

La relazione di calcolo si suddivide in n°3 fascicoli:

- Elaborato s.2 : struttura in elevazione.
- Elaborato s.2.1: fondazioni
- Elaborato s.2.2: scala interna in c.a.

RELAZIONE DI CALCOLO - STRUTTURA IN ELEVAZIONE

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Introduzione

Sistemi di riferimento

Le coordinate, i carichi concentrati, i cedimenti, le reazioni vincolari e gli spostamenti dei NODI sono riferiti ad una terna destra cartesiana globale con l'asse Z verticale rivolto verso l'alto.

I carichi in coordinate locali e le sollecitazioni delle ASTE sono riferite ad una terna destra cartesiana locale così definita:

- origine nel nodo iniziale dell'asta;
- asse X coincidente con l'asse dell'asta e con verso dal nodo iniziale al nodo finale;
- immaginando la trave a sezione rettangolare l'asse Y è parallelo alla base e l'asse Z è parallelo all'altezza. La rotazione dell'asta comporta quindi una rotazione di tutta la terna locale.

Si può immaginare la terna locale di un'asta comunque disposta nello spazio come derivante da quella globale dopo una serie di trasformazioni:

- una rotazione intorno all'asse Z che porti l'asse X a coincidere con la proiezione dell'asse dell'asta sul piano orizzontale;
- una traslazione lungo il nuovo asse X così definito in modo da portare l'origine a coincidere con la proiezione del nodo iniziale dell'asta sul piano orizzontale;
- una traslazione lungo l'asse Z che porti l'origine a coincidere con il nodo iniziale dell'asta;
- una rotazione intorno all'asse Y così definito che porti l'asse X a coincidere con l'asse dell'asta;
- una rotazione intorno all'asse X così definito pari alla rotazione dell'asta.

In pratica le travi prive di rotazione avranno sempre l'asse Z rivolto verso l'alto e l'asse Y nel piano del solaio, mentre i pilastri privi di rotazione avranno l'asse Y parallelo all'asse Y globale e l'asse Z parallelo ma controverso all'asse X globale. Da notare quindi che per i pilastri la "base" è il lato parallelo a Y.

Le sollecitazioni ed i carichi in coordinate locali negli ELEMENTI BIDIMENSIONALI e nei MURI sono riferiti ad una terna destra cartesiana locale così definita:

- origine nel primo nodo dell'elemento;
- asse X coincidente con la congiungente il primo ed il secondo nodo dell'elemento;
- asse Y definito come prodotto vettoriale fra il versore dell'asse X e il versore della congiungente il primo e il quarto nodo. Asse Z a formare con gli altri due una terna destrorsa.

Praticamente un elemento verticale con l'asse X locale coincidente con l'asse X globale ha anche gli altri assi locali coincidenti con quelli globali.

Rotazioni e momenti

Seguendo il principio adottato per tutti i carichi che sono positivi se CONTROVERSI agli assi, anche i momenti concentrati e le rotazioni impresse in coordinate globali risultano positivi se CONTROVERSI al segno positivo delle rotazioni. Il segno positivo dei momenti e delle rotazioni è quello orario per l'osservatore posto nell'origine: X ruota su Y, Y ruota su Z, Z ruota su X. In pratica è sufficiente adottare la regola della mano destra: col pollice rivolto nella direzione dell'asse, la rotazione che porta a chiudere il palmo della mano corrisponde al segno positivo.

Normativa di riferimento

La normativa di riferimento è la seguente:

- D.M. del 14/1/2008 - Norme tecniche per le costruzioni. Le verifiche degli elementi di fondazione sono eseguite utilizzando l'Approccio 2.

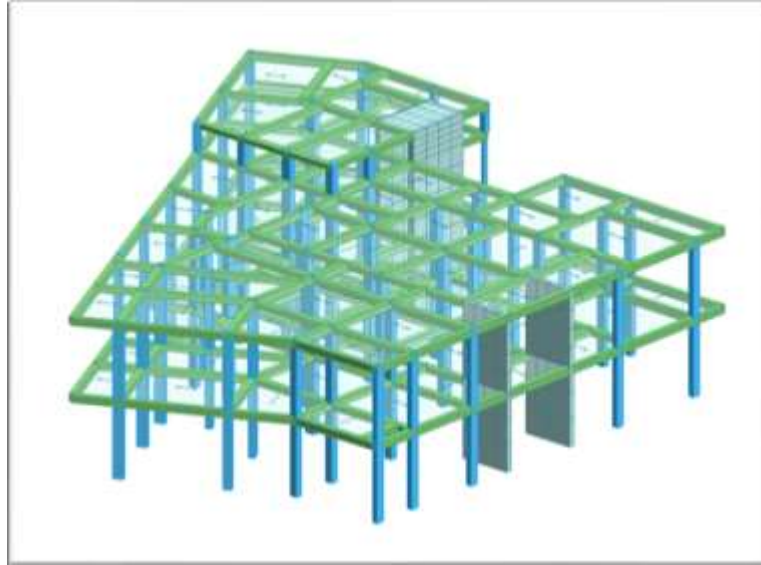
- Circolare n. 617 del 2/2/2009 - Istruzioni per l'applicazione delle "Nuove norme tecniche per le costruzioni" di cui al D.M. del 14/1/2008.

Unità di misura

Le unità di misura adottate sono le seguenti:

- lunghezze : m
- forze : daN
- masse : kg
- temperature : gradi centigradi
- angoli : gradi sessadecimali o radianti

Geometria



Elenco vincoli nodi

Simbologia

- Vn = Numero del vincolo nodo
- Comm. = Commento
- Sx = Spostamento in dir. X (L=libero, B=bloccato, E=elastico)
- Sy = Spostamento in dir. Y (L=libero, B=bloccato, E=elastico)
- Sz = Spostamento in dir. Z (L=libero, B=bloccato, E=elastico)
- Rx = Rotazione intorno all'asse X (L=libera, B=bloccata, E=elastica)
- Ry = Rotazione intorno all'asse Y (L=libera, B=bloccata, E=elastica)
- Rz = Rotazione intorno all'asse Z (L=libera, B=bloccata, E=elastica)
- RL = Rotazione libera
- Ly = Lunghezza (dir. Y locale)
- Lz = Larghezza (dir. Z locale)
- Kt = Coeff. di sottofondo su suolo elastico alla Winkler

Vn	Comm.	Sx	Sy	Sz	Rx	Ry	Rz	RL	Ly <m>	Lz <m>	Kt <daN/cm<
1	Libero	L	L	L	L	L	L				
2	Incastro	B	B	B	B	B	B				

Elenco nodi

Simbologia

- Nodo = Numero del nodo
- X = Coordinata X del nodo
- Y = Coordinata Y del nodo
- Z = Coordinata Z del nodo
- Imp. = Numero dell'impalcato
- Vn = Numero del vincolo nodo

Nodo	X <m>	Y <m>	Z <m>	Imp.	Vn	Nodo	X <m>	Y <m>	Z <m>	Imp.	Vn	Nodo	X <m>	Y <m>	Z <m>	Imp.	Vn
-273	6.30	27.65	8.66	3	1	-272	3.61	26.96	8.66	3	1	-271	11.71	26.00	8.66	3	1
-270	11.21	26.00	8.66	3	1	-269	10.70	26.00	8.66	3	1	-268	12.22	25.17	8.66	3	1
-267	11.71	25.17	8.66	3	1	-266	11.21	25.17	8.66	3	1	-265	10.70	25.17	8.66	3	1
-264	10.20	25.17	8.66	3	1	-263	12.22	24.33	8.66	3	1	-262	11.71	24.33	8.66	3	1
-261	11.21	24.33	8.66	3	1	-260	10.70	24.33	8.66	3	1	-259	10.20	24.33	8.66	3	1
-258	12.22	23.50	8.66	3	1	-257	11.71	23.50	8.66	3	1	-256	11.21	23.50	8.66	3	1
-255	10.70	23.50	8.66	3	1	-254	10.20	23.50	8.66	3	1	-253	11.71	22.66	8.66	3	1
-252	11.21	22.66	8.66	3	1	-251	10.70	22.66	8.66	3	1	-250	9.63	22.66	8.66	3	1
-249	6.92	22.66	8.66	3	1	-248	12.22	26.00	8.31	0	1	-247	11.71	26.00	8.31	0	1
-246	11.21	26.00	8.31	0	1	-245	10.70	26.00	8.31	0	1	-244	10.20	26.00	8.31	0	1
-243	12.22	25.17	8.31	0	1	-242	10.20	25.17	8.31	0	1	-241	12.22	24.33	8.31	0	1
-240	10.20	24.33	8.31	0	1	-239	12.22	23.50	8.31	0	1	-238	10.20	23.50	8.31	0	1
-237	12.22	22.66	8.31	0	1	-236	10.20	22.66	8.31	0	1	-235	12.22	26.00	7.96	0	1
-234	11.71	26.00	7.96	0	1	-233	11.21	26.00	7.96	0	1	-232	10.70	26.00	7.96	0	1
-231	10.20	26.00	7.96	0	1	-230	12.22	25.17	7.96	0	1	-229	10.20	25.17	7.96	0	1
-228	12.22	24.33	7.96	0	1	-227	10.20	24.33	7.96	0	1	-226	12.22	23.50	7.96	0	1
-225	10.20	23.50	7.96	0	1	-224	12.22	22.66	7.96	0	1	-223	10.20	22.66	7.96	0	1

Relazione di calcolo

-222	12.22	26.00	7.61	0	1	-221	11.71	26.00	7.61	0	1	-220	11.21	26.00	7.61	0	1
-219	10.70	26.00	7.61	0	1	-218	10.20	26.00	7.61	0	1	-217	12.22	25.17	7.61	0	1
-216	10.20	25.17	7.61	0	1	-215	12.22	24.33	7.61	0	1	-214	10.20	24.33	7.61	0	1
-213	12.22	23.50	7.61	0	1	-212	10.20	23.50	7.61	0	1	-211	12.22	22.66	7.61	0	1
-210	10.20	22.66	7.61	0	1	-209	6.30	27.70	7.26	2	1	-208	3.61	26.96	7.26	2	1
-207	11.71	26.00	7.26	2	1	-206	11.21	26.00	7.26	2	1	-205	10.70	26.00	7.26	2	1
-204	12.22	25.17	7.26	2	1	-203	10.20	25.17	7.26	2	1	-202	12.22	24.33	7.26	2	1
-201	10.20	24.33	7.26	2	1	-200	12.22	23.50	7.26	2	1	-199	10.20	23.50	7.26	2	1
-198	9.63	22.66	7.26	2	1	-197	6.92	22.66	7.26	2	1	-196	22.44	22.60	7.26	2	1
-195	5.87	22.44	7.26	2	1	-194	28.00	19.90	7.26	2	1	-193	20.46	19.90	7.26	2	1
-192	16.23	17.41	7.26	2	1	-191	12.57	17.41	7.26	2	1	-190	27.49	15.76	7.26	2	1
-189	26.82	15.76	7.26	2	1	-188	26.16	15.76	7.26	2	1	-187	12.57	15.76	7.26	2	1
-186	9.63	13.33	7.26	2	1	-185	27.49	11.56	7.26	2	1	-184	26.82	11.56	7.26	2	1
-183	26.16	11.56	7.26	2	1	-182	23.10	11.56	7.26	2	1	-181	18.40	11.56	7.26	2	1
-180	12.57	11.56	7.26	2	1	-179	12.47	9.25	7.26	2	1	-178	8.42	8.97	7.26	2	1
-177	18.40	8.62	7.26	2	1	-176	10.61	4.69	7.26	2	1	-175	12.22	26.00	6.33	0	1
-174	11.71	26.00	6.33	0	1	-173	11.21	26.00	6.33	0	1	-172	10.70	26.00	6.33	0	1
-171	10.20	26.00	6.33	0	1	-170	12.22	25.17	6.33	0	1	-169	10.20	25.17	6.33	0	1
-168	12.22	24.33	6.33	0	1	-167	10.20	24.33	6.33	0	1	-166	12.22	23.50	6.33	0	1
-165	10.20	23.50	6.33	0	1	-164	12.22	22.66	6.33	0	1	-163	10.20	22.66	6.33	0	1
-162	28.15	15.76	6.33	0	1	-161	27.49	15.76	6.33	0	1	-160	26.82	15.76	6.33	0	1
-159	26.16	15.76	6.33	0	1	-158	25.50	15.76	6.33	0	1	-157	28.15	11.56	6.33	0	1
-156	27.49	11.56	6.33	0	1	-155	26.82	11.56	6.33	0	1	-154	26.16	11.56	6.33	0	1
-153	25.50	11.56	6.33	0	1	-152	12.22	26.00	5.41	0	1	-151	11.71	26.00	5.41	0	1
-150	11.21	26.00	5.41	0	1	-149	10.70	26.00	5.41	0	1	-148	10.20	26.00	5.41	0	1
-147	12.22	25.17	5.41	0	1	-146	10.20	25.17	5.41	0	1	-145	12.22	24.33	5.41	0	1
-144	10.20	24.33	5.41	0	1	-143	12.22	23.50	5.41	0	1	-142	10.20	23.50	5.41	0	1
-141	12.22	22.66	5.41	0	1	-140	10.20	22.66	5.41	0	1	-139	28.15	15.76	5.41	0	1
-138	27.49	15.76	5.41	0	1	-137	26.82	15.76	5.41	0	1	-136	26.16	15.76	5.41	0	1
-135	25.50	15.76	5.41	0	1	-134	28.15	11.56	5.41	0	1	-133	27.49	11.56	5.41	0	1
-132	26.82	11.56	5.41	0	1	-131	26.16	11.56	5.41	0	1	-130	25.50	11.56	5.41	0	1
-129	12.22	26.00	4.49	0	1	-128	11.71	26.00	4.49	0	1	-127	11.21	26.00	4.49	0	1
-126	10.70	26.00	4.49	0	1	-125	10.20	26.00	4.49	0	1	-124	12.22	25.17	4.49	0	1
-123	10.20	25.17	4.49	0	1	-122	12.22	24.33	4.49	0	1	-121	10.20	24.33	4.49	0	1
-120	12.22	23.50	4.49	0	1	-119	10.20	23.50	4.49	0	1	-118	12.22	22.66	4.49	0	1
-117	10.20	22.66	4.49	0	1	-116	28.15	15.76	4.49	0	1	-115	27.49	15.76	4.49	0	1
-114	26.82	15.76	4.49	0	1	-113	26.16	15.76	4.49	0	1	-112	25.50	15.76	4.49	0	1
-111	28.15	11.56	4.49	0	1	-110	27.49	11.56	4.49	0	1	-109	26.82	11.56	4.49	0	1
-108	26.16	11.56	4.49	0	1	-107	25.50	11.56	4.49	0	1	-106	6.30	27.67	3.56	1	1
-105	11.71	26.00	3.56	1	1	-104	11.21	26.00	3.56	1	1	-103	10.70	26.00	3.56	1	1
-102	12.22	25.17	3.56	1	1	-101	10.20	25.17	3.56	1	1	-100	12.22	24.33	3.56	1	1
-99	10.20	24.33	3.56	1	1	-98	12.22	23.50	3.56	1	1	-97	10.20	23.50	3.56	1	1
-96	12.22	22.66	3.56	1	1	-95	9.63	22.66	3.56	1	1	-94	6.92	22.66	3.56	1	1
-93	22.44	22.60	3.56	1	1	-92	18.45	20.55	3.56	1	1	-91	16.23	20.55	3.56	1	1
-90	28.00	19.90	3.56	1	1	-89	20.46	19.90	3.56	1	1	-88	4.13	17.52	3.56	1	1
-87	16.23	17.41	3.56	1	1	-86	12.57	17.41	3.56	1	1	-85	27.49	15.76	3.56	1	1
-84	26.82	15.76	3.56	1	1	-83	26.16	15.76	3.56	1	1	-82	12.57	15.76	3.56	1	1
-81	9.63	15.76	3.56	1	1	-80	9.63	13.33	3.56	1	1	-79	27.49	11.56	3.56	1	1
-78	26.82	11.56	3.56	1	1	-77	26.16	11.56	3.56	1	1	-76	23.10	11.56	3.56	1	1
-75	18.40	11.56	3.56	1	1	-74	12.57	11.56	3.56	1	1	-73	12.47	9.25	3.56	1	1
-72	18.40	8.62	3.56	1	1	-71	27.25	5.30	3.56	1	1	-70	10.62	4.68	3.56	1	1
-69	12.22	26.00	2.33	0	1	-68	11.71	26.00	2.33	0	1	-67	11.21	26.00	2.33	0	1
-66	10.70	26.00	2.33	0	1	-65	10.20	26.00	2.33	0	1	-64	12.22	25.17	2.33	0	1
-63	10.20	25.17	2.33	0	1	-62	12.22	24.33	2.33	0	1	-61	10.20	24.33	2.33	0	1
-60	12.22	23.50	2.33	0	1	-59	10.20	23.50	2.33	0	1	-58	12.22	22.66	2.33	0	1
-57	10.20	22.66	2.33	0	1	-56	28.15	15.76	2.33	0	1	-55	27.49	15.76	2.33	0	1
-54	26.82	15.76	2.33	0	1	-53	26.16	15.76	2.33	0	1	-52	25.50	15.76	2.33	0	1
-51	28.15	11.56	2.33	0	1	-50	27.49	11.56	2.33	0	1	-49	26.82	11.56	2.33	0	1
-48	26.16	11.56	2.33	0	1	-47	25.50	11.56	2.33	0	1	-46	12.22	26.00	1.10	0	1
-45	11.71	26.00	1.10	0	1	-44	11.21	26.00	1.10	0	1	-43	10.70	26.00	1.10	0	1
-42	10.20	26.00	1.10	0	1	-41	12.22	25.17	1.10	0	1	-40	10.20	25.17	1.10	0	1
-39	12.22	24.33	1.10	0	1	-38	10.20	24.33	1.10	0	1	-37	12.22	23.50	1.10	0	1
-36	10.20	23.50	1.10	0	1	-35	12.22	22.66	1.10	0	1	-34	10.20	22.66	1.10	0	1
-33	28.15	15.76	1.10	0	1	-32	27.49	15.76	1.10	0	1	-31	26.82	15.76	1.10	0	1
-30	26.16	15.76	1.10	0	1	-29	25.50	15.76	1.10	0	1	-28	28.15	11.56	1.10	0	1
-27	27.49	11.56	1.10	0	1	-26	26.82	11.56	1.10	0	1	-25	26.16	11.56	1.10	0	1
-24	25.50	11.56	1.10	0	1	-23	12.22	26.00	-0.25	0	2	-22	11.71	26.00	-0.25	0	2
-21	11.21	26.00	-0.25	0	2	-20	10.70	26.00	-0.25	0	2	-19	10.20	26.00	-0.25	0	2
-18	12.22	25.17	-0.25	0	2	-17	10.20	25.17	-0.25	0	2	-16	12.22	24.33	-0.25	0	2
-15	10.20	24.33	-0.25	0	2	-14	12.22	23.50	-0.25	0	2	-13	10.20	23.50	-0.25	0	2
-12	12.22	22.66	-0.25	0	2	-11	10.20	22.66	-0.25	0	2	-10	28.15	15.76	-0.25	0	2
-9	27.49	15.76	-0.25	0	2	-8	26.82	15.76	-0.25	0	2	-7	26.16	15.76	-0.25	0	2
-6	25.50	15.76	-0.25	0	2	-5	28.15	11.56	-0.25	0	2	-4	27.49	11.56	-0.25	0	2
-3	26.82	11.56	-0.25	0	2	-2	26.16	11.56	-0.25	0	2	-1	25.50	11.56	-0.25	0	2
1	15.79	-0.72	-0.25	0	2	2	20.29	1.57	-0.25	0	2	3	23.10	2.93	-0.25	0	2
4	13.92	2.95	-0.25	0	2	5	28.00	2.98	-0.25	0	2	6	18.40	5.30	-0.25	0	2
7	23.10	5.30	-0.25	0	2	8	28.00	5.30	-0.25	0	2	9	10.21	5.47	-0.25	0	2
10	12.54	5.66	-0.25	0	2	11	14.56	6.68	-0.25	0	2	12	18.40	9.25	-0.25	0	2
13	23.10	9.25	-0.25	0	2	14	28.00	9.25	-0.25	0	2	15	8.23	9.35	-0.25	0	2

Relazione di calcolo

16	10.60	10.07	-0.25	0	2	17	12.47	10.17	-0.25	0	2	18	16.00	11.56	-0.25	0	2
19	20.46	11.56	-0.25	0	2	20	9.63	11.95	-0.25	0	2	21	6.25	13.33	-0.25	0	2
22	12.57	15.00	-0.25	0	2	23	16.00	15.76	-0.25	0	2	24	20.46	15.76	-0.25	0	2
25	4.25	17.29	-0.25	0	2	26	6.92	17.36	-0.25	0	2	27	9.63	17.36	-0.25	0	2
28	12.20	17.41	-0.25	0	2	29	28.00	19.00	-0.25	0	2	30	12.20	19.90	-0.25	0	2
31	16.23	19.90	-0.25	0	2	32	18.45	19.90	-0.25	0	2	33	22.44	19.90	-0.25	0	2
34	2.23	21.24	-0.25	0	2	35	18.45	22.61	-0.25	0	2	36	6.30	22.66	-0.25	0	2
37	16.23	22.66	-0.25	0	2	38	28.00	24.10	-0.25	0	2	39	22.44	24.15	-0.25	0	2
40	0.24	25.21	-0.25	0	2	41	18.50	25.96	-0.25	0	2	42	22.44	25.96	-0.25	0	2
43	6.30	26.00	-0.25	0	2	44	4.90	27.63	-0.25	0	2	45	12.17	27.64	-0.25	0	2
46	9.10	27.67	-0.25	0	2	101	15.79	-0.72	3.56	1	1	102	20.29	1.57	3.56	1	1
103	23.10	2.93	3.56	1	1	104	13.92	2.95	3.56	1	1	105	28.00	2.98	3.56	1	1
106	18.40	5.30	3.56	1	1	107	23.10	5.30	3.56	1	1	108	28.00	5.30	3.56	1	1
109	10.21	5.47	3.56	1	1	110	12.54	5.66	3.56	1	1	111	14.56	6.68	3.56	1	1
112	18.40	9.25	3.56	1	1	113	23.10	9.25	3.56	1	1	114	28.00	9.25	3.56	1	1
115	8.23	9.35	3.56	1	1	116	10.60	10.07	3.56	1	1	117	12.47	10.17	3.56	1	1
118	16.00	11.56	3.56	1	1	119	20.46	11.56	3.56	1	1	120	9.63	11.95	3.56	1	1
121	6.25	13.33	3.56	1	1	122	12.57	15.00	3.56	1	1	123	16.00	15.76	3.56	1	1
124	20.46	15.76	3.56	1	1	125	4.25	17.29	3.56	1	1	126	6.92	17.36	3.56	1	1
127	9.63	17.36	3.56	1	1	128	12.20	17.41	3.56	1	1	129	28.00	19.00	3.56	1	1
130	12.20	19.90	3.56	1	1	131	16.23	19.90	3.56	1	1	132	18.45	19.90	3.56	1	1
133	22.44	19.90	3.56	1	1	134	2.23	21.24	3.56	1	1	135	18.45	22.61	3.56	1	1
136	6.30	22.66	3.56	1	1	137	16.23	22.66	3.56	1	1	138	28.00	24.10	3.56	1	1
139	22.44	24.15	3.56	1	1	140	0.24	25.21	3.56	1	1	141	18.50	25.96	3.56	1	1
142	22.44	25.96	3.56	1	1	143	6.30	26.00	3.56	1	1	144	4.90	27.63	3.56	1	1
145	12.17	27.64	3.56	1	1	146	9.10	27.67	3.56	1	1	147	13.88	-1.70	3.56	1	1
148	12.01	1.96	3.56	1	1	149	27.25	2.93	3.56	1	1	150	8.42	8.97	3.56	1	1
151	25.50	11.56	3.56	1	1	152	28.15	11.56	3.56	1	1	153	25.50	15.76	3.56	1	1
154	28.15	15.76	3.56	1	1	155	25.50	19.90	3.56	1	1	156	2.48	20.73	3.56	1	1
157	5.87	22.44	3.56	1	1	158	10.20	22.66	3.56	1	1	159	28.00	25.96	3.56	1	1
160	10.20	26.00	3.56	1	1	161	12.22	26.00	3.56	1	1	162	3.61	26.96	3.56	1	1
201	15.79	-0.72	7.26	2	1	202	20.29	1.57	7.26	2	1	203	23.10	2.93	7.26	2	1
204	13.92	2.95	7.26	2	1	205	28.00	2.98	7.26	2	1	206	18.40	5.30	7.26	2	1
207	23.10	5.30	7.26	2	1	208	28.00	5.30	7.26	2	1	209	10.21	5.47	7.26	2	1
210	12.54	5.66	7.26	2	1	211	14.56	6.68	7.26	2	1	212	18.40	9.25	7.26	2	1
213	23.10	9.25	7.26	2	1	214	28.00	9.25	7.26	2	1	215	8.23	9.35	7.26	2	1
216	10.60	10.07	7.26	2	1	217	12.47	10.17	7.26	2	1	218	16.00	11.56	7.26	2	1
219	20.46	11.56	7.26	2	1	220	9.63	11.95	7.26	2	1	221	6.25	13.33	7.26	2	1
222	12.57	15.00	7.26	2	1	223	16.00	15.76	7.26	2	1	224	20.46	15.76	7.26	2	1
225	4.25	17.29	7.26	2	1	226	6.92	17.36	7.26	2	1	227	9.63	17.36	7.26	2	1
228	12.20	17.41	7.26	2	1	229	28.00	19.00	7.26	2	1	230	12.20	19.90	7.26	2	1
231	16.23	19.90	7.26	2	1	232	18.45	19.90	7.26	2	1	233	22.44	19.90	7.26	2	1
234	2.23	21.24	7.26	2	1	235	18.45	22.61	7.26	2	1	236	6.30	22.66	7.26	2	1
237	16.23	22.66	7.26	2	1	238	28.00	24.10	7.26	2	1	239	22.44	24.15	7.26	2	1
240	0.24	25.21	7.26	2	1	241	18.50	25.96	7.26	2	1	242	22.44	25.96	7.26	2	1
243	6.30	26.00	7.26	2	1	244	4.90	27.63	7.26	2	1	245	12.17	27.64	7.26	2	1
246	9.10	27.67	7.26	2	1	247	13.88	-1.70	7.26	2	1	248	12.01	1.96	7.26	2	1
249	25.50	11.56	7.26	2	1	250	28.15	11.56	7.26	2	1	251	25.50	15.76	7.26	2	1
252	28.15	15.76	7.26	2	1	253	25.50	19.90	7.26	2	1	254	2.48	20.73	7.26	2	1
255	10.20	22.66	7.26	2	1	256	12.22	22.66	7.26	2	1	257	28.00	25.96	7.26	2	1
258	10.20	26.00	7.26	2	1	259	12.22	26.00	7.26	2	1	325	4.25	17.29	8.66	3	1
326	6.92	17.36	8.66	3	1	327	9.63	17.36	8.66	3	1	328	12.20	17.41	8.66	3	1
330	12.20	19.90	8.66	3	1	334	2.23	21.24	8.66	3	1	336	6.30	22.66	8.66	3	1
340	0.24	25.21	8.66	3	1	343	6.30	26.00	8.66	3	1	344	4.90	27.63	8.66	3	1
345	12.17	27.64	8.66	3	1	346	9.10	27.67	8.66	3	1	347	2.48	20.73	8.66	3	1
348	5.87	22.44	8.66	3	1	349	10.20	22.66	8.66	3	1	350	12.22	22.66	8.66	3	1
351	10.20	26.00	8.66	3	1	352	12.22	26.00	8.66	3	1						

Elenco materiali

Simbologia

Mat. = Numero del materiale
 Comm. = Commento
 P = Peso specifico
 E = Modulo elastico
 G = Modulo elastico tangenziale
 v = Coeff. di Poisson
 α = Coeff. di dilatazione termica

Mat.	Comm.	P <daN/mc>	E <daN/cm ² >	G <daN/cm ² >	v	α
1	Calcestruzzo	2500	300000.00	130000.00	0.1	1.000000E-05

Elenco sezioni aste

Simbologia

Sez. = Numero della sezione
 Comm. = Commento
 Tipo = Tipologia

Relazione di calcolo

2C = Doppia C lato labbri
 2Cdx = Doppia C lato costola
 2I = Doppia I
 2L = Doppia L lato labbri
 2Ldx = Doppia L lato costole
 C = C
 Cdx = C destra
 Cir. = Circolare
 Cir.c = Circolare cava
 I = I
 L = L
 Ldx = L destra
 Om. = Omega
 Pg = Pi greco
 Pr = Poligono regolare
 Prc = Poligono regolare cavo
 Pc = Per coordinate
 Ia = Inerzie assegnate
 R = Rettangolare
 Rc = Rettangolare cava
 T = T
 U = U
 Ur = U rovescia
 V = V
 Vr = V rovescia
 Z = Z
 Zdx = Z destra
 Ts = T stondata
 Ls = L stondata
 Cs = C stondata
 Is = I stondata
 Dis. = Disegnata

Me = Membratura
 G = Generica
 T = Trave
 P = Pilastro
 Ver. = Verifica prevista
 N = Nessuna
 C = Cemento armato
 A = Acciaio
 L = Legno

B = Base
 H = Altezza
 R = Raggio
 Ma = Numero del materiale
 C = Numero del criterio di progetto
 Ccol = Numero del criterio di progetto collegamento

Sez.	Comm.	Tipo	Me	Ver.	B	H	R	Ma	C	Ccol
					<cm>	<cm>	<cm>			
1	Pilastri 30x40cm	R	P	C	30.00	40.00		1	1	
2	Trave 40x26cm	R	T	C	40.00	26.00		1	2	
3	Trave 30x35cm	R	T	C	30.00	35.00		1	1	
5	Pilastri 30x50cm	R	P	C	30.00	50.00		1	1	
6	Trave 30x26cm	R	T	C	30.00	26.00		1	1	
7	Trave 50x26cm	R	T	C	50.00	26.00		1	2	
8	Pilastri 35x40cm	R	P	C	35.00	40.00		1	2	
9	Pilastri 35x50cm	R	P	C	35.00	50.00		1	2	
10	Pilastri 30cm	Cir.	P	C			15.00	1	3	
11	Pilastri 30x30cm	R	P	C	30.00	30.00		1	1	
13	Pilastri 35x45cm	R	P	C	35.00	45.00		1	2	
14	Trave 40x24cm	R	T	C	40.00	24.00		1	1	

Elenco vincoli aste

Simbologia

Va = Numero del vincolo asta
 Comm. = Commento
 Tipo = Tipologia
 SVI = Definizione di vincolamenti interni
 ELA = Vincolo su suolo elastico alla Winkler
 BIE-RTC = Biella resistente a trazione e a compressione
 BIE-RC = Biella resistente solo a compressione
 BIE-RT = Biella resistente solo a trazione
 Ni = Sforzo normale nodo iniziale (0=sbloccato, 1=bloccato)
 Tyi = Taglio in dir. Y locale nodo iniziale (0=sbloccato, 1=bloccato)
 Tzi = Taglio in dir. Z locale nodo iniziale (0=sbloccato, 1=bloccato)
 Mxi = Momento intorno all'asse X locale nodo iniziale (0=sbloccato, 1=bloccato)
 Myi = Momento intorno all'asse Y locale nodo iniziale (0=sbloccato, 1=bloccato)
 Mzi = Momento intorno all'asse Z locale nodo iniziale (0=sbloccato, 1=bloccato)
 Nf = Sforzo normale nodo finale (0=sbloccato, 1=bloccato)

Relazione di calcolo

Tyf = Taglio in dir. Y locale nodo finale (0=sbloccato, 1=bloccato)
 Tzf = Taglio in dir. Z locale nodo finale (0=sbloccato, 1=bloccato)
 Mxf = Momento intorno all'asse X locale nodo finale (0=sbloccato, 1=bloccato)
 Myf = Momento intorno all'asse Y locale nodo finale (0=sbloccato, 1=bloccato)
 Mzf = Momento intorno all'asse Z locale nodo finale (0=sbloccato, 1=bloccato)
 Kt = Coeff. di sottofondo su suolo elastico alla Winkler

Va	Comm.	Tipo	Ni	Tyi	Tzi	Mxi	Myi	Mzi	Nf	Tyf	Tzf	Mxf	Myf	Mzf	Kt <daN/cm>
1	Inc+Inc	SVI	1	1	1	1	1	1	1	1	1	1	1	1	1

Elenco aste

Simbologia

Asta = Numero dell'asta
 N1 = Nodo iniziale
 N2 = Nodo finale
 Sez. = Numero della sezione
 Va = Numero del vincolo asta
 Par. = Numero dei parametri aggiuntivi
 Rot. = Rotazione
 FF = Filo fisso
 Dy1 = Scost. filo fisso Y1
 Dy2 = Scost. filo fisso Y2
 Dz1 = Scost. filo fisso Z1
 Dz2 = Scost. filo fisso Z2
 Kt = Coeff. di sottofondo su suolo elastico alla Winkler

Asta	N1	N2	Sez.	Va	Par.	Rot. <grad>	FF	Dy1 <cm>	Dy2 <cm>	Dz1 <cm>	Dz2 <cm>	Kt <daN/cm>
0	-11	-13		1		0.00	22	0.00	0.00	0.00	0.00	
0	-13	-15		1		0.00	22	0.00	0.00	0.00	0.00	
0	-15	-17		1		0.00	22	0.00	0.00	0.00	0.00	
0	-12	-14		1		0.00	22	0.00	0.00	0.00	0.00	
0	-17	-19		1		0.00	22	0.00	0.00	0.00	0.00	
0	-14	-16		1		0.00	22	0.00	0.00	0.00	0.00	
0	-20	-19		1		0.00	22	0.00	0.00	0.00	0.00	
0	-21	-20		1		0.00	22	0.00	0.00	0.00	0.00	
0	-16	-18		1		0.00	22	0.00	0.00	0.00	0.00	
0	-22	-21		1		0.00	22	0.00	0.00	0.00	0.00	
0	-18	-23		1		0.00	22	0.00	0.00	0.00	0.00	
0	-23	-22		1		0.00	22	0.00	0.00	0.00	0.00	
0	158	-97		1		0.00	22	0.00	0.00	0.00	0.00	
0	-97	-99		1		0.00	22	0.00	0.00	0.00	0.00	
0	-99	-101		1		0.00	22	0.00	0.00	0.00	0.00	
0	-96	-98		1		0.00	22	0.00	0.00	0.00	0.00	
0	-101	160		1		0.00	22	0.00	0.00	0.00	0.00	
0	-98	-100		1		0.00	22	0.00	0.00	0.00	0.00	
0	-103	160		1		0.00	22	0.00	0.00	0.00	0.00	
0	-104	-103		1		0.00	22	0.00	0.00	0.00	0.00	
0	-100	-102		1		0.00	22	0.00	0.00	0.00	0.00	
0	-105	-104		1		0.00	22	0.00	0.00	0.00	0.00	
0	-102	161		1		0.00	22	0.00	0.00	0.00	0.00	
0	161	-105		1		0.00	22	0.00	0.00	0.00	0.00	
0	255	-199		1		0.00	22	0.00	0.00	0.00	0.00	
0	-199	-201		1		0.00	22	0.00	0.00	0.00	0.00	
0	349	-254		1		0.00	22	0.00	0.00	0.00	0.00	
0	-201	-203		1		0.00	22	0.00	0.00	0.00	0.00	
0	-254	-259		1		0.00	22	0.00	0.00	0.00	0.00	
0	-203	258		1		0.00	22	0.00	0.00	0.00	0.00	
0	-206	-205		1		0.00	22	0.00	0.00	0.00	0.00	
0	-259	-264		1		0.00	22	0.00	0.00	0.00	0.00	
0	256	-200		1		0.00	22	0.00	0.00	0.00	0.00	
0	350	-258		1		0.00	22	0.00	0.00	0.00	0.00	
0	-264	351		1		0.00	22	0.00	0.00	0.00	0.00	
0	-200	-202		1		0.00	22	0.00	0.00	0.00	0.00	
0	-269	351		1		0.00	22	0.00	0.00	0.00	0.00	
0	-202	-204		1		0.00	22	0.00	0.00	0.00	0.00	
0	-258	-263		1		0.00	22	0.00	0.00	0.00	0.00	
0	-205	258		1		0.00	22	0.00	0.00	0.00	0.00	
0	259	-207		1		0.00	22	0.00	0.00	0.00	0.00	
0	-270	-269		1		0.00	22	0.00	0.00	0.00	0.00	
0	-263	-268		1		0.00	22	0.00	0.00	0.00	0.00	
0	131	132		1		0.00	22	0.00	0.00	0.00	0.00	
0	-1	-2		1		0.00	11	0.00	0.00	0.00	0.00	
0	-207	-206		1		0.00	22	0.00	0.00	0.00	0.00	
0	-204	259		1		0.00	22	0.00	0.00	0.00	0.00	
0	-271	-270		1		0.00	22	0.00	0.00	0.00	0.00	
0	352	-271		1		0.00	22	0.00	0.00	0.00	0.00	
0	-3	-4		1		0.00	11	0.00	0.00	0.00	0.00	

Relazione di calcolo

0	151	-77		1		0.00	11	0.00	0.00	0.00	0.00
0	-268	352		1		0.00	22	0.00	0.00	0.00	0.00
0	-2	-3		1		0.00	11	0.00	0.00	0.00	0.00
0	-4	-5		1		0.00	11	0.00	0.00	0.00	0.00
0	-77	-78		1		0.00	11	0.00	0.00	0.00	0.00
0	-78	-79		1		0.00	11	0.00	0.00	0.00	0.00
0	-79	152		1		0.00	11	0.00	0.00	0.00	0.00
0	-6	-7		1		0.00	11	0.00	0.00	0.00	0.00
0	-7	-8		1		0.00	11	0.00	0.00	0.00	0.00
0	-8	-9		1		0.00	11	0.00	0.00	0.00	0.00
0	-9	-10		1		0.00	11	0.00	0.00	0.00	0.00
0	249	-183		1		0.00	11	0.00	0.00	0.00	0.00
0	-183	-184		1		0.00	11	0.00	0.00	0.00	0.00
0	-184	-185		1		0.00	11	0.00	0.00	0.00	0.00
0	-185	250		1		0.00	11	0.00	0.00	0.00	0.00
0	153	-83		1		0.00	11	0.00	0.00	0.00	0.00
0	-83	-84		1		0.00	11	0.00	0.00	0.00	0.00
0	-84	-85		1		0.00	11	0.00	0.00	0.00	0.00
0	-85	154		1		0.00	11	0.00	0.00	0.00	0.00
0	251	-188		1		0.00	11	0.00	0.00	0.00	0.00
0	-188	-189		1		0.00	11	0.00	0.00	0.00	0.00
0	-189	-190		1		0.00	11	0.00	0.00	0.00	0.00
0	-190	252		1		0.00	11	0.00	0.00	0.00	0.00
1	1	101	5	1		27.00	55	0.00	0.00	0.00	0.00
1	101	201	5	1		27.00	55	0.00	0.00	0.00	0.00
2	2	102	1	1		27.00	55	-5.00	-5.00	0.00	0.00
2	102	202	1	1		27.00	55	-5.00	-5.00	0.00	0.00
3	3	103	1	1		0.00	55	0.00	0.00	0.00	0.00
3	103	203	1	1		0.00	55	0.00	0.00	0.00	0.00
4	4	104	5	1		27.00	55	0.00	0.00	0.00	0.00
4	104	204	9	1		27.00	55	0.00	0.00	0.00	0.00
5	5	105	1	1		90.00	55	0.00	0.00	0.00	0.00
5	105	205	1	1		90.00	55	0.00	0.00	0.00	0.00
6	6	106	5	1		117.00	55	0.00	0.00	0.00	0.00
6	106	206	9	1		117.00	55	0.00	0.00	0.00	0.00
7	7	107	8	1		0.00	55	0.00	0.00	0.00	0.00
7	107	207	8	1		0.00	55	0.00	0.00	0.00	0.00
8	8	108	1	1		90.00	55	0.00	0.00	0.00	0.00
8	108	208	1	1		90.00	55	0.00	0.00	0.00	0.00
9	9	109	5	1		117.00	55	0.00	0.00	0.00	0.00
9	109	209	5	1		117.00	55	0.00	0.00	0.00	0.00
10	10	110	5	1		27.00	55	0.00	0.00	0.00	0.00
10	110	210	9	1		27.00	55	0.00	0.00	0.00	0.00
11	11	111	1	1		117.00	55	0.00	0.00	0.00	0.00
11	111	211	8	1		117.00	55	0.00	0.00	0.00	0.00
12	12	112	9	1		0.00	55	0.00	0.00	0.00	0.00
12	112	212	9	1		0.00	55	0.00	0.00	0.00	0.00
13	13	113	8	1		0.00	55	0.00	0.00	0.00	0.00
13	113	213	8	1		0.00	55	0.00	0.00	0.00	0.00
14	14	114	1	1		90.00	55	0.00	0.00	0.00	0.00
14	114	214	1	1		90.00	55	0.00	0.00	0.00	0.00
15	15	115	5	1		117.00	55	0.00	0.00	0.00	0.00
15	115	215	5	1		117.00	55	0.00	0.00	0.00	0.00
16	16	116	1	1		0.00	55	0.00	0.00	0.00	0.00
16	116	216	1	1		0.00	55	0.00	0.00	0.00	0.00
17	17	117	5	1		90.00	55	-10.00	-10.00	0.00	0.00
17	117	217	9	1		90.00	55	-10.00	-10.00	0.00	0.00
18	18	118	8	1		90.00	55	0.00	0.00	0.00	0.00
18	118	218	8	1		90.00	55	0.00	0.00	0.00	0.00
19	19	119	8	1		90.00	55	0.00	0.00	0.00	0.00
19	119	219	8	1		90.00	55	0.00	0.00	0.00	0.00
20	20	120	1	1		90.00	55	0.00	0.00	0.00	0.00
20	120	220	1	1		90.00	55	0.00	0.00	0.00	0.00
21	21	121	5	1		117.00	55	0.00	0.00	0.00	0.00
21	121	221	5	1		117.00	55	0.00	0.00	0.00	0.00
22	22	122	8	1		90.00	55	0.00	0.00	0.00	0.00
22	122	222	8	1		90.00	55	0.00	0.00	0.00	0.00
23	23	123	8	1		0.00	55	0.00	0.00	0.00	0.00
23	123	223	8	1		0.00	55	0.00	0.00	0.00	0.00
24	24	124	9	1		90.00	55	0.00	0.00	0.00	0.00
24	124	224	9	1		90.00	55	0.00	0.00	0.00	0.00
25	25	125	5	1		117.00	55	0.00	0.00	0.00	0.00
25	125	225	5	1		117.00	55	0.00	0.00	0.00	0.00
25	225	325	5	1		117.00	55	0.00	0.00	0.00	0.00
26	26	126	1	1		0.00	55	0.00	0.00	0.00	0.00
26	126	226	1	1		0.00	55	0.00	0.00	0.00	0.00
26	226	326	1	1		0.00	55	0.00	0.00	0.00	0.00
27	27	127	5	1		0.00	55	0.00	0.00	0.00	0.00
27	127	227	5	1		0.00	55	0.00	0.00	0.00	0.00

Relazione di calcolo

27	227	327	5	1		0.00	55	0.00	0.00	0.00	0.00
28	28	128	13	1		0.00	55	0.00	0.00	0.00	0.00
28	128	228	13	1		0.00	55	0.00	0.00	0.00	0.00
28	228	328	13	1		0.00	55	0.00	0.00	0.00	0.00
29	29	129	1	1		90.00	55	0.00	0.00	0.00	0.00
29	129	229	1	1		90.00	55	0.00	0.00	0.00	0.00
30	30	130	8	1		90.00	55	0.00	0.00	0.00	0.00
30	130	230	8	1		90.00	55	0.00	0.00	0.00	0.00
30	230	330	8	1		90.00	55	0.00	0.00	0.00	0.00
31	31	131	8	1		0.00	55	0.00	0.00	0.00	0.00
31	131	231	8	1		0.00	55	0.00	0.00	0.00	0.00
32	32	132	8	1		90.00	55	0.00	0.00	0.00	0.00
32	132	232	8	1		90.00	55	0.00	0.00	0.00	0.00
33	33	133	8	1		0.00	55	0.00	0.00	0.00	0.00
33	133	233	8	1		0.00	55	0.00	0.00	0.00	0.00
34	34	134	5	1		117.00	55	0.00	0.00	0.00	0.00
34	134	234	5	1		117.00	55	0.00	0.00	0.00	0.00
34	234	334	5	1		117.00	55	0.00	0.00	0.00	0.00
35	35	135	1	1		90.00	55	0.00	0.00	0.00	0.00
35	135	235	1	1		90.00	55	0.00	0.00	0.00	0.00
36	36	136	9	1		0.00	55	0.00	0.00	0.00	0.00
36	136	236	9	1		0.00	55	0.00	0.00	0.00	0.00
36	236	336	9	1		0.00	55	0.00	0.00	0.00	0.00
37	37	137	1	1		0.00	55	0.00	0.00	0.00	0.00
37	137	237	1	1		0.00	55	0.00	0.00	0.00	0.00
38	38	138	1	1		90.00	55	0.00	0.00	0.00	0.00
38	138	238	1	1		90.00	55	0.00	0.00	0.00	0.00
39	39	139	1	1		0.00	55	0.00	0.00	0.00	0.00
39	139	239	1	1		0.00	55	0.00	0.00	0.00	0.00
40	40	140	5	1		117.00	55	0.00	0.00	0.00	0.00
40	140	240	5	1		117.00	55	0.00	0.00	0.00	0.00
40	240	340	5	1		117.00	55	0.00	0.00	0.00	0.00
41	41	141	1	1		0.00	55	0.00	0.00	0.00	0.00
41	141	241	1	1		0.00	55	0.00	0.00	0.00	0.00
42	42	142	1	1		0.00	55	0.00	0.00	0.00	0.00
42	142	242	1	1		0.00	55	0.00	0.00	0.00	0.00
43	43	143	1	1		0.00	55	0.00	0.00	0.00	0.00
43	143	243	8	1		0.00	55	0.00	0.00	0.00	0.00
43	243	343	1	1		0.00	55	0.00	0.00	0.00	0.00
44	44	144	1	1		27.00	55	0.00	0.00	0.00	0.00
44	144	244	1	1		27.00	55	0.00	0.00	0.00	0.00
44	244	344	1	1		27.00	55	0.00	0.00	0.00	0.00
45	45	145	1	1		0.00	55	0.00	0.00	0.00	0.00
45	145	245	10	1		0.00	55	0.00	0.00	0.00	0.00
45	245	345	11	1		0.00	55	0.00	0.00	0.00	0.00
46	46	146	1	1		0.00	55	0.00	0.00	0.00	0.00
46	146	246	10	1		0.00	55	0.00	0.00	0.00	0.00
46	246	346	11	1		0.00	55	0.00	0.00	0.00	0.00
101	106	107	2	1		0.00	22	0.00	0.00	0.00	0.00
101	107	-71	2	1		0.00	22	0.00	0.00	0.00	0.00
101	-71	108	2	1		0.00	22	0.00	0.00	0.00	0.00
102	112	-73	2	1		0.00	22	0.00	0.00	0.00	0.00
102	112	113	2	1		0.00	22	0.00	0.00	0.00	0.00
102	113	114	2	1		0.00	22	0.00	0.00	0.00	0.00
103	118	-74	2	1		0.00	22	0.00	0.00	0.00	0.00
103	118	-75	2	1		0.00	22	0.00	0.00	0.00	0.00
103	-75	119	2	1		0.00	22	0.00	0.00	0.00	0.00
103	119	-76	2	1		0.00	22	0.00	0.00	0.00	0.00
103	-76	151	2	1		0.00	22	0.00	0.00	0.00	0.00
104	121	-80	2	1		0.00	22	0.00	0.00	0.00	0.00
105	-82	-81	2	1		0.00	22	28.00	28.00	0.00	0.00
105	123	-82	2	1		0.00	22	0.00	0.00	0.00	0.00
105	123	124	2	1		0.00	22	0.00	0.00	0.00	0.00
105	124	153	2	1		0.00	22	0.00	0.00	0.00	0.00
106	130	131	2	1		0.00	22	0.00	0.00	0.00	0.00
107	-91	-92	2	1		0.00	22	0.00	0.00	0.00	0.00
108	142	141	3	1		0.00	22	0.00	0.00	0.00	0.00
108	142	159	3	1		0.00	22	0.00	0.00	0.00	0.00
109	143	160	2	1		0.00	22	0.00	0.00	0.00	0.00
110	136	143	2	1		0.00	22	0.00	0.00	0.00	0.00
110	143	-106	2	1		0.00	22	0.00	0.00	0.00	0.00
111	126	-94	2	1		0.00	22	0.00	0.00	0.00	0.00
112	-80	120	3	1		0.00	22	0.00	0.00	0.00	0.00
112	-81	-80	3	1		0.00	22	0.00	0.00	0.00	0.00
112	127	-81	3	1		0.00	22	0.00	0.00	0.00	0.00
112	127	-95	2	1		0.00	22	0.00	0.00	0.00	0.00
113	106	-72	2	1		0.00	22	0.00	0.00	0.00	0.00
113	-72	112	2	1		0.00	22	0.00	0.00	0.00	0.00
113	112	-75	2	1		0.00	22	0.00	0.00	0.00	0.00

Relazione di calcolo

114	119	124	2	1	0.00	22	0.00	0.00	0.00	0.00
114	124	-89	2	1	0.00	22	0.00	0.00	0.00	0.00
115	-93	133	2	1	0.00	22	0.00	0.00	0.00	0.00
115	139	-93	2	1	0.00	22	0.00	0.00	0.00	0.00
115	139	142	3	1	0.00	22	-5.00	-5.00	0.00	0.00
116	103	107	2	1	0.00	22	0.00	0.00	0.00	0.00
116	107	113	2	1	0.00	22	0.00	0.00	0.00	0.00
116	113	-76	2	1	0.00	22	0.00	0.00	0.00	0.00
117	153	151	2	1	0.00	22	0.00	0.00	0.00	0.00
117	153	155	2	1	0.00	22	0.00	0.00	0.00	0.00
118	149	-71	2	1	0.00	22	20.00	20.00	0.00	0.00
119	108	105	3	1	0.00	22	0.00	0.00	0.00	0.00
119	114	108	3	1	0.00	22	0.00	0.00	0.00	0.00
119	152	114	3	1	0.00	22	-15.00	0.00	0.00	0.00
119	154	152	3	1	0.00	22	-15.00	-15.00	0.00	0.00
119	129	154	3	1	0.00	22	0.00	-15.00	0.00	0.00
119	-90	129	3	1	0.00	22	0.00	0.00	0.00	0.00
119	138	-90	3	1	0.00	22	0.00	0.00	0.00	0.00
119	159	138	3	1	0.00	22	0.00	0.00	0.00	0.00
120	101	147	3	1	0.00	22	0.00	0.00	0.00	0.00
120	102	101	3	1	0.00	22	5.00	0.00	0.00	0.00
120	103	102	3	1	0.00	22	0.00	5.00	0.00	0.00
121	104	101	2	1	0.00	22	0.00	0.00	0.00	0.00
121	110	104	2	1	0.00	22	0.00	0.00	0.00	0.00
122	149	103	3	1	0.00	22	0.00	0.00	0.00	0.00
122	105	149	3	1	0.00	22	5.00	0.00	0.00	0.00
123	102	106	2	1	0.00	22	0.00	0.00	0.00	0.00
124	104	148	7	1	0.00	22	0.00	0.00	0.00	0.00
124	106	104	7	1	0.00	22	0.00	0.00	0.00	0.00
125	110	-70	2	1	0.00	22	0.00	0.00	0.00	0.00
125	110	111	2	1	0.00	22	0.00	0.00	0.00	0.00
125	111	-72	2	1	0.00	22	0.00	0.00	0.00	0.00
127	116	150	2	1	0.00	22	0.00	0.00	0.00	0.00
128	117	116	3	1	0.00	22	10.00	0.00	0.00	0.00
129	116	120	3	1	0.00	22	5.00	5.00	0.00	0.00
130	-73	110	2	1	0.00	22	15.00	8.00	0.00	0.00
130	117	-73	2	1	0.00	22	15.00	15.00	0.00	0.00
130	-74	117	2	1	0.00	22	5.00	15.00	0.00	0.00
130	122	-74	2	1	0.00	22	5.00	5.00	0.00	0.00
130	-82	122	2	1	0.00	22	5.00	5.00	0.00	0.00
130	-82	-86	2	1	0.00	22	-5.00	-5.00	0.00	0.00
131	148	147	3	1	0.00	22	0.00	0.00	0.00	0.00
131	-70	148	3	1	0.00	22	0.00	0.00	0.00	0.00
131	109	-70	3	1	0.00	22	0.00	0.00	0.00	0.00
131	150	109	3	1	0.00	22	0.00	0.00	0.00	0.00
131	115	150	3	1	0.00	22	0.00	0.00	0.00	0.00
131	121	115	3	1	0.00	22	0.00	0.00	0.00	0.00
131	125	121	3	1	0.00	22	0.00	0.00	0.00	0.00
131	-88	125	3	1	0.00	22	0.00	0.00	0.00	0.00
131	156	-88	3	1	0.00	22	0.00	0.00	0.00	0.00
131	134	156	3	1	0.00	22	0.00	0.00	0.00	0.00
131	140	134	3	1	0.00	22	0.00	0.00	0.00	0.00
132	118	123	2	1	0.00	22	0.00	0.00	0.00	0.00
132	-87	123	2	1	0.00	22	0.00	23.00	0.00	0.00
132	131	-87	2	1	0.00	22	0.00	0.00	0.00	0.00
132	-91	131	2	1	0.00	22	0.00	0.00	0.00	0.00
132	137	-91	2	1	0.00	22	0.00	0.00	0.00	0.00
134	126	-88	2	1	0.00	22	-5.00	9.00	0.00	0.00
134	126	127	2	1	0.00	22	5.00	5.00	0.00	0.00
134	127	128	2	1	0.00	22	5.00	0.00	0.00	0.00
134	128	-86	2	1	0.00	22	0.00	0.00	0.00	0.00
134	-86	-87	2	1	0.00	22	0.00	0.00	0.00	0.00
135	128	130	2	1	0.00	22	0.00	0.00	0.00	0.00
135	130	-96	2	1	0.00	22	0.00	0.00	0.00	0.00
136	157	156	2	1	0.00	22	0.00	0.00	0.00	0.00
136	136	157	2	1	0.00	22	0.00	0.00	0.00	0.00
137	-94	136	2	1	0.00	22	5.00	5.00	0.00	0.00
137	-95	-94	2	1	0.00	22	5.00	5.00	0.00	0.00
137	158	-95	2	1	0.00	22	5.00	5.00	0.00	0.00
137	-96	158	2	1	0.00	22	5.00	5.00	0.00	0.00
137	137	-96	2	1	0.00	22	5.00	5.00	0.00	0.00
137	137	135	3	1	0.00	22	0.00	5.00	0.00	0.00
137	135	-93	2	1	0.00	22	0.00	0.00	0.00	0.00
138	-92	132	2	1	0.00	22	0.00	0.00	0.00	0.00
138	135	-92	2	1	0.00	22	0.00	0.00	0.00	0.00
138	141	135	3	1	0.00	22	-5.00	0.00	0.00	0.00
139	138	139	3	1	0.00	22	-5.00	0.00	0.00	0.00
140	162	157	2	1	0.00	22	0.00	0.00	0.00	0.00
141	162	140	3	1	0.00	22	0.00	-5.00	0.00	0.00

Relazione di calcolo

141	144	162	3	1	0.00	22	0.00	0.00	0.00	0.00
142	161	145	3	1	0.00	22	0.00	-7.00	0.00	0.00
143	-106	144	3	1	0.00	22	0.00	-4.00	0.00	0.00
143	146	-106	3	1	0.00	22	0.00	0.00	0.00	0.00
143	145	146	3	1	0.00	22	0.00	0.00	0.00	0.00
149	132	-89	2	1	0.00	22	0.00	0.00	0.00	0.00
149	-89	133	2	1	0.00	22	0.00	0.00	0.00	0.00
149	133	155	2	1	0.00	22	0.00	0.00	0.00	0.00
149	155	-90	2	1	0.00	22	0.00	0.00	0.00	0.00
201	206	207	2	1	0.00	22	0.00	0.00	0.00	0.00
201	207	208	2	1	0.00	22	0.00	0.00	0.00	0.00
202	212	-179	2	1	0.00	22	0.00	0.00	0.00	0.00
202	212	213	2	1	0.00	22	0.00	0.00	0.00	0.00
202	213	214	2	1	0.00	22	0.00	0.00	0.00	0.00
203	218	-180	2	1	0.00	22	0.00	0.00	0.00	0.00
203	218	-181	2	1	0.00	22	0.00	0.00	0.00	0.00
203	-181	219	2	1	0.00	22	0.00	0.00	0.00	0.00
203	219	-182	2	1	0.00	22	0.00	0.00	0.00	0.00
203	-182	249	2	1	0.00	22	0.00	0.00	0.00	0.00
204	221	-186	2	1	0.00	22	0.00	0.00	0.00	0.00
205	223	-187	2	1	0.00	22	0.00	0.00	0.00	0.00
205	223	224	2	1	0.00	22	0.00	0.00	0.00	0.00
205	224	251	2	1	0.00	22	0.00	0.00	0.00	0.00
206	230	231	2	1	0.00	22	0.00	0.00	0.00	0.00
206	231	232	2	1	0.00	22	0.00	0.00	0.00	0.00
206	232	-193	2	1	0.00	22	0.00	0.00	0.00	0.00
206	-193	233	2	1	0.00	22	0.00	0.00	0.00	0.00
206	233	253	2	1	0.00	22	0.00	0.00	0.00	0.00
206	253	-194	2	1	0.00	22	0.00	0.00	0.00	0.00
208	242	241	3	1	0.00	22	0.00	0.00	0.00	0.00
208	242	257	3	1	0.00	22	0.00	0.00	0.00	0.00
209	243	258	2	1	0.00	22	0.00	0.00	0.00	0.00
210	236	243	2	1	0.00	22	0.00	0.00	0.00	0.00
210	243	-209	2	1	0.00	22	0.00	0.00	0.00	0.00
211	226	-197	2	1	0.00	22	0.00	0.00	0.00	0.00
212	-186	220	2	1	0.00	22	0.00	0.00	0.00	0.00
212	227	-186	2	1	0.00	22	0.00	0.00	0.00	0.00
212	227	-198	2	1	0.00	22	0.00	0.00	0.00	0.00
213	206	-177	2	1	0.00	22	0.00	0.00	0.00	0.00
213	-177	212	2	1	0.00	22	0.00	0.00	0.00	0.00
213	212	-181	2	1	0.00	22	0.00	0.00	0.00	0.00
214	219	224	2	1	0.00	22	0.00	0.00	0.00	0.00
214	224	-193	2	1	0.00	22	0.00	0.00	0.00	0.00
215	-196	233	2	1	0.00	22	0.00	0.00	0.00	0.00
215	239	-196	2	1	0.00	22	0.00	0.00	0.00	0.00
215	239	242	3	1	0.00	22	0.00	0.00	0.00	0.00
216	203	207	2	1	0.00	22	0.00	0.00	0.00	0.00
216	207	213	2	1	0.00	22	0.00	0.00	0.00	0.00
216	213	-182	2	1	0.00	22	0.00	0.00	0.00	0.00
217	251	249	2	1	0.00	22	0.00	0.00	0.00	0.00
217	251	253	2	1	0.00	22	0.00	0.00	0.00	0.00
219	208	205	3	1	0.00	22	0.00	0.00	0.00	0.00
219	214	208	3	1	0.00	22	0.00	0.00	0.00	0.00
219	250	214	3	1	0.00	22	-15.00	0.00	0.00	0.00
219	252	250	3	1	0.00	22	-15.00	-15.00	0.00	0.00
219	229	252	3	1	0.00	22	0.00	-15.00	0.00	0.00
219	-194	229	3	1	0.00	22	0.00	0.00	0.00	0.00
219	238	-194	3	1	0.00	22	0.00	0.00	0.00	0.00
219	257	238	3	1	0.00	22	0.00	0.00	0.00	0.00
220	201	247	3	1	0.00	22	0.00	0.00	0.00	0.00
220	202	201	3	1	0.00	22	5.00	2.50	0.00	0.00
220	203	202	3	1	0.00	22	0.00	5.00	0.00	0.00
221	204	201	2	1	0.00	22	0.00	0.00	0.00	0.00
221	210	204	2	1	0.00	22	0.00	0.00	0.00	0.00
222	205	203	3	1	0.00	22	5.00	0.00	0.00	0.00
223	202	206	2	1	0.00	22	0.00	0.00	0.00	0.00
224	204	248	2	1	0.00	22	0.00	0.00	0.00	0.00
224	206	204	2	1	0.00	22	0.00	0.00	0.00	0.00
226	210	-176	2	1	0.00	22	0.00	0.00	0.00	0.00
226	210	211	2	1	0.00	22	0.00	0.00	0.00	0.00
226	211	-177	2	1	0.00	22	0.00	0.00	0.00	0.00
227	216	-178	2	1	0.00	22	0.00	0.00	0.00	0.00
228	217	216	2	1	0.00	22	0.00	0.00	0.00	0.00
229	216	220	2	1	0.00	22	0.00	0.00	0.00	0.00
230	-179	210	2	1	0.00	22	0.00	-7.00	0.00	0.00
230	217	-179	2	1	0.00	22	0.00	0.00	0.00	0.00
230	-180	217	3	1	0.00	22	0.00	10.00	0.00	0.00
230	222	-180	3	1	0.00	22	0.00	0.00	0.00	0.00
230	-187	222	3	1	0.00	22	0.00	0.00	0.00	0.00

Relazione di calcolo

230	-187	-191	3	1		0.00	22	0.00	0.00	0.00	0.00
231	248	247	3	1		0.00	22	0.00	0.00	0.00	0.00
231	-176	248	3	1		0.00	22	0.00	0.00	0.00	0.00
231	209	-176	3	1		0.00	22	0.00	0.00	0.00	0.00
231	-178	209	3	1		0.00	22	0.00	0.00	0.00	0.00
231	215	-178	3	1		0.00	22	0.00	0.00	0.00	0.00
231	221	215	3	1		0.00	22	0.00	0.00	0.00	0.00
231	225	221	3	1		0.00	22	0.00	0.00	0.00	0.00
231	254	225	3	1		0.00	22	0.00	0.00	0.00	0.00
231	234	254	3	1		0.00	22	0.00	0.00	0.00	0.00
231	240	234	3	1		0.00	22	0.00	0.00	0.00	0.00
232	218	223	2	1		0.00	22	0.00	0.00	0.00	0.00
232	-192	223	2	1		0.00	22	0.00	23.00	0.00	0.00
232	231	-192	2	1		0.00	22	0.00	0.00	0.00	0.00
232	237	231	2	1		0.00	22	0.00	0.00	0.00	0.00
233	225	226	2	1		0.00	22	11.00	5.00	0.00	0.00
233	226	227	2	1		0.00	22	5.00	5.00	0.00	0.00
233	227	228	2	1		0.00	22	5.00	0.00	0.00	0.00
233	228	-191	2	1		0.00	22	0.00	0.00	0.00	0.00
233	-191	-192	2	1		0.00	22	0.00	0.00	0.00	0.00
235	228	230	2	1		0.00	22	0.00	0.00	0.00	0.00
235	230	256	2	1		0.00	22	0.00	0.00	0.00	0.00
236	-195	254	2	1		0.00	22	0.00	0.00	0.00	0.00
236	236	-195	2	1		0.00	22	0.00	0.00	0.00	0.00
237	-197	236	2	1		0.00	22	5.00	5.00	0.00	0.00
237	-198	-197	2	1		0.00	22	5.00	5.00	0.00	0.00
237	255	-198	2	1		0.00	22	5.00	5.00	0.00	0.00
237	256	255	2	1		0.00	22	5.00	5.00	0.00	0.00
237	237	256	2	1		0.00	22	5.00	5.00	0.00	0.00
237	237	235	2	1		0.00	22	-5.00	0.00	0.00	0.00
237	235	-196	2	1		0.00	22	0.00	0.00	0.00	0.00
238	235	232	2	1		0.00	22	0.00	0.00	0.00	0.00
238	241	235	3	1		0.00	22	-5.00	0.00	0.00	0.00
239	238	239	3	1		0.00	22	-5.00	0.00	0.00	0.00
240	-208	-195	2	1		0.00	22	0.00	0.00	0.00	0.00
241	-208	240	3	1		0.00	22	0.00	-5.00	0.00	0.00
241	244	-208	3	1		0.00	22	0.00	0.00	0.00	0.00
242	259	245	6	1		0.00	22	0.00	-5.00	0.00	0.00
243	-209	244	6	1		0.00	22	0.00	-7.00	0.00	0.00
243	246	-209	6	1		0.00	22	0.00	0.00	0.00	0.00
243	245	246	6	1		0.00	22	0.00	0.00	0.00	0.00
309	343	351	14	1		0.00	22	-5.00	-5.00	0.00	0.00
310	336	343	14	1		0.00	22	0.00	0.00	0.00	0.00
310	343	-273	14	1		0.00	22	0.00	0.00	0.00	0.00
311	326	-249	14	1		0.00	22	0.00	0.00	0.00	0.00
312	327	-250	14	1		0.00	22	0.00	0.00	0.00	0.00
331	347	325	3	1		0.00	22	0.00	0.00	0.00	0.00
331	334	347	3	1		0.00	22	0.00	0.00	0.00	0.00
331	340	334	3	1		0.00	22	0.00	0.00	0.00	0.00
333	325	326	14	1		0.00	22	6.00	0.00	0.00	0.00
333	326	327	14	1		0.00	22	0.00	0.00	0.00	0.00
333	327	328	14	1		0.00	22	0.00	0.00	0.00	0.00
335	328	330	14	1		0.00	22	0.00	0.00	0.00	0.00
335	330	350	14	1		0.00	22	0.00	0.00	0.00	0.00
336	348	347	14	1		0.00	22	0.00	0.00	0.00	0.00
336	336	348	14	1		0.00	22	0.00	0.00	0.00	0.00
337	-249	336	14	1		0.00	22	0.00	0.00	0.00	0.00
337	-250	-249	14	1		0.00	22	0.00	0.00	0.00	0.00
337	349	-250	14	1		0.00	22	0.00	0.00	0.00	0.00
337	-251	349	14	1		0.00	22	0.00	0.00	0.00	0.00
337	-252	-251	14	1		0.00	22	0.00	0.00	0.00	0.00
337	-253	-252	14	1		0.00	22	0.00	0.00	0.00	0.00
337	350	-253	14	1		0.00	22	0.00	0.00	0.00	0.00
340	-272	348	14	1		0.00	22	0.00	0.00	0.00	0.00
341	-272	340	3	1		0.00	22	0.00	-5.00	0.00	0.00
341	344	-272	3	1		0.00	22	0.00	0.00	0.00	0.00
342	352	345	3	1		0.00	22	0.00	-5.00	0.00	0.00
343	-273	344	3	1		0.00	22	-5.00	-7.00	0.00	0.00
343	346	-273	3	1		0.00	22	0.00	-5.00	0.00	0.00
343	345	346	3	1		0.00	22	0.00	0.00	0.00	0.00

Elenco tipi elementi bidimensionali

Simbologia

- Tb = Numero del tipo muro/elemento bidimensionale
- Comm. = Commento
- Tipo = Tipologia
 - F = Membranale e Flessionale
 - M = Membranale

Relazione di calcolo

W-RC = Winkler resistente solo a compressione
W-RTC = Winkler resistente a trazione e a compressione
Uso = Utilizzo
G = Generico
P = Parete
S = Soletta/Platea
N = Nucleo
M = Muratura ordinaria
L = Pilastro
MA = Muratura armata
Mat. = Numero del materiale
Crit. = Numero del criterio di progetto
Spess. = Spessore
Kt = Coeff. di sottofondo su suolo elastico alla Winkler

Tb	Comm.	Tipo	Uso	Mat.	Crit.	Spess. <cm>	Kt <daN/cm<
1	Pareti sp.30cm	F	P	1	1	30.00	
2	Pareti sp.20cm	F	N	1	1	20.00	
3	Soletta 20cm	F	S	1	1	20.00	
4	Pareti sp.30cm	F	N	1	1	30.00	

Elenco elementi bidimensionali

Simbologia

Bid. = Numero del muro/elemento bidimensionale
Tb = Numero del tipo muro/elemento bidimensionale
FF = Filo fisso
Dy1 = Scost. filo fisso Y1
Dy2 = Scost. filo fisso Y2
Kt = Coeff. di sottofondo su suolo elastico alla Winkler
NN = Nodi

Bid.	Tb	FF	Dy1 <cm>	Dy2 <cm>	Kt <daN/cm<	NN
102	2	22	0.00	0.00		-34 -36 -59 -57
102	2	22	0.00	0.00		-11 -13 -36 -34
102	2	22	0.00	0.00		-59 -61 -99 -97
102	2	22	0.00	0.00		-38 -40 -63 -61
102	2	22	0.00	0.00		-15 -17 -40 -38
102	2	22	0.00	0.00		-63 -65 160 -101
103	4	22	0.00	0.00		-39 -41 -64 -62
103	4	22	0.00	0.00		-60 -62 -100 -98
103	4	22	0.00	0.00		-35 -37 -60 -58
103	4	22	0.00	0.00		-16 -18 -41 -39
103	4	22	0.00	0.00		-64 -69 161 -102
103	4	22	0.00	0.00		-41 -46 -69 -64
104	1	22	0.00	0.00		-31 -32 -55 -54
104	1	22	0.00	0.00		-53 -54 -84 -83
104	1	22	0.00	0.00		-52 -53 -83 153
104	1	22	0.00	0.00		-6 -7 -30 -29
104	1	22	0.00	0.00		-9 -10 -33 -32
104	1	22	0.00	0.00		-30 -31 -54 -53
105	1	22	0.00	0.00		-50 -51 152 -79
105	1	22	0.00	0.00		-49 -50 -79 -78
105	1	22	0.00	0.00		-4 -5 -28 -27
105	1	22	0.00	0.00		-48 -49 -78 -77
105	1	22	0.00	0.00		-2 -3 -26 -25
105	1	22	0.00	0.00		-3 -4 -27 -26
106	4	22	0.00	0.00		-66 -65 160 -103
106	4	22	0.00	0.00		-21 -20 -43 -44
106	4	22	0.00	0.00		-69 -68 -105 161
106	4	22	0.00	0.00		-67 -66 -103 -104
106	4	22	0.00	0.00		-20 -19 -42 -43
106	4	22	0.00	0.00		-23 -22 -45 -46
202	2	22	0.00	0.00		-142 -144 -167 -165
202	2	22	0.00	0.00		-119 -121 -144 -142
202	2	22	0.00	0.00		-163 -165 -199 255
202	2	22	0.00	0.00		-165 -167 -201 -199
202	2	22	0.00	0.00		-146 -148 -171 -169
202	2	22	0.00	0.00		-123 -125 -148 -146
202	2	22	0.00	0.00		-169 -171 258 -203
202	2	22	0.00	0.00		-101 160 -125 -123
203	4	22	0.00	0.00		-96 -98 -120 -118
203	4	22	0.00	0.00		-98 -100 -122 -120
203	4	22	0.00	0.00		-102 161 -129 -124
203	4	22	0.00	0.00		-164 -166 -200 256
203	4	22	0.00	0.00		-124 -129 -152 -147
203	4	22	0.00	0.00		-100 -102 -124 -122
203	4	22	0.00	0.00		-145 -147 -170 -168

Bid.	Tb	FF	Dy1 <cm>	Dy2 <cm>	Kt <daN/cm<	NN
102	2	22	0.00	0.00		-57 -59 -97 158
102	2	22	0.00	0.00		-36 -38 -61 -59
102	2	22	0.00	0.00		-13 -15 -38 -36
102	2	22	0.00	0.00		-61 -63 -101 -99
102	2	22	0.00	0.00		-17 -19 -42 -40
102	2	22	0.00	0.00		-40 -42 -65 -63
103	4	22	0.00	0.00		-62 -64 -102 -100
103	4	22	0.00	0.00		-12 -14 -37 -35
103	4	22	0.00	0.00		-58 -60 -98 -96
103	4	22	0.00	0.00		-37 -39 -62 -60
103	4	22	0.00	0.00		-14 -16 -39 -37
103	4	22	0.00	0.00		-18 -23 -46 -41
104	1	22	0.00	0.00		-8 -9 -32 -31
104	1	22	0.00	0.00		-29 -30 -53 -52
104	1	22	0.00	0.00		-55 -56 154 -85
104	1	22	0.00	0.00		-54 -55 -85 -84
104	1	22	0.00	0.00		-7 -8 -31 -30
104	1	22	0.00	0.00		-32 -33 -56 -55
105	1	22	0.00	0.00		-47 -48 -77 151
105	1	22	0.00	0.00		-1 -2 -25 -24
105	1	22	0.00	0.00		-24 -25 -48 -47
105	1	22	0.00	0.00		-26 -27 -50 -49
105	1	22	0.00	0.00		-25 -26 -49 -48
105	1	22	0.00	0.00		-27 -28 -51 -50
106	4	22	0.00	0.00		-45 -44 -67 -68
106	4	22	0.00	0.00		-46 -45 -68 -69
106	4	22	0.00	0.00		-43 -42 -65 -66
106	4	22	0.00	0.00		-68 -67 -104 -105
106	4	22	0.00	0.00		-44 -43 -66 -67
106	4	22	0.00	0.00		-22 -21 -44 -45
202	2	22	0.00	0.00		-97 -99 -121 -119
202	2	22	0.00	0.00		-144 -146 -169 -167
202	2	22	0.00	0.00		-121 -123 -146 -144
202	2	22	0.00	0.00		-140 -142 -165 -163
202	2	22	0.00	0.00		158 -97 -119 -117
202	2	22	0.00	0.00		-167 -169 -203 -201
202	2	22	0.00	0.00		-117 -119 -142 -140
202	2	22	0.00	0.00		-99 -101 -123 -121
203	4	22	0.00	0.00		-118 -120 -143 -141
203	4	22	0.00	0.00		-120 -122 -145 -143
203	4	22	0.00	0.00		-141 -143 -166 -164
203	4	22	0.00	0.00		-143 -145 -168 -166
203	4	22	0.00	0.00		-168 -170 -204 -202
203	4	22	0.00	0.00		-122 -124 -147 -145
203	4	22	0.00	0.00		-170 -175 259 -204

Relazione di calcolo

203	4	22	0.00	0.00		-166	-168	-202	-200	203	4	22	0.00	0.00		-147	-152	-175	-170
204	1	22	0.00	0.00		-159	-160	-189	-188	204	1	22	0.00	0.00		-136	-137	-160	-159
204	1	22	0.00	0.00		-135	-136	-159	-158	204	1	22	0.00	0.00		-160	-161	-190	-189
204	1	22	0.00	0.00		-85	154	-116	-115	204	1	22	0.00	0.00		-158	-159	-188	251
204	1	22	0.00	0.00		-112	-113	-136	-135	204	1	22	0.00	0.00		-115	-116	-139	-138
204	1	22	0.00	0.00		-138	-139	-162	-161	204	1	22	0.00	0.00		-83	-84	-114	-113
204	1	22	0.00	0.00		-113	-114	-137	-136	204	1	22	0.00	0.00		153	-83	-113	-112
204	1	22	0.00	0.00		-84	-85	-115	-114	204	1	22	0.00	0.00		-114	-115	-138	-137
204	1	22	0.00	0.00		-137	-138	-161	-160	204	1	22	0.00	0.00		-161	-162	252	-190
205	1	22	0.00	0.00		-132	-133	-156	-155	205	1	22	0.00	0.00		-107	-108	-131	-130
205	1	22	0.00	0.00		-130	-131	-154	-153	205	1	22	0.00	0.00		-153	-154	-183	249
205	1	22	0.00	0.00		-77	-78	-109	-108	205	1	22	0.00	0.00		-108	-109	-132	-131
205	1	22	0.00	0.00		-155	-156	-185	-184	205	1	22	0.00	0.00		-79	152	-111	-110
205	1	22	0.00	0.00		-110	-111	-134	-133	205	1	22	0.00	0.00		151	-77	-108	-107
205	1	22	0.00	0.00		-109	-110	-133	-132	205	1	22	0.00	0.00		-156	-157	250	-185
205	1	22	0.00	0.00		-131	-132	-155	-154	205	1	22	0.00	0.00		-154	-155	-184	-183
205	1	22	0.00	0.00		-78	-79	-110	-109	205	1	22	0.00	0.00		-133	-134	-157	-156
206	4	22	0.00	0.00		-104	-103	-126	-127	206	4	22	0.00	0.00		-105	-104	-127	-128
206	4	22	0.00	0.00		-128	-127	-150	-151	206	4	22	0.00	0.00		-151	-150	-173	-174
206	4	22	0.00	0.00		-174	-173	-206	-207	206	4	22	0.00	0.00		-149	-148	-171	-172
206	4	22	0.00	0.00		-172	-171	258	-205	206	4	22	0.00	0.00		161	-105	-128	-129
206	4	22	0.00	0.00		-173	-172	-205	-206	206	4	22	0.00	0.00		-103	160	-125	-126
206	4	22	0.00	0.00		-126	-125	-148	-149	206	4	22	0.00	0.00		-129	-128	-151	-152
206	4	22	0.00	0.00		-127	-126	-149	-150	206	4	22	0.00	0.00		-150	-149	-172	-173
206	4	22	0.00	0.00		-152	-151	-174	-175	206	4	22	0.00	0.00		-175	-174	-207	259
302	2	22	0.00	0.00		-214	-216	-229	-227	302	2	22	0.00	0.00		-203	258	-218	-216
302	2	22	0.00	0.00		-227	-229	-242	-240	302	2	22	0.00	0.00		255	-199	-212	-210
302	2	22	0.00	0.00		-201	-203	-216	-214	302	2	22	0.00	0.00		-236	-238	-254	349
302	2	22	0.00	0.00		-199	-201	-214	-212	302	2	22	0.00	0.00		-240	-242	-264	-259
302	2	22	0.00	0.00		-225	-227	-240	-238	302	2	22	0.00	0.00		-210	-212	-225	-223
302	2	22	0.00	0.00		-223	-225	-238	-236	302	2	22	0.00	0.00		-242	-244	351	-264
302	2	22	0.00	0.00		-238	-240	-259	-254	302	2	22	0.00	0.00		-212	-214	-227	-225
302	2	22	0.00	0.00		-216	-218	-231	-229	302	2	22	0.00	0.00		-229	-231	-244	-242
303	4	22	0.00	0.00		-213	-215	-228	-226	303	4	22	0.00	0.00		-224	-226	-239	-237
303	4	22	0.00	0.00		-237	-239	-258	350	303	4	22	0.00	0.00		-200	-202	-215	-213
303	4	22	0.00	0.00		-228	-230	-243	-241	303	4	22	0.00	0.00		-243	-248	352	-268
303	4	22	0.00	0.00		-211	-213	-226	-224	303	4	22	0.00	0.00		256	-200	-213	-211
303	4	22	0.00	0.00		-202	-204	-217	-215	303	4	22	0.00	0.00		-215	-217	-230	-228
303	4	22	0.00	0.00		-217	-222	-235	-230	303	4	22	0.00	0.00		-241	-243	-268	-263
303	4	22	0.00	0.00		-204	259	-222	-217	303	4	22	0.00	0.00		-239	-241	-263	-258
303	4	22	0.00	0.00		-230	-235	-248	-243	303	4	22	0.00	0.00		-226	-228	-241	-239
306	4	22	0.00	0.00		-248	-247	-271	352	306	4	22	0.00	0.00		-245	-244	351	-269
306	4	22	0.00	0.00		-219	-218	-231	-232	306	4	22	0.00	0.00		-232	-231	-244	-245
306	4	22	0.00	0.00		-234	-233	-246	-247	306	4	22	0.00	0.00		-247	-246	-270	-271
306	4	22	0.00	0.00		-206	-205	-219	-220	306	4	22	0.00	0.00		-220	-219	-232	-233
306	4	22	0.00	0.00		-233	-232	-245	-246	306	4	22	0.00	0.00		-246	-245	-269	-270
306	4	22	0.00	0.00		-205	258	-218	-219	306	4	22	0.00	0.00		259	-207	-221	-222
306	4	22	0.00	0.00		-222	-221	-234	-235	306	4	22	0.00	0.00		-235	-234	-247	-248
306	4	22	0.00	0.00		-207	-206	-220	-221	306	4	22	0.00	0.00		-221	-220	-233	-234
601	3	33	0.00	0.00		351	-269	-265	-264	601	3	33	0.00	0.00		-264	-265	-260	-259
601	3	33	0.00	0.00		-259	-260	-255	-254	601	3	33	0.00	0.00		-254	-255	-251	349
601	3	33	0.00	0.00		-269	-270	-266	-265	601	3	33	0.00	0.00		-265	-266	-261	-260
601	3	33	0.00	0.00		-260	-261	-256	-255	601	3	33	0.00	0.00		-255	-256	-252	-251
601	3	33	0.00	0.00		-270	-271	-267	-266	601	3	33	0.00	0.00		-266	-267	-262	-261
601	3	33	0.00	0.00		-261	-262	-257	-256	601	3	33	0.00	0.00		-256	-257	-253	-252
601	3	33	0.00	0.00		-271	352	-268	-267	601	3	33	0.00	0.00		-267	-268	-263	-262
601	3	33	0.00	0.00		-262	-263	-258	-257	601	3	33	0.00	0.00		-257	-258	350	-253

Elenco tipi solai

Simbologia

Ts	=	Numero del tipo solaio
Comm.	=	Commento
Qps	=	Carico permanente strutturale
Qpn	=	Carico permanente non strutturale
Qa	=	Primo carico accidentale
Qa2	=	Secondo carico accidentale
Qa3	=	Terzo carico accidentale
Rip. ter.	=	Ripartizione su aste terminali
Rip. int.	=	Ripartizione su aste interne
s	=	Coeff. di riduzione
Hs	=	Altezza solaio
Sc	=	Spessore cappa
Crit.	=	Numero del criterio di progetto

Ts	Comm.	Qps <daN/mq>	Qpn <daN/mq>	Qa <daN/mq>	Qa2 <daN/mq>	Qa3 <daN/mq>	Rip. ter.	Rip. int.	s	Hs <cm>	Sc <cm>	Crit.
1	Solaio 26 cm interpiano	383.00	340.00	300.00	0.00	0.00	50.00	50.00	0.33	26.00	5.00	6
2	Solaio 26 cm	383.00	250.00	0.00	80.00	0.00	50.00	50.00	0.33	26.00	5.00	6

Relazione di calcolo

	copertura											
3	Solaio 26 cm sottotetto	383.00	60.00	50.00	0.00	0.00	50.00	50.00	0.33	26.00	5.00	6
4	Solaio 24 cm copertura alto	320.00	30.00	0.00	80.00	0.00	50.00	50.00	0.33	24.00	4.00	1

Elenco solai

Simbologia

Sol. = Numero del solaio
 Ts = Numero del tipo solaio
 Ord. = Orditura
 Nodi = Nodi del solaio

Sol.	Ts	Ord. <grad>	Nodi											
100	1	90.00	128	130	-96	158	-95	127						
101	1	0.00	-91	-92	135	137								
102	1	0.00	122	-82	123	118	-74							
103	1	90.00	117	-74	118	-75	112	-73						
104	1	28.00	148	104	101	147								
105	1	28.00	104	106	102	101								
106	1	118.00	110	111	-72	106	104							
107	1	0.00	110	111	-72	112	-73							
108	1	28.00	-70	110	104	148								
109	1	28.00	109	150	116	117	-73	110	-70					
110	1	28.00	115	121	-80	120	116	150						
111	1	0.00	128	-86	-87	131	130							
112	1	0.00	132	-89	133	-93	135	-92						
113	1	0.00	121	-80	-81	127	126	-88	125					
114	1	0.00	-86	-87	123	-82								
115	1	0.00	158	-97	-99	-101	160	143	136	-94	-95			
116	1	90.00	143	-106	146	145	161	-105	-104	-103	160			
117	1	0.00	162	144	-106	143	136	157						
118	1	0.00	156	157	136	-94	126	-88						
119	1	0.00	107	113	114	108	-71							
120	1	118.00	106	107	103	102								
121	1	0.00	106	107	113	112	-72							
122	1	90.00	112	113	-76	119	-75							
123	1	90.00	107	-71	149	103								
124	1	90.00	113	114	152	-79	-78	-77	151	-76				
125	1	0.00	151	-77	-78	-79	152	154	-85	-84	-83	153		
126	1	90.00	139	142	159	138								
127	1	0.00	153	-83	-84	-85	154	129	-90	155				
128	1	0.00	155	-90	138	139	-93	133						
129	1	90.00	124	153	155	133	-89							
130	1	0.00	119	-76	151	153	124							
131	1	90.00	118	-75	119	124	123							
132	1	0.00	123	124	-89	132	131	-87						
133	1	0.00	135	-93	139	142	141							
134	1	0.00	130	131	-91	137	-96							
135	1	0.00	127	128	-86	-82	-81							
136	1	90.00	127	-95	-94	126								
137	1	27.00	134	140	162	157	156							
200	2	118.00	210	211	-177	206	204							
201	2	90.00	210	211	-177	212	-179							
202	2	90.00	217	-180	218	-181	212	-179						
203	2	0.00	222	-187	223	218	-180							
204	2	0.00	223	224	-193	232	231	-192						
205	2	0.00	230	231	237	256								
206	2	0.00	228	-191	-192	231	230							
207	2	28.00	248	204	201	247								
208	2	118.00	204	206	202	201								
209	2	28.00	-176	210	204	248								
210	2	28.00	209	-178	216	217	-179	210	-176					
211	2	28.00	215	221	-186	220	216	-178						
212	2	28.00	221	-186	227	226	225							
213	3	90.00	228	230	256	255	-198	227						
214	3	90.00	227	-198	-197	226								
215	3	28.00	225	226	-197	236	-195	254						
216	3	0.00	255	-199	-201	-203	258	243	236	-197	-198			
217	3	90.00	243	-209	246	245	259	-207	-206	-205	258			
218	3	0.00	-208	244	-209	243	236	-195						
219	3	28.00	234	240	-208	-195	254							
220	2	90.00	207	208	205	203								
221	2	0.00	206	207	203	202								
222	2	0.00	206	207	213	212	-177							
223	2	90.00	212	213	-182	219	-181							
224	2	0.00	207	213	214	208								

Relazione di calcolo

225	2	90.00	213	214	250	-185	-184	-183	249	-182		
226	2	0.00	249	-183	-184	-185	250	252	-190	-189	-188	251
227	2	90.00	239	242	257	238						
228	2	0.00	251	-188	-189	-190	252	229	-194	253		
229	2	0.00	253	-194	238	239	-196	233				
230	2	90.00	224	251	253	233	-193					
231	2	0.00	219	-182	249	251	224					
232	2	90.00	218	-181	219	224	223					
233	2	0.00	-191	-192	223	-187						
234	2	0.00	232	-193	233	-196	235					
235	2	0.00	235	-196	239	242	241					
236	2	0.00	231	232	235	237						
237	2	0.00	220	-186	227	228	-191	-187	222	-180	217	216
300	4	0.00	328	330	350	-253	-252	-251	349	-250	327	
301	4	0.00	327	-250	-249	326						
302	4	28.00	325	326	-249	336	348	347				
303	4	0.00	349	-254	-259	-264	351	343	336	-249	-250	
304	4	90.00	343	-273	346	345	352	-271	-270	-269	351	
305	4	0.00	-272	344	-273	343	336	348				
306	4	28.00	334	340	-272	348	347					

Carichi

Condizioni di carico elementari

Simbologia

- CCE = Numero della condizione di carico elementare
- Comm. = Commento
- Mx = Moltiplicatore della massa in dir. X
- My = Moltiplicatore della massa in dir. Y
- Mz = Moltiplicatore della massa in dir. Z
- Jpx = Moltiplicatore del momento d'inerzia intorno all'asse X
- Jpy = Moltiplicatore del momento d'inerzia intorno all'asse Y
- Jpz = Moltiplicatore del momento d'inerzia intorno all'asse Z
- Tipo CCE = Tipo di CCE per calcolo agli stati limite
- Sicurezza = Contributo alla sicurezza
 - F = a favore
 - S = a sfavore
 - A = ambigua
- Variabilità = Tipo di variabilità
 - B = di base
 - I = indipendente
 - A = ambigua

CCE	Comm.	Mx	My	Mz	Jpx	Jpy	Jpz	Tipo CCE	Sicurezza	Variabilità
1	PS	1.00	1.00	0.00	0.00	0.00	1.00	1 D.M. 08 Permanenti strutturali	S	--
2	PNS	1.00	1.00	0.00	0.00	0.00	1.00	2 D.M. 08 Permanenti non strutturali	S	--
3	ACC RES	1.00	1.00	0.00	0.00	0.00	1.00	3 D.M. 08 Variabili Categoria A Ambienti ad uso residenziale	S	B
4	ACC NEVE	1.00	1.00	0.00	0.00	0.00	1.00	11 D.M. 08 Variabili Neve (a quota <= 1000 m s.l.m.)	S	B

Elenco carichi aste

Condizione di carico n. 1: PS

Carichi distribuiti

Simbologia

- Asta = Numero dell'asta
- N1 = Nodo iniziale
- N2 = Nodo finale
- E = Elemento provenienza del carico
 - S = Solaio
 - T = Tamponatura
- NE = Numero elemento di provenienza del carico
- T = Tipo di carico
 - QA = Primo carico accidentale
 - QA2 = Secondo carico accidentale
 - QA3 = Terzo carico accidentale
 - QPS = Carico permanente strutturale
 - QPN = Carico permanente non strutturale
 - PP = Peso proprio
 - M = Manuale
- DC = Direzione del carico
 - XG,YG,ZG = secondo gli assi globali
 - XL,YL,ZL = secondo gli assi locali
- Xi = Distanza iniziale
- Qi = Carico iniziale
- Xf = Distanza finale
- Qf = Carico finale

Asta	N1	N2	E	NE	T	DC	Xi	Qi	Xf	Qf
							<m>	<daN/m>	<m>	<daN/m>
0	158	-97	S	115	QPS	ZG	0.00	746.55	0.83	746.55

Relazione di calcolo

0	-97	-99	S	115	QPS	ZG	0.00	746.55	0.83	746.55
0	-99	-101	S	115	QPS	ZG	0.00	746.55	0.83	746.55
0	-101	160	S	115	QPS	ZG	0.00	746.55	0.83	746.55
0	-103	160	S	116	QPS	ZG	0.00	317.25	0.51	318.27
0	-104	-103	S	116	QPS	ZG	0.00	316.23	0.51	317.25
0	-105	-104	S	116	QPS	ZG	0.00	315.21	0.51	316.23
0	161	-105	S	116	QPS	ZG	0.00	0.00	0.05	314.29
0	161	-105	S	116	QPS	ZG	0.05	314.29	0.51	315.21
0	255	-199	S	216	QPS	ZG	0.00	746.55	0.83	746.55
0	-199	-201	S	216	QPS	ZG	0.00	746.55	0.83	746.55
0	349	-254	S	303	QPS	ZG	0.00	623.75	0.83	623.75
0	-201	-203	S	216	QPS	ZG	0.00	746.55	0.83	746.55
0	-254	-259	S	303	QPS	ZG	0.00	623.75	0.83	623.75
0	-203	258	S	216	QPS	ZG	0.00	746.55	0.83	746.55
0	-206	-205	S	217	QPS	ZG	0.00	316.23	0.51	317.25
0	-259	-264	S	303	QPS	ZG	0.00	623.75	0.83	623.75
0	-264	351	S	303	QPS	ZG	0.00	623.75	0.83	623.75
0	-269	351	S	304	QPS	ZG	0.00	265.07	0.51	265.92
0	-205	258	S	217	QPS	ZG	0.00	317.25	0.51	318.27
0	259	-207	S	217	QPS	ZG	0.00	0.00	0.05	314.29
0	259	-207	S	217	QPS	ZG	0.05	314.29	0.51	315.21
0	-270	-269	S	304	QPS	ZG	0.00	264.21	0.51	265.07
0	-207	-206	S	217	QPS	ZG	0.00	315.21	0.51	316.23
0	-271	-270	S	304	QPS	ZG	0.00	263.36	0.51	264.21
0	352	-271	S	304	QPS	ZG	0.00	0.00	0.05	262.60
0	352	-271	S	304	QPS	ZG	0.05	262.60	0.51	263.36
0	151	-77	S	124	QPS	ZG	0.00	442.37	0.66	442.37
0	-77	-78	S	124	QPS	ZG	0.00	442.37	0.66	442.37
0	-78	-79	S	124	QPS	ZG	0.00	442.37	0.66	442.37
0	-79	152	S	124	QPS	ZG	0.00	442.37	0.51	442.37
0	-79	152	S	124	QPS	ZG	0.51	442.37	0.66	0.00
0	249	-183	S	225	QPS	ZG	0.00	442.37	0.66	442.37
0	-183	-184	S	225	QPS	ZG	0.00	442.37	0.66	442.37
0	-184	-185	S	225	QPS	ZG	0.00	442.37	0.66	442.37
0	-185	250	S	225	QPS	ZG	0.00	442.37	0.51	442.37
0	-185	250	S	225	QPS	ZG	0.51	442.37	0.66	0.00
1	1	101	S	--	PP	ZG	0.00	375.00	3.81	375.00
1	101	201	S	--	PP	ZG	0.00	375.00	3.70	375.00
2	2	102	S	--	PP	ZG	0.00	300.00	3.81	300.00
2	102	202	S	--	PP	ZG	0.00	300.00	3.70	300.00
3	3	103	S	--	PP	ZG	0.00	300.00	3.81	300.00
3	103	203	S	--	PP	ZG	0.00	300.00	3.70	300.00
4	4	104	S	--	PP	ZG	0.00	375.00	3.81	375.00
4	104	204	S	--	PP	ZG	0.00	437.50	3.70	437.50
5	5	105	S	--	PP	ZG	0.00	300.00	3.81	300.00
5	105	205	S	--	PP	ZG	0.00	300.00	3.70	300.00
6	6	106	S	--	PP	ZG	0.00	375.00	3.81	375.00
6	106	206	S	--	PP	ZG	0.00	437.50	3.70	437.50
7	7	107	S	--	PP	ZG	0.00	350.00	3.81	350.00
7	107	207	S	--	PP	ZG	0.00	350.00	3.70	350.00
8	8	108	S	--	PP	ZG	0.00	300.00	3.81	300.00
8	108	208	S	--	PP	ZG	0.00	300.00	3.70	300.00
9	9	109	S	--	PP	ZG	0.00	375.00	3.81	375.00
9	109	209	S	--	PP	ZG	0.00	375.00	3.70	375.00
10	10	110	S	--	PP	ZG	0.00	375.00	3.81	375.00
10	110	210	S	--	PP	ZG	0.00	437.50	3.70	437.50
11	11	111	S	--	PP	ZG	0.00	300.00	3.81	300.00
11	111	211	S	--	PP	ZG	0.00	350.00	3.70	350.00
12	12	112	S	--	PP	ZG	0.00	437.50	3.81	437.50
12	112	212	S	--	PP	ZG	0.00	437.50	3.70	437.50
13	13	113	S	--	PP	ZG	0.00	350.00	3.81	350.00
13	113	213	S	--	PP	ZG	0.00	350.00	3.70	350.00
14	14	114	S	--	PP	ZG	0.00	300.00	3.81	300.00
14	114	214	S	--	PP	ZG	0.00	300.00	3.70	300.00
15	15	115	S	--	PP	ZG	0.00	375.00	3.81	375.00
15	115	215	S	--	PP	ZG	0.00	375.00	3.70	375.00
16	16	116	S	--	PP	ZG	0.00	300.00	3.81	300.00
16	116	216	S	--	PP	ZG	0.00	300.00	3.70	300.00
17	17	117	S	--	PP	ZG	0.00	375.00	3.81	375.00
17	117	217	S	--	PP	ZG	0.00	437.50	3.70	437.50
18	18	118	S	--	PP	ZG	0.00	350.00	3.81	350.00
18	118	218	S	--	PP	ZG	0.00	350.00	3.70	350.00
19	19	119	S	--	PP	ZG	0.00	350.00	3.81	350.00
19	119	219	S	--	PP	ZG	0.00	350.00	3.70	350.00
20	20	120	S	--	PP	ZG	0.00	300.00	3.81	300.00
20	120	220	S	--	PP	ZG	0.00	300.00	3.70	300.00
21	21	121	S	--	PP	ZG	0.00	375.00	3.81	375.00
21	121	221	S	--	PP	ZG	0.00	375.00	3.70	375.00
22	22	122	S	--	PP	ZG	0.00	350.00	3.81	350.00

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22	122	222	S	--	PP	ZG	0.00	350.00	3.70	350.00
23	23	123	S	--	PP	ZG	0.00	350.00	3.81	350.00
23	123	223	S	--	PP	ZG	0.00	350.00	3.70	350.00
24	24	124	S	--	PP	ZG	0.00	437.50	3.81	437.50
24	124	224	S	--	PP	ZG	0.00	437.50	3.70	437.50
25	25	125	S	--	PP	ZG	0.00	375.00	3.81	375.00
25	125	225	S	--	PP	ZG	0.00	375.00	3.70	375.00
25	225	325	S	--	PP	ZG	0.00	375.00	1.40	375.00
26	26	126	S	--	PP	ZG	0.00	300.00	3.81	300.00
26	126	226	S	--	PP	ZG	0.00	300.00	3.70	300.00
26	226	326	S	--	PP	ZG	0.00	300.00	1.40	300.00
27	27	127	S	--	PP	ZG	0.00	375.00	3.81	375.00
27	127	227	S	--	PP	ZG	0.00	375.00	3.70	375.00
27	227	327	S	--	PP	ZG	0.00	375.00	1.40	375.00
28	28	128	S	--	PP	ZG	0.00	393.75	3.81	393.75
28	128	228	S	--	PP	ZG	0.00	393.75	3.70	393.75
28	228	328	S	--	PP	ZG	0.00	393.75	1.40	393.75
29	29	129	S	--	PP	ZG	0.00	300.00	3.81	300.00
29	129	229	S	--	PP	ZG	0.00	300.00	3.70	300.00
30	30	130	S	--	PP	ZG	0.00	350.00	3.81	350.00
30	130	230	S	--	PP	ZG	0.00	350.00	3.70	350.00
30	230	330	S	--	PP	ZG	0.00	350.00	1.40	350.00
31	31	131	S	--	PP	ZG	0.00	350.00	3.81	350.00
31	131	231	S	--	PP	ZG	0.00	350.00	3.70	350.00
32	32	132	S	--	PP	ZG	0.00	350.00	3.81	350.00
32	132	232	S	--	PP	ZG	0.00	350.00	3.70	350.00
33	33	133	S	--	PP	ZG	0.00	350.00	3.81	350.00
33	133	233	S	--	PP	ZG	0.00	350.00	3.70	350.00
34	34	134	S	--	PP	ZG	0.00	375.00	3.81	375.00
34	134	234	S	--	PP	ZG	0.00	375.00	3.70	375.00
34	234	334	S	--	PP	ZG	0.00	375.00	1.40	375.00
35	35	135	S	--	PP	ZG	0.00	300.00	3.81	300.00
35	135	235	S	--	PP	ZG	0.00	300.00	3.70	300.00
36	36	136	S	--	PP	ZG	0.00	437.50	3.81	437.50
36	136	236	S	--	PP	ZG	0.00	437.50	3.70	437.50
36	236	336	S	--	PP	ZG	0.00	437.50	1.40	437.50
37	37	137	S	--	PP	ZG	0.00	300.00	3.81	300.00
37	137	237	S	--	PP	ZG	0.00	300.00	3.70	300.00
38	38	138	S	--	PP	ZG	0.00	300.00	3.81	300.00
38	138	238	S	--	PP	ZG	0.00	300.00	3.70	300.00
39	39	139	S	--	PP	ZG	0.00	300.00	3.81	300.00
39	139	239	S	--	PP	ZG	0.00	300.00	3.70	300.00
40	40	140	S	--	PP	ZG	0.00	375.00	3.81	375.00
40	140	240	S	--	PP	ZG	0.00	375.00	3.70	375.00
40	240	340	S	--	PP	ZG	0.00	375.00	1.40	375.00
41	41	141	S	--	PP	ZG	0.00	300.00	3.81	300.00
41	141	241	S	--	PP	ZG	0.00	300.00	3.70	300.00
42	42	142	S	--	PP	ZG	0.00	300.00	3.81	300.00
42	142	242	S	--	PP	ZG	0.00	300.00	3.70	300.00
43	43	143	S	--	PP	ZG	0.00	300.00	3.81	300.00
43	143	243	S	--	PP	ZG	0.00	350.00	3.70	350.00
43	243	343	S	--	PP	ZG	0.00	300.00	1.40	300.00
44	44	144	S	--	PP	ZG	0.00	300.00	3.81	300.00
44	144	244	S	--	PP	ZG	0.00	300.00	3.70	300.00
44	244	344	S	--	PP	ZG	0.00	300.00	1.40	300.00
45	45	145	S	--	PP	ZG	0.00	300.00	3.81	300.00
45	145	245	S	--	PP	ZG	0.00	176.72	3.70	176.72
45	245	345	S	--	PP	ZG	0.00	225.00	1.40	225.00
46	46	146	S	--	PP	ZG	0.00	300.00	3.81	300.00
46	146	246	S	--	PP	ZG	0.00	176.72	3.70	176.72
46	246	346	S	--	PP	ZG	0.00	225.00	1.40	225.00
101	106	107	S	120	QPS	ZG	0.00	706.33	3.44	453.63
101	106	107	S	120	QPS	ZG	3.44	453.63	4.70	0.00
101	106	107	S	--	PP	ZG	0.00	260.00	4.70	260.00
101	107	-71	S	123	QPS	ZG	0.00	453.63	4.15	453.63
101	107	-71	S	--	PP	ZG	0.00	260.00	4.15	260.00
101	-71	108	S	--	PP	ZG	0.00	260.00	0.75	260.00
102	112	-73	S	103	QPS	ZG	0.00	442.37	5.83	442.37
102	112	-73	S	103	QPS	ZG	5.83	442.37	5.93	176.10
102	112	-73	S	--	PP	ZG	0.00	260.00	5.93	260.00
102	112	113	S	122	QPS	ZG	0.00	442.37	4.70	442.37
102	112	113	S	--	PP	ZG	0.00	260.00	4.70	260.00
102	113	114	S	124	QPS	ZG	0.00	442.37	4.90	442.37
102	113	114	S	--	PP	ZG	0.00	260.00	4.90	260.00
103	118	-74	S	103	QPS	ZG	0.00	442.37	3.43	442.37
103	118	-74	S	--	PP	ZG	0.00	260.00	3.43	260.00
103	118	-75	S	103	QPS	ZG	0.00	442.37	2.40	442.37
103	118	-75	S	131	QPS	ZG	0.00	804.69	2.40	804.69
103	118	-75	S	--	PP	ZG	0.00	260.00	2.40	260.00

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103	-75	119	S	122	QPS	ZG	0.00	442.37	2.06	442.37
103	-75	119	S	131	QPS	ZG	0.00	804.69	2.06	804.69
103	-75	119	S	--	PP	ZG	0.00	260.00	2.06	260.00
103	119	-76	S	122	QPS	ZG	0.00	442.37	2.64	442.37
103	119	-76	S	--	PP	ZG	0.00	260.00	2.64	260.00
103	-76	151	S	124	QPS	ZG	0.00	442.37	2.40	442.37
103	-76	151	S	--	PP	ZG	0.00	260.00	2.40	260.00
104	121	-80	S	110	QPS	ZG	0.00	0.00	3.38	272.24
104	121	-80	S	--	PP	ZG	0.00	260.00	3.38	260.00
105	-82	-81	S	--	PP	ZG	0.00	260.00	2.94	260.00
105	123	-82	S	--	PP	ZG	0.00	260.00	3.43	260.00
105	123	124	S	131	QPS	ZG	0.00	804.69	4.46	804.69
105	123	124	S	--	PP	ZG	0.00	260.00	4.46	260.00
105	124	153	S	129	QPS	ZG	0.00	792.12	5.04	792.12
105	124	153	S	--	PP	ZG	0.00	260.00	5.04	260.00
106	130	131	S	--	PP	ZG	0.00	260.00	4.03	260.00
107	-91	-92	S	--	PP	ZG	0.00	260.00	2.22	260.00
108	142	141	S	--	PP	ZG	0.00	262.50	3.94	262.50
108	142	159	S	126	QPS	ZG	0.00	347.34	5.56	357.03
108	142	159	S	--	PP	ZG	0.00	262.50	5.56	262.50
109	143	160	S	116	QPS	ZG	0.00	320.23	2.80	320.49
109	143	160	S	116	QPS	ZG	2.80	320.49	3.90	318.27
109	143	160	S	--	PP	ZG	0.00	260.00	3.90	260.00
110	136	143	S	115	QPS	ZG	0.00	746.55	3.34	746.55
110	136	143	S	117	QPS	ZG	0.00	103.04	3.34	422.49
110	136	143	S	--	PP	ZG	0.00	260.00	3.34	260.00
110	143	-106	S	117	QPS	ZG	0.00	422.49	0.96	514.51
110	143	-106	S	117	QPS	ZG	1.63	267.92	1.67	0.00
110	143	-106	S	117	QPS	ZG	0.96	514.51	1.63	267.92
110	143	-106	S	--	PP	ZG	0.00	260.00	1.67	260.00
111	126	-94	S	118	QPS	ZG	0.00	0.00	0.15	533.70
111	126	-94	S	118	QPS	ZG	3.37	849.77	5.30	118.43
111	126	-94	S	118	QPS	ZG	0.15	533.70	3.37	849.77
111	126	-94	S	--	PP	ZG	0.00	260.00	5.30	260.00
112	-80	120	S	110	QPS	ZG	0.00	512.02	1.38	408.30
112	-80	120	S	--	PP	ZG	0.00	262.50	1.38	262.50
112	-81	-80	S	113	QPS	ZG	0.00	882.94	2.44	647.42
112	-81	-80	S	--	PP	ZG	0.00	262.50	2.44	262.50
112	127	-81	S	113	QPS	ZG	0.00	1037.89	0.07	1030.61
112	127	-81	S	135	QPS	ZG	0.00	562.86	1.60	562.86
112	127	-81	S	113	QPS	ZG	0.07	1030.61	1.60	882.94
112	127	-81	S	--	PP	ZG	0.00	262.50	1.60	262.50
112	127	-95	S	--	PP	ZG	0.00	260.00	5.30	260.00
113	106	-72	S	106	QPS	ZG	0.00	266.46	3.32	0.00
113	106	-72	S	121	QPS	ZG	0.00	899.90	3.32	899.90
113	106	-72	S	--	PP	ZG	0.00	260.00	3.32	260.00
113	-72	112	S	107	QPS	ZG	0.00	1133.40	0.63	1135.60
113	-72	112	S	121	QPS	ZG	0.00	899.90	0.63	899.90
113	-72	112	S	--	PP	ZG	0.00	260.00	0.63	260.00
113	112	-75	S	--	PP	ZG	0.00	260.00	2.31	260.00
114	119	124	S	130	QPS	ZG	0.00	965.16	4.20	965.16
114	119	124	S	--	PP	ZG	0.00	260.00	4.20	260.00
114	124	-89	S	132	QPS	ZG	0.00	854.09	1.65	809.90
114	124	-89	S	132	QPS	ZG	1.65	809.90	4.14	809.90
114	124	-89	S	--	PP	ZG	0.00	260.00	4.14	260.00
115	-93	133	S	112	QPS	ZG	0.00	763.32	2.70	763.32
115	-93	133	S	128	QPS	ZG	0.00	1065.63	2.70	1065.63
115	-93	133	S	--	PP	ZG	0.00	260.00	2.70	260.00
115	139	-93	S	128	QPS	ZG	0.00	0.00	0.05	1065.63
115	139	-93	S	133	QPS	ZG	1.54	763.32	1.55	0.00
115	139	-93	S	133	QPS	ZG	0.00	758.86	1.54	763.32
115	139	-93	S	128	QPS	ZG	0.05	1065.63	1.55	1065.63
115	139	-93	S	--	PP	ZG	0.00	260.00	1.55	260.00
115	139	142	S	133	QPS	ZG	0.00	758.86	1.81	753.62
115	139	142	S	--	PP	ZG	0.00	262.50	1.81	262.50
116	103	107	S	120	QPS	ZG	0.00	241.20	2.37	0.00
116	103	107	S	--	PP	ZG	0.00	260.00	2.37	260.00
116	107	113	S	119	QPS	ZG	0.00	938.05	3.95	938.05
116	107	113	S	121	QPS	ZG	0.00	899.90	3.95	899.90
116	107	113	S	--	PP	ZG	0.00	260.00	3.95	260.00
116	113	-76	S	--	PP	ZG	0.00	260.00	2.31	260.00
117	153	151	S	125	QPS	ZG	0.00	507.48	4.20	507.48
117	153	151	S	130	QPS	ZG	0.00	965.16	4.20	965.16
117	153	151	S	--	PP	ZG	0.00	260.00	4.20	260.00
117	153	155	S	127	QPS	ZG	0.00	507.48	3.24	478.75
117	153	155	S	127	QPS	ZG	3.24	478.75	4.14	478.75
117	153	155	S	--	PP	ZG	0.00	260.00	4.14	260.00
118	149	-71	S	--	PP	ZG	0.00	260.00	2.37	260.00
119	108	105	S	--	PP	ZG	0.00	262.50	2.32	262.50

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119	114	108	S	119	QPS	ZG	0.00	938.05	3.95	938.05
119	114	108	S	--	PP	ZG	0.00	262.50	3.95	262.50
119	152	114	S	124	QPS	ZG	0.00	0.00	2.31	28.66
119	152	114	S	--	PP	ZG	0.00	262.50	2.31	262.50
119	154	152	S	125	QPS	ZG	0.00	507.48	4.20	507.48
119	154	152	S	--	PP	ZG	0.00	262.50	4.20	262.50
119	129	154	S	127	QPS	ZG	0.00	478.24	3.24	506.93
119	129	154	S	--	PP	ZG	0.00	262.50	3.24	262.50
119	-90	129	S	127	QPS	ZG	0.00	478.75	0.90	478.75
119	-90	129	S	--	PP	ZG	0.00	262.50	0.90	262.50
119	138	-90	S	128	QPS	ZG	0.00	1065.63	4.20	1065.63
119	138	-90	S	--	PP	ZG	0.00	262.50	4.20	262.50
119	159	138	S	--	PP	ZG	0.00	262.50	1.86	262.50
120	101	147	S	104	QPS	ZG	0.00	0.00	2.14	5.91
120	101	147	S	--	PP	ZG	0.00	262.50	2.14	262.50
120	102	101	S	105	QPS	ZG	0.00	0.00	5.05	16.19
120	102	101	S	--	PP	ZG	0.00	262.50	5.05	262.50
120	103	102	S	120	QPS	ZG	0.00	513.37	3.04	799.34
120	103	102	S	120	QPS	ZG	3.04	799.34	3.12	0.00
120	103	102	S	--	PP	ZG	0.00	262.50	3.12	262.50
121	104	101	S	104	QPS	ZG	0.00	411.78	4.09	410.46
121	104	101	S	105	QPS	ZG	0.03	969.21	4.12	967.21
121	104	101	S	105	QPS	ZG	0.00	0.00	0.03	969.21
121	104	101	S	104	QPS	ZG	4.09	410.46	4.12	0.00
121	104	101	S	--	PP	ZG	0.00	260.00	4.12	260.00
121	110	104	S	106	QPS	ZG	0.00	10.01	3.04	0.00
121	110	104	S	108	QPS	ZG	3.02	411.79	3.04	0.00
121	110	104	S	108	QPS	ZG	0.00	412.76	3.02	411.78
121	110	104	S	--	PP	ZG	0.00	260.00	3.04	260.00
122	149	103	S	123	QPS	ZG	0.00	453.63	4.15	453.63
122	149	103	S	--	PP	ZG	0.00	262.50	4.15	262.50
122	105	149	S	--	PP	ZG	0.00	262.50	0.75	262.50
123	102	106	S	105	QPS	ZG	0.00	0.00	0.08	967.16
123	102	106	S	120	QPS	ZG	0.00	0.00	4.17	15.79
123	102	106	S	105	QPS	ZG	0.08	967.16	4.17	969.16
123	102	106	S	--	PP	ZG	0.00	260.00	4.17	260.00
124	104	148	S	104	QPS	ZG	0.00	4.35	2.15	0.00
124	104	148	S	108	QPS	ZG	0.00	0.00	2.15	4.35
124	104	148	S	--	PP	ZG	0.00	325.00	2.15	325.00
124	106	104	S	105	QPS	ZG	0.00	5.51	5.06	0.00
124	106	104	S	106	QPS	ZG	5.01	582.75	5.06	0.00
124	106	104	S	106	QPS	ZG	0.00	567.57	5.01	582.75
124	106	104	S	--	PP	ZG	0.00	325.00	5.06	325.00
125	110	-70	S	108	QPS	ZG	0.00	7.82	2.16	0.00
125	110	-70	S	109	QPS	ZG	0.00	0.00	2.16	7.89
125	110	-70	S	--	PP	ZG	0.00	260.00	2.16	260.00
125	110	111	S	106	QPS	ZG	0.00	582.62	2.27	575.75
125	110	111	S	107	QPS	ZG	0.00	0.00	2.27	176.16
125	110	111	S	--	PP	ZG	0.00	260.00	2.27	260.00
125	111	-72	S	106	QPS	ZG	0.00	575.75	2.74	567.45
125	111	-72	S	107	QPS	ZG	0.00	176.16	4.30	510.46
125	111	-72	S	106	QPS	ZG	2.74	567.45	4.30	0.00
125	111	-72	S	--	PP	ZG	0.00	260.00	4.30	260.00
127	116	150	S	109	QPS	ZG	0.00	9.88	2.44	0.00
127	116	150	S	110	QPS	ZG	0.00	0.00	2.44	9.88
127	116	150	S	--	PP	ZG	0.00	260.00	2.44	260.00
128	117	116	S	109	QPS	ZG	0.00	335.37	1.87	197.27
128	117	116	S	--	PP	ZG	0.00	262.50	1.87	262.50
129	116	120	S	110	QPS	ZG	0.00	0.00	0.05	467.78
129	116	120	S	110	QPS	ZG	0.48	467.42	2.12	462.39
129	116	120	S	110	QPS	ZG	0.05	467.78	0.48	467.42
129	116	120	S	--	PP	ZG	0.00	262.50	2.12	262.50
130	-73	110	S	107	QPS	ZG	0.00	1135.41	0.63	1133.21
130	-73	110	S	109	QPS	ZG	3.55	371.39	3.59	0.00
130	-73	110	S	109	QPS	ZG	2.56	445.70	3.55	371.39
130	-73	110	S	109	QPS	ZG	0.00	637.39	2.56	445.70
130	-73	110	S	107	QPS	ZG	2.57	391.08	3.59	0.00
130	-73	110	S	107	QPS	ZG	0.63	1133.21	2.57	391.08
130	-73	110	S	--	PP	ZG	0.00	260.00	3.59	260.00
130	117	-73	S	109	QPS	ZG	0.00	702.27	0.92	631.40
130	117	-73	S	--	PP	ZG	0.00	260.00	0.92	260.00
130	-74	117	S	103	QPS	ZG	0.00	30.75	1.39	12.24
130	-74	117	S	--	PP	ZG	0.00	260.00	1.39	260.00
130	122	-74	S	102	QPS	ZG	0.00	657.00	3.44	657.00
130	122	-74	S	--	PP	ZG	0.00	260.00	3.44	260.00
130	-82	122	S	102	QPS	ZG	0.00	657.00	0.76	657.00
130	-82	122	S	--	PP	ZG	0.00	260.00	0.76	260.00
130	-82	-86	S	114	QPS	ZG	0.00	657.00	1.65	701.19
130	-82	-86	S	135	QPS	ZG	1.60	562.86	1.65	70.86

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130	-82	-86	S	135	QPS	ZG	0.00	562.86	1.60	562.86
130	-82	-86	S	--	PP	ZG	0.00	260.00	1.65	260.00
131	148	147	S	104	QPS	ZG	0.00	0.00	0.02	411.79
131	148	147	S	104	QPS	ZG	0.02	411.79	4.11	410.47
131	148	147	S	--	PP	ZG	0.00	262.50	4.11	262.50
131	-70	148	S	108	QPS	ZG	0.00	0.00	0.04	412.77
131	-70	148	S	108	QPS	ZG	0.04	412.77	3.06	411.80
131	-70	148	S	--	PP	ZG	0.00	262.50	3.06	262.50
131	109	-70	S	109	QPS	ZG	0.00	499.98	0.88	416.62
131	109	-70	S	--	PP	ZG	0.00	262.50	0.88	262.50
131	150	109	S	109	QPS	ZG	0.00	0.00	0.05	467.79
131	150	109	S	109	QPS	ZG	1.65	715.02	3.93	499.98
131	150	109	S	109	QPS	ZG	0.84	795.28	1.65	715.02
131	150	109	S	109	QPS	ZG	0.05	467.79	0.84	795.28
131	150	109	S	--	PP	ZG	0.00	262.50	3.93	262.50
131	115	150	S	110	QPS	ZG	0.00	467.39	0.43	467.75
131	115	150	S	--	PP	ZG	0.00	262.50	0.43	262.50
131	121	115	S	110	QPS	ZG	0.00	0.00	1.59	579.68
131	121	115	S	110	QPS	ZG	2.80	462.25	4.44	467.27
131	121	115	S	110	QPS	ZG	1.59	579.68	2.80	462.25
131	121	115	S	--	PP	ZG	0.00	262.50	4.44	262.50
131	125	121	S	113	QPS	ZG	0.00	920.05	1.71	788.22
131	125	121	S	113	QPS	ZG	1.71	788.22	4.44	577.97
131	125	121	S	--	PP	ZG	0.00	262.50	4.44	262.50
131	-88	125	S	113	QPS	ZG	0.00	0.00	0.17	461.98
131	-88	125	S	113	QPS	ZG	0.17	924.26	0.25	917.78
131	-88	125	S	--	PP	ZG	0.00	262.50	0.25	262.50
131	156	-88	S	118	QPS	ZG	0.00	755.97	3.61	474.78
131	156	-88	S	--	PP	ZG	0.00	262.50	3.61	262.50
131	134	156	S	137	QPS	ZG	0.00	726.70	0.57	727.09
131	134	156	S	--	PP	ZG	0.00	262.50	0.57	262.50
131	140	134	S	137	QPS	ZG	0.00	727.08	4.44	726.73
131	140	134	S	--	PP	ZG	0.00	262.50	4.44	262.50
132	118	123	S	102	QPS	ZG	0.00	657.00	4.20	657.00
132	118	123	S	--	PP	ZG	0.00	260.00	4.20	260.00
132	-87	123	S	114	QPS	ZG	0.00	694.44	1.67	650.67
132	-87	123	S	132	QPS	ZG	0.00	802.10	1.67	845.87
132	-87	123	S	--	PP	ZG	0.00	260.00	1.67	260.00
132	131	-87	S	111	QPS	ZG	0.00	772.04	2.48	772.04
132	131	-87	S	132	QPS	ZG	0.00	809.90	2.48	809.90
132	131	-87	S	--	PP	ZG	0.00	260.00	2.48	260.00
132	-91	131	S	134	QPS	ZG	0.00	771.10	0.65	772.04
132	-91	131	S	--	PP	ZG	0.00	260.00	0.65	260.00
132	137	-91	S	101	QPS	ZG	0.00	0.00	0.05	424.86
132	137	-91	S	134	QPS	ZG	0.00	768.02	2.11	771.10
132	137	-91	S	101	QPS	ZG	0.05	424.86	2.11	424.86
132	137	-91	S	--	PP	ZG	0.00	260.00	2.11	260.00
134	126	-88	S	113	QPS	ZG	0.00	28.34	2.79	0.00
134	126	-88	S	118	QPS	ZG	0.00	0.00	2.79	29.16
134	126	-88	S	--	PP	ZG	0.00	260.00	2.79	260.00
134	126	127	S	136	QPS	ZG	0.00	1014.18	2.71	1014.18
134	126	127	S	--	PP	ZG	0.00	260.00	2.71	260.00
134	127	128	S	100	QPS	ZG	0.00	1014.00	2.57	1004.57
134	127	128	S	135	QPS	ZG	0.00	10.78	2.57	1.36
134	127	128	S	--	PP	ZG	0.00	260.00	2.57	260.00
134	128	-86	S	--	PP	ZG	0.00	260.00	0.37	260.00
134	-86	-87	S	--	PP	ZG	0.00	260.00	3.66	260.00
135	128	130	S	111	QPS	ZG	0.00	772.04	2.48	772.04
135	128	130	S	--	PP	ZG	0.00	260.00	2.48	260.00
135	130	-96	S	100	QPS	ZG	0.00	4.02	2.76	0.00
135	130	-96	S	134	QPS	ZG	0.00	772.02	2.76	768.00
135	130	-96	S	--	PP	ZG	0.00	260.00	2.76	260.00
136	157	156	S	118	QPS	ZG	0.00	90.48	3.80	383.05
136	157	156	S	137	QPS	ZG	0.00	0.00	3.80	2.62
136	157	156	S	--	PP	ZG	0.00	260.00	3.80	260.00
136	136	157	S	117	QPS	ZG	0.00	46.45	0.48	0.00
136	136	157	S	118	QPS	ZG	0.00	53.39	0.48	90.48
136	136	157	S	--	PP	ZG	0.00	260.00	0.48	260.00
137	-94	136	S	--	PP	ZG	0.00	260.00	0.62	260.00
137	-95	-94	S	136	QPS	ZG	0.00	1014.18	2.71	1014.18
137	-95	-94	S	--	PP	ZG	0.00	260.00	2.71	260.00
137	158	-95	S	100	QPS	ZG	0.00	1012.10	0.57	1014.18
137	158	-95	S	--	PP	ZG	0.00	260.00	0.57	260.00
137	-96	158	S	100	QPS	ZG	0.00	0.00	0.02	528.88
137	-96	158	S	100	QPS	ZG	0.02	1004.76	2.02	1012.10
137	-96	158	S	--	PP	ZG	0.00	260.00	2.02	260.00
137	137	-96	S	--	PP	ZG	0.00	260.00	4.01	260.00
137	137	135	S	101	QPS	ZG	0.00	0.00	2.22	9.69
137	137	135	S	--	PP	ZG	0.00	262.50	2.22	262.50

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137	135	-93	S	112	QPS	ZG	0.00	0.00	3.99	1.92
137	135	-93	S	133	QPS	ZG	0.00	1.92	3.99	0.00
137	135	-93	S	--	PP	ZG	0.00	260.00	3.99	260.00
138	-92	132	S	112	QPS	ZG	0.00	763.32	0.65	763.32
138	-92	132	S	--	PP	ZG	0.00	260.00	0.65	260.00
138	135	-92	S	101	QPS	ZG	0.00	424.86	2.06	424.86
138	135	-92	S	112	QPS	ZG	0.01	763.32	2.06	763.32
138	135	-92	S	112	QPS	ZG	0.00	0.00	0.01	763.32
138	135	-92	S	--	PP	ZG	0.00	260.00	2.06	260.00
138	141	135	S	133	QPS	ZG	0.00	753.53	1.81	758.78
138	141	135	S	133	QPS	ZG	1.81	758.78	3.35	763.23
138	141	135	S	--	PP	ZG	0.00	262.50	3.35	262.50
139	138	139	S	126	QPS	ZG	0.00	357.02	5.56	347.32
139	138	139	S	128	QPS	ZG	0.00	9.69	5.56	0.00
139	138	139	S	--	PP	ZG	0.00	262.50	5.56	262.50
140	162	157	S	117	QPS	ZG	0.00	460.29	1.08	377.97
140	162	157	S	137	QPS	ZG	5.04	727.12	5.05	0.00
140	162	157	S	137	QPS	ZG	4.47	726.73	5.04	727.11
140	162	157	S	137	QPS	ZG	0.03	727.08	4.47	726.73
140	162	157	S	137	QPS	ZG	0.00	0.00	0.03	727.07
140	162	157	S	117	QPS	ZG	4.81	92.18	5.05	0.00
140	162	157	S	117	QPS	ZG	1.08	377.97	4.81	92.18
140	162	157	S	--	PP	ZG	0.00	260.00	5.05	260.00
141	162	140	S	137	QPS	ZG	0.00	0.00	3.80	5.24
141	162	140	S	--	PP	ZG	0.00	262.50	3.80	262.50
141	144	162	S	117	QPS	ZG	0.00	123.35	1.45	236.88
141	144	162	S	--	PP	ZG	0.00	262.50	1.45	262.50
142	161	145	S	116	QPS	ZG	0.00	0.00	1.64	9.63
142	161	145	S	--	PP	ZG	0.00	262.50	1.64	262.50
143	-106	144	S	117	QPS	ZG	0.00	0.00	1.40	8.10
143	-106	144	S	--	PP	ZG	0.00	262.50	1.40	262.50
143	146	-106	S	116	QPS	ZG	0.00	320.49	2.80	320.23
143	146	-106	S	--	PP	ZG	0.00	262.50	2.80	262.50
143	145	146	S	116	QPS	ZG	0.00	314.28	3.07	320.47
143	145	146	S	--	PP	ZG	0.00	262.50	3.07	262.50
149	132	-89	S	--	PP	ZG	0.00	260.00	2.01	260.00
149	-89	133	S	129	QPS	ZG	0.00	792.12	1.98	792.12
149	-89	133	S	--	PP	ZG	0.00	260.00	1.98	260.00
149	133	155	S	129	QPS	ZG	0.00	792.12	3.06	792.12
149	133	155	S	--	PP	ZG	0.00	260.00	3.06	260.00
149	155	-90	S	--	PP	ZG	0.00	260.00	2.50	260.00
201	206	207	S	--	PP	ZG	0.00	260.00	4.70	260.00
201	207	208	S	220	QPS	ZG	0.00	453.63	4.90	444.06
201	207	208	S	--	PP	ZG	0.00	260.00	4.90	260.00
202	212	-179	S	201	QPS	ZG	0.00	121.10	5.86	687.63
202	212	-179	S	202	QPS	ZG	5.83	442.37	5.93	176.10
202	212	-179	S	202	QPS	ZG	0.00	442.37	5.83	442.37
202	212	-179	S	201	QPS	ZG	5.86	687.63	5.93	0.00
202	212	-179	S	--	PP	ZG	0.00	260.00	5.93	260.00
202	212	213	S	223	QPS	ZG	0.00	442.37	4.70	442.37
202	212	213	S	--	PP	ZG	0.00	260.00	4.70	260.00
202	213	214	S	225	QPS	ZG	0.00	442.37	4.90	442.37
202	213	214	S	--	PP	ZG	0.00	260.00	4.90	260.00
203	218	-180	S	202	QPS	ZG	0.00	442.37	3.43	442.37
203	218	-180	S	--	PP	ZG	0.00	260.00	3.43	260.00
203	218	-181	S	202	QPS	ZG	0.00	442.37	2.40	442.37
203	218	-181	S	232	QPS	ZG	0.00	804.69	2.40	804.69
203	218	-181	S	--	PP	ZG	0.00	260.00	2.40	260.00
203	-181	219	S	223	QPS	ZG	0.00	442.37	2.06	442.37
203	-181	219	S	232	QPS	ZG	0.00	804.69	2.06	804.69
203	-181	219	S	--	PP	ZG	0.00	260.00	2.06	260.00
203	219	-182	S	223	QPS	ZG	0.00	442.37	2.64	442.37
203	219	-182	S	--	PP	ZG	0.00	260.00	2.64	260.00
203	-182	249	S	225	QPS	ZG	0.00	442.37	2.40	442.37
203	-182	249	S	--	PP	ZG	0.00	260.00	2.40	260.00
204	221	-186	S	211	QPS	ZG	0.00	0.00	3.38	272.24
204	221	-186	S	212	QPS	ZG	0.00	344.24	3.38	0.00
204	221	-186	S	--	PP	ZG	0.00	260.00	3.38	260.00
205	223	-187	S	--	PP	ZG	0.00	260.00	3.43	260.00
205	223	224	S	232	QPS	ZG	0.00	804.69	4.46	804.69
205	223	224	S	--	PP	ZG	0.00	260.00	4.46	260.00
205	224	251	S	230	QPS	ZG	0.00	792.12	5.04	792.12
205	224	251	S	--	PP	ZG	0.00	260.00	5.04	260.00
206	230	231	S	--	PP	ZG	0.00	260.00	4.03	260.00
206	231	232	S	--	PP	ZG	0.00	260.00	2.22	260.00
206	232	-193	S	--	PP	ZG	0.00	260.00	2.01	260.00
206	-193	233	S	230	QPS	ZG	0.00	792.12	1.98	792.12
206	-193	233	S	--	PP	ZG	0.00	260.00	1.98	260.00
206	233	253	S	230	QPS	ZG	0.00	792.12	3.06	792.12

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206	233	253	S	--	PP	ZG	0.00	260.00	3.06	260.00
206	253	-194	S	--	PP	ZG	0.00	260.00	2.50	260.00
208	242	241	S	--	PP	ZG	0.00	262.50	3.94	262.50
208	242	257	S	227	QPS	ZG	0.00	347.34	5.56	357.03
208	242	257	S	--	PP	ZG	0.00	262.50	5.56	262.50
209	243	258	S	217	QPS	ZG	0.00	325.40	2.80	320.49
209	243	258	S	217	QPS	ZG	2.80	320.49	3.90	318.27
209	243	258	S	--	PP	ZG	0.00	260.00	3.90	260.00
210	236	243	S	216	QPS	ZG	0.00	746.55	3.34	746.55
210	236	243	S	218	QPS	ZG	0.00	103.04	3.34	422.49
210	236	243	S	--	PP	ZG	0.00	260.00	3.34	260.00
210	243	-209	S	218	QPS	ZG	0.00	422.49	0.96	514.51
210	243	-209	S	218	QPS	ZG	1.63	267.92	1.70	0.00
210	243	-209	S	218	QPS	ZG	0.96	514.51	1.63	267.92
210	243	-209	S	--	PP	ZG	0.00	260.00	1.70	260.00
211	226	-197	S	215	QPS	ZG	0.00	0.00	1.35	511.50
211	226	-197	S	215	QPS	ZG	1.35	511.50	5.30	816.50
211	226	-197	S	--	PP	ZG	0.00	260.00	5.30	260.00
212	-186	220	S	211	QPS	ZG	0.00	512.02	1.38	408.30
212	-186	220	S	237	QPS	ZG	0.00	562.86	1.38	562.86
212	-186	220	S	--	PP	ZG	0.00	260.00	1.38	260.00
212	227	-186	S	212	QPS	ZG	0.00	818.21	2.24	647.42
212	227	-186	S	237	QPS	ZG	0.00	562.86	4.04	562.86
212	227	-186	S	212	QPS	ZG	2.24	647.42	4.04	0.00
212	227	-186	S	--	PP	ZG	0.00	260.00	4.04	260.00
212	227	-198	S	--	PP	ZG	0.00	260.00	5.30	260.00
213	206	-177	S	200	QPS	ZG	0.00	266.46	3.32	0.00
213	206	-177	S	222	QPS	ZG	0.00	899.90	3.32	899.90
213	206	-177	S	--	PP	ZG	0.00	260.00	3.32	260.00
213	-177	212	S	222	QPS	ZG	0.00	899.90	0.63	899.90
213	-177	212	S	--	PP	ZG	0.00	260.00	0.63	260.00
213	212	-181	S	--	PP	ZG	0.00	260.00	2.31	260.00
214	219	224	S	231	QPS	ZG	0.00	965.16	4.20	965.16
214	219	224	S	--	PP	ZG	0.00	260.00	4.20	260.00
214	224	-193	S	204	QPS	ZG	0.00	854.09	1.65	809.90
214	224	-193	S	204	QPS	ZG	1.65	809.90	4.14	809.90
214	224	-193	S	--	PP	ZG	0.00	260.00	4.14	260.00
215	-196	233	S	229	QPS	ZG	0.00	1065.63	2.70	1065.63
215	-196	233	S	234	QPS	ZG	0.00	763.32	2.70	763.32
215	-196	233	S	--	PP	ZG	0.00	260.00	2.70	260.00
215	239	-196	S	229	QPS	ZG	0.00	0.00	0.05	1065.63
215	239	-196	S	235	QPS	ZG	1.54	763.32	1.55	0.00
215	239	-196	S	235	QPS	ZG	0.00	758.86	1.54	763.32
215	239	-196	S	229	QPS	ZG	0.05	1065.63	1.55	1065.63
215	239	-196	S	--	PP	ZG	0.00	260.00	1.55	260.00
215	239	242	S	235	QPS	ZG	0.00	758.86	1.81	753.62
215	239	242	S	--	PP	ZG	0.00	262.50	1.81	262.50
216	203	207	S	221	QPS	ZG	0.00	670.07	2.37	899.90
216	203	207	S	--	PP	ZG	0.00	260.00	2.37	260.00
216	207	213	S	222	QPS	ZG	0.00	899.90	3.95	899.90
216	207	213	S	224	QPS	ZG	0.00	938.05	3.95	938.05
216	207	213	S	--	PP	ZG	0.00	260.00	3.95	260.00
216	213	-182	S	--	PP	ZG	0.00	260.00	2.31	260.00
217	251	249	S	226	QPS	ZG	0.00	507.48	4.20	507.48
217	251	249	S	231	QPS	ZG	0.00	965.16	4.20	965.16
217	251	249	S	--	PP	ZG	0.00	260.00	4.20	260.00
217	251	253	S	228	QPS	ZG	0.00	507.48	3.24	478.75
217	251	253	S	228	QPS	ZG	3.24	478.75	4.14	478.75
217	251	253	S	--	PP	ZG	0.00	260.00	4.14	260.00
219	208	205	S	--	PP	ZG	0.00	262.50	2.32	262.50
219	214	208	S	224	QPS	ZG	0.00	938.05	3.95	938.05
219	214	208	S	--	PP	ZG	0.00	262.50	3.95	262.50
219	250	214	S	225	QPS	ZG	0.00	0.00	2.31	28.66
219	250	214	S	--	PP	ZG	0.00	262.50	2.31	262.50
219	252	250	S	226	QPS	ZG	0.00	507.48	4.20	507.48
219	252	250	S	--	PP	ZG	0.00	262.50	4.20	262.50
219	229	252	S	228	QPS	ZG	0.00	478.24	3.24	506.93
219	229	252	S	--	PP	ZG	0.00	262.50	3.24	262.50
219	-194	229	S	228	QPS	ZG	0.00	478.75	0.90	478.75
219	-194	229	S	--	PP	ZG	0.00	262.50	0.90	262.50
219	238	-194	S	229	QPS	ZG	0.00	1065.63	4.20	1065.63
219	238	-194	S	--	PP	ZG	0.00	262.50	4.20	262.50
219	257	238	S	--	PP	ZG	0.00	262.50	1.86	262.50
220	201	247	S	207	QPS	ZG	0.00	0.00	2.14	5.91
220	201	247	S	--	PP	ZG	0.00	262.50	2.14	262.50
220	202	201	S	208	QPS	ZG	0.00	799.32	4.98	788.78
220	202	201	S	208	QPS	ZG	4.98	788.78	5.05	0.00
220	202	201	S	--	PP	ZG	0.00	262.50	5.05	262.50
220	203	202	S	221	QPS	ZG	0.00	290.91	3.12	0.00

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220	203	202	S	--	PP	ZG	0.00	262.50	3.12	262.50
221	204	201	S	207	QPS	ZG	0.00	411.78	4.09	410.46
221	204	201	S	208	QPS	ZG	0.00	13.56	4.12	0.00
221	204	201	S	207	QPS	ZG	4.09	410.46	4.12	0.00
221	204	201	S	--	PP	ZG	0.00	260.00	4.12	260.00
221	210	204	S	200	QPS	ZG	0.00	10.01	3.04	0.00
221	210	204	S	209	QPS	ZG	3.02	411.78	3.04	0.00
221	210	204	S	209	QPS	ZG	0.00	412.76	3.02	411.78
221	210	204	S	--	PP	ZG	0.00	260.00	3.04	260.00
222	205	203	S	220	QPS	ZG	0.00	444.03	4.90	453.61
222	205	203	S	--	PP	ZG	0.00	262.50	4.90	262.50
223	202	206	S	208	QPS	ZG	0.00	15.78	4.17	0.00
223	202	206	S	221	QPS	ZG	1.52	597.73	4.17	802.75
223	202	206	S	221	QPS	ZG	0.00	0.00	1.52	597.73
223	202	206	S	--	PP	ZG	0.00	260.00	4.17	260.00
224	204	248	S	207	QPS	ZG	0.00	4.35	2.15	0.00
224	204	248	S	209	QPS	ZG	0.00	0.00	2.15	4.35
224	204	248	S	--	PP	ZG	0.00	260.00	2.15	260.00
224	206	204	S	200	QPS	ZG	0.00	567.57	5.01	582.75
224	206	204	S	208	QPS	ZG	0.08	799.42	5.06	788.88
224	206	204	S	208	QPS	ZG	0.00	0.00	0.08	799.42
224	206	204	S	200	QPS	ZG	5.01	582.75	5.06	0.00
224	206	204	S	--	PP	ZG	0.00	260.00	5.06	260.00
226	210	-176	S	209	QPS	ZG	0.00	9.11	2.16	0.00
226	210	-176	S	210	QPS	ZG	0.00	0.00	2.16	9.21
226	210	-176	S	--	PP	ZG	0.00	260.00	2.16	260.00
226	210	211	S	200	QPS	ZG	0.00	582.62	2.27	575.75
226	210	211	S	201	QPS	ZG	0.00	613.94	2.27	439.38
226	210	211	S	--	PP	ZG	0.00	260.00	2.27	260.00
226	211	-177	S	200	QPS	ZG	0.00	575.75	2.74	567.45
226	211	-177	S	201	QPS	ZG	0.00	439.38	4.30	108.12
226	211	-177	S	200	QPS	ZG	2.74	567.45	4.30	0.00
226	211	-177	S	--	PP	ZG	0.00	260.00	4.30	260.00
227	216	-178	S	210	QPS	ZG	0.00	9.88	2.44	0.00
227	216	-178	S	211	QPS	ZG	0.00	0.00	2.44	9.88
227	216	-178	S	--	PP	ZG	0.00	260.00	2.44	260.00
228	217	216	S	210	QPS	ZG	0.00	335.37	1.87	197.27
228	217	216	S	237	QPS	ZG	0.00	19.65	1.87	0.00
228	217	216	S	--	PP	ZG	0.00	260.00	1.87	260.00
229	216	220	S	211	QPS	ZG	0.00	0.00	0.05	467.78
229	216	220	S	237	QPS	ZG	1.68	465.69	2.12	499.88
229	216	220	S	237	QPS	ZG	0.11	326.84	1.68	465.69
229	216	220	S	237	QPS	ZG	0.00	0.00	0.11	326.84
229	216	220	S	211	QPS	ZG	0.48	467.42	2.12	462.39
229	216	220	S	211	QPS	ZG	0.05	467.78	0.48	467.42
229	216	220	S	--	PP	ZG	0.00	260.00	2.12	260.00
230	-179	210	S	201	QPS	ZG	0.00	0.00	3.59	12.49
230	-179	210	S	210	QPS	ZG	3.54	371.96	3.59	0.00
230	-179	210	S	210	QPS	ZG	2.56	445.70	3.54	371.96
230	-179	210	S	210	QPS	ZG	0.00	637.39	2.56	445.70
230	-179	210	S	--	PP	ZG	0.00	260.00	3.59	260.00
230	217	-179	S	210	QPS	ZG	0.00	702.27	0.92	631.40
230	217	-179	S	--	PP	ZG	0.00	260.00	0.92	260.00
230	-180	217	S	202	QPS	ZG	0.00	30.75	1.39	12.24
230	-180	217	S	237	QPS	ZG	0.00	523.10	1.39	367.13
230	-180	217	S	--	PP	ZG	0.00	262.50	1.39	262.50
230	222	-180	S	203	QPS	ZG	0.00	657.00	3.44	657.00
230	222	-180	S	237	QPS	ZG	3.05	562.86	3.44	524.36
230	222	-180	S	237	QPS	ZG	0.00	562.86	3.05	562.86
230	222	-180	S	--	PP	ZG	0.00	262.50	3.44	262.50
230	-187	222	S	203	QPS	ZG	0.00	657.00	0.76	657.00
230	-187	222	S	237	QPS	ZG	0.00	562.86	0.76	562.86
230	-187	222	S	--	PP	ZG	0.00	262.50	0.76	262.50
230	-187	-191	S	233	QPS	ZG	0.00	657.00	1.65	701.19
230	-187	-191	S	237	QPS	ZG	1.60	562.86	1.65	70.86
230	-187	-191	S	237	QPS	ZG	0.00	562.86	1.60	562.86
230	-187	-191	S	--	PP	ZG	0.00	262.50	1.65	262.50
231	248	247	S	207	QPS	ZG	0.00	0.00	0.02	411.79
231	248	247	S	207	QPS	ZG	0.02	411.79	4.11	410.47
231	248	247	S	--	PP	ZG	0.00	262.50	4.11	262.50
231	-176	248	S	209	QPS	ZG	0.00	0.00	0.05	412.77
231	-176	248	S	209	QPS	ZG	0.05	412.77	3.07	411.80
231	-176	248	S	--	PP	ZG	0.00	262.50	3.07	262.50
231	209	-176	S	210	QPS	ZG	0.00	499.98	0.88	417.26
231	209	-176	S	--	PP	ZG	0.00	262.50	0.88	262.50
231	-178	209	S	210	QPS	ZG	0.00	0.00	0.05	467.79
231	-178	209	S	210	QPS	ZG	1.65	715.02	3.93	499.98
231	-178	209	S	210	QPS	ZG	0.84	795.28	1.65	715.02
231	-178	209	S	210	QPS	ZG	0.05	467.79	0.84	795.28

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231	-178	209	S	--	PP	ZG	0.00	262.50	3.93	262.50
231	215	-178	S	211	QPS	ZG	0.00	467.39	0.43	467.75
231	215	-178	S	--	PP	ZG	0.00	262.50	0.43	262.50
231	221	215	S	211	QPS	ZG	0.00	0.00	1.59	579.68
231	221	215	S	211	QPS	ZG	2.80	462.25	4.44	467.27
231	221	215	S	211	QPS	ZG	1.59	579.68	2.80	462.25
231	221	215	S	--	PP	ZG	0.00	262.50	4.44	262.50
231	225	221	S	212	QPS	ZG	0.00	0.00	1.19	463.05
231	225	221	S	212	QPS	ZG	2.46	926.48	4.44	733.08
231	225	221	S	212	QPS	ZG	1.19	463.05	2.46	926.48
231	225	221	S	--	PP	ZG	0.00	262.50	4.44	262.50
231	254	225	S	215	QPS	ZG	0.00	0.00	0.08	727.10
231	254	225	S	215	QPS	ZG	0.38	924.65	3.87	579.24
231	254	225	S	215	QPS	ZG	0.09	819.28	0.38	924.65
231	254	225	S	215	QPS	ZG	0.08	727.11	0.09	819.29
231	254	225	S	--	PP	ZG	0.00	262.50	3.87	262.50
231	234	254	S	219	QPS	ZG	0.00	726.66	0.57	727.04
231	234	254	S	--	PP	ZG	0.00	262.50	0.57	262.50
231	240	234	S	219	QPS	ZG	0.00	0.00	0.04	727.08
231	240	234	S	219	QPS	ZG	0.04	727.08	4.44	726.74
231	240	234	S	--	PP	ZG	0.00	262.50	4.44	262.50
232	218	223	S	203	QPS	ZG	0.00	657.00	4.20	657.00
232	218	223	S	--	PP	ZG	0.00	260.00	4.20	260.00
232	-192	223	S	204	QPS	ZG	0.00	802.10	1.67	845.87
232	-192	223	S	233	QPS	ZG	0.00	694.44	1.67	650.67
232	-192	223	S	--	PP	ZG	0.00	260.00	1.67	260.00
232	231	-192	S	204	QPS	ZG	0.00	809.90	2.48	809.90
232	231	-192	S	206	QPS	ZG	0.00	772.04	2.48	772.04
232	231	-192	S	--	PP	ZG	0.00	260.00	2.48	260.00
232	237	231	S	205	QPS	ZG	0.00	768.02	2.76	772.04
232	237	231	S	236	QPS	ZG	0.05	424.86	2.76	424.86
232	237	231	S	236	QPS	ZG	0.00	0.00	0.05	424.86
232	237	231	S	--	PP	ZG	0.00	260.00	2.76	260.00
233	225	226	S	212	QPS	ZG	0.00	0.00	2.67	205.96
233	225	226	S	215	QPS	ZG	0.00	257.61	2.67	0.00
233	225	226	S	--	PP	ZG	0.00	260.00	2.67	260.00
233	226	227	S	212	QPS	ZG	0.00	217.44	2.71	435.05
233	226	227	S	214	QPS	ZG	0.00	1014.18	2.71	1014.18
233	226	227	S	--	PP	ZG	0.00	260.00	2.71	260.00
233	227	228	S	213	QPS	ZG	0.00	1014.00	2.57	1004.57
233	227	228	S	237	QPS	ZG	0.00	10.78	2.57	1.36
233	227	228	S	--	PP	ZG	0.00	260.00	2.57	260.00
233	228	-191	S	--	PP	ZG	0.00	260.00	0.37	260.00
233	-191	-192	S	--	PP	ZG	0.00	260.00	3.66	260.00
235	228	230	S	206	QPS	ZG	0.00	772.04	2.48	772.04
235	228	230	S	--	PP	ZG	0.00	260.00	2.48	260.00
235	230	256	S	205	QPS	ZG	0.00	772.02	2.76	768.00
235	230	256	S	213	QPS	ZG	0.00	4.02	2.76	0.00
235	230	256	S	--	PP	ZG	0.00	260.00	2.76	260.00
236	-195	254	S	215	QPS	ZG	0.00	15.31	3.80	0.00
236	-195	254	S	219	QPS	ZG	0.00	0.00	3.80	15.32
236	-195	254	S	--	PP	ZG	0.00	260.00	3.80	260.00
236	236	-195	S	215	QPS	ZG	0.00	17.26	0.48	15.32
236	236	-195	S	218	QPS	ZG	0.00	46.45	0.48	0.00
236	236	-195	S	--	PP	ZG	0.00	260.00	0.48	260.00
237	-197	236	S	215	QPS	ZG	0.00	434.14	0.62	384.67
237	-197	236	S	--	PP	ZG	0.00	260.00	0.62	260.00
237	-198	-197	S	214	QPS	ZG	0.00	1014.18	2.71	1014.18
237	-198	-197	S	--	PP	ZG	0.00	260.00	2.71	260.00
237	255	-198	S	213	QPS	ZG	0.00	1012.10	0.57	1014.18
237	255	-198	S	--	PP	ZG	0.00	260.00	0.57	260.00
237	256	255	S	213	QPS	ZG	0.00	0.00	0.02	528.88
237	256	255	S	213	QPS	ZG	0.02	1004.76	2.02	1012.10
237	256	255	S	--	PP	ZG	0.00	260.00	2.02	260.00
237	237	256	S	--	PP	ZG	0.00	260.00	4.01	260.00
237	237	235	S	236	QPS	ZG	0.00	0.00	2.22	9.69
237	237	235	S	--	PP	ZG	0.00	260.00	2.22	260.00
237	235	-196	S	234	QPS	ZG	0.00	0.00	3.99	1.92
237	235	-196	S	235	QPS	ZG	0.00	1.92	3.99	0.00
237	235	-196	S	--	PP	ZG	0.00	260.00	3.99	260.00
238	235	232	S	234	QPS	ZG	0.00	0.00	0.01	763.32
238	235	232	S	236	QPS	ZG	0.00	424.86	2.71	424.86
238	235	232	S	234	QPS	ZG	0.01	763.32	2.71	763.32
238	235	232	S	--	PP	ZG	0.00	260.00	2.71	260.00
238	241	235	S	235	QPS	ZG	0.00	753.53	1.81	758.78
238	241	235	S	235	QPS	ZG	1.81	758.78	3.35	763.23
238	241	235	S	--	PP	ZG	0.00	262.50	3.35	262.50
239	238	239	S	227	QPS	ZG	0.00	357.02	5.56	347.32
239	238	239	S	229	QPS	ZG	0.00	9.69	5.56	0.00

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239	238	239	S	--	PP	ZG	0.00	262.50	5.56	262.50
240	-208	-195	S	218	QPS	ZG	0.00	460.29	1.08	377.97
240	-208	-195	S	219	QPS	ZG	4.97	727.11	5.05	0.00
240	-208	-195	S	219	QPS	ZG	4.40	726.73	4.97	727.11
240	-208	-195	S	219	QPS	ZG	0.00	727.07	4.40	726.73
240	-208	-195	S	218	QPS	ZG	4.81	92.18	5.05	0.00
240	-208	-195	S	218	QPS	ZG	1.08	377.97	4.81	92.18
240	-208	-195	S	--	PP	ZG	0.00	260.00	5.05	260.00
241	-208	240	S	219	QPS	ZG	0.00	7.45	3.80	0.00
241	-208	240	S	--	PP	ZG	0.00	262.50	3.80	262.50
241	244	-208	S	218	QPS	ZG	0.00	123.35	1.45	236.88
241	244	-208	S	--	PP	ZG	0.00	262.50	1.45	262.50
242	259	245	S	217	QPS	ZG	0.00	0.00	1.64	9.63
242	259	245	S	--	PP	ZG	0.00	195.00	1.64	195.00
243	-209	244	S	218	QPS	ZG	0.00	0.00	1.40	13.25
243	-209	244	S	--	PP	ZG	0.00	195.00	1.40	195.00
243	246	-209	S	217	QPS	ZG	0.00	320.47	2.80	325.39
243	246	-209	S	--	PP	ZG	0.00	195.00	2.80	195.00
243	245	246	S	217	QPS	ZG	0.00	314.28	3.07	320.47
243	245	246	S	--	PP	ZG	0.00	195.00	3.07	195.00
309	343	351	S	304	QPS	ZG	0.00	263.35	2.80	267.77
309	343	351	S	304	QPS	ZG	2.80	267.77	3.90	265.92
309	343	351	S	--	PP	ZG	0.00	240.00	3.90	240.00
310	336	343	S	303	QPS	ZG	0.00	623.75	3.34	623.75
310	336	343	S	305	QPS	ZG	0.00	86.09	3.34	353.00
310	336	343	S	--	PP	ZG	0.00	240.00	3.34	240.00
310	343	-273	S	305	QPS	ZG	0.00	353.00	0.96	429.88
310	343	-273	S	305	QPS	ZG	1.63	223.85	1.65	0.00
310	343	-273	S	305	QPS	ZG	0.96	429.88	1.63	223.85
310	343	-273	S	--	PP	ZG	0.00	240.00	1.65	240.00
311	326	-249	S	301	QPS	ZG	0.00	433.73	5.30	433.73
311	326	-249	S	302	QPS	ZG	1.35	427.36	5.30	681.85
311	326	-249	S	302	QPS	ZG	0.00	0.00	1.35	427.36
311	326	-249	S	--	PP	ZG	0.00	240.00	5.30	240.00
312	327	-250	S	300	QPS	ZG	0.00	0.00	0.05	411.07
312	327	-250	S	301	QPS	ZG	0.00	433.73	5.30	433.73
312	327	-250	S	300	QPS	ZG	2.53	411.07	5.30	414.44
312	327	-250	S	300	QPS	ZG	0.05	411.07	2.53	411.07
312	327	-250	S	--	PP	ZG	0.00	240.00	5.30	240.00
331	347	325	S	302	QPS	ZG	0.00	0.00	0.08	607.07
331	347	325	S	302	QPS	ZG	0.38	772.15	3.87	483.96
331	347	325	S	302	QPS	ZG	0.09	684.09	0.38	772.15
331	347	325	S	302	QPS	ZG	0.08	607.07	0.09	684.09
331	347	325	S	--	PP	ZG	0.00	262.50	3.87	262.50
331	334	347	S	306	QPS	ZG	0.00	607.21	0.57	607.10
331	334	347	S	--	PP	ZG	0.00	262.50	0.57	262.50
331	340	334	S	306	QPS	ZG	0.00	0.00	0.04	607.48
331	340	334	S	306	QPS	ZG	0.04	607.48	4.44	607.19
331	340	334	S	--	PP	ZG	0.00	262.50	4.44	262.50
333	325	326	S	302	QPS	ZG	0.00	215.24	2.67	0.00
333	325	326	S	--	PP	ZG	0.00	240.00	2.67	240.00
333	326	327	S	--	PP	ZG	0.00	240.00	2.71	240.00
333	327	328	S	300	QPS	ZG	0.00	0.00	2.57	7.87
333	327	328	S	--	PP	ZG	0.00	240.00	2.57	240.00
335	328	330	S	300	QPS	ZG	0.00	411.07	2.48	411.07
335	328	330	S	--	PP	ZG	0.00	240.00	2.48	240.00
335	330	350	S	300	QPS	ZG	0.00	411.06	2.76	414.42
335	330	350	S	--	PP	ZG	0.00	240.00	2.76	240.00
336	348	347	S	302	QPS	ZG	0.00	12.79	3.79	0.00
336	348	347	S	306	QPS	ZG	0.00	0.00	3.79	12.79
336	348	347	S	--	PP	ZG	0.00	240.00	3.79	240.00
336	336	348	S	302	QPS	ZG	0.00	14.41	0.48	12.79
336	336	348	S	305	QPS	ZG	0.00	38.81	0.48	0.00
336	336	348	S	--	PP	ZG	0.00	240.00	0.48	240.00
337	-249	336	S	302	QPS	ZG	0.00	362.55	0.62	321.20
337	-249	336	S	--	PP	ZG	0.00	240.00	0.62	240.00
337	-250	-249	S	--	PP	ZG	0.00	240.00	2.71	240.00
337	349	-250	S	--	PP	ZG	0.00	240.00	0.57	240.00
337	-251	349	S	--	PP	ZG	0.00	240.00	0.51	240.00
337	-252	-251	S	--	PP	ZG	0.00	240.00	0.51	240.00
337	-253	-252	S	--	PP	ZG	0.00	240.00	0.51	240.00
337	350	-253	S	--	PP	ZG	0.00	240.00	0.51	240.00
340	-272	348	S	305	QPS	ZG	0.00	384.58	1.08	315.80
340	-272	348	S	306	QPS	ZG	4.97	607.08	5.05	0.00
340	-272	348	S	306	QPS	ZG	4.40	607.19	4.97	607.08
340	-272	348	S	306	QPS	ZG	0.00	607.48	4.40	607.19
340	-272	348	S	305	QPS	ZG	4.81	77.02	5.05	0.00
340	-272	348	S	305	QPS	ZG	1.08	315.80	4.81	77.02
340	-272	348	S	--	PP	ZG	0.00	240.00	5.05	240.00

Relazione di calcolo

341	-272	340	S	306	QPS	ZG	0.00	6.23	3.80	0.00
341	-272	340	S	--	PP	ZG	0.00	262.50	3.80	262.50
341	344	-272	S	305	QPS	ZG	0.00	103.06	1.45	197.92
341	344	-272	S	--	PP	ZG	0.00	262.50	1.45	262.50
342	352	345	S	304	QPS	ZG	0.00	0.00	1.64	8.04
342	352	345	S	--	PP	ZG	0.00	262.50	1.64	262.50
343	-273	344	S	305	QPS	ZG	0.00	0.00	1.40	2.56
343	-273	344	S	--	PP	ZG	0.00	262.50	1.40	262.50
343	346	-273	S	304	QPS	ZG	0.00	267.76	2.80	263.33
343	346	-273	S	--	PP	ZG	0.00	262.50	2.80	262.50
343	345	346	S	304	QPS	ZG	0.00	262.58	3.07	267.75
343	345	346	S	--	PP	ZG	0.00	262.50	3.07	262.50

Elenco carichi aste

Condizione di carico n. 2: PNS

Carichi distribuiti

Asta	N1	N2	E	NE	T	DC	Xi <m>	Qi <daN/m>	Xf <m>	Qf <daN/m>
0	158	-97	S	115	QPN	ZG	0.00	662.73	0.83	662.73
0	-97	-99	S	115	QPN	ZG	0.00	662.73	0.83	662.73
0	-99	-101	S	115	QPN	ZG	0.00	662.73	0.83	662.73
0	-101	160	S	115	QPN	ZG	0.00	662.73	0.83	662.73
0	-103	160	S	116	QPN	ZG	0.00	281.63	0.51	282.54
0	-104	-103	S	116	QPN	ZG	0.00	280.73	0.51	281.63
0	-105	-104	S	116	QPN	ZG	0.00	279.82	0.51	280.73
0	161	-105	S	116	QPN	ZG	0.00	0.00	0.05	279.01
0	161	-105	S	116	QPN	ZG	0.05	279.01	0.51	279.82
0	255	-199	S	216	QPN	ZG	0.00	116.95	0.83	116.95
0	-199	-201	S	216	QPN	ZG	0.00	116.95	0.83	116.95
0	349	-254	S	303	QPN	ZG	0.00	58.48	0.83	58.48
0	-201	-203	S	216	QPN	ZG	0.00	116.95	0.83	116.95
0	-254	-259	S	303	QPN	ZG	0.00	58.48	0.83	58.48
0	-203	258	S	216	QPN	ZG	0.00	116.95	0.83	116.95
0	-206	-205	S	217	QPN	ZG	0.00	49.54	0.51	49.70
0	-259	-264	S	303	QPN	ZG	0.00	58.48	0.83	58.48
0	-264	351	S	303	QPN	ZG	0.00	58.48	0.83	58.48
0	-269	351	S	304	QPN	ZG	0.00	24.85	0.51	24.93
0	-205	258	S	217	QPN	ZG	0.00	49.70	0.51	49.86
0	259	-207	S	217	QPN	ZG	0.00	0.00	0.05	49.24
0	259	-207	S	217	QPN	ZG	0.05	49.24	0.51	49.38
0	-270	-269	S	304	QPN	ZG	0.00	24.77	0.51	24.85
0	-207	-206	S	217	QPN	ZG	0.00	49.38	0.51	49.54
0	-271	-270	S	304	QPN	ZG	0.00	24.69	0.51	24.77
0	352	-271	S	304	QPN	ZG	0.00	0.00	0.05	24.62
0	352	-271	S	304	QPN	ZG	0.05	24.62	0.51	24.69
0	151	-77	S	124	QPN	ZG	0.00	392.70	0.66	392.70
0	-77	-78	S	124	QPN	ZG	0.00	392.70	0.66	392.70
0	-78	-79	S	124	QPN	ZG	0.00	392.70	0.66	392.70
0	-79	152	S	124	QPN	ZG	0.00	392.70	0.51	392.70
0	-79	152	S	124	QPN	ZG	0.51	392.70	0.66	0.00
0	249	-183	S	225	QPN	ZG	0.00	288.75	0.66	288.75
0	-183	-184	S	225	QPN	ZG	0.00	288.75	0.66	288.75
0	-184	-185	S	225	QPN	ZG	0.00	288.75	0.66	288.75
0	-185	250	S	225	QPN	ZG	0.00	288.75	0.51	288.75
0	-185	250	S	225	QPN	ZG	0.51	288.75	0.66	0.00
101	106	107	S	120	QPN	ZG	0.00	627.03	3.44	402.70
101	106	107	S	120	QPN	ZG	3.44	402.70	4.70	0.00
101	107	-71	S	123	QPN	ZG	0.00	402.70	4.15	402.70
102	112	-73	S	103	QPN	ZG	0.00	392.70	5.83	392.70
102	112	-73	S	103	QPN	ZG	5.83	392.70	5.93	156.33
102	112	113	S	122	QPN	ZG	0.00	392.70	4.70	392.70
102	113	114	S	124	QPN	ZG	0.00	392.70	4.90	392.70
103	118	-74	S	103	QPN	ZG	0.00	392.70	3.43	392.70
103	118	-75	S	103	QPN	ZG	0.00	392.70	2.40	392.70
103	118	-75	S	131	QPN	ZG	0.00	714.35	2.40	714.35
103	-75	119	S	122	QPN	ZG	0.00	392.70	2.06	392.70
103	-75	119	S	131	QPN	ZG	0.00	714.35	2.06	714.35
103	119	-76	S	122	QPN	ZG	0.00	392.70	2.64	392.70
103	-76	151	S	124	QPN	ZG	0.00	392.70	2.40	392.70
104	121	-80	S	110	QPN	ZG	0.00	0.00	3.38	241.68
105	123	124	S	131	QPN	ZG	0.00	714.35	4.46	714.35
105	124	153	S	129	QPN	ZG	0.00	703.19	5.04	703.19
108	142	141	S	--	M	ZG	0.00	1210.00	3.94	1210.00
108	142	159	S	126	QPN	ZG	0.00	308.34	5.56	316.95
109	143	160	S	--	M	ZG	0.00	1210.00	3.90	1210.00
109	143	160	S	116	QPN	ZG	0.00	284.28	2.80	284.50
109	143	160	S	116	QPN	ZG	2.80	284.50	3.90	282.54
110	136	143	S	115	QPN	ZG	0.00	662.73	3.34	662.73

Relazione di calcolo

110	136	143	S	117	QPN	ZG	0.00	91.47	3.34	375.06
110	143	-106	S	117	QPN	ZG	0.00	375.06	0.96	456.75
110	143	-106	S	117	QPN	ZG	1.63	237.84	1.67	0.00
110	143	-106	S	117	QPN	ZG	0.96	456.75	1.63	237.84
111	126	-94	S	118	QPN	ZG	0.00	0.00	0.15	473.78
111	126	-94	S	118	QPN	ZG	3.37	754.37	5.30	105.13
111	126	-94	S	118	QPN	ZG	0.15	473.78	3.37	754.37
112	-80	120	S	--	M	ZG	0.00	1210.00	1.38	1210.00
112	-80	120	S	110	QPN	ZG	0.00	454.53	1.38	362.45
112	-81	-80	S	--	M	ZG	0.00	1210.00	2.44	1210.00
112	-81	-80	S	113	QPN	ZG	0.00	783.81	2.44	574.73
112	127	-81	S	--	M	ZG	0.00	1210.00	1.60	1210.00
112	127	-81	S	113	QPN	ZG	0.00	921.37	0.07	914.90
112	127	-81	S	135	QPN	ZG	0.00	499.67	1.60	499.67
112	127	-81	S	113	QPN	ZG	0.07	914.90	1.60	783.81
113	106	-72	S	106	QPN	ZG	0.00	236.54	3.32	0.00
113	106	-72	S	121	QPN	ZG	0.00	798.87	3.32	798.87
113	-72	112	S	107	QPN	ZG	0.00	1006.15	0.63	1008.10
113	-72	112	S	121	QPN	ZG	0.00	798.87	0.63	798.87
114	119	124	S	130	QPN	ZG	0.00	856.80	4.20	856.80
114	124	-89	S	132	QPN	ZG	0.00	758.20	1.65	718.97
114	124	-89	S	132	QPN	ZG	1.65	718.97	4.14	718.97
115	-93	133	S	112	QPN	ZG	0.00	677.62	2.70	677.62
115	-93	133	S	128	QPN	ZG	0.00	945.99	2.70	945.99
115	139	-93	S	128	QPN	ZG	0.00	0.00	0.05	945.99
115	139	-93	S	133	QPN	ZG	1.54	677.62	1.55	0.00
115	139	-93	S	133	QPN	ZG	0.00	673.66	1.54	677.62
115	139	-93	S	128	QPN	ZG	0.05	945.99	1.55	945.99
115	139	142	S	--	M	ZG	0.00	1210.00	1.81	1210.00
115	139	142	S	133	QPN	ZG	0.00	673.66	1.81	669.01
116	103	107	S	120	QPN	ZG	0.00	214.12	2.37	0.00
116	107	113	S	119	QPN	ZG	0.00	832.73	3.95	832.73
116	107	113	S	121	QPN	ZG	0.00	798.87	3.95	798.87
117	153	151	S	--	M	ZG	0.00	1210.00	4.20	1210.00
117	153	151	S	125	QPN	ZG	0.00	450.50	4.20	450.50
117	153	151	S	130	QPN	ZG	0.00	856.80	4.20	856.80
117	153	155	S	127	QPN	ZG	0.00	450.50	3.24	425.00
117	153	155	S	127	QPN	ZG	3.24	425.00	4.14	425.00
119	108	105	S	--	M	ZG	0.00	1210.00	2.32	1210.00
119	114	108	S	--	M	ZG	0.00	1210.00	3.95	1210.00
119	114	108	S	119	QPN	ZG	0.00	832.73	3.95	832.73
119	152	114	S	--	M	ZG	0.00	1210.00	2.31	1210.00
119	152	114	S	124	QPN	ZG	0.00	0.00	2.31	25.45
119	154	152	S	125	QPN	ZG	0.00	450.50	4.20	450.50
119	129	154	S	--	M	ZG	0.00	1210.00	3.24	1210.00
119	129	154	S	127	QPN	ZG	0.00	424.55	3.24	450.02
119	-90	129	S	--	M	ZG	0.00	1210.00	0.90	1210.00
119	-90	129	S	127	QPN	ZG	0.00	425.00	0.90	425.00
119	138	-90	S	--	M	ZG	0.00	1210.00	4.20	1210.00
119	138	-90	S	128	QPN	ZG	0.00	945.99	4.20	945.99
120	101	147	S	--	M	ZG	0.00	1210.00	2.14	1210.00
120	101	147	S	104	QPN	ZG	0.00	0.00	2.14	5.24
120	102	101	S	--	M	ZG	0.00	1210.00	5.05	1210.00
120	102	101	S	105	QPN	ZG	0.00	0.00	5.05	14.37
120	103	102	S	--	M	ZG	0.00	1210.00	3.12	1210.00
120	103	102	S	120	QPN	ZG	0.00	455.73	3.04	709.60
120	103	102	S	120	QPN	ZG	3.04	709.60	3.12	0.00
121	104	101	S	104	QPN	ZG	0.00	365.55	4.09	364.38
121	104	101	S	105	QPN	ZG	0.03	860.39	4.12	858.62
121	104	101	S	105	QPN	ZG	0.00	0.00	0.03	860.39
121	104	101	S	104	QPN	ZG	4.09	364.38	4.12	0.00
121	110	104	S	106	QPN	ZG	0.00	8.89	3.04	0.00
121	110	104	S	108	QPN	ZG	3.02	365.55	3.04	0.00
121	110	104	S	108	QPN	ZG	0.00	366.42	3.02	365.55
122	149	103	S	--	M	ZG	0.00	1210.00	4.15	1210.00
122	149	103	S	123	QPN	ZG	0.00	402.70	4.15	402.70
122	105	149	S	--	M	ZG	0.00	1210.00	0.75	1210.00
123	102	106	S	105	QPN	ZG	0.00	0.00	0.08	858.58
123	102	106	S	120	QPN	ZG	0.00	0.00	4.17	14.02
123	102	106	S	105	QPN	ZG	0.08	858.58	4.17	860.35
124	104	148	S	104	QPN	ZG	0.00	3.86	2.15	0.00
124	104	148	S	108	QPN	ZG	0.00	0.00	2.15	3.86
124	106	104	S	105	QPN	ZG	0.00	4.89	5.06	0.00
124	106	104	S	106	QPN	ZG	5.01	517.32	5.06	0.00
124	106	104	S	106	QPN	ZG	2.74	511.22	5.01	517.32
124	106	104	S	106	QPN	ZG	0.00	503.85	2.74	511.22
125	110	-70	S	108	QPN	ZG	0.00	6.94	2.16	0.00
125	110	-70	S	109	QPN	ZG	0.00	0.00	2.16	7.01
125	110	111	S	106	QPN	ZG	0.00	517.21	2.27	511.11

Relazione di calcolo

125	110	111	S	107	QPN	ZG	0.00	0.00	2.27	156.39
125	111	-72	S	106	QPN	ZG	0.00	511.11	2.74	503.74
125	111	-72	S	107	QPN	ZG	0.00	156.39	4.30	453.15
125	111	-72	S	106	QPN	ZG	2.74	503.74	4.30	0.00
127	116	150	S	109	QPN	ZG	0.00	8.78	2.44	0.00
127	116	150	S	110	QPN	ZG	0.00	0.00	2.44	8.77
128	117	116	S	--	M	ZG	0.00	1210.00	1.87	1210.00
128	117	116	S	109	QPN	ZG	0.00	297.72	1.87	175.12
129	116	120	S	--	M	ZG	0.00	1210.00	2.12	1210.00
129	116	120	S	110	QPN	ZG	0.00	0.00	0.05	415.26
129	116	120	S	110	QPN	ZG	0.48	414.94	2.12	410.48
129	116	120	S	110	QPN	ZG	0.05	415.26	0.48	414.94
130	-73	110	S	107	QPN	ZG	0.00	1007.93	0.63	1005.98
130	-73	110	S	109	QPN	ZG	3.55	329.70	3.59	0.00
130	-73	110	S	109	QPN	ZG	2.56	395.66	3.55	329.69
130	-73	110	S	109	QPN	ZG	0.00	565.83	2.56	395.66
130	-73	110	S	107	QPN	ZG	2.57	347.18	3.59	0.00
130	-73	110	S	107	QPN	ZG	0.63	1005.98	2.57	347.18
130	117	-73	S	109	QPN	ZG	0.00	623.43	0.92	560.51
130	-74	117	S	103	QPN	ZG	0.00	27.30	1.39	10.87
130	122	-74	S	102	QPN	ZG	0.00	583.23	3.44	583.23
130	-82	122	S	102	QPN	ZG	0.00	583.23	0.76	583.23
130	-82	-86	S	114	QPN	ZG	0.00	583.23	1.65	622.47
130	-82	-86	S	135	QPN	ZG	1.60	499.67	1.65	62.90
130	-82	-86	S	135	QPN	ZG	0.00	499.67	1.60	499.67
131	148	147	S	--	M	ZG	0.00	1210.00	4.11	1210.00
131	148	147	S	104	QPN	ZG	0.00	0.00	0.02	365.56
131	148	147	S	104	QPN	ZG	0.02	365.56	4.11	364.39
131	-70	148	S	--	M	ZG	0.00	1210.00	3.06	1210.00
131	-70	148	S	108	QPN	ZG	0.00	0.00	0.04	366.43
131	-70	148	S	108	QPN	ZG	0.04	366.43	3.06	365.56
131	109	-70	S	--	M	ZG	0.00	1210.00	0.88	1210.00
131	109	-70	S	109	QPN	ZG	0.00	443.85	0.88	369.85
131	150	109	S	109	QPN	ZG	0.00	0.00	0.05	415.27
131	150	109	S	109	QPN	ZG	1.65	634.75	3.93	443.85
131	150	109	S	109	QPN	ZG	0.84	705.99	1.65	634.75
131	150	109	S	109	QPN	ZG	0.05	415.27	0.84	705.99
131	115	150	S	110	QPN	ZG	0.00	414.92	0.43	415.24
131	121	115	S	110	QPN	ZG	0.00	0.00	1.59	514.60
131	121	115	S	110	QPN	ZG	2.80	410.35	4.44	414.81
131	121	115	S	110	QPN	ZG	1.59	514.60	2.80	410.35
131	125	121	S	113	QPN	ZG	0.00	816.76	1.71	699.73
131	125	121	S	113	QPN	ZG	1.71	699.73	4.44	513.08
131	-88	125	S	113	QPN	ZG	0.00	0.00	0.17	410.12
131	-88	125	S	113	QPN	ZG	0.17	820.50	0.25	814.74
131	156	-88	S	--	M	ZG	0.00	1210.00	3.61	1210.00
131	156	-88	S	118	QPN	ZG	0.00	671.09	3.61	421.48
131	134	156	S	--	M	ZG	0.00	1210.00	0.57	1210.00
131	134	156	S	137	QPN	ZG	0.00	645.12	0.57	645.46
131	140	134	S	--	M	ZG	0.00	1210.00	4.44	1210.00
131	140	134	S	137	QPN	ZG	0.00	645.45	4.44	645.14
132	118	123	S	102	QPN	ZG	0.00	583.23	4.20	583.23
132	-87	123	S	114	QPN	ZG	0.00	616.48	1.67	577.62
132	-87	123	S	132	QPN	ZG	0.00	712.05	1.67	750.90
132	131	-87	S	111	QPN	ZG	0.00	685.37	2.48	685.37
132	131	-87	S	132	QPN	ZG	0.00	718.97	2.48	718.97
132	-91	131	S	--	M	ZG	0.00	1210.00	0.65	1210.00
132	-91	131	S	134	QPN	ZG	0.00	684.52	0.65	685.37
132	137	-91	S	--	M	ZG	0.00	1210.00	2.11	1210.00
132	137	-91	S	101	QPN	ZG	0.00	0.00	0.05	377.16
132	137	-91	S	134	QPN	ZG	0.00	681.80	2.11	684.52
132	137	-91	S	101	QPN	ZG	0.05	377.16	2.11	377.16
134	126	-88	S	--	M	ZG	0.00	1210.00	2.79	1210.00
134	126	-88	S	113	QPN	ZG	0.00	25.16	2.79	0.00
134	126	-88	S	118	QPN	ZG	0.00	0.00	2.79	25.88
134	126	127	S	--	M	ZG	0.00	1210.00	2.71	1210.00
134	126	127	S	136	QPN	ZG	0.00	900.32	2.71	900.32
134	127	128	S	100	QPN	ZG	0.00	900.15	2.57	891.79
134	127	128	S	135	QPN	ZG	0.00	9.57	2.57	1.20
135	128	130	S	111	QPN	ZG	0.00	685.37	2.48	685.37
135	130	-96	S	--	M	ZG	0.00	1210.00	2.76	1210.00
135	130	-96	S	100	QPN	ZG	0.00	3.57	2.76	0.00
135	130	-96	S	134	QPN	ZG	0.00	685.35	2.76	681.78
136	157	156	S	118	QPN	ZG	0.00	80.32	3.80	340.05
136	157	156	S	137	QPN	ZG	0.00	0.00	3.80	2.33
136	136	157	S	117	QPN	ZG	0.00	41.23	0.48	0.00
136	136	157	S	118	QPN	ZG	0.00	47.39	0.48	80.32
137	-95	-94	S	136	QPN	ZG	0.00	900.32	2.71	900.32
137	158	-95	S	100	QPN	ZG	0.00	898.47	0.57	900.32

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137	-96	158	S	100	QPN	ZG	0.00	0.00	0.02	469.50
137	-96	158	S	100	QPN	ZG	0.02	891.95	2.02	898.47
137	137	135	S	--	M	ZG	0.00	1210.00	2.22	1210.00
137	137	135	S	101	QPN	ZG	0.00	0.00	2.22	8.60
137	135	-93	S	112	QPN	ZG	0.00	0.00	3.99	1.70
137	135	-93	S	133	QPN	ZG	0.00	1.70	3.99	0.00
138	-92	132	S	112	QPN	ZG	0.00	677.62	0.65	677.62
138	135	-92	S	101	QPN	ZG	0.00	377.16	2.06	377.16
138	135	-92	S	112	QPN	ZG	0.01	677.62	2.06	677.62
138	135	-92	S	112	QPN	ZG	0.00	0.00	0.01	677.62
138	141	135	S	--	M	ZG	0.00	1210.00	3.35	1210.00
138	141	135	S	133	QPN	ZG	0.00	668.93	1.81	673.59
138	141	135	S	133	QPN	ZG	1.81	673.59	3.35	677.54
139	138	139	S	--	M	ZG	0.00	1210.00	5.56	1210.00
139	138	139	S	126	QPN	ZG	0.00	316.93	5.56	308.33
139	138	139	S	128	QPN	ZG	0.00	8.60	5.56	0.00
140	162	157	S	117	QPN	ZG	0.00	408.61	1.08	335.53
140	162	157	S	137	QPN	ZG	5.04	645.48	5.05	0.00
140	162	157	S	137	QPN	ZG	4.47	645.14	5.04	645.48
140	162	157	S	137	QPN	ZG	0.03	645.45	4.47	645.14
140	162	157	S	137	QPN	ZG	0.00	0.00	0.03	645.44
140	162	157	S	117	QPN	ZG	4.81	81.83	5.05	0.00
140	162	157	S	117	QPN	ZG	1.08	335.53	4.81	81.83
141	162	140	S	--	M	ZG	0.00	1210.00	3.80	1210.00
141	162	140	S	137	QPN	ZG	0.00	0.00	3.80	4.65
141	144	162	S	--	M	ZG	0.00	1210.00	1.45	1210.00
141	144	162	S	117	QPN	ZG	0.00	109.50	1.45	210.29
142	161	145	S	116	QPN	ZG	0.00	0.00	1.64	8.55
143	-106	144	S	--	M	ZG	0.00	1210.00	1.40	1210.00
143	-106	144	S	117	QPN	ZG	0.00	0.00	1.40	7.19
143	146	-106	S	116	QPN	ZG	0.00	284.50	2.80	284.28
143	145	146	S	116	QPN	ZG	0.00	278.99	3.07	284.49
149	-89	133	S	129	QPN	ZG	0.00	703.19	1.98	703.19
149	133	155	S	129	QPN	ZG	0.00	703.19	3.06	703.19
201	207	208	S	220	QPN	ZG	0.00	296.10	4.90	289.85
202	212	-179	S	201	QPN	ZG	0.00	79.04	5.86	448.85
202	212	-179	S	202	QPN	ZG	5.83	288.75	5.93	114.95
202	212	-179	S	202	QPN	ZG	0.00	288.75	5.83	288.75
202	212	-179	S	201	QPN	ZG	5.86	448.85	5.93	0.00
202	212	213	S	223	QPN	ZG	0.00	288.75	4.70	288.75
202	213	214	S	225	QPN	ZG	0.00	288.75	4.90	288.75
203	218	-180	S	202	QPN	ZG	0.00	288.75	3.43	288.75
203	218	-181	S	202	QPN	ZG	0.00	288.75	2.40	288.75
203	218	-181	S	232	QPN	ZG	0.00	525.25	2.40	525.25
203	-181	219	S	223	QPN	ZG	0.00	288.75	2.06	288.75
203	-181	219	S	232	QPN	ZG	0.00	525.25	2.06	525.25
203	219	-182	S	223	QPN	ZG	0.00	288.75	2.64	288.75
203	-182	249	S	225	QPN	ZG	0.00	288.75	2.40	288.75
204	221	-186	S	211	QPN	ZG	0.00	0.00	3.38	177.71
204	221	-186	S	212	QPN	ZG	0.00	224.70	3.38	0.00
205	223	224	S	232	QPN	ZG	0.00	525.25	4.46	525.25
205	224	251	S	230	QPN	ZG	0.00	517.05	5.04	517.05
206	-193	233	S	230	QPN	ZG	0.00	517.05	1.98	517.05
206	233	253	S	230	QPN	ZG	0.00	517.05	3.06	517.05
208	242	241	S	--	M	ZG	0.00	340.00	3.94	340.00
208	242	257	S	--	M	ZG	0.00	340.00	5.56	340.00
208	242	257	S	227	QPN	ZG	0.00	226.72	5.56	233.05
209	243	258	S	217	QPN	ZG	0.00	50.98	2.80	50.21
209	243	258	S	217	QPN	ZG	2.80	50.21	3.90	49.86
210	236	243	S	216	QPN	ZG	0.00	116.95	3.34	116.95
210	236	243	S	218	QPN	ZG	0.00	16.14	3.34	66.19
210	243	-209	S	218	QPN	ZG	0.00	66.19	0.96	80.60
210	243	-209	S	218	QPN	ZG	1.63	41.97	1.70	0.00
210	243	-209	S	218	QPN	ZG	0.96	80.60	1.63	41.97
211	226	-197	S	215	QPN	ZG	0.00	0.00	1.35	80.13
211	226	-197	S	215	QPN	ZG	1.35	80.13	5.30	127.91
212	-186	220	S	211	QPN	ZG	0.00	334.21	1.38	266.51
212	-186	220	S	237	QPN	ZG	0.00	367.40	1.38	367.40
212	227	-186	S	212	QPN	ZG	0.00	534.08	2.24	422.60
212	227	-186	S	237	QPN	ZG	0.00	367.40	4.04	367.40
212	227	-186	S	212	QPN	ZG	2.24	422.60	4.04	0.00
213	206	-177	S	200	QPN	ZG	0.00	173.93	3.32	0.00
213	206	-177	S	222	QPN	ZG	0.00	587.40	3.32	587.40
213	-177	212	S	222	QPN	ZG	0.00	587.40	0.63	587.40
214	219	224	S	231	QPN	ZG	0.00	630.00	4.20	630.00
214	224	-193	S	204	QPN	ZG	0.00	557.50	1.65	528.65
214	224	-193	S	204	QPN	ZG	1.65	528.65	4.14	528.65
215	-196	233	S	229	QPN	ZG	0.00	695.58	2.70	695.58
215	-196	233	S	234	QPN	ZG	0.00	498.25	2.70	498.25

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215	239	-196	S	229	QPN	ZG	0.00	0.00	0.05	695.58
215	239	-196	S	235	QPN	ZG	1.54	498.25	1.55	0.00
215	239	-196	S	235	QPN	ZG	0.00	495.34	1.54	498.25
215	239	-196	S	229	QPN	ZG	0.05	695.58	1.55	695.58
215	239	242	S	235	QPN	ZG	0.00	495.34	1.81	491.92
216	203	207	S	221	QPN	ZG	0.00	437.38	2.37	587.40
216	207	213	S	222	QPN	ZG	0.00	587.40	3.95	587.40
216	207	213	S	224	QPN	ZG	0.00	612.30	3.95	612.30
217	251	249	S	226	QPN	ZG	0.00	331.25	4.20	331.25
217	251	249	S	231	QPN	ZG	0.00	630.00	4.20	630.00
217	251	253	S	228	QPN	ZG	0.00	331.25	3.24	312.50
217	251	253	S	228	QPN	ZG	3.24	312.50	4.14	312.50
219	208	205	S	--	M	ZG	0.00	340.00	2.32	340.00
219	214	208	S	--	M	ZG	0.00	340.00	3.95	340.00
219	214	208	S	224	QPN	ZG	0.00	612.30	3.95	612.30
219	250	214	S	--	M	ZG	0.00	340.00	2.31	340.00
219	250	214	S	225	QPN	ZG	0.00	0.00	2.31	18.71
219	252	250	S	--	M	ZG	0.00	340.00	4.20	340.00
219	252	250	S	226	QPN	ZG	0.00	331.25	4.20	331.25
219	229	252	S	--	M	ZG	0.00	340.00	3.24	340.00
219	229	252	S	228	QPN	ZG	0.00	312.17	3.24	330.89
219	-194	229	S	--	M	ZG	0.00	340.00	0.90	340.00
219	-194	229	S	228	QPN	ZG	0.00	312.50	0.90	312.50
219	238	-194	S	--	M	ZG	0.00	340.00	4.20	340.00
219	238	-194	S	229	QPN	ZG	0.00	695.58	4.20	695.58
219	257	238	S	--	M	ZG	0.00	340.00	1.86	340.00
220	201	247	S	--	M	ZG	0.00	340.00	2.14	340.00
220	201	247	S	207	QPN	ZG	0.00	0.00	2.14	3.86
220	202	201	S	--	M	ZG	0.00	340.00	5.05	340.00
220	202	201	S	208	QPN	ZG	0.00	521.75	4.98	514.87
220	202	201	S	208	QPN	ZG	4.98	514.87	5.05	0.00
220	203	202	S	--	M	ZG	0.00	340.00	3.12	340.00
220	203	202	S	221	QPN	ZG	0.00	189.89	3.12	0.00
221	204	201	S	207	QPN	ZG	0.00	268.78	4.09	267.93
221	204	201	S	208	QPN	ZG	0.00	8.85	4.12	0.00
221	204	201	S	207	QPN	ZG	4.09	267.92	4.12	0.00
221	210	204	S	200	QPN	ZG	0.00	6.54	3.04	0.00
221	210	204	S	209	QPN	ZG	3.02	268.79	3.04	0.00
221	210	204	S	209	QPN	ZG	0.00	269.42	3.02	268.79
222	205	203	S	--	M	ZG	0.00	340.00	4.90	340.00
222	205	203	S	220	QPN	ZG	0.00	289.84	4.90	296.09
223	202	206	S	208	QPN	ZG	0.00	10.30	4.17	0.00
223	202	206	S	221	QPN	ZG	1.52	390.16	4.17	523.99
223	202	206	S	221	QPN	ZG	0.00	0.00	1.52	390.16
224	204	248	S	207	QPN	ZG	0.00	2.84	2.15	0.00
224	204	248	S	209	QPN	ZG	0.00	0.00	2.15	2.84
224	206	204	S	200	QPN	ZG	0.00	370.48	2.74	375.90
224	206	204	S	208	QPN	ZG	0.08	521.82	5.06	514.94
224	206	204	S	208	QPN	ZG	0.00	0.00	0.08	521.81
224	206	204	S	200	QPN	ZG	5.01	380.38	5.06	0.00
224	206	204	S	200	QPN	ZG	2.74	375.90	5.01	380.38
226	210	-176	S	209	QPN	ZG	0.00	5.95	2.16	0.00
226	210	-176	S	210	QPN	ZG	0.00	0.00	2.16	6.01
226	210	211	S	200	QPN	ZG	0.00	380.30	2.27	375.82
226	210	211	S	201	QPN	ZG	0.00	400.75	2.27	286.80
226	211	-177	S	200	QPN	ZG	0.00	375.82	2.74	370.39
226	211	-177	S	201	QPN	ZG	0.00	286.80	4.30	70.57
226	211	-177	S	200	QPN	ZG	2.74	370.39	4.30	0.00
227	216	-178	S	210	QPN	ZG	0.00	6.45	2.44	0.00
227	216	-178	S	211	QPN	ZG	0.00	0.00	2.44	6.45
228	217	216	S	210	QPN	ZG	0.00	218.91	1.87	128.77
228	217	216	S	237	QPN	ZG	0.00	12.83	1.87	0.00
229	216	220	S	211	QPN	ZG	0.00	0.00	0.05	305.34
229	216	220	S	237	QPN	ZG	1.68	303.98	2.12	326.30
229	216	220	S	237	QPN	ZG	0.11	213.34	1.68	303.98
229	216	220	S	237	QPN	ZG	0.00	0.00	0.11	213.34
229	216	220	S	211	QPN	ZG	0.48	305.10	2.12	301.82
229	216	220	S	211	QPN	ZG	0.05	305.34	0.48	305.10
230	-179	210	S	201	QPN	ZG	0.00	0.00	3.59	8.15
230	-179	210	S	210	QPN	ZG	3.54	242.79	3.59	0.00
230	-179	210	S	210	QPN	ZG	2.56	290.93	3.54	242.79
230	-179	210	S	210	QPN	ZG	0.00	416.05	2.56	290.93
230	217	-179	S	210	QPN	ZG	0.00	458.40	0.92	412.14
230	-180	217	S	202	QPN	ZG	0.00	20.07	1.39	7.99
230	-180	217	S	237	QPN	ZG	0.00	341.45	1.39	239.64
230	222	-180	S	203	QPN	ZG	0.00	428.85	3.44	428.85
230	222	-180	S	237	QPN	ZG	3.05	367.40	3.44	342.27
230	222	-180	S	237	QPN	ZG	0.00	367.40	3.05	367.40
230	-187	222	S	203	QPN	ZG	0.00	428.85	0.76	428.85

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230	-187	222	S	237	QPN	ZG	0.00	367.40	0.76	367.40
230	-187	-191	S	233	QPN	ZG	0.00	428.85	1.65	457.69
230	-187	-191	S	237	QPN	ZG	1.60	367.40	1.65	46.25
230	-187	-191	S	237	QPN	ZG	0.00	367.40	1.60	367.40
231	248	247	S	--	M	ZG	0.00	340.00	4.11	340.00
231	248	247	S	207	QPN	ZG	0.00	0.00	0.02	268.79
231	248	247	S	207	QPN	ZG	0.02	268.79	4.11	267.93
231	-176	248	S	--	M	ZG	0.00	340.00	3.07	340.00
231	-176	248	S	209	QPN	ZG	0.00	0.00	0.05	269.43
231	-176	248	S	209	QPN	ZG	0.05	269.43	3.07	268.80
231	209	-176	S	--	M	ZG	0.00	340.00	0.88	340.00
231	209	-176	S	210	QPN	ZG	0.00	326.36	0.88	272.36
231	-178	209	S	--	M	ZG	0.00	340.00	3.93	340.00
231	-178	209	S	210	QPN	ZG	0.00	0.00	0.05	305.35
231	-178	209	S	210	QPN	ZG	1.65	466.72	3.93	326.36
231	-178	209	S	210	QPN	ZG	0.84	519.11	1.65	466.72
231	-178	209	S	210	QPN	ZG	0.05	305.35	0.84	519.11
231	215	-178	S	211	QPN	ZG	0.00	305.09	0.43	305.32
231	221	215	S	--	M	ZG	0.00	340.00	4.44	340.00
231	221	215	S	211	QPN	ZG	0.00	0.00	1.59	378.38
231	221	215	S	211	QPN	ZG	2.80	301.73	4.44	305.01
231	221	215	S	211	QPN	ZG	1.59	378.38	2.80	301.73
231	225	221	S	--	M	ZG	0.00	340.00	4.44	340.00
231	225	221	S	212	QPN	ZG	0.00	0.00	1.19	302.25
231	225	221	S	212	QPN	ZG	2.46	604.75	4.44	478.51
231	225	221	S	212	QPN	ZG	1.19	302.25	2.46	604.75
231	254	225	S	--	M	ZG	0.00	370.00	3.87	370.00
231	254	225	S	215	QPN	ZG	0.00	0.00	0.08	113.91
231	254	225	S	215	QPN	ZG	0.38	144.85	3.87	90.74
231	254	225	S	215	QPN	ZG	0.09	128.35	0.38	144.85
231	254	225	S	215	QPN	ZG	0.08	113.91	0.09	128.35
231	234	254	S	--	M	ZG	0.00	370.00	0.57	370.00
231	234	254	S	219	QPN	ZG	0.00	113.84	0.57	113.90
231	240	234	S	--	M	ZG	0.00	370.00	4.44	370.00
231	240	234	S	219	QPN	ZG	0.00	0.00	0.04	113.90
231	240	234	S	219	QPN	ZG	0.04	113.90	4.44	113.85
232	218	223	S	203	QPN	ZG	0.00	428.85	4.20	428.85
232	-192	223	S	204	QPN	ZG	0.00	523.57	1.67	552.13
232	-192	223	S	233	QPN	ZG	0.00	453.29	1.67	424.72
232	231	-192	S	204	QPN	ZG	0.00	528.65	2.48	528.65
232	231	-192	S	206	QPN	ZG	0.00	503.94	2.48	503.94
232	237	231	S	205	QPN	ZG	0.00	501.32	2.76	503.94
232	237	231	S	236	QPN	ZG	0.05	277.32	2.76	277.32
232	237	231	S	236	QPN	ZG	0.00	0.00	0.05	277.32
233	225	226	S	--	M	ZG	0.00	370.00	2.67	370.00
233	225	226	S	212	QPN	ZG	0.00	0.00	2.67	134.44
233	225	226	S	215	QPN	ZG	0.00	40.36	2.67	0.00
233	226	227	S	--	M	ZG	0.00	370.00	2.71	370.00
233	226	227	S	212	QPN	ZG	0.00	141.93	2.71	283.98
233	226	227	S	214	QPN	ZG	0.00	158.88	2.71	158.88
233	227	228	S	--	M	ZG	0.00	370.00	2.57	370.00
233	227	228	S	213	QPN	ZG	0.00	158.85	2.57	157.38
233	227	228	S	237	QPN	ZG	0.00	7.04	2.57	0.89
235	228	230	S	--	M	ZG	0.00	370.00	2.48	370.00
235	228	230	S	206	QPN	ZG	0.00	503.94	2.48	503.94
235	230	256	S	--	M	ZG	0.00	370.00	2.76	370.00
235	230	256	S	205	QPN	ZG	0.00	503.93	2.76	501.31
235	230	256	S	213	QPN	ZG	0.00	0.63	2.76	0.00
236	-195	254	S	215	QPN	ZG	0.00	2.40	3.80	0.00
236	-195	254	S	219	QPN	ZG	0.00	0.00	3.80	2.40
236	236	-195	S	215	QPN	ZG	0.00	2.70	0.48	2.40
236	236	-195	S	218	QPN	ZG	0.00	7.28	0.48	0.00
237	-197	236	S	215	QPN	ZG	0.00	68.01	0.62	60.26
237	-198	-197	S	214	QPN	ZG	0.00	158.88	2.71	158.88
237	255	-198	S	213	QPN	ZG	0.00	158.55	0.57	158.88
237	256	255	S	213	QPN	ZG	0.00	0.00	0.02	82.85
237	256	255	S	213	QPN	ZG	0.02	157.40	2.02	158.55
237	237	256	S	--	M	ZG	0.00	340.00	4.01	340.00
237	237	235	S	--	M	ZG	0.00	340.00	2.22	340.00
237	237	235	S	236	QPN	ZG	0.00	0.00	2.22	6.32
237	235	-196	S	234	QPN	ZG	0.00	0.00	3.99	1.25
237	235	-196	S	235	QPN	ZG	0.00	1.25	3.99	0.00
238	235	232	S	234	QPN	ZG	0.00	0.00	0.01	498.25
238	235	232	S	236	QPN	ZG	0.00	277.32	2.71	277.32
238	235	232	S	234	QPN	ZG	0.01	498.25	2.71	498.25
238	241	235	S	--	M	ZG	0.00	340.00	3.35	340.00
238	241	235	S	235	QPN	ZG	0.00	491.86	1.81	495.29
238	241	235	S	235	QPN	ZG	1.81	495.29	3.35	498.19
239	238	239	S	227	QPN	ZG	0.00	233.04	5.56	226.71

Relazione di calcolo

239	238	239	S	229	QPN	ZG	0.00	6.33	5.56	0.00
240	-208	-195	S	218	QPN	ZG	0.00	72.11	4.81	14.44
240	-208	-195	S	219	QPN	ZG	4.97	113.91	5.05	0.00
240	-208	-195	S	219	QPN	ZG	4.40	113.85	4.97	113.91
240	-208	-195	S	219	QPN	ZG	0.00	113.90	4.40	113.85
240	-208	-195	S	218	QPN	ZG	4.81	14.44	5.05	0.00
241	-208	240	S	--	M	ZG	0.00	370.00	3.80	370.00
241	-208	240	S	219	QPN	ZG	0.00	1.17	3.80	0.00
241	244	-208	S	--	M	ZG	0.00	370.00	1.45	370.00
241	244	-208	S	218	QPN	ZG	0.00	19.32	1.45	37.11
242	259	245	S	--	M	ZG	0.00	370.00	1.64	370.00
242	259	245	S	217	QPN	ZG	0.00	0.00	1.64	1.51
243	-209	244	S	--	M	ZG	0.00	370.00	1.40	370.00
243	-209	244	S	218	QPN	ZG	0.00	0.00	1.40	2.08
243	246	-209	S	--	M	ZG	0.00	370.00	2.80	370.00
243	246	-209	S	217	QPN	ZG	0.00	50.20	2.80	50.97
243	245	246	S	--	M	ZG	0.00	370.00	3.07	370.00
243	245	246	S	217	QPN	ZG	0.00	49.23	3.07	50.20
309	343	351	S	304	QPN	ZG	0.00	24.69	2.80	25.10
309	343	351	S	304	QPN	ZG	2.80	25.10	3.90	24.93
310	336	343	S	303	QPN	ZG	0.00	58.48	3.34	58.48
310	336	343	S	305	QPN	ZG	0.00	8.07	3.34	33.09
310	343	-273	S	305	QPN	ZG	0.00	33.09	0.96	40.30
310	343	-273	S	305	QPN	ZG	1.63	20.99	1.65	0.00
310	343	-273	S	305	QPN	ZG	0.96	40.30	1.63	20.99
311	326	-249	S	301	QPN	ZG	0.00	40.66	5.30	40.66
311	326	-249	S	302	QPN	ZG	1.35	40.06	5.30	63.92
311	326	-249	S	302	QPN	ZG	0.00	0.00	1.35	40.06
312	327	-250	S	300	QPN	ZG	0.00	0.00	0.05	38.54
312	327	-250	S	301	QPN	ZG	0.00	40.66	5.30	40.66
312	327	-250	S	300	QPN	ZG	2.53	38.54	5.30	38.85
312	327	-250	S	300	QPN	ZG	0.05	38.54	2.53	38.54
331	347	325	S	--	M	ZG	0.00	340.00	3.87	340.00
331	347	325	S	302	QPN	ZG	0.00	0.00	0.08	56.91
331	347	325	S	302	QPN	ZG	0.38	72.39	3.87	45.37
331	347	325	S	302	QPN	ZG	0.09	64.13	0.38	72.39
331	347	325	S	302	QPN	ZG	0.08	56.91	0.09	64.13
331	334	347	S	--	M	ZG	0.00	340.00	0.57	340.00
331	334	347	S	306	QPN	ZG	0.00	56.93	0.57	56.92
331	340	334	S	--	M	ZG	0.00	340.00	4.44	340.00
331	340	334	S	306	QPN	ZG	0.00	0.00	0.04	56.95
331	340	334	S	306	QPN	ZG	0.04	56.95	4.44	56.92
333	325	326	S	--	M	ZG	0.00	340.00	2.67	340.00
333	325	326	S	302	QPN	ZG	0.00	20.18	2.67	0.00
333	326	327	S	--	M	ZG	0.00	340.00	2.71	340.00
333	327	328	S	--	M	ZG	0.00	340.00	2.57	340.00
333	327	328	S	300	QPN	ZG	0.00	0.00	2.57	0.74
335	328	330	S	--	M	ZG	0.00	340.00	2.48	340.00
335	328	330	S	300	QPN	ZG	0.00	38.54	2.48	38.54
335	330	350	S	--	M	ZG	0.00	340.00	2.76	340.00
335	330	350	S	300	QPN	ZG	0.00	38.54	2.76	38.85
336	348	347	S	302	QPN	ZG	0.00	1.20	3.79	0.00
336	348	347	S	306	QPN	ZG	0.00	0.00	3.79	1.20
336	336	348	S	302	QPN	ZG	0.00	1.35	0.48	1.20
336	336	348	S	305	QPN	ZG	0.00	3.64	0.48	0.00
337	-249	336	S	302	QPN	ZG	0.00	33.99	0.62	30.11
340	-272	348	S	305	QPN	ZG	0.00	36.05	4.81	7.22
340	-272	348	S	306	QPN	ZG	4.97	56.91	5.05	0.00
340	-272	348	S	306	QPN	ZG	4.40	56.92	4.97	56.91
340	-272	348	S	306	QPN	ZG	0.00	56.95	4.40	56.92
340	-272	348	S	305	QPN	ZG	4.81	7.22	5.05	0.00
341	-272	340	S	--	M	ZG	0.00	340.00	3.80	340.00
341	-272	340	S	306	QPN	ZG	0.00	0.58	3.80	0.00
341	344	-272	S	--	M	ZG	0.00	340.00	1.45	340.00
341	344	-272	S	305	QPN	ZG	0.00	9.66	1.45	18.55
342	352	345	S	--	M	ZG	0.00	340.00	1.64	340.00
342	352	345	S	304	QPN	ZG	0.00	0.00	1.64	0.75
343	-273	344	S	--	M	ZG	0.00	340.00	1.40	340.00
343	-273	344	S	305	QPN	ZG	0.00	0.00	1.40	0.24
343	346	-273	S	--	M	ZG	0.00	340.00	2.80	340.00
343	346	-273	S	304	QPN	ZG	0.00	25.10	2.80	24.69
343	345	346	S	--	M	ZG	0.00	340.00	3.07	340.00
343	345	346	S	304	QPN	ZG	0.00	24.62	3.07	25.10

Elenco carichi aste

Condizione di carico n. 3: ACC RES

Carichi distribuiti

Asta	N1	N2	E	NE	T	DC	Xi	Qi	Xf	Qf	Asta	N1	N2	E	NE	T	DC	Xi	Qi	Xf	Qf
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Relazione di calcolo

						<m>	<daN/m>	<m>	<daN/m>							<m>	<daN/m>	<m>	<daN/m>		
0	158	-97	S	115	QA	ZG	0.00	584.77	0.83	584.77	0	-97	-99	S	115	QA	ZG	0.00	584.77	0.83	584.77
0	-99	-101	S	115	QA	ZG	0.00	584.77	0.83	584.77	0	-101	160	S	115	QA	ZG	0.00	584.77	0.83	584.77
0	-103	160	S	116	QA	ZG	0.00	248.50	0.51	249.30	0	-104	-103	S	116	QA	ZG	0.00	247.70	0.51	248.50
0	-105	-104	S	116	QA	ZG	0.00	246.90	0.51	247.70	0	161	-105	S	116	QA	ZG	0.00	0.00	0.05	246.18
0	161	-105	S	116	QA	ZG	0.05	246.18	0.51	246.90	0	255	-199	S	216	QA	ZG	0.00	97.46	0.83	97.46
0	-199	-201	S	216	QA	ZG	0.00	97.46	0.83	97.46	0	-201	-203	S	216	QA	ZG	0.00	97.46	0.83	97.46
0	-203	258	S	216	QA	ZG	0.00	97.46	0.83	97.46	0	-206	-205	S	217	QA	ZG	0.00	41.28	0.51	41.42
0	-205	258	S	217	QA	ZG	0.00	41.42	0.51	41.55	0	259	-207	S	217	QA	ZG	0.00	0.00	0.05	41.03
0	259	-207	S	217	QA	ZG	0.05	41.03	0.51	41.15	0	-207	-206	S	217	QA	ZG	0.00	41.15	0.51	41.28
0	151	-77	S	124	QA	ZG	0.00	346.50	0.66	346.50	0	-77	-78	S	124	QA	ZG	0.00	346.50	0.66	346.50
0	-78	-79	S	124	QA	ZG	0.00	346.50	0.66	346.50	0	-79	152	S	124	QA	ZG	0.00	346.50	0.51	346.50
0	-79	152	S	124	QA	ZG	0.51	346.50	0.66	0.00	101	106	107	S	120	QA	ZG	0.00	553.26	3.44	355.32
101	106	107	S	120	QA	ZG	3.44	355.32	4.70	0.00	101	107	-71	S	123	QA	ZG	0.00	355.32	4.15	355.32
102	112	-73	S	103	QA	ZG	0.00	346.50	5.83	346.50	102	112	-73	S	103	QA	ZG	5.83	346.50	5.93	137.94
102	112	113	S	122	QA	ZG	0.00	346.50	4.70	346.50	102	113	114	S	124	QA	ZG	0.00	346.50	4.90	346.50
103	118	-74	S	103	QA	ZG	0.00	346.50	3.43	346.50	103	118	-75	S	103	QA	ZG	0.00	346.50	2.40	346.50
103	118	-75	S	131	QA	ZG	0.00	630.31	2.40	630.31	103	-75	119	S	122	QA	ZG	0.00	346.50	2.06	346.50
103	-75	119	S	131	QA	ZG	0.00	630.31	2.06	630.31	103	119	-76	S	122	QA	ZG	0.00	346.50	2.64	346.50
103	-76	151	S	124	QA	ZG	0.00	346.50	2.40	346.50	104	121	-80	S	110	QA	ZG	0.00	0.00	3.38	213.25
105	123	124	S	131	QA	ZG	0.00	630.31	4.46	630.31	105	124	153	S	129	QA	ZG	0.00	620.46	5.04	620.46
108	142	159	S	126	QA	ZG	0.00	272.07	5.56	279.66	109	143	160	S	116	QA	ZG	0.00	250.83	2.80	251.03
109	143	160	S	116	QA	ZG	2.80	251.03	3.90	249.30	110	136	143	S	115	QA	ZG	0.00	584.77	3.34	584.77
110	136	143	S	117	QA	ZG	0.00	80.71	3.34	330.94	110	143	-106	S	117	QA	ZG	0.00	330.94	0.96	403.01
110	143	-106	S	117	QA	ZG	1.63	209.86	1.67	0.00	110	143	-106	S	117	QA	ZG	0.96	403.01	1.63	209.86
111	126	-94	S	118	QA	ZG	0.00	0.00	0.15	418.04	111	126	-94	S	118	QA	ZG	3.37	665.62	5.30	92.77
111	126	-94	S	118	QA	ZG	0.15	418.04	3.37	665.62	112	-80	120	S	110	QA	ZG	0.00	401.06	1.38	319.81
112	-81	-80	S	113	QA	ZG	0.00	691.60	2.44	507.12	112	127	-81	S	113	QA	ZG	0.00	812.97	0.07	807.27
112	127	-81	S	135	QA	ZG	0.00	440.88	1.60	440.88	112	127	-81	S	113	QA	ZG	0.07	807.27	1.60	691.60
113	106	-72	S	106	QA	ZG	0.00	208.72	3.32	0.00	113	106	-72	S	121	QA	ZG	0.00	704.88	3.32	704.88
113	-72	112	S	107	QA	ZG	0.00	887.78	0.63	889.50	113	-72	112	S	121	QA	ZG	0.00	704.88	0.63	704.88
114	119	124	S	130	QA	ZG	0.00	756.00	4.20	756.00	114	124	-89	S	132	QA	ZG	0.00	669.00	1.65	634.38
114	124	-89	S	132	QA	ZG	1.65	634.38	4.14	634.38	115	-93	133	S	112	QA	ZG	0.00	597.90	2.70	597.90
115	-93	133	S	128	QA	ZG	0.00	834.70	2.70	834.70	115	139	-93	S	128	QA	ZG	0.00	0.00	0.05	834.70
115	139	-93	S	133	QA	ZG	1.54	597.90	1.55	0.00	115	139	-93	S	133	QA	ZG	0.00	594.41	1.54	597.90
115	139	-93	S	128	QA	ZG	0.05	834.70	1.55	834.70	115	139	142	S	133	QA	ZG	0.00	594.41	1.81	590.30
116	103	107	S	120	QA	ZG	0.00	188.93	2.37	0.00	116	107	113	S	119	QA	ZG	0.00	734.77	3.95	734.77
116	107	113	S	121	QA	ZG	0.00	704.88	3.95	704.88	117	153	151	S	125	QA	ZG	0.00	397.50	4.20	397.50
117	153	151	S	130	QA	ZG	0.00	756.00	4.20	756.00	117	153	155	S	127	QA	ZG	0.00	397.50	3.24	375.00
117	153	155	S	127	QA	ZG	3.24	375.00	4.14	375.00	119	114	108	S	119	QA	ZG	0.00	734.77	3.95	734.77
119	152	114	S	124	QA	ZG	0.00	0.00	2.31	22.45	119	154	152	S	125	QA	ZG	0.00	397.50	4.20	397.50
119	129	154	S	127	QA	ZG	0.00	374.60	3.24	397.07	119	-90	129	S	127	QA	ZG	0.00	375.00	0.90	375.00
119	138	-90	S	128	QA	ZG	0.00	834.70	4.20	834.70	120	101	147	S	104	QA	ZG	0.00	0.00	2.14	4.63
120	102	101	S	105	QA	ZG	0.00	0.00	5.05	12.68	120	103	102	S	120	QA	ZG	0.00	402.11	3.04	626.12
120	103	102	S	120	QA	ZG	3.04	626.12	3.12	0.00	121	104	101	S	104	QA	ZG	0.00	322.54	4.09	321.51
121	104	101	S	105	QA	ZG	0.03	759.17	4.12	757.60	121	104	101	S	105	QA	ZG	0.00	0.00	0.03	759.17
121	104	101	S	104	QA	ZG	4.09	321.51	4.12	0.00	121	110	104	S	106	QA	ZG	0.00	7.84	3.04	0.00
121	110	104	S	108	QA	ZG	3.02	322.54	3.04	0.00	121	110	104	S	108	QA	ZG	0.00	323.31	3.02	322.55
122	149	103	S	123	QA	ZG	0.00	355.32	4.15	355.32	123	102	106	S	105	QA	ZG	0.00	0.00	0.08	757.55
123	102	106	S	120	QA	ZG	0.00	0.00	4.17	12.37	123	102	106	S	105	QA	ZG	0.08	757.57	4.17	759.13
124	104	148	S	104	QA	ZG	0.00	3.41	2.15	0.00	124	104	148	S	108	QA	ZG	0.00	0.00	2.15	3.41
124	106	104	S	105	QA	ZG	0.00	4.31	5.06	0.00	124	106	104	S	106	QA	ZG	5.01	456.46	5.06	0.00
124	106	104	S	106	QA	ZG	2.74	451.08	5.01	456.46	124	106	104	S	106	QA	ZG	0.00	444.57	2.74	451.08
125	110	-70	S	108	QA	ZG	0.00	6.12	2.16	0.00	125	110	-70	S	109	QA	ZG	0.00	0.00	2.16	6.18
125	110	111	S	106	QA	ZG	0.00	456.36	2.27	450.98	125	110	111	S	107	QA	ZG	0.00	0.00	2.27	137.99
125	111	-72	S	106	QA	ZG	0.00	450.98	2.74	444.47	125	111	-72	S	107	QA	ZG	0.00	137.99	4.30	399.84
125	111	-72	S	106	QA	ZG	2.74	444.47	4.30	0.00	127	116	150	S	109	QA	ZG	0.00	7.74	2.44	0.00
127	116	150	S	110	QA	ZG	0.00	0.00	2.44	7.74	128	117	116	S	109	QA	ZG	0.00	262.69	1.87	154.52
129	116	120	S	110	QA	ZG	0.00	0.00	0.05	366.40	129	116	120	S	110	QA	ZG	0.48	366.12	2.12	362.19
129	116	120	S	110	QA	ZG	0.05	366.41	0.48	366.12	130	-73	110	S	107	QA	ZG	0.00	889.35	0.63	887.63
130	-73	110	S	109	QA	ZG	3.55	290.91	3.59	0.00	130	-73	110	S	109	QA	ZG	0.00	499.26	3.55	290.91
130	-73	110	S	107	QA	ZG	2.57	306.33	3.59	0.00	130	-73	110	S	107	QA	ZG	0.63	887.63	2.57	306.33
130	117	-73	S	109	QA	ZG	0.00	550.08	0.92	494.57	130	-74	117	S	103	QA	ZG	0.00	24.08	1.39	9.59
130	122	-74	S	102	QA	ZG	0.00	514.62	3.44	514.62	130	-82	122	S	102	QA	ZG	0.00	514.62	0.76	514.62
130	-82	-86	S	114	QA	ZG	0.00	514.62	1.65	549.23	130	-82	-86	S	135	QA	ZG	1.60	440.88	1.65	55.50
130	-82	-86	S	135	QA	ZG	0.00	440.88	1.60	440.88	131	148	147	S	104	QA	ZG	0.00	0.00	0.02	322.55
131	148	147	S	104	QA	ZG	0.02	322.55	4.11	321.52	131	-70	148	S	108	QA	ZG	0.00	0.00	0.04	323.31
131	-70	148	S	108	QA	ZG	0.04	323.32	3.06	322.56	131	109	-70	S	109	QA	ZG	0.00	391.63	0.88	326.34
131	150	109	S	109	QA	ZG	0.00	0.00	0.05	366.42	131	150	109	S	109	QA	ZG				

Relazione di calcolo

132	137	-91	S	134	QA	ZG	0.00	601.58	2.11	603.99	132	137	-91	S	101	QA	ZG	0.05	332.78	2.11	332.78
134	126	-88	S	113	QA	ZG	0.00	22.20	2.79	0.00	134	126	-88	S	118	QA	ZG	0.00	0.00	2.79	22.84
134	126	127	S	136	QA	ZG	0.00	794.40	2.71	794.40	134	127	128	S	100	QA	ZG	0.00	794.25	2.57	786.87
134	127	128	S	135	QA	ZG	0.00	8.44	2.57	1.06	135	128	130	S	111	QA	ZG	0.00	604.73	2.48	604.73
135	130	-96	S	100	QA	ZG	0.00	3.15	2.76	0.00	135	130	-96	S	134	QA	ZG	0.00	604.72	2.76	601.57
136	157	156	S	118	QA	ZG	0.00	70.87	3.80	300.04	136	157	156	S	137	QA	ZG	0.00	0.00	3.80	2.06
136	136	157	S	117	QA	ZG	0.00	36.38	0.48	0.00	136	136	157	S	118	QA	ZG	0.00	41.82	0.48	70.87
137	-95	-94	S	136	QA	ZG	0.00	794.40	2.71	794.40	137	158	-95	S	100	QA	ZG	0.00	792.76	0.57	794.40
137	-96	158	S	100	QA	ZG	0.00	0.00	0.02	414.27	137	-96	158	S	100	QA	ZG	0.02	787.02	2.02	792.76
137	137	135	S	101	QA	ZG	0.00	0.00	2.22	7.59	137	135	-93	S	112	QA	ZG	0.00	0.00	3.99	1.50
137	135	-93	S	133	QA	ZG	0.00	1.50	3.99	0.00	138	-92	132	S	112	QA	ZG	0.00	597.90	0.65	597.90
138	135	-92	S	101	QA	ZG	0.00	332.78	2.06	332.78	138	135	-92	S	112	QA	ZG	0.01	597.90	2.06	597.90
138	135	-92	S	112	QA	ZG	0.00	0.00	0.01	597.90	138	141	135	S	133	QA	ZG	0.00	590.23	3.35	597.83
139	138	139	S	126	QA	ZG	0.00	279.65	5.56	272.06	139	138	139	S	128	QA	ZG	0.00	7.59	5.56	0.00
140	162	157	S	117	QA	ZG	0.00	360.54	1.08	296.06	140	162	157	S	137	QA	ZG	5.04	569.54	5.05	0.00
140	162	157	S	137	QA	ZG	4.47	569.24	5.04	569.54	140	162	157	S	137	QA	ZG	0.03	569.51	4.47	569.24
140	162	157	S	137	QA	ZG	0.00	0.00	0.03	569.49	140	162	157	S	117	QA	ZG	4.81	72.20	5.05	0.00
140	162	157	S	117	QA	ZG	1.08	296.06	4.81	72.20	141	162	140	S	137	QA	ZG	0.00	0.00	3.80	4.10
141	144	162	S	117	QA	ZG	0.00	96.62	1.45	185.55	142	161	145	S	116	QA	ZG	0.00	0.00	1.64	7.54
143	-106	144	S	117	QA	ZG	0.00	0.00	1.40	6.34	143	146	-106	S	116	QA	ZG	0.00	251.03	2.80	250.83
143	145	146	S	116	QA	ZG	0.00	246.17	1.97	249.28	143	145	146	S	116	QA	ZG	1.97	249.28	3.07	251.02
149	-89	133	S	129	QA	ZG	0.00	620.46	1.98	620.46	149	133	155	S	129	QA	ZG	0.00	620.46	3.06	620.46
209	243	258	S	217	QA	ZG	0.00	42.48	2.80	41.84	209	243	258	S	217	QA	ZG	2.80	41.84	3.90	41.55
210	236	243	S	216	QA	ZG	0.00	97.46	3.34	97.46	210	236	243	S	218	QA	ZG	0.00	13.45	3.34	55.16
210	243	-209	S	218	QA	ZG	0.00	55.16	0.96	67.17	210	243	-209	S	218	QA	ZG	1.63	34.98	1.70	0.00
210	243	-209	S	218	QA	ZG	0.96	67.17	1.63	34.98	211	226	-197	S	215	QA	ZG	0.00	0.00	1.35	66.78
211	226	-197	S	215	QA	ZG	1.35	66.78	5.30	106.59	231	254	225	S	215	QA	ZG	0.00	0.00	0.08	94.92
231	254	225	S	215	QA	ZG	0.38	120.71	3.87	75.62	231	254	225	S	215	QA	ZG	0.09	106.96	0.38	120.71
231	254	225	S	215	QA	ZG	0.08	94.91	0.09	106.95	231	234	254	S	219	QA	ZG	0.00	94.86	0.57	94.91
231	240	234	S	219	QA	ZG	0.00	0.00	0.04	94.92	231	240	234	S	219	QA	ZG	0.04	94.92	4.44	94.87
233	225	226	S	215	QA	ZG	0.00	33.63	2.67	0.00	233	226	227	S	214	QA	ZG	0.00	132.40	2.71	132.40
233	227	228	S	213	QA	ZG	0.00	132.38	2.57	131.15	235	230	256	S	213	QA	ZG	0.00	0.52	2.76	0.00
236	-195	254	S	215	QA	ZG	0.00	2.00	3.80	0.00	236	-195	254	S	219	QA	ZG	0.00	0.00	3.80	2.00
236	236	-195	S	215	QA	ZG	0.00	2.25	0.48	2.00	236	236	-195	S	218	QA	ZG	0.00	6.06	0.48	0.00
237	-197	236	S	215	QA	ZG	0.00	56.68	0.62	50.22	237	-197	-197	S	214	QA	ZG	0.00	132.40	2.71	132.40
237	255	-198	S	213	QA	ZG	0.00	132.13	0.57	132.40	237	256	255	S	213	QA	ZG	0.00	0.00	0.02	69.04
237	256	255	S	213	QA	ZG	0.02	131.17	2.02	132.13	240	-208	-195	S	218	QA	ZG	0.00	60.09	4.81	12.03
240	-208	-195	S	219	QA	ZG	4.97	94.92	5.05	0.00	240	-208	-195	S	219	QA	ZG	4.40	94.87	4.97	94.92
240	-208	-195	S	219	QA	ZG	0.00	94.92	4.40	94.87	240	-208	-195	S	218	QA	ZG	4.81	12.03	5.05	0.00
241	-208	240	S	219	QA	ZG	0.00	0.97	3.80	0.00	241	244	-208	S	218	QA	ZG	0.00	16.10	1.45	30.92
242	259	245	S	217	QA	ZG	0.00	0.00	1.64	1.26	243	-209	244	S	218	QA	ZG	0.00	0.00	1.40	1.73
243	246	-209	S	217	QA	ZG	0.00	41.84	2.80	42.48	243	245	246	S	217	QA	ZG	0.00	41.03	3.07	41.84

Elenco carichi aste

Condizione di carico n. 4: ACC NEVE

Carichi distribuiti

Asta	N1	N2	E	NE	T	DC	Xi <m>	Qi <daN/m>	Xf <m>	Qf <daN/m>
0	349	-254	S	303	QA2	ZG	0.00	155.94	0.83	155.94
0	-254	-259	S	303	QA2	ZG	0.00	155.94	0.83	155.94
0	-259	-264	S	303	QA2	ZG	0.00	155.94	0.83	155.94
0	-264	351	S	303	QA2	ZG	0.00	155.94	0.83	155.94
0	-269	351	S	304	QA2	ZG	0.00	66.27	0.51	66.48
0	-270	-269	S	304	QA2	ZG	0.00	66.05	0.51	66.27
0	-271	-270	S	304	QA2	ZG	0.00	65.84	0.51	66.05
0	352	-271	S	304	QA2	ZG	0.00	0.00	0.05	65.65
0	352	-271	S	304	QA2	ZG	0.05	65.65	0.51	65.84
0	249	-183	S	225	QA2	ZG	0.00	92.40	0.66	92.40
0	-183	-184	S	225	QA2	ZG	0.00	92.40	0.66	92.40
0	-184	-185	S	225	QA2	ZG	0.00	92.40	0.66	92.40
0	-185	250	S	225	QA2	ZG	0.00	92.40	0.51	92.40
0	-185	250	S	225	QA2	ZG	0.51	92.40	0.66	0.00
201	207	208	S	220	QA2	ZG	0.00	94.75	4.90	92.75
202	212	-179	S	201	QA2	ZG	0.00	25.29	5.86	143.63
202	212	-179	S	202	QA2	ZG	5.83	92.40	5.93	36.78
202	212	-179	S	202	QA2	ZG	0.00	92.40	5.83	92.40
202	212	-179	S	201	QA2	ZG	5.86	143.63	5.93	0.00
202	212	213	S	223	QA2	ZG	0.00	92.40	4.70	92.40
202	213	214	S	225	QA2	ZG	0.00	92.40	4.90	92.40
203	218	-180	S	202	QA2	ZG	0.00	92.40	3.43	92.40
203	218	-181	S	202	QA2	ZG	0.00	92.40	2.40	92.40
203	218	-181	S	232	QA2	ZG	0.00	168.08	2.40	168.08
203	-181	219	S	223	QA2	ZG	0.00	92.40	2.06	92.40
203	-181	219	S	232	QA2	ZG	0.00	168.08	2.06	168.08
203	219	-182	S	223	QA2	ZG	0.00	92.40	2.64	92.40
203	-182	249	S	225	QA2	ZG	0.00	92.40	2.40	92.40
204	221	-186	S	211	QA2	ZG	0.00	0.00	3.38	56.87
204	221	-186	S	212	QA2	ZG	0.00	71.90	3.38	0.00

Relazione di calcolo

205	223	224	S	232	QA2	ZG	0.00	168.08	4.46	168.08
205	224	251	S	230	QA2	ZG	0.00	165.46	5.04	165.46
206	-193	233	S	230	QA2	ZG	0.00	165.46	1.98	165.46
206	233	253	S	230	QA2	ZG	0.00	165.46	3.06	165.46
208	242	257	S	227	QA2	ZG	0.00	72.55	5.56	74.58
212	-186	220	S	211	QA2	ZG	0.00	106.95	1.38	85.28
212	-186	220	S	237	QA2	ZG	0.00	117.57	1.38	117.57
212	227	-186	S	212	QA2	ZG	0.00	170.91	2.24	135.23
212	227	-186	S	237	QA2	ZG	0.00	117.57	4.04	117.57
212	227	-186	S	212	QA2	ZG	2.24	135.23	4.04	0.00
213	206	-177	S	200	QA2	ZG	0.00	55.66	3.32	0.00
213	206	-177	S	222	QA2	ZG	0.00	187.97	3.32	187.97
213	-177	212	S	222	QA2	ZG	0.00	187.97	0.63	187.97
214	219	224	S	231	QA2	ZG	0.00	201.60	4.20	201.60
214	224	-193	S	204	QA2	ZG	0.00	178.40	1.65	169.17
214	224	-193	S	204	QA2	ZG	1.65	169.17	4.14	169.17
215	-196	233	S	229	QA2	ZG	0.00	222.59	2.70	222.59
215	-196	233	S	234	QA2	ZG	0.00	159.44	2.70	159.44
215	239	-196	S	229	QA2	ZG	0.00	0.00	0.05	222.59
215	239	-196	S	235	QA2	ZG	1.54	159.44	1.55	0.00
215	239	-196	S	235	QA2	ZG	0.00	158.51	1.54	159.44
215	239	-196	S	229	QA2	ZG	0.05	222.59	1.55	222.59
215	239	242	S	235	QA2	ZG	0.00	158.51	1.81	157.41
216	203	207	S	221	QA2	ZG	0.00	139.96	2.37	187.97
216	207	213	S	222	QA2	ZG	0.00	187.97	3.95	187.97
216	207	213	S	224	QA2	ZG	0.00	195.94	3.95	195.94
217	251	249	S	226	QA2	ZG	0.00	106.00	4.20	106.00
217	251	249	S	231	QA2	ZG	0.00	201.60	4.20	201.60
217	251	253	S	228	QA2	ZG	0.00	106.00	3.24	100.00
217	251	253	S	228	QA2	ZG	3.24	100.00	4.14	100.00
219	214	208	S	224	QA2	ZG	0.00	195.94	3.95	195.94
219	250	214	S	225	QA2	ZG	0.00	0.00	2.31	5.99
219	252	250	S	226	QA2	ZG	0.00	106.00	4.20	106.00
219	229	252	S	228	QA2	ZG	0.00	99.89	3.24	105.89
219	-194	229	S	228	QA2	ZG	0.00	100.00	0.90	100.00
219	238	-194	S	229	QA2	ZG	0.00	222.59	4.20	222.59
220	201	247	S	207	QA2	ZG	0.00	0.00	2.14	1.23
220	202	201	S	208	QA2	ZG	0.00	166.96	4.98	164.76
220	202	201	S	208	QA2	ZG	4.98	164.76	5.05	0.00
220	203	202	S	221	QA2	ZG	0.00	60.77	3.12	0.00
221	204	201	S	207	QA2	ZG	0.00	86.01	4.09	85.74
221	204	201	S	208	QA2	ZG	0.00	2.83	4.12	0.00
221	204	201	S	207	QA2	ZG	4.09	85.74	4.12	0.00
221	210	204	S	200	QA2	ZG	0.00	2.09	3.04	0.00
221	210	204	S	209	QA2	ZG	3.02	86.01	3.04	0.00
221	210	204	S	209	QA2	ZG	0.00	86.22	3.02	86.01
222	205	203	S	220	QA2	ZG	0.00	92.75	4.90	94.75
223	202	206	S	208	QA2	ZG	0.00	3.30	4.17	0.00
223	202	206	S	221	QA2	ZG	1.52	124.85	4.17	167.68
223	202	206	S	221	QA2	ZG	0.00	0.00	1.52	124.85
224	204	248	S	207	QA2	ZG	0.00	0.91	2.15	0.00
224	204	248	S	209	QA2	ZG	0.00	0.00	2.15	0.91
224	206	204	S	200	QA2	ZG	0.00	118.55	2.74	120.29
224	206	204	S	208	QA2	ZG	0.08	166.98	5.06	164.78
224	206	204	S	208	QA2	ZG	0.00	0.00	0.08	166.98
224	206	204	S	200	QA2	ZG	5.01	121.72	5.06	0.00
224	206	204	S	200	QA2	ZG	2.74	120.29	5.01	121.72
226	210	-176	S	209	QA2	ZG	0.00	1.90	2.16	0.00
226	210	-176	S	210	QA2	ZG	0.00	0.00	2.16	1.92
226	210	211	S	200	QA2	ZG	0.00	121.70	2.27	120.26
226	210	211	S	201	QA2	ZG	0.00	128.24	2.27	91.78
226	211	-177	S	200	QA2	ZG	0.00	120.26	2.74	118.53
226	211	-177	S	201	QA2	ZG	0.00	91.78	4.30	22.58
226	211	-177	S	200	QA2	ZG	2.74	118.53	4.30	0.00
227	216	-178	S	210	QA2	ZG	0.00	2.06	2.44	0.00
227	216	-178	S	211	QA2	ZG	0.00	0.00	2.44	2.06
228	217	216	S	210	QA2	ZG	0.00	70.05	1.87	41.21
228	217	216	S	237	QA2	ZG	0.00	4.10	1.87	0.00
229	216	220	S	211	QA2	ZG	0.00	0.00	0.05	97.71
229	216	220	S	237	QA2	ZG	1.68	97.27	2.12	104.41
229	216	220	S	237	QA2	ZG	0.11	68.27	1.68	97.27
229	216	220	S	237	QA2	ZG	0.00	0.00	0.11	68.27
229	216	220	S	211	QA2	ZG	0.48	97.63	2.12	96.58
229	216	220	S	211	QA2	ZG	0.05	97.71	0.48	97.63
230	-179	210	S	201	QA2	ZG	0.00	0.00	3.59	2.61
230	-179	210	S	210	QA2	ZG	3.54	77.69	3.59	0.00
230	-179	210	S	210	QA2	ZG	2.56	93.10	3.54	77.69
230	-179	210	S	210	QA2	ZG	0.00	133.14	2.56	93.10
230	217	-179	S	210	QA2	ZG	0.00	146.69	0.92	131.89

Relazione di calcolo

230	-180	217	S	202	QA2	ZG	0.00	6.42	1.39	2.56
230	-180	217	S	237	QA2	ZG	0.00	109.26	1.39	76.68
230	222	-180	S	203	QA2	ZG	0.00	137.23	3.44	137.23
230	222	-180	S	237	QA2	ZG	3.05	117.57	3.44	109.53
230	222	-180	S	237	QA2	ZG	0.00	117.57	3.05	117.57
230	-187	222	S	203	QA2	ZG	0.00	137.23	0.76	137.23
230	-187	222	S	237	QA2	ZG	0.00	117.57	0.76	117.57
230	-187	-191	S	233	QA2	ZG	0.00	137.23	1.65	146.46
230	-187	-191	S	237	QA2	ZG	1.60	117.57	1.65	14.80
230	-187	-191	S	237	QA2	ZG	0.00	117.57	1.60	117.57
231	248	247	S	207	QA2	ZG	0.00	0.00	0.02	86.01
231	248	247	S	207	QA2	ZG	0.02	86.01	4.11	85.74
231	-176	248	S	209	QA2	ZG	0.00	0.00	0.05	86.22
231	-176	248	S	209	QA2	ZG	0.05	86.22	3.07	86.01
231	209	-176	S	210	QA2	ZG	0.00	104.43	0.88	87.16
231	-178	209	S	210	QA2	ZG	0.00	0.00	0.05	97.71
231	-178	209	S	210	QA2	ZG	1.65	149.35	3.93	104.43
231	-178	209	S	210	QA2	ZG	0.84	166.12	1.65	149.35
231	-178	209	S	210	QA2	ZG	0.05	97.71	0.84	166.12
231	215	-178	S	211	QA2	ZG	0.00	97.63	0.43	97.70
231	221	215	S	211	QA2	ZG	0.00	0.00	1.59	121.08
231	221	215	S	211	QA2	ZG	2.80	96.55	4.44	97.60
231	221	215	S	211	QA2	ZG	1.59	121.08	2.80	96.55
231	225	221	S	212	QA2	ZG	0.00	0.00	1.19	96.72
231	225	221	S	212	QA2	ZG	2.46	193.52	4.44	153.12
231	225	221	S	212	QA2	ZG	1.19	96.72	2.46	193.52
232	218	223	S	203	QA2	ZG	0.00	137.23	4.20	137.23
232	-192	223	S	204	QA2	ZG	0.00	167.54	1.67	176.68
232	-192	223	S	233	QA2	ZG	0.00	145.05	1.67	135.91
232	231	-192	S	204	QA2	ZG	0.00	169.17	2.48	169.17
232	231	-192	S	206	QA2	ZG	0.00	161.26	2.48	161.26
232	237	231	S	205	QA2	ZG	0.00	160.42	2.76	161.26
232	237	231	S	236	QA2	ZG	0.05	88.74	2.76	88.74
232	237	231	S	236	QA2	ZG	0.00	0.00	0.05	88.74
233	225	226	S	212	QA2	ZG	0.00	0.00	2.67	43.02
233	226	227	S	212	QA2	ZG	0.00	45.42	2.71	90.87
233	227	228	S	237	QA2	ZG	0.00	2.25	2.57	0.28
235	228	230	S	206	QA2	ZG	0.00	161.26	2.48	161.26
235	230	256	S	205	QA2	ZG	0.00	161.26	2.76	160.42
237	237	235	S	236	QA2	ZG	0.00	0.00	2.22	2.02
237	235	-196	S	234	QA2	ZG	0.00	0.00	3.99	0.40
237	235	-196	S	235	QA2	ZG	0.00	0.40	3.99	0.00
238	235	232	S	234	QA2	ZG	0.00	0.00	0.01	159.44
238	235	232	S	236	QA2	ZG	0.00	88.74	2.71	88.74
238	235	232	S	234	QA2	ZG	0.01	159.44	2.71	159.44
238	241	235	S	235	QA2	ZG	0.00	157.40	3.35	159.42
239	238	239	S	227	QA2	ZG	0.00	74.57	5.56	72.55
239	238	239	S	229	QA2	ZG	0.00	2.02	5.56	0.00
309	343	351	S	304	QA2	ZG	0.00	65.84	2.80	66.94
309	343	351	S	304	QA2	ZG	2.80	66.94	3.90	66.48
310	336	343	S	303	QA2	ZG	0.00	155.94	3.34	155.94
310	336	343	S	305	QA2	ZG	0.00	21.52	3.34	88.25
310	343	-273	S	305	QA2	ZG	0.00	88.25	0.96	107.47
310	343	-273	S	305	QA2	ZG	1.63	55.96	1.65	0.00
310	343	-273	S	305	QA2	ZG	0.96	107.47	1.63	55.96
311	326	-249	S	301	QA2	ZG	0.00	108.43	5.30	108.43
311	326	-249	S	302	QA2	ZG	1.35	106.84	5.30	170.46
311	326	-249	S	302	QA2	ZG	0.00	0.00	1.35	106.84
312	327	-250	S	300	QA2	ZG	0.00	0.00	0.05	102.77
312	327	-250	S	301	QA2	ZG	0.00	108.43	5.30	108.43
312	327	-250	S	300	QA2	ZG	2.53	102.77	5.30	103.61
312	327	-250	S	300	QA2	ZG	0.05	102.77	2.53	102.77
331	347	325	S	302	QA2	ZG	0.00	0.00	0.08	151.77
331	347	325	S	302	QA2	ZG	0.38	193.04	3.87	120.99
331	347	325	S	302	QA2	ZG	0.09	171.02	0.38	193.04
331	347	325	S	302	QA2	ZG	0.08	151.76	0.09	171.01
331	334	347	S	306	QA2	ZG	0.00	151.80	0.57	151.77
331	340	334	S	306	QA2	ZG	0.00	0.00	0.04	151.87
331	340	334	S	306	QA2	ZG	0.04	151.87	4.44	151.80
333	325	326	S	302	QA2	ZG	0.00	53.81	2.67	0.00
333	327	328	S	300	QA2	ZG	0.00	0.00	2.57	1.97
335	328	330	S	300	QA2	ZG	0.00	102.77	2.48	102.77
335	330	350	S	300	QA2	ZG	0.00	102.77	2.76	103.61
336	348	347	S	302	QA2	ZG	0.00	3.20	3.79	0.00
336	348	347	S	306	QA2	ZG	0.00	0.00	3.79	3.20
336	336	348	S	302	QA2	ZG	0.00	3.60	0.48	3.20
336	336	348	S	305	QA2	ZG	0.00	9.70	0.48	0.00
337	-249	336	S	302	QA2	ZG	0.00	90.64	0.62	80.30
340	-272	348	S	305	QA2	ZG	0.00	96.14	1.08	78.95

Relazione di calcolo

340	-272	348	S	306	QA2	ZG	4.97	151.77	5.05	0.00
340	-272	348	S	306	QA2	ZG	4.40	151.80	4.97	151.77
340	-272	348	S	306	QA2	ZG	0.00	151.87	4.40	151.80
340	-272	348	S	305	QA2	ZG	4.81	19.25	5.05	0.00
340	-272	348	S	305	QA2	ZG	1.08	78.95	4.81	19.25
341	-272	340	S	306	QA2	ZG	0.00	1.56	3.80	0.00
341	344	-272	S	305	QA2	ZG	0.00	25.76	1.45	49.48
342	352	345	S	304	QA2	ZG	0.00	0.00	1.64	2.01
343	-273	344	S	305	QA2	ZG	0.00	0.00	1.40	0.64
343	346	-273	S	304	QA2	ZG	0.00	66.94	2.80	65.83
343	345	346	S	304	QA2	ZG	0.00	65.65	3.07	66.94

Elenco carichi elementi bidimensionali

Condizione di carico n. 1: PS

Carichi uniformi

Simbologia

Bid. = Numero del muro/elemento bidimensionale

N1 = Nodo1

N2 = Nodo2

N3 = Nodo3

N4 = Nodo4

T = Tipo di carico

PP = Peso proprio

M = Manuale

DC = Direzione del carico

G = secondo gli assi globali

L = secondo gli assi locali

Qx = Carico in dir. X

Qy = Carico in dir. Y

Qz = Carico in dir. Z

Bid.	N1	N2	N3	N4	T	DC	Qx <daN/mq>	Qy <daN/mq>	Qz <daN/mq>
102	-34	-36	-59	-57	PP	G	0.00	0.00	500.00
102	-57	-59	-97	158	PP	G	0.00	0.00	500.00
102	-11	-13	-36	-34	PP	G	0.00	0.00	500.00
102	-36	-38	-61	-59	PP	G	0.00	0.00	500.00
102	-59	-61	-99	-97	PP	G	0.00	0.00	500.00
102	-13	-15	-38	-36	PP	G	0.00	0.00	500.00
102	-38	-40	-63	-61	PP	G	0.00	0.00	500.00
102	-61	-63	-101	-99	PP	G	0.00	0.00	500.00
102	-15	-17	-40	-38	PP	G	0.00	0.00	500.00
102	-17	-19	-42	-40	PP	G	0.00	0.00	500.00
102	-63	-65	160	-101	PP	G	0.00	0.00	500.00
102	-40	-42	-65	-63	PP	G	0.00	0.00	500.00
103	-39	-41	-64	-62	PP	G	0.00	0.00	750.00
103	-62	-64	-102	-100	PP	G	0.00	0.00	750.00
103	-60	-62	-100	-98	PP	G	0.00	0.00	750.00
103	-12	-14	-37	-35	PP	G	0.00	0.00	750.00
103	-35	-37	-60	-58	PP	G	0.00	0.00	750.00
103	-58	-60	-98	-96	PP	G	0.00	0.00	750.00
103	-16	-18	-41	-39	PP	G	0.00	0.00	750.00
103	-37	-39	-62	-60	PP	G	0.00	0.00	750.00
103	-64	-69	161	-102	PP	G	0.00	0.00	750.00
103	-14	-16	-39	-37	PP	G	0.00	0.00	750.00
103	-41	-46	-69	-64	PP	G	0.00	0.00	750.00
103	-18	-23	-46	-41	PP	G	0.00	0.00	750.00
104	-31	-32	-55	-54	PP	G	0.00	0.00	750.00
104	-8	-9	-32	-31	PP	G	0.00	0.00	750.00
104	-53	-54	-84	-83	PP	G	0.00	0.00	750.00
104	-29	-30	-53	-52	PP	G	0.00	0.00	750.00
104	-52	-53	-83	153	PP	G	0.00	0.00	750.00
104	-55	-56	154	-85	PP	G	0.00	0.00	750.00
104	-6	-7	-30	-29	PP	G	0.00	0.00	750.00
104	-54	-55	-85	-84	PP	G	0.00	0.00	750.00
104	-9	-10	-33	-32	PP	G	0.00	0.00	750.00
104	-7	-8	-31	-30	PP	G	0.00	0.00	750.00
104	-30	-31	-54	-53	PP	G	0.00	0.00	750.00
104	-32	-33	-56	-55	PP	G	0.00	0.00	750.00
105	-50	-51	152	-79	PP	G	0.00	0.00	750.00
105	-47	-48	-77	151	PP	G	0.00	0.00	750.00
105	-49	-50	-79	-78	PP	G	0.00	0.00	750.00
105	-1	-2	-25	-24	PP	G	0.00	0.00	750.00
105	-4	-5	-28	-27	PP	G	0.00	0.00	750.00
105	-24	-25	-48	-47	PP	G	0.00	0.00	750.00
105	-48	-49	-78	-77	PP	G	0.00	0.00	750.00
105	-26	-27	-50	-49	PP	G	0.00	0.00	750.00
105	-2	-3	-26	-25	PP	G	0.00	0.00	750.00

Relazione di calcolo

105	-25	-26	-49	-48	PP	G	0.00	0.00	750.00
105	-3	-4	-27	-26	PP	G	0.00	0.00	750.00
105	-27	-28	-51	-50	PP	G	0.00	0.00	750.00
106	-66	-65	160	-103	PP	G	0.00	0.00	750.00
106	-45	-44	-67	-68	PP	G	0.00	0.00	750.00
106	-21	-20	-43	-44	PP	G	0.00	0.00	750.00
106	-46	-45	-68	-69	PP	G	0.00	0.00	750.00
106	-69	-68	-105	161	PP	G	0.00	0.00	750.00
106	-43	-42	-65	-66	PP	G	0.00	0.00	750.00
106	-67	-66	-103	-104	PP	G	0.00	0.00	750.00
106	-68	-67	-104	-105	PP	G	0.00	0.00	750.00
106	-20	-19	-42	-43	PP	G	0.00	0.00	750.00
106	-44	-43	-66	-67	PP	G	0.00	0.00	750.00
106	-23	-22	-45	-46	PP	G	0.00	0.00	750.00
106	-22	-21	-44	-45	PP	G	0.00	0.00	750.00
202	-142	-144	-167	-165	PP	G	0.00	0.00	500.00
202	-97	-99	-121	-119	PP	G	0.00	0.00	500.00
202	-119	-121	-144	-142	PP	G	0.00	0.00	500.00
202	-144	-146	-169	-167	PP	G	0.00	0.00	500.00
202	-163	-165	-199	255	PP	G	0.00	0.00	500.00
202	-121	-123	-146	-144	PP	G	0.00	0.00	500.00
202	-165	-167	-201	-199	PP	G	0.00	0.00	500.00
202	-140	-142	-165	-163	PP	G	0.00	0.00	500.00
202	-146	-148	-171	-169	PP	G	0.00	0.00	500.00
202	158	-97	-119	-117	PP	G	0.00	0.00	500.00
202	-123	-125	-148	-146	PP	G	0.00	0.00	500.00
202	-167	-169	-203	-201	PP	G	0.00	0.00	500.00
202	-169	-171	258	-203	PP	G	0.00	0.00	500.00
202	-117	-119	-142	-140	PP	G	0.00	0.00	500.00
202	-101	160	-125	-123	PP	G	0.00	0.00	500.00
202	-99	-101	-123	-121	PP	G	0.00	0.00	500.00
203	-96	-98	-120	-118	PP	G	0.00	0.00	750.00
203	-118	-120	-143	-141	PP	G	0.00	0.00	750.00
203	-98	-100	-122	-120	PP	G	0.00	0.00	750.00
203	-120	-122	-145	-143	PP	G	0.00	0.00	750.00
203	-102	161	-129	-124	PP	G	0.00	0.00	750.00
203	-141	-143	-166	-164	PP	G	0.00	0.00	750.00
203	-164	-166	-200	256	PP	G	0.00	0.00	750.00
203	-143	-145	-168	-166	PP	G	0.00	0.00	750.00
203	-124	-129	-152	-147	PP	G	0.00	0.00	750.00
203	-168	-170	-204	-202	PP	G	0.00	0.00	750.00
203	-100	-102	-124	-122	PP	G	0.00	0.00	750.00
203	-122	-124	-147	-145	PP	G	0.00	0.00	750.00
203	-145	-147	-170	-168	PP	G	0.00	0.00	750.00
203	-170	-175	259	-204	PP	G	0.00	0.00	750.00
203	-166	-168	-202	-200	PP	G	0.00	0.00	750.00
203	-147	-152	-175	-170	PP	G	0.00	0.00	750.00
204	-159	-160	-189	-188	PP	G	0.00	0.00	750.00
204	-136	-137	-160	-159	PP	G	0.00	0.00	750.00
204	-135	-136	-159	-158	PP	G	0.00	0.00	750.00
204	-160	-161	-190	-189	PP	G	0.00	0.00	750.00
204	-85	154	-116	-115	PP	G	0.00	0.00	750.00
204	-158	-159	-188	251	PP	G	0.00	0.00	750.00
204	-112	-113	-136	-135	PP	G	0.00	0.00	750.00
204	-115	-116	-139	-138	PP	G	0.00	0.00	750.00
204	-138	-139	-162	-161	PP	G	0.00	0.00	750.00
204	-83	-84	-114	-113	PP	G	0.00	0.00	750.00
204	-113	-114	-137	-136	PP	G	0.00	0.00	750.00
204	153	-83	-113	-112	PP	G	0.00	0.00	750.00
204	-84	-85	-115	-114	PP	G	0.00	0.00	750.00
204	-114	-115	-138	-137	PP	G	0.00	0.00	750.00
204	-137	-138	-161	-160	PP	G	0.00	0.00	750.00
204	-161	-162	252	-190	PP	G	0.00	0.00	750.00
205	-132	-133	-156	-155	PP	G	0.00	0.00	750.00
205	-107	-108	-131	-130	PP	G	0.00	0.00	750.00
205	-130	-131	-154	-153	PP	G	0.00	0.00	750.00
205	-153	-154	-183	249	PP	G	0.00	0.00	750.00
205	-77	-78	-109	-108	PP	G	0.00	0.00	750.00
205	-108	-109	-132	-131	PP	G	0.00	0.00	750.00
205	-155	-156	-185	-184	PP	G	0.00	0.00	750.00
205	-79	152	-111	-110	PP	G	0.00	0.00	750.00
205	-110	-111	-134	-133	PP	G	0.00	0.00	750.00
205	151	-77	-108	-107	PP	G	0.00	0.00	750.00
205	-109	-110	-133	-132	PP	G	0.00	0.00	750.00
205	-156	-157	250	-185	PP	G	0.00	0.00	750.00
205	-131	-132	-155	-154	PP	G	0.00	0.00	750.00
205	-154	-155	-184	-183	PP	G	0.00	0.00	750.00
205	-78	-79	-110	-109	PP	G	0.00	0.00	750.00
205	-133	-134	-157	-156	PP	G	0.00	0.00	750.00

Relazione di calcolo

206	-104	-103	-126	-127	PP	G	0.00	0.00	750.00
206	-105	-104	-127	-128	PP	G	0.00	0.00	750.00
206	-128	-127	-150	-151	PP	G	0.00	0.00	750.00
206	-151	-150	-173	-174	PP	G	0.00	0.00	750.00
206	-174	-173	-206	-207	PP	G	0.00	0.00	750.00
206	-149	-148	-171	-172	PP	G	0.00	0.00	750.00
206	-172	-171	258	-205	PP	G	0.00	0.00	750.00
206	161	-105	-128	-129	PP	G	0.00	0.00	750.00
206	-173	-172	-205	-206	PP	G	0.00	0.00	750.00
206	-103	160	-125	-126	PP	G	0.00	0.00	750.00
206	-126	-125	-148	-149	PP	G	0.00	0.00	750.00
206	-129	-128	-151	-152	PP	G	0.00	0.00	750.00
206	-127	-126	-149	-150	PP	G	0.00	0.00	750.00
206	-150	-149	-172	-173	PP	G	0.00	0.00	750.00
206	-152	-151	-174	-175	PP	G	0.00	0.00	750.00
206	-175	-174	-207	259	PP	G	0.00	0.00	750.00
302	-214	-216	-229	-227	PP	G	0.00	0.00	500.00
302	-203	258	-218	-216	PP	G	0.00	0.00	500.00
302	-227	-229	-242	-240	PP	G	0.00	0.00	500.00
302	255	-199	-212	-210	PP	G	0.00	0.00	500.00
302	-201	-203	-216	-214	PP	G	0.00	0.00	500.00
302	-236	-238	-254	349	PP	G	0.00	0.00	500.00
302	-199	-201	-214	-212	PP	G	0.00	0.00	500.00
302	-240	-242	-264	-259	PP	G	0.00	0.00	500.00
302	-225	-227	-240	-238	PP	G	0.00	0.00	500.00
302	-210	-212	-225	-223	PP	G	0.00	0.00	500.00
302	-223	-225	-238	-236	PP	G	0.00	0.00	500.00
302	-242	-244	351	-264	PP	G	0.00	0.00	500.00
302	-238	-240	-259	-254	PP	G	0.00	0.00	500.00
302	-212	-214	-227	-225	PP	G	0.00	0.00	500.00
302	-216	-218	-231	-229	PP	G	0.00	0.00	500.00
302	-229	-231	-244	-242	PP	G	0.00	0.00	500.00
303	-213	-215	-228	-226	PP	G	0.00	0.00	750.00
303	-224	-226	-239	-237	PP	G	0.00	0.00	750.00
303	-237	-239	-258	350	PP	G	0.00	0.00	750.00
303	-200	-202	-215	-213	PP	G	0.00	0.00	750.00
303	-228	-230	-243	-241	PP	G	0.00	0.00	750.00
303	-243	-248	352	-268	PP	G	0.00	0.00	750.00
303	-211	-213	-226	-224	PP	G	0.00	0.00	750.00
303	256	-200	-213	-211	PP	G	0.00	0.00	750.00
303	-202	-204	-217	-215	PP	G	0.00	0.00	750.00
303	-215	-217	-230	-228	PP	G	0.00	0.00	750.00
303	-217	-222	-235	-230	PP	G	0.00	0.00	750.00
303	-241	-243	-268	-263	PP	G	0.00	0.00	750.00
303	-204	259	-222	-217	PP	G	0.00	0.00	750.00
303	-239	-241	-263	-258	PP	G	0.00	0.00	750.00
303	-230	-235	-248	-243	PP	G	0.00	0.00	750.00
303	-226	-228	-241	-239	PP	G	0.00	0.00	750.00
306	-248	-247	-271	352	PP	G	0.00	0.00	750.00
306	-245	-244	351	-269	PP	G	0.00	0.00	750.00
306	-219	-218	-231	-232	PP	G	0.00	0.00	750.00
306	-232	-231	-244	-245	PP	G	0.00	0.00	750.00
306	-234	-233	-246	-247	PP	G	0.00	0.00	750.00
306	-247	-246	-270	-271	PP	G	0.00	0.00	750.00
306	-206	-205	-219	-220	PP	G	0.00	0.00	750.00
306	-220	-219	-232	-233	PP	G	0.00	0.00	750.00
306	-233	-232	-245	-246	PP	G	0.00	0.00	750.00
306	-246	-245	-269	-270	PP	G	0.00	0.00	750.00
306	-205	258	-218	-219	PP	G	0.00	0.00	750.00
306	259	-207	-221	-222	PP	G	0.00	0.00	750.00
306	-222	-221	-234	-235	PP	G	0.00	0.00	750.00
306	-235	-234	-247	-248	PP	G	0.00	0.00	750.00
306	-207	-206	-220	-221	PP	G	0.00	0.00	750.00
306	-221	-220	-233	-234	PP	G	0.00	0.00	750.00
601	351	-269	-265	-264	PP	G	0.00	0.00	500.00
601	-264	-265	-260	-259	PP	G	0.00	0.00	500.00
601	-259	-260	-255	-254	PP	G	0.00	0.00	500.00
601	-254	-255	-251	349	PP	G	0.00	0.00	500.00
601	-269	-270	-266	-265	PP	G	0.00	0.00	500.00
601	-265	-266	-261	-260	PP	G	0.00	0.00	500.00
601	-260	-261	-256	-255	PP	G	0.00	0.00	500.00
601	-255	-256	-252	-251	PP	G	0.00	0.00	500.00
601	-270	-271	-267	-266	PP	G	0.00	0.00	500.00
601	-266	-267	-262	-261	PP	G	0.00	0.00	500.00
601	-261	-262	-257	-256	PP	G	0.00	0.00	500.00
601	-256	-257	-253	-252	PP	G	0.00	0.00	500.00
601	-271	352	-268	-267	PP	G	0.00	0.00	500.00
601	-267	-268	-263	-262	PP	G	0.00	0.00	500.00
601	-262	-263	-258	-257	PP	G	0.00	0.00	500.00

601	-257	-258	350	-253	PP	G	0.00	0.00	500.00
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Risultati del calcolo

Parametri di calcolo

La modellazione della struttura e la rielaborazione dei risultati del calcolo sono stati effettuati con: ModeSt ver. 8.11, prodotto da Tecnisoft s.a.s. - Prato

La struttura è stata calcolata utilizzando come solutore agli elementi finiti: Xfinest ver. 2014, prodotto da Ce.A.S. S.r.l. - Milano

Tipo di normativa: stati limite D.M. 08
 Tipo di calcolo: analisi sismica dinamica
 Vincoli esterni: Considera sempre vincoli assegnati in modellazione
 Schematizzazione piani rigidi: metodo Master-Slave
 Modalità di recupero masse secondarie: trasferire all'impalcato più vicino con modifica XY baricentro

Generazione combinazioni

- Lineari: si
 - Valuta spostamenti e non sollecitazioni: no
 - Buckling: no

Opzioni di calcolo

- Sono state considerate infinitamente rigide le zone di connessione fra travi, pilastri ed elementi bidimensionali con una riduzione del 20%
 - Calcolo con offset rigidi dai nodi: no
 - Uniformare i carichi variabili: no
 - Massimizzare i carichi variabili: no
 - Minimo carico da considerare: 0.00 <daN/m>
 - Recupero carichi zone rigide: taglio e momento flettente
 - Modalità di combinazione momento torcente: disaccoppiare le azioni

Opzioni del solutore

- Tipo di elemento bidimensionale: QF46
 - Calcolo sforzo nei nodi: No
 - Trascura deformabilità a taglio delle aste: No
 - Analisi dinamica con metodo di Lanczos: Si
 - Check sequenza di Sturm: Si
 - Soluzione matrice con metodo ver. 5.1: No
 - Analisi non lineare con Newton modificato: No
 - Usa formulazione secante per buckling: No
 - Trascura buckling torsionale: No

Dati struttura

- Zona sismica: zona 3
 - Sito di costruzione: Via Francesco Donati, 116, 55047 Seravezza LU, Italia LON. 10.22810 LAT. 43.99510
 Contenuto tra ID reticolo: 18934 18712 18935 18713

Simbologia

TCC = Tipo di combinazione di carico
 SLU = Stato limite ultimo
 SLU S = Stato limite ultimo (azione sismica)
 SLE R = Stato limite d'esercizio, combinazione rara
 SLE F = Stato limite d'esercizio, combinazione frequente
 SLE Q = Stato limite d'esercizio, combinazione quasi permanente
 SLD = Stato limite di danno
 SLV = Stato limite di salvaguardia della vita
 SLC = Stato limite di prevenzione del collasso
 SLO = Stato limite di operatività
 SLU I = Stato limite di resistenza al fuoco
 T_R = Periodo di ritorno <anni>
 A_g = Accelerazione orizzontale massima al sito
 F_O = Valore massimo del fattore di amplificazione dello spettro in accelerazione orizzontale
 T_C^* = Periodo di inizio del tratto a velocità costante dello spettro in accelerazione orizzontale <sec>
 S_s = Coefficiente di amplificazione stratigrafica
 C_c = Coefficiente funzione della categoria del suolo

TCC	T_R	A_g <g>	F_O	T_C^*	S_s	C_c
SLD	75	0.0687	2.50	0.26	1.60	1.97
SLV	712	0.1644	2.39	0.30	1.57	1.87

- Edificio esistente: No
 - Tipo di opera: Opera ordinaria
 - Vita nominale V_N : 50.00
 - Classe d'uso: Classe III
 - SL Esercizio: SLO-Pvr no, SLD-Pvr 63.00

Relazione di calcolo

- SL Ultimi: SLV-Pvr 10.00, SLC-Pvr no
- Classe di duttilità: Classe B
- Quota di riferimento: -0.25 <m>
- Altezza della struttura: 8.91 <m>
- Numero piani edificio: 3
- Coefficiente θ : 0.00
- Edificio regolare in altezza: no
- Edificio regolare in pianta: no
- Forze orizzontali convenzionali per stati limite non sismici: 1.00%
- Genera stati limite per verifiche di resistenza al fuoco: no

Dati di piano

Simbologia

- Imp. = Numero dell'impalcato
- Lx = Dimensione del piano in dir. X
- Ly = Dimensione del piano in dir. Y
- Ex = Eccentricità in dir. X
- Ey = Eccentricità in dir. Y
- Ea = Eccentricità complessiva

Imp.	Lx <m>	Ly <m>	Ex <m>	Ey <m>	Ea <m>
1	27.91	29.37	1.40	1.47	2.03
2	27.91	29.40	1.40	1.47	2.03
3	11.98	10.35	0.60	0.52	0.79

Dati di calcolo

- Categoria del suolo di fondazione: E
- Tipologia edificio: c.a. o prefabbricato a telaio a più piani ed una sola campata
- Coeff. C_1 : 0.075
- Periodo T_1 : 0.3949
- Coeff. λ SLD: 0.85
- Coeff. λ SLV: 0.85
- Rapporto di sovraresistenza (α_u/α_1): 1.10
- Valore di riferimento del fattore di struttura (q_0): 3.30
- Fattore riduttivo (K_w): 1.00
- Fattore riduttivo regolarità in altezza (KR): 0.80
- Fattore di struttura (q): 2.64

- Categoria topografica: T2 - Pendii con inclinazione media $i > 15^\circ$
- Coeff. amplificazione topografica S_T : 1.20
- Fattore di struttura per sisma verticale (q_v): 1.50
- Modalità di calcolo modi di vibrare: Autovalori
- Numero modi: 9
- Modi da considerare: tali da movimentare una percentuale di massa pari a 85.00%
- Trascura modi con massa movimentata minore di: no
- Smorzamento spettro: 5.00%

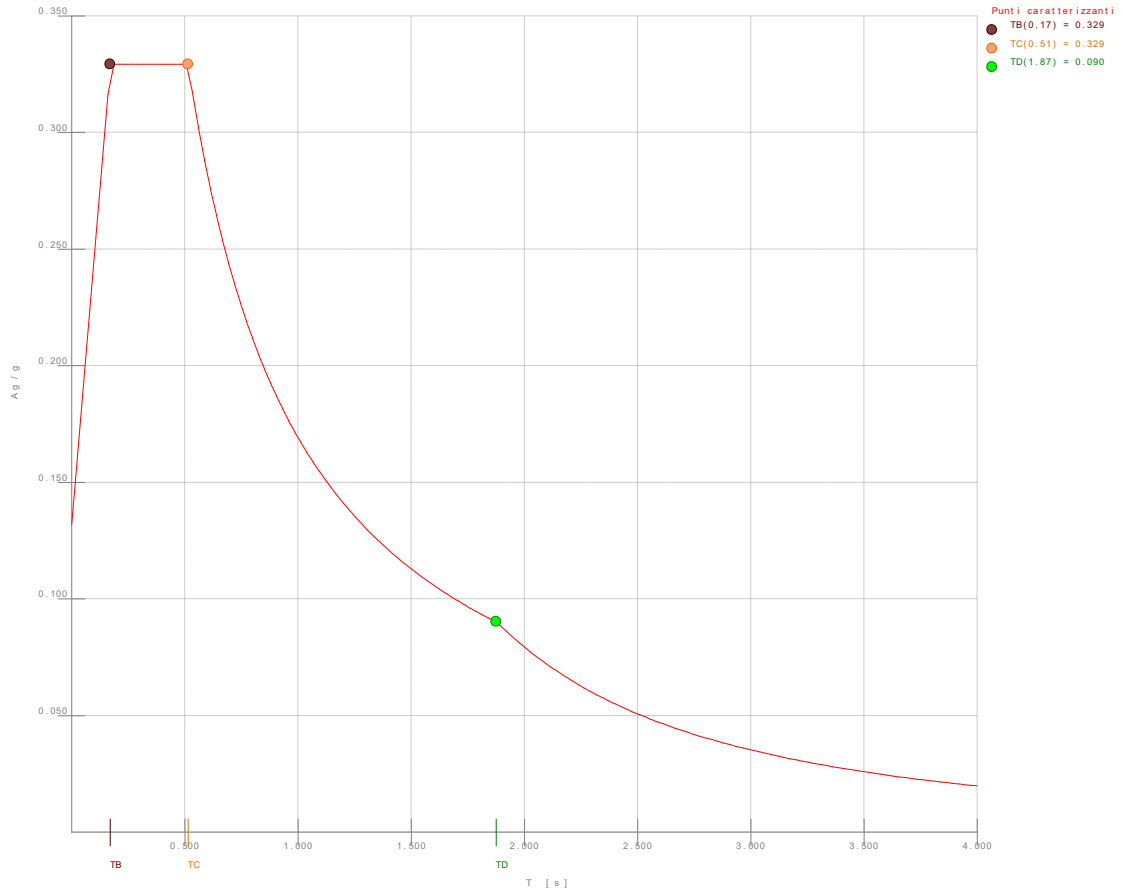


Figura numero 1: Spettro SLD

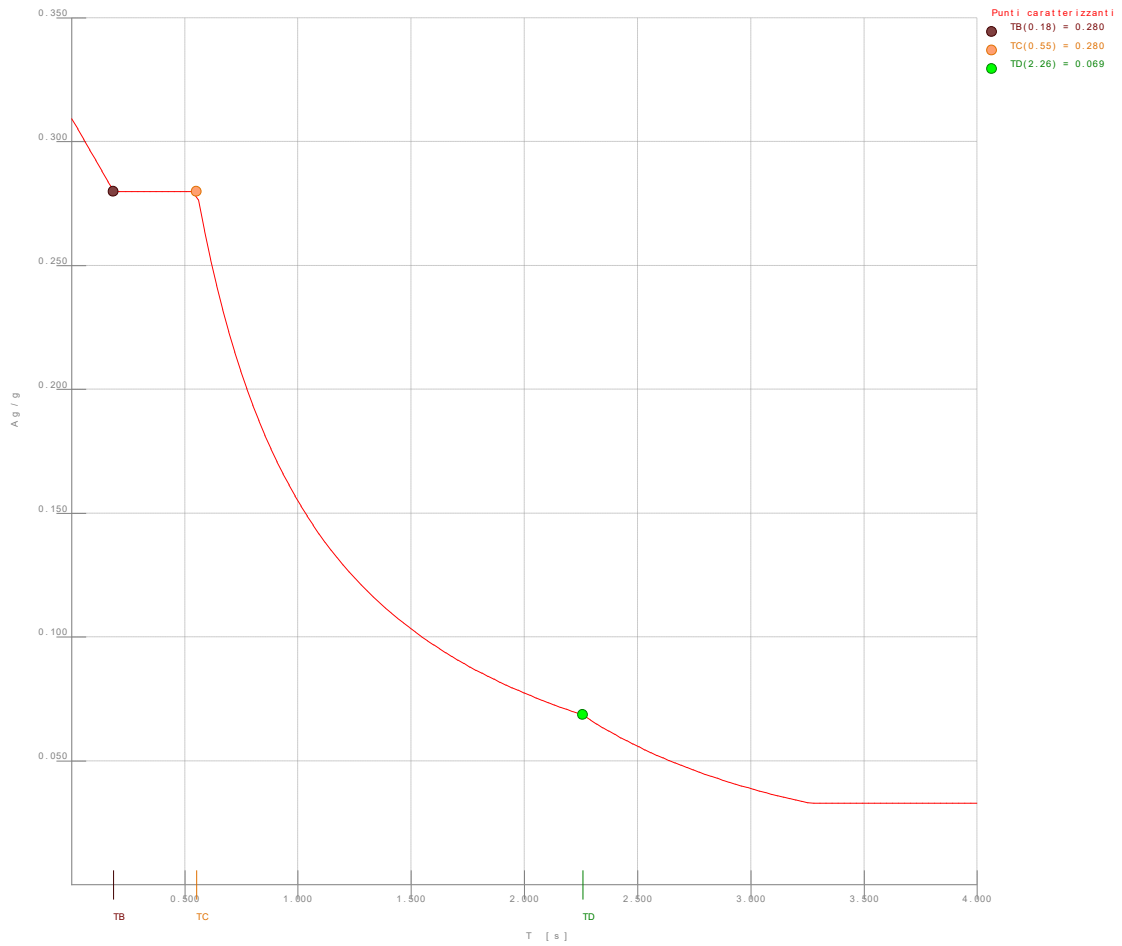


Figura numero 2: Spettro SLV

- Angolo di ingresso del sisma: 0.00 <grad>

Condizioni di carico elementari

Simbologia

CCE = Numero della condizione di carico elementare
 Comm. = Commento
 Mx = Moltiplicatore della massa in dir. X
 My = Moltiplicatore della massa in dir. Y
 Mz = Moltiplicatore della massa in dir. Z
 Jpx = Moltiplicatore del momento d'inerzia intorno all'asse X
 Jpy = Moltiplicatore del momento d'inerzia intorno all'asse Y
 Jpz = Moltiplicatore del momento d'inerzia intorno all'asse Z
 Tipo CCE = Tipo di CCE per calcolo agli stati limite
 Sicurezza = Contributo alla sicurezza
 F = a favore
 S = a sfavore
 A = ambigua
 Variabilità = Tipo di variabilità
 B = di base
 I = indipendente
 A = ambigua

CCE	Comm.	Mx	My	Mz	Jpx	Jpy	Jpz	Tipo CCE	Sicurezza	Variabilità
1	PS	1.00	1.00	0.00	0.00	0.00	1.00	1	S	--
2	PNS	1.00	1.00	0.00	0.00	0.00	1.00	2	S	--
3	ACC RES	1.00	1.00	0.00	0.00	0.00	1.00	3	S	B
4	ACC NEVE	1.00	1.00	0.00	0.00	0.00	1.00	11	S	B

Elenco tipi cce definiti

Simbologia

Tipo CCE = Tipo condizione di carico elementare
 Comm. = Commento
 Tipo = Tipologia
 G = Permanente
 Q = Variabile
 I = Da ignorare
 A = Azione eccezionale
 P = Precompressione
 Durata = Durata del carico
 N = Non definita
 P = Permanente
 L = Lunga
 M = Media
 B = Breve
 I = Istantanea
 $\gamma_{min.}$ = Coeff. $\gamma_{min.}$
 γ_{max} = Coeff. γ_{max}
 Ψ_0 = Coeff. Ψ_0
 Ψ_1 = Coeff. Ψ_1
 Ψ_2 = Coeff. Ψ_2
 $\Psi_{0,s}$ = Coeff. Ψ_0 sismico (D.M. 96)

Tipo CCE	Comm.	Tipo	Durata	$\gamma_{min.}$	γ_{max}	Ψ_0	Ψ_1	Ψ_2	$\Psi_{0,s}$
1	D.M. 08 Permanenti strutturali	G	N	1.00	1.30				
2	D.M. 08 Permanenti non strutturali	G	N	0.00	1.30				
3	D.M. 08 Variabili Categoria A Ambienti ad uso residenziale	Q	N	0.00	1.50	0.70	0.50	0.30	0.00
11	D.M. 08 Variabili Neve (a quota <= 1000 m s.l.m.)	Q	N	0.00	1.50	0.50	0.20	0.00	0.00

Ambienti di carico

Simbologia

N Numero
 Comm. Commento
 1 PS
 2 PNS
 3 ACC RES
 4 ACC NEVE
 F azioni orizzontali convenzionali
 SLU Stato limite ultimo
 SLR Stato limite per combinazioni rare
 SLF Stato limite per combinazioni frequenti
 SLQ\D Stato limite per combinazioni quasi permanenti o di danno

N	Comm.	1	2	3	4	F	S	SLU	SLR	SLF	SLQ
1	Calcolo sismico	si	si	si	si	no	si	si	no	no	no

Relazione di calcolo

2	Calcolo statico	si	si	si	si	si	no	si	si	si	si
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Elenco combinazioni di carico simboliche

Simbologia

- CC = Numero della combinazione delle condizioni di carico elementari
- Comm. = Commento
- TCC = Tipo di combinazione di carico
- SLU = Stato limite ultimo
- SLU S = Stato limite ultimo (azione sismica)
- SLE R = Stato limite d'esercizio, combinazione rara
- SLE F = Stato limite d'esercizio, combinazione frequente
- SLE Q = Stato limite d'esercizio, combinazione quasi permanente
- SLD = Stato limite di danno
- SLV = Stato limite di salvaguardia della vita
- SLC = Stato limite di prevenzione del collasso
- SLO = Stato limite di operatività
- SLU I = Stato limite di resistenza al fuoco

CC	Comm.	TCC	1	2	3	4	F	S
1	Amb. 1 (Sisma)	SLU S	1	1	Ψ_2	Ψ_2	-----	1
2	Amb. 2 (SLU)	SLU	γ max	γ max	γ max	γ max	1	-----
3	Amb. 2 (SLE R)	SLE R	1	1	1	1	1	-----
4	Amb. 2 (SLE F)	SLE F	1	1	Ψ_1	Ψ_1	1	-----
5	Amb. 2 (SLE Q)	SLE Q	1	1	Ψ_2	Ψ_2	1	-----

Genera le combinazioni con un solo carico di tipo variabile come di base: no

Considera sollecitazioni dinamiche con segno dei modi principali: no

Combinazioni delle cce

Simbologia

- CC = Numero della combinazione delle condizioni di carico elementari
- Comm. = Commento
- TCC = Tipo di combinazione di carico
- SLU = Stato limite ultimo
- SLU S = Stato limite ultimo (azione sismica)
- SLE R = Stato limite d'esercizio, combinazione rara
- SLE F = Stato limite d'esercizio, combinazione frequente
- SLE Q = Stato limite d'esercizio, combinazione quasi permanente
- SLD = Stato limite di danno
- SLV = Stato limite di salvaguardia della vita
- SLC = Stato limite di prevenzione del collasso
- SLO = Stato limite di operatività
- SLU I = Stato limite di resistenza al fuoco
- An. = Tipo di analisi
- L = Lineare
- NL = Non lineare
- Bk = Buckling
- S = Si
- N = No

CC	Comm.	TCC	An.	Bk	1	2	3	4	F X	F Y	Mt	±S X	±S Y
1	CC 1 - Amb. 1 (SLU S) S Mt+X+0.3Y	SLV	L	N	1.00	1.00	0.30	0.00	0.00	0.00	1.00	1.00	0.30
2	CC 2 - Amb. 1 (SLE) S Mt+X+0.3Y	SLD	L	N	1.00	1.00	0.30	0.00	0.00	0.00	1.00	1.00	0.30
3	CC 3 - Amb. 1 (SLU S) S Mt+X-0.3Y	SLV	L	N	1.00	1.00	0.30	0.00	0.00	0.00	1.00	1.00	-0.30
4	CC 4 - Amb. 1 (SLE) S Mt+X-0.3Y	SLD	L	N	1.00	1.00	0.30	0.00	0.00	0.00	1.00	1.00	-0.30
5	CC 5 - Amb. 1 (SLU S) S Mt+0.3X+Y	SLV	L	N	1.00	1.00	0.30	0.00	0.00	0.00	1.00	0.30	1.00
6	CC 6 - Amb. 1 (SLE) S Mt+0.3X+Y	SLD	L	N	1.00	1.00	0.30	0.00	0.00	0.00	1.00	0.30	1.00
7	CC 7 - Amb. 1 (SLU S) S Mt-0.3X+Y	SLV	L	N	1.00	1.00	0.30	0.00	0.00	0.00	1.00	-0.30	1.00
8	CC 8 - Amb. 1 (SLE) S Mt-0.3X+Y	SLD	L	N	1.00	1.00	0.30	0.00	0.00	0.00	1.00	-0.30	1.00
9	CC 9 - Amb. 1 (SLU S) S -Mt+X+0.3Y	SLV	L	N	1.00	1.00	0.30	0.00	0.00	0.00	-1.00	1.00	0.30
10	CC 10 - Amb. 1 (SLE) S -Mt+X+0.3Y	SLD	L	N	1.00	1.00	0.30	0.00	0.00	0.00	-1.00	1.00	0.30
11	CC 11 - Amb. 1 (SLU S) S -Mt+X-0.3Y	SLV	L	N	1.00	1.00	0.30	0.00	0.00	0.00	-1.00	1.00	-0.30
12	CC 12 - Amb. 1 (SLE) S -Mt+X-0.3Y	SLD	L	N	1.00	1.00	0.30	0.00	0.00	0.00	-1.00	1.00	-0.30
13	CC 13 - Amb. 1 (SLU S) S -Mt+0.3X+Y	SLV	L	N	1.00	1.00	0.30	0.00	0.00	0.00	-1.00	0.30	1.00
14	CC 14 - Amb. 1 (SLE) S -Mt+0.3X+Y	SLD	L	N	1.00	1.00	0.30	0.00	0.00	0.00	-1.00	0.30	1.00
15	CC 15 - Amb. 1 (SLU S) S -Mt-0.3X+Y	SLV	L	N	1.00	1.00	0.30	0.00	0.00	0.00	-1.00	-0.30	1.00
16	CC 16 - Amb. 1 (SLE) S -Mt-0.3X+Y	SLD	L	N	1.00	1.00	0.30	0.00	0.00	0.00	-1.00	-0.30	1.00
17	CC 17 - Amb. 2 (SLU) F X	SLU	L	N	1.30	1.30	1.50	1.50	1.00	0.00	0.00	0.00	0.00
18	CC 18 - Amb. 2 (SLU) F -X	SLU	L	N	1.30	1.30	1.50	1.50	-1.00	0.00	0.00	0.00	0.00
19	CC 19 - Amb. 2 (SLU) F Y	SLU	L	N	1.30	1.30	1.50	1.50	0.00	1.00	0.00	0.00	0.00
20	CC 20 - Amb. 2 (SLU) F -Y	SLU	L	N	1.30	1.30	1.50	1.50	0.00	-1.00	0.00	0.00	0.00
21	CC 21 - Amb. 2 (SLE R) F X	SLE R	L	N	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
22	CC 22 - Amb. 2 (SLE R) F -X	SLE R	L	N	1.00	1.00	1.00	1.00	-1.00	0.00	0.00	0.00	0.00
23	CC 23 - Amb. 2 (SLE R) F Y	SLE R	L	N	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
24	CC 24 - Amb. 2 (SLE R) F -Y	SLE R	L	N	1.00	1.00	1.00	1.00	0.00	-1.00	0.00	0.00	0.00
25	CC 25 - Amb. 2 (SLE F) F X	SLE F	L	N	1.00	1.00	0.50	0.20	1.00	0.00	0.00	0.00	0.00

Relazione di calcolo

26	CC 26 - Amb. 2 (SLE F) F -X	SLE F	L	N	1.00	1.00	0.50	0.20	-1.00	0.00	0.00	0.00	0.00
27	CC 27 - Amb. 2 (SLE F) F Y	SLE F	L	N	1.00	1.00	0.50	0.20	0.00	1.00	0.00	0.00	0.00
28	CC 28 - Amb. 2 (SLE F) F -Y	SLE F	L	N	1.00	1.00	0.50	0.20	0.00	-1.00	0.00	0.00	0.00
29	CC 29 - Amb. 2 (SLE Q) F X	SLE Q	L	N	1.00	1.00	0.30	0.00	1.00	0.00	0.00	0.00	0.00
30	CC 30 - Amb. 2 (SLE Q) F -X	SLE Q	L	N	1.00	1.00	0.30	0.00	-1.00	0.00	0.00	0.00	0.00
31	CC 31 - Amb. 2 (SLE Q) F Y	SLE Q	L	N	1.00	1.00	0.30	0.00	0.00	1.00	0.00	0.00	0.00
32	CC 32 - Amb. 2 (SLE Q) F -Y	SLE Q	L	N	1.00	1.00	0.30	0.00	0.00	-1.00	0.00	0.00	0.00

Elenco baricentri e masse impalcato

Simbologia

Imp. = Numero dell'impalcato
 X = Coordinata X
 Y = Coordinata Y
 Z = Coordinata Z
 Mo = Massa orizzontale
 Jpz = Momento d'inerzia polare intorno all'asse Z

Imp.	X <m>	Y <m>	Z <m>	Mo <kg>	Jpz <kg*mq>
1	16.42	15.01	3.56	733926.00	85038300.00
3	7.47	22.82	8.66	77832.60	1736890.00

Imp.	X <m>	Y <m>	Z <m>	Mo <kg>	Jpz <kg*mq>
2	16.58	14.85	7.26	519151.00	55869200.00

Totali masse impalcato

Mo <kg>	Jpz <kg*mq>
1330910.00	142644000.00

Elenco forze sismiche di impalcato allo SLD

Simbologia

Imp. = Numero dell'impalcato
 cx = Coeff. c in dir. X
 cy = Coeff. c in dir. Y
 Mz = Momento intorno all'asse Z

Imp.	cx	cy	Mz <daNm>
1	0.38	0.38	280364.00
2	0.53	0.53	390911.00
3	0.09	0.09	69531.90

Totali forze sismiche

Mz <daNm>
740807.00

Elenco forze sismiche di impalcato allo SLV

Imp.	cx	cy	Mz <daNm>
1	0.38	0.38	238308.00
2	0.53	0.53	332273.00
3	0.09	0.09	59101.90

Totali forze sismiche

Mz <daNm>
629683.00

Elenco pesi e forze fittizie impalcato

Simbologia

Imp. = Numero dell'impalcato
 Peso = Peso
 Fx = Forza in dir. X
 Fy = Forza in dir. Y

Imp.	Peso <daN>	Fx <daN>	Fy <daN>
1	827064.00	8270.64	8270.64
2	547296.00	5472.96	5472.96
3	83969.10	839.69	839.69

Elenco modi di vibrare, masse partecipanti e coefficienti di partecipazione

Simbologia

Modo = Numero del modo di vibrare
 C = * indica che il modo è stato considerato
 Per. = Periodo
 Diff. = Minima differenza percentuale dagli altri periodi

Relazione di calcolo

- Φ_x = Coefficiente di partecipazione in dir. X
- Φ_y = Coefficiente di partecipazione in dir. Y
- Φ_z = Coefficiente di partecipazione in dir. Z
- %Mx = Percentuale massa partecipante in dir. X
- %My = Percentuale massa partecipante in dir. Y
- %Mz = Percentuale massa partecipante in dir. Z
- %Jpz = Percentuale momento d'inerzia polare partecipante intorno all'asse Z

Modo	C	Per.	Diff.	Φ_x	Φ_y	Φ_z	%Mx	%My	%Mz	%Jpz
1*	0.32	49.21	182.53	132.85	0.00	25.03	13.26	0.00	41.88	
2*	0.21	11.49	233.35	-228.43	0.00	40.91	39.21	0.00	2.52	
3*	0.19	11.49	-142.82	-200.77	0.00	15.33	30.29	0.00	27.72	
4*	0.09	55.80	61.30	63.00	0.00	2.82	2.98	0.00	10.55	
5*	0.06	13.82	128.91	-77.73	0.00	12.49	4.54	0.00	0.12	
6*	0.05	13.82	-64.15	-110.33	0.00	3.09	9.15	0.00	12.72	
7	0.04	23.35	20.35	-27.41	0.00	0.31	0.56	0.00	0.15	
8	0.02	59.67	-4.31	-4.17	0.00	0.01	0.01	0.00	2.92	
9	0.01	59.67	0.32	0.26	0.00	0.00	0.00	0.00	1.41	
Tot.cons.						99.67	99.42	0.00	95.51	

Elenco coefficienti di risposta

Simbologia

- Modo = Numero del modo di vibrare
- Sx = Coefficiente di risposta (moltiplicato per 100) in dir. X
- Sy = Coefficiente di risposta (moltiplicato per 100) in dir. Y

Stato limite di danno

Modo	Sx	Sy
1	32.94	32.94
2	32.94	32.94
3	32.94	32.94
4	23.63	23.63
5	19.89	19.89
6	19.08	19.08
7	17.97	17.97
8	15.61	15.61
9	14.71	14.71

Stato limite di salvaguardia della vita

Modo	Sx	Sy
1	28.00	28.00
2	28.00	28.00
3	28.00	28.00
4	29.49	29.49
5	30.01	30.01
6	30.12	30.12
7	30.27	30.27
8	30.60	30.60
9	30.72	30.72

Spostamenti dei nodi allo stato limite ultimo

Simbologia

- Nodo = Numero del nodo
- Sx = Spostamento in dir. X
- CC = Numero della combinazione delle condizioni di carico elementari
- Sy = Spostamento in dir. Y
- Sz = Spostamento in dir. Z
- Rx = Rotazione intorno all'asse X
- Ry = Rotazione intorno all'asse Y
- Rz = Rotazione intorno all'asse Z

Nodo		Sx <cm>	CC	Sy <cm>	CC	Sz <cm>	CC	Rx <rad>	CC	Ry <rad>	CC	Rz <rad>	CC
-273	Max	1.67	9	1.45	13	0.03	5	0.00	5	0.00	1	0.00	1
-273	Min.	-1.70	1	-1.48	5	-0.12	13	0.00	13	0.00	9	-0.00	9
-272	Max	1.60	9	1.70	13	-0.02	13	0.00	5	0.00	5	0.00	1
-272	Min.	-1.64	1	-1.72	5	-0.17	5	0.00	13	0.00	13	-0.00	9
-271	Max	1.52	9	1.20	13	0.18	5	0.00	5	0.00	9	0.00	1
-271	Min.	-1.55	1	-1.23	5	-0.19	13	-0.00	13	-0.00	1	-0.00	9
-270	Max	1.52	9	1.20	13	0.18	5	0.00	5	0.00	9	0.00	1
-270	Min.	-1.55	1	-1.23	5	-0.19	13	-0.00	13	-0.00	1	-0.00	9
-269	Max	1.52	9	1.21	13	0.22	13	0.00	5	0.00	9	0.00	1
-269	Min.	-1.55	1	-1.24	5	-0.23	5	-0.00	13	-0.00	1	-0.00	9
-268	Max	1.45	9	1.19	13	0.13	5	0.00	5	0.00	9	0.00	1
-268	Min.	-1.49	1	-1.22	5	-0.14	13	-0.00	13	-0.00	1	-0.00	9

Relazione di calcolo

-267	Max	1.45	9	1.20	13	0.07	5	0.00	5	0.00	9	0.00	1
-267	Min.	-1.49	1	-1.23	5	-0.08	13	-0.00	13	-0.00	1	-0.00	9
-266	Max	1.45	9	1.20	13	0.06	13	0.00	5	0.00	9	0.00	1
-266	Min.	-1.49	1	-1.23	5	-0.07	5	-0.00	13	-0.00	1	-0.00	9
-265	Max	1.45	9	1.21	13	0.12	9	0.00	5	0.00	9	0.00	1
-265	Min.	-1.49	1	-1.24	5	-0.14	1	-0.00	13	-0.00	1	-0.00	9
-264	Max	1.45	9	1.23	13	0.19	9	0.00	5	0.00	9	0.00	1
-264	Min.	-1.49	1	-1.25	5	-0.21	1	-0.00	13	-0.00	1	-0.00	9
-263	Max	1.39	9	1.19	13	0.16	1	0.00	5	0.00	9	0.00	1
-263	Min.	-1.43	1	-1.22	5	-0.17	9	0.00	13	-0.00	1	-0.00	9
-262	Max	1.39	9	1.20	13	0.09	1	0.00	5	0.00	9	0.00	1
-262	Min.	-1.43	1	-1.23	5	-0.10	9	-0.00	13	-0.00	1	-0.00	9
-261	Max	1.39	9	1.20	13	0.06	13	0.00	5	0.00	9	0.00	1
-261	Min.	-1.43	1	-1.23	5	-0.08	5	-0.00	13	-0.00	1	-0.00	9
-260	Max	1.39	9	1.21	13	0.10	13	0.00	5	0.00	9	0.00	1
-260	Min.	-1.43	1	-1.24	5	-0.13	5	-0.00	13	-0.00	1	-0.00	9
-259	Max	1.39	9	1.23	13	0.17	13	0.00	5	0.00	9	0.00	1
-259	Min.	-1.43	1	-1.25	5	-0.19	5	-0.00	13	-0.00	1	-0.00	9
-258	Max	1.35	9	1.19	13	0.24	5	0.00	5	0.00	9	0.00	1
-258	Min.	-1.39	1	-1.22	5	-0.26	13	-0.00	13	-0.00	1	-0.00	9
-257	Max	1.35	9	1.20	13	0.21	5	0.00	5	0.00	9	0.00	1
-257	Min.	-1.39	1	-1.23	5	-0.22	13	-0.00	13	-0.00	1	-0.00	9
-256	Max	1.35	9	1.20	13	0.19	13	0.00	5	0.00	9	0.00	1
-256	Min.	-1.39	1	-1.23	5	-0.21	5	-0.00	13	-0.00	1	-0.00	9
-255	Max	1.35	9	1.21	13	0.21	13	0.00	5	0.00	9	0.00	1
-255	Min.	-1.39	1	-1.24	5	-0.23	5	-0.00	13	-0.00	1	-0.00	9
-254	Max	1.35	9	1.23	13	0.24	13	0.00	5	0.00	9	0.00	1
-254	Min.	-1.39	1	-1.25	5	-0.27	5	-0.00	13	-0.00	1	-0.00	9
-253	Max	1.31	9	1.20	13	0.31	5	0.00	5	0.00	9	0.00	1
-253	Min.	-1.35	1	-1.23	5	-0.34	13	-0.00	13	-0.00	1	-0.00	9
-252	Max	1.31	9	1.20	13	0.30	13	0.00	5	0.00	9	0.00	1
-252	Min.	-1.35	1	-1.23	5	-0.33	5	-0.00	13	-0.00	1	-0.00	9
-251	Max	1.31	9	1.21	13	0.32	13	0.00	5	0.00	9	0.00	1
-251	Min.	-1.35	1	-1.24	5	-0.35	5	-0.00	13	-0.00	1	-0.00	9
-250	Max	1.31	9	1.25	13	0.31	13	0.00	20	0.00	5	0.00	1
-250	Min.	-1.35	1	-1.27	5	-0.39	5	0.00	13	-0.00	13	-0.00	9
-249	Max	1.31	9	1.41	13	0.01	9	0.00	5	0.00	5	0.00	1
-249	Min.	-1.35	1	-1.43	5	-0.11	1	0.00	13	0.00	13	-0.00	9
-248	Max	1.46	9	1.15	13	0.21	5	0.00	5	0.00	9	0.00	1
-248	Min.	-1.49	1	-1.17	5	-0.21	13	-0.00	13	-0.00	1	-0.00	9
-247	Max	1.46	9	1.15	13	0.18	5	0.00	5	0.00	9	0.00	1
-247	Min.	-1.49	1	-1.17	5	-0.19	13	-0.00	13	-0.00	1	-0.00	9
-246	Max	1.46	9	1.15	13	0.18	5	0.00	5	0.00	9	0.00	1
-246	Min.	-1.49	1	-1.18	5	-0.19	13	-0.00	13	-0.00	1	-0.00	9
-245	Max	1.46	9	1.16	13	0.22	13	0.00	5	0.00	9	0.00	1
-245	Min.	-1.49	1	-1.19	5	-0.23	5	-0.00	13	-0.00	1	-0.00	9
-244	Max	1.46	9	1.17	13	0.27	9	0.00	5	0.00	9	0.00	1
-244	Min.	-1.50	1	-1.20	5	-0.29	1	-0.00	13	-0.00	1	-0.00	9
-243	Max	1.40	9	1.14	13	0.13	5	0.00	13	0.00	9	0.00	1
-243	Min.	-1.43	1	-1.17	5	-0.14	13	0.00	5	-0.00	1	-0.00	9
-242	Max	1.40	9	1.17	13	0.19	9	0.00	5	0.00	9	0.00	1
-242	Min.	-1.43	1	-1.20	5	-0.21	1	-0.00	13	-0.00	1	-0.00	9
-241	Max	1.34	9	1.14	13	0.16	1	0.00	5	0.00	9	0.00	1
-241	Min.	-1.38	1	-1.17	5	-0.17	9	-0.00	13	-0.00	1	-0.00	9
-240	Max	1.34	9	1.17	13	0.17	13	0.00	5	0.00	9	0.00	1
-240	Min.	-1.38	1	-1.20	5	-0.19	5	-0.00	13	-0.00	1	-0.00	9
-239	Max	1.30	9	1.14	13	0.24	5	0.00	5	0.00	9	0.00	1
-239	Min.	-1.33	1	-1.17	5	-0.26	13	0.00	13	-0.00	1	-0.00	9
-238	Max	1.30	9	1.18	13	0.24	13	0.00	5	0.00	9	0.00	1
-238	Min.	-1.33	1	-1.20	5	-0.27	5	-0.00	13	-0.00	1	-0.00	9
-237	Max	1.26	9	1.14	13	0.35	5	0.00	5	0.00	9	0.00	1
-237	Min.	-1.30	1	-1.17	5	-0.37	13	-0.00	13	-0.00	1	-0.00	9
-236	Max	1.27	9	1.18	13	0.34	13	0.00	5	0.00	9	0.00	1
-236	Min.	-1.31	1	-1.20	5	-0.38	5	-0.00	13	-0.00	1	-0.00	9
-235	Max	1.41	9	1.09	13	0.21	5	0.00	5	0.00	9	0.00	1
-235	Min.	-1.44	1	-1.12	5	-0.22	13	-0.00	13	-0.00	1	-0.00	9
-234	Max	1.41	9	1.10	13	0.18	5	0.00	5	0.00	9	0.00	1
-234	Min.	-1.44	1	-1.12	5	-0.19	13	-0.00	13	-0.00	1	-0.00	9
-233	Max	1.41	9	1.10	13	0.18	5	0.00	5	0.00	9	0.00	1
-233	Min.	-1.44	1	-1.13	5	-0.19	13	-0.00	13	-0.00	1	-0.00	9
-232	Max	1.41	9	1.11	13	0.22	13	0.00	5	0.00	9	0.00	1
-232	Min.	-1.44	1	-1.13	5	-0.23	5	-0.00	13	-0.00	1	-0.00	9
-231	Max	1.41	9	1.12	13	0.27	9	0.00	5	0.00	9	0.00	1
-231	Min.	-1.44	1	-1.15	5	-0.29	1	-0.00	13	-0.00	1	-0.00	9
-230	Max	1.35	9	1.09	13	0.13	5	0.00	5	0.00	9	0.00	1
-230	Min.	-1.38	1	-1.12	5	-0.14	13	-0.00	13	-0.00	1	-0.00	9
-229	Max	1.34	9	1.12	13	0.19	9	0.00	5	0.00	9	0.00	1
-229	Min.	-1.38	1	-1.14	5	-0.21	1	-0.00	13	-0.00	1	-0.00	9
-228	Max	1.29	9	1.09	13	0.16	1	0.00	5	0.00	9	0.00	1

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-228	Min.	-1.32	1	-1.12	5	-0.17	9	0.00	13	-0.00	1	-0.00	9
-227	Max	1.29	9	1.12	13	0.17	13	0.00	5	0.00	9	0.00	1
-227	Min.	-1.33	1	-1.14	5	-0.19	5	-0.00	13	-0.00	1	-0.00	9
-226	Max	1.25	9	1.09	13	0.24	5	0.00	5	0.00	9	0.00	1
-226	Min.	-1.28	1	-1.12	5	-0.26	13	-0.00	13	-0.00	1	-0.00	9
-225	Max	1.25	9	1.12	13	0.24	13	0.00	5	0.00	9	0.00	1
-225	Min.	-1.28	1	-1.14	5	-0.27	5	-0.00	13	-0.00	1	-0.00	9
-224	Max	1.21	9	1.09	13	0.35	5	0.00	5	0.00	9	0.00	1
-224	Min.	-1.25	1	-1.12	5	-0.37	13	0.00	13	-0.00	1	-0.00	9
-223	Max	1.22	9	1.12	13	0.34	13	0.00	5	0.00	9	0.00	1
-223	Min.	-1.25	1	-1.15	5	-0.38	5	-0.00	13	-0.00	1	-0.00	9
-222	Max	1.35	9	1.04	13	0.21	5	0.00	5	0.00	9	0.00	1
-222	Min.	-1.38	1	-1.06	5	-0.22	13	-0.00	13	-0.00	1	-0.00	9
-221	Max	1.35	9	1.04	13	0.18	5	0.00	5	0.00	9	0.00	1
-221	Min.	-1.38	1	-1.07	5	-0.19	13	-0.00	13	-0.00	1	-0.00	9
-220	Max	1.35	9	1.05	13	0.18	5	0.00	5	0.00	9	0.00	1
-220	Min.	-1.38	1	-1.07	5	-0.19	13	-0.00	13	-0.00	1	-0.00	9
-219	Max	1.35	9	1.06	13	0.22	13	0.00	5	0.00	9	0.00	1
-219	Min.	-1.38	1	-1.08	5	-0.23	5	-0.00	13	-0.00	1	-0.00	9
-218	Max	1.35	9	1.07	13	0.27	9	0.00	5	0.00	9	0.00	1
-218	Min.	-1.38	1	-1.09	5	-0.29	1	-0.00	13	-0.00	1	-0.00	9
-217	Max	1.29	9	1.04	13	0.13	5	0.00	5	0.00	9	0.00	1
-217	Min.	-1.32	1	-1.06	5	-0.14	13	0.00	13	-0.00	1	-0.00	9
-216	Max	1.29	9	1.07	13	0.19	9	0.00	5	0.00	9	0.00	1
-216	Min.	-1.32	1	-1.09	5	-0.21	1	-0.00	13	-0.00	1	-0.00	9
-215	Max	1.24	9	1.04	13	0.16	1	0.00	5	0.00	9	0.00	1
-215	Min.	-1.27	1	-1.06	5	-0.17	9	-0.00	13	-0.00	1	-0.00	9
-214	Max	1.24	9	1.07	13	0.17	13	0.00	5	0.00	9	0.00	1
-214	Min.	-1.27	1	-1.09	5	-0.19	5	-0.00	13	-0.00	1	-0.00	9
-213	Max	1.20	9	1.04	13	0.24	5	0.00	5	0.00	9	0.00	1
-213	Min.	-1.23	1	-1.06	5	-0.26	13	0.00	13	-0.00	1	-0.00	9
-212	Max	1.20	9	1.07	13	0.24	13	0.00	5	0.00	9	0.00	1
-212	Min.	-1.23	1	-1.09	5	-0.27	5	-0.00	13	-0.00	1	-0.00	9
-211	Max	1.16	9	1.04	13	0.35	5	0.00	5	0.00	9	0.00	1
-211	Min.	-1.19	1	-1.06	5	-0.38	13	-0.00	13	-0.00	1	-0.00	9
-210	Max	1.16	9	1.07	13	0.34	13	0.00	5	0.00	9	0.00	1
-210	Min.	-1.20	1	-1.09	5	-0.38	5	-0.00	13	-0.00	1	-0.00	9
-209	Max	1.44	9	1.23	13	0.06	5	0.00	5	0.00	5	0.00	1
-209	Min.	-1.46	1	-1.24	5	-0.17	13	0.00	13	0.00	13	-0.00	9
-208	Max	1.37	9	1.46	13	0.00	9	0.00	5	0.00	5	0.00	1
-208	Min.	-1.40	1	-1.47	5	-0.20	1	0.00	13	0.00	13	-0.00	9
-207	Max	1.29	9	0.99	13	0.18	5	0.00	5	0.00	9	0.00	1
-207	Min.	-1.32	1	-1.01	5	-0.19	13	-0.00	13	-0.00	1	-0.00	9
-206	Max	1.29	9	0.99	13	0.18	5	0.00	5	0.00	9	0.00	1
-206	Min.	-1.32	1	-1.02	5	-0.19	13	-0.00	13	-0.00	1	-0.00	9
-205	Max	1.29	9	1.00	13	0.22	13	0.00	5	0.00	9	0.00	1
-205	Min.	-1.32	1	-1.02	5	-0.23	5	-0.00	13	-0.00	1	-0.00	9
-204	Max	1.23	9	0.99	13	0.13	5	0.00	5	0.00	9	0.00	1
-204	Min.	-1.26	1	-1.01	5	-0.14	13	-0.00	13	-0.00	1	-0.00	9
-203	Max	1.23	9	1.02	13	0.19	9	0.00	5	0.00	9	0.00	1
-203	Min.	-1.26	1	-1.03	5	-0.21	1	-0.00	13	-0.00	1	-0.00	9
-202	Max	1.18	9	0.99	13	0.15	1	0.00	5	0.00	9	0.00	1
-202	Min.	-1.21	1	-1.01	5	-0.17	9	0.00	13	-0.00	1	-0.00	9
-201	Max	1.18	9	1.02	13	0.17	13	0.00	5	0.00	9	0.00	1
-201	Min.	-1.21	1	-1.03	5	-0.19	5	-0.00	13	-0.00	1	-0.00	9
-200	Max	1.14	9	0.99	13	0.24	5	0.00	5	0.00	9	0.00	1
-200	Min.	-1.17	1	-1.01	5	-0.26	13	-0.00	13	-0.00	1	-0.00	9
-199	Max	1.14	9	1.02	13	0.24	13	0.00	5	0.00	9	0.00	1
-199	Min.	-1.17	1	-1.03	5	-0.26	5	-0.00	13	-0.00	1	-0.00	9
-198	Max	1.11	9	1.03	13	0.31	13	0.00	13	0.00	5	0.00	1
-198	Min.	-1.15	1	-1.05	5	-0.38	5	0.00	5	-0.00	13	-0.00	9
-197	Max	1.11	9	1.18	13	0.02	1	0.00	5	0.00	1	0.00	1
-197	Min.	-1.15	1	-1.20	5	-0.12	9	0.00	13	0.00	9	-0.00	9
-196	Max	1.11	9	1.92	1	-0.19	1	0.00	1	0.00	9	0.00	1
-196	Min.	-1.14	1	-1.96	9	-0.30	17	0.00	9	0.00	1	-0.00	9
-195	Max	1.11	9	1.26	13	0.02	13	0.00	5	0.00	9	0.00	1
-195	Min.	-1.14	1	-1.27	5	-0.12	5	-0.00	13	-0.00	1	-0.00	9
-194	Max	1.10	9	2.67	1	0.01	9	0.00	9	0.00	1	0.00	1
-194	Min.	-1.14	1	-2.72	9	-0.19	1	-0.00	19	-0.00	9	-0.00	9
-193	Max	1.10	9	1.67	1	-0.07	9	0.00	9	0.00	1	0.00	1
-193	Min.	-1.14	1	-1.70	9	-0.15	18	0.00	1	0.00	9	-0.00	9
-192	Max	1.24	1	1.18	1	-0.10	9	0.00	1	0.00	1	0.00	1
-192	Min.	-1.28	9	-1.21	9	-0.22	17	0.00	9	0.00	9	-0.00	9
-191	Max	1.24	1	0.99	5	0.04	9	0.00	13	0.00	1	0.00	1
-191	Min.	-1.28	9	-1.01	13	-0.09	1	0.00	5	-0.00	9	-0.00	9
-190	Max	1.38	1	2.60	1	0.15	9	0.00	9	0.00	1	0.00	1
-190	Min.	-1.42	9	-2.64	9	-0.16	1	-0.00	1	-0.00	9	-0.00	9
-189	Max	1.38	1	2.51	1	-0.01	1	0.00	9	0.00	1	0.00	1
-189	Min.	-1.42	9	-2.55	9	-0.02	20	-0.00	1	-0.00	9	-0.00	9

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-188	Max	1.38	1	2.42	1	0.14	1	0.00	9	0.00	1	0.00	1
-188	Min.	-1.42	9	-2.46	9	-0.17	9	-0.00	1	-0.00	9	-0.00	9
-187	Max	1.38	1	0.99	5	-0.01	13	0.00	9	0.00	1	0.00	1
-187	Min.	-1.42	9	-1.01	13	-0.04	5	0.00	1	0.00	9	-0.00	9
-186	Max	1.62	1	1.03	13	-0.11	13	0.00	9	0.00	1	0.00	1
-186	Min.	-1.67	9	-1.05	5	-0.26	19	-0.00	17	0.00	9	-0.00	9
-185	Max	1.82	1	2.60	1	0.20	9	0.00	9	0.00	1	0.00	1
-185	Min.	-1.87	9	-2.64	9	-0.21	1	-0.00	1	-0.00	9	-0.00	9
-184	Max	1.82	1	2.51	1	-0.01	9	0.00	9	0.00	1	0.00	1
-184	Min.	-1.87	9	-2.55	9	-0.01	19	-0.00	1	-0.00	9	-0.00	9
-183	Max	1.82	1	2.42	1	0.19	1	0.00	9	0.00	1	0.00	1
-183	Min.	-1.87	9	-2.46	9	-0.22	9	-0.00	1	-0.00	9	-0.00	9
-182	Max	1.82	1	2.01	1	-0.01	9	0.00	9	0.00	9	0.00	1
-182	Min.	-1.87	9	-2.05	9	-0.22	1	-0.00	1	-0.00	1	-0.00	9
-181	Max	1.82	1	1.42	1	-0.08	13	0.00	9	0.00	9	0.00	1
-181	Min.	-1.87	9	-1.45	9	-0.20	19	0.00	1	0.00	1	-0.00	9
-180	Max	1.82	1	0.99	5	-0.01	13	0.00	1	0.00	1	0.00	1
-180	Min.	-1.87	9	-1.01	13	-0.17	5	0.00	18	0.00	9	-0.00	9
-179	Max	2.10	1	0.99	13	0.00	13	0.00	20	0.00	1	0.00	1
-179	Min.	-2.15	9	-1.01	5	-0.14	5	0.00	1	0.00	9	-0.00	9
-178	Max	2.13	1	1.09	13	0.03	13	0.00	5	0.00	1	0.00	1
-178	Min.	-2.19	9	-1.11	5	-0.07	5	0.00	13	-0.00	9	-0.00	9
-177	Max	2.18	1	1.42	1	-0.01	5	0.00	1	0.00	1	0.00	1
-177	Min.	-2.23	9	-1.45	9	-0.10	13	0.00	9	-0.00	9	-0.00	9
-176	Max	2.69	1	1.01	13	0.03	13	0.00	13	0.00	5	0.00	1
-176	Min.	-2.75	9	-1.02	5	-0.15	5	0.00	5	0.00	13	-0.00	9
-175	Max	1.11	9	0.83	13	0.22	5	0.00	5	0.00	9	0.00	1
-175	Min.	-1.13	1	-0.85	5	-0.22	13	-0.00	13	-0.00	1	-0.00	9
-174	Max	1.11	9	0.84	13	0.18	5	0.00	5	0.00	9	0.00	1
-174	Min.	-1.13	1	-0.85	5	-0.19	13	-0.00	13	-0.00	1	-0.00	9
-173	Max	1.11	9	0.84	13	0.18	5	0.00	5	0.00	9	0.00	1
-173	Min.	-1.13	1	-0.86	5	-0.19	13	-0.00	13	-0.00	1	-0.00	9
-172	Max	1.11	9	0.85	13	0.22	13	0.00	5	0.00	9	0.00	1
-172	Min.	-1.13	1	-0.86	5	-0.23	5	-0.00	13	-0.00	1	-0.00	9
-171	Max	1.11	9	0.86	13	0.28	9	0.00	5	0.00	9	0.00	1
-171	Min.	-1.14	1	-0.87	5	-0.30	1	-0.00	13	-0.00	1	-0.00	9
-170	Max	1.07	9	0.83	13	0.13	5	0.00	5	0.00	9	0.00	1
-170	Min.	-1.09	1	-0.85	5	-0.14	13	0.00	13	-0.00	1	-0.00	9
-169	Max	1.07	9	0.85	13	0.19	9	0.00	5	0.00	9	0.00	1
-169	Min.	-1.09	1	-0.87	5	-0.21	1	-0.00	13	-0.00	1	-0.00	9
-168	Max	1.02	9	0.83	13	0.15	1	0.00	5	0.00	9	0.00	1
-168	Min.	-1.05	1	-0.85	5	-0.16	9	-0.00	13	-0.00	1	-0.00	9
-167	Max	1.02	9	0.85	13	0.16	13	0.00	5	0.00	9	0.00	1
-167	Min.	-1.05	1	-0.87	5	-0.18	5	-0.00	13	-0.00	1	-0.00	9
-166	Max	0.99	9	0.83	13	0.23	5	0.00	5	0.00	9	0.00	1
-166	Min.	-1.02	1	-0.85	5	-0.25	13	0.00	13	-0.00	1	-0.00	9
-165	Max	0.99	9	0.86	13	0.23	13	0.00	5	0.00	9	0.00	1
-165	Min.	-1.01	1	-0.87	5	-0.26	5	-0.00	13	-0.00	1	-0.00	9
-164	Max	0.97	9	0.84	13	0.36	5	0.00	5	0.00	9	0.00	1
-164	Min.	-1.00	1	-0.85	5	-0.38	13	-0.00	13	-0.00	1	-0.00	9
-163	Max	0.97	9	0.86	13	0.35	13	0.00	5	0.00	9	0.00	1
-163	Min.	-0.99	1	-0.87	5	-0.38	5	-0.00	13	-0.00	1	-0.00	9
-162	Max	1.15	1	2.41	1	0.31	9	0.00	9	0.00	1	0.00	1
-162	Min.	-1.19	9	-2.45	9	-0.32	1	-0.00	1	-0.00	9	-0.00	9
-161	Max	1.15	1	2.29	1	0.15	9	0.00	9	0.00	1	0.00	1
-161	Min.	-1.19	9	-2.33	9	-0.16	1	-0.00	1	-0.00	9	-0.00	9
-160	Max	1.15	1	2.19	1	-0.01	1	0.00	9	0.00	1	0.00	1
-160	Min.	-1.19	9	-2.23	9	-0.02	18	-0.00	1	-0.00	9	-0.00	9
-159	Max	1.15	1	2.11	1	0.14	1	0.00	9	0.00	1	0.00	1
-159	Min.	-1.19	9	-2.15	9	-0.17	9	-0.00	1	-0.00	9	-0.00	9
-158	Max	1.16	1	2.05	1	0.30	1	0.00	9	0.00	1	0.00	1
-158	Min.	-1.19	9	-2.09	9	-0.33	9	-0.00	1	-0.00	9	-0.00	9
-157	Max	1.53	1	2.38	1	0.40	9	0.00	9	0.00	1	0.00	1
-157	Min.	-1.57	9	-2.43	9	-0.41	1	-0.00	1	-0.00	9	-0.00	9
-156	Max	1.53	1	2.27	1	0.20	9	0.00	9	0.00	1	0.00	1
-156	Min.	-1.57	9	-2.32	9	-0.21	1	-0.00	1	-0.00	9	-0.00	9
-155	Max	1.53	1	2.18	1	-0.01	9	0.00	9	0.00	1	0.00	1
-155	Min.	-1.57	9	-2.22	9	-0.01	19	-0.00	1	-0.00	9	-0.00	9
-154	Max	1.53	1	2.10	1	0.19	1	0.00	9	0.00	1	0.00	1
-154	Min.	-1.57	9	-2.15	9	-0.21	9	-0.00	1	-0.00	9	-0.00	9
-153	Max	1.53	1	2.04	1	0.39	1	0.00	9	0.00	1	0.00	1
-153	Min.	-1.57	9	-2.10	9	-0.42	9	-0.00	1	-0.00	9	0.00	9
-152	Max	0.93	9	0.68	13	0.21	5	0.00	5	0.00	9	0.00	1
-152	Min.	-0.94	1	-0.69	5	-0.22	13	-0.00	13	-0.00	1	-0.00	9
-151	Max	0.93	9	0.68	13	0.17	5	0.00	5	0.00	9	0.00	1
-151	Min.	-0.94	1	-0.69	5	-0.18	13	-0.00	13	-0.00	1	-0.00	9
-150	Max	0.93	9	0.68	13	0.17	5	0.00	5	0.00	9	0.00	1
-150	Min.	-0.94	1	-0.70	5	-0.18	13	-0.00	13	-0.00	1	-0.00	9
-149	Max	0.93	9	0.69	13	0.21	13	0.00	5	0.00	9	0.00	1

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-149	Min.	-0.94	1	-0.70	5	-0.22	5	-0.00	13	-0.00	1	-0.00	9
-148	Max	0.93	9	0.70	13	0.28	9	0.00	5	0.00	9	0.00	1
-148	Min.	-0.94	1	-0.71	5	-0.29	1	-0.00	13	-0.00	1	-0.00	9
-147	Max	0.89	9	0.68	13	0.13	5	0.00	5	0.00	9	0.00	1
-147	Min.	-0.91	1	-0.69	5	-0.14	13	-0.00	13	-0.00	1	-0.00	9
-146	Max	0.89	9	0.70	13	0.19	9	0.00	5	0.00	9	0.00	1
-146	Min.	-0.90	1	-0.71	5	-0.20	1	-0.00	13	-0.00	1	-0.00	9
-145	Max	0.85	9	0.68	13	0.14	1	0.00	5	0.00	9	0.00	1
-145	Min.	-0.87	1	-0.69	5	-0.15	9	0.00	13	-0.00	1	-0.00	9
-144	Max	0.85	9	0.70	13	0.15	13	0.00	5	0.00	9	0.00	1
-144	Min.	-0.87	1	-0.71	5	-0.17	5	-0.00	13	-0.00	1	-0.00	9
-143	Max	0.82	9	0.68	13	0.23	5	0.00	5	0.00	9	0.00	1
-143	Min.	-0.84	1	-0.69	5	-0.24	13	-0.00	13	-0.00	1	-0.00	9
-142	Max	0.81	9	0.70	13	0.22	13	0.00	5	0.00	9	0.00	1
-142	Min.	-0.84	1	-0.71	5	-0.24	5	-0.00	13	-0.00	1	-0.00	9
-141	Max	0.80	9	0.68	13	0.34	5	0.00	5	0.00	9	0.00	1
-141	Min.	-0.82	1	-0.69	5	-0.36	13	0.00	13	-0.00	1	-0.00	9
-140	Max	0.78	9	0.70	13	0.33	13	0.00	5	0.00	9	0.00	1
-140	Min.	-0.81	1	-0.71	5	-0.36	5	-0.00	13	-0.00	1	-0.00	9
-139	Max	0.94	1	1.97	1	0.30	9	0.00	9	0.00	1	0.00	1
-139	Min.	-0.96	9	-2.00	9	-0.31	1	-0.00	1	-0.00	9	-0.00	9
-138	Max	0.94	1	1.90	1	0.14	9	0.00	9	0.00	1	0.00	1
-138	Min.	-0.96	9	-1.93	9	-0.16	1	-0.00	1	-0.00	9	-0.00	9
-137	Max	0.94	1	1.83	1	-0.01	1	0.00	9	0.00	1	0.00	1
-137	Min.	-0.96	9	-1.86	9	-0.02	20	-0.00	1	-0.00	9	-0.00	9
-136	Max	0.94	1	1.77	1	0.14	1	0.00	9	0.00	1	0.00	1
-136	Min.	-0.96	9	-1.80	9	-0.16	9	-0.00	1	-0.00	9	-0.00	9
-135	Max	0.94	1	1.70	1	0.29	1	0.00	9	0.00	1	0.00	1
-135	Min.	-0.96	9	-1.74	9	-0.32	9	-0.00	1	-0.00	9	-0.00	9
-134	Max	1.25	1	1.96	1	0.39	9	0.00	9	0.00	1	0.00	1
-134	Min.	-1.28	9	-1.99	9	-0.40	1	-0.00	1	-0.00	9	-0.00	9
-133	Max	1.25	1	1.89	1	0.19	9	0.00	9	0.00	1	0.00	1
-133	Min.	-1.28	9	-1.92	9	-0.20	1	-0.00	1	-0.00	9	-0.00	9
-132	Max	1.25	1	1.83	1	-0.01	9	0.00	9	0.00	1	0.00	1
-132	Min.	-1.28	9	-1.86	9	-0.01	19	-0.00	1	-0.00	9	-0.00	9
-131	Max	1.25	1	1.77	1	0.18	1	0.00	9	0.00	1	0.00	1
-131	Min.	-1.28	9	-1.79	9	-0.21	9	-0.00	1	-0.00	9	-0.00	9
-130	Max	1.25	1	1.71	1	0.38	1	0.00	9	0.00	1	0.00	1
-130	Min.	-1.28	9	-1.73	9	-0.41	9	-0.00	1	-0.00	9	-0.00	9
-129	Max	0.75	9	0.53	13	0.20	5	0.00	5	0.00	9	0.00	1
-129	Min.	-0.76	1	-0.54	5	-0.20	13	-0.00	13	-0.00	1	0.00	9
-128	Max	0.75	9	0.53	13	0.16	5	0.00	5	0.00	9	0.00	1
-128	Min.	-0.76	1	-0.54	5	-0.17	13	-0.00	13	-0.00	1	0.00	9
-127	Max	0.75	9	0.53	13	0.16	5	0.00	5	0.00	9	0.00	1
-127	Min.	-0.76	1	-0.54	5	-0.17	13	-0.00	13	-0.00	1	0.00	9
-126	Max	0.75	9	0.54	13	0.20	13	0.00	5	0.00	9	0.00	1
-126	Min.	-0.76	1	-0.55	5	-0.21	5	-0.00	13	-0.00	1	0.00	9
-125	Max	0.75	9	0.54	13	0.27	9	0.00	5	0.00	9	0.00	1
-125	Min.	-0.76	1	-0.55	5	-0.28	1	-0.00	13	-0.00	1	0.00	9
-124	Max	0.71	9	0.53	13	0.12	5	0.00	5	0.00	9	0.00	1
-124	Min.	-0.73	1	-0.54	5	-0.13	13	0.00	13	-0.00	1	0.00	9
-123	Max	0.71	9	0.54	13	0.18	9	0.00	5	0.00	9	0.00	1
-123	Min.	-0.73	1	-0.55	5	-0.19	1	-0.00	13	-0.00	1	0.00	9
-122	Max	0.68	9	0.53	13	0.13	1	0.00	5	0.00	9	0.00	1
-122	Min.	-0.70	1	-0.54	5	-0.14	9	-0.00	13	-0.00	1	0.00	9
-121	Max	0.68	9	0.54	13	0.14	13	0.00	5	0.00	9	0.00	1
-121	Min.	-0.69	1	-0.55	5	-0.16	5	-0.00	13	-0.00	1	0.00	9
-120	Max	0.65	9	0.53	13	0.21	5	0.00	5	0.00	9	0.00	1
-120	Min.	-0.66	1	-0.54	5	-0.22	13	0.00	13	-0.00	1	0.00	9
-119	Max	0.64	9	0.54	13	0.20	13	0.00	5	0.00	9	0.00	1
-119	Min.	-0.66	1	-0.55	5	-0.22	5	-0.00	13	-0.00	1	0.00	9
-118	Max	0.62	9	0.53	13	0.32	5	0.00	5	0.00	9	0.00	1
-118	Min.	-0.63	1	-0.55	5	-0.34	13	-0.00	13	-0.00	1	0.00	9
-117	Max	0.59	9	0.55	13	0.31	13	0.00	5	0.00	9	0.00	1
-117	Min.	-0.62	1	-0.56	5	-0.34	5	-0.00	13	-0.00	1	0.00	9
-116	Max	0.73	1	1.52	1	0.28	9	0.01	9	0.00	1	0.00	1
-116	Min.	-0.75	9	-1.54	9	-0.29	1	-0.01	1	-0.00	9	0.00	9
-115	Max	0.73	1	1.50	1	0.13	9	0.00	9	0.00	1	0.00	1
-115	Min.	-0.75	9	-1.52	9	-0.15	1	-0.00	1	-0.00	9	0.00	9
-114	Max	0.73	1	1.46	1	-0.01	1	0.00	9	0.00	1	0.00	1
-114	Min.	-0.75	9	-1.49	9	-0.01	18	-0.00	1	-0.00	9	0.00	9
-113	Max	0.73	1	1.40	1	0.13	1	0.00	9	0.00	1	0.00	1
-113	Min.	-0.75	9	-1.44	9	-0.15	9	-0.00	1	-0.00	9	0.00	9
-112	Max	0.73	1	1.34	1	0.27	1	0.00	9	0.00	1	0.00	1
-112	Min.	-0.75	9	-1.38	9	-0.30	9	-0.00	1	-0.00	9	0.00	9
-111	Max	0.98	1	1.53	1	0.37	9	0.01	9	0.00	1	0.00	1
-111	Min.	-1.00	9	-1.54	9	-0.38	1	-0.00	1	-0.00	9	0.00	9
-110	Max	0.98	1	1.50	1	0.18	9	0.00	9	0.00	1	0.00	1
-110	Min.	-1.00	9	-1.52	9	-0.19	1	-0.00	1	-0.00	9	0.00	9

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-109	Max	0.98	1	1.46	1	-0.01	9	0.00	9	0.00	1	0.00	1
-109	Min.	-1.00	9	-1.48	9	-0.01	19	-0.00	1	-0.00	9	0.00	9
-108	Max	0.98	1	1.42	1	0.17	1	0.00	9	0.00	1	0.00	1
-108	Min.	-1.00	9	-1.43	9	-0.20	9	-0.00	1	-0.00	9	0.00	9
-107	Max	0.98	1	1.37	1	0.36	1	0.00	9	0.00	1	0.00	1
-107	Min.	-1.00	9	-1.36	9	-0.39	9	-0.00	1	-0.00	9	-0.00	9
-106	Max	0.65	9	0.49	13	0.07	5	0.00	5	0.00	1	0.00	1
-106	Min.	-0.65	1	-0.49	5	-0.11	13	0.00	13	0.00	9	0.00	9
-105	Max	0.57	9	0.40	13	0.15	5	0.00	5	0.00	9	0.00	1
-105	Min.	-0.58	1	-0.40	5	-0.15	13	-0.00	13	-0.00	1	0.00	9
-104	Max	0.57	9	0.40	13	0.14	5	0.00	5	0.00	9	0.00	1
-104	Min.	-0.58	1	-0.40	5	-0.15	13	-0.00	13	-0.00	1	0.00	9
-103	Max	0.57	9	0.40	13	0.18	13	0.00	5	0.00	9	0.00	1
-103	Min.	-0.58	1	-0.40	5	-0.19	5	-0.00	13	-0.00	1	0.00	9
-102	Max	0.54	9	0.40	13	0.11	5	0.00	5	0.00	9	0.00	1
-102	Min.	-0.55	1	-0.40	5	-0.12	13	-0.00	13	-0.00	1	0.00	9
-101	Max	0.54	9	0.40	13	0.16	9	0.00	5	0.00	9	0.00	1
-101	Min.	-0.55	1	-0.41	5	-0.17	1	-0.00	13	-0.00	1	0.00	9
-100	Max	0.51	9	0.40	13	0.12	1	0.00	5	0.00	9	0.00	1
-100	Min.	-0.52	1	-0.40	5	-0.13	9	0.00	13	-0.00	1	0.00	9
-99	Max	0.51	9	0.40	13	0.12	13	0.00	5	0.00	9	0.00	1
-99	Min.	-0.52	1	-0.41	5	-0.14	5	-0.00	13	-0.00	1	0.00	9
-98	Max	0.49	9	0.40	13	0.19	5	0.00	5	0.00	9	0.00	1
-98	Min.	-0.49	1	-0.40	5	-0.20	13	-0.00	13	-0.00	1	0.00	9
-97	Max	0.49	9	0.40	13	0.18	13	0.00	5	0.00	9	0.00	1
-97	Min.	-0.49	1	-0.41	5	-0.20	5	-0.00	13	-0.00	1	0.00	9
-96	Max	0.46	9	0.40	13	0.29	5	0.00	5	0.00	9	0.00	1
-96	Min.	-0.47	1	-0.40	5	-0.30	13	0.00	13	-0.00	1	0.00	9
-95	Max	0.46	9	0.41	13	0.23	13	0.00	5	0.00	5	0.00	1
-95	Min.	-0.47	1	-0.41	5	-0.31	5	0.00	13	-0.00	13	0.00	9
-94	Max	0.46	9	0.47	13	0.03	1	0.00	5	0.00	1	0.00	1
-94	Min.	-0.47	1	-0.47	5	-0.12	9	0.00	13	0.00	9	0.00	9
-93	Max	0.46	9	0.84	1	-0.20	1	0.00	1	0.00	9	0.00	1
-93	Min.	-0.47	1	-0.86	9	-0.35	17	0.00	9	0.00	1	0.00	9
-92	Max	0.44	9	0.62	1	0.04	9	0.00	9	0.00	1	0.00	1
-92	Min.	-0.45	1	-0.63	9	-0.08	1	0.00	17	0.00	9	0.00	9
-91	Max	0.44	9	0.50	1	0.01	9	0.00	9	0.00	9	0.00	1
-91	Min.	-0.45	1	-0.51	9	-0.07	1	0.00	18	0.00	1	0.00	9
-90	Max	0.44	9	1.18	1	0.03	9	-0.00	9	0.00	9	0.00	1
-90	Min.	-0.45	1	-1.20	9	-0.24	1	-0.00	19	-0.00	1	0.00	9
-89	Max	0.44	9	0.73	1	-0.08	9	0.00	9	0.00	1	0.00	1
-89	Min.	-0.45	1	-0.74	9	-0.17	19	0.00	1	0.00	9	0.00	9
-88	Max	0.47	1	0.57	13	0.03	1	0.00	5	0.00	1	0.00	1
-88	Min.	-0.49	9	-0.57	5	-0.07	9	-0.00	13	-0.00	9	0.00	9
-87	Max	0.48	1	0.50	1	-0.10	9	0.00	1	0.00	1	0.00	1
-87	Min.	-0.49	9	-0.51	9	-0.26	17	-0.00	9	0.00	9	0.00	9
-86	Max	0.48	1	0.40	5	0.04	9	0.00	5	0.00	1	0.00	1
-86	Min.	-0.49	9	-0.41	13	-0.08	1	0.00	13	-0.00	9	0.00	9
-85	Max	0.53	1	1.15	1	0.12	9	0.00	9	0.00	1	0.00	1
-85	Min.	-0.55	9	-1.16	9	-0.13	1	-0.00	1	-0.00	9	0.00	9
-84	Max	0.53	1	1.11	1	-0.01	1	0.00	9	0.00	1	0.00	1
-84	Min.	-0.55	9	-1.12	9	-0.01	20	-0.00	1	-0.00	9	0.00	9
-83	Max	0.53	1	1.06	1	0.12	1	0.00	9	0.00	1	0.00	1
-83	Min.	-0.55	9	-1.08	9	-0.14	9	-0.00	1	-0.00	9	0.00	9
-82	Max	0.53	1	0.40	5	0.02	13	0.00	9	0.00	1	0.00	1
-82	Min.	-0.55	9	-0.41	13	-0.07	5	0.00	1	0.00	9	0.00	9
-81	Max	0.53	1	0.41	13	-0.17	13	0.00	19	0.00	5	0.00	1
-81	Min.	-0.55	9	-0.41	5	-0.32	20	0.00	5	0.00	13	0.00	9
-80	Max	0.63	1	0.41	13	-0.09	5	-0.00	9	0.00	1	0.00	1
-80	Min.	-0.65	9	-0.41	5	-0.24	19	-0.00	17	0.00	9	0.00	9
-79	Max	0.72	1	1.15	1	0.17	9	0.00	9	0.00	1	0.00	1
-79	Min.	-0.74	9	-1.16	9	-0.17	1	-0.00	1	-0.00	9	0.00	9
-78	Max	0.72	1	1.11	1	-0.00	9	0.00	9	0.00	1	0.00	1
-78	Min.	-0.74	9	-1.12	9	-0.01	19	-0.00	1	-0.00	9	0.00	9
-77	Max	0.72	1	1.06	1	0.16	1	0.00	9	0.00	1	0.00	1
-77	Min.	-0.74	9	-1.08	9	-0.18	9	-0.00	1	-0.00	9	0.00	9
-76	Max	0.72	1	0.88	1	0.02	9	0.00	9	0.00	9	0.00	1
-76	Min.	-0.74	9	-0.90	9	-0.24	1	-0.00	1	-0.00	1	0.00	9
-75	Max	0.72	1	0.62	1	-0.08	9	0.00	9	0.00	9	0.00	1
-75	Min.	-0.74	9	-0.63	9	-0.24	19	-0.00	19	0.00	1	0.00	9
-74	Max	0.72	1	0.40	5	0.01	5	0.00	1	0.00	5	0.00	1
-74	Min.	-0.74	9	-0.41	13	-0.16	13	-0.00	18	0.00	13	0.00	9
-73	Max	0.84	1	0.40	5	-0.01	13	0.00	20	0.00	1	0.00	1
-73	Min.	-0.86	9	-0.41	13	-0.18	5	0.00	1	0.00	9	0.00	9
-72	Max	0.88	1	0.62	1	0.00	1	0.00	17	0.00	1	0.00	1
-72	Min.	-0.90	9	-0.63	9	-0.12	9	0.00	13	-0.00	9	0.00	9
-71	Max	1.07	1	1.13	1	0.07	1	0.00	9	0.00	1	0.00	1
-71	Min.	-1.09	9	-1.15	9	-0.19	9	-0.00	1	-0.00	9	0.00	9
-70	Max	1.10	1	0.40	13	0.01	13	0.00	13	0.00	13	0.00	1

Relazione di calcolo

-70	Min.	-1.12	9	-0.40	5	-0.19	5	0.00	5	0.00	5	0.00	9
-69	Max	0.33	9	0.23	13	0.15	5	0.00	5	0.00	9	0.00	1
-69	Min.	-0.34	1	-0.23	5	-0.15	13	-0.00	13	-0.00	1	0.00	9
-68	Max	0.33	9	0.23	13	0.11	5	0.00	5	0.00	9	0.00	1
-68	Min.	-0.33	1	-0.23	5	-0.12	13	-0.00	13	-0.00	1	0.00	9
-67	Max	0.33	9	0.23	13	0.11	5	0.00	5	0.00	9	0.00	1
-67	Min.	-0.33	1	-0.23	5	-0.12	13	-0.00	13	-0.00	1	0.00	9
-66	Max	0.33	9	0.23	13	0.14	13	0.00	5	0.00	9	0.00	1
-66	Min.	-0.34	1	-0.23	5	-0.15	5	-0.00	13	-0.00	1	0.00	9
-65	Max	0.34	9	0.23	13	0.20	9	0.00	5	0.00	9	0.00	1
-65	Min.	-0.34	1	-0.23	5	-0.21	1	-0.00	13	-0.00	1	0.00	9
-64	Max	0.31	9	0.22	13	0.09	5	0.00	5	0.00	9	0.00	1
-64	Min.	-0.31	1	-0.23	5	-0.09	13	0.00	13	-0.00	1	0.00	9
-63	Max	0.32	9	0.22	13	0.13	9	0.00	5	0.00	9	0.00	1
-63	Min.	-0.32	1	-0.22	5	-0.14	1	-0.00	13	-0.00	1	0.00	9
-62	Max	0.29	9	0.22	5	0.09	1	0.00	5	0.00	9	0.00	1
-62	Min.	-0.29	1	-0.22	13	-0.09	9	-0.00	13	-0.00	1	0.00	9
-61	Max	0.29	9	0.22	13	0.09	13	0.00	5	0.00	9	0.00	1
-61	Min.	-0.29	1	-0.22	5	-0.10	5	-0.00	13	-0.00	1	0.00	9
-60	Max	0.27	9	0.22	5	0.14	5	0.00	5	0.00	9	0.00	1
-60	Min.	-0.27	1	-0.23	13	-0.15	13	0.00	13	-0.00	1	0.00	9
-59	Max	0.29	9	0.22	13	0.14	13	0.00	5	0.00	9	0.00	1
-59	Min.	-0.28	1	-0.23	5	-0.15	5	0.00	13	-0.00	1	0.00	9
-58	Max	0.27	9	0.23	5	0.23	5	0.00	5	0.00	9	0.00	1
-58	Min.	-0.27	1	-0.23	13	-0.24	13	-0.00	13	-0.00	1	0.00	9
-57	Max	0.30	9	0.23	13	0.22	13	0.00	5	0.00	9	0.00	1
-57	Min.	-0.28	1	-0.23	5	-0.24	5	-0.00	13	-0.00	1	0.00	9
-56	Max	0.29	1	0.74	1	0.21	9	0.01	9	0.00	1	0.00	1
-56	Min.	-0.29	9	-0.75	9	-0.22	1	-0.01	1	-0.00	9	-0.00	9
-55	Max	0.29	1	0.68	1	0.10	9	0.00	9	0.00	1	0.00	1
-55	Min.	-0.29	9	-0.69	9	-0.11	1	-0.00	1	-0.00	9	0.00	9
-54	Max	0.28	1	0.64	1	-0.00	1	0.00	9	0.00	1	0.00	1
-54	Min.	-0.29	9	-0.64	9	-0.01	18	-0.00	1	-0.00	9	0.00	9
-53	Max	0.29	1	0.61	1	0.10	1	0.00	9	0.00	1	0.00	1
-53	Min.	-0.29	9	-0.61	9	-0.11	9	-0.00	1	-0.00	9	0.00	9
-52	Max	0.29	1	0.60	1	0.21	1	0.00	9	0.00	1	0.00	1
-52	Min.	-0.29	9	-0.59	9	-0.23	9	-0.00	1	-0.00	9	0.00	9
-51	Max	0.39	1	0.73	1	0.29	9	0.01	9	0.00	1	0.00	1
-51	Min.	-0.40	9	-0.75	9	-0.29	1	-0.00	1	-0.00	9	0.00	9
-50	Max	0.39	1	0.67	1	0.14	9	0.00	9	0.00	1	0.00	1
-50	Min.	-0.40	9	-0.69	9	-0.14	1	-0.00	1	-0.00	9	0.00	9
-49	Max	0.39	1	0.63	1	-0.00	9	0.00	9	0.00	1	0.00	1
-49	Min.	-0.40	9	-0.65	9	-0.01	18	-0.00	1	-0.00	9	0.00	9
-48	Max	0.39	1	0.59	1	0.13	1	0.00	9	0.00	1	0.00	1
-48	Min.	-0.40	9	-0.63	9	-0.14	9	-0.00	1	-0.00	9	0.00	9
-47	Max	0.39	1	0.56	1	0.28	1	0.00	9	0.00	1	0.00	1
-47	Min.	-0.40	9	-0.61	9	-0.30	9	-0.00	1	-0.00	9	0.00	9
-46	Max	0.13	9	0.09	5	0.09	5	0.00	5	0.00	9	0.00	1
-46	Min.	-0.13	1	-0.09	13	-0.10	13	0.00	13	-0.00	1	0.00	9
-45	Max	0.13	9	0.08	13	0.07	5	0.00	5	0.00	9	0.00	1
-45	Min.	-0.13	1	-0.08	5	-0.07	13	-0.00	13	0.00	1	0.00	9
-44	Max	0.13	9	0.08	13	0.06	5	0.00	5	0.00	9	0.00	1
-44	Min.	-0.13	1	-0.08	5	-0.07	13	-0.00	13	0.00	1	0.00	9
-43	Max	0.13	9	0.08	13	0.08	13	0.00	5	0.00	9	0.00	1
-43	Min.	-0.13	1	-0.08	5	-0.09	5	-0.00	13	0.00	1	0.00	9
-42	Max	0.13	9	0.08	13	0.13	9	0.00	5	0.00	9	0.00	1
-42	Min.	-0.13	1	-0.08	5	-0.14	1	-0.00	13	-0.00	1	0.00	9
-41	Max	0.10	9	0.09	5	0.05	5	0.00	5	0.00	9	0.00	1
-41	Min.	-0.10	1	-0.09	13	-0.05	13	0.00	13	-0.00	1	0.00	9
-40	Max	0.11	9	0.08	13	0.07	9	0.00	5	0.00	9	0.00	1
-40	Min.	-0.11	1	-0.08	5	-0.08	1	0.00	13	-0.00	1	0.00	9
-39	Max	0.09	9	0.09	5	0.05	1	0.00	5	0.00	9	0.00	1
-39	Min.	-0.09	1	-0.09	13	-0.05	9	0.00	13	-0.00	1	0.00	9
-38	Max	0.10	9	0.08	13	0.05	13	0.00	5	0.00	9	0.00	1
-38	Min.	-0.09	1	-0.08	5	-0.06	5	0.00	13	-0.00	1	0.00	9
-37	Max	0.09	9	0.09	5	0.08	5	0.00	5	0.00	9	0.00	1
-37	Min.	-0.09	1	-0.09	13	-0.08	13	0.00	13	-0.00	1	0.00	9
-36	Max	0.10	9	0.08	13	0.08	13	0.00	5	0.00	9	0.00	1
-36	Min.	-0.09	1	-0.08	5	-0.08	5	0.00	13	-0.00	1	0.00	9
-35	Max	0.08	9	0.09	5	0.15	5	0.00	13	0.00	9	0.00	1
-35	Min.	-0.08	1	-0.09	13	-0.15	13	0.00	5	-0.00	1	0.00	9
-34	Max	0.09	9	0.09	13	0.14	13	0.00	5	0.00	9	0.00	1
-34	Min.	-0.08	1	-0.09	5	-0.15	5	0.00	13	-0.00	1	0.00	9
-33	Max	0.10	1	0.23	1	0.13	9	0.00	9	0.00	1	0.00	5
-33	Min.	-0.10	9	-0.23	9	-0.14	1	-0.00	1	-0.00	9	0.00	13
-32	Max	0.10	1	0.23	1	0.06	9	0.00	9	0.00	1	0.00	1
-32	Min.	-0.10	9	-0.23	9	-0.06	1	-0.00	1	-0.00	9	0.00	9
-31	Max	0.10	1	0.21	1	-0.00	1	0.00	9	0.00	1	0.00	1
-31	Min.	-0.10	9	-0.21	9	-0.00	17	-0.00	1	0.00	9	0.00	9

Relazione di calcolo

-30	Max	0.10	1	0.20	1	0.06	1	0.00	9	0.00	1	0.00	1
-30	Min.	-0.10	9	-0.20	9	-0.06	9	-0.00	1	-0.00	9	0.00	9
-29	Max	0.10	1	0.18	1	0.13	1	0.00	9	0.00	1	0.00	1
-29	Min.	-0.10	9	-0.18	9	-0.14	9	-0.00	1	-0.00	9	0.00	9
-28	Max	0.14	1	0.23	1	0.18	9	0.00	9	0.00	1	0.00	5
-28	Min.	-0.14	9	-0.23	9	-0.18	1	-0.00	1	-0.00	9	0.00	13
-27	Max	0.13	1	0.22	1	0.08	9	0.00	9	0.00	1	0.00	1
-27	Min.	-0.14	9	-0.23	9	-0.08	1	-0.00	1	-0.00	9	0.00	9
-26	Max	0.13	1	0.21	1	-0.00	9	0.00	9	0.00	1	0.00	1
-26	Min.	-0.13	9	-0.22	9	-0.00	19	-0.00	1	0.00	9	0.00	9
-25	Max	0.13	1	0.19	1	0.08	1	0.00	9	0.00	1	0.00	1
-25	Min.	-0.14	9	-0.20	9	-0.09	9	-0.00	1	-0.00	9	0.00	9
-24	Max	0.14	1	0.17	1	0.18	1	0.00	9	0.00	1	0.00	1
-24	Min.	-0.14	9	-0.18	9	-0.19	9	-0.00	1	-0.00	9	0.00	9
101	Max	1.43	1	0.48	1	-0.02	1	0.00	9	0.00	1	0.00	1
101	Min.	-1.45	9	-0.49	9	-0.04	20	-0.00	1	-0.01	9	0.00	9
102	Max	1.29	1	0.72	1	-0.01	1	0.00	9	0.00	1	0.00	1
102	Min.	-1.31	9	-0.73	9	-0.03	9	-0.00	1	-0.00	9	0.00	9
103	Max	1.21	1	0.88	1	-0.01	9	0.00	9	0.00	1	0.00	1
103	Min.	-1.23	9	-0.90	9	-0.03	17	-0.00	1	-0.00	9	0.00	9
104	Max	1.21	1	0.43	5	-0.03	13	0.00	9	0.00	1	0.00	1
104	Min.	-1.23	9	-0.44	13	-0.04	20	0.00	1	-0.00	9	0.00	9
105	Max	1.20	1	1.18	1	0.02	1	0.00	9	0.00	1	0.00	1
105	Min.	-1.23	9	-1.20	9	-0.04	9	-0.00	1	-0.00	9	0.00	9
106	Max	1.07	1	0.62	1	-0.03	1	0.00	9	0.00	1	0.00	1
106	Min.	-1.09	9	-0.63	9	-0.04	18	-0.00	1	-0.00	9	0.00	9
107	Max	1.07	1	0.88	1	-0.02	9	0.00	9	0.00	1	0.00	1
107	Min.	-1.09	9	-0.90	9	-0.04	19	-0.00	1	-0.00	9	0.00	9
108	Max	1.07	1	1.18	1	0.01	9	0.00	9	0.00	1	0.00	1
108	Min.	-1.09	9	-1.20	9	-0.05	1	-0.00	1	-0.00	9	0.00	9
109	Max	1.06	1	0.40	13	-0.00	1	0.00	5	0.00	1	0.00	1
109	Min.	-1.08	9	-0.41	5	-0.03	9	-0.00	13	-0.00	9	0.00	9
110	Max	1.05	1	0.40	5	-0.00	1	0.00	13	0.00	1	0.00	1
110	Min.	-1.07	9	-0.41	13	-0.02	9	-0.00	5	-0.00	9	0.00	9
111	Max	0.99	1	0.44	5	0.01	9	0.00	5	0.00	1	0.00	1
111	Min.	-1.01	9	-0.45	13	-0.04	1	-0.00	13	-0.00	9	0.00	9
112	Max	0.84	1	0.62	1	-0.02	1	0.00	9	0.00	1	0.00	1
112	Min.	-0.86	9	-0.63	9	-0.04	18	-0.00	1	-0.00	9	0.00	9
113	Max	0.84	1	0.88	1	-0.03	1	0.00	9	0.00	1	0.00	1
113	Min.	-0.86	9	-0.90	9	-0.04	18	-0.00	1	-0.00	9	0.00	9
114	Max	0.84	1	1.18	1	-0.01	1	0.00	9	0.00	1	0.00	1
114	Min.	-0.86	9	-1.20	9	-0.03	9	-0.00	1	-0.00	9	0.00	9
115	Max	0.84	1	0.44	13	-0.00	1	0.00	5	0.00	1	0.00	1
115	Min.	-0.86	9	-0.44	5	-0.02	9	-0.00	13	-0.00	9	0.00	9
116	Max	0.80	1	0.40	13	0.00	5	0.00	5	0.00	1	0.00	1
116	Min.	-0.82	9	-0.40	5	-0.02	13	0.00	13	-0.00	9	0.00	9
117	Max	0.79	1	0.40	5	-0.00	9	0.00	5	0.00	1	0.00	1
117	Min.	-0.81	9	-0.41	13	-0.04	1	-0.00	13	-0.00	9	0.00	9
118	Max	0.72	1	0.49	1	-0.02	1	0.00	9	0.00	1	0.00	1
118	Min.	-0.74	9	-0.50	9	-0.03	18	-0.00	1	-0.00	9	0.00	9
119	Max	0.72	1	0.73	1	-0.02	9	0.00	9	0.00	1	0.00	1
119	Min.	-0.74	9	-0.74	9	-0.03	17	-0.00	1	-0.00	9	0.00	9
120	Max	0.70	1	0.41	13	-0.01	5	0.00	5	0.00	1	0.00	1
120	Min.	-0.72	9	-0.41	5	-0.03	13	-0.00	13	-0.00	9	0.00	9
121	Max	0.63	1	0.49	13	-0.01	1	0.00	5	0.00	1	0.00	1
121	Min.	-0.65	9	-0.50	5	-0.02	18	-0.00	13	-0.00	9	0.00	9
122	Max	0.56	1	0.40	5	-0.01	5	0.00	13	0.00	1	0.00	1
122	Min.	-0.58	9	-0.41	13	-0.03	20	-0.00	5	-0.00	9	0.00	9
123	Max	0.53	1	0.49	1	-0.02	9	0.00	9	0.00	1	0.00	1
123	Min.	-0.55	9	-0.50	9	-0.04	17	-0.00	1	-0.00	9	0.00	9
124	Max	0.53	1	0.73	1	-0.02	9	0.00	9	0.00	1	0.00	1
124	Min.	-0.55	9	-0.74	9	-0.04	19	-0.00	1	-0.00	9	0.00	9
125	Max	0.48	1	0.57	13	-0.01	9	0.00	5	0.00	1	0.00	1
125	Min.	-0.49	9	-0.57	5	-0.03	18	-0.00	13	-0.00	9	0.00	9
126	Max	0.48	1	0.47	13	-0.02	13	0.00	5	0.00	1	0.00	1
126	Min.	-0.49	9	-0.47	5	-0.04	18	-0.00	13	-0.00	9	0.00	9
127	Max	0.48	1	0.41	13	-0.03	1	0.00	5	0.00	1	0.00	1
127	Min.	-0.49	9	-0.41	5	-0.05	18	0.00	13	-0.00	9	0.00	9
128	Max	0.48	1	0.40	13	-0.01	9	0.00	5	0.00	1	0.00	1
128	Min.	-0.49	9	-0.40	5	-0.03	1	0.00	13	-0.00	9	0.00	9
129	Max	0.44	1	1.18	1	-0.01	9	0.00	9	0.00	1	0.00	1
129	Min.	-0.45	9	-1.20	9	-0.04	17	-0.00	1	-0.00	9	0.00	9
130	Max	0.44	9	0.40	13	-0.01	1	0.00	5	0.00	9	0.00	1
130	Min.	-0.45	1	-0.40	5	-0.02	20	0.00	13	-0.00	1	0.00	9
131	Max	0.44	9	0.50	1	-0.02	1	0.00	9	0.00	9	0.00	1
131	Min.	-0.45	1	-0.51	9	-0.03	20	-0.00	1	-0.00	1	0.00	9
132	Max	0.44	9	0.62	1	-0.00	1	0.00	9	0.00	1	0.00	1
132	Min.	-0.45	1	-0.63	9	-0.02	9	-0.00	1	-0.00	9	0.00	9
133	Max	0.44	9	0.84	1	-0.03	1	0.00	9	0.00	9	0.00	1

Relazione di calcolo

133	Min.	-0.45	1	-0.86	9	-0.05	17	-0.00	1	-0.00	1	0.00	9
134	Max	0.44	9	0.65	13	-0.02	13	0.00	5	0.00	9	0.00	1
134	Min.	-0.45	1	-0.65	5	-0.04	18	-0.00	13	-0.00	1	0.00	9
135	Max	0.46	9	0.62	1	-0.01	1	0.00	9	0.00	9	0.00	1
135	Min.	-0.47	1	-0.63	9	-0.03	17	-0.00	1	0.00	1	0.00	9
136	Max	0.46	9	0.49	13	-0.02	13	0.00	5	0.00	9	0.00	1
136	Min.	-0.47	1	-0.49	5	-0.04	20	-0.00	13	-0.00	1	0.00	9
137	Max	0.46	9	0.50	1	-0.00	9	0.00	9	0.00	9	0.00	1
137	Min.	-0.47	1	-0.51	9	-0.02	1	0.00	1	0.00	1	0.00	9
138	Max	0.50	9	1.18	1	-0.02	9	0.00	9	0.00	9	0.00	1
138	Min.	-0.51	1	-1.20	9	-0.05	17	-0.00	1	-0.00	1	0.00	9
139	Max	0.50	9	0.84	1	-0.01	1	0.00	9	0.00	9	0.00	1
139	Min.	-0.51	1	-0.86	9	-0.05	9	0.00	1	-0.00	1	0.00	9
140	Max	0.54	9	0.75	9	-0.01	1	0.00	1	0.00	9	0.00	1
140	Min.	-0.55	1	-0.75	1	-0.03	9	-0.00	9	0.00	1	0.00	9
141	Max	0.57	9	0.62	1	0.00	9	0.00	9	0.00	9	0.00	1
141	Min.	-0.58	1	-0.63	9	-0.03	1	-0.00	1	-0.00	1	0.00	9
142	Max	0.57	9	0.84	1	0.01	9	0.00	9	0.00	9	0.00	1
142	Min.	-0.58	1	-0.86	9	-0.04	1	-0.00	1	-0.00	1	0.00	9
143	Max	0.57	9	0.49	13	-0.02	9	0.00	5	0.00	9	0.00	1
143	Min.	-0.58	1	-0.49	5	-0.03	18	0.00	13	-0.00	1	0.00	9
144	Max	0.64	9	0.54	13	-0.01	5	0.00	5	0.00	9	0.00	1
144	Min.	-0.65	1	-0.54	5	-0.04	13	-0.00	13	-0.00	1	0.00	9
145	Max	0.64	9	0.40	13	0.04	5	0.00	13	0.00	9	0.00	1
145	Min.	-0.65	1	-0.40	5	-0.05	13	0.00	5	-0.00	1	0.00	9
146	Max	0.65	9	0.42	13	-0.01	13	0.00	5	0.00	9	0.00	1
146	Min.	-0.65	1	-0.42	5	-0.02	5	-0.00	13	0.00	1	0.00	9
147	Max	1.49	1	0.43	5	0.35	1	0.00	9	0.00	1	0.00	1
147	Min.	-1.51	9	-0.44	13	-1.56	9	-0.00	1	-0.01	9	0.00	9
148	Max	1.26	1	0.40	13	-0.12	1	0.01	9	-0.00	1	0.00	1
148	Min.	-1.29	9	-0.40	5	-1.23	9	0.00	1	-0.00	20	0.00	9
149	Max	1.21	1	1.13	1	0.15	1	0.00	9	0.00	1	0.00	1
149	Min.	-1.23	9	-1.15	9	-0.27	9	-0.00	1	-0.00	9	0.00	9
150	Max	0.86	1	0.43	13	0.05	13	0.00	5	0.00	1	0.00	1
150	Min.	-0.88	9	-0.44	5	-0.08	5	0.00	13	-0.00	9	0.00	9
151	Max	0.72	1	1.02	1	0.34	1	0.00	9	0.00	1	0.00	1
151	Min.	-0.74	9	-1.04	9	-0.36	9	-0.00	1	-0.00	9	0.00	9
152	Max	0.72	1	1.19	1	0.35	9	0.00	9	0.00	1	0.00	1
152	Min.	-0.74	9	-1.20	9	-0.35	1	-0.00	1	-0.00	9	0.00	9
153	Max	0.53	1	1.02	1	0.25	1	0.00	9	0.00	1	0.00	1
153	Min.	-0.55	9	-1.04	9	-0.28	9	-0.00	1	-0.00	9	0.00	9
154	Max	0.53	1	1.19	1	0.26	9	0.00	9	0.00	1	0.00	1
154	Min.	-0.55	9	-1.20	9	-0.27	1	-0.00	1	-0.00	9	0.00	9
155	Max	0.44	9	1.02	1	-0.24	9	0.00	9	0.00	1	0.00	1
155	Min.	-0.45	1	-1.04	9	-0.61	19	-0.00	1	0.00	9	0.00	9
156	Max	0.44	9	0.64	13	0.05	9	0.00	5	0.00	9	0.00	1
156	Min.	-0.45	1	-0.64	5	-0.12	1	0.00	13	0.00	1	0.00	9
157	Max	0.46	9	0.50	13	0.03	13	0.00	5	0.00	9	0.00	1
157	Min.	-0.47	1	-0.51	5	-0.10	5	-0.00	13	-0.00	1	0.00	9
158	Max	0.46	9	0.40	13	0.28	13	0.00	5	0.00	9	0.00	1
158	Min.	-0.47	1	-0.41	5	-0.30	5	0.00	13	-0.00	1	0.00	9
159	Max	0.57	9	1.18	1	0.49	9	0.00	9	0.00	1	0.00	1
159	Min.	-0.58	1	-1.20	9	-0.63	1	-0.00	1	-0.00	9	0.00	9
160	Max	0.57	9	0.40	13	0.25	9	0.00	5	0.00	9	0.00	1
160	Min.	-0.58	1	-0.41	5	-0.26	1	-0.00	13	-0.00	1	0.00	9
161	Max	0.57	9	0.40	13	0.18	5	0.00	13	0.00	9	0.00	1
161	Min.	-0.58	1	-0.40	5	-0.18	13	0.00	5	-0.00	1	0.00	9
162	Max	0.61	9	0.59	13	-0.09	9	0.00	17	0.00	5	0.00	1
162	Min.	-0.62	1	-0.59	5	-0.27	18	0.00	13	0.00	13	0.00	9
201	Max	3.43	1	1.14	5	-0.02	1	0.00	9	0.00	1	0.00	1
201	Min.	-3.49	9	-1.17	13	-0.05	20	-0.00	1	-0.00	9	-0.00	9
202	Max	3.11	1	1.65	1	-0.01	1	0.00	9	0.00	1	0.00	1
202	Min.	-3.18	9	-1.68	9	-0.05	9	-0.00	1	-0.00	9	-0.00	9
203	Max	2.93	1	2.01	1	-0.01	13	0.00	9	0.00	1	0.00	1
203	Min.	-2.99	9	-2.05	9	-0.04	5	0.00	1	-0.00	9	-0.00	9
204	Max	2.92	1	1.04	5	-0.03	13	0.00	9	0.00	1	0.00	1
204	Min.	-2.99	9	-1.07	13	-0.06	20	-0.00	1	-0.00	9	-0.00	9
205	Max	2.92	1	2.67	1	0.02	1	0.00	9	0.00	1	0.00	1
205	Min.	-2.98	9	-2.72	9	-0.05	9	-0.00	1	-0.00	9	-0.00	9
206	Max	2.61	1	1.42	1	-0.03	1	0.00	9	0.00	1	0.00	1
206	Min.	-2.67	9	-1.45	9	-0.06	18	-0.00	1	-0.00	9	-0.00	9
207	Max	2.61	1	2.01	1	-0.03	9	0.00	9	0.00	1	0.00	1
207	Min.	-2.67	9	-2.05	9	-0.05	19	-0.00	1	-0.00	9	-0.00	9
208	Max	2.61	1	2.67	1	0.01	9	0.00	9	0.00	1	0.00	1
208	Min.	-2.67	9	-2.72	9	-0.07	1	-0.00	1	-0.00	9	-0.00	9
209	Max	2.59	1	1.02	13	-0.00	1	0.00	5	0.00	1	0.00	1
209	Min.	-2.64	9	-1.03	5	-0.04	9	-0.00	13	-0.00	9	-0.00	9
210	Max	2.56	1	0.99	5	-0.01	1	0.00	5	0.00	1	0.00	1
210	Min.	-2.62	9	-1.01	13	-0.03	9	0.00	13	-0.00	9	-0.00	9

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211	Max	2.43	1	1.07	5	0.01	9	0.00	5	0.00	1	0.00	1
211	Min.	-2.48	9	-1.10	13	-0.05	1	-0.00	13	-0.00	9	-0.00	9
212	Max	2.10	1	1.42	1	-0.03	1	0.00	9	0.00	1	0.00	1
212	Min.	-2.15	9	-1.45	9	-0.05	18	-0.00	1	-0.00	9	-0.00	9
213	Max	2.10	1	2.01	1	-0.04	1	0.00	9	0.00	1	0.00	1
213	Min.	-2.15	9	-2.05	9	-0.06	18	-0.00	1	-0.00	9	-0.00	9
214	Max	2.10	1	2.67	1	-0.01	9	0.00	9	0.00	1	0.00	1
214	Min.	-2.15	9	-2.72	9	-0.05	1	-0.00	1	-0.00	9	-0.00	9
215	Max	2.09	1	1.10	13	-0.00	1	0.00	5	0.00	1	0.00	1
215	Min.	-2.14	9	-1.12	5	-0.03	9	-0.00	13	-0.00	9	-0.00	9
216	Max	2.00	1	1.01	13	0.00	5	0.00	5	0.00	1	0.00	1
216	Min.	-2.05	9	-1.03	5	-0.02	13	0.00	13	-0.00	9	-0.00	9
217	Max	1.99	1	0.99	13	-0.01	9	0.00	5	0.00	1	0.00	1
217	Min.	-2.04	9	-1.01	5	-0.06	1	-0.00	13	-0.00	9	-0.00	9
218	Max	1.82	1	1.16	5	-0.03	1	0.00	13	0.00	1	0.00	1
218	Min.	-1.87	9	-1.19	13	-0.04	18	-0.00	5	-0.00	9	-0.00	9
219	Max	1.82	1	1.67	1	-0.03	9	0.00	9	0.00	1	0.00	1
219	Min.	-1.87	9	-1.70	9	-0.05	17	-0.00	1	-0.00	9	-0.00	9
220	Max	1.77	1	1.03	13	-0.01	5	0.00	5	0.00	1	0.00	1
220	Min.	-1.82	9	-1.05	5	-0.05	13	-0.00	13	-0.00	9	-0.00	9
221	Max	1.62	1	1.23	13	-0.02	1	0.00	5	0.00	1	0.00	1
221	Min.	-1.67	9	-1.24	5	-0.03	18	-0.00	13	-0.00	9	-0.00	9
222	Max	1.45	1	0.99	5	-0.02	5	0.00	13	0.00	1	0.00	1
222	Min.	-1.49	9	-1.01	13	-0.04	20	0.00	5	-0.00	9	-0.00	9
223	Max	1.38	1	1.16	5	-0.04	9	0.00	13	0.00	1	0.00	1
223	Min.	-1.42	9	-1.19	13	-0.06	17	-0.00	5	-0.00	9	-0.00	9
224	Max	1.38	1	1.67	1	-0.03	9	0.00	9	0.00	1	0.00	1
224	Min.	-1.42	9	-1.70	9	-0.06	19	-0.00	1	-0.00	9	-0.00	9
225	Max	1.25	1	1.40	13	-0.02	9	0.00	5	0.00	1	0.00	1
225	Min.	-1.29	9	-1.41	5	-0.04	18	-0.00	13	-0.00	9	-0.00	9
226	Max	1.24	1	1.18	13	-0.03	13	0.00	5	0.00	1	0.00	1
226	Min.	-1.28	9	-1.20	5	-0.05	20	-0.00	13	-0.00	9	-0.00	9
227	Max	1.24	1	1.03	13	-0.04	1	0.00	5	0.00	1	0.00	1
227	Min.	-1.28	9	-1.05	5	-0.07	18	-0.00	13	-0.00	9	-0.00	9
228	Max	1.24	1	0.99	13	-0.01	9	0.00	5	0.00	1	0.00	1
228	Min.	-1.28	9	-1.01	5	-0.04	1	-0.00	13	-0.00	9	-0.00	9
229	Max	1.14	1	2.67	1	-0.02	9	0.00	9	0.00	1	0.00	1
229	Min.	-1.18	9	-2.72	9	-0.05	1	-0.00	1	-0.00	9	-0.00	9
230	Max	1.10	9	0.99	13	-0.02	1	0.00	5	0.00	1	0.00	1
230	Min.	-1.14	1	-1.01	5	-0.04	20	-0.00	13	-0.00	9	-0.00	9
231	Max	1.10	9	1.18	1	-0.02	1	0.00	13	0.00	1	0.00	1
231	Min.	-1.14	1	-1.21	9	-0.05	20	0.00	5	0.00	9	-0.00	9
232	Max	1.10	9	1.42	1	-0.01	1	0.00	9	0.00	1	0.00	1
232	Min.	-1.14	1	-1.46	9	-0.03	9	-0.00	1	0.00	9	-0.00	9
233	Max	1.10	9	1.92	1	-0.04	1	0.00	9	0.00	1	0.00	1
233	Min.	-1.14	1	-1.96	9	-0.07	17	-0.00	1	-0.00	9	-0.00	9
234	Max	1.09	9	1.59	13	-0.03	13	0.00	5	0.00	9	0.00	1
234	Min.	-1.13	1	-1.60	5	-0.05	18	-0.00	13	-0.00	1	-0.00	9
235	Max	1.11	9	1.42	1	-0.02	1	0.00	9	0.00	9	0.00	1
235	Min.	-1.14	1	-1.46	9	-0.04	17	0.00	1	0.00	1	-0.00	9
236	Max	1.11	9	1.23	13	-0.03	13	0.00	5	0.00	9	0.00	1
236	Min.	-1.15	1	-1.24	5	-0.07	20	-0.00	13	-0.00	1	-0.00	9
237	Max	1.11	9	1.18	1	-0.01	9	0.00	13	0.00	9	0.00	1
237	Min.	-1.15	1	-1.21	9	-0.03	1	0.00	5	0.00	1	-0.00	9
238	Max	1.17	9	2.67	1	-0.03	9	0.00	9	0.00	9	0.00	1
238	Min.	-1.20	1	-2.72	9	-0.06	17	-0.00	1	-0.00	1	-0.00	9
239	Max	1.17	9	1.92	1	-0.02	1	0.00	9	0.00	9	0.00	1
239	Min.	-1.20	1	-1.96	9	-0.07	9	0.00	1	-0.00	1	-0.00	9
240	Max	1.24	9	1.80	13	-0.01	1	0.00	5	0.00	9	0.00	1
240	Min.	-1.27	1	-1.80	5	-0.04	9	-0.00	13	-0.00	1	-0.00	9
241	Max	1.29	9	1.43	1	0.00	9	0.00	9	0.00	9	0.00	1
241	Min.	-1.32	1	-1.46	9	-0.04	1	0.00	1	-0.00	1	-0.00	9
242	Max	1.29	9	1.92	1	0.01	9	0.00	9	0.00	9	0.00	1
242	Min.	-1.32	1	-1.96	9	-0.05	1	-0.00	1	0.00	1	-0.00	9
243	Max	1.29	9	1.23	13	-0.02	9	0.00	5	0.00	9	0.00	1
243	Min.	-1.32	1	-1.24	5	-0.05	18	-0.00	13	-0.00	1	-0.00	9
244	Max	1.43	9	1.34	13	-0.01	5	0.00	5	0.00	9	0.00	1
244	Min.	-1.46	1	-1.35	5	-0.06	13	-0.00	13	-0.00	1	-0.00	9
245	Max	1.43	9	0.99	13	0.08	5	0.00	13	0.00	9	0.00	1
245	Min.	-1.46	1	-1.01	5	-0.10	13	-0.00	5	-0.00	1	-0.00	9
246	Max	1.44	9	1.06	13	-0.01	13	0.00	5	0.00	9	0.00	1
246	Min.	-1.46	1	-1.07	5	-0.03	5	-0.00	13	-0.00	1	-0.00	9
247	Max	3.56	1	1.04	5	0.54	1	0.00	9	0.00	1	0.00	1
247	Min.	-3.63	9	-1.06	13	-1.16	9	-0.00	1	-0.01	9	-0.00	9
248	Max	3.06	1	0.99	13	0.12	1	0.00	9	0.00	1	0.00	1
248	Min.	-3.12	9	-1.01	5	-0.88	9	0.00	1	-0.00	9	-0.00	9
249	Max	1.82	1	2.33	1	0.39	1	0.00	9	0.00	9	0.00	1
249	Min.	-1.87	9	-2.37	9	-0.42	9	-0.00	1	-0.00	1	-0.00	9
250	Max	1.82	1	2.69	1	0.41	9	0.00	9	0.00	1	0.00	1

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250	Min.	-1.87	9	-2.74	9	-0.41	1	-0.00	1	-0.00	9	-0.00	9
251	Max	1.38	1	2.33	1	0.29	1	0.00	9	0.00	1	0.00	1
251	Min.	-1.42	9	-2.37	9	-0.34	9	-0.00	1	-0.00	9	-0.00	9
252	Max	1.38	1	2.69	1	0.31	9	0.00	9	0.00	1	0.00	1
252	Min.	-1.42	9	-2.74	9	-0.32	1	0.00	1	-0.00	9	-0.00	9
253	Max	1.10	9	2.33	1	-0.24	9	0.00	9	0.00	1	0.00	1
253	Min.	-1.14	1	-2.37	9	-0.48	19	-0.00	1	0.00	9	-0.00	9
254	Max	1.09	9	1.57	13	0.05	13	0.00	5	0.00	9	0.00	1
254	Min.	-1.13	1	-1.57	5	-0.13	5	0.00	13	0.00	1	-0.00	9
255	Max	1.11	9	1.02	13	0.34	13	0.00	5	0.00	9	0.00	1
255	Min.	-1.15	1	-1.03	5	-0.38	5	0.00	13	-0.00	1	-0.00	9
256	Max	1.11	9	0.99	13	0.36	5	0.00	5	0.00	9	0.00	1
256	Min.	-1.15	1	-1.01	5	-0.38	13	0.00	13	-0.00	1	-0.00	9
257	Max	1.29	9	2.67	1	0.26	9	0.00	9	0.00	1	0.00	1
257	Min.	-1.32	1	-2.72	9	-0.63	1	-0.00	1	-0.00	9	-0.00	9
258	Max	1.29	9	1.02	13	0.28	9	0.00	5	0.00	9	0.00	1
258	Min.	-1.32	1	-1.03	5	-0.29	1	-0.00	13	-0.00	1	-0.00	9
259	Max	1.29	9	0.99	13	0.21	5	0.00	13	0.00	9	0.00	1
259	Min.	-1.32	1	-1.01	5	-0.22	13	-0.00	5	-0.00	1	-0.00	9
325	Max	1.45	1	1.64	13	-0.02	13	0.00	5	0.00	1	0.00	1
325	Min.	-1.49	9	-1.66	5	-0.05	5	-0.00	13	-0.00	9	-0.00	9
326	Max	1.44	1	1.41	13	-0.04	13	0.00	5	0.00	1	0.00	1
326	Min.	-1.48	9	-1.43	5	-0.06	20	-0.00	13	-0.00	9	-0.00	9
327	Max	1.44	1	1.25	13	-0.04	5	0.00	5	0.00	1	0.00	1
327	Min.	-1.48	9	-1.27	5	-0.07	18	-0.00	13	-0.00	9	-0.00	9
328	Max	1.44	1	1.19	13	-0.01	9	0.00	5	0.00	1	0.00	1
328	Min.	-1.48	9	-1.22	5	-0.05	1	-0.00	13	-0.00	9	-0.00	9
330	Max	1.29	9	1.19	13	-0.02	1	0.00	5	0.00	1	0.00	1
330	Min.	-1.33	1	-1.22	5	-0.04	20	-0.00	13	-0.00	9	-0.00	9
334	Max	1.28	9	1.85	13	-0.03	13	0.00	5	0.00	9	0.00	1
334	Min.	-1.32	1	-1.87	5	-0.05	18	-0.00	13	-0.00	1	-0.00	9
336	Max	1.31	9	1.45	13	-0.03	13	0.00	5	0.00	9	0.00	1
336	Min.	-1.35	1	-1.48	5	-0.07	20	-0.00	13	-0.00	1	-0.00	9
340	Max	1.45	9	2.07	13	-0.01	1	0.00	5	0.00	9	0.00	1
340	Min.	-1.49	1	-2.09	5	-0.05	9	-0.00	13	-0.00	1	-0.00	9
343	Max	1.52	9	1.45	13	-0.03	9	0.00	5	0.00	9	0.00	1
343	Min.	-1.55	1	-1.48	5	-0.05	18	-0.00	13	-0.00	1	-0.00	9
344	Max	1.67	9	1.58	13	-0.01	5	0.00	5	0.00	9	0.00	1
344	Min.	-1.70	1	-1.60	5	-0.07	13	-0.00	13	-0.00	1	-0.00	9
345	Max	1.67	9	1.19	13	0.08	5	0.00	13	0.00	9	0.00	1
345	Min.	-1.70	1	-1.22	5	-0.11	13	0.00	5	-0.00	1	-0.00	9
346	Max	1.67	9	1.27	13	-0.01	13	0.00	5	0.00	9	0.00	1
346	Min.	-1.71	1	-1.30	5	-0.04	5	-0.00	13	0.00	1	-0.00	9
347	Max	1.28	9	1.82	13	0.03	13	0.00	5	0.00	9	0.00	1
347	Min.	-1.32	1	-1.84	5	-0.12	5	0.00	13	0.00	1	-0.00	9
348	Max	1.31	9	1.49	13	0.01	13	0.00	5	0.00	9	0.00	1
348	Min.	-1.35	1	-1.51	5	-0.12	5	-0.00	13	-0.00	1	-0.00	9
349	Max	1.31	9	1.23	13	0.34	13	0.00	5	0.00	9	0.00	1
349	Min.	-1.35	1	-1.25	5	-0.38	5	0.00	13	-0.00	1	-0.00	9
350	Max	1.31	9	1.19	13	0.35	5	0.00	5	0.00	9	0.00	1
350	Min.	-1.35	1	-1.22	5	-0.37	13	0.00	13	-0.00	1	-0.00	9
351	Max	1.52	9	1.23	13	0.27	9	0.00	5	0.00	9	0.00	1
351	Min.	-1.55	1	-1.25	5	-0.28	1	-0.00	13	-0.00	1	-0.00	9
352	Max	1.52	9	1.19	13	0.21	5	0.00	13	0.00	9	0.00	1
352	Min.	-1.55	1	-1.22	5	-0.21	13	0.00	5	-0.00	1	-0.00	9

Min = -3.63

Max = 3.56

Reazioni vincolari

Simbologia

Nodo = Numero del nodo

Rx = Reazione vincolare (forza) in dir. X

CC = Numero della combinazione delle condizioni di carico elementari

Ry = Reazione vincolare (forza) in dir. Y

Rz = Reazione vincolare (forza) in dir. Z

Mx = Reazione vincolare (momento) intorno all'asse X

My = Reazione vincolare (momento) intorno all'asse Y

Mz = Reazione vincolare (momento) intorno all'asse Z

Nodo		Rx <daN>	CC	Ry <daN>	CC	Rz <daN>	CC	Mx <daNm>	CC	My <daNm>	CC	Mz <daNm>	CC
-23	Max	28409.20	1	27370.00	13	147706.00	13	4441.94	5	5330.21	1	145.15	13
-23	Min.	-29410.40	9	-27958.40	5	-140043.00	5	-4312.67	13	-5665.80	9	-144.07	5
-22	Max	35277.90	1	2747.32	13	86012.90	13	2094.54	5	2253.25	1	126.50	9
-22	Min.	-35916.40	9	-2851.21	5	-76957.90	5	-2077.25	13	-2122.27	9	-114.44	1
-21	Max	36767.60	1	330.83	5	74669.40	13	1260.83	13	707.11	1	136.17	9
-21	Min.	-36934.30	9	-352.78	13	-67213.00	5	-1258.82	5	-868.04	9	-127.66	1
-20	Max	32736.80	1	2246.65	5	112233.00	1	2035.63	13	1831.74	1	117.00	9

Relazione di calcolo

-20	Min.	-31713.10	9	-2446.60	13	-99434.20	9	-1959.84	5	-1479.93	9	-110.52	1
-19	Max	30308.30	1	16896.40	5	169304.00	1	3140.34	13	2921.10	1	66.48	13
-19	Min.	-32442.90	9	-18575.30	13	-153161.00	9	-2969.53	5	-4187.40	9	-96.16	5
-18	Max	3677.45	1	44064.40	9	114528.00	13	2292.77	1	4112.83	1	306.92	9
-18	Min.	-3783.37	9	-43950.80	1	-100145.00	5	-2830.49	9	-4111.44	9	-309.25	1
-17	Max	1883.21	1	28104.40	5	113667.00	1	1988.96	13	1574.47	1	62.31	9
-17	Min.	-1840.87	9	-29171.90	13	-93669.30	9	-2120.90	5	-1541.29	9	-121.04	1
-16	Max	462.19	1	41244.80	13	110781.00	9	1560.71	13	2455.07	1	201.11	9
-16	Min.	-429.88	9	-41968.10	5	-92263.90	1	-1580.95	5	-2389.63	9	-189.84	1
-15	Max	184.64	9	25974.40	5	86656.80	5	903.28	13	667.21	1	43.64	9
-15	Min.	-260.46	1	-26839.80	13	-63827.90	13	-837.16	5	-753.58	9	-79.57	1
-14	Max	469.99	1	31683.70	13	174899.00	13	447.76	5	2140.80	1	179.59	9
-14	Min.	-497.38	9	-29764.20	5	-149478.00	5	-1675.06	13	-2082.27	9	-176.47	1
-13	Max	279.66	1	20843.40	5	124681.00	5	-12.13	5	660.77	1	61.27	9
-13	Min.	-135.50	9	-20031.50	13	-97790.30	13	-361.99	13	-696.56	9	-52.15	1
-12	Max	609.15	9	26989.70	13	141425.00	13	408.61	9	1035.95	1	180.66	9
-12	Min.	-581.99	1	-26104.90	5	-127153.00	5	-460.29	1	-989.32	9	-185.54	1
-11	Max	134.87	9	18077.70	5	98615.70	5	328.98	5	285.21	1	83.44	9
-11	Min.	-447.12	1	-16707.00	13	-83611.40	13	-282.91	13	-463.68	9	-50.59	1
-10	Max	16235.90	9	2457.56	9	100655.00	1	3079.79	1	45.60	1	437.91	1
-10	Min.	-18684.40	1	-2323.13	1	-90611.30	9	-3155.73	9	-306.29	9	-414.00	9
-9	Max	13173.30	9	944.58	9	108124.00	1	4681.56	1	2429.24	17	139.02	1
-9	Min.	-12578.80	1	-1111.14	1	-85732.90	9	-4636.11	9	755.15	9	-65.74	9
-8	Max	16001.70	9	2122.65	9	19157.00	18	5099.53	1	601.99	9	264.99	9
-8	Min.	-19215.00	1	-2357.54	1	12659.80	1	-4908.86	9	-986.24	1	-179.88	1
-7	Max	14507.40	9	1346.79	9	115246.00	9	4127.77	1	3393.50	17	323.90	9
-7	Min.	-10471.90	1	-908.92	1	-77232.90	1	-4143.50	9	989.31	9	-375.83	1
-6	Max	17934.10	9	-127.78	13	105444.00	9	2165.85	1	258.39	1	374.69	9
-6	Min.	-17837.80	1	-806.00	5	-87843.70	1	-1712.24	9	-319.21	9	-462.48	1
-5	Max	24896.80	9	2264.48	9	139064.00	1	2882.61	1	178.37	1	339.82	1
-5	Min.	-26122.10	1	-2173.61	1	-134253.00	9	-3171.24	9	-322.43	9	-465.06	9
-4	Max	19758.20	9	1314.39	9	144707.00	1	4276.02	1	2500.28	1	-9.90	5
-4	Min.	-18936.70	1	-879.04	1	-130255.00	9	-4998.97	9	-563.12	9	-184.14	13
-3	Max	26386.70	9	2588.39	9	15708.00	19	4346.00	1	1111.62	9	129.79	9
-3	Min.	-27735.10	1	-1741.88	1	9961.29	9	-5482.68	9	-1322.15	1	-294.01	1
-2	Max	20170.50	9	689.77	9	151919.00	9	3855.51	1	3298.80	1	417.63	9
-2	Min.	-17187.00	1	-1639.13	1	-118589.00	1	-4347.53	9	-806.75	9	-235.88	1
-1	Max	26747.70	9	1747.80	20	146817.00	9	1223.45	1	377.32	1	536.00	9
-1	Min.	-25422.40	1	871.21	5	-128336.00	1	-2534.72	9	-458.89	9	-264.74	1
1	Max	1463.20	9	1408.67	9	46613.70	20	4020.15	1	7919.25	9	234.03	9
1	Min.	-5681.27	1	-1362.09	1	28790.00	1	-4258.17	9	-12819.10	1	-227.10	1
2	Max	3093.33	9	2121.65	9	32139.10	20	2886.81	1	6878.55	9	158.78	9
2	Min.	-3203.84	1	-1138.71	1	18017.90	1	-4200.64	9	-6858.66	1	-154.08	1
3	Max	3383.24	9	1368.70	9	27735.80	17	3171.30	1	7078.67	9	158.78	9
3	Min.	-2538.59	1	-1651.24	1	16766.20	9	-2872.57	9	-5873.57	1	-154.08	1
4	Max	1875.78	9	-369.78	9	54500.80	20	4701.79	1	7390.59	9	234.03	9
4	Min.	-4113.72	1	-2328.27	1	34996.90	13	-1481.26	9	-9851.48	1	-227.10	1
5	Max	724.81	9	2991.17	9	22270.00	9	6177.19	1	2518.54	9	162.02	9
5	Min.	-1959.41	1	-2833.33	1	2210.52	1	-6493.38	9	-3971.47	1	-157.22	1
6	Max	2000.69	9	1085.67	9	54337.30	18	3280.98	5	4477.70	9	234.03	9
6	Min.	-1033.32	1	-1326.85	1	34259.20	1	-3047.19	13	-3172.72	1	-227.10	1
7	Max	2033.84	9	2544.90	9	45286.30	19	3088.73	1	5481.27	9	214.49	9
7	Min.	-2029.51	1	-1065.65	1	26575.30	9	-5023.52	9	-5308.81	1	-208.14	1
8	Max	721.07	9	3880.61	9	31696.60	1	6231.60	1	2323.75	9	158.78	9
8	Min.	-1385.89	1	-2869.18	1	11091.60	9	-7610.59	9	-3075.87	1	-154.08	1
9	Max	2244.93	9	581.43	1	32429.70	18	5535.38	13	5294.77	9	238.80	9
9	Min.	-1624.05	1	-2863.79	9	15966.50	1	-2721.19	5	-4422.29	1	-231.73	1
10	Max	3266.69	9	1586.27	9	27919.40	18	2491.51	1	8338.10	9	234.03	9
10	Min.	-3049.75	1	-819.15	1	14110.30	1	-3567.40	9	-7809.95	1	-227.10	1
11	Max	1597.58	9	707.70	9	25984.10	17	1145.33	5	3442.23	9	158.78	9
11	Min.	-973.33	1	-403.60	1	9416.62	9	-1555.91	13	-2581.52	1	-154.08	1
12	Max	2277.60	9	841.13	9	53769.70	18	3785.21	1	7323.55	9	333.99	9
12	Min.	-2853.46	1	-1834.80	1	34706.00	1	-2629.96	9	-7748.87	1	-324.10	1
13	Max	1762.32	9	1060.58	9	47020.70	18	4403.16	1	4508.27	9	214.49	9
13	Min.	-1575.29	1	-2118.68	1	30344.60	1	-3169.44	9	-4129.42	1	-208.14	1
14	Max	509.60	9	2503.35	9	30541.30	17	6864.23	1	1750.91	9	158.78	9
14	Min.	-1081.95	1	-3385.32	1	16265.70	1	-5886.99	9	-2397.33	1	-154.08	1
15	Max	1634.12	9	1693.77	5	22804.40	18	4379.08	13	4178.77	9	238.80	9
15	Min.	-1565.08	1	-1765.72	13	11333.10	1	-4279.28	5	-3988.68	1	-231.73	1
16	Max	2436.58	9	606.29	5	12947.00	20	1132.24	13	4911.69	9	158.78	9
16	Min.	-2044.81	1	-535.86	13	5983.72	5	-1243.63	5	-4302.65	1	-154.08	1
17	Max	1550.50	9	248.16	13	45652.40	17	3476.17	5	3252.98	9	234.03	9
17	Min.	-1213.34	1	-1580.33	5	22019.80	9	-1929.18	13	-2745.58	1	-227.10	1
18	Max	1421.01	9	1325.75	9	37589.10	18	1723.04	1	3278.50	9	214.49	9
18	Min.	-754.23	1	-405.08	1	23678.20	1	-2945.45	9	-2343.39	1	-208.14	1
19	Max	934.92	9	2026.21	9	41484.70	17	2839.46	1	2671.33	9	214.49	9
19	Min.	-1347.05	1	-776.00	1	26118.20	9	-4495.64	9	-3083.52	1	-208.14	1
20	Max	957.67	9	1997.90	5	32396.90	18	1115.62	13	2108.72	9	162.02	9
20	Min.	-579.02	1	-213.33	13	17657.60	5	-3363.85	5	-1572.82	1	-157.22	1

Relazione di calcolo

21	Max	1499.46	9	1948.47	5	28364.20	18	4360.22	13	3657.83	9	234.03	9
21	Min.	-1115.43	1	-1642.73	13	17733.70	1	-4723.87	5	-3084.32	1	-227.10	1
22	Max	529.81	9	661.87	13	31001.70	20	1838.86	5	1802.84	9	214.49	9
22	Min.	-727.84	1	-737.94	5	18901.00	5	-1802.69	13	-1961.64	1	-208.14	1
23	Max	1518.91	9	1227.23	9	48545.30	17	1517.87	1	3290.56	9	214.49	9
23	Min.	-343.66	1	-467.58	1	30840.60	9	-2525.22	9	-1716.48	1	-208.14	1
24	Max	1084.49	9	2463.89	9	60611.70	19	6424.89	1	2695.07	9	333.99	9
24	Min.	-708.80	1	-2242.91	1	38152.40	9	-6893.61	9	-2119.18	1	-324.10	1
25	Max	1158.90	9	2271.10	5	38876.10	18	4415.29	13	2916.26	9	238.80	9
25	Min.	-1114.91	1	-1569.84	13	23769.30	9	-5256.03	5	-2777.28	1	-231.73	1
26	Max	1181.50	9	1136.54	20	37988.30	18	259.96	13	2527.49	9	158.78	9
26	Min.	-714.33	1	264.85	13	25357.70	13	-1971.56	5	-1857.80	1	-154.08	1
27	Max	1290.73	9	-267.13	5	58811.90	18	2487.46	13	3656.45	9	234.03	9
27	Min.	-1795.20	1	-1499.12	13	38497.20	1	-301.11	5	-4106.52	1	-227.10	1
28	Max	1239.03	9	779.17	13	33554.80	17	1789.92	13	3281.36	9	274.24	9
28	Min.	-1108.10	1	-805.96	5	18079.60	9	-1805.15	5	-2972.73	1	-266.12	1
29	Max	19.87	1	4001.71	9	39043.60	17	5221.47	1	540.90	1	162.02	9
29	Min.	-532.01	9	-2061.84	1	22398.20	9	-7745.90	9	-1133.96	9	-157.22	1
30	Max	600.14	1	1249.72	13	28338.20	20	1938.49	13	1584.55	1	214.49	9
30	Min.	-462.86	9	-824.78	5	18532.50	1	-2523.83	5	-1344.53	9	-208.14	1
31	Max	713.95	1	697.83	9	39514.80	20	2473.57	1	1976.95	1	214.49	9
31	Min.	-665.78	9	-1214.15	1	24771.50	1	-1888.47	9	-1827.41	9	-208.14	1
32	Max	962.95	1	1471.98	9	22181.70	20	2805.78	1	2033.76	1	214.49	9
32	Min.	-225.99	9	-996.67	1	11821.10	1	-3486.97	9	-1044.88	9	-208.14	1
33	Max	1153.28	1	2199.42	9	59869.40	17	2183.71	1	2528.03	1	214.49	9
33	Min.	-390.94	9	-408.71	1	37522.30	1	-4504.72	9	-1489.76	9	-208.14	1
34	Max	1085.18	9	2122.71	1	46922.40	18	5038.73	13	2563.94	9	238.80	9
34	Min.	-731.32	1	-1955.12	9	30881.10	13	-5217.34	5	-2056.25	1	-231.73	1
35	Max	844.80	1	1716.22	9	32452.30	17	3058.69	1	1647.81	1	158.78	9
35	Min.	-656.23	9	-1376.34	1	19010.50	1	-3558.53	9	-1375.38	9	-154.08	1
36	Max	1302.13	1	1364.99	5	66571.40	20	2123.64	13	3977.39	1	333.99	9
36	Min.	-1673.87	9	-712.13	13	40209.70	13	-2963.04	5	-4289.80	9	-324.10	1
37	Max	1277.49	1	317.08	9	19684.10	18	1710.22	1	2638.58	1	158.78	9
37	Min.	-1066.95	9	-883.67	1	10410.00	9	-1038.14	9	-2312.34	9	-154.08	1
38	Max	-280.75	1	1358.51	9	47848.80	17	6431.57	1	296.34	1	162.02	9
38	Min.	-1655.43	9	-3042.67	1	30155.10	9	-4465.23	9	-2678.35	9	-157.22	1
39	Max	1897.70	1	1002.53	9	52261.20	20	3523.75	1	3514.46	1	158.78	9
39	Min.	161.81	9	-1970.00	1	27591.90	1	-2365.46	9	-894.06	9	-154.08	1
40	Max	2038.01	1	1160.46	1	35602.50	18	5662.44	9	3534.16	1	238.80	9
40	Min.	565.68	9	-2334.25	9	21055.30	1	-4197.74	1	-251.76	9	-231.73	1
41	Max	1448.40	1	487.62	9	18631.30	19	2250.12	1	3118.69	1	162.02	9
41	Min.	-829.68	9	-1192.90	1	8308.01	9	-1414.07	9	-2302.68	9	-157.22	1
42	Max	1568.14	1	1359.92	9	23789.60	1	2772.90	1	3264.60	1	162.02	9
42	Min.	-1140.49	9	-1374.79	1	7483.13	9	-2807.93	9	-2685.34	9	-157.22	1
43	Max	1600.37	1	464.57	5	34314.70	18	1621.91	13	3314.64	1	158.78	9
43	Min.	-653.21	9	-797.88	13	21390.80	9	-1216.61	5	-2086.91	9	-154.08	1
44	Max	806.95	1	-270.17	5	38240.50	19	3091.80	13	2473.96	1	162.02	9
44	Min.	-2339.19	9	-1732.52	13	21959.40	5	-619.84	5	-4328.08	9	-157.22	1
45	Max	1402.31	1	1048.94	5	20230.00	13	1626.59	13	3244.95	1	162.02	9
45	Min.	-1678.86	9	-956.82	13	-8399.26	5	-1768.71	5	-3545.96	9	-157.22	1
46	Max	2089.02	1	325.20	5	16926.70	19	952.77	13	4101.17	1	162.02	9
46	Min.	-2140.23	9	-358.86	13	9928.40	13	-930.17	5	-4123.10	9	-157.22	1

Sollecitazioni aste

Simbologia

- Asta = Numero dell'asta
- N1 = Nodol
- N2 = Nodo2
- X = Coordinata progressiva rispetto al nodo iniziale
- N = Sforzo normale
- CC = Numero della combinazione delle condizioni di carico elementari
- Ty = Taglio in dir. Y
- Mz = Momento flettente intorno all'asse Z
- Tz = Taglio in dir. Z
- My = Momento flettente intorno all'asse Y
- Mx = Momento torcente intorno all'asse X

Asta	N1	N2		X	N	CC	Ty	CC	Mz	CC	Tz	CC	My	CC	Mx	CC
				<cm>	<daN>		<daN>		<daNm>		<daN>		<daNm>		<daNm>	
1	1	101	Max	0.00	-28790.00	1	1637.77	17	411.82	13	5649.91	1	8917.96	9	227.10	1
1	1	101	Max	355.00	-27458.70	1	1637.77	17	3748.41	17	5649.91	1	7084.51	1	227.10	1
1	1	101	Min.	0.00	-46613.70	20	356.47	13	-2848.40	5	-1912.74	9	-13175.70	1	-234.03	9
1	1	101	Min.	355.00	-44883.10	20	356.47	13	1657.53	9	-1912.74	9	1924.70	9	-234.03	9
1	101	201	Max	0.00	-10830.90	1	2105.58	5	-1033.24	13	4651.41	1	328.90	9	302.14	1
1	101	201	Max	344.00	-9540.94	1	2105.58	5	3242.67	5	4651.41	1	7250.60	1	302.14	1
1	101	201	Min.	0.00	-17438.50	20	302.95	13	-4034.42	17	-1067.12	9	-8828.64	1	-310.50	9
1	101	201	Min.	344.00	-15761.50	20	302.95	13	7.15	13	-1067.12	9	-3420.38	9	-310.50	9
2	2	102	Max	0.00	-18017.90	1	836.57	5	396.59	13	3350.23	1	7969.65	9	154.08	1
2	2	102	Max	355.00	-16952.90	1	836.57	5	1828.41	20	3350.23	1	4544.16	1	154.08	1

Relazione di calcolo

2	2	102	Min.	0.00	-32139.10	20	89.40	13	-1558.19	5	-3698.01	9	-7355.47	1	-158.78	9
2	2	102	Min.	355.00	-30754.60	20	89.40	13	708.08	13	-3698.01	9	-5164.61	9	-158.78	9
2	102	202	Max	0.00	-7352.07	1	1206.38	5	-395.40	13	5404.64	1	7623.99	9	204.99	1
2	102	202	Max	344.00	-6320.07	1	1206.38	5	1950.59	5	5404.64	1	10022.90	1	204.99	1
2	102	202	Min.	0.00	-12487.10	20	112.78	13	-2200.48	5	-4337.96	9	-8571.03	1	-210.66	9
2	102	202	Min.	344.00	-11145.50	20	112.78	13	-8.55	13	-4337.96	9	-7300.54	9	-210.66	9
3	3	103	Max	0.00	-16766.20	9	1368.70	9	3171.30	1	2538.59	1	7078.67	9	154.08	1
3	3	103	Max	355.00	-15701.20	9	1368.70	9	1993.64	9	2538.59	1	3154.46	1	154.08	1
3	3	103	Min.	0.00	-27735.80	17	-1651.24	1	-2872.57	9	-3383.24	9	-5873.57	1	-158.78	9
3	3	103	Min.	355.00	-26351.30	17	-1651.24	1	-2697.92	1	-3383.24	9	-9084.19	9	-158.78	9
3	103	203	Max	0.00	-5892.40	13	1966.35	9	3604.43	1	3185.02	1	8606.16	9	204.99	1
3	103	203	Max	344.00	-4860.40	13	1966.35	9	3572.86	9	3185.02	1	5602.77	1	204.99	1
3	103	203	Min.	0.00	-9695.60	17	-2045.16	1	-3191.79	9	-5142.10	9	-5355.23	1	-210.66	9
3	103	203	Min.	344.00	-8354.00	17	-2045.16	1	-3431.32	1	-5142.10	9	-9084.19	9	-210.66	9
4	4	104	Max	0.00	-34996.90	13	127.98	1	2754.83	13	4653.25	1	7139.61	9	227.10	1
4	4	104	Max	355.00	-33665.70	13	127.98	1	-530.14	1	4653.25	1	5916.29	1	227.10	1
4	4	104	Min.	0.00	-54500.80	20	-1515.96	9	-1002.54	5	-1434.34	9	-10794.40	1	-234.03	9
4	4	104	Min.	355.00	-52770.10	20	-1515.96	9	-2644.90	9	-1434.34	9	1856.08	9	-234.03	9
4	104	204	Max	0.00	-14520.60	13	792.78	5	5755.09	13	3389.91	1	763.40	9	431.19	1
4	104	204	Max	344.00	-13015.60	13	792.78	5	1992.06	5	3389.91	1	4379.23	1	431.19	1
4	104	204	Min.	0.00	-21586.80	20	-3003.04	13	-735.54	5	-1406.37	9	-7349.96	1	-443.12	9
4	104	204	Min.	344.00	-19630.30	20	-3003.04	13	-4575.81	13	-1406.37	9	-4142.42	9	-443.12	9
5	5	105	Max	0.00	-2210.52	1	1959.41	1	2518.54	9	2833.33	1	6493.38	9	157.22	1
5	5	105	Max	346.00	-1172.52	1	1959.41	1	2818.25	1	2833.33	1	3630.96	1	157.22	1
5	5	105	Min.	0.00	-22270.00	9	-724.81	9	-3971.47	1	-2991.17	9	-6177.19	1	-162.02	9
5	5	105	Min.	346.00	-21232.00	9	-724.81	9	0.53	9	-2991.17	9	-3860.87	9	-162.02	9
5	105	205	Max	0.00	-913.60	1	2879.97	1	967.01	9	2981.78	1	5378.90	9	209.30	1
5	105	205	Max	335.00	91.40	1	2879.97	1	4844.21	1	2981.78	1	5070.54	1	209.30	1
5	105	205	Min.	0.00	-8420.77	9	-730.07	9	-4808.64	1	-3260.67	9	-4921.49	1	-215.10	9
5	105	205	Min.	335.00	-7415.77	9	-730.07	9	-1483.69	9	-3260.67	9	-5547.41	9	-215.10	9
6	6	106	Max	0.00	-34259.20	1	1255.98	1	4444.42	9	1355.79	13	2633.43	5	227.10	1
6	6	106	Max	355.00	-32927.90	1	1255.98	1	1090.26	1	1355.79	13	1494.56	1	227.10	1
6	6	106	Min.	0.00	-54337.30	18	-2008.42	9	-3387.82	1	-701.72	5	-3434.18	13	-234.03	9
6	6	106	Min.	355.00	-52606.70	18	-2008.42	9	-2704.81	9	-701.72	5	26.64	9	-234.03	9
6	106	206	Max	0.00	-15634.30	1	3419.36	1	4700.88	9	1391.15	13	1883.97	5	431.19	1
6	106	206	Max	344.00	-14129.30	1	3419.36	1	6891.21	1	1391.15	13	2039.88	13	431.19	1
6	106	206	Min.	0.00	-23279.80	18	-2241.26	9	-4874.84	1	-1367.84	5	-2754.35	13	-443.12	9
6	106	206	Min.	344.00	-21323.30	18	-2241.27	9	-3012.52	9	-1367.84	5	-2830.07	5	-443.12	9
7	7	107	Max	0.00	-26575.30	9	2544.90	9	3088.73	1	2029.51	1	5481.27	9	208.14	1
7	7	107	Max	355.00	-25332.80	9	2544.90	9	4015.37	9	2029.51	1	1939.75	1	208.14	1
7	7	107	Min.	0.00	-45286.30	19	-1065.65	1	-5023.52	9	-2033.84	9	-5308.81	1	-214.49	9
7	7	107	Min.	355.00	-43671.10	19	-1065.65	1	-698.81	1	-2033.84	9	-1782.68	9	-214.49	9
7	107	207	Max	0.00	-12207.80	9	3398.50	9	955.75	1	1809.94	1	4819.86	9	276.92	1
7	107	207	Max	344.00	-11003.80	9	3398.50	9	5911.83	9	1809.94	1	3031.16	1	276.92	1
7	107	207	Min.	0.00	-19179.80	19	-714.01	1	-5781.08	9	-3164.31	9	-3205.89	1	-284.58	9
7	107	207	Min.	344.00	-17614.60	19	-714.01	1	-1502.54	1	-3164.31	9	-6076.24	9	-284.58	9
8	8	108	Max	0.00	-11091.60	9	1385.89	1	2323.75	9	2869.18	1	7610.59	9	154.08	1
8	8	108	Max	355.00	-10026.60	9	1385.89	1	1868.64	1	2869.18	1	3955.60	1	154.08	1
8	8	108	Min.	0.00	-31696.60	1	-721.07	9	-3075.87	1	-3880.61	9	-6231.60	1	-158.78	9
8	8	108	Min.	355.00	-30631.60	1	-721.07	9	-260.66	9	-3880.61	9	-6167.20	9	-158.78	9
8	108	208	Max	0.00	-4914.20	9	2008.47	1	674.01	9	3268.02	1	8920.65	9	204.99	1
8	108	208	Max	344.00	-3882.20	9	2008.48	1	3570.21	1	3268.02	1	5793.63	1	204.99	1
8	108	208	Min.	0.00	-12583.20	1	-409.33	9	-3342.07	1	-5267.28	9	-5448.97	1	-210.66	9
8	108	208	Min.	344.00	-11551.20	1	-409.33	9	-737.20	9	-5267.28	9	-9199.40	9	-210.66	9
9	9	109	Max	0.00	-15966.50	1	1259.14	1	2507.33	9	3540.67	9	4258.66	1	231.73	1
9	9	109	Max	346.00	-14669.00	1	1259.14	1	1380.10	1	3540.67	9	5170.96	9	231.73	1
9	9	109	Min.	0.00	-32429.70	18	-776.17	9	-3007.56	1	-1225.20	1	-7162.23	9	-238.80	9
9	9	109	Min.	346.00	-30743.00	18	-776.17	9	-209.29	9	-1225.20	1	-63.00	1	-238.80	9
9	109	209	Max	0.00	-6483.39	1	1499.40	1	1087.45	9	4906.14	9	2811.14	1	308.50	1
9	109	209	Max	335.00	-5227.14	1	1499.39	1	2539.80	1	4906.14	9	7935.04	9	308.50	1
9	109	209	Min.	0.00	-13139.20	18	-739.17	9	-2491.78	1	-2087.02	1	-8505.16	9	-317.04	9
9	109	209	Min.	335.00	-11506.10	18	-739.17	9	-1397.39	9	-2087.02	1	-4184.97	1	-317.04	9
10	10	110	Max	0.00	-14110.30	1	963.42	5	1332.47	13	3046.00	1	8944.09	9	227.10	1
10	10	110	Max	355.00	-12779.00	1	963.42	5	1379.58	5	3046.00	1	2877.73	1	227.10	1
10	10	110	Min.	0.00	-27919.40	18	-378.41	13	-2051.31	5	-3587.56	9	-7985.07	1	-234.03	9
10	10	110	Min.	355.00	-26188.80	18	-378.41	13	-21.64	13	-3587.56	9	-3841.27	9	-234.03	9
10	110	210	Max	0.00	-6419.52	1	1853.34	5	1505.66	13	3637.84	1	8691.10	9	431.19	1
10	110	210	Max	344.00	-4914.52	1	1853.34	5	2921.78	5	3637.84	1	6482.09	1	431.19	1
10	110	210	Min.	0.00	-11988.20	18	-1081.69	13	-3455.27	5	-5291.77	9	-6045.44	1	-443.12	9
10	110	210	Min.	344.00	-10031.70	18	-1081.69	13	-2216.92	13	-5291.77	9	-9525.94	9	-443.12	9
11	11	111	Max	0.00	-9416.62	9	1000.92	1	3426.26	9	402.14	13	1513.58	5	154.08	1
11	11	111	Max	355.00	-8351.62	9	1000.92	1	1084.71	1	402.14	13	291.07	1	154.08	1
11	11	111	Min.	0.00	-25984.10	17	-1695.20	9	-2472.96	1	-389.68	5	-1538.50	13	-158.78	9
11	11	111	Min.	355.00	-24599.60	17	-1695.20	9	-2596.07	9	-389.68	5	-271.76	9	-158.78	9
11	111	211	Max	0.00	-4964.44	9	1921.33	1	6697.77	9	239.75	13	347.08	5	276.92	1
11	111	211	Max	344.00	-3760.44	9	1921.33	1	3472.93	1	239.75	13	392.06	13	276.92	1
11	111	211	Min.	0.00	-12013.20	17	-3896.23	9	-3136.92	1	-153.98	5	-454.59	13	-284.58	9
11	111	211	Min.	344.00	-10471.00	1	-3896.23	9	-6705.72	9	-153.98	5	-204.54	5	-284.58	9
12	12	112	Max	0.00	-34706.00	1	841.13	9	3785.21	1	2853.46	1	7323.55	9	324.10	1

Relazione di calcolo

12	12	112	Max	355.00	-33152.90	1	841.13	9	365.51	9	2853.46	1	2544.34	1	324.10	1
12	12	112	Min.	0.00	-53769.70	18	-1834.80	1	-2629.96	9	-2277.60	9	-7748.87	1	-333.99	9
12	12	112	Min.	355.00	-51750.60	18	-1834.80	1	-2737.80	1	-2277.60	9	-925.36	9	-333.99	9
12	112	212	Max	0.00	-15548.60	1	752.03	9	3876.48	1	4441.75	1	2118.11	9	431.19	1
12	112	212	Max	344.00	-14043.60	1	752.03	9	1641.65	9	4441.75	1	8439.17	1	431.19	1
12	112	212	Min.	0.00	-22508.50	18	-2274.49	1	-949.10	9	-1023.02	9	-6866.83	1	-443.12	9
12	112	212	Min.	344.00	-20552.00	18	-2274.49	1	-3951.54	1	-1023.02	9	-1427.38	9	-443.12	9
13	13	113	Max	0.00	-30344.60	1	1060.58	9	4403.16	1	1575.29	1	4508.27	9	208.14	1
13	13	113	Max	355.00	-29102.10	1	1060.58	9	602.81	9	1575.29	1	1487.64	1	208.14	1
13	13	113	Min.	0.00	-47020.70	18	-2118.68	1	-3169.44	9	-1762.32	9	-4129.42	1	-214.49	9
13	13	113	Min.	355.00	-45405.40	18	-2118.68	1	-3125.32	1	-1762.32	9	-1772.76	9	-214.49	9
13	113	213	Max	0.00	-13693.10	1	610.59	9	4620.35	1	1942.43	1	4268.79	9	276.92	1
13	113	213	Max	344.00	-12489.10	1	610.59	9	1292.22	9	1942.43	1	3457.61	1	276.92	1
13	113	213	Min.	0.00	-19859.60	18	-2793.29	1	-812.24	9	-2643.94	9	-3229.33	1	-284.58	9
13	113	213	Min.	344.00	-18294.40	18	-2793.29	1	-4992.61	1	-2643.94	9	-4831.35	9	-284.58	9
14	14	114	Max	0.00	-16265.70	1	1081.95	1	1750.91	9	3385.32	1	5886.99	9	154.08	1
14	14	114	Max	355.00	-15200.70	1	1081.95	1	1470.55	1	3385.31	1	5173.79	1	154.08	1
14	14	114	Min.	0.00	-30541.30	17	-509.60	9	-2397.33	1	-2503.35	9	-6864.23	1	-158.78	9
14	14	114	Min.	355.00	-29156.90	17	-509.60	9	-85.12	9	-2503.35	9	-3020.05	9	-158.78	9
14	114	214	Max	0.00	-5858.96	9	1710.24	1	427.06	9	4224.74	1	3865.88	9	204.99	1
14	114	214	Max	344.00	-4826.96	9	1710.24	1	3060.69	1	4224.74	1	7391.80	1	204.99	1
14	114	214	Min.	0.00	-11445.00	17	-245.64	9	-2825.34	1	-2337.30	9	-7143.92	1	-210.66	9
14	114	214	Min.	344.00	-10103.40	17	-245.64	9	-420.75	9	-2337.30	9	-4177.05	9	-210.66	9
15	15	115	Max	0.00	-11333.10	1	734.03	1	2066.77	9	2265.30	9	5438.13	1	231.73	1
15	15	115	Max	346.00	-10035.60	1	734.03	1	618.29	1	2265.30	9	2260.09	9	231.73	1
15	15	115	Min.	0.00	-22804.40	18	-762.89	9	-1942.71	1	-2169.85	1	-5613.35	9	-238.80	9
15	15	115	Min.	346.00	-21117.60	18	-762.89	9	-594.05	9	-2169.85	1	-2105.04	1	-238.80	9
15	115	215	Max	0.00	-6021.10	1	888.06	1	1633.32	9	3234.36	9	4856.18	1	308.50	1
15	115	215	Max	335.00	-4764.85	1	888.06	1	1534.08	1	3234.36	9	5607.38	9	308.50	1
15	115	215	Min.	0.00	-11018.80	18	-1016.01	9	-1444.98	1	-2961.01	1	-5234.04	9	-317.04	9
15	115	215	Min.	335.00	-9385.71	18	-1016.01	9	-1774.36	9	-2961.01	1	-5069.50	1	-317.04	9
16	16	116	Max	0.00	-5983.72	5	606.29	5	1132.24	13	2044.81	1	4911.69	9	154.08	1
16	16	116	Max	355.00	-4918.72	5	606.29	5	913.84	5	2044.81	1	2958.01	1	154.08	1
16	16	116	Min.	0.00	-12947.00	20	-535.86	13	-1243.63	5	-2436.58	9	-4302.65	1	-158.78	9
16	16	116	Min.	355.00	-11562.50	20	-535.86	13	-775.18	13	-2436.58	9	-3739.78	9	-158.78	9
16	116	216	Max	0.00	-2390.70	5	895.48	5	1269.34	13	3066.63	1	6309.58	9	204.99	1
16	116	216	Max	344.00	-1358.70	5	895.48	5	1495.14	5	3066.63	1	5274.11	1	204.99	1
16	116	216	Min.	0.00	-4800.66	20	-703.65	13	-1586.55	5	-3575.77	9	-5275.58	1	-210.66	9
16	116	216	Min.	344.00	-3459.06	20	-703.65	13	-1152.45	13	-3575.77	9	-5991.55	9	-210.66	9
17	17	117	Max	0.00	-22019.80	9	1213.34	1	3252.98	9	1580.33	5	1929.18	13	227.10	1
17	17	117	Max	355.00	-20688.60	9	1213.34	1	1565.52	1	1580.33	5	2772.37	19	227.10	1
17	17	117	Min.	0.00	-45652.40	17	-1550.50	9	-2745.58	1	-248.16	13	-3476.17	5	-234.03	9
17	17	117	Min.	355.00	-43921.80	17	-1550.50	9	-2255.04	9	-248.16	13	945.65	13	-234.03	9
17	117	217	Max	0.00	-11716.60	9	1706.90	1	6560.80	9	1765.27	5	517.70	13	431.19	1
17	117	217	Max	344.00	-10211.60	9	1706.90	1	2471.52	1	1765.27	5	2646.06	5	431.19	1
17	117	217	Min.	0.00	-20892.90	17	-3847.53	9	-3400.69	1	-745.66	13	-3437.43	5	-443.12	9
17	117	217	Min.	344.00	-18936.40	17	-3847.53	9	-6675.18	9	-745.65	13	-2058.30	13	-443.12	9
18	18	118	Max	0.00	-23678.20	1	754.23	1	3278.50	9	405.08	1	2945.45	9	208.14	1
18	18	118	Max	355.00	-22435.70	1	754.23	1	347.22	1	405.08	1	-264.89	1	208.14	1
18	18	118	Min.	0.00	-37589.10	18	-1421.01	9	-2343.39	1	-1325.75	9	-1723.04	1	-214.49	9
18	18	118	Min.	355.00	-35973.80	18	-1421.01	9	-1779.18	9	-1325.75	9	-1793.95	20	-214.49	9
18	118	218	Max	0.00	-10854.40	1	914.38	1	3848.48	9	-262.29	5	3044.67	13	276.92	1
18	118	218	Max	344.00	-9650.35	1	914.38	1	1708.12	1	-262.29	5	-387.27	5	276.92	1
18	118	218	Min.	0.00	-16088.90	18	-2309.75	9	-1440.23	1	-1852.48	13	506.28	5	-284.58	9
18	118	218	Min.	344.00	-14523.70	18	-2309.75	9	-4099.94	9	-1852.48	13	-3336.62	13	-284.58	9
19	19	119	Max	0.00	-26118.20	9	1347.05	1	2671.33	9	776.00	1	4495.64	9	208.14	1
19	19	119	Max	355.00	-24875.70	9	1347.05	1	1710.80	1	776.00	1	-64.44	1	208.14	1
19	19	119	Min.	0.00	-41484.70	17	-934.92	9	-3083.52	1	-2026.21	9	-2839.46	1	-214.49	9
19	19	119	Min.	355.00	-39869.40	17	-934.92	9	-659.91	9	-2026.21	9	-2717.64	9	-214.49	9
19	119	219	Max	0.00	-11819.00	9	2080.29	1	2049.71	9	-192.72	1	4330.49	9	276.92	1
19	119	219	Max	344.00	-10615.00	9	2080.29	1	3672.09	1	-192.72	1	-166.10	1	276.92	1
19	119	219	Min.	0.00	-17564.90	17	-1262.67	9	-3486.25	1	-2687.79	9	486.13	1	-284.58	9
19	119	219	Min.	344.00	-15999.70	17	-1262.67	9	-2296.00	9	-2687.79	9	-4926.25	9	-284.58	9
20	20	120	Max	0.00	-17657.60	5	579.02	1	2108.72	9	213.33	13	3363.85	5	157.22	1
20	20	120	Max	346.00	-16619.60	5	579.02	1	458.39	1	213.33	13	-347.43	13	157.22	1
20	20	120	Min.	0.00	-32396.90	18	-957.67	9	-1572.82	1	-1997.90	5	-1115.62	13	-162.02	9
20	20	120	Min.	346.00	-31047.50	18	-957.67	9	-1232.64	9	-1997.90	5	-3578.94	5	-162.02	9
20	120	220	Max	0.00	-7749.28	5	634.16	1	2340.46	9	-207.80	13	5814.90	5	204.99	1
20	120	220	Max	344.00	-6717.28	5	634.16	1	1081.07	1	-207.80	13	-415.36	13	204.99	1
20	120	220	Min.	0.00	-13461.10	19	-1342.27	9	-1102.49	1	-3352.03	5	298.46	13	-210.66	9
20	120	220	Min.	344.00	-12119.50	19	-1342.27	9	-2279.01	9	-3352.03	5	-5717.60	5	-210.66	9
21	21	121	Max	0.00	-17733.70	1	194.35	1	1578.72	9	2124.94	9	5499.15	1	227.10	1
21	21	121	Max	355.00	-16402.50	1	194.35	1	-185.05	1	2124.94	9	2139.58	9	227.10	1
21	21	121	Min.	0.00	-28364.20	18	-675.33	9	-902.63	1	-2223.01	1	-5435.51	9	-234.03	9
21	21	121	Min.	355.00	-26633.50	18	-675.33	9	-846.35	9	-2223.01	1	-2424.09	1	-234.03	9
21	121	221	Max	0.00	-9650.37	1	-186.12	1	2268.51	9	2840.17	9	5569.60	1	302.14	1
21	121	221	Max	344.00	-8360.37	1	-186.12	1	-434.82	1	2840.17	9	5063.67	9	302.14	1
21	121	221	Min.	0.00	-14547.80	18	-1413.70	9	203.05	1	-3427.99	1	-4710.18	9	-310.50	9
21	121	221	Min.	344.00	-12870.80	18	-1413.70	9	-2597.00	9	-3427.99	1	-6226.37	1	-310.50	9

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22	22	122	Max	0.00	-18901.00	5	727.84	1	1802.84	9	737.94	5	1802.69	13	208.14	1
22	22	122	Max	355.00	-17658.50	5	727.84	1	661.30	1	737.94	5	797.80	5	208.14	1
22	22	122	Min.	0.00	-31001.70	20	-529.81	9	-1961.64	1	-661.87	13	-1838.86	5	-214.49	9
22	22	122	Min.	355.00	-29386.50	20	-529.81	9	-117.08	9	-661.87	13	-563.93	13	-214.49	9
22	122	222	Max	0.00	-9762.08	5	727.35	1	1193.56	9	1943.17	13	1359.24	5	282.75	1
22	122	222	Max	335.00	-8589.58	5	677.35	1	967.84	1	1943.17	13	3730.61	13	282.75	1
22	122	222	Min.	0.00	-15359.00	20	-753.97	9	-1306.79	1	-820.37	5	-2780.90	13	-290.57	9
22	122	222	Min.	335.00	-13834.80	20	-753.97	9	-1337.75	9	-820.37	5	-1390.89	5	-290.57	9
23	23	123	Max	0.00	-30840.60	9	1227.23	9	1517.87	1	343.66	1	3290.56	9	208.14	1
23	23	123	Max	355.00	-29598.10	9	1227.23	9	1838.12	9	343.66	1	-473.85	1	208.14	1
23	23	123	Min.	0.00	-48545.30	17	-467.58	1	-2525.22	9	-1518.91	9	-1716.48	1	-214.49	9
23	23	123	Min.	355.00	-46930.10	17	-467.58	1	-148.67	1	-1518.91	9	-2305.39	18	-214.49	9
23	123	223	Max	0.00	-13982.20	9	1847.32	13	292.65	5	285.13	1	4622.48	9	276.92	1
23	123	223	Max	344.00	-12778.20	9	1847.32	13	3281.82	13	285.13	1	617.91	1	276.92	1
23	123	223	Min.	0.00	-20674.20	17	-225.53	5	-3074.89	13	-2742.20	9	-365.09	1	-284.58	9
23	123	223	Min.	344.00	-19109.00	17	-225.53	5	-485.10	5	-2742.20	9	-4812.85	9	-284.58	9
24	24	124	Max	0.00	-38152.40	9	708.80	1	2695.07	9	2242.91	1	6893.61	9	324.10	1
24	24	124	Max	355.00	-36599.30	9	708.80	1	415.40	1	2242.91	1	1613.90	1	324.10	1
24	24	124	Min.	0.00	-60611.70	19	-1084.49	9	-2119.18	1	-2463.89	9	-6424.89	1	-333.99	9
24	24	124	Min.	355.00	-58592.60	19	-1084.49	9	-1173.20	9	-2463.89	9	-1929.64	9	-333.99	9
24	124	224	Max	0.00	-17321.40	9	902.29	1	3152.92	9	1444.94	1	2706.54	9	431.19	1
24	124	224	Max	344.00	-15816.40	9	902.29	1	1584.01	1	1444.94	1	2913.08	1	431.19	1
24	124	224	Min.	0.00	-25681.50	19	-1902.78	9	-1522.22	1	-1777.15	9	-2102.26	1	-443.12	9
24	124	224	Min.	344.00	-23725.00	19	-1902.78	9	-3395.00	9	-1777.15	9	-3451.61	9	-443.12	9
25	25	125	Max	0.00	-23769.30	9	208.55	9	1290.16	1	1886.94	9	5825.53	1	231.73	1
25	25	125	Max	346.00	-22471.80	9	208.55	9	-37.25	9	1886.94	9	1406.24	9	231.73	1
25	25	125	Min.	0.00	-38876.10	18	-566.12	1	-784.64	9	-2491.80	1	-5139.53	9	-238.80	9
25	25	125	Min.	346.00	-37189.30	18	-566.12	1	-694.41	1	-2491.80	1	-2813.05	1	-238.80	9
25	125	225	Max	0.00	-11197.00	13	312.11	1	1358.86	9	2660.95	9	4863.82	1	302.14	1
25	125	225	Max	344.00	-9906.95	13	312.11	1	630.29	1	2660.95	9	5012.60	9	302.14	1
25	125	225	Min.	0.00	-18746.30	18	-750.51	9	-447.45	1	-2675.34	1	-4180.58	9	-310.50	9
25	125	225	Min.	344.00	-17069.30	18	-750.51	9	-1226.98	9	-2675.34	1	-4378.84	1	-310.50	9
25	225	325	Max	0.00	-3174.20	13	1103.79	1	1553.90	9	2828.40	13	3201.42	5	210.43	1
25	225	325	Max	116.00	-2739.20	13	1103.79	1	611.24	1	2828.41	13	916.72	9	210.43	1
25	225	325	Min.	0.00	-6411.74	20	-2704.49	9	-679.79	1	-6266.66	5	-2554.32	13	-195.30	9
25	225	325	Min.	116.00	-5846.24	20	-2704.49	9	-1593.94	9	-6266.67	5	-4258.00	1	-195.30	9
26	26	126	Max	0.00	-25357.70	13	1136.54	20	259.96	13	714.33	1	2527.49	9	154.08	1
26	26	126	Max	355.00	-24292.70	13	1136.54	20	2583.63	20	714.33	1	681.95	1	154.08	1
26	26	126	Min.	0.00	-37988.30	18	264.85	13	-1971.56	5	-1181.50	9	-1857.80	1	-158.78	9
26	26	126	Min.	355.00	-36603.80	18	264.85	13	1191.14	13	-1181.50	9	-1670.73	9	-158.78	9
26	126	226	Max	0.00	-12662.10	13	1026.27	20	-837.40	13	1034.12	1	3224.46	9	204.99	1
26	126	226	Max	344.00	-11630.10	13	1026.27	20	1325.57	5	1034.12	1	1790.62	1	204.99	1
26	126	226	Min.	0.00	-18463.90	20	275.80	13	-2468.86	20	-1800.27	9	-1774.64	1	-210.66	9
26	126	226	Min.	344.00	-17122.30	20	275.80	13	100.63	13	-1800.27	9	-2976.37	9	-210.66	9
26	226	326	Max	0.00	-5023.05	13	5034.65	20	-1002.88	13	3391.90	1	2850.95	9	142.77	1
26	226	326	Max	116.00	-4675.05	13	5034.67	20	3763.24	20	3391.90	1	2159.79	1	142.77	1
26	226	326	Min.	0.00	-7669.24	20	2472.80	13	-2076.97	20	-4636.99	9	-1816.51	1	-132.50	9
26	226	326	Min.	116.00	-7216.84	20	2472.81	13	1833.50	13	-4637.00	9	-2569.65	9	-132.50	9
27	27	127	Max	0.00	-38497.20	1	-267.13	5	2487.46	13	1795.20	1	3656.45	9	227.10	1
27	27	127	Max	355.00	-37166.00	1	-267.13	5	-1247.84	5	1795.20	1	2281.74	1	227.10	1
27	27	127	Min.	0.00	-58811.90	18	-1499.12	13	-301.11	5	-1290.73	9	-4106.52	1	-234.03	9
27	27	127	Min.	355.00	-57081.30	18	-1499.12	13	-3215.73	19	-1290.73	9	-940.93	9	-234.03	9
27	127	227	Max	0.00	-18086.90	13	-763.54	5	4097.58	19	2378.69	1	3323.37	9	302.14	1
27	127	227	Max	344.00	-16796.90	13	-763.54	5	-1212.90	5	2378.69	1	3864.91	1	302.14	1
27	127	227	Min.	0.00	-26643.30	18	-2154.76	19	1411.88	5	-1965.98	9	-4342.19	1	-310.50	9
27	127	227	Min.	344.00	-24966.30	18	-2154.76	19	-3314.81	19	-1965.98	9	-3464.00	9	-310.50	9
27	227	327	Max	0.00	-4614.75	13	2806.99	5	1734.00	13	4792.93	1	2006.11	9	210.43	1
27	227	327	Max	116.00	-4179.75	13	2807.00	5	3983.49	20	4792.94	1	2937.56	1	210.43	1
27	227	327	Min.	0.00	-7371.98	20	133.31	13	-99.87	5	-3794.49	9	-2881.92	1	-195.30	9
27	227	327	Min.	116.00	-6806.48	20	133.31	13	1879.87	13	-3794.49	9	-2655.18	9	-195.30	9
28	28	128	Max	0.00	-18079.60	9	779.17	13	1789.92	13	1108.10	1	3281.36	9	266.12	1
28	28	128	Max	355.00	-16681.70	9	779.17	13	970.51	13	1108.09	1	990.56	1	266.12	1
28	28	128	Min.	0.00	-33554.80	17	-805.96	5	-1805.15	5	-1239.03	9	-2972.73	1	-274.24	9
28	28	128	Min.	355.00	-31737.60	17	-805.96	5	-1080.86	5	-1239.03	9	-1146.73	9	-274.24	9
28	128	228	Max	0.00	-8709.33	9	956.87	5	1631.22	13	1503.99	1	3233.46	9	354.05	1
28	128	228	Max	344.00	-7354.83	9	956.87	5	1576.18	5	1503.99	1	2591.82	1	354.05	1
28	128	228	Min.	0.00	-16723.30	17	-871.21	13	-1716.28	5	-1883.75	9	-2604.60	1	-363.85	9
28	128	228	Min.	344.00	-14962.50	17	-871.21	13	-1366.56	13	-1883.75	9	-3269.33	9	-363.85	9
28	228	328	Max	0.00	-688.00	9	3588.98	13	1388.40	5	3011.14	1	1569.71	9	246.59	1
28	228	328	Max	116.00	-231.25	9	3588.99	13	1680.09	13	3011.15	1	1916.16	1	246.59	1
28	228	328	Min.	0.00	-4941.00	1	-1706.85	5	-2488.35	13	-1879.05	9	-1887.92	1	-228.85	9
28	228	328	Min.	116.00	-4484.25	1	-1706.85	5	-596.77	5	-1879.05	9	-921.13	9	-228.85	9
29	29	129	Max	0.00	-22398.20	9	532.01	9	540.90	1	2061.84	1	7745.90	9	157.22	1
29	29	129	Max	346.00	-21360.20	9	532.01	9	993.48	17	2061.84	1	1916.44	1	157.22	1
29	29	129	Min.	0.00	-39043.60	17	-19.87	1	-1133.96	9	-4001.71	9	-5221.47	1	-162.02	9
29	29	129	Min.	346.00	-37694.20	17	-19.87	1	369.25	1	-4001.70	9	-6103.96	9	-162.02	9
29	129	229	Max	0.00	-8585.29	9	980.14	17	-578.45	9	1919.14	1	9075.15	9	209.30	1
29	129	229	Max	335.00	-7580.29	9	980.14	17	1677.14	17	1919.14	1	3551.42	1	209.30	1
29	129	229	Min.	0.00	-14487.10	17	381.10	1	-1606.32	17	-5476.65	9	-2879.70	1	-215.10	9

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29	129	229	Min.	335.00	-13180.60	17	381.10	1	689.51	1	-5476.65	9	-9273.64	9	-215.10	9
30	30	130	Max	0.00	-18532.50	1	462.86	9	1584.55	1	824.78	5	2523.83	5	208.14	1
30	30	130	Max	355.00	-17290.00	1	462.86	9	333.53	9	824.78	5	1000.72	5	208.14	1
30	30	130	Min.	0.00	-28338.20	20	-600.14	1	-1344.53	9	-1249.72	13	-1938.49	13	-214.49	9
30	30	130	Min.	355.00	-26722.90	20	-600.14	1	-580.67	1	-1249.72	13	-1923.93	13	-214.49	9
30	130	230	Max	0.00	-9911.38	1	474.35	1	1376.92	9	923.78	13	2665.12	5	276.92	1
30	130	230	Max	344.00	-8707.38	1	474.35	1	825.26	1	923.78	13	1505.98	13	276.92	1
30	130	230	Min.	0.00	-14746.40	20	-794.39	9	-818.45	1	-1353.26	5	-1672.95	13	-284.58	9
30	130	230	Min.	344.00	-13181.20	20	-794.39	9	-1367.73	9	-1353.26	5	-1991.21	5	-284.58	9
30	230	330	Max	0.00	-2908.88	1	212.22	1	679.05	9	4735.98	5	3091.04	13	192.86	1
30	230	330	Max	116.00	-2502.88	1	212.22	1	174.13	1	4735.99	5	2704.50	5	192.86	1
30	230	330	Min.	0.00	-4709.26	17	-477.19	9	-294.04	1	-5266.46	13	-2789.89	5	-178.99	9
30	230	330	Min.	116.00	-4181.46	17	-477.19	9	-96.48	9	-5266.47	13	-3018.71	13	-178.99	9
31	31	131	Max	0.00	-24771.50	1	697.83	9	2473.57	1	665.78	9	1976.95	1	208.14	1
31	31	131	Max	355.00	-23529.00	1	697.83	9	595.47	9	665.78	9	595.93	9	208.14	1
31	31	131	Min.	0.00	-39514.80	20	-1214.15	1	-1888.47	9	-713.95	1	-1827.41	9	-214.49	9
31	31	131	Min.	355.00	-37899.50	20	-1214.15	1	-1843.31	1	-713.95	1	-617.39	1	-214.49	9
31	131	231	Max	0.00	-10160.00	1	443.58	13	3043.55	5	1348.76	1	1921.52	9	276.92	1
31	131	231	Max	344.00	-8955.98	1	443.58	13	751.75	13	1348.76	1	2647.08	1	276.92	1
31	131	231	Min.	0.00	-15895.10	18	-1852.94	5	-776.59	13	-1218.73	9	-1996.49	1	-284.58	9
31	131	231	Min.	344.00	-14329.90	18	-1852.94	5	-3332.98	5	-1218.73	9	-2274.76	9	-284.58	9
32	32	132	Max	0.00	-11821.10	1	225.99	9	2033.76	1	996.67	1	3486.97	9	208.14	1
32	32	132	Max	355.00	-10578.60	1	225.99	9	-199.94	9	996.67	1	754.78	1	208.14	1
32	32	132	Min.	0.00	-22181.70	20	-962.95	1	-1044.88	9	-1471.98	9	-2805.78	1	-214.49	9
32	32	132	Min.	355.00	-20566.50	20	-962.95	1	-1427.40	1	-1471.98	9	-1760.94	9	-214.49	9
32	132	232	Max	0.00	-5918.74	1	423.32	1	2958.52	9	715.12	1	2704.29	9	276.92	1
32	132	232	Max	344.00	-4714.74	1	423.32	1	998.13	1	715.12	1	1427.80	1	276.92	1
32	132	232	Min.	0.00	-10495.50	20	-1810.97	9	-459.81	1	-1676.22	9	-1039.29	1	-284.58	9
32	132	232	Min.	344.00	-8930.28	20	-1810.97	9	-3272.93	9	-1676.22	9	-3068.98	9	-284.58	9
33	33	133	Max	0.00	-37522.30	1	2199.42	9	2183.71	1	390.94	9	2528.03	1	208.14	1
33	33	133	Max	355.00	-36279.80	1	2199.42	9	3555.30	20	390.94	9	-75.71	9	208.14	1
33	33	133	Min.	0.00	-59869.40	17	-408.71	1	-4504.72	9	-1153.28	1	-1489.76	9	-214.49	9
33	33	133	Min.	355.00	-58254.10	17	-408.71	1	715.68	1	-1153.28	1	-1592.30	1	-214.49	9
33	133	233	Max	0.00	-16919.20	1	3191.13	9	-1566.67	1	123.45	1	3321.49	9	276.92	1
33	133	233	Max	344.00	-15715.20	1	3191.13	9	5767.54	9	123.45	1	195.06	1	276.92	1
33	133	233	Min.	0.00	-25096.30	17	831.93	1	-5446.51	20	-1970.43	9	-233.77	1	-284.58	9
33	133	233	Min.	344.00	-23531.10	17	831.93	1	1286.92	1	-1970.43	9	-3460.92	9	-284.58	9
34	34	134	Max	0.00	-30881.10	13	332.62	9	1702.23	5	2183.60	9	5433.87	1	231.73	1
34	34	134	Max	346.00	-29583.60	13	332.62	9	21.21	9	2183.60	9	2067.31	9	231.73	1
34	34	134	Min.	0.00	-46922.40	18	-724.00	1	-1168.79	13	-2172.27	1	-5505.21	9	-238.80	9
34	34	134	Min.	346.00	-45235.60	18	-724.00	1	-841.92	1	-2172.27	1	-2099.46	1	-238.80	9
34	134	234	Max	0.00	-14779.40	13	135.09	13	976.34	5	2702.73	9	4324.76	1	308.50	1
34	134	234	Max	335.00	-13523.10	13	135.09	13	361.00	13	2702.73	9	4582.01	9	308.50	1
34	134	234	Min.	0.00	-21987.30	18	-503.01	5	-108.42	13	-2510.83	1	-4519.40	9	-317.04	9
34	134	234	Min.	335.00	-20354.20	18	-503.01	5	-725.60	5	-2510.83	1	-4133.77	1	-317.04	9
34	234	334	Max	0.00	-6539.97	13	295.66	13	425.41	5	6229.23	13	3320.73	5	226.96	1
34	234	334	Max	105.00	-6146.22	13	295.66	13	201.08	13	6229.23	13	3964.45	13	226.96	1
34	234	334	Min.	0.00	-10111.60	18	-1078.31	5	-116.04	13	-6541.01	5	-2870.00	13	-210.64	9
34	234	334	Min.	105.00	-9599.75	18	-1078.31	5	-713.49	5	-6541.01	5	-3841.09	5	-210.64	9
35	35	135	Max	0.00	-19010.50	1	656.23	9	1647.81	1	1376.34	1	3558.53	9	154.08	1
35	35	135	Max	355.00	-17945.50	1	656.23	9	954.84	9	1376.34	1	1829.28	1	154.08	1
35	35	135	Min.	0.00	-32452.30	17	-844.80	1	-1375.38	9	-1716.22	9	-3058.69	1	-158.78	9
35	35	135	Min.	355.00	-31067.80	17	-844.80	1	-1351.81	1	-1716.22	9	-2536.01	9	-158.78	9
35	135	235	Max	0.00	-7982.40	1	632.73	9	2232.69	1	1771.66	1	3717.12	9	204.99	1
35	135	235	Max	344.00	-6950.40	1	632.73	9	988.98	9	1771.66	1	3240.73	1	204.99	1
35	135	235	Min.	0.00	-12523.30	17	-1310.50	1	-1187.74	9	-2188.61	9	-2854.47	1	-210.66	9
35	135	235	Min.	344.00	-11181.70	17	-1310.50	1	-2275.56	1	-2188.61	9	-3812.41	9	-210.66	9
36	36	136	Max	0.00	-40209.70	13	1364.99	5	2123.64	13	1673.87	9	3977.39	1	324.10	1
36	36	136	Max	355.00	-38656.50	13	1364.99	5	1895.31	5	1673.87	9	1813.07	9	324.10	1
36	36	136	Min.	0.00	-66571.40	20	-712.13	13	-2963.04	5	-1302.13	1	-4289.80	9	-333.99	9
36	36	136	Min.	355.00	-64552.30	20	-712.13	13	-417.06	13	-1302.13	1	-805.80	1	-333.99	9
36	136	236	Max	0.00	-20966.10	13	1496.52	5	1088.72	13	1192.13	9	1657.22	1	431.19	1
36	136	236	Max	344.00	-19461.10	13	1496.52	5	2327.86	5	1192.13	9	1984.15	9	431.19	1
36	136	236	Min.	0.00	-33714.20	20	-664.20	13	-2833.93	5	-1054.81	1	-2154.90	9	-443.12	9
36	136	236	Min.	344.00	-31757.70	20	-664.20	13	-1209.86	13	-1054.81	1	-2009.47	1	-443.12	9
36	236	336	Max	0.00	-9035.51	13	3882.76	5	1254.19	13	2696.77	13	1368.68	1	300.31	1
36	236	336	Max	116.00	-8528.01	13	3882.77	5	1986.42	5	2696.78	13	1975.75	9	300.31	1
36	236	336	Min.	0.00	-15383.60	20	-2705.21	13	-2547.00	5	-2256.10	5	-1338.67	9	-278.71	9
36	236	336	Min.	116.00	-14723.80	20	-2705.22	13	-1913.27	13	-2256.11	5	-1434.56	1	-278.71	9
37	37	137	Max	0.00	-10410.00	9	317.08	9	1710.22	1	1066.95	9	2638.58	1	154.08	1
37	37	137	Max	355.00	-9345.05	9	317.08	9	90.46	9	1066.95	9	1481.34	9	154.08	1
37	37	137	Min.	0.00	-19684.10	18	-883.67	1	-1038.14	9	-1277.49	1	-2312.34	9	-158.78	9
37	37	137	Min.	355.00	-18299.60	18	-883.67	1	-1429.79	1	-1277.49	1	-1902.53	1	-158.78	9
37	137	237	Max	0.00	-4653.98	9	310.06	13	2073.35	5	1503.04	9	2756.10	1	204.99	1
37	137	237	Max	344.00	-3621.98	9	310.06	13	676.09	13	1503.04	9	2722.61	9	204.99	1
37	137	237	Min.	0.00	-7776.77	19	-1193.30	5	-391.26	13	-1538.48	1	-2450.12	9	-210.66	9
37	137	237	Min.	344.00	-6435.17	19	-1193.30	5	-2032.33	5	-1538.48	1	-2538.54	1	-210.66	9
38	38	138	Max	0.00	-30155.10	9	1655.43	9	296.34	1	3042.67	1	4465.23	9	157.22	1
38	38	138	Max	346.00	-29117.10	9	1655.43	9	3202.82	17	3042.67	1	4121.79	1	157.22	1

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38	38	138	Min.	0.00	-47848.80	17	280.75	1	-2678.35	9	-1358.51	9	-6431.57	1	-162.02	9
38	38	138	Min.	346.00	-46499.40	17	280.75	1	1257.23	1	-1358.51	9	-260.94	9	-162.02	9
38	138	238	Max	0.00	-12260.80	9	2186.11	9	-1219.02	1	2678.29	1	1485.87	9	209.30	1
38	138	238	Max	335.00	-11255.80	9	2186.11	9	3388.91	9	2678.29	1	4215.21	1	209.30	1
38	138	238	Min.	0.00	-18853.80	17	503.32	1	-3935.95	9	-1391.05	9	-4769.20	1	-215.10	9
38	138	238	Min.	335.00	-17547.30	17	503.32	1	465.70	1	-1391.05	9	-3186.30	9	-215.10	9
39	39	139	Max	0.00	-27591.90	1	1002.53	9	3523.75	1	-161.81	9	3514.46	1	154.08	1
39	39	139	Max	355.00	-26526.90	1	1002.53	9	1193.88	9	-161.81	9	-1442.86	9	154.08	1
39	39	139	Min.	0.00	-52261.20	20	-1970.00	1	-2365.46	9	-1897.70	1	-894.06	9	-158.78	9
39	39	139	Min.	355.00	-50876.70	20	-1970.00	1	-3470.09	1	-1897.70	1	-3478.50	18	-158.78	9
39	139	239	Max	0.00	-10849.80	1	848.76	9	5143.62	1	-651.49	9	4365.10	18	204.99	1
39	139	239	Max	344.00	-9817.79	1	848.76	9	1461.85	9	-651.49	9	-638.51	9	204.99	1
39	139	239	Min.	0.00	-19369.00	20	-3017.88	1	-1457.98	9	-2367.31	1	1592.14	9	-210.66	9
39	139	239	Min.	344.00	-18027.40	20	-3017.88	1	-5237.98	1	-2367.31	1	-3824.30	1	-210.66	9
40	40	140	Max	0.00	-21055.30	1	147.34	9	3563.90	1	2718.15	9	3353.54	1	231.73	1
40	40	140	Max	346.00	-19757.80	1	147.34	9	-786.65	9	2718.15	9	3832.99	18	231.73	1
40	40	140	Min.	0.00	-35602.50	18	-1934.35	1	-1304.23	9	-490.25	1	-6148.77	9	-238.80	9
40	40	140	Min.	346.00	-33915.80	18	-1934.35	1	-3136.75	1	-490.25	1	1532.74	5	-238.80	9
40	140	240	Max	0.00	-9686.86	1	-147.63	13	3289.72	5	3089.46	9	326.57	1	308.50	1
40	140	240	Max	335.00	-8430.61	1	-147.63	13	255.56	9	3089.46	9	4898.54	9	308.50	1
40	140	240	Min.	0.00	-17235.00	18	-1662.51	5	719.83	13	-610.22	1	-5526.13	9	-317.04	9
40	140	240	Min.	335.00	-15601.90	18	-1662.51	5	-2310.01	1	-610.22	1	-1792.63	1	-317.04	9
40	240	340	Max	0.00	-4127.18	1	-113.27	13	2512.12	5	5696.84	13	834.30	1	226.96	1
40	240	340	Max	105.00	-3733.43	1	-113.27	13	5.69	13	5696.84	13	3835.24	13	226.96	1
40	240	340	Min.	0.00	-7696.06	18	-5050.92	5	111.81	13	-664.66	5	-3022.79	9	-210.64	9
40	240	340	Min.	105.00	-7184.19	18	-5050.92	5	-2804.16	5	-664.66	5	-739.94	5	-210.64	9
41	41	141	Max	0.00	-8308.01	9	487.62	9	2250.12	1	829.68	9	3118.69	1	157.22	1
41	41	141	Max	346.00	-7270.01	9	487.62	9	274.51	9	829.68	9	584.09	9	157.22	1
41	41	141	Min.	0.00	-18631.30	19	-1192.90	1	-1414.07	9	-1448.40	1	-2302.68	9	-162.02	9
41	41	141	Min.	346.00	-17281.90	19	-1192.90	1	-1878.73	1	-1448.40	1	-1908.82	1	-162.02	9
41	141	241	Max	0.00	-2693.90	9	424.91	9	2704.25	1	808.53	9	2449.62	1	209.30	1
41	141	241	Max	335.00	-1688.90	9	424.91	9	842.90	9	808.53	9	1669.08	9	209.30	1
41	141	241	Min.	0.00	-6730.89	1	-1596.69	1	-581.34	9	-1415.84	1	-1048.65	9	-215.10	9
41	141	241	Min.	335.00	-5725.89	1	-1596.69	1	-2645.47	1	-1415.84	1	-2302.58	1	-215.10	9
42	42	142	Max	0.00	-7483.13	9	1359.92	9	2772.90	1	1140.49	9	3264.60	1	157.22	1
42	42	142	Max	346.00	-6445.13	9	1359.92	9	1898.55	9	1140.49	9	1277.69	9	157.22	1
42	42	142	Min.	0.00	-23789.60	1	-1374.79	1	-2807.93	9	-1568.14	1	-2685.34	9	-162.02	9
42	42	142	Min.	346.00	-22751.60	1	-1374.79	1	-1985.03	1	-1568.14	1	-2178.12	1	-162.02	9
42	142	242	Max	0.00	-3560.89	9	1690.36	9	2715.61	1	371.42	9	4015.70	1	209.30	1
42	142	242	Max	335.00	-2555.89	9	1690.36	9	2878.54	9	371.42	9	445.45	9	209.30	1
42	142	242	Min.	0.00	-9977.16	1	-1611.90	1	-2784.61	9	-2647.46	1	-802.30	9	-215.10	9
42	142	242	Min.	335.00	-8972.16	1	-1611.90	1	-2684.69	1	-2647.46	1	-4856.79	1	-215.10	9
43	43	143	Max	0.00	-21390.80	9	464.57	5	1621.91	13	653.21	9	3314.64	1	154.08	1
43	43	143	Max	355.00	-20325.80	9	464.57	5	435.41	5	653.21	9	250.88	9	154.08	1
43	43	143	Min.	0.00	-34314.70	18	-797.88	13	-1216.61	5	-1600.37	1	-2086.91	9	-158.78	9
43	43	143	Min.	355.00	-32930.20	18	-797.88	13	-1213.36	13	-1600.37	1	-2385.58	1	-158.78	9
43	143	243	Max	0.00	-10474.30	9	792.21	5	2576.13	13	357.79	9	2913.90	1	276.92	1
43	143	243	Max	344.00	-9270.29	9	792.21	5	1331.89	5	357.79	9	930.71	9	276.92	1
43	143	243	Min.	0.00	-16292.50	18	-1317.32	13	-1399.02	5	-1477.21	1	-308.79	9	-284.58	9
43	143	243	Min.	344.00	-14727.30	18	-1317.32	13	-1961.17	13	-1477.21	1	-2176.41	1	-284.58	9
43	243	343	Max	0.00	-4203.18	13	2730.03	5	1682.46	13	1622.93	9	1559.31	1	142.77	1
43	243	343	Max	116.00	-3855.18	13	2730.03	5	1639.56	5	1622.93	9	1031.16	9	142.77	1
43	243	343	Min.	0.00	-7060.68	20	-3238.28	13	-1540.79	5	-3145.40	1	-854.28	9	-132.50	9
43	243	343	Min.	116.00	-6608.28	20	-3238.28	13	-2087.47	13	-3145.40	1	-2092.19	1	-132.50	9
44	44	144	Max	0.00	-21959.40	5	-100.47	5	1779.84	13	2795.29	9	2284.48	1	157.22	1
44	44	144	Max	346.00	-20921.40	5	-100.47	5	-663.52	9	2795.29	9	4629.77	9	157.22	1
44	44	144	Min.	0.00	-38240.50	19	-988.32	13	-419.05	5	-520.86	1	-5058.75	9	-162.02	9
44	44	144	Min.	346.00	-36891.10	19	-988.32	13	-1979.67	19	-520.86	1	465.50	1	-162.02	9
44	144	244	Max	0.00	-10309.90	5	-160.06	1	2001.21	9	2261.59	9	-479.70	1	204.99	1
44	144	244	Max	344.00	-9277.88	5	-160.06	1	-88.52	1	2261.59	9	3277.80	9	204.99	1
44	144	244	Min.	0.00	-18781.60	19	-965.68	9	442.42	1	31.09	1	-4515.21	9	-210.66	9
44	144	244	Min.	344.00	-17440.00	19	-965.68	9	-1340.38	9	31.09	1	-385.89	1	-210.66	9
44	244	344	Max	0.00	-4466.08	5	-151.26	9	1577.29	1	6824.51	9	306.11	5	153.98	1
44	244	344	Max	105.00	-4151.08	5	-151.26	9	29.13	9	6824.50	9	4042.41	9	153.98	1
44	244	344	Min.	0.00	-8653.77	19	-3273.89	1	153.33	9	-1373.02	1	-3150.45	13	-142.91	9
44	244	344	Min.	105.00	-8244.27	19	-3273.89	1	-1894.93	1	-1373.02	1	-1162.70	1	-142.91	9
45	45	145	Max	0.00	8399.26	5	1048.94	5	1626.59	13	1678.86	9	3244.95	1	157.22	1
45	45	145	Max	346.00	9437.26	5	1048.94	5	1867.52	5	1678.86	9	2266.87	9	157.22	1
45	45	145	Min.	0.00	-20230.00	13	-956.82	13	-1768.71	5	-1402.31	1	-3545.96	9	-162.02	9
45	45	145	Min.	346.00	-19192.00	13	-956.82	13	-1690.91	13	-1402.31	1	-1611.03	1	-162.02	9
45	145	245	Max	0.00	5504.18	5	474.15	5	882.19	13	334.71	9	384.68	1	85.84	1
45	145	245	Max	344.00	6112.08	5	474.15	5	650.24	5	334.71	9	549.28	9	85.84	1
45	145	245	Min.	0.00	-12712.40	13	-428.49	13	-981.11	5	-200.58	1	-604.34	9	-88.22	9
45	145	245	Min.	344.00	-12104.50	13	-428.49	13	-592.10	13	-200.58	1	-307.52	1	-88.22	9
45	245	345	Max	0.00	3799.32	5	5216.00	5	2178.02	13	3308.07	9	613.91	1	81.01	1
45	245	345	Max	105.00	4035.57	5	5216.00	5	2906.95	5	3308.07	9	1854.31	9	81.01	1
45	245	345	Min.	0.00	-6844.11	13	-4383.80	13	-2569.88	5	-1701.00	1	-1619.63	9	-75.18	9
45	245	345	Min.	105.00	-6607.86	13	-4383.80	13	-2425.00	13	-1701.00	1	-1172.60	1	-75.18	9
46	46	146	Max	0.00	-9928.40	13	325.20	5	952.77	13	2140.23	9	4101.17	1	157.22	1

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46	46	146	Max	346.00	-8890.40	13	325.20	5	199.52	5	2140.23	9	3282.45	9	157.22	1
46	46	146	Min.	0.00	-16926.70	19	-358.86	13	-930.17	5	-2089.02	1	-4123.10	9	-162.02	9
46	46	146	Min.	346.00	-15577.30	19	-358.86	13	-293.38	13	-2089.02	1	-3127.19	1	-162.02	9
46	146	246	Max	0.00	-6240.47	13	97.35	5	219.44	13	458.81	9	813.89	1	85.84	1
46	146	246	Max	344.00	-5632.57	13	97.35	5	139.04	5	458.81	9	713.10	9	85.84	1
46	146	246	Min.	0.00	-10193.60	19	-104.43	13	-201.38	5	-416.05	1	-865.86	9	-88.22	9
46	146	246	Min.	344.00	-9403.33	19	-104.43	13	-145.33	13	-416.05	1	-617.98	1	-88.22	9
46	246	346	Max	0.00	-2738.22	13	440.04	5	34.18	1	4896.17	9	1901.54	1	81.01	1
46	246	346	Max	105.00	-2501.97	13	440.04	5	313.21	5	4896.17	9	2766.53	9	81.01	1
46	246	346	Min.	0.00	-4865.14	19	-281.36	13	-176.51	9	-4119.27	1	-2374.85	9	-75.18	9
46	246	346	Min.	105.00	-4558.02	19	-281.36	13	-288.94	13	-4119.26	1	-2424.08	1	-75.18	9
101	106	107	Max	24.71	0.00	1	0.00	1	0.00	1	5173.10	18	818.56	1	-28.05	9
101	106	107	Max	222.28									1934.71	17		
101	106	107	Max	449.92	0.00	1	0.00	1	0.00	1	-1152.58	9	812.09	9	-28.05	9
101	106	107	Min.	24.71	0.00	1	0.00	1	0.00	1	1854.23	1	-4515.31	9	-219.71	17
101	106	107	Min.	137.83									-179.87	1		
101	106	107	Min.	449.92	0.00	1	0.00	1	0.00	1	-3969.39	17	-4734.67	1	-219.71	17
101	107	-71	Max	20.00	0.00	1	0.00	5	0.00	5	4827.96	18	166.05	1	261.00	1
101	107	-71	Max	262.75									1961.02	18		
101	107	-71	Max	414.84	0.00	1	0.00	5	0.00	5	-739.83	9	1649.87	9	261.00	1
101	107	-71	Min.	20.00	0.00	1	0.00	5	0.00	5	1860.33	1	-4962.16	9	-53.51	9
101	107	-71	Min.	353.62									-52.49	9		
101	107	-71	Min.	414.84	0.00	1	0.00	5	0.00	5	-3077.80	17	-2021.74	1	-53.51	9
101	-71	108	Max	0.00	0.00	1	0.00	9	0.00	5	-328.80	9	1463.08	9	604.48	9
101	-71	108	Max	60.00	0.00	1	0.00	9	0.00	9	-484.80	9	1179.02	9	604.48	9
101	-71	108	Min.	0.00	0.00	1	0.00	1	0.00	5	-4263.03	1	-2029.00	1	-1116.81	1
101	-71	108	Min.	60.00	0.00	1	0.00	1	0.00	1	-4419.03	1	-4593.64	1	-1116.81	1
102	112	-73	Max	25.00	0.00	1	0.00	1	0.00	5	5957.09	17	-2235.20	9	-173.78	9
102	112	-73	Max	330.00									3151.49	18		
102	112	-73	Max	593.00	0.00	1	0.00	1	0.00	5	-2687.45	1	-1160.16	1	-173.78	9
102	112	-73	Min.	25.00	0.00	1	0.00	1	0.00	5	3231.61	9	-5986.34	17	-532.22	19
102	112	-73	Min.	294.63									1682.12	9		
102	112	-73	Min.	593.00	0.00	1	0.00	1	0.00	5	-5064.21	18	-3568.04	18	-532.22	19
102	112	113	Max	25.00	0.00	1	0.00	5	0.00	5	4276.64	18	433.05	1	144.27	9
102	112	113	Max	245.07									1464.77	18		
102	112	113	Max	449.92	0.00	1	0.00	5	0.00	5	-1379.35	9	637.84	9	144.27	9
102	112	113	Min.	25.00	0.00	1	0.00	5	0.00	5	1516.65	1	-4325.62	9	-87.00	1
102	112	113	Min.	334.88									-305.73	9		
102	112	113	Min.	449.92	0.00	1	0.00	5	0.00	5	-4057.41	17	-3946.98	1	-87.00	1
102	113	114	Max	20.00	0.00	1	0.00	5	0.00	5	4644.75	18	-198.39	1	55.54	9
102	113	114	Max	259.01									1898.86	18		
102	113	114	Max	474.84	0.00	1	0.00	5	0.00	5	-1711.36	9	379.89	9	55.54	9
102	113	114	Min.	20.00	0.00	1	0.00	5	0.00	5	1954.66	1	-4239.01	9	-96.77	1
102	113	114	Min.	330.36									321.87	9		
102	113	114	Min.	474.84	0.00	1	0.00	5	0.00	5	-4256.84	17	-3710.61	1	-96.77	1
103	118	-74	Max	17.50	0.00	1	0.00	5	0.00	1	4131.42	17	-275.12	9	592.63	9
103	118	-74	Max	229.83									1129.98	17		
103	118	-74	Max	343.08	0.00	1	0.00	5	0.00	1	-569.01	1	892.00	1	592.63	9
103	118	-74	Min.	17.50	0.00	1	0.00	5	0.00	1	1696.31	9	-3610.42	1	-37.75	1
103	118	-74	Min.	294.92									-17.89	1		
103	118	-74	Min.	343.08	0.00	1	0.00	5	0.00	1	-2256.49	18	-1107.29	9	-37.75	1
103	118	-75	Max	17.50	0.00	1	0.00	5	0.00	5	9096.83	18	-1509.16	1	-95.07	5
103	118	-75	Max	203.80									2850.45	19		
103	118	-75	Max	240.23	0.00	1	0.00	5	0.00	5	6.83	9	2530.13	18	-95.07	5
103	118	-75	Min.	17.50	0.00	1	0.00	5	0.00	5	4396.41	1	-5667.48	18	-719.48	13
103	118	-75	Min.	235.23									1105.87	9		
103	118	-75	Min.	240.23	0.00	1	0.00	5	0.00	5	-2078.80	1	972.72	5	-719.48	13
103	-75	119	Max	0.00	0.00	1	0.00	5	0.00	1	1915.83	9	2625.15	19	1025.24	9
103	-75	119	Max	6.24									2636.39	19		
103	-75	119	Max	188.27	0.00	1	0.00	5	0.00	5	-3557.33	9	-770.99	9	1025.24	9
103	-75	119	Min.	0.00	0.00	1	0.00	5	0.00	1	-1523.98	1	713.11	9	-160.70	1
103	-75	119	Min.	0.47									1158.32	15		
103	-75	119	Min.	188.27	0.00	1	0.00	5	0.00	5	-8841.44	17	-5650.99	1	-160.70	1
103	119	-76	Max	17.50	0.00	1	0.00	5	0.00	1	4451.30	18	-835.74	1	129.00	1
103	119	-76	Max	245.97									1374.72	19		
103	119	-76	Max	264.16	0.00	1	0.00	5	0.00	1	433.94	9	1525.79	1	129.00	1
103	119	-76	Min.	17.50	0.00	1	0.00	5	0.00	1	2124.91	1	-3764.60	9	-729.35	9
103	119	-76	Min.	257.92									447.44	11		
103	119	-76	Min.	264.16	0.00	1	0.00	5	0.00	1	-832.53	1	185.45	9	-729.35	9
103	-76	151	Max	0.00	0.00	1	0.00	1	0.00	5	2232.19	9	2278.04	1	720.75	9
103	-76	151	Max	47.97									1488.99	19		
103	-76	151	Max	239.84	0.00	1	0.00	1	0.00	1	-643.58	9	1236.08	9	720.75	9
103	-76	151	Min.	0.00	0.00	1	0.00	1	0.00	5	-1047.61	1	-702.99	9	-638.74	1
103	-76	151	Min.	9.80									108.88	12		
103	-76	151	Min.	239.84	0.00	1	0.00	1	0.00	1	-3923.38	1	-3717.25	1	-638.74	1
104	121	-80	Max	24.71	0.00	1	0.00	5	0.00	5	2152.84	9	54.92	1	-346.81	13
104	121	-80	Max	335.67									952.85	6		
104	121	-80	Max	338.08	0.00	1	0.00	5	0.00	5	366.44	9	1411.08	9	-346.81	13
104	121	-80	Min.	24.71	0.00	1	0.00	5	0.00	5	607.74	1	-2975.53	9	-985.95	20

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104	121	-80	Min.	335.67									-100.12	6		
104	121	-80	Min.	338.08	0.00	1	0.00	5	0.00	5	-1178.66	1	-402.32	1	-985.95	20
105	-82	-81	Max	0.00	0.00	1	0.00	5	0.00	5	1628.97	17	-785.47	9	-603.59	13
105	-82	-81	Max	293.92	0.00	1	0.00	5	0.00	5	710.16	1	1274.77	17	-603.59	13
105	-82	-81	Min.	0.00	0.00	1	0.00	5	0.00	5	770.88	9	-2053.15	17	-1043.38	19
105	-82	-81	Min.	293.92	0.00	1	0.00	5	0.00	5	6.68	9	356.38	9	-1043.38	19
105	123	-82	Max	20.00	0.00	1	0.00	5	0.00	5	1110.27	1	1035.61	9	211.76	13
105	123	-82	Max	24.75									295.03	3		
105	123	-82	Max	343.08	0.00	1	0.00	5	0.00	5	270.27	1	487.31	1	211.76	13
105	123	-82	Min.	20.00	0.00	1	0.00	5	0.00	5	-386.66	9	-1743.83	1	-235.33	5
105	123	-82	Min.	24.75									-1221.30	3		
105	123	-82	Min.	343.08	0.00	1	0.00	5	0.00	5	-1226.66	9	-1571.55	9	-235.33	5
105	123	124	Max	20.00	0.00	1	0.00	5	0.00	5	6436.10	18	-918.81	1	248.54	9
105	123	124	Max	215.09									2465.60	17		
105	123	124	Max	428.50	0.00	1	0.00	5	0.00	5	-3463.56	9	-1489.02	9	248.54	9
105	123	124	Min.	20.00	0.00	1	0.00	5	0.00	5	3182.69	1	-3895.65	18	-107.38	1
105	123	124	Min.	181.72									1118.92	1		
105	123	124	Min.	428.50	0.00	1	0.00	5	0.00	5	-6934.47	17	-4913.70	17	-107.38	1
105	124	153	Max	17.50	0.00	1	0.00	5	0.00	5	8197.20	18	-2716.88	1	186.90	9
105	124	153	Max	271.21									3653.04	17		
105	124	153	Max	504.00	0.00	1	0.00	5	0.00	5	-3960.85	9	-1763.81	9	186.90	9
105	124	153	Min.	17.50	0.00	1	0.00	5	0.00	5	4413.07	1	-6806.07	18	9.79	1
105	124	153	Min.	244.91									2010.83	1		
105	124	153	Min.	504.00	0.00	1	0.00	5	0.00	5	-7478.71	17	-5051.94	17	9.79	1
106	130	131	Max	17.50	0.00	1	0.00	5	0.00	5	1221.20	1	955.99	9	211.28	9
106	130	131	Max	375.16									557.62	3		
106	130	131	Max	383.16	0.00	1	0.00	5	0.00	5	270.49	1	1089.66	1	211.28	9
106	130	131	Min.	17.50	0.00	1	0.00	5	0.00	5	-196.14	9	-1637.60	1	-15.82	1
106	130	131	Min.	375.16									-878.04	3		
106	130	131	Min.	383.16	0.00	1	0.00	5	0.00	5	-1146.85	9	-1499.41	9	-15.82	1
107	-91	-92	Max	0.00	0.00	1	0.00	19	0.00	5	873.79	1	872.83	9	101.82	9
107	-91	-92	Max	27.68									90.55	17		
107	-91	-92	Max	221.86	0.00	1	0.00	19	0.00	19	296.96	1	473.92	1	101.82	9
107	-91	-92	Min.	0.00	0.00	1	0.00	20	0.00	5	-626.38	9	-824.83	1	-8.83	1
107	-91	-92	Min.	51.83									27.00	22		
107	-91	-92	Min.	221.86	0.00	1	0.00	20	0.00	20	-1203.21	9	-1156.76	9	-8.83	1
108	142	141	Max	20.00	0.00	1	0.00	1	0.00	1	4362.25	9	720.83	1	-70.08	13
108	142	141	Max	315.60									1956.08	9		
108	142	141	Max	373.53	0.00	1	0.00	1	0.00	1	-843.54	9	1714.41	9	-70.08	13
108	142	141	Min.	20.00	0.00	1	0.00	1	0.00	1	1326.42	1	-4505.91	9	-189.85	17
108	142	141	Min.	315.60									-1220.40	9		
108	142	141	Min.	373.53	0.00	1	0.00	1	0.00	1	-3879.37	1	-3792.32	1	-189.85	17
108	142	159	Max	20.00	0.00	1	0.00	1	0.00	1	5304.30	19	-1939.59	9	-47.22	9
108	142	159	Max	347.49									3166.76	20		
108	142	159	Max	556.47	0.00	1	0.00	1	0.00	1	-1666.99	1	533.21	1	-47.22	9
108	142	159	Min.	20.00	0.00	1	0.00	1	0.00	1	2896.09	9	-5577.36	19	-355.30	1
108	142	159	Min.	322.93									1650.46	1		
108	142	159	Min.	556.47	0.00	1	0.00	1	0.00	1	-3401.36	20	-896.23	9	-355.30	1
109	143	160	Max	20.00	0.00	1	0.00	1	0.00	1	5421.19	18	196.99	9	73.04	9
109	143	160	Max	192.13									1963.24	17		
109	143	160	Max	379.84	0.00	1	0.00	1	0.00	1	-2757.12	1	-75.09	1	73.04	9
109	143	160	Min.	20.00	0.00	1	0.00	1	0.00	1	2565.53	9	-4068.12	1	-183.44	1
109	143	160	Min.	139.34									532.79	9		
109	143	160	Min.	379.84	0.00	1	0.00	1	0.00	1	-5695.03	17	-4490.49	9	-183.44	1
110	136	143	Max	17.50	0.00	1	0.00	1	0.00	1	5684.10	20	-21.90	13	262.13	9
110	136	143	Max	168.30									1825.25	18		
110	136	143	Max	318.98	0.00	1	0.00	1	0.00	1	-2860.44	5	-299.64	5	262.13	9
110	136	143	Min.	17.50	0.00	1	0.00	1	0.00	1	2423.53	13	-3069.76	5	16.14	1
110	136	143	Min.	127.14									574.52	13		
110	136	143	Min.	318.98	0.00	1	0.00	1	0.00	1	-6436.19	19	-3181.93	13	16.14	1
110	143	-106	Max	15.00	0.00	1	0.00	5	0.00	5	3277.61	5	267.25	13	553.50	1
110	143	-106	Max	167.22	0.00	1	0.00	5	0.00	1	1495.23	5	1349.82	5	553.50	1
110	143	-106	Min.	15.00	0.00	1	0.00	5	0.00	5	590.50	13	-2204.63	5	-754.94	9
110	143	-106	Min.	167.22	0.00	1	0.00	5	0.00	1	-1191.88	13	-270.82	13	-754.94	9
111	126	-94	Max	15.00	0.00	1	0.00	1	0.00	5	7120.01	20	-2633.00	13	248.13	18
111	126	-94	Max	274.06									3960.03	19		
111	126	-94	Max	529.60	0.00	1	0.00	1	0.00	5	-3400.68	5	-2493.55	5	248.13	18
111	126	-94	Min.	15.00	0.00	1	0.00	1	0.00	5	4006.71	13	-5825.12	20	75.27	1
111	126	-94	Min.	263.53									2282.67	5		
111	126	-94	Min.	529.60	0.00	1	0.00	1	0.00	5	-6099.21	19	-5362.85	19	75.27	1
112	-80	120	Max	0.00	0.00	1	0.00	1	0.00	1	-3939.23	13	1812.84	19	995.01	9
112	-80	120	Max	117.70	0.00	1	0.00	1	0.00	1	-6840.85	13	-5000.88	13	995.01	9
112	-80	120	Min.	0.00	0.00	1	0.00	1	0.00	1	-7247.87	17	641.38	13	-820.18	1
112	-80	120	Min.	117.70	0.00	1	0.00	1	0.00	1	-11498.60	17	-9294.94	20	-820.18	1
112	-81	-80	Max	0.00	0.00	1	0.00	5	0.00	1	4874.75	19	3351.79	20	-377.41	9
112	-81	-80	Max	97.82									5688.31	17		
112	-81	-80	Max	243.66	0.00	1	0.00	5	0.00	5	-3866.45	13	1227.04	13	-377.41	9
112	-81	-80	Min.	0.00	0.00	1	0.00	5	0.00	1	2749.04	5	1697.35	13	-640.29	18
112	-81	-80	Min.	110.59									3617.36	13		

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112	-81	-80	Min.	243.66	0.00	1	0.00	5	0.00	5	-6597.78	20	-132.74	5	-640.29	18
112	127	-81	Max	15.00	0.00	1	0.00	1	0.00	1	15024.60	19	-4913.03	5	854.83	1
112	127	-81	Max	160.22	0.00	1	0.00	1	0.00	1	4255.60	19	4388.88	20	854.83	1
112	127	-81	Min.	15.00	0.00	1	0.00	1	0.00	1	9047.04	5	-9554.21	19	-71.40	9
112	127	-81	Min.	160.22	0.00	1	0.00	1	0.00	1	2235.58	5	2428.76	13	-71.40	9
112	127	-95	Max	15.00	0.00	1	0.00	1	0.00	1	1326.25	20	-601.31	13	-33.66	9
112	127	-95	Max	500.05									782.89	5		
112	127	-95	Max	529.60	0.00	1	0.00	1	0.00	1	-76.79	5	771.54	5	-33.66	9
112	127	-95	Min.	15.00	0.00	1	0.00	1	0.00	1	657.43	13	-2276.03	5	-340.79	1
112	127	-95	Min.	500.05									-342.42	5		
112	127	-95	Min.	529.60	0.00	1	0.00	1	0.00	1	-680.53	13	-660.90	13	-340.79	1
113	106	-72	Max	29.09	0.00	1	0.00	1	0.00	1	8076.83	20	-1271.72	1	-133.38	9
113	106	-72	Max	220.82									2727.15	20		
113	106	-72	Max	331.88	0.00	1	0.00	1	0.00	1	-1649.68	9	1287.60	13	-133.38	9
113	106	-72	Min.	29.09	0.00	1	0.00	1	0.00	1	3938.95	1	-4855.54	20	-596.89	17
113	106	-72	Min.	255.65									1117.87	13		
113	106	-72	Min.	331.88	0.00	1	0.00	1	0.00	1	-4244.51	19	-888.66	5	-596.89	17
113	-72	112	Max	0.00	0.00	1	0.00	9	0.00	1	-4602.99	9	1146.06	9	2469.28	1
113	-72	112	Max	45.74	0.00	1	0.00	9	0.00	9	-6696.68	9	-1439.04	9	2469.28	1
113	-72	112	Min.	0.00	0.00	1	0.00	1	0.00	1	-10175.20	19	-1863.41	1	-3.06	9
113	-72	112	Min.	45.74	0.00	1	0.00	1	0.00	1	-13705.90	19	-6099.66	19	-3.06	9
113	112	-75	Max	17.50	0.00	1	0.00	1	0.00	1	2929.51	9	-836.55	1	973.47	9
113	112	-75	Max	231.00	0.00	1	0.00	1	0.00	1	2374.41	9	1732.81	9	973.47	9
113	112	-75	Min.	17.50	0.00	1	0.00	1	0.00	1	644.25	1	-4004.57	20	-1075.80	1
113	112	-75	Min.	231.00	0.00	1	0.00	1	0.00	1	89.15	1	-53.72	1	-1075.80	1
114	119	124	Max	20.00	0.00	1	0.00	1	0.00	5	7038.45	20	-119.14	1	188.05	9
114	119	124	Max	200.60									2532.76	19		
114	119	124	Max	395.20	0.00	1	0.00	1	0.00	5	-3247.52	9	-493.33	9	188.05	9
114	119	124	Min.	20.00	0.00	1	0.00	1	0.00	5	3023.76	1	-4559.63	9	-26.51	1
114	119	124	Min.	150.97									746.65	1		
114	119	124	Min.	395.20	0.00	1	0.00	1	0.00	5	-7454.01	19	-5025.00	1	-26.51	1
114	124	-89	Max	25.00	0.00	1	0.00	5	0.00	5	7329.16	20	-1697.89	1	337.13	9
114	124	-89	Max	244.30									2555.33	19		
114	124	-89	Max	413.64	0.00	1	0.00	5	0.00	5	-2645.70	9	-190.03	9	337.13	9
114	124	-89	Min.	25.00	0.00	1	0.00	5	0.00	5	3734.81	1	-5479.18	20	-323.13	1
114	124	-89	Min.	210.52									1197.28	1		
114	124	-89	Min.	413.64	0.00	1	0.00	5	0.00	5	-5549.50	19	-2320.53	1	-323.13	1
115	-93	133	Max	0.00	0.00	1	0.00	5	0.00	5	4202.59	19	3753.84	20	400.22	9
115	-93	133	Max	59.79									4990.33	17		
115	-93	133	Max	252.62	0.00	1	0.00	5	0.00	5	-7025.23	1	-2768.16	1	400.22	9
115	-93	133	Min.	0.00	0.00	1	0.00	5	0.00	5	1432.49	9	1753.96	1	23.58	1
115	-93	133	Min.	81.76									2638.09	1		
115	-93	133	Min.	252.62	0.00	1	0.00	5	0.00	5	-13480.90	20	-8044.87	20	23.58	1
115	139	-93	Max	15.00	0.00	1	0.00	1	0.00	1	14008.80	19	-3542.13	9	397.63	9
115	139	-93	Max	155.06	0.00	1	0.00	1	0.00	1	4263.18	19	4436.74	20	397.63	9
115	139	-93	Min.	15.00	0.00	1	0.00	1	0.00	1	7443.59	9	-8359.53	19	-399.65	1
115	139	-93	Min.	155.06	0.00	1	0.00	1	0.00	1	1655.82	9	2471.12	1	-399.65	1
115	139	142	Max	15.00	0.00	1	0.00	5	0.00	5	9541.83	9	1282.67	1	-326.41	9
115	139	142	Max	156.71									224.55	20		
115	139	142	Max	166.38	0.00	1	0.00	5	0.00	5	4882.73	9	4460.12	9	-326.41	9
115	139	142	Min.	15.00	0.00	1	0.00	5	0.00	5	-1422.78	1	-6456.18	9	-543.19	17
115	139	142	Min.	146.25									-29.99	23		
115	139	142	Min.	166.38	0.00	1	0.00	5	0.00	5	-6081.88	1	-4399.56	1	-543.19	17
116	103	107	Max	15.00	0.00	1	0.00	1	0.00	5	3090.91	9	2394.57	1	73.12	1
116	103	107	Max	46.47									-123.49	31		
116	103	107	Max	219.38	0.00	1	0.00	1	0.00	1	2030.77	9	2198.09	9	73.12	1
116	103	107	Min.	15.00	0.00	1	0.00	1	0.00	5	-2465.73	1	-2888.62	9	-365.83	9
116	103	107	Min.	56.29									-306.13	20		
116	103	107	Min.	219.38	0.00	1	0.00	1	0.00	1	-3525.87	1	-3888.67	1	-365.83	9
116	107	113	Max	17.50	0.00	1	0.00	1	0.00	1	12628.00	20	-1939.02	1	165.02	9
116	107	113	Max	197.70									4432.46	20		
116	107	113	Max	377.62	0.00	1	0.00	1	0.00	1	-6282.61	9	-1899.76	9	165.02	9
116	107	113	Min.	17.50	0.00	1	0.00	1	0.00	1	6251.16	1	-6945.10	20	-126.36	1
116	107	113	Min.	226.63									2163.70	9		
116	107	113	Min.	377.62	0.00	1	0.00	1	0.00	1	-12684.30	19	-7049.88	19	-126.36	1
116	113	-76	Max	17.50	0.00	1	0.00	1	0.00	1	2842.82	9	147.40	1	1148.72	9
116	113	-76	Max	231.00	0.00	1	0.00	1	0.00	1	2287.72	9	1446.43	9	1148.72	9
116	113	-76	Min.	17.50	0.00	1	0.00	1	0.00	1	-149.37	1	-4030.43	9	-1012.54	1
116	113	-76	Min.	231.00	0.00	1	0.00	1	0.00	1	-704.47	1	-764.08	1	-1012.54	1
117	153	151	Max	15.00	0.00	1	0.00	5	0.00	5	14505.20	19	-3224.92	9	-94.98	13
117	153	151	Max	214.93									5337.60	19		
117	153	151	Max	405.20	0.00	1	0.00	5	0.00	5	-7482.89	1	-2449.84	1	-94.98	13
117	153	151	Min.	15.00	0.00	1	0.00	5	0.00	5	7853.29	9	-9162.50	19	-207.49	20
117	153	151	Min.	242.38									2899.94	1		
117	153	151	Min.	405.20	0.00	1	0.00	5	0.00	5	-13881.50	20	-7947.33	20	-207.49	20
117	153	155	Max	15.00	0.00	1	0.00	17	0.00	17	5748.89	20	-2634.03	1	423.75	9
117	153	155	Max	283.50									1322.12	17		
117	153	155	Max	413.64	0.00	1	0.00	17	0.00	17	-1188.36	9	265.59	9	423.75	9
117	153	155	Min.	15.00	0.00	1	0.00	18	0.00	18	3077.09	1	-6382.85	20	66.73	1

Relazione di calcolo

117	153	155	Min.	251.04								578.03	1			
117	153	155	Min.	413.64	0.00	1	0.00	18	0.00	18	-2704.97	19	-779.62	1	66.73	1
118	149	-71	Max	0.00	0.00	1	0.00	5	0.00	5	1127.71	9	1200.83	1	207.13	9
118	149	-71	Max	25.55									106.18	16		
118	149	-71	Max	236.88	0.00	1	0.00	5	0.00	5	511.81	9	655.76	9	207.13	9
118	149	-71	Min.	0.00	0.00	1	0.00	5	0.00	5	-779.68	1	-1286.13	9	-12.95	1
118	149	-71	Min.	25.55									-392.58	16		
118	149	-71	Min.	236.88	0.00	1	0.00	5	0.00	5	-1395.57	1	-1375.58	1	-12.95	1
119	108	105	Max	20.00	0.00	1	0.00	1	0.00	1	8746.29	1	5207.68	9	279.12	9
119	108	105	Max	152.28									70.21	31		
119	108	105	Max	211.88	0.00	1	0.00	1	0.00	1	5920.81	1	6713.58	1	279.12	9
119	108	105	Min.	20.00	0.00	1	0.00	1	0.00	1	-5184.33	9	-7358.25	1	55.82	1
119	108	105	Min.	135.13									-129.90	20		
119	108	105	Min.	211.88	0.00	1	0.00	1	0.00	1	-8009.80	9	-7450.96	9	55.82	1
119	114	108	Max	20.00	0.00	1	0.00	1	0.00	1	9369.23	19	1329.47	9	150.59	9
119	114	108	Max	192.01									3495.66	18		
119	114	108	Max	375.12	0.00	1	0.00	1	0.00	1	-3880.21	1	650.09	1	150.59	9
119	114	108	Min.	20.00	0.00	1	0.00	1	0.00	1	3693.97	9	-7412.70	1	-108.50	1
119	114	108	Min.	126.36									241.67	9		
119	114	108	Min.	375.12	0.00	1	0.00	1	0.00	1	-9637.99	20	-7394.71	9	-108.50	1
119	152	114	Max	14.97	0.00	1	0.00	1	0.00	1	5935.70	1	3678.14	9	298.14	9
119	152	114	Max	90.18									-180.68	32		
119	152	114	Max	210.56	0.00	1	0.00	1	0.00	1	2997.69	1	3606.37	1	298.14	9
119	152	114	Min.	14.97	0.00	1	0.00	1	0.00	1	-3421.06	9	-5146.78	1	-246.04	1
119	152	114	Min.	105.74									-452.66	19		
119	152	114	Min.	210.56	0.00	1	0.00	1	0.00	1	-6359.07	9	-5870.27	9	-246.04	1
119	154	152	Max	15.00	0.00	1	0.00	1	0.00	1	4609.03	1	2158.76	9	24.73	9
119	154	152	Max	358.21									2543.20	1		
119	154	152	Max	405.20	0.00	1	0.00	1	0.00	1	-618.63	1	2399.15	1	24.73	9
119	154	152	Min.	15.00	0.00	1	0.00	1	0.00	1	652.10	9	-5394.61	1	-96.81	1
119	154	152	Min.	358.21									-2410.67	1		
119	154	152	Min.	405.20	0.00	1	0.00	1	0.00	1	-4575.56	9	-5504.39	9	-96.81	1
119	129	154	Max	20.67	0.00	5	0.00	1	0.00	1	8038.29	1	3278.37	9	183.52	9
119	129	154	Max	22.39									3278.71	9		
119	129	154	Max	309.16	0.00	5	0.00	1	0.00	1	772.32	1	4053.91	1	183.52	9
119	129	154	Min.	20.67	0.00	13	0.00	1	0.00	1	41.18	9	-8692.45	1	-57.57	1
119	129	154	Min.	22.39									-6493.55	9		
119	129	154	Min.	309.16	0.00	13	0.00	1	0.00	1	-7224.80	9	-7045.97	9	-57.57	1
119	-90	129	Max	0.00	0.00	1	0.00	5	0.00	5	-6753.39	1	2152.65	1	-1183.16	9
119	-90	129	Max	69.84	0.00	1	0.00	5	0.00	5	-8491.63	1	-3176.16	1	-1183.16	9
119	-90	129	Min.	0.00	0.00	1	0.00	5	0.00	5	-13020.60	20	-3358.30	9	-2927.26	17
119	-90	129	Min.	69.84	0.00	1	0.00	5	0.00	5	-15571.00	20	-10935.80	20	-2927.26	17
119	138	-90	Max	20.00	0.00	1	0.00	1	0.00	5	13670.20	19	-1811.30	9	220.80	20
119	138	-90	Max	254.79									6309.08	20		
119	138	-90	Max	420.12	0.00	1	0.00	1	0.00	5	-4371.56	1	1734.35	1	220.80	20
119	138	-90	Min.	20.00	0.00	1	0.00	1	0.00	5	6978.64	9	-10668.10	1	24.02	1
119	138	-90	Min.	206.26									2923.84	9		
119	138	-90	Min.	420.12	0.00	1	0.00	1	0.00	5	-9558.31	20	-3782.33	9	24.02	1
119	159	138	Max	0.00	0.00	1	0.00	5	0.00	1	-1667.03	1	355.30	1	533.13	1
119	159	138	Max	166.44	0.00	1	0.00	5	0.00	1	-2103.94	1	-2820.90	1	533.13	1
119	159	138	Min.	0.00	0.00	1	0.00	5	0.00	1	-3401.43	20	47.22	9	-896.35	9
119	159	138	Min.	166.44	0.00	1	0.00	5	0.00	1	-3969.41	20	-5812.59	20	-896.35	9
120	101	147	Max	25.05	0.00	13	0.00	9	0.00	13	10879.80	20	-11597.00	9	1675.71	1
120	101	147	Max	214.34	0.00	13	0.00	9	0.00	9	7233.56	20	307.43	9	1675.71	1
120	101	147	Min.	25.05	0.00	5	0.00	1	0.00	5	7639.97	13	-17265.60	17	550.68	9
120	101	147	Min.	214.34	0.00	5	0.00	1	0.00	1	4839.34	13	-433.95	1	550.68	9
120	102	101	Max	20.01	0.00	9	0.00	1	0.00	1	5463.63	1	3313.19	9	222.28	9
120	102	101	Max	54.63									3405.67	9		
120	102	101	Max	480.04	0.00	9	0.00	1	0.00	1	-1388.43	1	2249.38	1	222.28	9
120	102	101	Min.	20.01	0.00	1	0.00	1	0.00	1	522.37	9	-7179.24	1	-27.23	1
120	102	101	Min.	54.63									-3812.43	9		
120	102	101	Min.	480.04	0.00	1	0.00	1	0.00	1	-6329.70	9	-9989.12	9	-27.23	1
120	103	102	Max	24.53	0.00	1	0.00	1	0.00	1	8971.54	1	4809.53	9	578.59	19
120	103	102	Max	284.44									3381.50	3		
120	103	102	Max	291.75	0.00	1	0.00	1	0.00	1	1280.62	1	5425.93	1	578.59	19
120	103	102	Min.	24.53	0.00	1	0.00	1	0.00	1	-1249.06	9	-8590.12	1	301.77	13
120	103	102	Min.	37.83									-3840.76	14		
120	103	102	Min.	291.75	0.00	1	0.00	1	0.00	1	-8939.97	9	-8487.00	9	301.77	13
121	104	101	Max	15.01	0.00	1	0.00	1	0.00	1	10428.10	18	-2252.45	5	170.37	9
121	104	101	Max	210.06									4086.00	18		
121	104	101	Max	396.89	0.00	1	0.00	1	0.00	1	-5227.73	13	-1680.65	13	170.37	9
121	104	101	Min.	15.01	0.00	9	0.00	1	0.00	1	5477.18	5	-6082.39	18	-111.75	1
121	104	101	Min.	232.28									2190.02	13		
121	104	101	Min.	396.89	0.00	9	0.00	1	0.00	1	-10016.00	17	-5312.43	17	-111.75	1
121	110	104	Max	15.01	0.00	9	0.00	1	0.00	1	2740.03	13	1074.34	5	521.12	9
121	110	104	Max	19.86									1075.70	5		
121	110	104	Max	289.32	0.00	9	0.00	1	0.00	1	-402.92	13	478.39	13	521.12	9
121	110	104	Min.	15.01	0.00	1	0.00	1	0.00	1	55.92	5	-2714.44	13	11.38	1
121	110	104	Min.	19.86									-2058.31	5		

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121	110	104	Min.	289.32	0.00	1	0.00	1	0.00	1	-3087.03	5	-3096.74	5	11.38	1
122	149	103	Max	0.00	0.00	1	0.00	1	0.00	1	5818.95	1	3196.75	9	35.61	9
122	149	103	Max	74.12									3863.62	9		
122	149	103	Max	394.84	0.00	1	0.00	1	0.00	1	-3797.19	1	-19.00	1	35.61	9
122	149	103	Min.	0.00	0.00	1	0.00	1	0.00	1	1801.49	9	-4011.93	1	-138.66	1
122	149	103	Min.	74.12									377.18	9		
122	149	103	Min.	394.84	0.00	1	0.00	1	0.00	1	-8555.69	18	-8676.08	9	-138.66	1
122	105	149	Max	16.30	0.00	13	0.00	1	0.00	5	6950.67	17	1561.74	9	1078.87	9
122	105	149	Max	75.17	0.00	13	0.00	1	0.00	1	5823.77	17	3459.90	9	1078.87	9
122	105	149	Min.	16.30	0.00	5	0.00	1	0.00	5	3559.00	9	-7383.83	1	-1055.27	1
122	105	149	Min.	75.17	0.00	5	0.00	1	0.00	1	2692.15	9	-4080.69	1	-1055.27	1
123	102	106	Max	10.05	0.00	9	0.00	1	0.00	1	7190.42	20	-1133.78	13	115.52	1
123	102	106	Max	194.51									2774.41	19		
123	102	106	Max	392.46	0.00	9	0.00	1	0.00	1	-3958.87	5	-1613.73	5	115.52	1
123	102	106	Min.	10.05	0.00	1	0.00	1	0.00	1	3671.98	13	-3926.42	20	28.30	9
123	102	106	Min.	167.49									1382.18	13		
123	102	106	Min.	392.46	0.00	1	0.00	1	0.00	1	-7686.17	19	-4802.85	19	28.30	9
124	104	148	Max	25.10	0.00	9	0.00	1	0.00	1	10069.80	17	-8623.14	9	-265.61	1
124	104	148	Max	215.04	0.00	9	0.00	1	0.00	20	9237.37	17	3153.84	17	-265.61	1
124	104	148	Min.	25.10	0.00	1	0.00	1	0.00	1	5946.47	9	-15181.50	17	-2595.21	9
124	104	148	Min.	215.04	0.00	1	0.00	1	0.00	19	5311.64	9	2060.64	9	-2595.21	9
124	106	104	Max	15.29	0.00	1	0.00	1	0.00	1	5708.18	17	719.11	9	-40.84	9
124	106	104	Max	241.65									1976.30	19		
124	106	104	Max	480.97	0.00	1	0.00	1	0.00	5	-2261.91	1	265.35	1	-40.84	9
124	106	104	Min.	15.29	0.00	9	0.00	1	0.00	1	1947.26	9	-6061.08	1	-304.69	1
124	106	104	Min.	140.66									-540.53	9		
124	106	104	Min.	480.97	0.00	9	0.00	1	0.00	5	-6111.58	18	-7003.19	9	-304.69	1
125	110	-70	Max	25.02	0.00	1	0.00	1	0.00	1	3969.49	1	3357.13	9	-896.51	1
125	110	-70	Max	186.96									-551.23	29		
125	110	-70	Max	215.55	0.00	1	0.00	1	0.00	1	3442.34	1	2127.54	1	-896.51	1
125	110	-70	Min.	25.02	0.00	9	0.00	1	0.00	1	-3296.04	9	-4933.51	1	-2162.39	18
125	110	-70	Min.	136.13									-867.34	20		
125	110	-70	Min.	215.55	0.00	9	0.00	1	0.00	1	-3823.19	9	-3425.09	9	-2162.39	18
125	110	111	Max	25.06	0.00	1	0.00	1	0.00	5	5881.58	9	4659.04	1	314.91	13
125	110	111	Max	53.41									440.67	16		
125	110	111	Max	211.61	0.00	1	0.00	1	0.00	5	2739.43	9	3225.09	9	314.91	13
125	110	111	Min.	25.06	0.00	1	0.00	1	0.00	5	-3963.25	1	-4902.08	9	12.22	5
125	110	111	Min.	53.41									-1126.28	16		
125	110	111	Min.	211.61	0.00	1	0.00	1	0.00	5	-7105.40	1	-5579.64	1	12.22	5
125	111	-72	Max	15.08	0.00	1	0.00	1	0.00	1	7751.59	18	-1666.59	1	369.38	13
125	111	-72	Max	242.04									3339.97	18		
125	111	-72	Max	430.18	0.00	1	0.00	1	0.00	1	-2755.76	9	-33.24	9	369.38	13
125	111	-72	Min.	15.08	0.00	9	0.00	1	0.00	1	3845.22	1	-5721.29	18	66.59	5
125	111	-72	Min.	277.11									1597.49	9		
125	111	-72	Min.	430.18	0.00	9	0.00	1	0.00	1	-5943.06	17	-3310.12	1	66.59	5
127	116	150	Max	24.61	0.00	1	0.00	1	0.00	1	2593.58	1	2056.02	9	54.77	9
127	116	150	Max	194.09									65.66	17		
127	116	150	Max	244.28	0.00	1	0.00	1	0.00	1	1976.35	1	2431.77	1	54.77	9
127	116	150	Min.	24.61	0.00	1	0.00	1	0.00	1	-1796.45	9	-2587.62	1	-215.91	1
127	116	150	Min.	144.47									-4.52	22		
127	116	150	Min.	244.28	0.00	1	0.00	1	0.00	1	-2413.68	9	-2568.17	9	-215.91	1
128	117	116	Max	6.33	0.00	9	0.00	5	0.00	5	7484.38	1	5368.42	9	430.62	13
128	117	116	Max	51.84									452.32	18		
128	117	116	Max	166.50	0.00	9	0.00	5	0.00	5	4202.36	1	3901.41	1	430.62	13
128	117	116	Min.	6.33	0.00	1	0.00	5	0.00	5	-5164.43	9	-5405.08	1	-33.14	5
128	117	116	Min.	70.39									233.33	21		
128	117	116	Min.	166.50	0.00	1	0.00	5	0.00	5	-8446.45	9	-5586.20	9	-33.14	5
129	116	120	Max	22.51	0.00	1	0.00	1	0.00	1	4797.94	5	2677.13	13	453.03	1
129	116	120	Max	23.68									592.62	3		
129	116	120	Max	186.90	0.00	1	0.00	1	0.00	1	752.66	5	1366.76	5	453.03	1
129	116	120	Min.	22.51	0.00	9	0.00	1	0.00	1	-2562.71	13	-3196.04	5	-36.15	9
129	116	120	Min.	23.68									-1872.31	3		
129	116	120	Min.	186.90	0.00	9	0.00	1	0.00	1	-6607.99	13	-4865.66	13	-36.15	9
130	-73	110	Max	0.00	0.00	13	0.00	13	0.00	5	7582.78	19	764.48	13	828.80	9
130	-73	110	Max	116.90									4279.55	20		
130	-73	110	Max	334.70	0.00	13	0.00	13	0.00	13	-4557.01	5	-2810.68	13	828.80	9
130	-73	110	Min.	0.00	0.00	5	0.00	5	0.00	5	3950.96	13	-766.46	5	30.20	1
130	-73	110	Min.	102.29									2287.13	5		
130	-73	110	Min.	334.70	0.00	5	0.00	5	0.00	5	-8461.20	20	-6354.96	20	30.20	1
130	117	-73	Max	25.00	0.00	1	0.00	1	0.00	1	14451.90	19	-4043.18	5	-1119.84	1
130	117	-73	Max	91.96	0.00	1	0.00	1	0.00	1	12628.50	19	969.88	5	-1119.84	1
130	117	-73	Min.	25.00	0.00	1	0.00	1	0.00	9	8000.08	5	-8623.30	19	-2858.71	18
130	117	-73	Min.	91.96	0.00	1	0.00	1	0.00	9	6891.83	5	-358.00	13	-2858.71	18
130	-74	117	Max	0.00	0.00	5	0.00	9	0.00	1	-2203.76	1	1177.15	13	757.55	9
130	-74	117	Max	112.70	0.00	5	0.00	9	0.00	9	-2552.43	1	-1885.15	5	757.55	9
130	-74	117	Min.	0.00	0.00	13	0.00	1	0.00	1	-5185.17	20	260.52	5	-681.23	1
130	-74	117	Min.	112.70	0.00	13	0.00	1	0.00	1	-5661.24	20	-4994.30	20	-681.23	1
130	122	-74	Max	20.00	0.00	1	0.00	1	0.00	1	5918.81	19	-1506.19	5	187.29	1
130	122	-74	Max	236.42									2264.32	18		

Relazione di calcolo

130	122	-74	Max	344.00	0.00	1	0.00	1	0.00	1	-1247.45	13	1085.31	13	187.29	1
130	122	-74	Min.	20.00	0.00	1	0.00	1	0.00	1	3085.30	5	-4171.98	19	-426.46	9
130	122	-74	Min.	266.37									1061.02	5		
130	122	-74	Min.	344.00	0.00	1	0.00	1	0.00	1	-2946.93	20	-200.69	5	-426.46	9
130	-82	122	Max	0.00	0.00	1	0.00	9	0.00	5	-2121.30	5	1391.72	13	922.07	9
130	-82	122	Max	56.20	0.00	1	0.00	9	0.00	9	-3051.25	5	-95.77	13	922.07	9
130	-82	122	Min.	0.00	0.00	1	0.00	1	0.00	5	-5417.32	20	-57.84	5	-1870.17	1
130	-82	122	Min.	56.20	0.00	1	0.00	1	0.00	1	-6947.31	20	-2982.86	5	-1870.17	1
130	-82	-86	Max	0.00	0.00	1	0.00	1	0.00	9	3194.39	20	858.44	13	553.41	17
130	-82	-86	Max	64.38									992.10	19		
130	-82	-86	Max	165.14	0.00	1	0.00	1	0.00	9	-1648.32	5	348.65	5	553.41	17
130	-82	-86	Min.	0.00	0.00	1	0.00	1	0.00	1	610.37	13	-858.68	5	157.77	9
130	-82	-86	Min.	21.51									-254.23	13		
130	-82	-86	Min.	165.14	0.00	1	0.00	1	0.00	1	-4867.68	19	-2061.92	13	157.77	9
131	148	147	Max	0.00	0.00	5	0.00	1	0.00	1	6759.87	19	-186.18	9	306.73	9
131	148	147	Max	198.27									6133.72	18		
131	148	147	Max	411.07	0.00	5	0.00	1	0.00	1	-4839.33	13	-550.95	9	306.73	9
131	148	147	Min.	0.00	0.00	5	0.00	1	0.00	1	4502.48	5	-688.09	1	-435.75	1
131	148	147	Min.	200.44									3847.00	1		
131	148	147	Min.	411.07	0.00	5	0.00	1	0.00	1	-7233.55	20	-1675.24	1	-435.75	1
131	-70	148	Max	0.00	0.00	13	0.00	1	0.00	5	7990.02	18	-2762.53	1	3056.58	18
131	-70	148	Max	281.45									2356.11	9		
131	-70	148	Max	306.13	0.00	13	0.00	1	0.00	1	-569.02	9	2285.44	9	3056.58	18
131	-70	148	Min.	0.00	0.00	5	0.00	1	0.00	5	4377.26	1	-7157.73	18	1823.39	1
131	-70	148	Min.	263.74									648.57	1		
131	-70	148	Min.	306.13	0.00	5	0.00	1	0.00	1	-2791.73	1	-320.36	1	1823.39	1
131	109	-70	Max	25.03	0.00	1	0.00	9	0.00	9	11931.70	9	-2978.15	1	3956.27	1
131	109	-70	Max	88.29	0.00	1	0.00	9	0.00	9	10400.60	9	-1848.15	1	3956.27	1
131	109	-70	Min.	25.03	0.00	9	0.00	1	0.00	1	2488.65	1	-12007.40	9	-1041.47	9
131	109	-70	Min.	88.29	0.00	9	0.00	1	0.00	1	957.56	1	-4998.94	18	-1041.47	9
131	150	109	Max	0.00	0.00	5	0.00	1	0.00	1	4511.71	18	1519.69	5	362.34	9
131	150	109	Max	72.19									1945.06	5		
131	150	109	Max	368.08	0.00	5	0.00	1	0.00	1	-1739.11	13	400.00	13	362.34	9
131	150	109	Min.	0.00	0.00	5	0.00	1	0.00	1	1078.46	5	-4070.70	13	-215.14	1
131	150	109	Min.	72.19									-792.83	5		
131	150	109	Min.	368.08	0.00	5	0.00	1	0.00	1	-5458.37	17	-5788.69	5	-215.14	1
131	115	150	Max	25.03	0.00	5	0.00	1	0.00	1	6680.12	9	1770.26	1	2225.30	1
131	115	150	Max	41.92									1711.65	5		
131	115	150	Max	42.80	0.00	5	0.00	1	0.00	1	6457.00	9	1711.65	5	2225.30	1
131	115	150	Min.	25.03	0.00	5	0.00	9	0.00	9	-439.68	1	-5230.49	9	-2215.39	9
131	115	150	Min.	41.92									-3169.12	5		
131	115	150	Min.	42.80	0.00	5	0.00	9	0.00	9	-662.80	1	-4102.28	13	-2215.39	9
131	121	115	Max	25.14	0.00	5	0.00	1	0.00	1	3748.22	9	1446.22	1	205.89	9
131	121	115	Max	340.57									1806.54	9		
131	121	115	Max	418.90	0.00	5	0.00	1	0.00	1	-947.98	9	1447.78	9	205.89	9
131	121	115	Min.	25.14	0.00	13	0.00	1	0.00	1	639.31	1	-4661.12	9	-75.72	1
131	121	115	Min.	342.53									-1316.90	13		
131	121	115	Min.	418.90	0.00	13	0.00	1	0.00	1	-4107.07	17	-4686.34	1	-75.72	1
131	125	121	Max	25.06	0.00	1	0.00	1	0.00	1	6613.57	18	435.63	1	133.22	9
131	125	121	Max	223.16									2044.24	19		
131	125	121	Max	419.02	0.00	1	0.00	1	0.00	1	-1762.14	9	918.65	9	133.22	9
131	125	121	Min.	25.06	0.00	1	0.00	1	0.00	1	2437.92	1	-5681.41	9	-166.78	1
131	125	121	Min.	310.25									-363.89	9		
131	125	121	Min.	419.02	0.00	1	0.00	1	0.00	1	-5517.96	17	-5168.50	1	-166.78	1
131	-88	125	Max	0.00	0.00	5	0.00	1	0.00	5	-5851.36	13	671.40	9	2218.60	9
131	-88	125	Max	0.47	0.00	5	0.00	1	0.00	5	-5852.65	13	641.29	9	2218.60	9
131	-88	125	Min.	0.00	0.00	13	0.00	9	0.00	5	-10251.50	20	-6670.25	1	-444.09	1
131	-88	125	Min.	0.47	0.00	13	0.00	9	0.00	13	-10253.20	20	-6706.36	1	-444.09	1
131	156	-88	Max	0.00	0.00	9	0.00	1	0.00	5	7347.57	18	545.01	1	179.12	9
131	156	-88	Max	163.89									2875.12	17		
131	156	-88	Max	361.39	0.00	9	0.00	1	0.00	5	-3596.59	9	-146.95	9	179.12	9
131	156	-88	Min.	0.00	0.00	1	0.00	1	0.00	5	3312.61	1	-4645.30	9	-39.19	1
131	156	-88	Min.	222.57									896.88	9		
131	156	-88	Min.	361.39	0.00	1	0.00	1	0.00	5	-7721.58	17	-6278.85	1	-39.19	1
131	134	156	Max	25.17	0.00	5	0.00	5	0.00	5	11527.40	18	-706.82	1	233.99	13
131	134	156	Max	57.14	0.00	5	0.00	5	0.00	5	10071.80	18	1059.42	1	233.99	13
131	134	156	Min.	25.17	0.00	13	0.00	13	0.00	13	5938.38	1	-6845.88	9	-1744.47	5
131	134	156	Min.	57.14	0.00	13	0.00	13	0.00	13	4974.15	1	-4095.50	9	-1744.47	5
131	140	134	Max	25.11	0.00	1	0.00	1	0.00	1	8657.40	18	272.94	1	280.67	9
131	140	134	Max	212.76									3384.95	17		
131	140	134	Max	418.75	0.00	1	0.00	1	0.00	1	-4451.27	9	-789.43	9	280.67	9
131	140	134	Min.	25.11	0.00	1	0.00	1	0.00	1	4005.54	1	-6629.47	9	80.65	1
131	140	134	Min.	157.94									954.63	1		
131	140	134	Min.	418.75	0.00	1	0.00	1	0.00	1	-9350.87	17	-7323.33	1	80.65	1
132	118	123	Max	20.00	0.00	1	0.00	1	0.00	1	4886.74	20	-268.33	1	150.56	9
132	118	123	Max	196.73									1744.71	19		
132	118	123	Max	402.70	0.00	1	0.00	1	0.00	1	-2683.29	9	-1097.05	9	150.56	9
132	118	123	Min.	20.00	0.00	1	0.00	1	0.00	1	2287.66	1	-2944.99	9	-92.60	1
132	118	123	Min.	158.27									596.99	1		

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132	118	123	Min.	402.70	0.00	1	0.00	1	0.00	1	-5590.75	19	-3996.23	19	-92.60	1
132	-87	123	Max	0.00	0.00	13	0.00	1	0.00	1	-1031.59	5	3703.36	17	555.20	9
132	-87	123	Max	146.65	0.00	13	0.00	1	0.00	1	-6071.39	5	-2822.43	1	555.20	9
132	-87	123	Min.	0.00	0.00	5	0.00	1	0.00	1	-2876.22	20	1878.66	9	-294.33	1
132	-87	123	Min.	146.65	0.00	5	0.00	1	0.00	1	-11336.10	20	-6740.29	20	-294.33	1
132	131	-87	Max	17.50	0.00	1	0.00	1	0.00	5	11407.80	19	-2885.78	9	-34.77	9
132	131	-87	Max	204.10									3828.75	17		
132	131	-87	Max	248.50	0.00	1	0.00	1	0.00	1	-837.95	1	3254.37	19	-34.77	9
132	131	-87	Min.	17.50	0.00	1	0.00	1	0.00	5	6101.85	9	-6878.95	19	-500.32	1
132	131	-87	Min.	222.33									2032.99	1		
132	131	-87	Min.	248.50	0.00	1	0.00	1	0.00	1	-2694.11	20	1532.98	9	-500.32	1
132	-91	131	Max	0.00	0.00	1	0.00	1	0.00	1	-2273.91	1	647.86	1	802.73	1
132	-91	131	Max	47.50	0.00	1	0.00	1	0.00	1	-3750.00	1	-871.85	1	802.73	1
132	-91	131	Min.	0.00	0.00	1	0.00	1	0.00	1	-5799.67	20	-1438.43	9	-783.34	9
132	-91	131	Min.	47.50	0.00	1	0.00	1	0.00	1	-8037.18	20	-4118.72	9	-783.34	9
132	137	-91	Max	15.00	0.00	1	0.00	1	0.00	5	6700.33	19	531.70	9	134.94	9
132	137	-91	Max	120.39									1758.43	20		
132	137	-91	Max	211.18	0.00	1	0.00	1	0.00	1	-2156.54	1	612.46	1	134.94	9
132	137	-91	Min.	15.00	0.00	1	0.00	1	0.00	5	2896.17	9	-2870.01	1	-67.54	1
132	137	-91	Min.	87.34									348.41	13		
132	137	-91	Min.	211.18	0.00	1	0.00	1	0.00	1	-5673.10	20	-1495.88	9	-67.54	1
134	126	-88	Max	20.79	0.00	1	0.00	5	0.00	5	3091.93	1	478.99	9	-144.85	9
134	126	-88	Max	222.65									876.56	1		
134	126	-88	Max	279.11	0.00	1	0.00	5	0.00	5	-863.18	1	633.02	1	-144.85	9
134	126	-88	Min.	20.79	0.00	9	0.00	5	0.00	5	913.17	9	-2247.44	1	-415.49	19
134	126	-88	Min.	222.65									-746.62	1		
134	126	-88	Min.	279.11	0.00	9	0.00	5	0.00	5	-3041.94	9	-2270.55	9	-415.49	19
134	126	127	Max	20.00	0.00	1	0.00	1	0.00	1	6601.21	18	338.23	1	1252.52	18
134	126	127	Max	138.06									1481.46	18		
134	126	127	Max	246.08	0.00	1	0.00	1	0.00	1	-2229.81	9	777.89	9	1252.52	18
134	126	127	Min.	20.00	0.00	1	0.00	1	0.00	1	2554.32	1	-3439.39	9	605.25	5
134	126	127	Min.	184.53									-254.23	9		
134	126	127	Min.	246.08	0.00	1	0.00	1	0.00	1	-6197.02	17	-3145.39	1	605.25	5
134	127	128	Max	25.28	0.00	1	0.00	5	0.00	5	4679.32	9	1303.26	1	-308.28	9
134	127	128	Max	218.94									1409.19	9		
134	127	128	Max	234.14	0.00	1	0.00	5	0.00	5	-364.79	9	1381.46	9	-308.28	9
134	127	128	Min.	25.28	0.00	9	0.00	5	0.00	5	381.07	1	-3112.32	9	-654.93	17
134	127	128	Min.	218.94									-2278.07	9		
134	127	128	Min.	234.14	0.00	9	0.00	5	0.00	5	-4663.03	1	-3180.16	1	-654.93	17
134	128	-86	Max	22.50	0.00	1	0.00	1	0.00	1	5970.74	19	80.09	1	1918.02	13
134	128	-86	Max	37.00	0.00	1	0.00	1	0.00	1	5921.73	19	466.75	1	1918.02	13
134	128	-86	Min.	22.50	0.00	1	0.00	9	0.00	9	2216.32	5	-2251.64	9	-745.53	5
134	128	-86	Min.	37.00	0.00	1	0.00	9	0.00	9	2178.62	5	-1575.77	9	-745.53	5
134	-86	-87	Max	0.00	0.00	1	0.00	5	0.00	1	1152.46	9	-78.17	1	-111.06	5
134	-86	-87	Max	363.12									404.84	12		
134	-86	-87	Max	366.16	0.00	1	0.00	5	0.00	5	200.45	9	743.48	9	-111.06	5
134	-86	-87	Min.	0.00	0.00	1	0.00	5	0.00	1	342.41	1	-1734.23	9	-457.06	20
134	-86	-87	Min.	350.97									-171.48	4		
134	-86	-87	Min.	366.16	0.00	1	0.00	5	0.00	5	-609.60	1	-568.17	1	-457.06	20
135	128	130	Max	17.50	0.00	1	0.00	1	0.00	1	3240.08	20	686.37	13	147.78	9
135	128	130	Max	53.55									809.78	13		
135	128	130	Max	228.50	0.00	1	0.00	1	0.00	1	-860.62	5	421.55	5	147.78	9
135	128	130	Min.	17.50	0.00	1	0.00	1	0.00	1	684.59	13	-1989.44	5	-115.70	1
135	128	130	Min.	53.55									-959.51	13		
135	128	130	Min.	228.50	0.00	1	0.00	1	0.00	1	-3501.57	19	-2096.06	13	-115.70	1
135	130	-96	Max	20.13	0.00	13	0.00	1	0.00	1	6157.47	20	580.79	5	168.36	9
135	130	-96	Max	145.94									1569.42	19		
135	130	-96	Max	276.07	0.00	13	0.00	1	0.00	1	-2332.05	13	552.24	13	168.36	9
135	130	-96	Min.	20.13	0.00	5	0.00	1	0.00	1	2384.61	5	-3650.55	13	-200.33	1
135	130	-96	Min.	95.17									-283.14	5		
135	130	-96	Min.	276.07	0.00	5	0.00	1	0.00	1	-6048.80	19	-3504.75	5	-200.33	1
136	157	156	Max	0.00	0.00	5	0.00	5	0.00	1	1873.73	17	365.37	5	-445.31	9
136	157	156	Max	196.99									1060.12	19		
136	157	156	Max	379.70	0.00	5	0.00	5	0.00	1	-1182.86	13	198.64	13	-445.31	9
136	157	156	Min.	0.00	0.00	5	0.00	5	0.00	1	685.33	5	-1581.15	13	-850.42	19
136	157	156	Min.	123.86									237.54	5		
136	157	156	Min.	379.70	0.00	5	0.00	5	0.00	1	-2724.34	18	-1797.86	5	-850.42	19
136	136	157	Max	30.20	0.00	1	0.00	9	0.00	9	12211.20	17	-960.67	1	8329.04	17
136	136	157	Max	48.14	0.00	1	0.00	9	0.00	9	12090.60	17	273.37	5	8329.04	17
136	136	157	Min.	30.20	0.00	1	0.00	1	0.00	1	6864.69	1	-3503.15	17	4294.07	13
136	136	157	Min.	48.14	0.00	1	0.00	1	0.00	1	6782.96	1	-1966.14	13	4294.07	13
137	-94	136	Max	0.00	0.00	1	0.00	5	0.00	1	-6368.94	9	401.07	13	4889.00	19
137	-94	136	Max	36.84	0.00	1	0.00	5	0.00	5	-6464.73	9	-1986.28	13	4889.00	19
137	-94	136	Min.	0.00	0.00	1	0.00	13	0.00	1	-11826.10	18	-2045.38	5	2113.95	5
137	-94	136	Min.	36.84	0.00	1	0.00	13	0.00	13	-11950.60	18	-5784.29	18	2113.95	5
137	-95	-94	Max	0.00	0.00	1	0.00	1	0.00	1	5213.12	17	471.27	5	-154.94	13
137	-95	-94	Max	128.14									2443.75	17		
137	-95	-94	Max	271.08	0.00	1	0.00	1	0.00	1	-2606.63	13	274.38	13	-154.94	13
137	-95	-94	Min.	0.00	0.00	1	0.00	1	0.00	1	2279.59	5	-1528.40	13	-475.63	17

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137	-95	-94	Min.	162.65								1059.74	13			
137	-95	-94	Min.	271.08	0.00	1	0.00	1	0.00	1	-5730.71	18	-2218.04	5	-475.63	17
137	158	-95	Max	10.00	0.00	1	0.00	9	0.00	9	7520.18	17	-874.80	5	409.30	5
137	158	-95	Max	56.92	0.00	1	0.00	9	0.00	13	5636.11	17	572.52	5	409.30	5
137	158	-95	Min.	10.00	0.00	1	0.00	1	0.00	1	3619.34	5	-3704.62	17	-849.30	13
137	158	-95	Min.	56.92	0.00	1	0.00	1	0.00	5	2488.06	5	-1255.07	13	-849.30	13
137	-96	158	Max	15.00	0.00	1	0.00	1	0.00	1	2420.79	1	944.13	9	243.43	13
137	-96	158	Max	22.21									953.20	9		
137	-96	158	Max	192.10	0.00	1	0.00	1	0.00	1	-1830.88	1	-639.95	1	243.43	13
137	-96	158	Min.	15.00	0.00	1	0.00	1	0.00	1	194.87	9	-1200.63	1	-81.30	5
137	-96	158	Min.	22.21									-771.34	9		
137	-96	158	Min.	192.10	0.00	1	0.00	1	0.00	1	-4920.04	18	-2608.64	18	-81.30	5
137	137	-96	Max	20.00	0.00	1	0.00	5	0.00	5	1291.42	9	1195.77	1	179.87	9
137	137	-96	Max	366.24									522.02	15		
137	137	-96	Max	386.06	0.00	1	0.00	5	0.00	5	339.68	9	1268.08	9	179.87	9
137	137	-96	Min.	20.00	0.00	1	0.00	5	0.00	5	-387.01	1	-1718.16	9	-132.24	1
137	137	-96	Min.	21.74									-766.36	7		
137	137	-96	Min.	386.06	0.00	1	0.00	5	0.00	5	-1338.76	1	-1963.74	1	-132.24	1
137	137	135	Max	20.34	0.00	5	0.00	5	0.00	5	3856.11	1	1926.18	9	-199.21	13
137	137	135	Max	24.37									815.21	15		
137	137	135	Max	206.46	0.00	5	0.00	5	0.00	5	1095.86	1	1766.11	1	-199.21	13
137	137	135	Min.	20.34	0.00	5	0.00	5	0.00	5	-1061.24	9	-2848.00	1	-395.63	20
137	137	135	Min.	24.37									-1229.79	15		
137	137	135	Min.	206.46	0.00	5	0.00	5	0.00	5	-3821.49	9	-2613.54	9	-395.63	20
137	135	-93	Max	15.05	0.00	5	0.00	1	0.00	5	1271.78	18	-626.77	9	742.76	1
137	135	-93	Max	383.74									487.22	18		
137	135	-93	Max	398.60	0.00	5	0.00	1	0.00	1	136.15	1	737.77	1	742.76	1
137	135	-93	Min.	15.05	0.00	5	0.00	1	0.00	5	587.95	9	-1857.23	18	94.07	9
137	135	-93	Min.	389.37									-78.82	11		
137	135	-93	Min.	398.60	0.00	5	0.00	1	0.00	1	-424.87	9	-314.04	9	94.07	9
138	-92	132	Max	0.00	0.00	1	0.00	5	0.00	1	-95.37	1	1600.08	1	458.13	1
138	-92	132	Max	45.00	0.00	1	0.00	5	0.00	5	-941.50	1	1313.23	1	458.13	1
138	-92	132	Min.	0.00	0.00	1	0.00	5	0.00	1	-4514.16	9	-1524.82	9	-1147.46	9
138	-92	132	Min.	45.00	0.00	1	0.00	5	0.00	5	-5360.29	9	-3693.01	9	-1147.46	9
138	135	-92	Max	20.00	0.00	1	0.00	1	0.00	1	5601.83	19	849.58	9	97.44	9
138	135	-92	Max	195.17									1305.90	2		
138	135	-92	Max	206.12	0.00	1	0.00	1	0.00	1	122.06	1	1620.65	1	97.44	9
138	135	-92	Min.	20.00	0.00	1	0.00	1	0.00	1	1352.85	9	-3426.29	1	-103.98	1
138	135	-92	Min.	191.73									-930.96	9		
138	135	-92	Min.	206.12	0.00	1	0.00	1	0.00	1	-3825.22	9	-1452.30	9	-103.98	1
138	141	135	Max	15.30	0.00	13	0.00	5	0.00	5	6513.22	19	1303.95	9	241.95	9
138	141	135	Max	151.55									2346.25	20		
138	141	135	Max	315.25	0.00	13	0.00	5	0.00	5	-3203.77	1	133.26	1	241.95	9
138	141	135	Min.	15.30	0.00	5	0.00	5	0.00	5	2508.29	9	-4136.23	1	-166.67	1
138	141	135	Min.	96.66									98.81	9		
138	141	135	Min.	315.25	0.00	5	0.00	5	0.00	5	-7618.58	20	-5024.05	9	-166.67	1
139	138	139	Max	15.18	0.00	9	0.00	1	0.00	1	8177.29	17	-2293.55	1	285.29	9
139	138	139	Max	267.75									4718.46	20		
139	138	139	Max	536.35	0.00	9	0.00	1	0.00	1	-5317.48	9	-3006.30	9	285.29	9
139	138	139	Min.	15.18	0.00	1	0.00	1	0.00	1	5027.05	1	-5625.69	17	-292.26	1
139	138	139	Min.	238.78									3027.58	1		
139	138	139	Min.	536.35	0.00	1	0.00	1	0.00	1	-8594.24	18	-6863.88	18	-292.26	1
140	162	157	Max	0.00	0.00	5	0.00	5	0.00	1	9635.71	18	-2175.44	5	-113.09	5
140	162	157	Max	222.29									5845.70	18		
140	162	157	Max	505.12	0.00	5	0.00	5	0.00	5	-5912.36	13	-4865.70	13	-113.09	5
140	162	157	Min.	0.00	0.00	5	0.00	5	0.00	1	5504.90	5	-4681.60	18	-413.16	13
140	162	157	Min.	217.58									3461.59	13		
140	162	157	Min.	505.12	0.00	5	0.00	5	0.00	5	-10216.70	17	-9172.87	17	-413.16	13
141	162	140	Max	0.00	0.00	5	0.00	20	0.00	5	1781.33	9	5107.71	18	1317.23	18
141	162	140	Max	30.36									5200.28	18		
141	162	140	Max	364.54	0.00	5	0.00	20	0.00	5	-3605.97	9	-1314.21	9	1317.23	18
141	162	140	Min.	0.00	0.00	5	0.00	19	0.00	5	-207.40	1	1999.54	9	504.22	1
141	162	140	Min.	12.98									2218.38	9		
141	162	140	Min.	364.54	0.00	5	0.00	19	0.00	5	-6415.89	18	-6234.93	1	504.22	1
141	144	162	Max	20.11	0.00	5	0.00	5	0.00	5	13485.10	19	-3890.39	5	-1649.45	5
141	144	162	Max	145.06	0.00	5	0.00	5	0.00	5	10240.80	19	5415.79	18	-1649.45	5
141	144	162	Min.	20.11	0.00	5	0.00	5	0.00	5	7778.30	5	-9473.27	17	-3371.19	19
141	144	162	Min.	145.06	0.00	5	0.00	5	0.00	5	5439.75	5	2359.52	9	-3371.19	19
142	161	145	Max	0.46	0.00	1	0.00	1	0.00	1	5333.26	5	3986.30	13	203.68	1
142	161	145	Max	139.92									40.83	27		
142	161	145	Max	149.21	0.00	1	0.00	1	0.00	1	4928.95	5	2848.62	5	203.68	1
142	161	145	Min.	0.46	0.00	1	0.00	1	0.00	1	-4193.11	13	-4787.48	5	-288.40	9
142	161	145	Min.	136.34									37.06	31		
142	161	145	Min.	149.21	0.00	1	0.00	1	0.00	1	-4597.43	13	-2548.44	13	-288.40	9
143	-106	144	Max	0.00	0.00	13	0.00	5	0.00	5	771.17	9	741.57	13	-8.96	13
143	-106	144	Max	115.48	0.00	13	0.00	5	0.00	5	-937.43	9	141.36	9	-8.96	13
143	-106	144	Min.	0.00	0.00	5	0.00	5	0.00	5	-2326.54	1	-931.84	5	-1216.52	5
143	-106	144	Min.	115.48	0.00	5	0.00	5	0.00	5	-4035.14	1	-4097.67	1	-1216.52	5
143	146	-106	Max	15.00	0.00	13	0.00	1	0.00	1	2795.49	9	1155.60	1	140.40	5

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143	146	-106	Max	51.87								1219.49	1			
143	146	-106	Max	280.08	0.00	13	0.00	1	0.00	1	297.11	9	1325.19	13	140.40	5
143	146	-106	Min.	15.00	0.00	5	0.00	1	0.00	1	342.55	1	-2802.35	9	-292.10	13
143	146	-106	Min.	51.87									-1258.35	1		
143	146	-106	Min.	280.08	0.00	5	0.00	1	0.00	1	-2155.83	1	-1276.97	5	-292.10	13
143	145	146	Max	15.00	0.00	5	0.00	1	0.00	1	3029.47	9	2509.07	1	347.67	13
143	145	146	Max	25.81									1264.76	7		
143	145	146	Max	291.86	0.00	5	0.00	1	0.00	1	437.55	9	1620.00	9	347.67	13
143	145	146	Min.	15.00	0.00	5	0.00	1	0.00	1	-724.98	1	-3188.48	9	-396.92	5
143	145	146	Min.	33.09									-2113.14	10		
143	145	146	Min.	291.86	0.00	5	0.00	1	0.00	1	-3316.89	1	-3080.03	1	-396.92	5
149	132	-89	Max	17.50	0.00	1	0.00	5	0.00	5	4091.51	18	-698.53	9	869.97	1
149	132	-89	Max	201.07	0.00	1	0.00	5	0.00	5	3471.06	18	3576.54	19	869.97	1
149	132	-89	Min.	17.50	0.00	1	0.00	5	0.00	5	1663.33	9	-3411.91	1	50.66	9
149	132	-89	Min.	201.07	0.00	1	0.00	5	0.00	5	1186.05	9	1839.61	9	50.66	9
149	-89	133	Max	0.00	0.00	1	0.00	5	0.00	5	-345.57	9	3571.36	19	-133.57	9
149	-89	133	Max	177.53	0.00	1	0.00	5	0.00	5	-3792.31	9	-1797.30	9	-133.57	9
149	-89	133	Min.	0.00	0.00	1	0.00	5	0.00	5	-2189.82	1	1756.34	9	-1456.37	1
149	-89	133	Min.	177.53	0.00	1	0.00	5	0.00	5	-7836.18	17	-5278.90	17	-1456.37	1
149	133	155	Max	20.00	0.00	1	0.00	5	0.00	5	9284.94	18	-4260.73	9	326.11	1
149	133	155	Max	306.47	0.00	1	0.00	5	0.00	5	540.90	1	4883.57	19	326.11	1
149	133	155	Min.	20.00	0.00	1	0.00	5	0.00	5	5208.28	9	-8538.43	18	-654.73	9
149	133	155	Min.	306.47	0.00	1	0.00	5	0.00	5	-353.30	9	2656.12	9	-654.73	9
149	155	-90	Max	0.00	0.00	1	0.00	1	0.00	5	-1239.42	9	4505.45	19	-320.26	9
149	155	-90	Max	250.00	0.00	1	0.00	1	0.00	1	-1889.42	9	-1309.32	9	-320.26	9
149	155	-90	Min.	0.00	0.00	1	0.00	1	0.00	5	-2636.71	17	2448.49	9	-646.39	18
149	155	-90	Min.	250.00	0.00	1	0.00	1	0.00	1	-3481.71	17	-3147.84	17	-646.39	18
201	206	207	Max	26.94	0.00	1	0.00	1	0.00	1	1805.83	9	1403.92	1	-91.62	13
201	206	207	Max	418.21									374.94	4		
201	206	207	Max	449.92	0.00	1	0.00	1	0.00	1	706.08	9	2028.50	9	-91.62	13
201	206	207	Min.	26.94	0.00	1	0.00	1	0.00	1	-410.13	1	-3284.00	9	-243.58	5
201	206	207	Min.	418.21									-1276.30	4		
201	206	207	Min.	449.92	0.00	1	0.00	1	0.00	1	-1509.88	1	-2656.77	1	-243.58	5
201	207	208	Max	20.00	0.00	1	0.00	1	0.00	1	3421.59	18	456.74	1	58.40	5
201	207	208	Max	349.91									1647.56	9		
201	207	208	Max	474.84	0.00	1	0.00	1	0.00	1	-1245.10	9	869.11	9	58.40	5
201	207	208	Min.	20.00	0.00	1	0.00	1	0.00	1	1420.25	1	-3804.44	9	1.65	13
201	207	208	Min.	349.91									-12.27	9		
201	207	208	Min.	474.84	0.00	1	0.00	1	0.00	1	-3198.19	17	-3470.82	1	1.65	13
202	212	-179	Max	25.00	0.00	1	0.00	1	0.00	1	6695.78	17	-3314.92	9	-51.60	9
202	212	-179	Max	334.32									4177.14	18		
202	212	-179	Max	593.00	0.00	1	0.00	1	0.00	1	-4509.50	1	-2309.26	1	-51.60	9
202	212	-179	Min.	25.00	0.00	1	0.00	1	0.00	1	4170.00	9	-6826.48	17	-249.92	1
202	212	-179	Min.	310.52									2705.18	9		
202	212	-179	Min.	593.00	0.00	1	0.00	1	0.00	1	-7216.95	18	-4911.35	18	-249.92	1
202	212	213	Max	25.00	0.00	1	0.00	1	0.00	1	3288.85	18	130.81	1	154.12	9
202	212	213	Max	347.62									1172.13	9		
202	212	213	Max	449.92	0.00	1	0.00	1	0.00	1	-1013.92	9	653.50	9	154.12	9
202	212	213	Min.	25.00	0.00	1	0.00	1	0.00	1	1325.81	1	-3985.88	9	-23.17	1
202	212	213	Min.	347.62									-465.97	9		
202	212	213	Min.	449.92	0.00	1	0.00	1	0.00	1	-2885.65	1	-3183.26	1	-23.17	1
202	213	214	Max	20.00	0.00	1	0.00	1	0.00	1	3459.57	18	-179.84	1	86.42	9
202	213	214	Max	262.43									1501.93	18		
202	213	214	Max	474.84	0.00	1	0.00	1	0.00	1	-1370.74	9	515.54	9	86.42	9
202	213	214	Min.	20.00	0.00	1	0.00	1	0.00	1	1646.00	1	-3502.14	9	-123.62	1
202	213	214	Min.	335.60									277.68	9		
202	213	214	Min.	474.84	0.00	1	0.00	1	0.00	1	-3080.24	17	-2945.48	1	-123.62	1
203	218	-180	Max	17.50	0.00	1	0.00	1	0.00	1	3237.65	17	-371.20	9	436.14	9
203	218	-180	Max	319.52									1224.25	1		
203	218	-180	Max	343.08	0.00	1	0.00	1	0.00	1	-233.43	1	1196.75	1	436.14	9
203	218	-180	Min.	17.50	0.00	1	0.00	1	0.00	1	1460.77	9	-3296.33	1	-54.91	1
203	218	-180	Min.	319.52									-252.45	1		
203	218	-180	Min.	343.08	0.00	1	0.00	1	0.00	1	-1766.08	9	-868.32	9	-54.91	1
203	218	-181	Max	17.50	0.00	1	0.00	1	0.00	1	6561.44	18	-1222.31	1	-39.54	5
203	218	-181	Max	208.81									2191.68	19		
203	218	-181	Max	240.23	0.00	1	0.00	1	0.00	1	171.01	9	2031.85	18	-39.54	5
203	218	-181	Min.	17.50	0.00	1	0.00	1	0.00	1	3563.95	1	-4323.47	9	-552.57	13
203	218	-181	Min.	235.78									968.50	1		
203	218	-181	Min.	240.23	0.00	1	0.00	1	0.00	1	-1605.85	1	901.28	5	-552.57	13
203	-181	219	Max	0.00	0.00	1	0.00	1	0.00	1	1489.39	9	1935.04	1	726.11	9
203	-181	219	Max	3.77									1878.22	19		
203	-181	219	Max	188.27	0.00	1	0.00	1	0.00	1	-2880.37	9	-653.58	9	726.11	9
203	-181	219	Min.	0.00	0.00	1	0.00	1	0.00	1	-1219.67	1	609.86	9	-165.70	1
203	-181	219	Min.	0.47									1023.07	16		
203	-181	219	Min.	188.27	0.00	1	0.00	1	0.00	1	-6249.02	17	-4520.50	1	-165.70	1
203	219	-182	Max	17.50	0.00	1	0.00	5	0.00	20	3412.27	18	-774.70	1	109.54	1
203	219	-182	Max	255.98									1117.99	19		
203	219	-182	Max	264.16	0.00	1	0.00	5	0.00	5	443.90	9	1290.84	1	109.54	1
203	219	-182	Min.	17.50	0.00	1	0.00	13	0.00	19	1832.46	1	-3314.31	9	-574.55	9

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203	219	-182	Min.	262.14									502.09	12		
203	219	-182	Min.	264.16	0.00	1	0.00	13	0.00	13	-612.18	1	234.95	9	-574.55	9
203	-182	249	Max	0.00	0.00	1	0.00	1	0.00	1	1919.95	9	1972.99	1	527.79	9
203	-182	249	Max	60.78									1320.57	19		
203	-182	249	Max	239.84	0.00	1	0.00	1	0.00	1	-457.18	9	1243.40	9	527.79	9
203	-182	249	Min.	0.00	0.00	1	0.00	1	0.00	1	-694.66	1	-540.64	9	-473.12	1
203	-182	249	Min.	4.62									-74.48	14		
203	-182	249	Min.	239.84	0.00	1	0.00	1	0.00	1	-3071.79	1	-2573.67	1	-473.12	1
204	221	-186	Max	24.71	0.00	1	0.00	1	0.00	1	2577.58	18	-143.48	1	-379.89	13
204	221	-186	Max	337.45									1038.03	13		
204	221	-186	Max	338.08	0.00	1	0.00	1	0.00	1	72.07	9	1134.81	9	-379.89	13
204	221	-186	Min.	24.71	0.00	1	0.00	1	0.00	1	1081.67	1	-2757.29	9	-956.10	20
204	221	-186	Min.	324.43									-427.71	1		
204	221	-186	Min.	338.08	0.00	1	0.00	1	0.00	1	-1315.86	1	-600.68	1	-956.10	20
205	223	-187	Max	20.00	0.00	1	0.00	1	0.00	1	1328.05	1	771.73	9	115.57	13
205	223	-187	Max	342.43									360.86	8		
205	223	-187	Max	343.08	0.00	1	0.00	1	0.00	1	488.05	1	1110.76	1	115.57	13
205	223	-187	Min.	20.00	0.00	1	0.00	1	0.00	1	-199.25	9	-1823.00	1	-239.75	5
205	223	-187	Min.	342.67									-653.10	12		
205	223	-187	Min.	343.08	0.00	1	0.00	1	0.00	1	-1039.25	9	-1228.96	9	-239.75	5
205	223	224	Max	20.00	0.00	1	0.00	1	0.00	1	4518.69	18	-589.14	1	235.97	9
205	223	224	Max	212.25									1752.52	17		
205	223	224	Max	428.50	0.00	1	0.00	1	0.00	1	-2833.38	9	-1266.91	9	235.97	9
205	223	224	Min.	20.00	0.00	1	0.00	1	0.00	1	2491.73	1	-2958.44	9	-74.07	1
205	223	224	Min.	176.27									871.43	1		
205	223	224	Min.	428.50	0.00	1	0.00	1	0.00	1	-5000.90	17	-3676.31	1	-74.07	1
205	224	251	Max	17.50	0.00	1	0.00	1	0.00	1	6058.61	18	-2239.48	1	111.86	13
205	224	251	Max	282.29									2883.85	18		
205	224	251	Max	504.00	0.00	1	0.00	1	0.00	1	-3028.01	9	-881.50	9	111.86	13
205	224	251	Min.	17.50	0.00	1	0.00	1	0.00	1	3664.34	1	-5137.35	18	-15.60	5
205	224	251	Min.	309.40									1798.41	9		
205	224	251	Min.	504.00	0.00	1	0.00	1	0.00	1	-5110.25	17	-2982.20	1	-15.60	5
206	230	231	Max	17.50	0.00	1	0.00	19	0.00	19	1100.20	9	692.58	1	189.22	13
206	230	231	Max	379.88									545.24	6		
206	230	231	Max	383.16	0.00	1	0.00	19	0.00	19	149.49	9	808.30	9	189.22	13
206	230	231	Min.	17.50	0.00	1	0.00	20	0.00	20	5.54	1	-1477.11	9	9.48	5
206	230	231	Min.	379.88									-749.13	6		
206	230	231	Min.	383.16	0.00	1	0.00	20	0.00	20	-945.17	1	-1025.97	1	9.48	5
206	231	232	Max	20.00	0.00	1	0.00	1	0.00	20	1157.40	9	1554.33	1	-106.40	9
206	231	232	Max	204.36	0.00	1	0.00	1	0.00	1	678.07	9	579.64	9	-106.40	9
206	231	232	Min.	20.00	0.00	1	0.00	9	0.00	19	-1668.94	1	-1112.34	9	-426.31	1
206	231	232	Min.	204.36	0.00	1	0.00	9	0.00	9	-2148.27	1	-1964.37	1	-426.31	1
206	232	-193	Max	17.50	0.00	1	0.00	9	0.00	9	3117.41	18	-884.48	9	671.15	1
206	232	-193	Max	201.07	0.00	1	0.00	9	0.00	9	2496.96	18	2549.54	19	671.15	1
206	232	-193	Min.	17.50	0.00	1	0.00	1	0.00	1	1534.83	9	-2608.48	1	18.72	9
206	232	-193	Min.	201.07	0.00	1	0.00	1	0.00	1	1057.56	9	1460.41	9	18.72	9
206	-193	233	Max	0.00	0.00	1	0.00	9	0.00	1	-359.40	9	2543.41	19	-249.05	9
206	-193	233	Max	177.53	0.00	1	0.00	9	0.00	9	-3145.22	9	-1541.22	9	-249.05	9
206	-193	233	Min.	0.00	0.00	1	0.00	1	0.00	1	-1767.60	1	1452.09	9	-1288.23	1
206	-193	233	Min.	177.53	0.00	1	0.00	1	0.00	1	-5594.05	17	-3785.09	17	-1288.23	1
206	233	253	Max	20.00	0.00	1	0.00	1	0.00	1	6728.49	18	-3429.68	9	328.60	1
206	233	253	Max	306.47	0.00	1	0.00	1	0.00	1	494.58	1	3746.27	19	328.60	1
206	233	253	Min.	20.00	0.00	1	0.00	1	0.00	1	4276.08	9	-6141.24	18	-374.34	9
206	233	253	Min.	306.47	0.00	1	0.00	1	0.00	1	-219.05	9	2355.77	9	-374.34	9
206	253	-194	Max	0.00	0.00	1	0.00	19	0.00	1	-960.89	9	3241.87	19	-60.97	1
206	253	-194	Max	250.00	0.00	1	0.00	19	0.00	1	-1610.89	9	-1016.90	9	-60.97	1
206	253	-194	Min.	0.00	0.00	1	0.00	20	0.00	9	-1800.43	17	2068.40	9	-328.41	9
206	253	-194	Min.	250.00	0.00	1	0.00	20	0.00	9	-2645.43	17	-2319.87	17	-328.41	9
208	242	241	Max	20.00	0.00	1	0.00	1	0.00	1	2590.98	9	296.90	1	-50.62	9
208	242	241	Max	370.52									973.52	2		
208	242	241	Max	373.53	0.00	1	0.00	1	0.00	1	460.93	9	1855.73	9	-50.62	9
208	242	241	Min.	20.00	0.00	1	0.00	1	0.00	1	343.68	1	-3539.61	9	-150.47	1
208	242	241	Min.	370.52									-1758.31	2		
208	242	241	Min.	373.53	0.00	1	0.00	1	0.00	1	-1786.36	1	-2253.85	1	-150.47	1
208	242	257	Max	20.00	0.00	1	0.00	1	0.00	1	5318.80	19	-2806.66	9	-265.88	9
208	242	257	Max	341.88									3138.76	20		
208	242	257	Max	556.47	0.00	1	0.00	1	0.00	1	-2246.54	1	30.54	1	-265.88	9
208	242	257	Min.	20.00	0.00	1	0.00	1	0.00	1	3516.88	9	-5469.69	19	-538.45	17
208	242	257	Min.	326.28									2047.05	1		
208	242	257	Min.	556.47	0.00	1	0.00	1	0.00	1	-3545.00	20	-953.07	9	-538.45	17
209	243	258	Max	20.00	0.00	1	0.00	17	0.00	17	2300.56	1	1411.37	9	101.86	9
209	243	258	Max	24.21									1411.94	9		
209	243	258	Max	379.84	0.00	1	0.00	17	0.00	17	-20.01	1	1389.94	1	101.86	9
209	243	258	Min.	20.00	0.00	1	0.00	1	0.00	1	27.31	9	-2704.92	1	-92.97	1
209	243	258	Min.	24.21									-2119.93	9		
209	243	258	Min.	379.84	0.00	1	0.00	1	0.00	1	-2293.26	9	-2673.96	9	-92.97	1
210	236	243	Max	17.50	0.00	1	0.00	1	0.00	1	3199.47	5	870.82	13	99.56	9
210	236	243	Max	80.57									1142.15	13		
210	236	243	Max	318.98	0.00	1	0.00	1	0.00	1	-1227.42	5	547.96	5	99.56	9

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210	236	243	Min.	17.50	0.00	1	0.00	1	0.00	1	846.37	13	-2686.06	5	-106.37	1
210	236	243	Min.	80.57									-631.53	13		
210	236	243	Min.	318.98	0.00	1	0.00	1	0.00	1	-3580.52	13	-2989.60	13	-106.37	1
210	243	-209	Max	15.00	0.00	1	0.00	5	0.00	1	2642.15	5	412.21	13	892.59	1
210	243	-209	Max	169.92	0.00	1	0.00	5	0.00	1	1453.89	5	842.51	5	892.59	1
210	243	-209	Min.	15.00	0.00	1	0.00	5	0.00	1	143.20	13	-2278.38	5	-442.69	9
210	243	-209	Min.	169.92	0.00	1	0.00	5	0.00	1	-1045.06	13	-338.43	13	-442.69	9
211	226	-197	Max	15.00	0.00	1	0.00	1	0.00	1	3116.50	20	-1319.45	13	180.97	9
211	226	-197	Max	296.31									1733.24	17		
211	226	-197	Max	529.60	0.00	1	0.00	1	0.00	1	-2300.40	5	-940.62	5	180.97	9
211	226	-197	Min.	15.00	0.00	1	0.00	1	0.00	1	1884.33	13	-3279.71	20	14.74	1
211	226	-197	Min.	260.06									1100.56	13		
211	226	-197	Min.	529.60	0.00	1	0.00	1	0.00	1	-3677.07	19	-2570.05	13	14.74	1
212	-186	220	Max	0.00	0.00	1	0.00	1	0.00	1	-2342.08	9	1453.12	17	903.90	9
212	-186	220	Max	117.70	0.00	1	0.00	1	0.00	1	-4652.81	9	-3179.71	13	903.90	9
212	-186	220	Min.	0.00	0.00	1	0.00	9	0.00	9	-4497.08	17	610.25	9	-579.06	1
212	-186	220	Min.	117.70	0.00	1	0.00	9	0.00	9	-7881.06	17	-5866.66	20	-579.06	1
212	227	-186	Max	15.00	0.00	1	0.00	1	0.00	1	8282.82	19	-3350.16	5	52.94	1
212	227	-186	Max	248.33									3467.63	17		
212	227	-186	Max	403.88	0.00	1	0.00	1	0.00	1	-2121.95	13	823.85	13	52.94	1
212	227	-186	Min.	15.00	0.00	1	0.00	1	0.00	1	5310.35	5	-6164.57	19	-262.22	9
212	227	-186	Min.	251.24									2233.07	9		
212	227	-186	Min.	403.88	0.00	1	0.00	1	0.00	1	-3623.16	20	-112.00	5	-262.22	9
212	227	-198	Max	15.00	0.00	1	0.00	18	0.00	18	1224.14	5	-58.57	13	17.17	9
212	227	-198	Max	485.81									724.30	5		
212	227	-198	Max	529.60	0.00	1	0.00	18	0.00	18	-113.83	5	699.38	5	17.17	9
212	227	-198	Min.	15.00	0.00	1	0.00	17	0.00	17	501.80	13	-2157.53	5	-301.74	1
212	227	-198	Min.	485.81									-439.99	5		
212	227	-198	Min.	529.60	0.00	1	0.00	17	0.00	17	-836.16	13	-918.94	13	-301.74	1
213	206	-177	Max	30.22	0.00	1	0.00	18	0.00	18	5673.29	20	-1155.76	5	166.12	9
213	206	-177	Max	218.93									1678.42	17		
213	206	-177	Max	331.88	0.00	1	0.00	18	0.00	18	-1288.18	13	898.06	13	166.12	9
213	206	-177	Min.	30.22	0.00	1	0.00	17	0.00	17	3145.70	5	-3781.81	13	-249.62	1
213	206	-177	Min.	258.78									698.17	13		
213	206	-177	Min.	331.88	0.00	1	0.00	17	0.00	17	-2983.65	19	-839.31	5	-249.62	1
213	-177	212	Max	0.00	0.00	1	0.00	9	0.00	9	-2905.85	9	875.87	9	1805.83	1
213	-177	212	Max	45.74	0.00	1	0.00	9	0.00	9	-3704.99	9	-636.58	9	1805.83	1
213	-177	212	Min.	0.00	0.00	1	0.00	1	0.00	1	-6037.09	19	-1418.94	1	-288.00	9
213	-177	212	Min.	45.74	0.00	1	0.00	1	0.00	1	-7204.92	19	-4035.36	1	-288.00	9
213	212	-181	Max	17.50	0.00	1	0.00	18	0.00	18	2255.51	9	-710.72	1	998.43	9
213	212	-181	Max	231.00	0.00	1	0.00	18	0.00	18	1700.41	9	1262.45	9	998.43	9
213	212	-181	Min.	17.50	0.00	1	0.00	17	0.00	17	559.05	1	-2960.70	9	-769.99	1
213	212	-181	Min.	231.00	0.00	1	0.00	17	0.00	17	3.95	1	-109.93	1	-769.99	1
214	219	224	Max	20.00	0.00	1	0.00	1	0.00	1	4908.60	20	28.35	1	172.79	9
214	219	224	Max	198.15									1853.51	19		
214	219	224	Max	395.20	0.00	1	0.00	1	0.00	1	-2694.07	9	-490.09	9	172.79	9
214	219	224	Min.	20.00	0.00	1	0.00	1	0.00	1	2382.95	1	-3440.10	9	20.77	1
214	219	224	Min.	148.45									659.40	1		
214	219	224	Min.	395.20	0.00	1	0.00	1	0.00	1	-5333.62	19	-4089.03	1	20.77	1
214	224	-193	Max	25.00	0.00	1	0.00	1	0.00	1	5166.46	20	-1316.94	1	268.25	9
214	224	-193	Max	242.32									1781.88	19		
214	224	-193	Max	413.64	0.00	1	0.00	1	0.00	1	-2182.03	9	-274.85	9	268.25	9
214	224	-193	Min.	25.00	0.00	1	0.00	1	0.00	1	2981.03	1	-3887.21	9	-270.09	1
214	224	-193	Min.	208.21									915.95	1		
214	224	-193	Min.	413.64	0.00	1	0.00	1	0.00	1	-3994.85	19	-1952.30	1	-270.09	1
215	-196	233	Max	0.00	0.00	1	0.00	1	0.00	5	2890.65	19	2825.74	20	274.38	9
215	-196	233	Max	57.86									3668.91	17		
215	-196	233	Max	252.62	0.00	1	0.00	1	0.00	5	-5593.26	1	-2079.73	1	274.38	9
215	-196	233	Min.	0.00	0.00	1	0.00	1	0.00	5	1180.66	9	1564.36	1	-81.31	1
215	-196	233	Min.	80.55									2255.44	1		
215	-196	233	Min.	252.62	0.00	1	0.00	1	0.00	5	-9381.19	20	-5427.32	20	-81.31	1
215	239	-196	Max	15.00	0.00	1	0.00	5	0.00	5	9830.73	19	-2778.76	9	172.86	9
215	239	-196	Max	155.06	0.00	1	0.00	5	0.00	5	3067.13	19	3312.35	17	172.86	9
215	239	-196	Min.	15.00	0.00	1	0.00	13	0.00	13	5976.14	9	-5720.83	19	-464.87	1
215	239	-196	Min.	155.06	0.00	1	0.00	13	0.00	13	1389.17	9	2111.87	1	-464.87	1
215	239	242	Max	15.00	0.00	1	0.00	5	0.00	5	5969.18	9	115.32	1	240.34	9
215	239	242	Max	166.38	0.00	1	0.00	5	0.00	5	3679.78	9	2727.52	9	240.34	9
215	239	242	Min.	15.00	0.00	1	0.00	5	0.00	5	-982.75	1	-4575.32	9	81.88	1
215	239	242	Min.	166.38	0.00	1	0.00	5	0.00	5	-3272.16	1	-3107.58	1	81.88	1
216	203	207	Max	15.00	0.00	1	0.00	1	0.00	1	2933.09	9	1649.59	1	209.85	1
216	203	207	Max	15.51									806.16	7		
216	203	207	Max	219.38	0.00	1	0.00	1	0.00	1	-245.82	9	896.98	9	209.85	1
216	203	207	Min.	15.00	0.00	1	0.00	1	0.00	1	-917.19	1	-1974.42	9	-206.29	9
216	203	207	Min.	19.00									-1403.94	14		
216	203	207	Min.	219.38	0.00	1	0.00	1	0.00	1	-4096.10	1	-3370.63	1	-206.29	9
216	207	213	Max	17.50	0.00	1	0.00	1	0.00	1	8829.17	20	-1719.31	1	47.81	9
216	207	213	Max	199.06									3093.26	20		
216	207	213	Max	377.62	0.00	1	0.00	1	0.00	1	-5008.63	9	-1532.71	9	47.81	9
216	207	213	Min.	17.50	0.00	1	0.00	1	0.00	1	5075.94	1	-4922.09	20	-181.91	1

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216	207	213	Min.	225.66								1789.44	9			
216	207	213	Min.	377.62	0.00	1	0.00	1	0.00	1	-8733.14	19	-4822.96	1	-181.91	1
216	213	-182	Max	17.50	0.00	1	0.00	18	0.00	18	2379.27	9	-252.53	1	979.16	9
216	213	-182	Max	231.00	0.00	1	0.00	18	0.00	18	1824.17	9	1098.83	9	979.16	9
216	213	-182	Min.	17.50	0.00	1	0.00	17	0.00	17	124.58	1	-3388.35	9	-885.74	1
216	213	-182	Min.	231.00	0.00	1	0.00	17	0.00	17	-430.52	1	-579.15	1	-885.74	1
217	251	249	Max	15.00	0.00	1	0.00	1	0.00	1	8138.83	19	-1893.04	9	-86.29	1
217	251	249	Max	220.35									3062.70	19		
217	251	249	Max	405.20	0.00	1	0.00	1	0.00	1	-4110.63	1	-797.77	1	-86.29	1
217	251	249	Min.	15.00	0.00	1	0.00	1	0.00	1	4645.15	9	-5293.73	19	-245.44	20
217	251	249	Min.	252.13									1674.72	1		
217	251	249	Min.	405.20	0.00	1	0.00	1	0.00	1	-7373.15	20	-4276.27	9	-245.44	20
217	251	253	Max	15.00	0.00	1	0.00	1	0.00	1	4205.95	20	-2338.78	1	509.54	18
217	251	253	Max	284.60									1019.39	17		
217	251	253	Max	413.64	0.00	1	0.00	1	0.00	1	-1053.35	9	194.49	9	509.54	18
217	251	253	Min.	15.00	0.00	1	0.00	1	0.00	1	2601.68	1	-4637.91	20	214.01	1
217	251	253	Min.	262.50									594.75	1		
217	251	253	Min.	413.64	0.00	1	0.00	1	0.00	1	-1959.75	19	-538.13	1	214.01	1
219	208	205	Max	20.00	0.00	1	0.00	1	0.00	1	5739.63	1	3497.04	9	56.00	1
219	208	205	Max	177.91									-60.09	31		
219	208	205	Max	211.88	0.00	1	0.00	1	0.00	1	4583.53	1	4975.15	1	56.00	1
219	208	205	Min.	20.00	0.00	1	0.00	1	0.00	1	-4062.97	9	-4929.20	1	-69.59	9
219	208	205	Min.	144.55									-252.06	20		
219	208	205	Min.	211.88	0.00	1	0.00	1	0.00	1	-5219.07	9	-5408.46	9	-69.59	9
219	214	208	Max	20.00	0.00	1	0.00	1	0.00	1	5588.69	1	1824.09	9	125.72	9
219	214	208	Max	107.09									2649.47	9		
219	214	208	Max	375.12	0.00	1	0.00	1	0.00	1	-2056.48	1	1064.95	1	125.72	9
219	214	208	Min.	20.00	0.00	1	0.00	1	0.00	1	1882.37	9	-5213.00	1	-107.01	1
219	214	208	Min.	107.09									-499.62	9		
219	214	208	Min.	375.12	0.00	1	0.00	1	0.00	1	-5762.79	9	-5072.13	9	-107.01	1
219	250	214	Max	14.97	0.00	1	0.00	1	0.00	1	3354.36	1	1224.05	9	209.70	9
219	250	214	Max	159.46									-399.61	31		
219	250	214	Max	210.56	0.00	1	0.00	1	0.00	1	2130.80	1	2169.29	1	209.70	9
219	250	214	Min.	14.97	0.00	9	0.00	1	0.00	1	-1695.21	9	-3211.98	1	-209.22	1
219	250	214	Min.	145.71									-633.78	20		
219	250	214	Min.	210.56	0.00	9	0.00	1	0.00	1	-2918.77	9	-3279.72	9	-209.22	1
219	252	250	Max	15.00	0.00	1	0.00	1	0.00	1	4061.42	1	626.95	9	-5.89	13
219	252	250	Max	294.65									1963.50	1		
219	252	250	Max	405.20	0.00	1	0.00	1	0.00	1	-1562.29	1	1102.25	1	-5.89	13
219	252	250	Min.	15.00	0.00	1	0.00	1	0.00	1	1553.22	9	-3805.41	1	-93.19	5
219	252	250	Min.	294.65									-247.12	1		
219	252	250	Min.	405.20	0.00	1	0.00	1	0.00	1	-4070.49	9	-4316.12	9	-93.19	5
219	229	252	Max	20.67	0.00	1	0.00	1	0.00	1	4798.34	1	2701.84	9	190.08	9
219	229	252	Max	22.37									1786.66	10		
219	229	252	Max	309.16	0.00	1	0.00	1	0.00	1	710.39	1	2233.14	1	190.08	9
219	229	252	Min.	20.67	0.00	1	0.00	1	0.00	1	-558.53	9	-5742.32	1	10.05	1
219	229	252	Min.	22.37									-3650.89	10		
219	229	252	Min.	309.16	0.00	1	0.00	1	0.00	1	-4646.48	9	-4776.99	9	10.05	1
219	-194	229	Max	0.00	0.00	1	0.00	13	0.00	5	-4254.05	1	1964.14	1	-748.10	9
219	-194	229	Max	69.84	0.00	1	0.00	13	0.00	13	-5227.50	1	-1349.40	1	-748.10	9
219	-194	229	Min.	0.00	0.00	1	0.00	5	0.00	5	-7867.77	20	-1983.69	9	-1979.28	17
219	-194	229	Min.	69.84	0.00	1	0.00	5	0.00	5	-9238.01	20	-6972.24	9	-1979.28	17
219	238	-194	Max	20.00	0.00	1	0.00	1	0.00	1	8458.56	19	-1420.06	9	341.70	18
219	238	-194	Max	266.13									3632.46	18		
219	238	-194	Max	420.12	0.00	1	0.00	1	0.00	1	-2246.53	1	1815.94	1	341.70	18
219	238	-194	Min.	20.00	0.00	1	0.00	1	0.00	1	4527.92	9	-8116.93	1	173.95	1
219	238	-194	Min.	211.17									1617.70	9		
219	238	-194	Min.	420.12	0.00	1	0.00	1	0.00	1	-5236.46	20	-2224.68	9	173.95	1
219	257	238	Max	0.00	0.00	1	0.00	1	0.00	17	-2246.60	1	538.45	17	30.43	1
219	257	238	Max	166.44	0.00	1	0.00	1	0.00	1	-3249.39	1	-4104.92	1	30.43	1
219	257	238	Min.	0.00	0.00	1	0.00	9	0.00	18	-3545.08	20	265.88	9	-953.20	9
219	257	238	Min.	166.44	0.00	1	0.00	9	0.00	9	-4848.71	20	-6451.93	20	-953.20	9
220	201	247	Max	25.05	0.00	9	0.00	5	0.00	5	5457.90	20	-6107.82	9	1266.83	1
220	201	247	Max	214.34	0.00	9	0.00	5	0.00	5	3959.87	20	218.08	9	1266.83	1
220	201	247	Min.	25.05	0.00	1	0.00	13	0.00	13	3866.15	13	-9088.90	17	342.69	9
220	201	247	Min.	214.34	0.00	1	0.00	13	0.00	13	2715.33	13	-447.68	1	342.69	9
220	202	201	Max	20.01	0.00	9	0.00	1	0.00	1	6079.15	1	1718.89	9	90.19	9
220	202	201	Max	336.08									3171.64	1		
220	202	201	Max	480.04	0.00	9	0.00	1	0.00	1	-2729.47	1	1219.85	1	90.19	9
220	202	201	Min.	20.01	0.00	1	0.00	1	0.00	1	2086.22	9	-6456.47	1	-88.56	1
220	202	201	Min.	336.08									-512.63	1		
220	202	201	Min.	480.04	0.00	1	0.00	1	0.00	1	-6796.45	18	-8973.24	9	-88.56	1
220	203	202	Max	24.53	0.00	5	0.00	1	0.00	1	4475.44	1	4062.24	9	170.85	1
220	203	202	Max	285.64									267.98	8		
220	203	202	Max	291.75	0.00	5	0.00	1	0.00	1	2231.42	1	3337.88	1	170.85	1
220	203	202	Min.	24.53	0.00	5	0.00	1	0.00	1	-2674.51	9	-5378.73	1	81.20	9
220	203	202	Min.	285.64									-1844.13	8		
220	203	202	Min.	291.75	0.00	5	0.00	1	0.00	1	-4918.53	9	-6328.23	9	81.20	9
221	204	201	Max	17.51	0.00	1	0.00	1	0.00	1	2719.80	18	-10.54	5	153.28	9

Relazione di calcolo

221	204	201	Max	283.26								973.04	13			
221	204	201	Max	396.89	0.00	1	0.00	1	0.00	1	-1071.28	13	363.58	13	153.28	9
221	204	201	Min.	17.51	0.00	9	0.00	1	0.00	1	1250.21	5	-2386.04	13	-18.52	1
221	204	201	Min.	283.26									71.69	13		
221	204	201	Min.	396.89	0.00	9	0.00	1	0.00	1	-2496.54	17	-2135.69	5	-18.52	1
221	210	204	Max	17.51	0.00	1	0.00	1	0.00	1	2646.76	13	980.02	5	266.93	9
221	210	204	Max	35.28									995.70	5		
221	210	204	Max	286.82	0.00	1	0.00	1	0.00	1	89.24	13	1229.21	13	266.93	9
221	210	204	Min.	17.51	0.00	1	0.00	1	0.00	1	173.20	5	-2445.54	13	-325.80	1
221	210	204	Min.	35.28									-1582.82	5		
221	210	204	Min.	286.82	0.00	1	0.00	1	0.00	1	-2384.31	5	-2007.38	5	-325.80	1
222	205	203	Max	15.20	0.00	9	0.00	1	0.00	1	4437.92	1	2032.24	9	223.83	9
222	205	203	Max	118.62									2758.00	9		
222	205	203	Max	469.72	0.00	9	0.00	1	0.00	1	-1671.67	1	1098.07	1	223.83	9
222	205	203	Min.	15.20	0.00	1	0.00	1	0.00	1	1393.49	9	-5214.07	1	-192.02	1
222	205	203	Min.	118.62									-655.63	9		
222	205	203	Min.	469.72	0.00	1	0.00	1	0.00	1	-4716.09	9	-5493.69	9	-192.02	1
223	202	206	Max	10.05	0.00	9	0.00	1	0.00	1	2567.35	20	-82.51	13	66.29	1
223	202	206	Max	200.95									1225.58	20		
223	202	206	Max	392.45	0.00	9	0.00	1	0.00	1	-2213.09	5	-642.43	5	66.29	1
223	202	206	Min.	10.05	0.00	1	0.00	1	0.00	1	1196.07	13	-2179.24	5	-182.27	9
223	202	206	Min.	239.49									524.39	5		
223	202	206	Min.	392.45	0.00	1	0.00	1	0.00	1	-4036.39	19	-2863.25	13	-182.27	9
224	204	248	Max	25.12	0.00	9	0.00	9	0.00	19	5307.77	17	-4013.70	9	62.93	1
224	204	248	Max	215.04	0.00	9	0.00	9	0.00	9	4645.50	17	1753.01	17	62.93	1
224	204	248	Min.	25.12	0.00	1	0.00	1	0.00	20	2971.45	9	-7698.40	17	-1463.78	9
224	204	248	Min.	215.04	0.00	1	0.00	1	0.00	1	2464.00	9	1141.98	9	-1463.78	9
224	206	204	Max	17.79	0.00	1	0.00	1	0.00	1	8379.84	17	-1347.28	9	46.11	9
224	206	204	Max	243.53									3759.88	17		
224	206	204	Max	480.94	0.00	1	0.00	1	0.00	1	-4882.78	1	-1883.36	1	46.11	9
224	206	204	Min.	17.79	0.00	1	0.00	1	0.00	1	4551.39	9	-6344.98	1	-112.58	1
224	206	204	Min.	287.58									1932.43	1		
224	206	204	Min.	480.94	0.00	1	0.00	1	0.00	1	-8863.34	18	-7318.74	9	-112.58	1
226	210	-176	Max	25.08	0.00	1	0.00	5	0.00	5	3410.02	1	2892.08	9	-178.34	1
226	210	-176	Max	190.43									-298.66	29		
226	210	-176	Max	215.55	0.00	1	0.00	5	0.00	5	2885.95	1	1956.21	1	-178.34	1
226	210	-176	Min.	25.08	0.00	1	0.00	5	0.00	5	-2679.14	9	-4040.28	1	-1176.81	9
226	210	-176	Min.	133.66									-472.37	18		
226	210	-176	Min.	215.55	0.00	1	0.00	5	0.00	5	-3203.21	9	-2710.40	9	-1176.81	9
226	210	211	Max	25.07	0.00	1	0.00	1	0.00	1	5486.46	9	3743.04	1	174.54	5
226	210	211	Max	33.21									1002.96	12		
226	210	211	Max	209.11	0.00	1	0.00	1	0.00	1	1653.38	9	2388.79	9	174.54	5
226	210	211	Min.	25.07	0.00	1	0.00	1	0.00	1	-2621.59	1	-4112.66	9	-185.37	13
226	210	211	Min.	33.21									-2036.16	12		
226	210	211	Min.	209.11	0.00	1	0.00	1	0.00	1	-6454.67	1	-4677.76	1	-185.37	13
226	211	-177	Max	17.58	0.00	1	0.00	1	0.00	1	5784.14	18	-1270.25	1	256.34	13
226	211	-177	Max	241.71									2226.15	18		
226	211	-177	Max	430.18	0.00	1	0.00	1	0.00	1	-1405.52	9	564.18	9	256.34	13
226	211	-177	Min.	17.58	0.00	1	0.00	1	0.00	1	3242.47	1	-4224.45	9	-72.47	5
226	211	-177	Min.	284.58									1095.89	9		
226	211	-177	Min.	430.18	0.00	1	0.00	1	0.00	1	-3065.23	17	-2265.36	1	-72.47	5
227	216	-178	Max	24.61	0.00	9	0.00	17	0.00	17	2284.82	1	1805.33	9	-76.61	9
227	216	-178	Max	189.84									104.92	17		
227	216	-178	Max	244.28	0.00	9	0.00	17	0.00	17	1677.79	1	2119.76	1	-76.61	9
227	216	-178	Min.	24.61	0.00	1	0.00	1	0.00	1	-1510.82	9	-2232.71	1	-193.69	19
227	216	-178	Min.	147.73									37.92	22		
227	216	-178	Min.	244.28	0.00	1	0.00	1	0.00	1	-2117.85	9	-2180.36	9	-193.69	19
228	217	216	Max	8.82	0.00	9	0.00	1	0.00	19	4517.02	1	3009.44	9	154.56	13
228	217	216	Max	60.25									-161.16	26		
228	217	216	Max	166.50	0.00	9	0.00	1	0.00	19	3374.36	1	2390.76	1	154.56	13
228	217	216	Min.	8.82	0.00	1	0.00	1	0.00	20	-3399.25	9	-3785.08	1	-116.35	5
228	217	216	Min.	85.89									-290.41	17		
228	217	216	Min.	166.50	0.00	1	0.00	1	0.00	20	-4541.91	9	-3296.60	9	-116.35	5
229	216	220	Max	22.51	0.00	1	0.00	1	0.00	1	3073.94	5	1722.92	13	517.82	1
229	216	220	Max	28.30									425.87	3		
229	216	220	Max	186.90	0.00	1	0.00	1	0.00	1	268.71	5	775.85	5	517.82	1
229	216	220	Min.	22.51	0.00	1	0.00	1	0.00	1	-1486.19	13	-2023.78	5	-0.01	9
229	216	220	Min.	28.30									-1102.44	3		
229	216	220	Min.	186.90	0.00	1	0.00	1	0.00	1	-4291.43	13	-2973.57	13	-0.01	9
230	-179	210	Max	0.00	0.00	13	0.00	1	0.00	18	1715.30	19	1282.49	5	976.09	18
230	-179	210	Max	90.16									1728.17	20		
230	-179	210	Max	332.46	0.00	13	0.00	1	0.00	1	-2079.92	13	-1091.02	13	976.09	18
230	-179	210	Min.	0.00	0.00	5	0.00	9	0.00	17	721.94	5	13.01	13	367.77	1
230	-179	210	Min.	56.52									727.44	5		
230	-179	210	Min.	332.46	0.00	5	0.00	9	0.00	9	-3689.11	20	-2913.43	20	367.77	1
230	217	-179	Max	25.00	0.00	1	0.00	1	0.00	1	10225.70	19	-2617.85	5	-1922.90	1
230	217	-179	Max	91.96	0.00	1	0.00	1	0.00	1	8915.97	19	1357.22	5	-1922.90	1
230	217	-179	Min.	25.00	0.00	1	0.00	1	0.00	9	6344.38	5	-5282.23	19	-3918.27	18
230	217	-179	Min.	91.96	0.00	1	0.00	1	0.00	9	5442.96	5	215.52	13	-3918.27	18

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230	-180	217	Max	0.00	0.00	1	0.00	1	0.00	1	-2509.57	1	1576.54	13	586.07	9
230	-180	217	Max	112.53	0.00	1	0.00	1	0.00	1	-3703.98	1	-2225.85	5	586.07	9
230	-180	217	Min.	0.00	0.00	9	0.00	1	0.00	1	-5091.66	20	264.42	5	-956.09	1
230	-180	217	Min.	112.53	0.00	9	0.00	1	0.00	1	-6814.82	20	-5390.62	20	-956.09	1
230	222	-180	Max	20.00	0.00	1	0.00	1	0.00	1	7220.21	19	-2051.93	5	201.45	1
230	222	-180	Max	235.64									3042.20	19		
230	222	-180	Max	344.00	0.00	1	0.00	1	0.00	1	-1868.08	13	1539.06	13	201.45	1
230	222	-180	Min.	20.00	0.00	1	0.00	9	0.00	9	4292.51	5	-4751.67	19	-370.16	9
230	222	-180	Min.	259.95									1674.57	5		
230	222	-180	Min.	344.00	0.00	1	0.00	9	0.00	9	-3646.49	20	-109.52	5	-370.16	9
230	-187	222	Max	0.00	0.00	1	0.00	1	0.00	1	-803.89	5	310.54	13	1232.26	9
230	-187	222	Max	56.20	0.00	1	0.00	1	0.00	1	-2084.55	5	-586.34	13	1232.26	9
230	-187	222	Min.	0.00	0.00	1	0.00	9	0.00	1	-3660.90	13	-1291.45	5	-1004.25	1
230	-187	222	Min.	56.20	0.00	1	0.00	9	0.00	9	-5166.99	20	-3623.73	5	-1004.25	1
230	-187	-191	Max	0.00	0.00	1	0.00	1	0.00	1	3530.71	5	505.90	13	165.44	9
230	-187	-191	Max	152.76									1349.28	5		
230	-187	-191	Max	165.14	0.00	1	0.00	1	0.00	1	-272.48	5	1331.25	5	165.44	9
230	-187	-191	Min.	0.00	0.00	1	0.00	1	0.00	1	382.88	13	-1362.63	5	-55.63	1
230	-187	-191	Min.	152.76									-1504.83	5		
230	-187	-191	Min.	165.14	0.00	1	0.00	1	0.00	1	-3420.31	13	-2004.86	13	-55.63	1
231	248	247	Max	0.00	0.00	1	0.00	9	0.00	1	3415.79	19	247.62	9	217.63	9
231	248	247	Max	190.03									3212.65	18		
231	248	247	Max	411.07	0.00	1	0.00	9	0.00	9	-2715.32	13	-342.87	9	217.63	9
231	248	247	Min.	0.00	0.00	1	0.00	1	0.00	1	2335.35	5	-320.43	1	-449.03	1
231	248	247	Min.	192.45									1976.66	1		
231	248	247	Min.	411.07	0.00	1	0.00	1	0.00	1	-3959.86	20	-1266.36	1	-449.03	1
231	-176	248	Max	0.00	0.00	5	0.00	20	0.00	1	4307.90	18	-1007.48	1	1592.38	18
231	-176	248	Max	301.89									1530.77	13		
231	-176	248	Max	306.80	0.00	5	0.00	20	0.00	20	30.14	9	1641.25	9	1592.38	18
231	-176	248	Min.	0.00	0.00	13	0.00	19	0.00	1	2180.57	1	-4506.09	9	906.26	1
231	-176	248	Min.	284.63									26.91	1		
231	-176	248	Min.	306.80	0.00	13	0.00	19	0.00	19	-1742.26	1	-325.61	1	906.26	1
231	209	-176	Max	25.03	0.00	13	0.00	1	0.00	5	7978.13	9	-675.63	1	2867.90	1
231	209	-176	Max	37.55									-664.11	1		
231	209	-176	Max	87.62	0.00	13	0.00	1	0.00	1	7138.87	9	-803.79	1	2867.90	1
231	209	-176	Min.	25.03	0.00	5	0.00	9	0.00	13	151.22	1	-8044.08	9	-1343.15	9
231	209	-176	Min.	37.55									-5981.34	1		
231	209	-176	Min.	87.62	0.00	5	0.00	9	0.00	9	-688.04	1	-3359.67	9	-1343.15	9
231	-178	209	Max	0.00	0.00	1	0.00	1	0.00	1	4278.14	13	875.16	5	297.95	9
231	-178	209	Max	95.66									1687.98	5		
231	-178	209	Max	368.08	0.00	1	0.00	1	0.00	1	-1872.50	13	399.01	13	297.95	9
231	-178	209	Min.	0.00	0.00	17	0.00	1	0.00	1	1575.84	5	-3871.08	13	-191.04	1
231	-178	209	Min.	95.66									-140.84	5		
231	-178	209	Min.	368.08	0.00	17	0.00	1	0.00	1	-4604.90	17	-4802.96	5	-191.04	1
231	215	-178	Max	25.03	0.00	13	0.00	1	0.00	1	6329.24	9	916.12	1	1934.85	1
231	215	-178	Max	42.80	0.00	13	0.00	1	0.00	1	6145.18	9	1027.62	5	1934.85	1
231	215	-178	Min.	25.03	0.00	5	0.00	9	0.00	9	332.89	1	-4799.75	9	-1890.01	9
231	215	-178	Min.	42.80	0.00	5	0.00	9	0.00	9	148.83	1	-3759.75	13	-1890.01	9
231	221	215	Max	25.14	0.00	1	0.00	17	0.00	17	3777.06	13	653.25	1	246.34	9
231	221	215	Max	313.32									1524.33	13		
231	221	215	Max	418.90	0.00	1	0.00	17	0.00	17	-1446.99	13	761.09	13	246.34	9
231	221	215	Min.	25.14	0.00	1	0.00	1	0.00	1	1230.68	5	-4291.32	9	24.28	1
231	221	215	Min.	313.32									-495.90	13		
231	221	215	Min.	418.90	0.00	1	0.00	1	0.00	1	-3993.38	5	-4323.06	5	24.28	1
231	225	221	Max	25.06	0.00	5	0.00	1	0.00	1	4201.03	13	841.34	5	8.47	9
231	225	221	Max	226.40									1946.83	20		
231	225	221	Max	419.02	0.00	5	0.00	1	0.00	1	-2474.55	13	186.99	13	8.47	9
231	225	221	Min.	25.06	0.00	5	0.00	1	0.00	1	1476.41	5	-4723.21	13	-267.11	1
231	225	221	Min.	151.56									119.72	5		
231	225	221	Min.	419.02	0.00	5	0.00	1	0.00	1	-5519.26	17	-4986.25	5	-267.11	1
231	254	225	Max	0.00	0.00	9	0.00	1	0.00	1	4135.18	13	1670.75	5	113.04	9
231	254	225	Max	60.63									1981.12	5		
231	254	225	Max	361.83	0.00	9	0.00	1	0.00	1	-1459.70	13	899.38	13	113.04	9
231	254	225	Min.	0.00	0.00	1	0.00	1	0.00	1	973.35	5	-3616.16	13	-65.73	1
231	254	225	Min.	60.63									-821.25	5		
231	254	225	Min.	361.83	0.00	1	0.00	1	0.00	1	-4621.52	5	-5254.05	5	-65.73	1
231	234	254	Max	25.17	0.00	5	0.00	1	0.00	1	5259.47	9	1314.10	5	534.74	13
231	234	254	Max	57.14	0.00	5	0.00	1	0.00	1	4779.29	9	1915.00	5	534.74	13
231	234	254	Min.	25.17	0.00	5	0.00	9	0.00	9	2009.28	1	-4862.96	13	-1318.74	5
231	234	254	Min.	57.14	0.00	5	0.00	9	0.00	9	1529.10	1	-3293.28	13	-1318.74	5
231	240	234	Max	25.11	0.00	5	0.00	1	0.00	1	4589.42	13	1469.70	5	116.91	9
231	240	234	Max	109.62									2013.10	5		
231	240	234	Max	418.75	0.00	5	0.00	1	0.00	1	-1322.05	13	1308.56	13	116.91	9
231	240	234	Min.	25.11	0.00	5	0.00	1	0.00	1	1277.62	5	-5121.75	13	-76.36	1
231	240	234	Min.	109.62									-1139.04	5		
231	240	234	Min.	418.75	0.00	5	0.00	1	0.00	1	-4633.84	5	-5136.45	5	-76.36	1
232	218	223	Max	20.00	0.00	1	0.00	1	0.00	1	3438.74	20	-82.39	5	112.50	9
232	218	223	Max	193.37									1278.62	19		
232	218	223	Max	402.70	0.00	1	0.00	1	0.00	1	-2274.23	13	-1075.76	13	112.50	9

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232	218	223	Min.	20.00	0.00	1	0.00	1	0.00	1	1804.07	5	-2228.07	13	-55.69	1
232	218	223	Min.	154.07									479.77	5		
232	218	223	Min.	402.70	0.00	1	0.00	1	0.00	1	-4087.04	19	-3034.04	5	-55.69	1
232	-192	223	Max	0.00	0.00	5	0.00	1	0.00	1	-902.09	5	2712.85	17	462.98	9
232	-192	223	Max	146.65	0.00	5	0.00	1	0.00	1	-4910.48	5	-2296.90	5	462.98	9
232	-192	223	Min.	0.00	0.00	5	0.00	1	0.00	1	-2118.14	20	1575.31	9	-335.40	1
232	-192	223	Min.	146.65	0.00	5	0.00	1	0.00	1	-8016.65	20	-4734.86	20	-335.40	1
232	231	-192	Max	17.50	0.00	1	0.00	1	0.00	1	7974.44	19	-2218.43	9	-117.80	9
232	231	-192	Max	205.30									2799.84	17		
232	231	-192	Max	248.50	0.00	1	0.00	1	0.00	1	-666.06	1	2413.07	19	-117.80	9
232	231	-192	Min.	17.50	0.00	1	0.00	1	0.00	1	4857.34	9	-4715.24	19	-399.13	1
232	231	-192	Min.	218.08									1705.64	9		
232	231	-192	Min.	248.50	0.00	1	0.00	1	0.00	1	-1845.86	20	1310.87	9	-399.13	1
232	237	231	Max	15.00	0.00	1	0.00	1	0.00	1	3350.36	19	692.54	13	62.97	13
232	237	231	Max	69.01									1022.89	13		
232	237	231	Max	258.68	0.00	1	0.00	1	0.00	1	-2207.21	5	-490.69	5	62.97	13
232	237	231	Min.	15.00	0.00	1	0.00	1	0.00	1	1214.41	13	-1750.27	5	-64.88	5
232	237	231	Min.	69.01									-200.13	13		
232	237	231	Min.	258.68	0.00	1	0.00	1	0.00	1	-4721.58	20	-2980.47	13	-64.88	5
233	225	226	Max	24.27	0.00	1	0.00	1	0.00	1	2793.46	9	1476.53	1	63.43	9
233	225	226	Max	27.56									758.23	3		
233	225	226	Max	246.79	0.00	1	0.00	1	0.00	1	669.60	9	1540.31	9	63.43	9
233	225	226	Min.	24.27	0.00	9	0.00	1	0.00	1	-610.63	1	-2324.01	9	-115.54	1
233	225	226	Min.	27.56									-1284.07	3		
233	225	226	Min.	246.79	0.00	9	0.00	1	0.00	1	-2734.50	1	-2234.35	1	-115.54	1
233	226	227	Max	20.00	0.00	1	0.00	1	0.00	1	4611.77	9	952.98	1	351.17	9
233	226	227	Max	215.58									1459.07	9		
233	226	227	Max	246.08	0.00	1	0.00	1	0.00	1	-765.88	9	1342.46	9	351.17	9
233	226	227	Min.	20.00	0.00	1	0.00	1	0.00	1	934.48	1	-3132.66	9	115.90	1
233	226	227	Min.	215.58									-1409.08	9		
233	226	227	Min.	246.08	0.00	1	0.00	1	0.00	1	-4443.17	1	-2885.46	1	115.90	1
233	227	228	Max	25.28	0.00	5	0.00	1	0.00	1	3820.06	9	1875.48	1	-145.53	9
233	227	228	Max	30.79									1237.84	6		
233	227	228	Max	234.14	0.00	5	0.00	1	0.00	1	-37.14	9	1317.13	9	-145.53	9
233	227	228	Min.	25.28	0.00	13	0.00	1	0.00	1	-509.35	1	-2625.41	9	-396.28	17
233	227	228	Min.	37.02									-1746.07	10		
233	227	228	Min.	234.14	0.00	13	0.00	1	0.00	1	-4366.55	1	-3224.28	1	-396.28	17
233	228	-191	Max	22.50	0.00	1	0.00	5	0.00	9	4378.48	13	-50.81	1	1919.02	13
233	228	-191	Max	37.00	0.00	1	0.00	5	0.00	5	4340.78	13	140.36	1	1919.02	13
233	228	-191	Min.	22.50	0.00	1	0.00	13	0.00	1	817.26	5	-2202.54	9	-1644.52	5
233	228	-191	Min.	37.00	0.00	1	0.00	13	0.00	13	779.56	5	-1645.79	9	-1644.52	5
233	-191	-192	Max	0.00	0.00	1	0.00	1	0.00	1	1087.05	9	5.28	1	-51.54	5
233	-191	-192	Max	364.21									409.09	11		
233	-191	-192	Max	366.16	0.00	1	0.00	1	0.00	1	135.04	9	617.88	9	-51.54	5
233	-191	-192	Min.	0.00	0.00	1	0.00	1	0.00	1	340.50	1	-1620.51	9	-347.58	13
233	-191	-192	Min.	361.23									-309.78	6		
233	-191	-192	Min.	366.16	0.00	1	0.00	1	0.00	1	-611.50	1	-491.86	1	-347.58	13
235	228	230	Max	17.50	0.00	1	0.00	9	0.00	17	3659.07	5	985.71	13	111.79	9
235	228	230	Max	209.48									1110.94	5		
235	228	230	Max	228.50	0.00	1	0.00	9	0.00	9	-362.57	5	1076.46	5	111.79	9
235	228	230	Min.	17.50	0.00	1	0.00	1	0.00	18	438.61	13	-2401.37	5	-91.82	1
235	228	230	Min.	209.48									-1664.49	5		
235	228	230	Min.	228.50	0.00	1	0.00	1	0.00	1	-3583.03	13	-2331.68	13	-91.82	1
235	230	256	Max	20.13	0.00	9	0.00	18	0.00	18	4425.05	13	1529.26	5	159.23	9
235	230	256	Max	56.15									1653.00	5		
235	230	256	Max	276.07	0.00	9	0.00	18	0.00	18	-449.62	13	1441.48	13	159.23	9
235	230	256	Min.	20.13	0.00	1	0.00	17	0.00	17	687.38	5	-3640.16	13	-139.04	1
235	230	256	Min.	56.15									-2097.69	5		
235	230	256	Min.	276.07	0.00	1	0.00	17	0.00	17	-4187.30	5	-2955.45	5	-139.04	1
236	-195	254	Max	0.00	0.00	9	0.00	1	0.00	1	953.55	13	804.38	5	-208.21	9
236	-195	254	Max	24.27									608.03	6		
236	-195	254	Max	379.70	0.00	9	0.00	1	0.00	1	-103.20	13	546.14	13	-208.21	9
236	-195	254	Min.	0.00	0.00	1	0.00	1	0.00	1	-39.96	5	-1068.56	13	-388.79	19
236	-195	254	Min.	25.72									-832.56	13		
236	-195	254	Min.	379.70	0.00	1	0.00	1	0.00	1	-1096.71	5	-1353.90	5	-388.79	19
236	236	-195	Max	30.20	0.00	1	0.00	1	0.00	1	5830.29	17	189.17	5	4227.37	20
236	236	-195	Max	48.14	0.00	1	0.00	1	0.00	1	5762.26	17	853.67	5	4227.37	20
236	236	-195	Min.	30.20	0.00	9	0.00	9	0.00	9	3650.70	1	-2132.87	13	2241.43	13
236	236	-195	Min.	48.14	0.00	9	0.00	9	0.00	9	3598.86	1	-1296.33	13	2241.43	13
237	-197	236	Max	0.00	0.00	1	0.00	1	0.00	13	-3760.13	9	985.59	13	2611.62	13
237	-197	236	Max	36.84	0.00	1	0.00	1	0.00	9	-4040.71	9	-477.13	13	2611.62	13
237	-197	236	Min.	0.00	0.00	1	0.00	9	0.00	5	-6514.62	18	-1697.82	5	679.00	5
237	-197	236	Min.	36.84	0.00	1	0.00	9	0.00	1	-6901.76	18	-3781.70	5	679.00	5
237	-198	-197	Max	0.00	0.00	1	0.00	1	0.00	1	2938.03	13	846.46	5	50.12	13
237	-198	-197	Max	199.16									1326.35	13		
237	-198	-197	Max	271.08	0.00	1	0.00	1	0.00	1	-1054.37	13	947.64	13	50.12	13
237	-198	-197	Min.	0.00	0.00	1	0.00	1	0.00	1	1000.48	5	-1608.36	13	-270.16	5
237	-198	-197	Min.	199.16									71.88	13		
237	-198	-197	Min.	271.08	0.00	1	0.00	1	0.00	1	-2991.91	5	-1855.62	5	-270.16	5

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237	255	-198	Max	10.00	0.00	1	0.00	1	0.00	1	4359.20	17	116.81	5	439.78	5
237	255	-198	Max	56.92	0.00	1	0.00	1	0.00	5	3639.52	13	882.16	5	439.78	5
237	255	-198	Min.	10.00	0.00	1	0.00	9	0.00	9	1939.49	5	-3211.90	13	-879.38	13
237	255	-198	Min.	56.92	0.00	1	0.00	9	0.00	13	1248.92	5	-1359.40	13	-879.38	13
237	256	255	Max	15.00	0.00	1	0.00	1	0.00	1	2598.15	1	1235.22	9	276.74	13
237	256	255	Max	18.54									568.17	12		
237	256	255	Max	192.10	0.00	1	0.00	1	0.00	1	1.93	1	551.63	1	276.74	13
237	256	255	Min.	15.00	0.00	1	0.00	1	0.00	1	-699.99	9	-1770.78	1	-183.02	5
237	256	255	Min.	191.21									-1606.17	1		
237	256	255	Min.	192.10	0.00	1	0.00	1	0.00	1	-3296.21	9	-2319.40	9	-183.02	5
237	237	256	Max	20.00	0.00	1	0.00	1	0.00	1	1877.78	9	1002.36	1	126.71	9
237	237	256	Max	47.41									1025.73	1		
237	237	256	Max	386.06	0.00	1	0.00	1	0.00	1	-318.56	9	895.76	9	126.71	9
237	237	256	Min.	20.00	0.00	1	0.00	1	0.00	1	167.01	1	-1959.36	9	-169.90	1
237	237	256	Min.	47.41									-1282.18	1		
237	237	256	Min.	386.06	0.00	1	0.00	1	0.00	1	-2029.33	1	-2407.50	1	-169.90	1
237	237	235	Max	20.34	0.00	1	0.00	1	0.00	1	1962.25	1	758.91	9	-77.33	13
237	237	235	Max	196.36									113.90	16		
237	237	235	Max	206.46	0.00	1	0.00	1	0.00	1	830.27	1	938.88	1	-77.33	13
237	237	235	Min.	20.34	0.00	9	0.00	1	0.00	9	-611.23	9	-1666.89	1	-191.31	20
237	237	235	Min.	196.36									-631.20	16		
237	237	235	Min.	206.46	0.00	9	0.00	1	0.00	9	-1743.21	9	-1431.41	9	-191.31	20
237	235	-196	Max	15.05	0.00	13	0.00	20	0.00	20	1147.46	18	-477.35	9	579.27	1
237	235	-196	Max	397.47									550.55	10		
237	235	-196	Max	398.60	0.00	13	0.00	20	0.00	20	80.30	1	694.92	1	579.27	1
237	235	-196	Min.	15.05	0.00	5	0.00	19	0.00	19	574.04	9	-1549.02	1	102.57	9
237	235	-196	Min.	397.47									-108.31	10		
237	235	-196	Min.	398.60	0.00	5	0.00	19	0.00	19	-435.33	9	-211.55	9	102.57	9
238	235	232	Max	20.00	0.00	1	0.00	17	0.00	17	3933.54	1	688.28	9	95.61	9
238	235	232	Max	196.89									1137.57	1		
238	235	232	Max	251.12	0.00	1	0.00	17	0.00	17	-1205.91	1	810.58	1	95.61	9
238	235	232	Min.	20.00	0.00	1	0.00	1	0.00	1	1069.14	9	-2341.47	1	-60.87	1
238	235	232	Min.	196.89									-644.33	1		
238	235	232	Min.	251.12	0.00	1	0.00	1	0.00	1	-4070.31	9	-2779.85	9	-60.87	1
238	241	235	Max	15.30	0.00	9	0.00	1	0.00	1	3769.95	1	1138.54	9	21.13	9
238	241	235	Max	83.82									1597.11	9		
238	241	235	Max	315.25	0.00	9	0.00	1	0.00	1	-1796.55	1	240.29	1	21.13	9
238	241	235	Min.	15.30	0.00	1	0.00	1	0.00	1	1302.88	9	-2730.23	1	-216.41	1
238	241	235	Min.	83.82									-308.05	9		
238	241	235	Min.	315.25	0.00	1	0.00	1	0.00	1	-4359.60	20	-3291.24	9	-216.41	1
239	238	239	Max	15.18	0.00	1	0.00	1	0.00	1	3089.82	17	-153.10	1	63.32	9
239	238	239	Max	262.62									1852.55	18		
239	238	239	Max	536.35	0.00	1	0.00	1	0.00	1	-1812.92	9	-506.12	9	63.32	9
239	238	239	Min.	15.18	0.00	1	0.00	1	0.00	1	1657.36	1	-2570.67	9	-395.93	1
239	238	239	Min.	207.67									938.30	1		
239	238	239	Min.	536.35	0.00	1	0.00	1	0.00	1	-3302.64	18	-3164.21	1	-395.93	1
240	-208	-195	Max	0.00	0.00	1	0.00	1	0.00	1	5014.63	19	-1246.43	5	37.74	5
240	-208	-195	Max	226.26									2915.39	20		
240	-208	-195	Max	505.12	0.00	1	0.00	1	0.00	1	-3436.89	13	-2573.09	13	37.74	5
240	-208	-195	Min.	0.00	0.00	1	0.00	1	0.00	1	3302.27	5	-2652.46	19	-245.50	13
240	-208	-195	Min.	207.91									2014.67	5		
240	-208	-195	Min.	505.12	0.00	1	0.00	1	0.00	1	-5171.88	20	-4610.78	20	-245.50	13
241	-208	240	Max	0.00	0.00	5	0.00	1	0.00	1	1066.97	13	2955.33	5	719.23	9
241	-208	240	Max	0.36									2346.67	17		
241	-208	240	Max	364.54	0.00	5	0.00	1	0.00	1	-1255.63	13	109.99	13	719.23	9
241	-208	240	Min.	0.00	0.00	13	0.00	1	0.00	1	-960.93	5	462.44	13	262.76	1
241	-208	240	Min.	10.41									1692.01	29		
241	-208	240	Min.	364.54	0.00	13	0.00	1	0.00	1	-3283.52	5	-4791.35	5	262.76	1
241	244	-208	Max	20.11	0.00	1	0.00	1	0.00	1	6434.05	19	-939.95	5	-964.42	5
241	244	-208	Max	145.06	0.00	1	0.00	1	0.00	1	5007.42	19	2894.54	5	-964.42	5
241	244	-208	Min.	20.11	0.00	1	0.00	1	0.00	1	3575.90	5	-5909.53	13	-1961.23	19
241	244	-208	Min.	145.06	0.00	1	0.00	1	0.00	1	2504.68	5	674.58	13	-1961.23	19
242	259	245	Max	0.46	0.00	1	0.00	1	0.00	1	4497.96	5	2277.32	13	22.11	9
242	259	245	Max	143.13									226.65	19		
242	259	245	Max	149.21	0.00	1	0.00	1	0.00	1	3649.74	5	2871.52	5	22.11	9
242	259	245	Min.	0.46	0.00	9	0.00	1	0.00	1	-2736.48	13	-3190.16	5	-92.92	1
242	259	245	Min.	129.41									131.35	31		
242	259	245	Min.	149.21	0.00	9	0.00	1	0.00	1	-3584.70	13	-2422.07	13	-92.92	1
243	-209	244	Max	0.00	0.00	9	0.00	1	0.00	5	643.17	9	828.67	13	206.59	13
243	-209	244	Max	115.69	0.00	9	0.00	1	0.00	1	-18.03	9	495.81	9	206.59	13
243	-209	244	Min.	0.00	0.00	1	0.00	1	0.00	5	-2008.23	1	-265.22	5	-609.30	5
243	-209	244	Min.	115.69	0.00	1	0.00	1	0.00	1	-2669.44	1	-2273.57	1	-609.30	5
243	246	-209	Max	15.00	0.00	17	0.00	1	0.00	1	2423.82	13	347.85	5	225.60	5
243	246	-209	Max	268.26									904.98	13		
243	246	-209	Max	280.09	0.00	17	0.00	1	0.00	1	-98.03	13	898.66	13	225.60	5
243	246	-209	Min.	15.00	0.00	30	0.00	1	0.00	1	845.98	5	-2205.48	13	-94.66	13
243	246	-209	Min.	268.26									-292.22	13		
243	246	-209	Min.	280.09	0.00	30	0.00	1	0.00	1	-1675.87	5	-767.05	5	-94.66	13
243	245	246	Max	15.00	0.00	13	0.00	1	0.00	1	2274.37	9	997.39	1	89.37	13

Relazione di calcolo

243	245	246	Max	34.91								1016.87	1			
243	245	246	Max	291.86	0.00	13	0.00	1	0.00	1	-340.60	9	735.41	9	89.37	13
243	245	246	Min.	15.00	0.00	5	0.00	1	0.00	1	191.48	1	-1945.88	9	-89.86	5
243	245	246	Min.	34.91									-1131.19	1		
243	245	246	Min.	291.86	0.00	5	0.00	1	0.00	1	-2423.50	1	-2088.24	1	-89.86	5
309	343	351	Max	20.00	0.00	1	0.00	17	0.00	17	1723.91	1	970.19	9	62.77	9
309	343	351	Max	44.91									987.27	9		
309	343	351	Max	379.84	0.00	1	0.00	17	0.00	17	-186.84	1	840.64	1	62.77	9
309	343	351	Min.	20.00	0.00	1	0.00	1	0.00	1	134.39	9	-1929.00	1	-80.00	1
309	343	351	Min.	44.91									-1217.81	9		
309	343	351	Min.	379.84	0.00	1	0.00	1	0.00	1	-1776.36	9	-1979.98	9	-80.00	1
310	336	343	Max	17.50	0.00	1	0.00	18	0.00	18	2684.10	20	380.26	13	81.17	9
310	336	343	Max	99.14									756.10	13		
310	336	343	Max	318.98	0.00	1	0.00	18	0.00	18	-1003.37	5	339.48	5	81.17	9
310	336	343	Min.	17.50	0.00	1	0.00	17	0.00	17	891.12	13	-2122.53	5	-44.86	1
310	336	343	Min.	99.14									-263.10	13		
310	336	343	Min.	318.98	0.00	1	0.00	17	0.00	17	-2875.94	19	-2020.95	13	-44.86	1
310	343	-273	Max	15.00	0.00	1	0.00	5	0.00	5	2410.31	5	492.44	13	563.48	1
310	343	-273	Max	164.59	0.00	1	0.00	5	0.00	5	1457.57	5	1057.49	5	563.48	1
310	343	-273	Min.	15.00	0.00	1	0.00	5	0.00	5	-157.79	13	-1806.97	5	-452.33	9
310	343	-273	Min.	164.59	0.00	1	0.00	5	0.00	5	-1110.53	13	-485.04	13	-452.33	9
311	326	-249	Max	15.00	0.00	1	0.00	1	0.00	1	4799.76	20	-2058.86	13	120.64	13
311	326	-249	Max	286.73									2666.55	19		
311	326	-249	Max	529.60	0.00	1	0.00	1	0.00	1	-3066.91	5	-1639.71	5	120.64	13
311	326	-249	Min.	15.00	0.00	1	0.00	1	0.00	1	2793.81	13	-4390.82	20	-10.64	5
311	326	-249	Min.	267.26									1609.81	13		
311	326	-249	Min.	529.60	0.00	1	0.00	1	0.00	1	-5278.73	19	-3598.11	19	-10.64	5
312	327	-250	Max	15.00	0.00	1	0.00	1	0.00	1	4959.51	20	-1719.78	13	24.05	9
312	327	-250	Max	284.79									2553.75	19		
312	327	-250	Max	529.60	0.00	1	0.00	1	0.00	1	-2528.09	5	-1110.05	5	24.05	9
312	327	-250	Min.	15.00	0.00	1	0.00	1	0.00	1	2825.27	13	-4169.37	20	-210.69	1
312	327	-250	Min.	257.19									1473.99	13		
312	327	-250	Min.	529.60	0.00	1	0.00	1	0.00	1	-4487.98	19	-2936.76	19	-210.69	1
331	347	325	Max	0.00	0.00	5	0.00	1	0.00	1	3634.96	13	1473.32	5	94.49	9
331	347	325	Max	272.00									1714.93	13		
331	347	325	Max	361.84	0.00	5	0.00	1	0.00	1	-1070.92	13	1229.62	13	94.49	9
331	347	325	Min.	0.00	0.00	5	0.00	1	0.00	1	784.73	5	-3161.39	13	-47.87	1
331	347	325	Min.	272.00									-855.84	13		
331	347	325	Min.	361.84	0.00	5	0.00	1	0.00	1	-3921.15	5	-4448.83	5	-47.87	1
331	334	347	Max	25.10	0.00	5	0.00	13	0.00	13	4690.12	18	1117.02	5	354.03	13
331	334	347	Max	57.14	0.00	5	0.00	13	0.00	13	4178.09	9	1632.35	5	354.03	13
331	334	347	Min.	25.10	0.00	5	0.00	5	0.00	5	1763.22	1	-4293.00	13	-1074.34	5
331	334	347	Min.	57.14	0.00	5	0.00	5	0.00	5	1357.40	1	-2904.65	13	-1074.34	5
331	340	334	Max	25.11	0.00	5	0.00	1	0.00	1	3793.39	13	1385.86	5	103.27	9
331	340	334	Max	104.91									1793.48	5		
331	340	334	Max	418.75	0.00	5	0.00	1	0.00	1	-1193.12	13	964.50	13	103.27	9
331	340	334	Min.	25.11	0.00	5	0.00	1	0.00	1	1016.30	5	-4152.95	13	-41.04	1
331	340	334	Min.	104.91									-940.13	5		
331	340	334	Min.	418.75	0.00	5	0.00	1	0.00	1	-3970.21	5	-4428.35	5	-41.04	1
333	325	326	Max	24.27	0.00	9	0.00	20	0.00	20	2170.75	9	949.95	1	-39.33	9
333	325	326	Max	242.34									511.63	12		
333	325	326	Max	246.79	0.00	9	0.00	20	0.00	20	622.00	9	1220.32	9	-39.33	9
333	325	326	Min.	24.27	0.00	1	0.00	19	0.00	19	-280.31	1	-1806.03	9	-197.75	17
333	325	326	Min.	239.81									-873.09	3		
333	325	326	Min.	246.79	0.00	1	0.00	19	0.00	19	-1829.06	1	-1477.87	1	-197.75	17
333	326	327	Max	20.00	0.00	1	0.00	20	0.00	19	2057.56	9	1026.17	1	31.09	9
333	326	327	Max	240.23									473.34	16		
333	326	327	Max	246.08	0.00	1	0.00	20	0.00	20	746.31	9	1362.85	9	31.09	9
333	326	327	Min.	20.00	0.00	1	0.00	19	0.00	20	-473.22	1	-1806.62	9	-118.00	1
333	326	327	Min.	231.93									-617.09	4		
333	326	327	Min.	246.08	0.00	1	0.00	19	0.00	19	-1784.48	1	-1525.92	1	-118.00	1
333	327	328	Max	25.28	0.00	1	0.00	19	0.00	19	1888.11	9	1601.64	1	302.32	20
333	327	328	Max	77.24									276.33	17		
333	327	328	Max	234.14	0.00	1	0.00	19	0.00	19	667.67	9	1181.76	9	302.32	20
333	327	328	Min.	25.28	0.00	1	0.00	20	0.00	20	-1133.11	1	-1489.74	9	128.42	1
333	327	328	Min.	99.50									160.56	30		
333	327	328	Min.	234.14	0.00	1	0.00	20	0.00	20	-2353.55	1	-2036.85	1	128.42	1
335	328	330	Max	17.50	0.00	1	0.00	9	0.00	1	2498.22	5	1155.67	13	86.61	9
335	328	330	Max	18.95									824.12	14		
335	328	330	Max	228.50	0.00	1	0.00	9	0.00	1	325.74	5	1071.03	5	86.61	9
335	328	330	Min.	17.50	0.00	1	0.00	1	0.00	9	-286.54	13	-1908.36	5	-75.52	1
335	328	330	Min.	18.95									-1533.95	14		
335	328	330	Min.	228.50	0.00	1	0.00	1	0.00	9	-2459.02	13	-1741.00	13	-75.52	1
335	330	350	Max	20.13	0.00	5	0.00	17	0.00	1	2896.15	13	1593.26	5	144.39	9
335	330	350	Max	27.78									1142.76	6		
335	330	350	Max	276.19	0.00	5	0.00	17	0.00	17	254.77	13	1435.93	13	144.39	9
335	330	350	Min.	20.13	0.00	13	0.00	1	0.00	17	-259.37	5	-2599.96	13	-159.38	1
335	330	350	Min.	27.78									-1892.86	6		
335	330	350	Min.	276.19	0.00	13	0.00	1	0.00	1	-2900.75	5	-2450.68	5	-159.38	1

Relazione di calcolo

336	348	347	Max	0.00	0.00	1	0.00	1	0.00	1	780.20	13	604.52	5	-144.67	13
336	348	347	Max	11.62									606.46	5		
336	348	347	Max	379.43	0.00	1	0.00	1	0.00	1	-183.50	13	351.71	13	-144.67	13
336	348	347	Min.	0.00	0.00	1	0.00	1	0.00	1	31.39	5	-780.43	13	-322.30	19
336	348	347	Min.	11.62									-548.93	5		
336	348	347	Min.	379.43	0.00	1	0.00	1	0.00	1	-932.31	5	-1104.75	5	-322.30	19
336	336	348	Max	30.20	0.00	1	0.00	1	0.00	1	5157.87	17	121.91	5	3771.38	20
336	336	348	Max	48.14	0.00	1	0.00	1	0.00	1	5095.37	17	659.76	5	3771.38	20
336	336	348	Min.	30.20	0.00	1	0.00	9	0.00	9	2964.81	1	-1603.45	13	1815.03	13
336	336	348	Min.	48.14	0.00	1	0.00	9	0.00	9	2917.79	1	-940.20	13	1815.03	13
337	-249	336	Max	0.00	0.00	1	0.00	5	0.00	5	-3020.06	9	1111.13	13	3746.63	19
337	-249	336	Max	36.84	0.00	1	0.00	5	0.00	1	-3249.62	9	-59.32	13	3746.63	19
337	-249	336	Min.	0.00	0.00	1	0.00	13	0.00	5	-5808.49	18	-928.65	5	1653.92	5
337	-249	336	Min.	36.84	0.00	1	0.00	13	0.00	9	-6155.31	18	-2579.53	5	1653.92	5
337	-250	-249	Max	0.00	0.00	1	0.00	20	0.00	1	1025.53	13	1186.25	5	186.47	13
337	-250	-249	Max	267.31									566.34	16		
337	-250	-249	Max	271.08	0.00	1	0.00	20	0.00	20	374.94	13	1111.08	13	186.47	13
337	-250	-249	Min.	0.00	0.00	1	0.00	19	0.00	1	-494.52	5	-789.64	13	3.77	5
337	-250	-249	Min.	267.31									-257.13	16		
337	-250	-249	Min.	271.08	0.00	1	0.00	19	0.00	19	-1145.10	5	-1038.60	5	3.77	5
337	349	-250	Max	10.00	0.00	1	0.00	1	0.00	5	4971.03	19	158.24	5	-1094.92	5
337	349	-250	Max	56.92	0.00	1	0.00	1	0.00	1	4824.64	19	1201.62	5	-1094.92	5
337	349	-250	Min.	10.00	0.00	1	0.00	1	0.00	5	2249.66	5	-2550.41	13	-2788.22	19
337	349	-250	Min.	56.92	0.00	1	0.00	1	0.00	1	2137.04	5	-618.26	13	-2788.22	19
337	-251	349	Max	0.00	0.00	1	0.00	5	0.00	5	106.28	5	204.18	1	-436.75	5
337	-251	349	Max	8.40									204.63	1		
337	-251	349	Max	40.52	0.00	1	0.00	5	0.00	5	9.02	5	214.17	5	-436.75	5
337	-251	349	Min.	0.00	0.00	1	0.00	5	0.00	5	-2389.69	13	-555.65	9	-1031.80	19
337	-251	349	Min.	8.40									-520.44	1		
337	-251	349	Min.	40.52	0.00	1	0.00	5	0.00	5	-2486.95	13	-1530.40	13	-1031.80	19
337	-252	-251	Max	0.00	0.00	1	0.00	5	0.00	13	410.23	1	83.20	1	-29.78	13
337	-252	-251	Max	40.42									44.17	10		
337	-252	-251	Max	50.52	0.00	1	0.00	5	0.00	13	288.97	1	217.70	1	-29.78	13
337	-252	-251	Min.	0.00	0.00	1	0.00	5	0.00	5	-485.78	9	-136.20	9	-196.70	5
337	-252	-251	Min.	40.42									-258.69	10		
337	-252	-251	Min.	50.52	0.00	1	0.00	5	0.00	5	-607.04	9	-370.14	9	-196.70	5
337	-253	-252	Max	0.00	0.00	1	0.00	5	0.00	5	443.46	5	406.28	9	141.63	13
337	-253	-252	Max	50.52	0.00	1	0.00	5	0.00	1	322.20	5	157.99	9	141.63	13
337	-253	-252	Min.	0.00	0.00	1	0.00	5	0.00	5	-474.05	13	-307.88	1	-185.74	5
337	-253	-252	Min.	50.52	0.00	1	0.00	5	0.00	1	-595.31	13	-136.31	1	-185.74	5
337	350	-253	Max	15.00	0.00	1	0.00	1	0.00	5	1388.46	1	751.23	9	886.05	13
337	350	-253	Max	50.52	0.00	1	0.00	1	0.00	1	1303.20	1	415.45	9	886.05	13
337	350	-253	Min.	15.00	0.00	1	0.00	1	0.00	5	-1062.69	9	-736.89	1	-602.48	5
337	350	-253	Min.	50.52	0.00	1	0.00	1	0.00	1	-1147.95	9	-315.67	1	-602.48	5
340	-272	348	Max	0.00	0.00	13	0.00	1	0.00	1	4494.50	19	-1121.49	5	44.88	5
340	-272	348	Max	228.05									2515.00	20		
340	-272	348	Max	505.12	0.00	13	0.00	1	0.00	1	-2723.01	13	-2076.86	13	44.88	5
340	-272	348	Min.	0.00	0.00	5	0.00	1	0.00	1	2648.33	5	-2515.93	19	-172.58	13
340	-272	348	Min.	212.13									1553.03	5		
340	-272	348	Min.	505.12	0.00	5	0.00	1	0.00	1	-4571.09	20	-4088.77	20	-172.58	13
341	-272	340	Max	0.00	0.00	1	0.00	1	0.00	1	994.72	13	2468.89	5	667.96	18
341	-272	340	Max	1.21									2290.88	18		
341	-272	340	Max	364.54	0.00	1	0.00	1	0.00	1	-1214.53	13	62.88	13	667.96	18
341	-272	340	Min.	0.00	0.00	1	0.00	1	0.00	1	-699.70	5	470.65	13	247.74	5
341	-272	340	Min.	4.55									1036.20	12		
341	-272	340	Min.	364.54	0.00	1	0.00	1	0.00	1	-2908.95	5	-4115.94	5	247.74	5
341	344	-272	Max	20.11	0.00	5	0.00	13	0.00	13	5858.69	17	-810.43	5	-865.13	5
341	344	-272	Max	145.06	0.00	5	0.00	13	0.00	13	4527.35	17	2403.46	5	-865.13	5
341	344	-272	Min.	20.11	0.00	5	0.00	5	0.00	5	3037.69	5	-4881.24	13	-1849.61	19
341	344	-272	Min.	145.06	0.00	5	0.00	5	0.00	5	2070.19	5	615.86	13	-1849.61	19
342	352	345	Max	0.00	0.00	9	0.00	1	0.00	1	6197.90	5	3241.16	13	118.61	1
342	352	345	Max	147.63									233.19	31		
342	352	345	Max	148.75	0.00	9	0.00	1	0.00	1	5295.78	5	4150.28	5	118.61	1
342	352	345	Min.	0.00	0.00	1	0.00	1	0.00	1	-4007.42	13	-4399.44	5	-186.44	9
342	352	345	Min.	147.63									233.19	31		
342	352	345	Min.	148.75	0.00	1	0.00	1	0.00	1	-4909.54	13	-3389.24	13	-186.44	9
343	-273	344	Max	0.00	0.00	9	0.00	5	0.00	20	949.38	9	928.34	13	308.15	13
343	-273	344	Max	88.43									752.86	10		
343	-273	344	Max	115.33	0.00	9	0.00	5	0.00	5	253.17	9	1201.26	9	308.15	13
343	-273	344	Min.	0.00	0.00	1	0.00	13	0.00	19	-2192.42	1	-558.80	5	-810.49	5
343	-273	344	Min.	88.43									-1583.30	10		
343	-273	344	Min.	115.33	0.00	1	0.00	13	0.00	13	-2888.64	1	-3067.82	1	-810.49	5
343	346	-273	Max	15.15	0.00	5	0.00	20	0.00	19	2686.98	13	957.68	5	258.89	13
343	346	-273	Max	66.77									1075.26	5		
343	346	-273	Max	280.09	0.00	5	0.00	20	0.00	20	321.56	13	1256.18	13	258.89	13
343	346	-273	Min.	15.15	0.00	5	0.00	19	0.00	20	453.78	5	-2741.68	13	-187.14	5
343	346	-273	Min.	66.77									-1016.01	5		
343	346	-273	Min.	280.09	0.00	5	0.00	19	0.00	19	-1911.65	5	-991.35	5	-187.14	5
343	345	346	Max	15.16	0.00	1	0.00	1	0.00	1	2723.66	9	1825.65	1	194.83	13

Relazione di calcolo

343	345	346	Max	16.72								1251.17	6			
343	345	346	Max	291.70	0.00	1	0.00	1	0.00	1	255.46	9	1386.82	9	194.83	13
343	345	346	Min.	15.16	0.00	1	0.00	1	0.00	1	-381.15	1	-2736.99	9	-243.03	5
343	345	346	Min.	16.72									-1598.61	6		
343	345	346	Min.	291.70	0.00	1	0.00	1	0.00	1	-2849.36	1	-2639.27	1	-243.03	5

Sollecitazioni elementi bidimensionali

Simbologia

- Bid. = Numero del muro/elemento bidimensionale
- Nodo = Numero del nodo
- σ_{xx} = Tensione normale sulle facce perp. all'asse X
- CC = Numero della combinazione delle condizioni di carico elementari
- σ_{zz} = Tensione normale sulle facce perp. all'asse Z
- τ_{xz} = Tensione in dir. Z sulle facce perp. all'asse X
- Mxx = Momento che provoca variazione di tensione sulle facce perp. all'asse X
- Mzz = Momento che provoca variazione di tensione sulle facce perp. all'asse Z
- Mxz = Momento che provoca variazione di tensione tangenziale sulle facce perp. all'asse X
- τ_{zy} = Tensione in dir. Y sulle facce perp. all'asse Z
- τ_{xy} = Tensione in dir. Y sulle facce perp. all'asse X

Bid.	Nodo	σ_{xx} <daN/mq>	CC	σ_{zz} <daN/mq>	CC	τ_{xz} <daN/mq>	CC	Mxx <daNm/m>	CC	Mzz <daNm/m>	CC	Mxz <daNm/m>	CC	τ_{zy} <daN/mq>	CC	τ_{xy} <daN/mq>	CC	
102	Max	-34	5610.62	5	523584.00	13	67597.60	13	65.68	9	272.50	9	100.54	9	863.04	9	1357.84	9
102	Max	-36	5610.62	5	523584.00	13	67597.60	13	65.68	9	272.50	9	100.54	9	863.04	9	1357.84	9
102	Max	-59	5610.62	5	523584.00	13	67597.60	13	65.68	9	272.50	9	100.54	9	863.04	9	1357.84	9
102	Max	-57	5610.62	5	523584.00	13	67597.60	13	65.68	9	272.50	9	100.54	9	863.04	9	1357.84	9
102	Min.	-34	-7666.90	13	-689572.00	5	-64815.80	5	-26.84	1	-344.34	1	-273.77	1	-1875.66	1	-435.66	1
102	Min.	-36	-7666.90	13	-689572.00	5	-64815.80	5	-26.84	1	-344.34	1	-273.77	1	-1875.66	1	-435.66	1
102	Min.	-59	-7666.90	13	-689572.00	5	-64815.80	5	-26.84	1	-344.34	1	-273.77	1	-1875.66	1	-435.66	1
102	Min.	-57	-7666.90	13	-689572.00	5	-64815.80	5	-26.84	1	-344.34	1	-273.77	1	-1875.66	1	-435.66	1
102	Max	-57	7077.99	13	354040.00	13	80717.30	13	32.15	1	57.12	1	296.03	9	2048.20	1	2537.71	9
102	Max	-59	7077.99	13	354040.00	13	80717.30	13	32.15	1	57.12	1	296.03	9	2048.20	1	2537.71	9
102	Max	-97	7077.99	13	354040.00	13	80717.30	13	32.15	1	57.12	1	296.03	9	2048.20	1	2537.71	9
102	Max	158	7077.99	13	354040.00	13	80717.30	13	32.15	1	57.12	1	296.03	9	2048.20	1	2537.71	9
102	Min.	-57	-22058.70	5	-534765.00	5	-56582.00	5	-17.95	9	-645.07	9	-79.96	1	-5361.30	9	-520.37	1
102	Min.	-59	-22058.70	5	-534765.00	5	-56582.00	5	-17.95	9	-645.07	9	-79.96	1	-5361.30	9	-520.37	1
102	Min.	-97	-22058.70	5	-534765.00	5	-56582.00	5	-17.95	9	-645.07	9	-79.96	1	-5361.30	9	-520.37	1
102	Min.	158	-22058.70	5	-534765.00	5	-56582.00	5	-17.95	9	-645.07	9	-79.96	1	-5361.30	9	-520.37	1
102	Max	-11	45559.70	13	742204.00	13	110349.00	13	27.46	9	691.90	9	72.55	9	1075.36	9	191.95	9
102	Max	-13	45559.70	13	742204.00	13	110349.00	13	27.46	9	691.90	9	72.55	9	1075.36	9	191.95	9
102	Max	-36	45559.70	13	742204.00	13	110349.00	13	27.46	9	691.90	9	72.55	9	1075.36	9	191.95	9
102	Max	-34	45559.70	13	742204.00	13	110349.00	13	27.46	9	691.90	9	72.55	9	1075.36	9	191.95	9
102	Min.	-11	-51090.30	5	-912018.00	5	-113282.00	5	-44.83	1	-595.93	1	-81.87	1	-2401.69	1	-1287.12	1
102	Min.	-13	-51090.30	5	-912018.00	5	-113282.00	5	-44.83	1	-595.93	1	-81.87	1	-2401.69	1	-1287.12	1
102	Min.	-36	-51090.30	5	-912018.00	5	-113282.00	5	-44.83	1	-595.93	1	-81.87	1	-2401.69	1	-1287.12	1
102	Min.	-34	-51090.30	5	-912018.00	5	-113282.00	5	-44.83	1	-595.93	1	-81.87	1	-2401.69	1	-1287.12	1
102	Max	-36	14604.50	13	361557.00	13	175211.00	13	121.72	9	151.45	9	132.06	9	2549.27	1	645.13	9
102	Max	-38	14604.50	13	361557.00	13	175211.00	13	121.72	9	151.45	9	132.06	9	2549.27	1	645.13	9
102	Max	-61	14604.50	13	361557.00	13	175211.00	13	121.72	9	151.45	9	132.06	9	2549.27	1	645.13	9
102	Max	-59	14604.50	13	361557.00	13	175211.00	13	121.72	9	151.45	9	132.06	9	2549.27	1	645.13	9
102	Min.	-36	-24134.80	5	-506583.00	5	-167662.00	5	-73.46	1	-297.52	1	-167.19	1	-2701.02	9	-341.79	1
102	Min.	-38	-24134.80	5	-506583.00	5	-167662.00	5	-73.46	1	-297.52	1	-167.19	1	-2701.02	9	-341.79	1
102	Min.	-61	-24134.80	5	-506583.00	5	-167662.00	5	-73.46	1	-297.52	1	-167.19	1	-2701.02	9	-341.79	1
102	Min.	-59	-24134.80	5	-506583.00	5	-167662.00	5	-73.46	1	-297.52	1	-167.19	1	-2701.02	9	-341.79	1
102	Max	-59	8010.99	13	266878.00	13	158569.00	13	126.08	9	61.68	1	159.43	9	1951.65	1	470.70	9
102	Max	-61	8010.99	13	266878.00	13	158569.00	13	126.08	9	61.68	1	159.43	9	1951.65	1	470.70	9
102	Max	-99	8010.99	13	266878.00	13	158569.00	13	126.08	9	61.68	1	159.43	9	1951.65	1	470.70	9
102	Max	-97	8010.99	13	266878.00	13	158569.00	13	126.08	9	61.68	1	159.43	9	1951.65	1	470.70	9
102	Min.	-59	-20353.90	5	-383966.00	5	-156425.00	5	-58.74	1	-178.03	9	-73.26	1	-1435.83	9	-439.59	1
102	Min.	-61	-20353.90	5	-383966.00	5	-156425.00	5	-58.74	1	-178.03	9	-73.26	1	-1435.83	9	-439.59	1
102	Min.	-99	-20353.90	5	-383966.00	5	-156425.00	5	-58.74	1	-178.03	9	-73.26	1	-1435.83	9	-439.59	1
102	Min.	-97	-20353.90	5	-383966.00	5	-156425.00	5	-58.74	1	-178.03	9	-73.26	1	-1435.83	9	-439.59	1
102	Max	-13	39192.90	13	417050.00	13	162403.00	13	45.66	9	715.40	9	52.10	9	1455.87	1	367.07	1
102	Max	-15	39192.90	13	417050.00	13	162403.00	13	45.66	9	715.40	9	52.10	9	1455.87	1	367.07	1
102	Max	-38	39192.90	13	417050.00	13	162403.00	13	45.66	9	715.40	9	52.10	9	1455.87	1	367.07	1
102	Max	-36	39192.90	13	417050.00	13	162403.00	13	45.66	9	715.40	9	52.10	9	1455.87	1	367.07	1
102	Min.	-13	-48516.20	5	-566345.00	5	-162980.00	5	-55.83	1	-655.99	1	-100.02	1	-2117.80	9	-94.84	9
102	Min.	-15	-48516.20	5	-566345.00	5	-162980.00	5	-55.83	1	-655.99	1	-100.02	1	-2117.80	9	-94.84	9
102	Min.	-38	-48516.20	5	-566345.00	5	-162980.00	5	-55.83	1	-655.99	1	-100.02	1	-2117.80	9	-94.84	9
102	Min.	-36	-48516.20	5	-566345.00	5	-162980.00	5	-55.83	1	-655.99	1	-100.02	1	-2117.80	9	-94.84	9
102	Max	-38	16033.20	13	331251.00	9	207401.00	13	128.50	9	126.95	9	128.29	9	838.34	1	288.99	9
102	Max	-40	16033.20	13	331251.00	9	207401.00	13	128.50	9	126.95	9	128.29	9	838.34	1	288.99	9
102	Max	-63	16033.20	13	331251.00	9	207401.00	13	128.50	9	126.95	9	128.29	9	838.34	1	288.99	9
102	Max	-61	16033.20	13	331251.00	9	207401.00	13	128.50	9	126.95	9	128.29	9	838.34	1	288.99	9
102	Min.	-38	-24025.70	5	-451631.00	1	-208827.00	5	-95.91	1	-206.77	1	-129.48	1	-4958.52	9	-262.24	1
102	Min.	-40	-24025.70	5	-451631.00	1	-208827.00	5	-95.91	1	-206.77	1	-129.48	1	-4958.52	9	-262.24	1
102	Min.	-63	-24025.70	5	-451631.00	1	-208827.00	5	-95.91	1	-206.77	1	-129.48	1	-4958.52	9	-262.24	1
102	Min.	-61	-24025.70	5	-451631.00	1	-208827.00	5	-95.91	1	-206.77	1	-129.48	1	-4958.52	9	-262.24	1
102	Max	-61	6420.27	13	225113.00	9	208585.00	13	53.95	1	119.76	1	147.02	9	8140.77	9	1876.76	1
102	Max	-63	6420.27	13	225113.00	9	208585.00	13	53.95	1	119.76	1	147.02	9	8140.77	9	1876.76	1
102	Max	-101	6420.27	13	225113.00	9	208585.00	13	53.95	1	119.76	1	147.02	9	8140.77	9	1876.76	1
102	Max	-99	6420.27	13	225113.00	9	208585.00	13	53.95	1	119.76	1	147.02	9	8140.77	9	1876.76	1
102	Min.	-61	-17634.30	5	-329349.00	1	-212768.00	5	-39.52	9	-156.57	9	-83.62	1	-1601.41	1	-2061.76	9
102	Min.	-63	-17634.30	5	-329349.00	1	-212768.00	5	-39.52	9	-156.57	9	-83.62	1	-1601.41	1	-2061.76	9
102	Min.	-101	-17634.30	5	-329349.00	1	-212768.00	5	-39.52	9	-156.57	9	-83.62	1	-1601.41	1	-2061.76	9
102	Min.	-99	-17634.30	5	-329349.00	1	-212768.00	5	-39.52	9	-156.57	9	-83.62	1	-1601.41	1	-2061.76	9
102	Max	-15	40873.80	9	400782.00	9</												

Relazione di calcolo

102	Max	-40	44185.50	9	708164.00	9	194103.00	13	95.57	13	790.09	9	49.77	9	27430.30	1	4222.56	1
102	Min.	-17	-50528.70	1	-812314.00	1	-189126.00	5	-72.04	5	-846.38	1	-102.44	1	-39933.40	9	-3802.38	9
102	Min.	-19	-50528.70	1	-812314.00	1	-189126.00	5	-72.04	5	-846.38	1	-102.44	1	-39933.40	9	-3802.38	9
102	Min.	-42	-50528.70	1	-812314.00	1	-189126.00	5	-72.04	5	-846.38	1	-102.44	1	-39933.40	9	-3802.38	9
102	Min.	-40	-50528.70	1	-812314.00	1	-189126.00	5	-72.04	5	-846.38	1	-102.44	1	-39933.40	9	-3802.38	9
102	Max	-63	7558.34	9	262553.00	9	244753.00	13	21.76	5	-97.81	1	70.54	9	12144.10	1	2128.29	9
102	Max	-65	7558.34	9	262553.00	9	244753.00	13	21.76	5	-97.81	1	70.54	9	12144.10	1	2128.29	9
102	Max	160	7558.34	9	262553.00	9	244753.00	13	21.76	5	-97.81	1	70.54	9	12144.10	1	2128.29	9
102	Max	-101	7558.34	9	262553.00	9	244753.00	13	21.76	5	-97.81	1	70.54	9	12144.10	1	2128.29	9
102	Min.	-63	-14813.10	1	-371814.00	1	-256562.00	5	-43.48	13	-300.85	9	-142.75	1	-39039.30	9	-2335.87	1
102	Min.	-65	-14813.10	1	-371814.00	1	-256562.00	5	-43.48	13	-300.85	9	-142.75	1	-39039.30	9	-2335.87	1
102	Min.	160	-14813.10	1	-371814.00	1	-256562.00	5	-43.48	13	-300.85	9	-142.75	1	-39039.30	9	-2335.87	1
102	Min.	-101	-14813.10	1	-371814.00	1	-256562.00	5	-43.48	13	-300.85	9	-142.75	1	-39039.30	9	-2335.87	1
102	Max	-40	3587.77	13	469018.00	9	246848.00	13	92.86	5	219.34	13	103.29	9	19007.70	9	2052.75	1
102	Max	-42	3587.77	13	469018.00	9	246848.00	13	92.86	5	219.34	13	103.29	9	19007.70	9	2052.75	1
102	Max	-65	3587.77	13	469018.00	9	246848.00	13	92.86	5	219.34	13	103.29	9	19007.70	9	2052.75	1
102	Max	-63	3587.77	13	469018.00	9	246848.00	13	92.86	5	219.34	13	103.29	9	19007.70	9	2052.75	1
102	Min.	-40	-5494.91	5	-565521.00	1	-245381.00	5	-29.93	13	-63.04	5	-46.62	1	-3779.57	1	-1840.16	9
102	Min.	-42	-5494.91	5	-565521.00	1	-245381.00	5	-29.93	13	-63.04	5	-46.62	1	-3779.57	1	-1840.16	9
102	Min.	-65	-5494.91	5	-565521.00	1	-245381.00	5	-29.93	13	-63.04	5	-46.62	1	-3779.57	1	-1840.16	9
102	Min.	-63	-5494.91	5	-565521.00	1	-245381.00	5	-29.93	13	-63.04	5	-46.62	1	-3779.57	1	-1840.16	9
103	Max	-39	17178.60	1	270377.00	1	210858.00	5	318.00	9	725.66	9	444.53	9	3058.36	1	532.95	9
103	Max	-41	17178.60	1	270377.00	1	210858.00	5	318.00	9	725.66	9	444.53	9	3058.36	1	532.95	9
103	Max	-64	17178.60	1	270377.00	1	210858.00	5	318.00	9	725.66	9	444.53	9	3058.36	1	532.95	9
103	Max	-62	17178.60	1	270377.00	1	210858.00	5	318.00	9	725.66	9	444.53	9	3058.36	1	532.95	9
103	Min.	-39	-20492.30	9	-322541.00	9	-215563.00	13	-323.24	1	-831.26	1	-432.07	1	-3503.86	9	-516.21	1
103	Min.	-41	-20492.30	9	-322541.00	9	-215563.00	13	-323.24	1	-831.26	1	-432.07	1	-3503.86	9	-516.21	1
103	Min.	-64	-20492.30	9	-322541.00	9	-215563.00	13	-323.24	1	-831.26	1	-432.07	1	-3503.86	9	-516.21	1
103	Min.	-62	-20492.30	9	-322541.00	9	-215563.00	13	-323.24	1	-831.26	1	-432.07	1	-3503.86	9	-516.21	1
103	Max	-62	7484.92	1	187678.00	1	209093.00	5	100.78	1	420.36	1	399.29	9	1206.54	9	2046.64	1
103	Max	-64	7484.92	1	187678.00	1	209093.00	5	100.78	1	420.36	1	399.29	9	1206.54	9	2046.64	1
103	Max	-102	7484.92	1	187678.00	1	209093.00	5	100.78	1	420.36	1	399.29	9	1206.54	9	2046.64	1
103	Max	-100	7484.92	1	187678.00	1	209093.00	5	100.78	1	420.36	1	399.29	9	1206.54	9	2046.64	1
103	Min.	-62	-12312.30	9	-232887.00	9	-215632.00	13	-108.98	9	-511.09	9	-390.64	1	-785.25	1	-2118.67	9
103	Min.	-64	-12312.30	9	-232887.00	9	-215632.00	13	-108.98	9	-511.09	9	-390.64	1	-785.25	1	-2118.67	9
103	Min.	-102	-12312.30	9	-232887.00	9	-215632.00	13	-108.98	9	-511.09	9	-390.64	1	-785.25	1	-2118.67	9
103	Min.	-100	-12312.30	9	-232887.00	9	-215632.00	13	-108.98	9	-511.09	9	-390.64	1	-785.25	1	-2118.67	9
103	Max	-60	9490.05	1	268138.00	1	153998.00	5	162.15	9	376.71	1	407.93	9	2198.53	1	291.31	9
103	Max	-62	9490.05	1	268138.00	1	153998.00	5	162.15	9	376.71	1	407.93	9	2198.53	1	291.31	9
103	Max	-100	9490.05	1	268138.00	1	153998.00	5	162.15	9	376.71	1	407.93	9	2198.53	1	291.31	9
103	Max	-98	9490.05	1	268138.00	1	153998.00	5	162.15	9	376.71	1	407.93	9	2198.53	1	291.31	9
103	Min.	-60	-14682.80	9	-324836.00	9	-157893.00	13	-173.69	1	-489.42	9	-399.48	1	-2494.05	9	-236.68	1
103	Min.	-62	-14682.80	9	-324836.00	9	-157893.00	13	-173.69	1	-489.42	9	-399.48	1	-2494.05	9	-236.68	1
103	Min.	-100	-14682.80	9	-324836.00	9	-157893.00	13	-173.69	1	-489.42	9	-399.48	1	-2494.05	9	-236.68	1
103	Min.	-98	-14682.80	9	-324836.00	9	-157893.00	13	-173.69	1	-489.42	9	-399.48	1	-2494.05	9	-236.68	1
103	Max	-12	48619.20	5	750033.00	5	112243.00	5	117.75	9	1965.17	9	250.16	9	2924.08	9	737.52	9
103	Max	-14	48619.20	5	750033.00	5	112243.00	5	117.75	9	1965.17	9	250.16	9	2924.08	9	737.52	9
103	Max	-37	48619.20	5	750033.00	5	112243.00	5	117.75	9	1965.17	9	250.16	9	2924.08	9	737.52	9
103	Max	-35	48619.20	5	750033.00	5	112243.00	5	117.75	9	1965.17	9	250.16	9	2924.08	9	737.52	9
103	Min.	-12	-50053.80	13	-858717.00	13	-114873.00	13	-120.10	1	-2052.88	1	-245.36	1	-2843.29	1	-674.32	1
103	Min.	-14	-50053.80	13	-858717.00	13	-114873.00	13	-120.10	1	-2052.88	1	-245.36	1	-2843.29	1	-674.32	1
103	Min.	-37	-50053.80	13	-858717.00	13	-114873.00	13	-120.10	1	-2052.88	1	-245.36	1	-2843.29	1	-674.32	1
103	Min.	-35	-50053.80	13	-858717.00	13	-114873.00	13	-120.10	1	-2052.88	1	-245.36	1	-2843.29	1	-674.32	1
103	Max	-35	5418.30	5	528691.00	5	64700.10	5	89.71	9	1057.80	9	474.58	9	2425.51	9	1134.15	9
103	Max	-37	5418.30	5	528691.00	5	64700.10	5	89.71	9	1057.80	9	474.58	9	2425.51	9	1134.15	9
103	Max	-60	5418.30	5	528691.00	5	64700.10	5	89.71	9	1057.80	9	474.58	9	2425.51	9	1134.15	9
103	Max	-58	5418.30	5	528691.00	5	64700.10	5	89.71	9	1057.80	9	474.58	9	2425.51	9	1134.15	9
103	Min.	-35	-7457.57	13	-630049.00	13	-65821.10	13	-94.85	1	-1148.55	1	-450.62	1	-2381.80	1	-1196.46	1
103	Min.	-37	-7457.57	13	-630049.00	13	-65821.10	13	-94.85	1	-1148.55	1	-450.62	1	-2381.80	1	-1196.46	1
103	Min.	-60	-7457.57	13	-630049.00	13	-65821.10	13	-94.85	1	-1148.55	1	-450.62	1	-2381.80	1	-1196.46	1
103	Min.	-58	-7457.57	13	-630049.00	13	-65821.10	13	-94.85	1	-1148.55	1	-450.62	1	-2381.80	1	-1196.46	1
103	Max	-58	4734.75	1	357594.00	5	73008.00	5	39.99	1	481.77	1	459.59	9	5165.49	1	1499.01	9
103	Max	-60	4734.75	1	357594.00	5	73008.00	5	39.99	1	481.77	1	459.59	9	5165.49	1	1499.01	9
103	Max	-98	4734.75	1	357594.00	5	73008.00	5	39.99	1	481.77	1	459.59	9	5165.49	1	1499.01	9
103	Max	-96	4734.75	1	357594.00	5	73008.00	5	39.99	1	481.77	1	459.59	9	5165.49	1	1499.01	9
103	Min.	-58	-16387.70	9	-460751.00	13	-60649.30	13	-50.10	9	-558.09	9	-460.27	1	-4976.34	9	-1624.51	1
103	Min.	-60	-16387.70	9	-460751.00	13	-60649.30	13	-50.10	9	-558.09	9	-460.27	1	-4976.34	9	-1624.51	1
103	Min.	-98	-16387.70	9	-460751.00	13	-60649.30	13	-50.10	9	-558.09	9	-460.27	1	-4976.34	9	-1624.51	1
103	Min.	-96	-16387.70	9	-460751.00	13	-60649.30	13	-50.10	9	-558.09	9	-460.27	1	-4976.34	9	-1624.51	1
103	Max	-16	33810.70	1	320532.00	1	188799.00	5	492.34	9	2448.79	9	334.51	9	2431.52	5	2361.09	9
103	Max	-18	33810.70	1	320532.00	1	188799.00	5	492.34	9	2448.79	9	334.51	9	2431.52	5	2361.09	9
103	Max	-41	33810.70	1	320532.00	1	188799.00	5	492.34	9	2448.79</							

Relazione di calcolo

103	Min.	-41	-7754.30	13	-385942.00	13	-249706.00	9	-113.64	13	-528.15	1	-248.02	1	-3646.77	5	-2828.80	13
103	Min.	-46	-7754.30	13	-385942.00	13	-249706.00	9	-113.64	13	-528.15	1	-248.02	1	-3646.77	5	-2828.80	13
103	Min.	-69	-7754.30	13	-385942.00	13	-249706.00	9	-113.64	13	-528.15	1	-248.02	1	-3646.77	5	-2828.80	13
103	Min.	-64	-7754.30	13	-385942.00	13	-249706.00	9	-113.64	13	-528.15	1	-248.02	1	-3646.77	5	-2828.80	13
103	Max	-18	36468.40	5	518243.00	5	197070.00	1	350.25	9	2669.76	9	304.34	9	30997.70	1	4294.92	5
103	Max	-23	36468.40	5	518243.00	5	197070.00	1	350.25	9	2669.76	9	304.34	9	30997.70	1	4294.92	5
103	Max	-46	36468.40	5	518243.00	5	197070.00	1	350.25	9	2669.76	9	304.34	9	30997.70	1	4294.92	5
103	Max	-41	36468.40	5	518243.00	5	197070.00	1	350.25	9	2669.76	9	304.34	9	30997.70	1	4294.92	5
103	Min.	-18	-39317.20	13	-557754.00	13	-199453.00	9	-361.72	1	-2736.45	1	-312.48	1	-33310.90	9	-4364.74	13
103	Min.	-23	-39317.20	13	-557754.00	13	-199453.00	9	-361.72	1	-2736.45	1	-312.48	1	-33310.90	9	-4364.74	13
103	Min.	-46	-39317.20	13	-557754.00	13	-199453.00	9	-361.72	1	-2736.45	1	-312.48	1	-33310.90	9	-4364.74	13
103	Min.	-41	-39317.20	13	-557754.00	13	-199453.00	9	-361.72	1	-2736.45	1	-312.48	1	-33310.90	9	-4364.74	13
104	Max	-31	-3745.31	1	114283.00	9	135453.00	1	461.84	9	1628.63	9	796.61	9	10533.50	1	1431.77	1
104	Max	-32	-3745.31	1	114283.00	9	135453.00	1	461.84	9	1628.63	9	796.61	9	10533.50	1	1431.77	1
104	Max	-32	-3745.31	1	114283.00	9	135453.00	1	461.84	9	1628.63	9	796.61	9	10533.50	1	1431.77	1
104	Max	-55	-3745.31	1	114283.00	9	135453.00	1	461.84	9	1628.63	9	796.61	9	10533.50	1	1431.77	1
104	Max	-54	-3745.31	1	114283.00	9	135453.00	1	461.84	9	1628.63	9	796.61	9	10533.50	1	1431.77	1
104	Min.	-31	-7698.11	18	-223683.00	1	-141725.00	9	-588.69	1	-1261.19	1	-709.19	1	-11088.90	9	-1600.38	9
104	Min.	-32	-7698.11	18	-223683.00	1	-141725.00	9	-588.69	1	-1261.19	1	-709.19	1	-11088.90	9	-1600.38	9
104	Min.	-55	-7698.11	18	-223683.00	1	-141725.00	9	-588.69	1	-1261.19	1	-709.19	1	-11088.90	9	-1600.38	9
104	Min.	-54	-7698.11	18	-223683.00	1	-141725.00	9	-588.69	1	-1261.19	1	-709.19	1	-11088.90	9	-1600.38	9
104	Max	-8	11647.80	9	156750.00	9	123630.00	1	462.25	9	5609.04	9	464.05	9	8501.99	1	153.13	5
104	Max	-9	11647.80	9	156750.00	9	123630.00	1	462.25	9	5609.04	9	464.05	9	8501.99	1	153.13	5
104	Max	-32	11647.80	9	156750.00	9	123630.00	1	462.25	9	5609.04	9	464.05	9	8501.99	1	153.13	5
104	Max	-31	11647.80	9	156750.00	9	123630.00	1	462.25	9	5609.04	9	464.05	9	8501.99	1	153.13	5
104	Min.	-8	-13857.90	1	-279078.00	1	-113999.00	9	-496.22	1	-5570.49	1	-342.18	1	-6818.17	9	-250.34	13
104	Min.	-9	-13857.90	1	-279078.00	1	-113999.00	9	-496.22	1	-5570.49	1	-342.18	1	-6818.17	9	-250.34	13
104	Min.	-32	-13857.90	1	-279078.00	1	-113999.00	9	-496.22	1	-5570.49	1	-342.18	1	-6818.17	9	-250.34	13
104	Min.	-31	-13857.90	1	-279078.00	1	-113999.00	9	-496.22	1	-5570.49	1	-342.18	1	-6818.17	9	-250.34	13
104	Max	-53	-4745.90	1	55060.70	1	125316.00	1	242.57	9	737.93	1	114.20	9	-599.33	1	80.50	9
104	Max	-54	-4745.90	1	55060.70	1	125316.00	1	242.57	9	737.93	1	114.20	9	-599.33	1	80.50	9
104	Max	-84	-4745.90	1	55060.70	1	125316.00	1	242.57	9	737.93	1	114.20	9	-599.33	1	80.50	9
104	Max	-83	-4745.90	1	55060.70	1	125316.00	1	242.57	9	737.93	1	114.20	9	-599.33	1	80.50	9
104	Min.	-53	-11176.50	17	-157612.00	9	-130033.00	9	-421.72	1	-302.66	9	-415.62	1	-5409.30	9	-906.48	1
104	Min.	-54	-11176.50	17	-157612.00	9	-130033.00	9	-421.72	1	-302.66	9	-415.62	1	-5409.30	9	-906.48	1
104	Min.	-84	-11176.50	17	-157612.00	9	-130033.00	9	-421.72	1	-302.66	9	-415.62	1	-5409.30	9	-906.48	1
104	Min.	-83	-11176.50	17	-157612.00	9	-130033.00	9	-421.72	1	-302.66	9	-415.62	1	-5409.30	9	-906.48	1
104	Max	-29	7867.28	9	396769.00	1	51139.60	1	147.32	9	2439.30	9	464.02	13	6082.27	1	1671.79	9
104	Max	-30	7867.28	9	396769.00	1	51139.60	1	147.32	9	2439.30	9	464.02	13	6082.27	1	1671.79	9
104	Max	-53	7867.28	9	396769.00	1	51139.60	1	147.32	9	2439.30	9	464.02	13	6082.27	1	1671.79	9
104	Max	-52	7867.28	9	396769.00	1	51139.60	1	147.32	9	2439.30	9	464.02	13	6082.27	1	1671.79	9
104	Min.	-29	-12138.50	1	-589130.00	9	-57938.90	9	-256.18	1	-2231.53	1	122.11	5	-4850.85	9	-3675.54	1
104	Min.	-30	-12138.50	1	-589130.00	9	-57938.90	9	-256.18	1	-2231.53	1	122.11	5	-4850.85	9	-3675.54	1
104	Min.	-53	-12138.50	1	-589130.00	9	-57938.90	9	-256.18	1	-2231.53	1	122.11	5	-4850.85	9	-3675.54	1
104	Min.	-52	-12138.50	1	-589130.00	9	-57938.90	9	-256.18	1	-2231.53	1	122.11	5	-4850.85	9	-3675.54	1
104	Max	-52	-9195.04	1	189158.00	1	90274.30	1	47.95	9	2399.36	1	329.84	9	17070.80	1	1040.70	9
104	Max	-53	-9195.04	1	189158.00	1	90274.30	1	47.95	9	2399.36	1	329.84	9	17070.80	1	1040.70	9
104	Max	-83	-9195.04	1	189158.00	1	90274.30	1	47.95	9	2399.36	1	329.84	9	17070.80	1	1040.70	9
104	Max	153	-9195.04	1	189158.00	1	90274.30	1	47.95	9	2399.36	1	329.84	9	17070.80	1	1040.70	9
104	Min.	-52	-23318.40	17	-412935.00	9	-47234.90	9	-38.11	1	-353.27	9	-1106.92	1	-7071.03	9	-5444.09	1
104	Min.	-53	-23318.40	17	-412935.00	9	-47234.90	9	-38.11	1	-353.27	9	-1106.92	1	-7071.03	9	-5444.09	1
104	Min.	-83	-23318.40	17	-412935.00	9	-47234.90	9	-38.11	1	-353.27	9	-1106.92	1	-7071.03	9	-5444.09	1
104	Min.	153	-23318.40	17	-412935.00	9	-47234.90	9	-38.11	1	-353.27	9	-1106.92	1	-7071.03	9	-5444.09	1
104	Max	-55	4844.89	9	255703.00	9	55641.20	1	31.05	9	3424.14	1	903.93	1	28026.00	1	8524.74	1
104	Max	-56	4844.89	9	255703.00	9	55641.20	1	31.05	9	3424.14	1	903.93	1	28026.00	1	8524.74	1
104	Max	154	4844.89	9	255703.00	9	55641.20	1	31.05	9	3424.14	1	903.93	1	28026.00	1	8524.74	1
104	Max	-85	4844.89	9	255703.00	9	55641.20	1	31.05	9	3424.14	1	903.93	1	28026.00	1	8524.74	1
104	Min.	-55	-9575.44	1	-345393.00	1	-77747.50	9	-58.91	1	-3326.57	9	-1001.60	9	-28216.20	9	-8497.53	9
104	Min.	-56	-9575.44	1	-345393.00	1	-77747.50	9	-58.91	1	-3326.57	9	-1001.60	9	-28216.20	9	-8497.53	9
104	Min.	154	-9575.44	1	-345393.00	1	-77747.50	9	-58.91	1	-3326.57	9	-1001.60	9	-28216.20	9	-8497.53	9
104	Min.	-85	-9575.44	1	-345393.00	1	-77747.50	9	-58.91	1	-3326.57	9	-1001.60	9	-28216.20	9	-8497.53	9
104	Max	-6	38535.90	1	609092.00	1	78693.70	1	320.03	9	4680.47	9	458.45	9	5136.51	1	1842.66	19
104	Max	-7	38535.90	1	609092.00	1	78693.70	1	320.03	9	4680.47	9	458.45	9	5136.51	1	1842.66	19
104	Max	-30	38535.90	1	609092.00	1	78693.70	1	320.03	9	4680.47	9	458.45	9	5136.51	1	1842.66	19
104	Max	-29	38535.90	1	609092.00	1	78693.70	1	320.03	9	4680.47	9	458.45	9	5136.51	1	1842.66	19
104	Min.	-6	-36441.80	9	-806522.00	9	-79423.10	9	-273.28	1	-4864.35	1	-444.24	1	-1570.87	9	594.09	9
104	Min.	-7	-36441.80	9	-806522.00	9	-79423.10	9	-273.28	1	-4864.35	1	-444.24	1	-1570.87	9	594.09	9
104	Min.	-30	-36441.80	9	-806522.00	9	-79423.10	9	-273.28	1	-4864.35	1	-444.24	1	-1570.87	9	594.09	9
104	Min.	-29	-36441.80	9	-806522.00	9	-79423.10	9	-273.28	1	-4864.35	1	-444.24	1	-1570.87	9	594.09	9
104	Max	-54	-6493.78	9	55977.50	9	123089.00	1	386.59	9	716.53	1	33.48	13	7665.39	9	1341.91	1
104	Max	-55	-6493.78	9	55977.50	9	123089.00	1	386.59	9	716.53	1	33.48	13	7665.39	9	1341.91	1
104	Max	-85	-6493.78	9	55977.50	9	123089.00											

Relazione di calcolo

104	Min.	-33	-9986.72	9	-528208.00	1	-56719.50	9	-312.42	1	-2215.65	1	-1487.77	1	-11427.90	9	-4455.13	9
104	Min.	-56	-9986.72	9	-528208.00	1	-56719.50	9	-312.42	1	-2215.65	1	-1487.77	1	-11427.90	9	-4455.13	9
104	Min.	-55	-9986.72	9	-528208.00	1	-56719.50	9	-312.42	1	-2215.65	1	-1487.77	1	-11427.90	9	-4455.13	9
105	Max	-50	6711.52	9	360709.00	9	90139.90	1	74.00	1	2706.76	1	828.82	1	23873.60	1	6673.03	1
105	Max	-51	6711.52	9	360709.00	9	90139.90	1	74.00	1	2706.76	1	828.82	1	23873.60	1	6673.03	1
105	Max	152	6711.52	9	360709.00	9	90139.90	1	74.00	1	2706.76	1	828.82	1	23873.60	1	6673.03	1
105	Max	-79	6711.52	9	360709.00	9	90139.90	1	74.00	1	2706.76	1	828.82	1	23873.60	1	6673.03	1
105	Min.	-50	-9757.57	1	-421392.00	1	-106920.00	9	-8.67	9	-3520.29	9	-857.11	9	-28519.10	9	-8453.57	9
105	Min.	-51	-9757.57	1	-421392.00	1	-106920.00	9	-8.67	9	-3520.29	9	-857.11	9	-28519.10	9	-8453.57	9
105	Min.	152	-9757.57	1	-421392.00	1	-106920.00	9	-8.67	9	-3520.29	9	-857.11	9	-28519.10	9	-8453.57	9
105	Min.	-79	-9757.57	1	-421392.00	1	-106920.00	9	-8.67	9	-3520.29	9	-857.11	9	-28519.10	9	-8453.57	9
105	Max	-47	-2860.16	9	297152.00	1	116371.00	1	43.47	9	-1201.47	1	1583.06	9	-1655.05	1	8661.15	20
105	Max	-48	-2860.16	9	297152.00	1	116371.00	1	43.47	9	-1201.47	1	1583.06	9	-1655.05	1	8661.15	20
105	Max	-77	-2860.16	9	297152.00	1	116371.00	1	43.47	9	-1201.47	1	1583.06	9	-1655.05	1	8661.15	20
105	Max	151	-2860.16	9	297152.00	1	116371.00	1	43.47	9	-1201.47	1	1583.06	9	-1655.05	1	8661.15	20
105	Min.	-47	-16203.00	1	-474719.00	9	-91601.70	9	-28.93	1	-3788.57	20	296.71	1	-23095.50	9	2807.44	1
105	Min.	-48	-16203.00	1	-474719.00	9	-91601.70	9	-28.93	1	-3788.57	20	296.71	1	-23095.50	9	2807.44	1
105	Min.	-77	-16203.00	1	-474719.00	9	-91601.70	9	-28.93	1	-3788.57	20	296.71	1	-23095.50	9	2807.44	1
105	Min.	151	-16203.00	1	-474719.00	9	-91601.70	9	-28.93	1	-3788.57	20	296.71	1	-23095.50	9	2807.44	1
105	Max	-49	-2619.84	9	99613.40	9	185214.00	1	544.31	9	440.63	1	404.95	13	6703.47	9	1108.13	1
105	Max	-50	-2619.84	9	99613.40	9	185214.00	1	544.31	9	440.63	1	404.95	13	6703.47	9	1108.13	1
105	Max	-79	-2619.84	9	99613.40	9	185214.00	1	544.31	9	440.63	1	404.95	13	6703.47	9	1108.13	1
105	Max	-78	-2619.84	9	99613.40	9	185214.00	1	544.31	9	440.63	1	404.95	13	6703.47	9	1108.13	1
105	Min.	-49	-9581.49	1	-173717.00	1	-198676.00	9	-205.49	1	-824.80	9	-8.67	5	-5223.97	1	-1464.84	9
105	Min.	-50	-9581.49	1	-173717.00	1	-198676.00	9	-205.49	1	-824.80	9	-8.67	5	-5223.97	1	-1464.84	9
105	Min.	-79	-9581.49	1	-173717.00	1	-198676.00	9	-205.49	1	-824.80	9	-8.67	5	-5223.97	1	-1464.84	9
105	Min.	-78	-9581.49	1	-173717.00	1	-198676.00	9	-205.49	1	-824.80	9	-8.67	5	-5223.97	1	-1464.84	9
105	Max	-1	53152.50	1	902455.00	1	115345.00	1	261.17	9	5266.14	9	458.19	9	-1261.23	1	-2538.78	1
105	Max	-2	53152.50	1	902455.00	1	115345.00	1	261.17	9	5266.14	9	458.19	9	-1261.23	1	-2538.78	1
105	Max	-25	53152.50	1	902455.00	1	115345.00	1	261.17	9	5266.14	9	458.19	9	-1261.23	1	-2538.78	1
105	Max	-24	53152.50	1	902455.00	1	115345.00	1	261.17	9	5266.14	9	458.19	9	-1261.23	1	-2538.78	1
105	Min.	-1	-55074.70	9	-1085290.00	9	-119815.00	9	-332.53	1	-4187.49	1	-410.88	1	-7139.02	9	-4536.33	20
105	Min.	-2	-55074.70	9	-1085290.00	9	-119815.00	9	-332.53	1	-4187.49	1	-410.88	1	-7139.02	9	-4536.33	20
105	Min.	-25	-55074.70	9	-1085290.00	9	-119815.00	9	-332.53	1	-4187.49	1	-410.88	1	-7139.02	9	-4536.33	20
105	Min.	-24	-55074.70	9	-1085290.00	9	-119815.00	9	-332.53	1	-4187.49	1	-410.88	1	-7139.02	9	-4536.33	20
105	Max	-4	49696.70	9	974757.00	9	115775.00	1	336.44	9	5965.03	9	1.83	13	13400.60	1	3648.54	9
105	Max	-5	49696.70	9	974757.00	9	115775.00	1	336.44	9	5965.03	9	1.83	13	13400.60	1	3648.54	9
105	Max	-28	49696.70	9	974757.00	9	115775.00	1	336.44	9	5965.03	9	1.83	13	13400.60	1	3648.54	9
105	Max	-27	49696.70	9	974757.00	9	115775.00	1	336.44	9	5965.03	9	1.83	13	13400.60	1	3648.54	9
105	Min.	-4	-53714.80	1	-1017320.00	1	-116322.00	9	-257.91	1	-5463.58	1	-189.71	5	-14065.30	9	-3270.40	1
105	Min.	-5	-53714.80	1	-1017320.00	1	-116322.00	9	-257.91	1	-5463.58	1	-189.71	5	-14065.30	9	-3270.40	1
105	Min.	-28	-53714.80	1	-1017320.00	1	-116322.00	9	-257.91	1	-5463.58	1	-189.71	5	-14065.30	9	-3270.40	1
105	Min.	-27	-53714.80	1	-1017320.00	1	-116322.00	9	-257.91	1	-5463.58	1	-189.71	5	-14065.30	9	-3270.40	1
105	Max	-24	13146.50	9	589391.00	1	78167.20	1	326.30	9	2312.65	9	-542.99	13	3684.49	1	4933.11	9
105	Max	-25	13146.50	9	589391.00	1	78167.20	1	326.30	9	2312.65	9	-542.99	13	3684.49	1	4933.11	9
105	Max	-48	13146.50	9	589391.00	1	78167.20	1	326.30	9	2312.65	9	-542.99	13	3684.49	1	4933.11	9
105	Max	-47	13146.50	9	589391.00	1	78167.20	1	326.30	9	2312.65	9	-542.99	13	3684.49	1	4933.11	9
105	Min.	-24	-14845.80	1	-756933.00	9	-83877.70	9	-29.41	1	-2382.64	1	-1099.64	20	-6955.88	9	223.34	1
105	Min.	-25	-14845.80	1	-756933.00	9	-83877.70	9	-29.41	1	-2382.64	1	-1099.64	20	-6955.88	9	223.34	1
105	Min.	-48	-14845.80	1	-756933.00	9	-83877.70	9	-29.41	1	-2382.64	1	-1099.64	20	-6955.88	9	223.34	1
105	Min.	-47	-14845.80	1	-756933.00	9	-83877.70	9	-29.41	1	-2382.64	1	-1099.64	20	-6955.88	9	223.34	1
105	Max	-48	-1657.38	9	92866.10	1	186418.00	1	539.00	9	117.50	1	623.18	9	11607.60	19	1403.42	20
105	Max	-49	-1657.38	9	92866.10	1	186418.00	1	539.00	9	117.50	1	623.18	9	11607.60	19	1403.42	20
105	Max	-78	-1657.38	9	92866.10	1	186418.00	1	539.00	9	117.50	1	623.18	9	11607.60	19	1403.42	20
105	Max	-77	-1657.38	9	92866.10	1	186418.00	1	539.00	9	117.50	1	623.18	9	11607.60	19	1403.42	20
105	Min.	-48	-8107.08	1	-183169.00	9	-194070.00	9	-24.98	1	-906.52	9	39.00	1	4319.75	9	518.16	1
105	Min.	-49	-8107.08	1	-183169.00	9	-194070.00	9	-24.98	1	-906.52	9	39.00	1	4319.75	9	518.16	1
105	Min.	-78	-8107.08	1	-183169.00	9	-194070.00	9	-24.98	1	-906.52	9	39.00	1	4319.75	9	518.16	1
105	Min.	-77	-8107.08	1	-183169.00	9	-194070.00	9	-24.98	1	-906.52	9	39.00	1	4319.75	9	518.16	1
105	Max	-26	-1887.80	1	192460.00	9	202080.00	1	670.87	9	1249.89	9	683.23	9	10208.20	1	1342.34	1
105	Max	-27	-1887.80	1	192460.00	9	202080.00	1	670.87	9	1249.89	9	683.23	9	10208.20	1	1342.34	1
105	Max	-50	-1887.80	1	192460.00	9	202080.00	1	670.87	9	1249.89	9	683.23	9	10208.20	1	1342.34	1
105	Max	-49	-1887.80	1	192460.00	9	202080.00	1	670.87	9	1249.89	9	683.23	9	10208.20	1	1342.34	1
105	Min.	-26	-4776.94	18	-276049.00	1	-211015.00	9	-281.30	1	-1860.72	1	-752.96	1	-10433.60	9	-1447.26	9
105	Min.	-27	-4776.94	18	-276049.00	1	-211015.00	9	-281.30	1	-1860.72	1	-752.96	1	-10433.60	9	-1447.26	9
105	Min.	-50	-4776.94	18	-276049.00	1	-211015.00	9	-281.30	1	-1860.72	1	-752.96	1	-10433.60	9	-1447.26	9
105	Min.	-49	-4776.94	18	-276049.00	1	-211015.00	9	-281.30	1	-1860.72	1	-752.96	1	-10433.60	9	-1447.26	9
105	Max	-2	13998.90	1	236114.00	1	169134.00	1	500.66	9	5629.35	9	198.38	9	10335.60	1	1163.37	9
105	Max	-3	13998.90	1	236114.00	1	169134.00	1	500.66	9	5629.35	9	198.38	9	10335.60	1	1163.37	9
105	Max	-26	13998.90	1	236114.00	1	169134.00	1	500.66	9	5629.35	9	198.38	9	10335.60	1	1163.37	9
105	Max	-25	13998.90	1	236114.00	1	169134.00	1	500.66	9	5629.35	9	198.38	9	10335.60	1	1163.37	9
105	Min.	-2	-21963.50	9	-372537.00	9	-178056											

Relazione di calcolo

106	Min.	160	-20076.70	9	-363880.00	5	-226259.00	9	-122.64	9	-417.81	5	-376.69	1	-14208.60	13	-2108.34	5
106	Min.	-103	-20076.70	9	-363880.00	5	-226259.00	9	-122.64	9	-417.81	5	-376.69	1	-14208.60	13	-2108.34	5
106	Max	-45	2784.66	5	341963.00	5	317801.00	1	197.15	5	337.64	13	451.15	9	3306.01	5	1402.28	13
106	Max	-44	2784.66	5	341963.00	5	317801.00	1	197.15	5	337.64	13	451.15	9	3306.01	5	1402.28	13
106	Max	-67	2784.66	5	341963.00	5	317801.00	1	197.15	5	337.64	13	451.15	9	3306.01	5	1402.28	13
106	Max	-68	2784.66	5	341963.00	5	317801.00	1	197.15	5	337.64	13	451.15	9	3306.01	5	1402.28	13
106	Min.	-45	-4218.50	13	-387758.00	13	-322345.00	9	-184.31	13	-443.57	5	-438.52	1	-3406.85	13	-1362.24	5
106	Min.	-44	-4218.50	13	-387758.00	13	-322345.00	9	-184.31	13	-443.57	5	-438.52	1	-3406.85	13	-1362.24	5
106	Min.	-67	-4218.50	13	-387758.00	13	-322345.00	9	-184.31	13	-443.57	5	-438.52	1	-3406.85	13	-1362.24	5
106	Min.	-68	-4218.50	13	-387758.00	13	-322345.00	9	-184.31	13	-443.57	5	-438.52	1	-3406.85	13	-1362.24	5
106	Max	-21	38482.30	13	472267.00	13	272588.00	1	392.21	13	1771.81	13	293.04	9	3520.32	5	1945.59	9
106	Max	-20	38482.30	13	472267.00	13	272588.00	1	392.21	13	1771.81	13	293.04	9	3520.32	5	1945.59	9
106	Max	-43	38482.30	13	472267.00	13	272588.00	1	392.21	13	1771.81	13	293.04	9	3520.32	5	1945.59	9
106	Max	-44	38482.30	13	472267.00	13	272588.00	1	392.21	13	1771.81	13	293.04	9	3520.32	5	1945.59	9
106	Min.	-21	-36685.00	5	-541879.00	5	-268562.00	9	-378.54	5	-1807.25	5	-272.06	1	-3734.09	13	-1915.25	1
106	Min.	-20	-36685.00	5	-541879.00	5	-268562.00	9	-378.54	5	-1807.25	5	-272.06	1	-3734.09	13	-1915.25	1
106	Min.	-43	-36685.00	5	-541879.00	5	-268562.00	9	-378.54	5	-1807.25	5	-272.06	1	-3734.09	13	-1915.25	1
106	Min.	-44	-36685.00	5	-541879.00	5	-268562.00	9	-378.54	5	-1807.25	5	-272.06	1	-3734.09	13	-1915.25	1
106	Max	-46	3382.35	13	396757.00	5	291426.00	1	200.28	1	670.73	13	311.42	9	9406.51	13	2652.42	13
106	Max	-45	3382.35	13	396757.00	5	291426.00	1	200.28	1	670.73	13	311.42	9	9406.51	13	2652.42	13
106	Max	-68	3382.35	13	396757.00	5	291426.00	1	200.28	1	670.73	13	311.42	9	9406.51	13	2652.42	13
106	Max	-69	3382.35	13	396757.00	5	291426.00	1	200.28	1	670.73	13	311.42	9	9406.51	13	2652.42	13
106	Min.	-46	-3514.16	5	-424899.00	13	-300264.00	9	-213.22	9	-734.03	5	-305.91	1	-8856.81	5	-2344.24	5
106	Min.	-45	-3514.16	5	-424899.00	13	-300264.00	9	-213.22	9	-734.03	5	-305.91	1	-8856.81	5	-2344.24	5
106	Min.	-68	-3514.16	5	-424899.00	13	-300264.00	9	-213.22	9	-734.03	5	-305.91	1	-8856.81	5	-2344.24	5
106	Min.	-69	-3514.16	5	-424899.00	13	-300264.00	9	-213.22	9	-734.03	5	-305.91	1	-8856.81	5	-2344.24	5
106	Max	-69	11671.00	13	253722.00	5	289652.00	1	103.87	9	380.49	5	528.73	13	32800.80	13	2411.20	13
106	Max	-68	11671.00	13	253722.00	5	289652.00	1	103.87	9	380.49	5	528.73	13	32800.80	13	2411.20	13
106	Max	-105	11671.00	13	253722.00	5	289652.00	1	103.87	9	380.49	5	528.73	13	32800.80	13	2411.20	13
106	Max	161	11671.00	13	253722.00	5	289652.00	1	103.87	9	380.49	5	528.73	13	32800.80	13	2411.20	13
106	Min.	-69	-13321.00	5	-277850.00	13	-287879.00	9	-111.00	1	-436.74	13	-532.69	5	-31199.30	5	-2285.34	5
106	Min.	-68	-13321.00	5	-277850.00	13	-287879.00	9	-111.00	1	-436.74	13	-532.69	5	-31199.30	5	-2285.34	5
106	Min.	-105	-13321.00	5	-277850.00	13	-287879.00	9	-111.00	1	-436.74	13	-532.69	5	-31199.30	5	-2285.34	5
106	Min.	161	-13321.00	5	-277850.00	13	-287879.00	9	-111.00	1	-436.74	13	-532.69	5	-31199.30	5	-2285.34	5
106	Max	-43	8134.00	1	479479.00	9	218671.00	1	101.00	9	355.72	13	293.55	13	5040.77	1	1743.75	5
106	Max	-42	8134.00	1	479479.00	9	218671.00	1	101.00	9	355.72	13	293.55	13	5040.77	1	1743.75	5
106	Max	-65	8134.00	1	479479.00	9	218671.00	1	101.00	9	355.72	13	293.55	13	5040.77	1	1743.75	5
106	Max	-66	8134.00	1	479479.00	9	218671.00	1	101.00	9	355.72	13	293.55	13	5040.77	1	1743.75	5
106	Min.	-43	-10483.00	9	-563572.00	1	-223070.00	9	-135.25	1	-470.93	5	-292.72	5	-4335.00	9	-2211.87	13
106	Min.	-42	-10483.00	9	-563572.00	1	-223070.00	9	-135.25	1	-470.93	5	-292.72	5	-4335.00	9	-2211.87	13
106	Min.	-65	-10483.00	9	-563572.00	1	-223070.00	9	-135.25	1	-470.93	5	-292.72	5	-4335.00	9	-2211.87	13
106	Min.	-66	-10483.00	9	-563572.00	1	-223070.00	9	-135.25	1	-470.93	5	-292.72	5	-4335.00	9	-2211.87	13
106	Max	-67	2777.57	5	243296.00	13	273397.00	1	84.12	5	351.23	13	437.73	9	1648.75	13	872.72	5
106	Max	-66	2777.57	5	243296.00	13	273397.00	1	84.12	5	351.23	13	437.73	9	1648.75	13	872.72	5
106	Max	-103	2777.57	5	243296.00	13	273397.00	1	84.12	5	351.23	13	437.73	9	1648.75	13	872.72	5
106	Max	-104	2777.57	5	243296.00	13	273397.00	1	84.12	5	351.23	13	437.73	9	1648.75	13	872.72	5
106	Min.	-67	-12887.60	13	-294425.00	5	-268491.00	9	-82.75	13	-353.56	5	-430.38	1	-918.82	5	-1018.92	13
106	Min.	-66	-12887.60	13	-294425.00	5	-268491.00	9	-82.75	13	-353.56	5	-430.38	1	-918.82	5	-1018.92	13
106	Min.	-103	-12887.60	13	-294425.00	5	-268491.00	9	-82.75	13	-353.56	5	-430.38	1	-918.82	5	-1018.92	13
106	Min.	-104	-12887.60	13	-294425.00	5	-268491.00	9	-82.75	13	-353.56	5	-430.38	1	-918.82	5	-1018.92	13
106	Max	-68	4191.68	13	233425.00	5	296153.00	1	109.67	13	327.79	13	442.99	9	5345.63	13	1736.92	5
106	Max	-67	4191.68	13	233425.00	5	296153.00	1	109.67	13	327.79	13	442.99	9	5345.63	13	1736.92	5
106	Max	-104	4191.68	13	233425.00	5	296153.00	1	109.67	13	327.79	13	442.99	9	5345.63	13	1736.92	5
106	Max	-105	4191.68	13	233425.00	5	296153.00	1	109.67	13	327.79	13	442.99	9	5345.63	13	1736.92	5
106	Min.	-68	-9829.72	5	-275090.00	13	-294440.00	9	-100.65	5	-344.80	5	-430.09	1	-5142.25	5	-1711.29	13
106	Min.	-67	-9829.72	5	-275090.00	13	-294440.00	9	-100.65	5	-344.80	5	-430.09	1	-5142.25	5	-1711.29	13
106	Min.	-104	-9829.72	5	-275090.00	13	-294440.00	9	-100.65	5	-344.80	5	-430.09	1	-5142.25	5	-1711.29	13
106	Min.	-105	-9829.72	5	-275090.00	13	-294440.00	9	-100.65	5	-344.80	5	-430.09	1	-5142.25	5	-1711.29	13
106	Max	-20	55319.70	9	744435.00	9	221378.00	1	267.24	13	1701.72	13	188.04	9	27663.20	5	3699.72	5
106	Max	-19	55319.70	9	744435.00	9	221378.00	1	267.24	13	1701.72	13	188.04	9	27663.20	5	3699.72	5
106	Max	-42	55319.70	9	744435.00	9	221378.00	1	267.24	13	1701.72	13	188.04	9	27663.20	5	3699.72	5
106	Max	-43	55319.70	9	744435.00	9	221378.00	1	267.24	13	1701.72	13	188.04	9	27663.20	5	3699.72	5
106	Min.	-20	-48488.70	1	-827826.00	1	-221368.00	9	-275.43	5	-1740.27	5	-187.27	1	-30239.40	13	-4038.90	13
106	Min.	-19	-48488.70	1	-827826.00	1	-221368.00	9	-275.43	5	-1740.27	5	-187.27	1	-30239.40	13	-4038.90	13
106	Min.	-42	-48488.70	1	-827826.00	1	-221368.00	9	-275.43	5	-1740.27	5	-187.27	1	-30239.40	13	-4038.90	13
106	Min.	-43	-48488.70	1	-827826.00	1	-221368.00	9	-275.43	5	-1740.27	5	-187.27	1	-30239.40	13	-4038.90	13
106	Max	-44	2747.00	5	373653.00	13	292527.00	1	198.36	13	340.92	13	454.63	9	2983.58	9	1083.22	9
106	Max	-43	2747.00	5	373653.00	13	292527.00	1	198.36	13	340.92	13	454.63	9	2983.58	9	1083.22	9
106	Max	-66	2747.00	5	373653.00	13	292527.00	1	198.36	13	340.92	13	454.63	9	2983.58	9	1083.22	9
106	Max	-67	2747.00	5	373653.00	13	292527.00	1	198.36	13	340.92	13	454.63	9	2983.58	9	1083.22	9
106	Min.	-44	-5818.12	13	-441978.00	5	-308264.00	9	-191.59									

Relazione di calcolo

202	Min.	-119	-16266.10	5	-287132.00	5	-110812.00	5	-65.91	9	-134.94	9	-86.98	1	-781.75	9	-955.20	1
202	Max	-119	8542.17	5	137097.00	13	125951.00	13	33.90	1	240.16	1	147.82	9	879.92	1	99.19	1
202	Max	-121	8542.17	5	137097.00	13	125951.00	13	33.90	1	240.16	1	147.82	9	879.92	1	99.19	1
202	Max	-144	8542.17	5	137097.00	13	125951.00	13	33.90	1	240.16	1	147.82	9	879.92	1	99.19	1
202	Max	-142	8542.17	5	137097.00	13	125951.00	13	33.90	1	240.16	1	147.82	9	879.92	1	99.19	1
202	Min.	-119	-1147.93	13	-218689.00	5	-110649.00	5	-80.36	9	-73.95	9	-204.12	1	-1109.70	9	-383.18	9
202	Min.	-121	-1147.93	13	-218689.00	5	-110649.00	5	-80.36	9	-73.95	9	-204.12	1	-1109.70	9	-383.18	9
202	Min.	-144	-1147.93	13	-218689.00	5	-110649.00	5	-80.36	9	-73.95	9	-204.12	1	-1109.70	9	-383.18	9
202	Min.	-142	-1147.93	13	-218689.00	5	-110649.00	5	-80.36	9	-73.95	9	-204.12	1	-1109.70	9	-383.18	9
202	Max	-144	9358.49	1	52417.50	9	160826.00	13	58.66	1	33.25	1	158.33	9	1847.64	1	289.21	9
202	Max	-146	9358.49	1	52417.50	9	160826.00	13	58.66	1	33.25	1	158.33	9	1847.64	1	289.21	9
202	Max	-169	9358.49	1	52417.50	9	160826.00	13	58.66	1	33.25	1	158.33	9	1847.64	1	289.21	9
202	Max	-167	9358.49	1	52417.50	9	160826.00	13	58.66	1	33.25	1	158.33	9	1847.64	1	289.21	9
202	Min.	-144	-10883.70	9	-107473.00	1	-154148.00	5	-61.25	9	-66.89	9	-173.82	1	-1041.24	9	-673.46	1
202	Min.	-146	-10883.70	9	-107473.00	1	-154148.00	5	-61.25	9	-66.89	9	-173.82	1	-1041.24	9	-673.46	1
202	Min.	-169	-10883.70	9	-107473.00	1	-154148.00	5	-61.25	9	-66.89	9	-173.82	1	-1041.24	9	-673.46	1
202	Min.	-167	-10883.70	9	-107473.00	1	-154148.00	5	-61.25	9	-66.89	9	-173.82	1	-1041.24	9	-673.46	1
202	Max	-163	3239.70	5	9068.45	9	70287.00	13	35.60	1	227.31	9	215.00	13	2200.14	9	2817.15	1
202	Max	-165	3239.70	5	9068.45	9	70287.00	13	35.60	1	227.31	9	215.00	13	2200.14	9	2817.15	1
202	Max	-199	3239.70	5	9068.45	9	70287.00	13	35.60	1	227.31	9	215.00	13	2200.14	9	2817.15	1
202	Max	255	3239.70	5	9068.45	9	70287.00	13	35.60	1	227.31	9	215.00	13	2200.14	9	2817.15	1
202	Min.	-163	-14456.40	13	-117356.00	1	-50299.10	5	-12.34	9	-715.09	1	-48.48	5	-6072.70	1	-694.40	9
202	Min.	-165	-14456.40	13	-117356.00	1	-50299.10	5	-12.34	9	-715.09	1	-48.48	5	-6072.70	1	-694.40	9
202	Min.	-199	-14456.40	13	-117356.00	1	-50299.10	5	-12.34	9	-715.09	1	-48.48	5	-6072.70	1	-694.40	9
202	Min.	255	-14456.40	13	-117356.00	1	-50299.10	5	-12.34	9	-715.09	1	-48.48	5	-6072.70	1	-694.40	9
202	Max	-121	7657.28	1	97289.30	9	163992.00	13	49.29	1	119.47	9	143.87	9	326.21	9	225.65	9
202	Max	-123	7657.28	1	97289.30	9	163992.00	13	49.29	1	119.47	9	143.87	9	326.21	9	225.65	9
202	Max	-146	7657.28	1	97289.30	9	163992.00	13	49.29	1	119.47	9	143.87	9	326.21	9	225.65	9
202	Max	-144	7657.28	1	97289.30	9	163992.00	13	49.29	1	119.47	9	143.87	9	326.21	9	225.65	9
202	Min.	-121	-4496.44	9	-166522.00	1	-158767.00	5	-56.47	9	-33.09	1	-132.66	1	-2394.51	1	-168.44	1
202	Min.	-123	-4496.44	9	-166522.00	1	-158767.00	5	-56.47	9	-33.09	1	-132.66	1	-2394.51	1	-168.44	1
202	Min.	-146	-4496.44	9	-166522.00	1	-158767.00	5	-56.47	9	-33.09	1	-132.66	1	-2394.51	1	-168.44	1
202	Min.	-144	-4496.44	9	-166522.00	1	-158767.00	5	-56.47	9	-33.09	1	-132.66	1	-2394.51	1	-168.44	1
202	Max	-165	1153.33	5	39017.90	13	123584.00	13	79.69	1	178.17	1	134.94	9	3334.43	1	212.00	9
202	Max	-167	1153.33	5	39017.90	13	123584.00	13	79.69	1	178.17	1	134.94	9	3334.43	1	212.00	9
202	Max	-201	1153.33	5	39017.90	13	123584.00	13	79.69	1	178.17	1	134.94	9	3334.43	1	212.00	9
202	Max	-199	1153.33	5	39017.90	13	123584.00	13	79.69	1	178.17	1	134.94	9	3334.43	1	212.00	9
202	Min.	-165	-8173.46	13	-94024.30	5	-113739.00	5	-17.10	9	-165.01	9	-115.65	1	-1084.44	9	-602.40	1
202	Min.	-167	-8173.46	13	-94024.30	5	-113739.00	5	-17.10	9	-165.01	9	-115.65	1	-1084.44	9	-602.40	1
202	Min.	-201	-8173.46	13	-94024.30	5	-113739.00	5	-17.10	9	-165.01	9	-115.65	1	-1084.44	9	-602.40	1
202	Min.	-199	-8173.46	13	-94024.30	5	-113739.00	5	-17.10	9	-165.01	9	-115.65	1	-1084.44	9	-602.40	1
202	Max	-140	3564.38	5	101951.00	13	53171.70	13	80.37	1	83.43	1	157.89	9	1497.85	9	2483.49	1
202	Max	-142	3564.38	5	101951.00	13	53171.70	13	80.37	1	83.43	1	157.89	9	1497.85	9	2483.49	1
202	Max	-165	3564.38	5	101951.00	13	53171.70	13	80.37	1	83.43	1	157.89	9	1497.85	9	2483.49	1
202	Max	-163	3564.38	5	101951.00	13	53171.70	13	80.37	1	83.43	1	157.89	9	1497.85	9	2483.49	1
202	Min.	-140	-7366.07	13	-195044.00	5	-44563.70	5	-17.46	9	-110.55	9	-335.06	1	-3179.55	1	-486.64	9
202	Min.	-142	-7366.07	13	-195044.00	5	-44563.70	5	-17.46	9	-110.55	9	-335.06	1	-3179.55	1	-486.64	9
202	Min.	-165	-7366.07	13	-195044.00	5	-44563.70	5	-17.46	9	-110.55	9	-335.06	1	-3179.55	1	-486.64	9
202	Min.	-163	-7366.07	13	-195044.00	5	-44563.70	5	-17.46	9	-110.55	9	-335.06	1	-3179.55	1	-486.64	9
202	Max	-146	3334.20	1	41359.70	9	185276.00	13	36.79	13	296.25	9	147.01	9	2064.77	9	673.87	9
202	Max	-148	3334.20	1	41359.70	9	185276.00	13	36.79	13	296.25	9	147.01	9	2064.77	9	673.87	9
202	Max	-171	3334.20	1	41359.70	9	185276.00	13	36.79	13	296.25	9	147.01	9	2064.77	9	673.87	9
202	Max	-169	3334.20	1	41359.70	9	185276.00	13	36.79	13	296.25	9	147.01	9	2064.77	9	673.87	9
202	Min.	-146	-4095.34	9	-84144.00	1	-183713.00	5	-40.23	5	-73.78	1	-166.08	1	-4108.40	1	-1072.03	1
202	Min.	-148	-4095.34	9	-84144.00	1	-183713.00	5	-40.23	5	-73.78	1	-166.08	1	-4108.40	1	-1072.03	1
202	Min.	-171	-4095.34	9	-84144.00	1	-183713.00	5	-40.23	5	-73.78	1	-166.08	1	-4108.40	1	-1072.03	1
202	Min.	-169	-4095.34	9	-84144.00	1	-183713.00	5	-40.23	5	-73.78	1	-166.08	1	-4108.40	1	-1072.03	1
202	Max	158	18927.50	13	307377.00	13	63786.30	13	33.40	1	904.77	1	321.95	9	1875.18	9	715.51	1
202	Max	-97	18927.50	13	307377.00	13	63786.30	13	33.40	1	904.77	1	321.95	9	1875.18	9	715.51	1
202	Max	-119	18927.50	13	307377.00	13	63786.30	13	33.40	1	904.77	1	321.95	9	1875.18	9	715.51	1
202	Max	-117	18927.50	13	307377.00	13	63786.30	13	33.40	1	904.77	1	321.95	9	1875.18	9	715.51	1
202	Min.	158	-16572.90	5	-369754.00	5	-40538.60	5	-22.95	9	-219.62	9	-94.21	1	-6150.11	1	-2666.51	9
202	Min.	-97	-16572.90	5	-369754.00	5	-40538.60	5	-22.95	9	-219.62	9	-94.21	1	-6150.11	1	-2666.51	9
202	Min.	-119	-16572.90	5	-369754.00	5	-40538.60	5	-22.95	9	-219.62	9	-94.21	1	-6150.11	1	-2666.51	9
202	Min.	-117	-16572.90	5	-369754.00	5	-40538.60	5	-22.95	9	-219.62	9	-94.21	1	-6150.11	1	-2666.51	9
202	Max	-123	3713.83	1	102397.00	9	189446.00	13	4.87	1	-59.82	1	159.46	9	7527.70	1	948.73	9
202	Max	-125	3713.83	1	102397.00	9	189446.00	13	4.87	1	-59.82	1	159.46	9	7527.70	1	948.73	9
202	Max	-148	3713.83	1	102397.00	9	189446.00	13	4.87	1	-59.82	1	159.46	9	7527.70	1	948.73	9
202	Max	-146	3713.83	1	102397.00	9	189446.00	13	4.87	1	-59.82	1	159.46	9	7527.70	1	948.73	9
202	Min.	-123	-2760.80	9	-153476.00	1	-188009.00	5	-50.22	9	-227.31	9	-117.41	1	-805.00	9	-1145.09	1
202	Min.	-125	-2760.80	9	-153476.00	1	-188009.00	5	-50.22	9	-227.31	9	-117.41	1	-805.00	9	-1145.09	1
202	Min.	-148	-2760.80	9	-153476.00	1	-188009.00	5	-50.22	9	-227.31	9	-117.41	1	-805.00	9	-1145.09	1
202	Min.	-146	-2760.80	9	-153476.00	1	-1											

Relazione di calcolo

202	Max	-99	10637.90	9	147025.00	9	160280.00	13	29.50	1	151.84	1	151.81	9	3975.27	20	1013.86	1
202	Max	-101	10637.90	9	147025.00	9	160280.00	13	29.50	1	151.84	1	151.81	9	3975.27	20	1013.86	1
202	Max	-123	10637.90	9	147025.00	9	160280.00	13	29.50	1	151.84	1	151.81	9	3975.27	20	1013.86	1
202	Max	-121	10637.90	9	147025.00	9	160280.00	13	29.50	1	151.84	1	151.81	9	3975.27	20	1013.86	1
202	Min.	-99	-13173.80	1	-227984.00	1	-154932.00	5	-51.13	9	-183.35	9	-100.28	1	1633.26	1	-654.65	9
202	Min.	-101	-13173.80	1	-227984.00	1	-154932.00	5	-51.13	9	-183.35	9	-100.28	1	1633.26	1	-654.65	9
202	Min.	-123	-13173.80	1	-227984.00	1	-154932.00	5	-51.13	9	-183.35	9	-100.28	1	1633.26	1	-654.65	9
202	Min.	-121	-13173.80	1	-227984.00	1	-154932.00	5	-51.13	9	-183.35	9	-100.28	1	1633.26	1	-654.65	9
203	Max	-96	16966.90	5	285161.00	5	51150.10	5	51.47	1	1028.94	1	507.93	9	6238.46	9	1796.16	1
203	Max	-98	16966.90	5	285161.00	5	51150.10	5	51.47	1	1028.94	1	507.93	9	6238.46	9	1796.16	1
203	Max	-120	16966.90	5	285161.00	5	51150.10	5	51.47	1	1028.94	1	507.93	9	6238.46	9	1796.16	1
203	Max	-118	16966.90	5	285161.00	5	51150.10	5	51.47	1	1028.94	1	507.93	9	6238.46	9	1796.16	1
203	Min.	-96	-12743.40	13	-323865.00	13	-39347.90	13	-65.28	9	-1204.61	9	-490.11	1	-5393.86	1	-1804.94	9
203	Min.	-98	-12743.40	13	-323865.00	13	-39347.90	13	-65.28	9	-1204.61	9	-490.11	1	-5393.86	1	-1804.94	9
203	Min.	-120	-12743.40	13	-323865.00	13	-39347.90	13	-65.28	9	-1204.61	9	-490.11	1	-5393.86	1	-1804.94	9
203	Min.	-118	-12743.40	13	-323865.00	13	-39347.90	13	-65.28	9	-1204.61	9	-490.11	1	-5393.86	1	-1804.94	9
203	Max	-118	4711.24	20	197709.00	5	40026.10	5	83.07	1	319.83	1	588.58	9	4374.84	9	1769.83	9
203	Max	-120	4711.24	20	197709.00	5	40026.10	5	83.07	1	319.83	1	588.58	9	4374.84	9	1769.83	9
203	Max	-143	4711.24	20	197709.00	5	40026.10	5	83.07	1	319.83	1	588.58	9	4374.84	9	1769.83	9
203	Max	-141	4711.24	20	197709.00	5	40026.10	5	83.07	1	319.83	1	588.58	9	4374.84	9	1769.83	9
203	Min.	-118	1597.21	1	-239400.00	13	-36800.30	13	-78.20	9	-345.70	9	-533.21	1	-3697.50	1	-1423.42	1
203	Min.	-120	1597.21	1	-239400.00	13	-36800.30	13	-78.20	9	-345.70	9	-533.21	1	-3697.50	1	-1423.42	1
203	Min.	-143	1597.21	1	-239400.00	13	-36800.30	13	-78.20	9	-345.70	9	-533.21	1	-3697.50	1	-1423.42	1
203	Min.	-141	1597.21	1	-239400.00	13	-36800.30	13	-78.20	9	-345.70	9	-533.21	1	-3697.50	1	-1423.42	1
203	Max	-98	15701.40	1	179012.00	1	99058.80	5	78.08	1	492.19	1	457.29	9	1588.19	1	565.54	9
203	Max	-100	15701.40	1	179012.00	1	99058.80	5	78.08	1	492.19	1	457.29	9	1588.19	1	565.54	9
203	Max	-122	15701.40	1	179012.00	1	99058.80	5	78.08	1	492.19	1	457.29	9	1588.19	1	565.54	9
203	Max	-120	15701.40	1	179012.00	1	99058.80	5	78.08	1	492.19	1	457.29	9	1588.19	1	565.54	9
203	Min.	-98	-14578.40	9	-236847.00	9	-102228.00	13	-86.19	9	-584.18	9	-429.84	1	-1506.93	9	-429.05	1
203	Min.	-100	-14578.40	9	-236847.00	9	-102228.00	13	-86.19	9	-584.18	9	-429.84	1	-1506.93	9	-429.05	1
203	Min.	-122	-14578.40	9	-236847.00	9	-102228.00	13	-86.19	9	-584.18	9	-429.84	1	-1506.93	9	-429.05	1
203	Min.	-120	-14578.40	9	-236847.00	9	-102228.00	13	-86.19	9	-584.18	9	-429.84	1	-1506.93	9	-429.05	1
203	Max	-120	7673.29	9	132077.00	1	109097.00	5	129.43	1	329.45	1	566.75	9	1481.86	1	291.69	1
203	Max	-122	7673.29	9	132077.00	1	109097.00	5	129.43	1	329.45	1	566.75	9	1481.86	1	291.69	1
203	Max	-145	7673.29	9	132077.00	1	109097.00	5	129.43	1	329.45	1	566.75	9	1481.86	1	291.69	1
203	Max	-143	7673.29	9	132077.00	1	109097.00	5	129.43	1	329.45	1	566.75	9	1481.86	1	291.69	1
203	Min.	-120	-3277.66	1	-174958.00	9	-103960.00	13	-138.89	9	-369.36	9	-508.12	1	-1302.73	9	-354.66	9
203	Min.	-122	-3277.66	1	-174958.00	9	-103960.00	13	-138.89	9	-369.36	9	-508.12	1	-1302.73	9	-354.66	9
203	Min.	-145	-3277.66	1	-174958.00	9	-103960.00	13	-138.89	9	-369.36	9	-508.12	1	-1302.73	9	-354.66	9
203	Min.	-143	-3277.66	1	-174958.00	9	-103960.00	13	-138.89	9	-369.36	9	-508.12	1	-1302.73	9	-354.66	9
203	Max	-102	12752.80	5	148316.00	5	171143.00	1	103.86	1	702.30	1	396.81	9	8955.49	9	1299.17	9
203	Max	161	12752.80	5	148316.00	5	171143.00	1	103.86	1	702.30	1	396.81	9	8955.49	9	1299.17	9
203	Max	-129	12752.80	5	148316.00	5	171143.00	1	103.86	1	702.30	1	396.81	9	8955.49	9	1299.17	9
203	Max	-124	12752.80	5	148316.00	5	171143.00	1	103.86	1	702.30	1	396.81	9	8955.49	9	1299.17	9
203	Min.	-102	-12462.20	13	-171606.00	13	-170790.00	9	-102.42	9	-616.45	9	-375.87	1	-8822.66	1	-1302.10	1
203	Min.	161	-12462.20	13	-171606.00	13	-170790.00	9	-102.42	9	-616.45	9	-375.87	1	-8822.66	1	-1302.10	1
203	Min.	-129	-12462.20	13	-171606.00	13	-170790.00	9	-102.42	9	-616.45	9	-375.87	1	-8822.66	1	-1302.10	1
203	Min.	-124	-12462.20	13	-171606.00	13	-170790.00	9	-102.42	9	-616.45	9	-375.87	1	-8822.66	1	-1302.10	1
203	Max	-141	3719.06	13	106603.00	5	45247.30	5	45.39	1	378.38	1	656.81	9	4445.15	9	1215.63	1
203	Max	-143	3719.06	13	106603.00	5	45247.30	5	45.39	1	378.38	1	656.81	9	4445.15	9	1215.63	1
203	Max	-166	3719.06	13	106603.00	5	45247.30	5	45.39	1	378.38	1	656.81	9	4445.15	9	1215.63	1
203	Max	-164	3719.06	13	106603.00	5	45247.30	5	45.39	1	378.38	1	656.81	9	4445.15	9	1215.63	1
203	Min.	-141	-8302.36	5	-152896.00	13	-42883.80	13	-76.32	9	-303.61	9	-557.20	1	-3752.92	1	-1854.25	9
203	Min.	-143	-8302.36	5	-152896.00	13	-42883.80	13	-76.32	9	-303.61	9	-557.20	1	-3752.92	1	-1854.25	9
203	Min.	-166	-8302.36	5	-152896.00	13	-42883.80	13	-76.32	9	-303.61	9	-557.20	1	-3752.92	1	-1854.25	9
203	Min.	-164	-8302.36	5	-152896.00	13	-42883.80	13	-76.32	9	-303.61	9	-557.20	1	-3752.92	1	-1854.25	9
203	Max	-164	6489.52	13	22629.30	1	59604.30	5	52.32	1	1265.67	1	307.35	9	6916.60	9	1168.85	1
203	Max	-166	6489.52	13	22629.30	1	59604.30	5	52.32	1	1265.67	1	307.35	9	6916.60	9	1168.85	1
203	Max	-200	6489.52	13	22629.30	1	59604.30	5	52.32	1	1265.67	1	307.35	9	6916.60	9	1168.85	1
203	Max	256	6489.52	13	22629.30	1	59604.30	5	52.32	1	1265.67	1	307.35	9	6916.60	9	1168.85	1
203	Min.	-164	-13665.20	5	-71925.90	9	-50350.20	13	-52.28	9	-844.25	9	-463.55	1	-5116.87	1	-2162.66	9
203	Min.	-166	-13665.20	5	-71925.90	9	-50350.20	13	-52.28	9	-844.25	9	-463.55	1	-5116.87	1	-2162.66	9
203	Min.	-200	-13665.20	5	-71925.90	9	-50350.20	13	-52.28	9	-844.25	9	-463.55	1	-5116.87	1	-2162.66	9
203	Min.	256	-13665.20	5	-71925.90	9	-50350.20	13	-52.28	9	-844.25	9	-463.55	1	-5116.87	1	-2162.66	9
203	Max	-143	10244.70	9	82728.60	1	112530.00	5	89.37	1	387.37	1	555.25	9	1651.26	1	310.94	1
203	Max	-145	10244.70	9	82728.60	1	112530.00	5	89.37	1	387.37	1	555.25	9	1651.26	1	310.94	1
203	Max	-168	10244.70	9	82728.60	1	112530.00	5	89.37	1	387.37	1	555.25	9	1651.26	1	310.94	1
203	Max	-166	10244.70	9	82728.60	1	112530.00	5	89.37	1	387.37	1	555.25	9	1651.26	1	310.94	1
203	Min.	-143	-13568.20	1	-114603.00	9	-106839.00	13	-122.57	9	-284.55	9	-533.09	1	-1278.60	9	-509.06	9
203	Min.	-145	-13568.20	1	-114603.00	9	-106839.00	13	-122.57	9	-284.55	9	-533.09	1	-1278.60	9	-509.06	9
203	Min.	-168	-13568.20	1	-114603.00	9	-106839.00	13	-122.57	9	-284.55	9	-533.09	1	-1278.60	9	-509.06	9
203	Min.	-166	-13568.20	1	-114603.00	9	-106839.00	13	-122.57	9	-							

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203	Max	-147	8330.05	9	49017.80	1	140850.00	1	152.40	1	138.97	1	566.04	9	1276.27	1	418.67	9
203	Max	-170	8330.05	9	49017.80	1	140850.00	1	152.40	1	138.97	1	566.04	9	1276.27	1	418.67	9
203	Max	-168	8330.05	9	49017.80	1	140850.00	1	152.40	1	138.97	1	566.04	9	1276.27	1	418.67	9
203	Min.	-145	-9295.08	1	-73599.60	9	-140800.00	9	-174.78	9	-146.10	9	-554.52	1	-1155.20	9	-472.04	1
203	Min.	-147	-9295.08	1	-73599.60	9	-140800.00	9	-174.78	9	-146.10	9	-554.52	1	-1155.20	9	-472.04	1
203	Min.	-170	-9295.08	1	-73599.60	9	-140800.00	9	-174.78	9	-146.10	9	-554.52	1	-1155.20	9	-472.04	1
203	Min.	-168	-9295.08	1	-73599.60	9	-140800.00	9	-174.78	9	-146.10	9	-554.52	1	-1155.20	9	-472.04	1
203	Max	-170	7016.26	13	18062.60	9	149413.00	1	91.33	1	609.33	1	540.37	9	10186.60	1	1227.28	9
203	Max	-175	7016.26	13	18062.60	9	149413.00	1	91.33	1	609.33	1	540.37	9	10186.60	1	1227.28	9
203	Max	259	7016.26	13	18062.60	9	149413.00	1	91.33	1	609.33	1	540.37	9	10186.60	1	1227.28	9
203	Max	-204	7016.26	13	18062.60	9	149413.00	1	91.33	1	609.33	1	540.37	9	10186.60	1	1227.28	9
203	Min.	-170	-9890.47	5	-34425.50	1	-149579.00	9	-110.95	9	-714.80	9	-545.06	1	-9568.38	9	-1390.61	1
203	Min.	-175	-9890.47	5	-34425.50	1	-149579.00	9	-110.95	9	-714.80	9	-545.06	1	-9568.38	9	-1390.61	1
203	Min.	259	-9890.47	5	-34425.50	1	-149579.00	9	-110.95	9	-714.80	9	-545.06	1	-9568.38	9	-1390.61	1
203	Min.	-204	-9890.47	5	-34425.50	1	-149579.00	9	-110.95	9	-714.80	9	-545.06	1	-9568.38	9	-1390.61	1
203	Max	-166	1885.99	9	45458.80	1	108780.00	5	43.83	1	554.74	1	446.39	9	1312.18	1	261.31	9
203	Max	-168	1885.99	9	45458.80	1	108780.00	5	43.83	1	554.74	1	446.39	9	1312.18	1	261.31	9
203	Max	-202	1885.99	9	45458.80	1	108780.00	5	43.83	1	554.74	1	446.39	9	1312.18	1	261.31	9
203	Max	-200	1885.99	9	45458.80	1	108780.00	5	43.83	1	554.74	1	446.39	9	1312.18	1	261.31	9
203	Min.	-166	-5833.86	1	-65806.70	9	-106761.00	13	-76.77	9	-514.83	9	-492.70	1	-2252.16	9	-259.97	1
203	Min.	-168	-5833.86	1	-65806.70	9	-106761.00	13	-76.77	9	-514.83	9	-492.70	1	-2252.16	9	-259.97	1
203	Min.	-202	-5833.86	1	-65806.70	9	-106761.00	13	-76.77	9	-514.83	9	-492.70	1	-2252.16	9	-259.97	1
203	Min.	-200	-5833.86	1	-65806.70	9	-106761.00	13	-76.77	9	-514.83	9	-492.70	1	-2252.16	9	-259.97	1
203	Max	-147	4894.82	13	40762.00	5	159619.00	1	49.25	13	212.34	9	525.73	9	1578.56	1	1627.43	9
203	Max	-152	4894.82	13	40762.00	5	159619.00	1	49.25	13	212.34	9	525.73	9	1578.56	1	1627.43	9
203	Max	-175	4894.82	13	40762.00	5	159619.00	1	49.25	13	212.34	9	525.73	9	1578.56	1	1627.43	9
203	Max	-170	4894.82	13	40762.00	5	159619.00	1	49.25	13	212.34	9	525.73	9	1578.56	1	1627.43	9
203	Min.	-147	-7050.43	5	-60243.40	13	-160963.00	9	-55.69	5	-98.88	1	-514.74	1	-2105.15	9	-1771.21	1
203	Min.	-152	-7050.43	5	-60243.40	13	-160963.00	9	-55.69	5	-98.88	1	-514.74	1	-2105.15	9	-1771.21	1
203	Min.	-175	-7050.43	5	-60243.40	13	-160963.00	9	-55.69	5	-98.88	1	-514.74	1	-2105.15	9	-1771.21	1
203	Min.	-170	-7050.43	5	-60243.40	13	-160963.00	9	-55.69	5	-98.88	1	-514.74	1	-2105.15	9	-1771.21	1
204	Max	-159	-8986.59	9	19409.30	1	47983.80	1	321.00	9	936.60	1	454.56	9	3287.32	9	652.24	9
204	Max	-160	-8986.59	9	19409.30	1	47983.80	1	321.00	9	936.60	1	454.56	9	3287.32	9	652.24	9
204	Max	-189	-8986.59	9	19409.30	1	47983.80	1	321.00	9	936.60	1	454.56	9	3287.32	9	652.24	9
204	Max	-188	-8986.59	9	19409.30	1	47983.80	1	321.00	9	936.60	1	454.56	9	3287.32	9	652.24	9
204	Min.	-159	-13417.10	17	-9663.20	9	-45703.60	9	-444.60	1	-726.00	9	-419.85	1	-6713.51	1	-1476.76	1
204	Min.	-160	-13417.10	17	-9663.20	9	-45703.60	9	-444.60	1	-726.00	9	-419.85	1	-6713.51	1	-1476.76	1
204	Min.	-189	-13417.10	17	-9663.20	9	-45703.60	9	-444.60	1	-726.00	9	-419.85	1	-6713.51	1	-1476.76	1
204	Min.	-188	-13417.10	17	-9663.20	9	-45703.60	9	-444.60	1	-726.00	9	-419.85	1	-6713.51	1	-1476.76	1
204	Max	-136	-11089.50	9	82.67	1	67028.60	1	342.50	9	1394.55	1	643.50	9	3989.30	1	986.89	9
204	Max	-137	-11089.50	9	82.67	1	67028.60	1	342.50	9	1394.55	1	643.50	9	3989.30	1	986.89	9
204	Max	-160	-11089.50	9	82.67	1	67028.60	1	342.50	9	1394.55	1	643.50	9	3989.30	1	986.89	9
204	Max	-159	-11089.50	9	82.67	1	67028.60	1	342.50	9	1394.55	1	643.50	9	3989.30	1	986.89	9
204	Min.	-136	-20047.50	17	-52546.60	9	-37998.30	9	-467.46	1	-1061.45	9	-358.25	1	-2735.97	9	-1540.47	1
204	Min.	-137	-20047.50	17	-52546.60	9	-37998.30	9	-467.46	1	-1061.45	9	-358.25	1	-2735.97	9	-1540.47	1
204	Min.	-160	-20047.50	17	-52546.60	9	-37998.30	9	-467.46	1	-1061.45	9	-358.25	1	-2735.97	9	-1540.47	1
204	Min.	-159	-20047.50	17	-52546.60	9	-37998.30	9	-467.46	1	-1061.45	9	-358.25	1	-2735.97	9	-1540.47	1
204	Max	-135	-6138.43	9	35020.80	1	24862.70	1	155.81	9	655.78	1	467.84	13	3632.38	13	2843.85	9
204	Max	-136	-6138.43	9	35020.80	1	24862.70	1	155.81	9	655.78	1	467.84	13	3632.38	13	2843.85	9
204	Max	-159	-6138.43	9	35020.80	1	24862.70	1	155.81	9	655.78	1	467.84	13	3632.38	13	2843.85	9
204	Max	-158	-6138.43	9	35020.80	1	24862.70	1	155.81	9	655.78	1	467.84	13	3632.38	13	2843.85	9
204	Min.	-135	-12604.30	17	-121831.00	9	-17361.60	9	-276.40	1	-609.25	9	-42.53	5	49.29	5	-6164.38	1
204	Min.	-136	-12604.30	17	-121831.00	9	-17361.60	9	-276.40	1	-609.25	9	-42.53	5	49.29	5	-6164.38	1
204	Min.	-159	-12604.30	17	-121831.00	9	-17361.60	9	-276.40	1	-609.25	9	-42.53	5	49.29	5	-6164.38	1
204	Min.	-158	-12604.30	17	-121831.00	9	-17361.60	9	-276.40	1	-609.25	9	-42.53	5	49.29	5	-6164.38	1
204	Max	-160	-7453.30	9	5670.87	9	46752.40	1	437.36	9	1136.11	1	229.46	13	14920.00	9	2996.76	1
204	Max	-161	-7453.30	9	5670.87	9	46752.40	1	437.36	9	1136.11	1	229.46	13	14920.00	9	2996.76	1
204	Max	-190	-7453.30	9	5670.87	9	46752.40	1	437.36	9	1136.11	1	229.46	13	14920.00	9	2996.76	1
204	Max	-189	-7453.30	9	5670.87	9	46752.40	1	437.36	9	1136.11	1	229.46	13	14920.00	9	2996.76	1
204	Min.	-160	-12593.60	17	-16538.30	1	-51104.70	9	-544.13	1	-941.32	9	-80.42	5	-16405.00	1	-2719.62	9
204	Min.	-161	-12593.60	17	-16538.30	1	-51104.70	9	-544.13	1	-941.32	9	-80.42	5	-16405.00	1	-2719.62	9
204	Min.	-190	-12593.60	17	-16538.30	1	-51104.70	9	-544.13	1	-941.32	9	-80.42	5	-16405.00	1	-2719.62	9
204	Min.	-189	-12593.60	17	-16538.30	1	-51104.70	9	-544.13	1	-941.32	9	-80.42	5	-16405.00	1	-2719.62	9
204	Max	-85	10267.50	9	174658.00	9	17429.10	1	164.95	9	4621.41	9	949.66	1	29112.80	1	8207.27	9
204	Max	154	10267.50	9	174658.00	9	17429.10	1	164.95	9	4621.41	9	949.66	1	29112.80	1	8207.27	9
204	Max	-116	10267.50	9	174658.00	9	17429.10	1	164.95	9	4621.41	9	949.66	1	29112.80	1	8207.27	9
204	Max	-115	10267.50	9	174658.00	9	17429.10	1	164.95	9	4621.41	9	949.66	1	29112.80	1	8207.27	9
204	Min.	-85	-3262.36	1	-212162.00	1	-27787.40	9	-155.22	1	-4784.67	1	-1079.08	9	-28424.50	9	-7958.18	1
204	Min.	154	-3262.36	1	-212162.00	1	-27787.40	9	-155.22	1	-4784.67	1	-1079.08	9	-28424.50	9	-7958.18	1
204	Min.	-116	-3262.36	1	-212162.00	1	-27787.40	9	-155.22	1	-4784.67	1	-1079.08	9	-28424.50	9	-7958.18	1
204	Min.	-115	-3262.36	1	-212162.00	1	-27787.40	9	-155.22	1	-4784.67	1	-1079.08	9	-28424.50	9	-7958.18	1
204	Max	-158	-9500.19	9	-49358.10	1	59059.10	1	31.24	1	3363.83	1	1042.26	9	13828.70	1	4054.32	

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204	Max	-114	13979.00	1	9536.72	1	50253.00	1	383.12	1	474.20	9	225.82	9	1076.89	9	1689.37	1
204	Max	-113	13979.00	1	9536.72	1	50253.00	1	383.12	1	474.20	9	225.82	9	1076.89	9	1689.37	1
204	Min.	-83	2455.14	9	-121309.00	9	-49738.40	9	-245.15	9	-954.29	1	-604.94	1	-6382.16	1	-223.58	9
204	Min.	-84	2455.14	9	-121309.00	9	-49738.40	9	-245.15	9	-954.29	1	-604.94	1	-6382.16	1	-223.58	9
204	Min.	-114	2455.14	9	-121309.00	9	-49738.40	9	-245.15	9	-954.29	1	-604.94	1	-6382.16	1	-223.58	9
204	Min.	-113	2455.14	9	-121309.00	9	-49738.40	9	-245.15	9	-954.29	1	-604.94	1	-6382.16	1	-223.58	9
204	Max	-113	14640.00	18	12413.30	1	64061.10	1	304.92	1	211.15	9	625.81	9	5298.52	1	1620.08	1
204	Max	-114	14640.00	18	12413.30	1	64061.10	1	304.92	1	211.15	9	625.81	9	5298.52	1	1620.08	1
204	Max	-137	14640.00	18	12413.30	1	64061.10	1	304.92	1	211.15	9	625.81	9	5298.52	1	1620.08	1
204	Max	-136	14640.00	18	12413.30	1	64061.10	1	304.92	1	211.15	9	625.81	9	5298.52	1	1620.08	1
204	Min.	-113	8196.50	1	-79508.40	9	-40320.30	9	-195.32	9	-838.74	1	-445.79	1	-2454.95	9	116.65	9
204	Min.	-114	8196.50	1	-79508.40	9	-40320.30	9	-195.32	9	-838.74	1	-445.79	1	-2454.95	9	116.65	9
204	Min.	-137	8196.50	1	-79508.40	9	-40320.30	9	-195.32	9	-838.74	1	-445.79	1	-2454.95	9	116.65	9
204	Min.	-136	8196.50	1	-79508.40	9	-40320.30	9	-195.32	9	-838.74	1	-445.79	1	-2454.95	9	116.65	9
204	Max	153	13308.70	1	185561.00	1	47358.10	1	5.30	5	457.70	9	475.56	9	13036.20	1	5568.43	1
204	Max	-83	13308.70	1	185561.00	1	47358.10	1	5.30	5	457.70	9	475.56	9	13036.20	1	5568.43	1
204	Max	-113	13308.70	1	185561.00	1	47358.10	1	5.30	5	457.70	9	475.56	9	13036.20	1	5568.43	1
204	Max	-112	13308.70	1	185561.00	1	47358.10	1	5.30	5	457.70	9	475.56	9	13036.20	1	5568.43	1
204	Min.	153	-3086.06	9	-205404.00	9	-543.26	9	-77.74	13	-2919.94	1	-1345.71	1	-1265.58	9	-915.86	9
204	Min.	-114	-3086.06	9	-205404.00	9	-543.26	9	-77.74	13	-2919.94	1	-1345.71	1	-1265.58	9	-915.86	9
204	Min.	-83	-3086.06	9	-205404.00	9	-543.26	9	-77.74	13	-2919.94	1	-1345.71	1	-1265.58	9	-915.86	9
204	Min.	-113	-3086.06	9	-205404.00	9	-543.26	9	-77.74	13	-2919.94	1	-1345.71	1	-1265.58	9	-915.86	9
204	Min.	-112	-3086.06	9	-205404.00	9	-543.26	9	-77.74	13	-2919.94	1	-1345.71	1	-1265.58	9	-915.86	9
204	Max	-84	4212.30	9	29552.60	9	51500.80	1	395.26	1	860.11	9	39.38	13	10870.00	9	3517.64	9
204	Max	-85	4212.30	9	29552.60	9	51500.80	1	395.26	1	860.11	9	39.38	13	10870.00	9	3517.64	9
204	Max	-115	4212.30	9	29552.60	9	51500.80	1	395.26	1	860.11	9	39.38	13	10870.00	9	3517.64	9
204	Max	-114	4212.30	9	29552.60	9	51500.80	1	395.26	1	860.11	9	39.38	13	10870.00	9	3517.64	9
204	Min.	-84	-5100.55	1	-103321.00	1	-51491.30	9	-311.53	9	-1116.38	1	-273.06	5	-10855.80	1	-3555.70	1
204	Min.	-85	-5100.55	1	-103321.00	1	-51491.30	9	-311.53	9	-1116.38	1	-273.06	5	-10855.80	1	-3555.70	1
204	Min.	-115	-5100.55	1	-103321.00	1	-51491.30	9	-311.53	9	-1116.38	1	-273.06	5	-10855.80	1	-3555.70	1
204	Min.	-114	-5100.55	1	-103321.00	1	-51491.30	9	-311.53	9	-1116.38	1	-273.06	5	-10855.80	1	-3555.70	1
204	Max	-114	5469.72	17	13767.20	9	55061.10	1	335.69	1	848.25	9	1082.07	9	4582.30	1	3121.82	9
204	Max	-115	5469.72	17	13767.20	9	55061.10	1	335.69	1	848.25	9	1082.07	9	4582.30	1	3121.82	9
204	Max	-138	5469.72	17	13767.20	9	55061.10	1	335.69	1	848.25	9	1082.07	9	4582.30	1	3121.82	9
204	Max	-137	5469.72	17	13767.20	9	55061.10	1	335.69	1	848.25	9	1082.07	9	4582.30	1	3121.82	9
204	Min.	-114	2101.06	9	-81642.50	1	-48685.60	9	-232.14	9	-1127.14	1	-1086.95	1	-4526.32	9	-2716.00	1
204	Min.	-115	2101.06	9	-81642.50	1	-48685.60	9	-232.14	9	-1127.14	1	-1086.95	1	-4526.32	9	-2716.00	1
204	Min.	-138	2101.06	9	-81642.50	1	-48685.60	9	-232.14	9	-1127.14	1	-1086.95	1	-4526.32	9	-2716.00	1
204	Min.	-137	2101.06	9	-81642.50	1	-48685.60	9	-232.14	9	-1127.14	1	-1086.95	1	-4526.32	9	-2716.00	1
204	Max	-137	-5115.74	1	9676.64	9	50331.10	1	420.63	9	1884.33	1	1095.09	9	6084.81	1	3851.06	1
204	Max	-138	-5115.74	1	9676.64	9	50331.10	1	420.63	9	1884.33	1	1095.09	9	6084.81	1	3851.06	1
204	Max	-161	-5115.74	1	9676.64	9	50331.10	1	420.63	9	1884.33	1	1095.09	9	6084.81	1	3851.06	1
204	Max	-160	-5115.74	1	9676.64	9	50331.10	1	420.63	9	1884.33	1	1095.09	9	6084.81	1	3851.06	1
204	Min.	-137	-8523.66	18	-36997.70	1	-48903.00	9	-506.12	1	-1697.51	9	-980.97	1	-4523.02	9	-3130.03	9
204	Min.	-138	-8523.66	18	-36997.70	1	-48903.00	9	-506.12	1	-1697.51	9	-980.97	1	-4523.02	9	-3130.03	9
204	Min.	-161	-8523.66	18	-36997.70	1	-48903.00	9	-506.12	1	-1697.51	9	-980.97	1	-4523.02	9	-3130.03	9
204	Min.	-160	-8523.66	18	-36997.70	1	-48903.00	9	-506.12	1	-1697.51	9	-980.97	1	-4523.02	9	-3130.03	9
204	Max	-161	-2026.08	1	-2767.01	9	11533.60	1	109.56	1	6329.25	1	1734.88	1	34683.20	1	13038.60	1
204	Max	-162	-2026.08	1	-2767.01	9	11533.60	1	109.56	1	6329.25	1	1734.88	1	34683.20	1	13038.60	1
204	Max	252	-2026.08	1	-2767.01	9	11533.60	1	109.56	1	6329.25	1	1734.88	1	34683.20	1	13038.60	1
204	Max	-190	-2026.08	1	-2767.01	9	11533.60	1	109.56	1	6329.25	1	1734.88	1	34683.20	1	13038.60	1
204	Min.	-161	-4688.81	18	-46175.60	1	-36786.30	9	-105.07	9	-5514.43	9	-1349.22	9	-31036.40	9	-11085.20	9
204	Min.	-162	-4688.81	18	-46175.60	1	-36786.30	9	-105.07	9	-5514.43	9	-1349.22	9	-31036.40	9	-11085.20	9
204	Min.	252	-4688.81	18	-46175.60	1	-36786.30	9	-105.07	9	-5514.43	9	-1349.22	9	-31036.40	9	-11085.20	9
204	Min.	-190	-4688.81	18	-46175.60	1	-36786.30	9	-105.07	9	-5514.43	9	-1349.22	9	-31036.40	9	-11085.20	9
205	Max	-132	-2334.20	1	15098.90	9	57808.40	1	552.88	9	1099.62	1	861.85	9	2553.90	1	2186.98	1
205	Max	-133	-2334.20	1	15098.90	9	57808.40	1	552.88	9	1099.62	1	861.85	9	2553.90	1	2186.98	1
205	Max	-156	-2334.20	1	15098.90	9	57808.40	1	552.88	9	1099.62	1	861.85	9	2553.90	1	2186.98	1
205	Max	-155	-2334.20	1	15098.90	9	57808.40	1	552.88	9	1099.62	1	861.85	9	2553.90	1	2186.98	1
205	Min.	-132	-5237.29	18	-40310.10	1	-60415.40	9	-189.19	1	-1834.33	9	-1012.70	1	-5257.78	9	-3123.56	9
205	Min.	-133	-5237.29	18	-40310.10	1	-60415.40	9	-189.19	1	-1834.33	9	-1012.70	1	-5257.78	9	-3123.56	9
205	Min.	-156	-5237.29	18	-40310.10	1	-60415.40	9	-189.19	1	-1834.33	9	-1012.70	1	-5257.78	9	-3123.56	9
205	Min.	-155	-5237.29	18	-40310.10	1	-60415.40	9	-189.19	1	-1834.33	9	-1012.70	1	-5257.78	9	-3123.56	9
205	Max	-107	7675.15	17	142081.00	1	25690.40	1	-37.19	1	754.54	1	-465.45	13	-4137.10	13	-2225.71	1
205	Max	-108	7675.15	17	142081.00	1	25690.40	1	-37.19	1	754.54	1	-465.45	13	-4137.10	13	-2225.71	1
205	Max	-131	7675.15	17	142081.00	1	25690.40	1	-37.19	1	754.54	1	-465.45	13	-4137.10	13	-2225.71	1
205	Max	-130	7675.15	17	142081.00	1	25690.40	1	-37.19	1	754.54	1	-465.45	13	-4137.10	13	-2225.71	1
205	Min.	-107	3667.69	9	-190756.00	9	-22920.50	9	-312.60	9	13.52	9	-1057.87	20	-8746.28	20	-9070.01	9
205	Min.	-108	3667.69	9	-190756.00	9	-22920.50	9	-312.60	9	13.52	9	-1057.87	20	-8746.28	20	-9070.01	9
205	Min.	-131	3667.69	9	-190756.00	9	-22920.50	9	-312.60	9	13.52	9	-1057.87	20	-8746.28	20	-9070.01	9
205	Min.	-130	3667.69	9	-190756.00	9	-22920.50	9	-312.60	9	13.52	9	-1057.87	20	-8746.28	20	-9070.01	9
205	Max	-130	-1470.99	9	64149.90	1	26315.70	1	395.17	9	284.78	1	-549.					

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205	Max	-184	-3143.24	9	7541.54	9	55874.70	1	567.71	9	512.05	1	342.96	9	13935.20	9	2004.06	1
205	Min.	-155	-8356.96	1	-20627.60	1	-61462.00	9	-220.05	1	-1173.38	9	-241.40	1	-11126.70	1	-2603.38	9
205	Min.	-156	-8356.96	1	-20627.60	1	-61462.00	9	-220.05	1	-1173.38	9	-241.40	1	-11126.70	1	-2603.38	9
205	Min.	-185	-8356.96	1	-20627.60	1	-61462.00	9	-220.05	1	-1173.38	9	-241.40	1	-11126.70	1	-2603.38	9
205	Min.	-184	-8356.96	1	-20627.60	1	-61462.00	9	-220.05	1	-1173.38	9	-241.40	1	-11126.70	1	-2603.38	9
205	Max	-79	9594.18	9	218568.00	9	21404.60	1	122.44	9	4651.64	9	877.35	1	22267.00	1	8156.67	9
205	Max	152	9594.18	9	218568.00	9	21404.60	1	122.44	9	4651.64	9	877.35	1	22267.00	1	8156.67	9
205	Max	-111	9594.18	9	218568.00	9	21404.60	1	122.44	9	4651.64	9	877.35	1	22267.00	1	8156.67	9
205	Max	-110	9594.18	9	218568.00	9	21404.60	1	122.44	9	4651.64	9	877.35	1	22267.00	1	8156.67	9
205	Min.	-79	-5296.23	1	-243640.00	1	-29501.50	9	-123.46	1	-3342.98	1	-1000.46	9	-27711.10	9	-6758.18	1
205	Min.	152	-5296.23	1	-243640.00	1	-29501.50	9	-123.46	1	-3342.98	1	-1000.46	9	-27711.10	9	-6758.18	1
205	Min.	-111	-5296.23	1	-243640.00	1	-29501.50	9	-123.46	1	-3342.98	1	-1000.46	9	-27711.10	9	-6758.18	1
205	Min.	-110	-5296.23	1	-243640.00	1	-29501.50	9	-123.46	1	-3342.98	1	-1000.46	9	-27711.10	9	-6758.18	1
205	Max	-110	5510.59	1	149224.00	9	25301.90	1	208.74	1	531.13	9	1461.02	9	9222.87	1	9330.27	9
205	Max	-111	5510.59	1	149224.00	9	25301.90	1	208.74	1	531.13	9	1461.02	9	9222.87	1	9330.27	9
205	Max	-134	5510.59	1	149224.00	9	25301.90	1	208.74	1	531.13	9	1461.02	9	9222.87	1	9330.27	9
205	Max	-133	5510.59	1	149224.00	9	25301.90	1	208.74	1	531.13	9	1461.02	9	9222.87	1	9330.27	9
205	Min.	-110	-3279.05	9	-175418.00	1	-27228.10	9	-317.67	9	-172.09	1	-1282.99	1	-11875.00	9	-7041.65	1
205	Min.	-111	-3279.05	9	-175418.00	1	-27228.10	9	-317.67	9	-172.09	1	-1282.99	1	-11875.00	9	-7041.65	1
205	Min.	-134	-3279.05	9	-175418.00	1	-27228.10	9	-317.67	9	-172.09	1	-1282.99	1	-11875.00	9	-7041.65	1
205	Min.	-133	-3279.05	9	-175418.00	1	-27228.10	9	-317.67	9	-172.09	1	-1282.99	1	-11875.00	9	-7041.65	1
205	Max	151	11745.10	1	218855.00	1	41462.40	1	168.88	19	5057.24	20	1774.25	9	-10535.20	1	-2571.77	1
205	Max	-77	11745.10	1	218855.00	1	41462.40	1	168.88	19	5057.24	20	1774.25	9	-10535.20	1	-2571.77	1
205	Max	-108	11745.10	1	218855.00	1	41462.40	1	168.88	19	5057.24	20	1774.25	9	-10535.20	1	-2571.77	1
205	Max	-107	11745.10	1	218855.00	1	41462.40	1	168.88	19	5057.24	20	1774.25	9	-10535.20	1	-2571.77	1
205	Min.	151	-7232.99	9	-251451.00	9	-14365.50	9	65.57	13	1849.71	1	174.66	1	-25041.00	20	-8480.83	20
205	Min.	-77	-7232.99	9	-251451.00	9	-14365.50	9	65.57	13	1849.71	1	174.66	1	-25041.00	20	-8480.83	20
205	Min.	-108	-7232.99	9	-251451.00	9	-14365.50	9	65.57	13	1849.71	1	174.66	1	-25041.00	20	-8480.83	20
205	Min.	-107	-7232.99	9	-251451.00	9	-14365.50	9	65.57	13	1849.71	1	174.66	1	-25041.00	20	-8480.83	20
205	Max	-109	4663.29	1	33142.50	9	61873.00	1	143.77	1	1213.19	9	877.14	9	2615.83	1	2625.46	9
205	Max	-110	4663.29	1	33142.50	9	61873.00	1	143.77	1	1213.19	9	877.14	9	2615.83	1	2625.46	9
205	Max	-133	4663.29	1	33142.50	9	61873.00	1	143.77	1	1213.19	9	877.14	9	2615.83	1	2625.46	9
205	Max	-132	4663.29	1	33142.50	9	61873.00	1	143.77	1	1213.19	9	877.14	9	2615.83	1	2625.46	9
205	Min.	-109	-456.24	9	-82734.20	1	-61949.00	9	-382.23	9	-433.89	1	-993.30	1	-5096.81	9	-2710.48	1
205	Min.	-110	-456.24	9	-82734.20	1	-61949.00	9	-382.23	9	-433.89	1	-993.30	1	-5096.81	9	-2710.48	1
205	Min.	-133	-456.24	9	-82734.20	1	-61949.00	9	-382.23	9	-433.89	1	-993.30	1	-5096.81	9	-2710.48	1
205	Min.	-132	-456.24	9	-82734.20	1	-61949.00	9	-382.23	9	-433.89	1	-993.30	1	-5096.81	9	-2710.48	1
205	Max	-156	-147.23	1	7580.39	9	19102.60	1	93.80	1	3787.00	1	864.23	1	22175.80	1	7437.34	1
205	Max	-157	-147.23	1	7580.39	9	19102.60	1	93.80	1	3787.00	1	864.23	1	22175.80	1	7437.34	1
205	Max	250	-147.23	1	7580.39	9	19102.60	1	93.80	1	3787.00	1	864.23	1	22175.80	1	7437.34	1
205	Max	-185	-147.23	1	7580.39	9	19102.60	1	93.80	1	3787.00	1	864.23	1	22175.80	1	7437.34	1
205	Min.	-156	-3523.82	9	-48182.50	1	-37753.40	9	-78.98	9	-5593.09	9	-1414.59	9	-30816.30	9	-11252.40	9
205	Min.	-157	-3523.82	9	-48182.50	1	-37753.40	9	-78.98	9	-5593.09	9	-1414.59	9	-30816.30	9	-11252.40	9
205	Min.	250	-3523.82	9	-48182.50	1	-37753.40	9	-78.98	9	-5593.09	9	-1414.59	9	-30816.30	9	-11252.40	9
205	Min.	-185	-3523.82	9	-48182.50	1	-37753.40	9	-78.98	9	-5593.09	9	-1414.59	9	-30816.30	9	-11252.40	9
205	Max	-131	-4379.82	9	11511.30	1	69984.60	1	550.81	9	271.09	1	135.17	9	-203.63	1	3014.60	9
205	Max	-132	-4379.82	9	11511.30	1	69984.60	1	550.81	9	271.09	1	135.17	9	-203.63	1	3014.60	9
205	Max	-155	-4379.82	9	11511.30	1	69984.60	1	550.81	9	271.09	1	135.17	9	-203.63	1	3014.60	9
205	Max	-154	-4379.82	9	11511.30	1	69984.60	1	550.81	9	271.09	1	135.17	9	-203.63	1	3014.60	9
205	Min.	-131	-12225.80	1	-52268.60	9	-56270.90	9	-90.79	1	-1805.17	9	-847.92	1	-6561.76	9	590.71	1
205	Min.	-132	-12225.80	1	-52268.60	9	-56270.90	9	-90.79	1	-1805.17	9	-847.92	1	-6561.76	9	590.71	1
205	Min.	-155	-12225.80	1	-52268.60	9	-56270.90	9	-90.79	1	-1805.17	9	-847.92	1	-6561.76	9	590.71	1
205	Min.	-154	-12225.80	1	-52268.60	9	-56270.90	9	-90.79	1	-1805.17	9	-847.92	1	-6561.76	9	590.71	1
205	Max	-154	-5063.60	1	18827.10	1	55424.60	1	562.55	9	233.04	1	804.37	9	12069.30	9	2532.63	9
205	Max	-155	-5063.60	1	18827.10	1	55424.60	1	562.55	9	233.04	1	804.37	9	12069.30	9	2532.63	9
205	Max	-184	-5063.60	1	18827.10	1	55424.60	1	562.55	9	233.04	1	804.37	9	12069.30	9	2532.63	9
205	Max	-183	-5063.60	1	18827.10	1	55424.60	1	562.55	9	233.04	1	804.37	9	12069.30	9	2532.63	9
205	Min.	-154	-7862.15	18	-19179.60	9	-56080.90	9	-71.58	1	-1162.15	9	-277.71	1	3426.55	1	650.78	1
205	Min.	-155	-7862.15	18	-19179.60	9	-56080.90	9	-71.58	1	-1162.15	9	-277.71	1	3426.55	1	650.78	1
205	Min.	-184	-7862.15	18	-19179.60	9	-56080.90	9	-71.58	1	-1162.15	9	-277.71	1	3426.55	1	650.78	1
205	Min.	-183	-7862.15	18	-19179.60	9	-56080.90	9	-71.58	1	-1162.15	9	-277.71	1	3426.55	1	650.78	1
205	Max	-78	5003.21	9	55312.10	9	61136.40	1	205.38	1	1226.52	9	380.71	13	10862.30	9	3133.24	9
205	Max	-79	5003.21	9	55312.10	9	61136.40	1	205.38	1	1226.52	9	380.71	13	10862.30	9	3133.24	9
205	Max	-110	5003.21	9	55312.10	9	61136.40	1	205.38	1	1226.52	9	380.71	13	10862.30	9	3133.24	9
205	Max	-109	5003.21	9	55312.10	9	61136.40	1	205.38	1	1226.52	9	380.71	13	10862.30	9	3133.24	9
205	Min.	-78	-6429.10	1	-109538.00	1	-65436.00	9	-455.57	9	-330.88	1	-67.31	5	-9374.53	1	-2881.00	1
205	Min.	-79	-6429.10	1	-109538.00	1	-65436.00	9	-455.57	9	-330.88	1	-67.31	5	-9374.53	1	-2881.00	1
205	Min.	-110	-6429.10	1	-109538.00	1	-65436.00	9	-455.57	9	-330.88	1	-67.31	5	-9374.53	1	-2881.00	1
205	Min.	-109	-6429.10	1	-109538.00	1	-65436.00	9	-455.57	9	-330.88	1	-67.31	5	-9374.53	1	-2881.00	1
205	Max	-133	97.19	9	82110.00	9	26739.00	1	402.76	9	595.85	1	1666.33	9	9034.75	1	7094.22	1
205	Max	-134	97.19	9	82110.00	9	26739.00	1	402.76	9	595.85	1	1666.33	9	9034.75	1	7094.22	1
205	Max	-157	97.19	9	82110.00	9	26739.00	1	402.76	9	595.85	1	1666.33</					

Relazione di calcolo

206	Min.	-151	-6594.23	5	-82686.10	5	-174590.00	9	-113.76	13	-98.73	13	-566.28	1	-1156.73	13	-311.49	9
206	Min.	-150	-6594.23	5	-82686.10	5	-174590.00	9	-113.76	13	-98.73	13	-566.28	1	-1156.73	13	-311.49	9
206	Min.	-173	-6594.23	5	-82686.10	5	-174590.00	9	-113.76	13	-98.73	13	-566.28	1	-1156.73	13	-311.49	9
206	Min.	-174	-6594.23	5	-82686.10	5	-174590.00	9	-113.76	13	-98.73	13	-566.28	1	-1156.73	13	-311.49	9
206	Max	-174	3014.25	13	22977.90	13	164236.00	1	110.56	5	228.85	5	553.08	9	1730.25	5	620.18	1
206	Max	-173	3014.25	13	22977.90	13	164236.00	1	110.56	5	228.85	5	553.08	9	1730.25	5	620.18	1
206	Max	-206	3014.25	13	22977.90	13	164236.00	1	110.56	5	228.85	5	553.08	9	1730.25	5	620.18	1
206	Max	-207	3014.25	13	22977.90	13	164236.00	1	110.56	5	228.85	5	553.08	9	1730.25	5	620.18	1
206	Min.	-174	-5133.53	5	-41021.70	5	-160007.00	9	-104.40	13	-249.99	13	-548.83	1	-2682.57	13	-857.88	9
206	Min.	-173	-5133.53	5	-41021.70	5	-160007.00	9	-104.40	13	-249.99	13	-548.83	1	-2682.57	13	-857.88	9
206	Min.	-206	-5133.53	5	-41021.70	5	-160007.00	9	-104.40	13	-249.99	13	-548.83	1	-2682.57	13	-857.88	9
206	Min.	-207	-5133.53	5	-41021.70	5	-160007.00	9	-104.40	13	-249.99	13	-548.83	1	-2682.57	13	-857.88	9
206	Max	-149	1478.92	1	51214.50	5	144704.00	5	74.07	1	388.57	13	426.26	9	4150.61	5	1309.17	13
206	Max	-148	1478.92	1	51214.50	5	144704.00	5	74.07	1	388.57	13	426.26	9	4150.61	5	1309.17	13
206	Max	-171	1478.92	1	51214.50	5	144704.00	5	74.07	1	388.57	13	426.26	9	4150.61	5	1309.17	13
206	Max	-172	1478.92	1	51214.50	5	144704.00	5	74.07	1	388.57	13	426.26	9	4150.61	5	1309.17	13
206	Min.	-149	-7617.37	9	-86431.30	13	-142409.00	13	-33.22	9	-276.40	5	-438.50	1	-5232.47	13	-1107.55	5
206	Min.	-148	-7617.37	9	-86431.30	13	-142409.00	13	-33.22	9	-276.40	5	-438.50	1	-5232.47	13	-1107.55	5
206	Min.	-171	-7617.37	9	-86431.30	13	-142409.00	13	-33.22	9	-276.40	5	-438.50	1	-5232.47	13	-1107.55	5
206	Min.	-172	-7617.37	9	-86431.30	13	-142409.00	13	-33.22	9	-276.40	5	-438.50	1	-5232.47	13	-1107.55	5
206	Max	-172	11613.10	1	31463.60	1	138180.00	5	76.72	5	345.37	5	487.48	9	10798.00	5	1209.65	13
206	Max	-171	11613.10	1	31463.60	1	138180.00	5	76.72	5	345.37	5	487.48	9	10798.00	5	1209.65	13
206	Max	258	11613.10	1	31463.60	1	138180.00	5	76.72	5	345.37	5	487.48	9	10798.00	5	1209.65	13
206	Max	-205	11613.10	1	31463.60	1	138180.00	5	76.72	5	345.37	5	487.48	9	10798.00	5	1209.65	13
206	Min.	-172	-12844.90	9	-58369.80	9	-138173.00	13	-86.33	13	-506.46	13	-501.20	1	-10957.30	13	-1300.02	5
206	Min.	-171	-12844.90	9	-58369.80	9	-138173.00	13	-86.33	13	-506.46	13	-501.20	1	-10957.30	13	-1300.02	5
206	Min.	258	-12844.90	9	-58369.80	9	-138173.00	13	-86.33	13	-506.46	13	-501.20	1	-10957.30	13	-1300.02	5
206	Min.	-205	-12844.90	9	-58369.80	9	-138173.00	13	-86.33	13	-506.46	13	-501.20	1	-10957.30	13	-1300.02	5
206	Max	161	12790.80	13	181834.00	5	181132.00	1	138.44	13	1252.53	13	452.62	13	15512.50	5	1385.82	13
206	Max	-105	12790.80	13	181834.00	5	181132.00	1	138.44	13	1252.53	13	452.62	13	15512.50	5	1385.82	13
206	Max	-128	12790.80	13	181834.00	5	181132.00	1	138.44	13	1252.53	13	452.62	13	15512.50	5	1385.82	13
206	Max	-129	12790.80	13	181834.00	5	181132.00	1	138.44	13	1252.53	13	452.62	13	15512.50	5	1385.82	13
206	Min.	161	-13099.20	5	-205450.00	13	-176616.00	9	-138.16	5	-1198.11	5	-467.38	5	-14442.80	13	-1115.04	5
206	Min.	-105	-13099.20	5	-205450.00	13	-176616.00	9	-138.16	5	-1198.11	5	-467.38	5	-14442.80	13	-1115.04	5
206	Min.	-128	-13099.20	5	-205450.00	13	-176616.00	9	-138.16	5	-1198.11	5	-467.38	5	-14442.80	13	-1115.04	5
206	Min.	-129	-13099.20	5	-205450.00	13	-176616.00	9	-138.16	5	-1198.11	5	-467.38	5	-14442.80	13	-1115.04	5
206	Max	-173	4543.62	1	19102.90	5	157005.00	1	99.62	5	315.04	5	543.63	9	1860.77	5	722.88	1
206	Max	-172	4543.62	1	19102.90	5	157005.00	1	99.62	5	315.04	5	543.63	9	1860.77	5	722.88	1
206	Max	-205	4543.62	1	19102.90	5	157005.00	1	99.62	5	315.04	5	543.63	9	1860.77	5	722.88	1
206	Max	-206	4543.62	1	19102.90	5	157005.00	1	99.62	5	315.04	5	543.63	9	1860.77	5	722.88	1
206	Min.	-173	-8046.61	9	-40060.90	13	-156013.00	9	-100.90	13	-338.60	13	-547.10	1	-1928.19	13	-638.66	9
206	Min.	-172	-8046.61	9	-40060.90	13	-156013.00	9	-100.90	13	-338.60	13	-547.10	1	-1928.19	13	-638.66	9
206	Min.	-205	-8046.61	9	-40060.90	13	-156013.00	9	-100.90	13	-338.60	13	-547.10	1	-1928.19	13	-638.66	9
206	Min.	-206	-8046.61	9	-40060.90	13	-156013.00	9	-100.90	13	-338.60	13	-547.10	1	-1928.19	13	-638.66	9
206	Max	-103	16093.60	1	175977.00	13	144447.00	5	96.55	5	403.61	5	384.32	9	4619.26	13	693.60	13
206	Max	160	16093.60	1	175977.00	13	144447.00	5	96.55	5	403.61	5	384.32	9	4619.26	13	693.60	13
206	Max	-125	16093.60	1	175977.00	13	144447.00	5	96.55	5	403.61	5	384.32	9	4619.26	13	693.60	13
206	Max	-126	16093.60	1	175977.00	13	144447.00	5	96.55	5	403.61	5	384.32	9	4619.26	13	693.60	13
206	Min.	-103	-5741.53	9	-222800.00	5	-145904.00	13	-68.86	13	-336.67	13	-337.06	1	-6383.58	5	-1127.37	5
206	Min.	160	-5741.53	9	-222800.00	5	-145904.00	13	-68.86	13	-336.67	13	-337.06	1	-6383.58	5	-1127.37	5
206	Min.	-125	-5741.53	9	-222800.00	5	-145904.00	13	-68.86	13	-336.67	13	-337.06	1	-6383.58	5	-1127.37	5
206	Min.	-126	-5741.53	9	-222800.00	5	-145904.00	13	-68.86	13	-336.67	13	-337.06	1	-6383.58	5	-1127.37	5
206	Max	-126	6482.01	13	118347.00	5	141125.00	5	79.84	1	90.67	13	408.23	9	5964.68	5	663.02	13
206	Max	-125	6482.01	13	118347.00	5	141125.00	5	79.84	1	90.67	13	408.23	9	5964.68	5	663.02	13
206	Max	-148	6482.01	13	118347.00	5	141125.00	5	79.84	1	90.67	13	408.23	9	5964.68	5	663.02	13
206	Max	-149	6482.01	13	118347.00	5	141125.00	5	79.84	1	90.67	13	408.23	9	5964.68	5	663.02	13
206	Min.	-126	1124.32	5	-151873.00	13	-143485.00	13	-54.12	9	-274.77	5	-432.69	1	-7090.84	13	-804.79	5
206	Min.	-125	1124.32	5	-151873.00	13	-143485.00	13	-54.12	9	-274.77	5	-432.69	1	-7090.84	13	-804.79	5
206	Min.	-148	1124.32	5	-151873.00	13	-143485.00	13	-54.12	9	-274.77	5	-432.69	1	-7090.84	13	-804.79	5
206	Min.	-149	1124.32	5	-151873.00	13	-143485.00	13	-54.12	9	-274.77	5	-432.69	1	-7090.84	13	-804.79	5
206	Max	-129	3704.80	13	121267.00	5	173973.00	1	126.69	9	437.56	5	472.80	9	6736.24	9	1064.89	13
206	Max	-128	3704.80	13	121267.00	5	173973.00	1	126.69	9	437.56	5	472.80	9	6736.24	9	1064.89	13
206	Max	-151	3704.80	13	121267.00	5	173973.00	1	126.69	9	437.56	5	472.80	9	6736.24	9	1064.89	13
206	Max	-152	3704.80	13	121267.00	5	173973.00	1	126.69	9	437.56	5	472.80	9	6736.24	9	1064.89	13
206	Min.	-129	-2318.36	5	-140187.00	13	-173002.00	9	-153.47	1	-637.97	13	-399.17	1	-9508.74	1	-803.07	5
206	Min.	-128	-2318.36	5	-140187.00	13	-173002.00	9	-153.47	1	-637.97	13	-399.17	1	-9508.74	1	-803.07	5
206	Min.	-151	-2318.36	5	-140187.00	13	-173002.00	9	-153.47	1	-637.97	13	-399.17	1	-9508.74	1	-803.07	5
206	Min.	-152	-2318.36	5	-140187.00	13	-173002.00	9	-153.47	1	-637.97	13	-399.17	1	-9508.74	1	-803.07	5
206	Max	-127	6132.56	13	106998.00	5	159617.00	1	96.13	5	235.02	13	466.86	9	1304.39	13	280.73	1
206	Max	-126	6132.56	13	106998.00	5	159617.00	1	96.13	5	235.02	13	466.86	9	1304.39	13	280.73	1
206	Max	-149	6132.56	13	106998.00	5	159617.00	1	96.13	5	235.02	13	466.86	9	1304.39	13	2	

Relazione di calcolo

302	Min.	-216	-6685.63	9	-22981.80	5	-66760.00	1	-30.05	1	-118.59	1	-115.63	1	-1521.27	1	-1499.53	9
302	Min.	-229	-6685.63	9	-22981.80	5	-66760.00	1	-30.05	1	-118.59	1	-115.63	1	-1521.27	1	-1499.53	9
302	Min.	-227	-6685.63	9	-22981.80	5	-66760.00	1	-30.05	1	-118.59	1	-115.63	1	-1521.27	1	-1499.53	9
302	Max	-203	4799.89	13	38611.70	1	62265.80	13	48.65	5	389.60	9	89.22	9	-2175.64	1	3199.14	9
302	Max	258	4799.89	13	38611.70	1	62265.80	13	48.65	5	389.60	9	89.22	9	-2175.64	1	3199.14	9
302	Max	-218	4799.89	13	38611.70	1	62265.80	13	48.65	5	389.60	9	89.22	9	-2175.64	1	3199.14	9
302	Max	-216	4799.89	13	38611.70	1	62265.80	13	48.65	5	389.60	9	89.22	9	-2175.64	1	3199.14	9
302	Min.	-203	-4162.61	5	-51467.40	9	-72019.20	5	-3.48	13	69.62	1	-159.61	1	-12406.70	9	-1627.66	1
302	Min.	258	-4162.61	5	-51467.40	9	-72019.20	5	-3.48	13	69.62	1	-159.61	1	-12406.70	9	-1627.66	1
302	Min.	-218	-4162.61	5	-51467.40	9	-72019.20	5	-3.48	13	69.62	1	-159.61	1	-12406.70	9	-1627.66	1
302	Min.	-216	-4162.61	5	-51467.40	9	-72019.20	5	-3.48	13	69.62	1	-159.61	1	-12406.70	9	-1627.66	1
302	Max	-227	5736.34	1	-2230.75	13	62931.50	9	55.17	9	202.01	9	77.19	9	1583.97	9	1122.83	1
302	Max	-229	5736.34	1	-2230.75	13	62931.50	9	55.17	9	202.01	9	77.19	9	1583.97	9	1122.83	1
302	Max	-242	5736.34	1	-2230.75	13	62931.50	9	55.17	9	202.01	9	77.19	9	1583.97	9	1122.83	1
302	Max	-240	5736.34	1	-2230.75	13	62931.50	9	55.17	9	202.01	9	77.19	9	1583.97	9	1122.83	1
302	Min.	-227	-3472.64	9	-16857.90	5	-64461.60	1	-33.00	1	-211.25	1	-73.55	1	-1395.96	1	-798.71	9
302	Min.	-229	-3472.64	9	-16857.90	5	-64461.60	1	-33.00	1	-211.25	1	-73.55	1	-1395.96	1	-798.71	9
302	Min.	-242	-3472.64	9	-16857.90	5	-64461.60	1	-33.00	1	-211.25	1	-73.55	1	-1395.96	1	-798.71	9
302	Min.	-240	-3472.64	9	-16857.90	5	-64461.60	1	-33.00	1	-211.25	1	-73.55	1	-1395.96	1	-798.71	9
302	Max	255	500.82	13	32344.10	1	40794.00	9	40.42	1	1163.70	1	304.37	9	3905.44	9	1373.61	9
302	Max	-199	500.82	13	32344.10	1	40794.00	9	40.42	1	1163.70	1	304.37	9	3905.44	9	1373.61	9
302	Max	-212	500.82	13	32344.10	1	40794.00	9	40.42	1	1163.70	1	304.37	9	3905.44	9	1373.61	9
302	Max	-210	500.82	13	32344.10	1	40794.00	9	40.42	1	1163.70	1	304.37	9	3905.44	9	1373.61	9
302	Min.	255	-8153.97	5	-69303.60	9	-4668.72	1	0.57	9	-133.31	9	-51.40	1	-15220.70	1	-6663.26	1
302	Min.	-199	-8153.97	5	-69303.60	9	-4668.72	1	0.57	9	-133.31	9	-51.40	1	-15220.70	1	-6663.26	1
302	Min.	-212	-8153.97	5	-69303.60	9	-4668.72	1	0.57	9	-133.31	9	-51.40	1	-15220.70	1	-6663.26	1
302	Min.	-210	-8153.97	5	-69303.60	9	-4668.72	1	0.57	9	-133.31	9	-51.40	1	-15220.70	1	-6663.26	1
302	Max	-201	-1324.68	5	5559.90	13	62502.00	13	44.26	1	259.16	1	143.47	9	5747.91	9	928.13	1
302	Max	-203	-1324.68	5	5559.90	13	62502.00	13	44.26	1	259.16	1	143.47	9	5747.91	9	928.13	1
302	Max	-216	-1324.68	5	5559.90	13	62502.00	13	44.26	1	259.16	1	143.47	9	5747.91	9	928.13	1
302	Max	-214	-1324.68	5	5559.90	13	62502.00	13	44.26	1	259.16	1	143.47	9	5747.91	9	928.13	1
302	Min.	-201	-6675.26	13	-32047.40	5	-59294.60	5	-48.72	9	-357.63	9	-146.32	1	-2170.86	1	-1281.10	9
302	Min.	-203	-6675.26	13	-32047.40	5	-59294.60	5	-48.72	9	-357.63	9	-146.32	1	-2170.86	1	-1281.10	9
302	Min.	-216	-6675.26	13	-32047.40	5	-59294.60	5	-48.72	9	-357.63	9	-146.32	1	-2170.86	1	-1281.10	9
302	Min.	-214	-6675.26	13	-32047.40	5	-59294.60	5	-48.72	9	-357.63	9	-146.32	1	-2170.86	1	-1281.10	9
302	Max	-236	-12759.60	5	-21476.00	5	52956.80	9	50.54	9	474.71	9	220.27	9	3133.11	9	4235.78	1
302	Max	-238	-12759.60	5	-21476.00	5	52956.80	9	50.54	9	474.71	9	220.27	9	3133.11	9	4235.78	1
302	Max	-254	-12759.60	5	-21476.00	5	52956.80	9	50.54	9	474.71	9	220.27	9	3133.11	9	4235.78	1
302	Max	349	-12759.60	5	-21476.00	5	52956.80	9	50.54	9	474.71	9	220.27	9	3133.11	9	4235.78	1
302	Min.	-236	-26410.40	19	-62594.20	19	7029.21	1	-109.56	1	-1462.02	1	-27.26	1	-14287.50	1	40.98	9
302	Min.	-238	-26410.40	19	-62594.20	19	7029.21	1	-109.56	1	-1462.02	1	-27.26	1	-14287.50	1	40.98	9
302	Min.	-254	-26410.40	19	-62594.20	19	7029.21	1	-109.56	1	-1462.02	1	-27.26	1	-14287.50	1	40.98	9
302	Min.	349	-26410.40	19	-62594.20	19	7029.21	1	-109.56	1	-1462.02	1	-27.26	1	-14287.50	1	40.98	9
302	Max	-199	4467.92	5	10109.80	13	48829.10	9	24.62	9	182.31	1	103.63	9	2671.92	13	900.55	1
302	Max	-201	4467.92	5	10109.80	13	48829.10	9	24.62	9	182.31	1	103.63	9	2671.92	13	900.55	1
302	Max	-214	4467.92	5	10109.80	13	48829.10	9	24.62	9	182.31	1	103.63	9	2671.92	13	900.55	1
302	Max	-212	4467.92	5	10109.80	13	48829.10	9	24.62	9	182.31	1	103.63	9	2671.92	13	900.55	1
302	Min.	-199	-4635.22	13	-57803.70	5	-39704.40	1	-49.25	1	-225.90	9	-109.39	1	-681.90	5	-335.10	9
302	Min.	-201	-4635.22	13	-57803.70	5	-39704.40	1	-49.25	1	-225.90	9	-109.39	1	-681.90	5	-335.10	9
302	Min.	-214	-4635.22	13	-57803.70	5	-39704.40	1	-49.25	1	-225.90	9	-109.39	1	-681.90	5	-335.10	9
302	Min.	-212	-4635.22	13	-57803.70	5	-39704.40	1	-49.25	1	-225.90	9	-109.39	1	-681.90	5	-335.10	9
302	Max	-240	1138.29	5	-7091.15	1	66782.70	9	53.91	9	409.31	9	37.35	9	8007.41	9	611.92	1
302	Max	-242	1138.29	5	-7091.15	1	66782.70	9	53.91	9	409.31	9	37.35	9	8007.41	9	611.92	1
302	Max	-264	1138.29	5	-7091.15	1	66782.70	9	53.91	9	409.31	9	37.35	9	8007.41	9	611.92	1
302	Max	-259	1138.29	5	-7091.15	1	66782.70	9	53.91	9	409.31	9	37.35	9	8007.41	9	611.92	1
302	Min.	-240	-3924.51	13	-17280.40	18	-62006.70	1	-25.09	1	-238.33	1	-40.43	1	-3651.62	1	-426.67	9
302	Min.	-242	-3924.51	13	-17280.40	18	-62006.70	1	-25.09	1	-238.33	1	-40.43	1	-3651.62	1	-426.67	9
302	Min.	-264	-3924.51	13	-17280.40	18	-62006.70	1	-25.09	1	-238.33	1	-40.43	1	-3651.62	1	-426.67	9
302	Min.	-259	-3924.51	13	-17280.40	18	-62006.70	1	-25.09	1	-238.33	1	-40.43	1	-3651.62	1	-426.67	9
302	Max	-225	-2568.27	5	12414.20	13	46253.70	9	67.56	9	301.26	9	79.21	9	2630.34	9	920.42	1
302	Max	-227	-2568.27	5	12414.20	13	46253.70	9	67.56	9	301.26	9	79.21	9	2630.34	9	920.42	1
302	Max	-240	-2568.27	5	12414.20	13	46253.70	9	67.56	9	301.26	9	79.21	9	2630.34	9	920.42	1
302	Max	-238	-2568.27	5	12414.20	13	46253.70	9	67.56	9	301.26	9	79.21	9	2630.34	9	920.42	1
302	Min.	-225	-13275.40	13	-21101.30	5	-49091.10	1	-64.72	1	-316.54	1	-110.38	1	-2492.29	1	-543.32	9
302	Min.	-227	-13275.40	13	-21101.30	5	-49091.10	1	-64.72	1	-316.54	1	-110.38	1	-2492.29	1	-543.32	9
302	Min.	-240	-13275.40	13	-21101.30	5	-49091.10	1	-64.72	1	-316.54	1	-110.38	1	-2492.29	1	-543.32	9
302	Min.	-238	-13275.40	13	-21101.30	5	-49091.10	1	-64.72	1	-316.54	1	-110.38	1	-2492.29	1	-543.32	9
302	Max	-210	1691.70	5	12356.40	1	39598.40	9	36.07	9	261.10	5	73.56	9	3340.45	9	1412.11	9
302	Max	-212	1691.70	5	12356.40	1	39598.40	9	36.07	9	261.10	5	73.56	9	3340.45	9	1412.11	9
302	Max	-225	1691.70	5	12356.40	1	39598.40	9	36.07	9	261.10	5	73.56	9	3340.45	9	1412.11	9
302	Max	-223	1691.70	5	12356.40	1	39598.40	9	36.07	9	261.10	5	73.56	9	3340.45	9	1412.11	9
302	Min.	-210	-1879.22	13	-62721.00	9	-1026.43	1	-78.61	1	46.11	13	-256.16	1	-12754.00	1	-6670.20	1
302	Min.	-212	-1879.22	13	-62721.00	9	-1026.43	1	-78.61	1	46.11	13	-256.16	1	-12754.00	1		

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302	Min.	-227	-12631.10	13	-40895.30	5	-39618.60	1	-72.75	1	-137.20	1	-116.59	1	-1883.98	1	-246.16	9
302	Min.	-225	-12631.10	13	-40895.30	5	-39618.60	1	-72.75	1	-137.20	1	-116.59	1	-1883.98	1	-246.16	9
302	Max	-216	6381.67	13	26625.60	1	57505.40	13	38.83	5	139.08	1	134.02	9	3440.38	9	3581.79	9
302	Max	-218	6381.67	13	26625.60	1	57505.40	13	38.83	5	139.08	1	134.02	9	3440.38	9	3581.79	9
302	Max	-231	6381.67	13	26625.60	1	57505.40	13	38.83	5	139.08	1	134.02	9	3440.38	9	3581.79	9
302	Max	-229	6381.67	13	26625.60	1	57505.40	13	38.83	5	139.08	1	134.02	9	3440.38	9	3581.79	9
302	Min.	-216	-7261.57	5	-40162.30	9	-62179.70	5	-57.14	13	-265.31	9	-108.57	1	-2779.07	1	-2445.02	1
302	Min.	-218	-7261.57	5	-40162.30	9	-62179.70	5	-57.14	13	-265.31	9	-108.57	1	-2779.07	1	-2445.02	1
302	Min.	-231	-7261.57	5	-40162.30	9	-62179.70	5	-57.14	13	-265.31	9	-108.57	1	-2779.07	1	-2445.02	1
302	Min.	-229	-7261.57	5	-40162.30	9	-62179.70	5	-57.14	13	-265.31	9	-108.57	1	-2779.07	1	-2445.02	1
302	Max	-229	3712.35	13	16299.00	1	52647.30	13	39.61	5	175.32	9	116.43	9	1741.56	9	777.78	1
302	Max	-231	3712.35	13	16299.00	1	52647.30	13	39.61	5	175.32	9	116.43	9	1741.56	9	777.78	1
302	Max	-244	3712.35	13	16299.00	1	52647.30	13	39.61	5	175.32	9	116.43	9	1741.56	9	777.78	1
302	Max	-242	3712.35	13	16299.00	1	52647.30	13	39.61	5	175.32	9	116.43	9	1741.56	9	777.78	1
302	Min.	-229	-5510.73	5	-34404.40	9	-61217.10	5	-37.98	13	-50.92	1	-100.96	1	-1155.72	1	-3033.16	9
302	Min.	-231	-5510.73	5	-34404.40	9	-61217.10	5	-37.98	13	-50.92	1	-100.96	1	-1155.72	1	-3033.16	9
302	Min.	-244	-5510.73	5	-34404.40	9	-61217.10	5	-37.98	13	-50.92	1	-100.96	1	-1155.72	1	-3033.16	9
302	Min.	-242	-5510.73	5	-34404.40	9	-61217.10	5	-37.98	13	-50.92	1	-100.96	1	-1155.72	1	-3033.16	9
303	Max	-213	6681.94	13	11262.50	1	31209.70	1	110.24	9	318.87	9	326.47	9	1656.67	9	792.33	1
303	Max	-215	6681.94	13	11262.50	1	31209.70	1	110.24	9	318.87	9	326.47	9	1656.67	9	792.33	1
303	Max	-228	6681.94	13	11262.50	1	31209.70	1	110.24	9	318.87	9	326.47	9	1656.67	9	792.33	1
303	Max	-226	6681.94	13	11262.50	1	31209.70	1	110.24	9	318.87	9	326.47	9	1656.67	9	792.33	1
303	Min.	-213	-5927.48	5	-26674.70	9	-28496.40	9	-79.82	1	-436.21	1	-362.20	1	-2270.93	1	-778.11	9
303	Min.	-215	-5927.48	5	-26674.70	9	-28496.40	9	-79.82	1	-436.21	1	-362.20	1	-2270.93	1	-778.11	9
303	Min.	-228	-5927.48	5	-26674.70	9	-28496.40	9	-79.82	1	-436.21	1	-362.20	1	-2270.93	1	-778.11	9
303	Min.	-226	-5927.48	5	-26674.70	9	-28496.40	9	-79.82	1	-436.21	1	-362.20	1	-2270.93	1	-778.11	9
303	Max	-224	6319.22	13	12643.50	5	23742.80	1	85.78	13	675.77	9	397.75	9	8258.54	9	3066.95	1
303	Max	-226	6319.22	13	12643.50	5	23742.80	1	85.78	13	675.77	9	397.75	9	8258.54	9	3066.95	1
303	Max	-239	6319.22	13	12643.50	5	23742.80	1	85.78	13	675.77	9	397.75	9	8258.54	9	3066.95	1
303	Max	-237	6319.22	13	12643.50	5	23742.80	1	85.78	13	675.77	9	397.75	9	8258.54	9	3066.95	1
303	Min.	-224	-12413.20	5	-25443.30	13	-6662.07	9	-51.27	5	-890.47	1	-348.31	1	-7350.10	1	-2337.00	9
303	Min.	-226	-12413.20	5	-25443.30	13	-6662.07	9	-51.27	5	-890.47	1	-348.31	1	-7350.10	1	-2337.00	9
303	Min.	-239	-12413.20	5	-25443.30	13	-6662.07	9	-51.27	5	-890.47	1	-348.31	1	-7350.10	1	-2337.00	9
303	Min.	-237	-12413.20	5	-25443.30	13	-6662.07	9	-51.27	5	-890.47	1	-348.31	1	-7350.10	1	-2337.00	9
303	Max	-237	5135.62	13	7944.93	13	25839.10	1	118.38	9	1448.53	9	221.91	13	9264.50	9	2746.69	1
303	Max	-239	5135.62	13	7944.93	13	25839.10	1	118.38	9	1448.53	9	221.91	13	9264.50	9	2746.69	1
303	Max	-258	5135.62	13	7944.93	13	25839.10	1	118.38	9	1448.53	9	221.91	13	9264.50	9	2746.69	1
303	Max	350	5135.62	13	7944.93	13	25839.10	1	118.38	9	1448.53	9	221.91	13	9264.50	9	2746.69	1
303	Min.	-237	-8647.74	5	-24866.20	5	-7848.20	9	-112.62	1	-1602.28	1	-116.52	5	-8511.33	1	-2260.97	9
303	Min.	-239	-8647.74	5	-24866.20	5	-7848.20	9	-112.62	1	-1602.28	1	-116.52	5	-8511.33	1	-2260.97	9
303	Min.	-258	-8647.74	5	-24866.20	5	-7848.20	9	-112.62	1	-1602.28	1	-116.52	5	-8511.33	1	-2260.97	9
303	Min.	350	-8647.74	5	-24866.20	5	-7848.20	9	-112.62	1	-1602.28	1	-116.52	5	-8511.33	1	-2260.97	9
303	Max	-200	634.92	5	13098.30	1	28558.20	1	91.92	1	665.39	1	377.19	9	2194.13	9	414.20	1
303	Max	-202	634.92	5	13098.30	1	28558.20	1	91.92	1	665.39	1	377.19	9	2194.13	9	414.20	1
303	Max	-215	634.92	5	13098.30	1	28558.20	1	91.92	1	665.39	1	377.19	9	2194.13	9	414.20	1
303	Max	-213	634.92	5	13098.30	1	28558.20	1	91.92	1	665.39	1	377.19	9	2194.13	9	414.20	1
303	Min.	-200	-5054.42	13	-36949.90	9	-27815.40	9	-68.19	9	-602.94	9	-437.01	1	-4004.76	1	-518.42	9
303	Min.	-202	-5054.42	13	-36949.90	9	-27815.40	9	-68.19	9	-602.94	9	-437.01	1	-4004.76	1	-518.42	9
303	Min.	-215	-5054.42	13	-36949.90	9	-27815.40	9	-68.19	9	-602.94	9	-437.01	1	-4004.76	1	-518.42	9
303	Min.	-213	-5054.42	13	-36949.90	9	-27815.40	9	-68.19	9	-602.94	9	-437.01	1	-4004.76	1	-518.42	9
303	Max	-228	3336.81	13	3819.64	5	44487.50	1	79.26	1	290.98	9	251.59	9	2412.10	9	1084.30	1
303	Max	-230	3336.81	13	3819.64	5	44487.50	1	79.26	1	290.98	9	251.59	9	2412.10	9	1084.30	1
303	Max	-243	3336.81	13	3819.64	5	44487.50	1	79.26	1	290.98	9	251.59	9	2412.10	9	1084.30	1
303	Max	-241	3336.81	13	3819.64	5	44487.50	1	79.26	1	290.98	9	251.59	9	2412.10	9	1084.30	1
303	Min.	-228	-3335.22	5	-10566.30	13	-43229.00	9	-103.30	9	-393.03	1	-270.41	1	-3200.05	1	-1073.25	9
303	Min.	-230	-3335.22	5	-10566.30	13	-43229.00	9	-103.30	9	-393.03	1	-270.41	1	-3200.05	1	-1073.25	9
303	Min.	-243	-3335.22	5	-10566.30	13	-43229.00	9	-103.30	9	-393.03	1	-270.41	1	-3200.05	1	-1073.25	9
303	Min.	-241	-3335.22	5	-10566.30	13	-43229.00	9	-103.30	9	-393.03	1	-270.41	1	-3200.05	1	-1073.25	9
303	Max	-243	23972.90	13	12840.10	13	30339.50	1	24.64	1	135.25	9	236.62	9	1218.90	1	865.28	1
303	Max	-248	23972.90	13	12840.10	13	30339.50	1	24.64	1	135.25	9	236.62	9	1218.90	1	865.28	1
303	Max	352	23972.90	13	12840.10	13	30339.50	1	24.64	1	135.25	9	236.62	9	1218.90	1	865.28	1
303	Max	-268	23972.90	13	12840.10	13	30339.50	1	24.64	1	135.25	9	236.62	9	1218.90	1	865.28	1
303	Min.	-243	-33524.20	5	-19735.70	5	-35157.00	9	-32.52	9	-291.30	1	-238.90	1	-2723.83	9	-340.12	9
303	Min.	-248	-33524.20	5	-19735.70	5	-35157.00	9	-32.52	9	-291.30	1	-238.90	1	-2723.83	9	-340.12	9
303	Min.	352	-33524.20	5	-19735.70	5	-35157.00	9	-32.52	9	-291.30	1	-238.90	1	-2723.83	9	-340.12	9
303	Min.	-268	-33524.20	5	-19735.70	5	-35157.00	9	-32.52	9	-291.30	1	-238.90	1	-2723.83	9	-340.12	9
303	Max	-211	3938.43	1	22222.50	1	22438.80	1	103.46	9	98.17	1	395.02	9	8411.05	9	4825.44	9
303	Max	-213	3938.43	1	22222.50	1	22438.80	1	103.46	9	98.17	1	395.02	9	8411.05	9	4825.44	9
303	Max	-226	3938.43	1	22222.50	1	22438.80	1	103.46	9	98.17	1	395.02	9	8411.05	9	4825.44	9
303	Max	-224	3938.43	1	22222.50	1	22438.80	1	103.46	9	98.17	1	395.02	9	8411.05	9	4825.44	9
303	Min.	-211	1386.04	9	-30000.00	9	-5171.75	9	-62.52	1	-423.74	9	-423.58	1	-7127.32	1	-2769.04	1
303	Min.	-213	1386.04	9	-30000.00	9	-5171.75	9	-62.52	1	-423.74	9	-423.58	1	-7127.32	1	-2769.04	1
303	Min.	-226	1386.04	9	-30000.00	9	-5171.75	9	-6									

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303	Min.	-230	-5047.81	13	-32415.40	5	-42082.00	9	-103.81	9	-428.34	9	-329.31	1	-3865.64	1	-2028.82	1
303	Max	-241	5948.74	5	10682.90	5	45546.90	1	37.22	9	325.09	9	197.87	9	3051.07	9	538.48	1
303	Max	-243	5948.74	5	10682.90	5	45546.90	1	37.22	9	325.09	9	197.87	9	3051.07	9	538.48	1
303	Max	-268	5948.74	5	10682.90	5	45546.90	1	37.22	9	325.09	9	197.87	9	3051.07	9	538.48	1
303	Max	-263	5948.74	5	10682.90	5	45546.90	1	37.22	9	325.09	9	197.87	9	3051.07	9	538.48	1
303	Min.	-241	-1766.63	13	-14363.20	13	-41527.90	9	-63.44	1	-500.76	1	-198.99	1	-3932.68	1	-561.25	9
303	Min.	-243	-1766.63	13	-14363.20	13	-41527.90	9	-63.44	1	-500.76	1	-198.99	1	-3932.68	1	-561.25	9
303	Min.	-268	-1766.63	13	-14363.20	13	-41527.90	9	-63.44	1	-500.76	1	-198.99	1	-3932.68	1	-561.25	9
303	Min.	-263	-1766.63	13	-14363.20	13	-41527.90	9	-63.44	1	-500.76	1	-198.99	1	-3932.68	1	-561.25	9
303	Max	-204	7642.39	13	34508.20	9	41087.70	1	134.27	1	1056.10	1	326.96	9	11612.70	9	1191.51	9
303	Max	259	7642.39	13	34508.20	9	41087.70	1	134.27	1	1056.10	1	326.96	9	11612.70	9	1191.51	9
303	Max	-222	7642.39	13	34508.20	9	41087.70	1	134.27	1	1056.10	1	326.96	9	11612.70	9	1191.51	9
303	Max	-217	7642.39	13	34508.20	9	41087.70	1	134.27	1	1056.10	1	326.96	9	11612.70	9	1191.51	9
303	Min.	-204	-7901.84	5	-43070.80	1	-45274.80	9	-115.51	9	-864.45	9	-383.73	1	-14020.00	1	-1023.87	1
303	Min.	259	-7901.84	5	-43070.80	1	-45274.80	9	-115.51	9	-864.45	9	-383.73	1	-14020.00	1	-1023.87	1
303	Min.	-222	-7901.84	5	-43070.80	1	-45274.80	9	-115.51	9	-864.45	9	-383.73	1	-14020.00	1	-1023.87	1
303	Min.	-217	-7901.84	5	-43070.80	1	-45274.80	9	-115.51	9	-864.45	9	-383.73	1	-14020.00	1	-1023.87	1
303	Max	-239	700.04	9	14402.70	5	30514.80	5	72.43	9	526.32	9	218.13	9	1536.78	13	484.59	5
303	Max	-241	700.04	9	14402.70	5	30514.80	5	72.43	9	526.32	9	218.13	9	1536.78	13	484.59	5
303	Max	-263	700.04	9	14402.70	5	30514.80	5	72.43	9	526.32	9	218.13	9	1536.78	13	484.59	5
303	Max	-258	700.04	9	14402.70	5	30514.80	5	72.43	9	526.32	9	218.13	9	1536.78	13	484.59	5
303	Min.	-239	-3186.05	1	-13962.50	13	-29838.60	13	-67.35	1	-634.13	1	-222.07	1	-1382.69	5	-775.30	13
303	Min.	-241	-3186.05	1	-13962.50	13	-29838.60	13	-67.35	1	-634.13	1	-222.07	1	-1382.69	5	-775.30	13
303	Min.	-263	-3186.05	1	-13962.50	13	-29838.60	13	-67.35	1	-634.13	1	-222.07	1	-1382.69	5	-775.30	13
303	Min.	-258	-3186.05	1	-13962.50	13	-29838.60	13	-67.35	1	-634.13	1	-222.07	1	-1382.69	5	-775.30	13
303	Max	-230	26385.60	13	17214.00	13	34424.60	1	59.14	1	145.19	9	280.37	9	1032.77	1	1597.32	1
303	Max	-235	26385.60	13	17214.00	13	34424.60	1	59.14	1	145.19	9	280.37	9	1032.77	1	1597.32	1
303	Max	-248	26385.60	13	17214.00	13	34424.60	1	59.14	1	145.19	9	280.37	9	1032.77	1	1597.32	1
303	Max	-243	26385.60	13	17214.00	13	34424.60	1	59.14	1	145.19	9	280.37	9	1032.77	1	1597.32	1
303	Min.	-230	-33626.80	5	-24713.20	5	-41162.00	9	-48.32	9	-144.10	1	-302.50	1	-1287.94	9	-1051.77	9
303	Min.	-235	-33626.80	5	-24713.20	5	-41162.00	9	-48.32	9	-144.10	1	-302.50	1	-1287.94	9	-1051.77	9
303	Min.	-248	-33626.80	5	-24713.20	5	-41162.00	9	-48.32	9	-144.10	1	-302.50	1	-1287.94	9	-1051.77	9
303	Min.	-243	-33626.80	5	-24713.20	5	-41162.00	9	-48.32	9	-144.10	1	-302.50	1	-1287.94	9	-1051.77	9
303	Max	-226	6445.52	13	11211.60	1	30797.00	1	104.73	9	415.43	9	279.22	9	1738.01	13	824.49	5
303	Max	-228	6445.52	13	11211.60	1	30797.00	1	104.73	9	415.43	9	279.22	9	1738.01	13	824.49	5
303	Max	-241	6445.52	13	11211.60	1	30797.00	1	104.73	9	415.43	9	279.22	9	1738.01	13	824.49	5
303	Max	-239	6445.52	13	11211.60	1	30797.00	1	104.73	9	415.43	9	279.22	9	1738.01	13	824.49	5
303	Min.	-226	-5333.69	5	-18093.00	9	-27701.30	9	-77.99	1	-553.36	1	-270.95	1	-1881.36	5	-996.76	13
303	Min.	-228	-5333.69	5	-18093.00	9	-27701.30	9	-77.99	1	-553.36	1	-270.95	1	-1881.36	5	-996.76	13
303	Min.	-241	-5333.69	5	-18093.00	9	-27701.30	9	-77.99	1	-553.36	1	-270.95	1	-1881.36	5	-996.76	13
303	Min.	-239	-5333.69	5	-18093.00	9	-27701.30	9	-77.99	1	-553.36	1	-270.95	1	-1881.36	5	-996.76	13
306	Max	-248	1726.75	13	21083.60	13	20949.70	5	384.89	5	3657.98	5	794.19	13	45946.20	5	5170.95	13
306	Max	-247	1726.75	13	21083.60	13	20949.70	5	384.89	5	3657.98	5	794.19	13	45946.20	5	5170.95	13
306	Max	-271	1726.75	13	21083.60	13	20949.70	5	384.89	5	3657.98	5	794.19	13	45946.20	5	5170.95	13
306	Max	352	1726.75	13	21083.60	13	20949.70	5	384.89	5	3657.98	5	794.19	13	45946.20	5	5170.95	13
306	Min.	-248	-2689.76	5	-33653.30	5	-15032.50	13	-300.05	13	-2949.26	13	-1056.10	5	-36863.80	13	-7836.10	5
306	Min.	-247	-2689.76	5	-33653.30	5	-15032.50	13	-300.05	13	-2949.26	13	-1056.10	5	-36863.80	13	-7836.10	5
306	Min.	-271	-2689.76	5	-33653.30	5	-15032.50	13	-300.05	13	-2949.26	13	-1056.10	5	-36863.80	13	-7836.10	5
306	Min.	352	-2689.76	5	-33653.30	5	-15032.50	13	-300.05	13	-2949.26	13	-1056.10	5	-36863.80	13	-7836.10	5
306	Max	-245	8045.59	1	4270.70	1	17129.40	5	41.23	13	8.78	5	247.74	9	4880.80	5	1346.26	13
306	Max	-244	8045.59	1	4270.70	1	17129.40	5	41.23	13	8.78	5	247.74	9	4880.80	5	1346.26	13
306	Max	351	8045.59	1	4270.70	1	17129.40	5	41.23	13	8.78	5	247.74	9	4880.80	5	1346.26	13
306	Max	-269	8045.59	1	4270.70	1	17129.40	5	41.23	13	8.78	5	247.74	9	4880.80	5	1346.26	13
306	Min.	-245	-21487.90	9	-18451.80	9	-20756.50	13	-49.83	5	-354.86	13	-307.80	1	-8710.82	13	-903.33	5
306	Min.	-244	-21487.90	9	-18451.80	9	-20756.50	13	-49.83	5	-354.86	13	-307.80	1	-8710.82	13	-903.33	5
306	Min.	351	-21487.90	9	-18451.80	9	-20756.50	13	-49.83	5	-354.86	13	-307.80	1	-8710.82	13	-903.33	5
306	Min.	-269	-21487.90	9	-18451.80	9	-20756.50	13	-49.83	5	-354.86	13	-307.80	1	-8710.82	13	-903.33	5
306	Max	-219	13882.40	9	40109.60	1	20790.00	5	94.72	1	185.71	5	248.67	9	1220.32	5	2478.94	13
306	Max	-218	13882.40	9	40109.60	1	20790.00	5	94.72	1	185.71	5	248.67	9	1220.32	5	2478.94	13
306	Max	-231	13882.40	9	40109.60	1	20790.00	5	94.72	1	185.71	5	248.67	9	1220.32	5	2478.94	13
306	Max	-232	13882.40	9	40109.60	1	20790.00	5	94.72	1	185.71	5	248.67	9	1220.32	5	2478.94	13
306	Min.	-219	-1257.36	1	-50997.30	9	-28646.30	13	-117.24	9	-328.38	13	-291.39	1	-1637.54	13	-2345.88	5
306	Min.	-218	-1257.36	1	-50997.30	9	-28646.30	13	-117.24	9	-328.38	13	-291.39	1	-1637.54	13	-2345.88	5
306	Min.	-231	-1257.36	1	-50997.30	9	-28646.30	13	-117.24	9	-328.38	13	-291.39	1	-1637.54	13	-2345.88	5
306	Min.	-232	-1257.36	1	-50997.30	9	-28646.30	13	-117.24	9	-328.38	13	-291.39	1	-1637.54	13	-2345.88	5
306	Max	-232	9589.99	1	24131.50	1	21430.80	5	91.21	9	100.13	20	265.87	9	2103.47	1	2376.78	13
306	Max	-231	9589.99	1	24131.50	1	21430.80	5	91.21	9	100.13	20	265.87	9	2103.47	1	2376.78	13
306	Max	-244	9589.99	1	24131.50	1	21430.80	5	91.21	9	100.13	20	265.87	9	2103.47	1	2376.78	13
306	Max	-245	9589.99	1	24131.50	1	21430.80	5	91.21	9	100.13	20	265.87	9	2103.47	1	2376.78	13
306	Min.	-232	-24316.70	9	-36973.00	9	-31106.80	13	-46.52	1	35.22	5	-291.13	1	-3210.28	9	-1396.23	5
306	Min.	-231	-24316.70	9	-36973.00	9	-31106.80	13	-46.52	1	35.22	5	-291.13	1	-3210.28	9	-1396.23	5
306	Min.	-244	-24316.70	9	-36973.00	9	-31106.80	13	-46.52	1	35.22	5	-291.13	1	-3210.28	9	-	

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306	Max	-233	4701.09	13	4899.59	5	15216.70	13	41.09	5	71.42	5	273.93	9	2019.46	13	801.24	5
306	Max	-232	4701.09	13	4899.59	5	15216.70	13	41.09	5	71.42	5	273.93	9	2019.46	13	801.24	5
306	Max	-245	4701.09	13	4899.59	5	15216.70	13	41.09	5	71.42	5	273.93	9	2019.46	13	801.24	5
306	Max	-246	4701.09	13	4899.59	5	15216.70	13	41.09	5	71.42	5	273.93	9	2019.46	13	801.24	5
306	Min.	-233	-7100.73	5	-8230.91	13	-15460.80	5	-90.23	13	-142.93	13	-292.60	1	-2447.83	5	-986.98	13
306	Min.	-232	-7100.73	5	-8230.91	13	-15460.80	5	-90.23	13	-142.93	13	-292.60	1	-2447.83	5	-986.98	13
306	Min.	-245	-7100.73	5	-8230.91	13	-15460.80	5	-90.23	13	-142.93	13	-292.60	1	-2447.83	5	-986.98	13
306	Min.	-246	-7100.73	5	-8230.91	13	-15460.80	5	-90.23	13	-142.93	13	-292.60	1	-2447.83	5	-986.98	13
306	Max	-246	1143.50	5	7402.59	9	20703.40	13	26.68	1	131.54	5	304.92	9	712.66	9	859.43	5
306	Max	-245	1143.50	5	7402.59	9	20703.40	13	26.68	1	131.54	5	304.92	9	712.66	9	859.43	5
306	Max	-269	1143.50	5	7402.59	9	20703.40	13	26.68	1	131.54	5	304.92	9	712.66	9	859.43	5
306	Max	-270	1143.50	5	7402.59	9	20703.40	13	26.68	1	131.54	5	304.92	9	712.66	9	859.43	5
306	Min.	-246	-4179.67	13	-3668.18	1	-14740.20	5	-54.81	9	-138.62	13	-346.11	1	-166.64	1	-992.99	13
306	Min.	-245	-4179.67	13	-3668.18	1	-14740.20	5	-54.81	9	-138.62	13	-346.11	1	-166.64	1	-992.99	13
306	Min.	-269	-4179.67	13	-3668.18	1	-14740.20	5	-54.81	9	-138.62	13	-346.11	1	-166.64	1	-992.99	13
306	Min.	-270	-4179.67	13	-3668.18	1	-14740.20	5	-54.81	9	-138.62	13	-346.11	1	-166.64	1	-992.99	13
306	Max	-205	12871.60	9	58951.80	1	24983.20	5	100.58	5	690.47	5	277.03	9	7862.39	13	1397.20	13
306	Max	258	12871.60	9	58951.80	1	24983.20	5	100.58	5	690.47	5	277.03	9	7862.39	13	1397.20	13
306	Max	-218	12871.60	9	58951.80	1	24983.20	5	100.58	5	690.47	5	277.03	9	7862.39	13	1397.20	13
306	Max	-219	12871.60	9	58951.80	1	24983.20	5	100.58	5	690.47	5	277.03	9	7862.39	13	1397.20	13
306	Min.	-205	1044.93	1	-71109.00	9	-22521.10	13	-101.10	13	-554.73	13	-339.30	1	-10847.30	5	-1801.76	5
306	Min.	258	1044.93	1	-71109.00	9	-22521.10	13	-101.10	13	-554.73	13	-339.30	1	-10847.30	5	-1801.76	5
306	Min.	-218	1044.93	1	-71109.00	9	-22521.10	13	-101.10	13	-554.73	13	-339.30	1	-10847.30	5	-1801.76	5
306	Min.	-219	1044.93	1	-71109.00	9	-22521.10	13	-101.10	13	-554.73	13	-339.30	1	-10847.30	5	-1801.76	5
306	Max	259	7271.50	9	43143.50	9	21445.90	1	161.38	13	1365.55	13	628.50	13	18659.00	5	4039.51	5
306	Max	-207	7271.50	9	43143.50	9	21445.90	1	161.38	13	1365.55	13	628.50	13	18659.00	5	4039.51	5
306	Max	-221	7271.50	9	43143.50	9	21445.90	1	161.38	13	1365.55	13	628.50	13	18659.00	5	4039.51	5
306	Max	-222	7271.50	9	43143.50	9	21445.90	1	161.38	13	1365.55	13	628.50	13	18659.00	5	4039.51	5
306	Min.	259	-9875.09	1	-52683.30	1	-15981.50	9	-161.59	5	-1443.09	5	-658.73	5	-18838.70	13	-3905.62	13
306	Min.	-207	-9875.09	1	-52683.30	1	-15981.50	9	-161.59	5	-1443.09	5	-658.73	5	-18838.70	13	-3905.62	13
306	Min.	-221	-9875.09	1	-52683.30	1	-15981.50	9	-161.59	5	-1443.09	5	-658.73	5	-18838.70	13	-3905.62	13
306	Min.	-222	-9875.09	1	-52683.30	1	-15981.50	9	-161.59	5	-1443.09	5	-658.73	5	-18838.70	13	-3905.62	13
306	Max	-222	8469.60	9	33822.10	9	14303.30	1	125.05	9	441.09	5	286.16	9	2944.55	13	7302.51	5
306	Max	-221	8469.60	9	33822.10	9	14303.30	1	125.05	9	441.09	5	286.16	9	2944.55	13	7302.51	5
306	Max	-234	8469.60	9	33822.10	9	14303.30	1	125.05	9	441.09	5	286.16	9	2944.55	13	7302.51	5
306	Max	-235	8469.60	9	33822.10	9	14303.30	1	125.05	9	441.09	5	286.16	9	2944.55	13	7302.51	5
306	Min.	-222	-9091.80	1	-42418.50	1	-12349.50	9	-110.54	1	-549.26	13	-269.00	1	-5051.05	5	-6165.26	13
306	Min.	-221	-9091.80	1	-42418.50	1	-12349.50	9	-110.54	1	-549.26	13	-269.00	1	-5051.05	5	-6165.26	13
306	Min.	-234	-9091.80	1	-42418.50	1	-12349.50	9	-110.54	1	-549.26	13	-269.00	1	-5051.05	5	-6165.26	13
306	Min.	-235	-9091.80	1	-42418.50	1	-12349.50	9	-110.54	1	-549.26	13	-269.00	1	-5051.05	5	-6165.26	13
306	Max	-235	4486.71	13	24724.00	13	15206.20	1	94.22	9	368.20	13	334.47	9	7437.09	13	2931.60	13
306	Max	-234	4486.71	13	24724.00	13	15206.20	1	94.22	9	368.20	13	334.47	9	7437.09	13	2931.60	13
306	Max	-247	4486.71	13	24724.00	13	15206.20	1	94.22	9	368.20	13	334.47	9	7437.09	13	2931.60	13
306	Max	-248	4486.71	13	24724.00	13	15206.20	1	94.22	9	368.20	13	334.47	9	7437.09	13	2931.60	13
306	Min.	-235	-3490.53	5	-36572.30	5	-13487.10	9	-58.23	1	-325.98	5	-272.32	1	-6988.44	5	-4593.39	5
306	Min.	-234	-3490.53	5	-36572.30	5	-13487.10	9	-58.23	1	-325.98	5	-272.32	1	-6988.44	5	-4593.39	5
306	Min.	-247	-3490.53	5	-36572.30	5	-13487.10	9	-58.23	1	-325.98	5	-272.32	1	-6988.44	5	-4593.39	5
306	Min.	-248	-3490.53	5	-36572.30	5	-13487.10	9	-58.23	1	-325.98	5	-272.32	1	-6988.44	5	-4593.39	5
306	Max	-207	3798.57	13	10406.80	9	14258.80	5	103.25	5	636.88	5	346.37	9	6648.97	13	1634.28	5
306	Max	-206	3798.57	13	10406.80	9	14258.80	5	103.25	5	636.88	5	346.37	9	6648.97	13	1634.28	5
306	Max	-220	3798.57	13	10406.80	9	14258.80	5	103.25	5	636.88	5	346.37	9	6648.97	13	1634.28	5
306	Max	-221	3798.57	13	10406.80	9	14258.80	5	103.25	5	636.88	5	346.37	9	6648.97	13	1634.28	5
306	Min.	-207	-3298.60	5	-23334.40	1	-15488.90	13	-107.88	13	-678.59	13	-356.38	1	-6609.46	5	-1640.34	13
306	Min.	-206	-3298.60	5	-23334.40	1	-15488.90	13	-107.88	13	-678.59	13	-356.38	1	-6609.46	5	-1640.34	13
306	Min.	-220	-3298.60	5	-23334.40	1	-15488.90	13	-107.88	13	-678.59	13	-356.38	1	-6609.46	5	-1640.34	13
306	Min.	-221	-3298.60	5	-23334.40	1	-15488.90	13	-107.88	13	-678.59	13	-356.38	1	-6609.46	5	-1640.34	13
306	Max	-221	5397.06	13	8158.86	9	14308.20	5	98.24	9	69.87	5	291.97	9	2048.47	1	1440.56	5
306	Max	-220	5397.06	13	8158.86	9	14308.20	5	98.24	9	69.87	5	291.97	9	2048.47	1	1440.56	5
306	Max	-233	5397.06	13	8158.86	9	14308.20	5	98.24	9	69.87	5	291.97	9	2048.47	1	1440.56	5
306	Max	-234	5397.06	13	8158.86	9	14308.20	5	98.24	9	69.87	5	291.97	9	2048.47	1	1440.56	5
306	Min.	-221	-6460.06	5	-18051.60	1	-11763.70	13	-100.69	1	-94.10	13	-296.77	1	-1196.79	9	-1864.26	13
306	Min.	-220	-6460.06	5	-18051.60	1	-11763.70	13	-100.69	1	-94.10	13	-296.77	1	-1196.79	9	-1864.26	13
306	Min.	-233	-6460.06	5	-18051.60	1	-11763.70	13	-100.69	1	-94.10	13	-296.77	1	-1196.79	9	-1864.26	13
306	Min.	-234	-6460.06	5	-18051.60	1	-11763.70	13	-100.69	1	-94.10	13	-296.77	1	-1196.79	9	-1864.26	13
601	Max	351	0.00	1	0.00	1	0.00	1	544.96	9	98.05	9	161.53	9	1770.26	5	6014.30	1
601	Max	-269	0.00	1	0.00	1	0.00	1	544.96	9	98.05	9	161.53	9	1770.26	5	6014.30	1
601	Max	-265	0.00	1	0.00	1	0.00	1	544.96	9	98.05	9	161.53	9	1770.26	5	6014.30	1
601	Max	-264	0.00	1	0.00	1	0.00	1	544.96	9	98.05	9	161.53	9	1770.26	5	6014.30	1
601	Min.	351	0.00	1	0.00	1	0.00	1	-231.48	1	-161.01	1	-25.01	1	-6662.76	13	-17702.40	9
601	Min.	-269	0.00	1	0.00	1	0.00	1	-231.48	1	-161.01	1	-25.01	1	-6662.76	13	-17702.40	9
601	Min.	-265	0.00	1	0.00	1	0.00	1	-231.48	1	-161.01	1	-25.01	1	-6662.76	13	-17702.40	9
601	Min.	-264	0.00	1	0.00	1	0.00	1	-231.48	1	-161.01	1	-25.01	1	-6662.76	13	-17702.40	9
601	Max	-264	0.00	13	0.00	1	0											

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601	Max	-266	0.00	9	0.00	13	0.00	5	22.85	9	-6.46	5	122.13	9	-312.01	5	2797.02	1
601	Max	-261	0.00	9	0.00	13	0.00	5	22.85	9	-6.46	5	122.13	9	-312.01	5	2797.02	1
601	Max	-260	0.00	9	0.00	13	0.00	5	22.85	9	-6.46	5	122.13	9	-312.01	5	2797.02	1
601	Min.	-265	0.00	1	0.00	5	0.00	5	-147.15	1	-119.27	13	-157.63	1	-2820.28	13	-2599.25	9
601	Min.	-266	0.00	1	0.00	5	0.00	5	-147.15	1	-119.27	13	-157.63	1	-2820.28	13	-2599.25	9
601	Min.	-261	0.00	1	0.00	5	0.00	5	-147.15	1	-119.27	13	-157.63	1	-2820.28	13	-2599.25	9
601	Min.	-260	0.00	1	0.00	5	0.00	5	-147.15	1	-119.27	13	-157.63	1	-2820.28	13	-2599.25	9
601	Max	-260	0.00	5	0.00	5	0.00	13	140.22	13	26.98	1	138.83	9	5243.59	13	2429.22	1
601	Max	-261	0.00	5	0.00	5	0.00	13	140.22	13	26.98	1	138.83	9	5243.59	13	2429.22	1
601	Max	-256	0.00	5	0.00	5	0.00	13	140.22	13	26.98	1	138.83	9	5243.59	13	2429.22	1
601	Max	-255	0.00	5	0.00	5	0.00	13	140.22	13	26.98	1	138.83	9	5243.59	13	2429.22	1
601	Min.	-260	0.00	13	0.00	13	0.00	5	-119.32	5	-146.19	9	-129.52	1	-206.31	5	-3270.53	9
601	Min.	-261	0.00	13	0.00	13	0.00	5	-119.32	5	-146.19	9	-129.52	1	-206.31	5	-3270.53	9
601	Min.	-256	0.00	13	0.00	13	0.00	5	-119.32	5	-146.19	9	-129.52	1	-206.31	5	-3270.53	9
601	Min.	-255	0.00	13	0.00	13	0.00	5	-119.32	5	-146.19	9	-129.52	1	-206.31	5	-3270.53	9
601	Max	-255	0.00	1	0.00	1	0.00	5	369.60	13	491.80	13	107.68	13	5263.99	9	3913.91	1
601	Max	-256	0.00	1	0.00	1	0.00	5	369.60	13	491.80	13	107.68	13	5263.99	9	3913.91	1
601	Max	-252	0.00	1	0.00	1	0.00	5	369.60	13	491.80	13	107.68	13	5263.99	9	3913.91	1
601	Max	-251	0.00	1	0.00	1	0.00	5	369.60	13	491.80	13	107.68	13	5263.99	9	3913.91	1
601	Min.	-255	0.00	1	0.00	1	0.00	13	-125.42	5	47.85	5	-114.91	5	-1551.43	1	-11203.00	9
601	Min.	-256	0.00	1	0.00	1	0.00	13	-125.42	5	47.85	5	-114.91	5	-1551.43	1	-11203.00	9
601	Min.	-252	0.00	1	0.00	1	0.00	13	-125.42	5	47.85	5	-114.91	5	-1551.43	1	-11203.00	9
601	Min.	-251	0.00	1	0.00	1	0.00	13	-125.42	5	47.85	5	-114.91	5	-1551.43	1	-11203.00	9
601	Max	-270	0.00	13	0.00	13	0.00	9	64.62	5	54.43	5	95.71	9	7308.23	5	2710.15	1
601	Max	-271	0.00	13	0.00	13	0.00	9	64.62	5	54.43	5	95.71	9	7308.23	5	2710.15	1
601	Max	-267	0.00	13	0.00	13	0.00	9	64.62	5	54.43	5	95.71	9	7308.23	5	2710.15	1
601	Max	-266	0.00	13	0.00	13	0.00	9	64.62	5	54.43	5	95.71	9	7308.23	5	2710.15	1
601	Min.	-270	0.00	5	0.00	5	0.00	1	-75.63	13	-15.05	13	-125.49	1	-5621.91	13	-2309.30	9
601	Min.	-271	0.00	5	0.00	5	0.00	1	-75.63	13	-15.05	13	-125.49	1	-5621.91	13	-2309.30	9
601	Min.	-267	0.00	5	0.00	5	0.00	1	-75.63	13	-15.05	13	-125.49	1	-5621.91	13	-2309.30	9
601	Min.	-266	0.00	5	0.00	5	0.00	1	-75.63	13	-15.05	13	-125.49	1	-5621.91	13	-2309.30	9
601	Max	-266	0.00	13	0.00	5	0.00	13	90.55	1	18.38	5	124.55	9	-920.14	5	2999.27	1
601	Max	-267	0.00	13	0.00	5	0.00	13	90.55	1	18.38	5	124.55	9	-920.14	5	2999.27	1
601	Max	-262	0.00	13	0.00	5	0.00	13	90.55	1	18.38	5	124.55	9	-920.14	5	2999.27	1
601	Max	-261	0.00	13	0.00	5	0.00	13	90.55	1	18.38	5	124.55	9	-920.14	5	2999.27	1
601	Min.	-266	0.00	5	0.00	13	0.00	5	-192.96	9	-150.28	13	-137.40	1	-1955.10	20	-1863.80	9
601	Min.	-267	0.00	5	0.00	13	0.00	5	-192.96	9	-150.28	13	-137.40	1	-1955.10	20	-1863.80	9
601	Min.	-262	0.00	5	0.00	13	0.00	5	-192.96	9	-150.28	13	-137.40	1	-1955.10	20	-1863.80	9
601	Min.	-261	0.00	5	0.00	13	0.00	5	-192.96	9	-150.28	13	-137.40	1	-1955.10	20	-1863.80	9
601	Max	-261	0.00	13	0.00	13	0.00	9	215.65	1	36.44	1	162.99	9	4302.05	5	3023.48	1
601	Max	-262	0.00	13	0.00	13	0.00	9	215.65	1	36.44	1	162.99	9	4302.05	5	3023.48	1
601	Max	-257	0.00	13	0.00	13	0.00	9	215.65	1	36.44	1	162.99	9	4302.05	5	3023.48	1
601	Max	-256	0.00	13	0.00	13	0.00	9	215.65	1	36.44	1	162.99	9	4302.05	5	3023.48	1
601	Min.	-261	0.00	5	0.00	5	0.00	1	-258.56	9	-54.27	9	-87.34	1	269.13	13	-3000.46	9
601	Min.	-262	0.00	5	0.00	5	0.00	1	-258.56	9	-54.27	9	-87.34	1	269.13	13	-3000.46	9
601	Min.	-257	0.00	5	0.00	5	0.00	1	-258.56	9	-54.27	9	-87.34	1	269.13	13	-3000.46	9
601	Min.	-256	0.00	5	0.00	5	0.00	1	-258.56	9	-54.27	9	-87.34	1	269.13	13	-3000.46	9
601	Max	-256	0.00	1	0.00	1	0.00	5	271.40	1	475.20	5	83.00	9	462.65	9	6879.79	1
601	Max	-257	0.00	1	0.00	1	0.00	5	271.40	1	475.20	5	83.00	9	462.65	9	6879.79	1
601	Max	-253	0.00	1	0.00	1	0.00	5	271.40	1	475.20	5	83.00	9	462.65	9	6879.79	1
601	Max	-252	0.00	1	0.00	1	0.00	5	271.40	1	475.20	5	83.00	9	462.65	9	6879.79	1
601	Min.	-256	0.00	1	0.00	1	0.00	13	-326.53	9	-160.82	13	-97.56	1	-2349.54	1	-7961.20	9
601	Min.	-257	0.00	1	0.00	1	0.00	13	-326.53	9	-160.82	13	-97.56	1	-2349.54	1	-7961.20	9
601	Min.	-253	0.00	1	0.00	1	0.00	13	-326.53	9	-160.82	13	-97.56	1	-2349.54	1	-7961.20	9
601	Min.	-252	0.00	1	0.00	1	0.00	13	-326.53	9	-160.82	13	-97.56	1	-2349.54	1	-7961.20	9
601	Max	-271	0.00	1	0.00	1	0.00	5	157.60	1	630.37	5	108.64	13	18353.20	13	3698.50	13
601	Max	352	0.00	1	0.00	1	0.00	5	157.60	1	630.37	5	108.64	13	18353.20	13	3698.50	13
601	Max	-268	0.00	1	0.00	1	0.00	5	157.60	1	630.37	5	108.64	13	18353.20	13	3698.50	13
601	Max	-267	0.00	1	0.00	1	0.00	5	157.60	1	630.37	5	108.64	13	18353.20	13	3698.50	13
601	Min.	-271	0.00	9	0.00	9	0.00	5	-125.95	9	-523.05	13	-222.14	5	-30030.80	5	-3521.02	5
601	Min.	352	0.00	9	0.00	9	0.00	5	-125.95	9	-523.05	13	-222.14	5	-30030.80	5	-3521.02	5
601	Min.	-268	0.00	9	0.00	9	0.00	5	-125.95	9	-523.05	13	-222.14	5	-30030.80	5	-3521.02	5
601	Min.	-267	0.00	9	0.00	9	0.00	5	-125.95	9	-523.05	13	-222.14	5	-30030.80	5	-3521.02	5
601	Max	-267	0.00	9	0.00	13	0.00	1	395.76	1	375.78	13	61.37	1	6648.37	1	4216.02	1
601	Max	-268	0.00	9	0.00	13	0.00	1	395.76	1	375.78	13	61.37	1	6648.37	1	4216.02	1
601	Max	-263	0.00	9	0.00	13	0.00	1	395.76	1	375.78	13	61.37	1	6648.37	1	4216.02	1
601	Max	-262	0.00	9	0.00	13	0.00	1	395.76	1	375.78	13	61.37	1	6648.37	1	4216.02	1
601	Min.	-267	0.00	1	0.00	5	0.00	1	-294.52	9	-371.52	5	-19.43	9	909.80	9	-53.33	9
601	Min.	-268	0.00	1	0.00	5	0.00	1	-294.52	9	-371.52	5	-19.43	9	909.80	9	-53.33	9
601	Min.	-263	0.00	1	0.00	5	0.00	1	-294.52	9	-371.52	5	-19.43	9	909.80	9	-53.33	9
601	Min.	-262	0.00	1	0.00	5	0.00	1	-294.52	9	-371.52	5	-19.43	9	909.80	9	-53.33	9
601	Max	-262	0.00	1	0.00	1	0.00	5	617.01	1	419.51	5	64.12	13	3258.29	13	5450.63	5
601	Max	-263	0.00	1	0.00	1	0.00	5	617.01	1	419.51	5	64.12	13	3258.29	13	5450.63	5
601	Max	-258	0.00	1	0.00	1	0.00	5	617.01	1	419.51	5	64.12	13	3258.29	13	5450.63	5
601	Max	-257	0.00	1	0.00	1	0.00	5	617.01	1	419.51	5	64.12	13	3258.29	13	5450.63	5
601	Min.	-262	0.00	9	0.00	9	0.00	5	-605.59	9	-554.66	13	-44.24	5	-11225.50	5	-4743.02	13
601	Min.	-263	0.00	9	0.00	9	0.00	5	-605.59	9	-554.66	13	-44.24	5	-11225.50	5	-4743.02	13
601	Min.																	

Relazione di calcolo

My = Momento flettente intorno all'asse Y
 Mz = Momento flettente intorno all'asse Z

Nucleo	Liv.	Xg <cm>	Yg <cm>	CC	Z <cm>	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	Mz <daNm>
102	1	10.20	24.33	1	-0.25	-105793.00	57.88	-16808.20	13712.80	-288.89	226.37
102	1	10.20	24.33	±	-0.25	252814.00	4696.94	73532.50	219144.00	2085.57	5648.57
102	1	10.20	24.33	2	-0.25	-92881.50	250.88	-13051.60	12405.20	-216.08	-34.20
102	1	10.20	24.33	±	-0.25	198275.00	3653.25	56900.80	171685.00	1627.58	4402.28
102	1	10.20	24.33	3	-0.25	-105793.00	57.88	-16808.20	13712.80	-288.89	226.37
102	1	10.20	24.33	±	-0.25	129564.00	2702.15	29001.60	101179.00	1183.04	3289.64
102	1	10.20	24.33	4	-0.25	-92881.50	250.88	-13051.60	12405.20	-216.08	-34.20
102	1	10.20	24.33	±	-0.25	101617.00	2100.61	22521.20	79211.60	922.54	2564.22
102	1	10.20	24.33	5	-0.25	-105793.00	57.88	-16808.20	13712.80	-288.89	226.37
102	1	10.20	24.33	±	-0.25	262774.00	4434.52	89598.20	244658.00	1994.50	5272.28
102	1	10.20	24.33	6	-0.25	-92881.50	250.88	-13051.60	12405.20	-216.08	-34.20
102	1	10.20	24.33	±	-0.25	206079.00	3450.82	69212.80	191757.00	1557.57	4108.41
102	1	10.20	24.33	7	-0.25	-105793.00	57.88	-16808.20	13712.80	-288.89	226.37
102	1	10.20	24.33	±	-0.25	148061.00	2214.79	58837.90	148561.00	1013.92	2590.81
102	1	10.20	24.33	8	-0.25	-92881.50	250.88	-13051.60	12405.20	-216.08	-34.20
102	1	10.20	24.33	±	-0.25	116112.00	1724.66	45386.20	116488.00	792.54	2018.46
102	1	10.20	24.33	9	-0.25	13937.10	1847.59	18026.30	1587.33	386.26	-2189.88
102	1	10.20	24.33	±	-0.25	252814.00	4696.94	73532.50	219144.00	2085.57	5648.57
102	1	10.20	24.33	10	-0.25	1025.14	1654.58	14269.70	2894.96	313.45	-1929.31
102	1	10.20	24.33	±	-0.25	198275.00	3653.25	56900.80	171685.00	1627.58	4402.28
102	1	10.20	24.33	11	-0.25	13937.10	1847.59	18026.30	1587.33	386.26	-2189.88
102	1	10.20	24.33	±	-0.25	129564.00	2702.15	29001.60	101179.00	1183.04	3289.64
102	1	10.20	24.33	12	-0.25	1025.14	1654.58	14269.70	2894.96	313.45	-1929.31
102	1	10.20	24.33	±	-0.25	101617.00	2100.61	22521.20	79211.60	922.54	2564.22
102	1	10.20	24.33	13	-0.25	13937.10	1847.59	18026.30	1587.33	386.26	-2189.88
102	1	10.20	24.33	±	-0.25	262774.00	4434.52	89598.20	244658.00	1994.50	5272.28
102	1	10.20	24.33	14	-0.25	1025.14	1654.58	14269.70	2894.96	313.45	-1929.31
102	1	10.20	24.33	±	-0.25	206079.00	3450.82	69212.80	191757.00	1557.57	4108.41
102	1	10.20	24.33	15	-0.25	13937.10	1847.59	18026.30	1587.33	386.26	-2189.88
102	1	10.20	24.33	±	-0.25	148061.00	2214.79	58837.90	148561.00	1013.92	2590.81
102	1	10.20	24.33	16	-0.25	1025.14	1654.58	14269.70	2894.96	313.45	-1929.31
102	1	10.20	24.33	±	-0.25	116112.00	1724.66	45386.20	116488.00	792.54	2018.46
102	1	10.20	24.33	17	-0.25	-61625.50	1507.80	1856.37	14022.40	155.08	-1459.08
102	1	10.20	24.33	18	-0.25	-74243.30	1254.69	288.10	9024.83	8.34	-1245.31
102	1	10.20	24.33	19	-0.25	-65705.60	1295.44	4610.60	365.52	56.06	-1237.84
102	1	10.20	24.33	20	-0.25	-70163.20	1467.05	-2466.14	22681.70	107.36	-1466.55
102	1	10.20	24.33	21	-0.25	-44871.60	1169.36	1568.76	11151.70	133.61	-1136.52
102	1	10.20	24.33	22	-0.25	-57489.40	916.25	0.50	6154.11	-13.13	-922.74
102	1	10.20	24.33	23	-0.25	-48951.80	957.00	4323.00	-2505.20	34.59	-915.27
102	1	10.20	24.33	24	-0.25	-53409.30	1128.61	-2753.74	19811.00	85.89	-1143.98
102	1	10.20	24.33	25	-0.25	-41019.00	1104.89	1445.40	10423.70	125.45	-1102.32
102	1	10.20	24.33	26	-0.25	-53636.80	851.77	-122.87	5426.15	-21.29	-888.55
102	1	10.20	24.33	27	-0.25	-45099.10	892.53	4199.64	-3233.17	26.43	-881.08
102	1	10.20	24.33	28	-0.25	-49556.70	1064.14	-2877.11	19083.00	77.73	-1109.79
102	1	10.20	24.33	29	-0.25	-39619.30	1079.29	1393.19	10148.80	122.06	-1088.64
102	1	10.20	24.33	30	-0.25	-52237.10	826.18	-175.08	5151.29	-24.69	-874.87
102	1	10.20	24.33	31	-0.25	-43699.40	866.93	4147.43	-3508.02	23.03	-867.40
102	1	10.20	24.33	32	-0.25	-48157.00	1038.54	-2929.32	18808.20	74.34	-1096.11
102	1	10.20	24.33	1	1.10	-105793.00	57.88	-16808.20	13712.80	-288.89	226.37
102	1	10.20	24.33	±	1.10	252814.00	4696.94	73532.50	219144.00	2085.57	5648.57
102	1	10.20	24.33	2	1.10	-92881.50	250.88	-13051.60	12405.20	-216.08	-34.20
102	1	10.20	24.33	±	1.10	198275.00	3653.25	56900.80	171685.00	1627.58	4402.28
102	1	10.20	24.33	3	1.10	-105793.00	57.88	-16808.20	13712.80	-288.89	226.37
102	1	10.20	24.33	±	1.10	129564.00	2702.15	29001.60	101179.00	1183.04	3289.64
102	1	10.20	24.33	4	1.10	-92881.50	250.88	-13051.60	12405.20	-216.08	-34.20
102	1	10.20	24.33	±	1.10	101617.00	2100.61	22521.20	79211.60	922.54	2564.22
102	1	10.20	24.33	5	1.10	-105793.00	57.88	-16808.20	13712.80	-288.89	226.37
102	1	10.20	24.33	±	1.10	262774.00	4434.52	89598.20	244658.00	1994.50	5272.28
102	1	10.20	24.33	6	1.10	-92881.50	250.88	-13051.60	12405.20	-216.08	-34.20
102	1	10.20	24.33	±	1.10	206079.00	3450.82	69212.80	191757.00	1557.57	4108.41
102	1	10.20	24.33	7	1.10	-105793.00	57.88	-16808.20	13712.80	-288.89	226.37
102	1	10.20	24.33	±	1.10	148061.00	2214.79	58837.90	148561.00	1013.92	2590.81
102	1	10.20	24.33	8	1.10	-92881.50	250.88	-13051.60	12405.20	-216.08	-34.20
102	1	10.20	24.33	±	1.10	116112.00	1724.66	45386.20	116488.00	792.54	2018.46
102	1	10.20	24.33	9	1.10	13937.10	1847.59	18026.30	1587.33	386.26	-2189.88
102	1	10.20	24.33	±	1.10	252814.00	4696.94	73532.50	219144.00	2085.57	5648.57
102	1	10.20	24.33	10	1.10	1025.14	1654.58	14269.70	2894.96	313.45	-1929.31
102	1	10.20	24.33	±	1.10	198275.00	3653.25	56900.80	171685.00	1627.58	4402.28
102	1	10.20	24.33	11	1.10	13937.10	1847.59	18026.30	1587.33	386.26	-2189.88
102	1	10.20	24.33	±	1.10	129564.00	2702.15	29001.60	101179.00	1183.04	3289.64
102	1	10.20	24.33	12	1.10	1025.14	1654.58	14269.70	2894.96	313.45	-1929.31
102	1	10.20	24.33	±	1.10	101617.00	2100.61	22521.20	79211.60	922.54	2564.22
102	1	10.20	24.33	13	1.10	13937.10	1847.59	18026.30	1587.33	386.26	-2189.88
102	1	10.20	24.33	±	1.10	262774.00	4434.52	89598.20	244658.00	1994.50	5272.28

Relazione di calcolo

102	1	10.20	24.33	14	1.10	1025.14	1654.58	14269.70	2894.96	313.45	-1929.31
102	1	10.20	24.33	±	1.10	206079.00	3450.82	69212.80	191757.00	1557.57	4108.41
102	1	10.20	24.33	15	1.10	13937.10	1847.59	18026.30	1587.33	386.26	-2189.88
102	1	10.20	24.33	±	1.10	148061.00	2214.79	58837.90	148561.00	1013.92	2590.81
102	1	10.20	24.33	16	1.10	1025.14	1654.58	14269.70	2894.96	313.45	-1929.31
102	1	10.20	24.33	±	1.10	116112.00	1724.66	45386.20	116488.00	792.54	2018.46
102	1	10.20	24.33	17	1.10	-61625.50	1507.80	1856.37	14022.40	155.08	-1459.08
102	1	10.20	24.33	18	1.10	-74243.30	1254.69	288.10	9024.83	8.34	-1245.31
102	1	10.20	24.33	19	1.10	-65705.60	1295.44	4610.60	365.52	56.06	-1237.84
102	1	10.20	24.33	20	1.10	-70163.20	1467.05	-2466.14	22681.70	107.36	-1466.55
102	1	10.20	24.33	21	1.10	-44871.60	1169.36	1568.76	11151.70	133.61	-1136.52
102	1	10.20	24.33	22	1.10	-57489.40	916.25	0.50	6154.11	-13.13	-922.74
102	1	10.20	24.33	23	1.10	-48951.80	957.00	4323.00	-2505.20	34.59	-915.27
102	1	10.20	24.33	24	1.10	-53409.30	1128.61	-2753.74	19811.00	85.89	-1143.98
102	1	10.20	24.33	25	1.10	-41019.00	1104.89	1445.40	10423.70	125.45	-1102.32
102	1	10.20	24.33	26	1.10	-53636.80	851.77	-122.87	5426.15	-21.29	-888.55
102	1	10.20	24.33	27	1.10	-45099.10	892.53	4199.64	-3233.17	26.43	-881.08
102	1	10.20	24.33	28	1.10	-49556.70	1064.14	-2877.11	19083.00	77.73	-1109.79
102	1	10.20	24.33	29	1.10	-39619.30	1079.29	1393.19	10148.80	122.06	-1088.64
102	1	10.20	24.33	30	1.10	-52237.10	826.18	-175.08	5151.29	-24.69	-874.87
102	1	10.20	24.33	31	1.10	-43699.40	866.93	4147.43	-3508.02	23.03	-867.40
102	1	10.20	24.33	32	1.10	-48157.00	1038.54	-2929.32	18808.20	74.34	-1096.11
102	2	10.20	24.33	1	1.10	-89722.10	-727.99	-17036.80	14813.30	-151.95	1409.10
102	2	10.20	24.33	±	1.10	199467.00	831.90	76300.60	155320.00	590.41	2244.02
102	2	10.20	24.33	2	1.10	-79877.10	-750.04	-13175.40	13370.80	-131.91	1455.40
102	2	10.20	24.33	±	1.10	156363.00	650.60	59033.50	121809.00	462.71	1749.27
102	2	10.20	24.33	3	1.10	-89722.10	-727.99	-17036.80	14813.30	-151.95	1409.10
102	2	10.20	24.33	±	1.10	101726.00	463.09	29972.20	70015.20	327.76	1281.45
102	2	10.20	24.33	4	1.10	-79877.10	-750.04	-13175.40	13370.80	-131.91	1455.40
102	2	10.20	24.33	±	1.10	79741.30	363.00	23269.50	54910.90	256.83	996.88
102	2	10.20	24.33	5	1.10	-89722.10	-727.99	-17036.80	14813.30	-151.95	1409.10
102	2	10.20	24.33	±	1.10	208081.00	808.93	93154.80	175975.00	575.47	2133.11
102	2	10.20	24.33	6	1.10	-79877.10	-750.04	-13175.40	13370.80	-131.91	1455.40
102	2	10.20	24.33	±	1.10	163119.00	631.37	71952.20	138004.00	451.07	1665.90
102	2	10.20	24.33	7	1.10	-89722.10	-727.99	-17036.80	14813.30	-151.95	1409.10
102	2	10.20	24.33	±	1.10	117723.00	420.44	61273.00	108374.00	300.02	1075.47
102	2	10.20	24.33	8	1.10	-79877.10	-750.04	-13175.40	13370.80	-131.91	1455.40
102	2	10.20	24.33	±	1.10	92287.70	327.29	47261.30	84988.20	235.20	842.05
102	2	10.20	24.33	9	1.10	1568.94	-932.48	18768.80	1436.89	33.85	1838.48
102	2	10.20	24.33	±	1.10	199467.00	831.90	76300.60	155320.00	590.41	2244.02
102	2	10.20	24.33	10	1.10	-8276.03	-910.43	14907.40	2879.42	13.81	1792.18
102	2	10.20	24.33	±	1.10	156363.00	650.60	59033.50	121809.00	462.71	1749.27
102	2	10.20	24.33	11	1.10	1568.94	-932.48	18768.80	1436.89	33.85	1838.48
102	2	10.20	24.33	±	1.10	101726.00	463.09	29972.20	70015.20	327.76	1281.45
102	2	10.20	24.33	12	1.10	-8276.03	-910.43	14907.40	2879.42	13.81	1792.18
102	2	10.20	24.33	±	1.10	79741.30	363.00	23269.50	54910.90	256.83	996.88
102	2	10.20	24.33	13	1.10	1568.94	-932.48	18768.80	1436.89	33.85	1838.48
102	2	10.20	24.33	±	1.10	208081.00	808.93	93154.80	175975.00	575.47	2133.11
102	2	10.20	24.33	14	1.10	-8276.03	-910.43	14907.40	2879.42	13.81	1792.18
102	2	10.20	24.33	±	1.10	163119.00	631.37	71952.20	138004.00	451.07	1665.90
102	2	10.20	24.33	15	1.10	1568.94	-932.48	18768.80	1436.89	33.85	1838.48
102	2	10.20	24.33	±	1.10	117723.00	420.44	61273.00	108374.00	300.02	1075.47
102	2	10.20	24.33	16	1.10	-8276.03	-910.43	14907.40	2879.42	13.81	1792.18
102	2	10.20	24.33	±	1.10	92287.70	327.29	47261.30	84988.20	235.20	842.05
102	2	10.20	24.33	17	1.10	-60386.10	-1158.71	2251.48	14176.30	-87.47	2446.27
102	2	10.20	24.33	18	1.10	-70575.30	-1147.16	653.15	11008.00	-128.71	2279.80
102	2	10.20	24.33	19	1.10	-63636.50	-1115.25	5172.92	5204.30	-109.21	2310.38
102	2	10.20	24.33	20	1.10	-67324.80	-1190.62	-2268.28	19979.90	-106.97	2415.68
102	2	10.20	24.33	21	1.10	-44205.30	-882.44	1870.05	10994.60	-58.29	1866.15
102	2	10.20	24.33	22	1.10	-54394.40	-870.89	271.72	7826.28	-99.53	1699.68
102	2	10.20	24.33	23	1.10	-47455.70	-838.98	4791.48	2022.61	-80.03	1730.27
102	2	10.20	24.33	24	1.10	-51144.00	-914.35	-2649.71	16798.30	-77.80	1835.57
102	2	10.20	24.33	25	1.10	-40372.90	-849.28	1725.34	10067.80	-43.93	1752.27
102	2	10.20	24.33	26	1.10	-50562.00	-837.73	127.01	6899.49	-85.18	1585.79
102	2	10.20	24.33	27	1.10	-43623.30	-805.82	4646.77	1095.82	-65.67	1616.38
102	2	10.20	24.33	28	1.10	-47311.60	-881.19	-2794.42	15871.50	-63.44	1721.68
102	2	10.20	24.33	29	1.10	-38982.00	-836.01	1665.17	9709.24	-38.43	1707.03
102	2	10.20	24.33	30	1.10	-49171.20	-824.46	66.84	6540.93	-79.67	1540.56
102	2	10.20	24.33	31	1.10	-42232.40	-792.55	4586.61	737.26	-60.17	1571.14
102	2	10.20	24.33	32	1.10	-45920.70	-867.92	-2854.59	15512.90	-57.93	1676.44
102	2	10.20	24.33	1	2.33	-89722.10	-727.99	-17036.80	14813.30	-151.95	1409.10
102	2	10.20	24.33	±	2.33	199467.00	831.90	76300.60	155320.00	590.41	2244.02
102	2	10.20	24.33	2	2.33	-79877.10	-750.04	-13175.40	13370.80	-131.92	1455.40
102	2	10.20	24.33	±	2.33	156363.00	650.60	59033.50	121809.00	462.71	1749.27
102	2	10.20	24.33	3	2.33	-89722.10	-727.99	-17036.80	14813.30	-151.95	1409.10
102	2	10.20	24.33	±	2.33	101726.00	463.09	29972.20	70015.30	327.76	1281.45
102	2	10.20	24.33	4	2.33	-79877.10	-750.04	-13175.40	13370.80	-131.92	1455.40
102	2	10.20	24.33	±	2.33	79741.30	363.00	23269.50	54910.90	256.83	996.88
102	2	10.20	24.33	5	2.33	-89722.10	-727.99	-17036.80	14813.30	-151.95	1409.10

Relazione di calcolo

102	2	10.20	24.33	±	2.33	208081.00	808.93	93154.80	175975.00	575.47	2133.11
102	2	10.20	24.33	6	2.33	-79877.10	-750.04	-13175.40	13370.80	-131.92	1455.40
102	2	10.20	24.33	±	2.33	163119.00	631.37	71952.20	138004.00	451.07	1665.90
102	2	10.20	24.33	7	2.33	-89722.10	-727.99	-17036.80	14813.30	-151.95	1409.10
102	2	10.20	24.33	±	2.33	117723.00	420.44	61273.00	108374.00	300.02	1075.47
102	2	10.20	24.33	8	2.33	-79877.10	-750.04	-13175.40	13370.80	-131.92	1455.40
102	2	10.20	24.33	±	2.33	92287.70	327.29	47261.30	84988.20	235.20	842.05
102	2	10.20	24.33	9	2.33	1568.94	-932.48	18768.80	1436.89	33.85	1838.48
102	2	10.20	24.33	±	2.33	199467.00	831.90	76300.60	155320.00	590.41	2244.02
102	2	10.20	24.33	10	2.33	-8276.03	-910.43	14907.40	2879.42	13.81	1792.18
102	2	10.20	24.33	±	2.33	156363.00	650.60	59033.50	121809.00	462.71	1749.27
102	2	10.20	24.33	11	2.33	1568.94	-932.48	18768.80	1436.89	33.85	1838.48
102	2	10.20	24.33	±	2.33	101726.00	463.09	29972.20	70015.30	327.76	1281.45
102	2	10.20	24.33	12	2.33	-8276.03	-910.43	14907.40	2879.42	13.81	1792.18
102	2	10.20	24.33	±	2.33	79741.30	363.00	23269.50	54910.90	256.83	996.88
102	2	10.20	24.33	13	2.33	1568.94	-932.48	18768.80	1436.89	33.85	1838.48
102	2	10.20	24.33	±	2.33	208081.00	808.93	93154.80	175975.00	575.47	2133.11
102	2	10.20	24.33	14	2.33	-8276.03	-910.43	14907.40	2879.42	13.81	1792.18
102	2	10.20	24.33	±	2.33	163119.00	631.37	71952.20	138004.00	451.07	1665.90
102	2	10.20	24.33	15	2.33	1568.94	-932.48	18768.80	1436.89	33.85	1838.48
102	2	10.20	24.33	±	2.33	117723.00	420.44	61273.00	108374.00	300.02	1075.47
102	2	10.20	24.33	16	2.33	-8276.03	-910.43	14907.40	2879.42	13.81	1792.18
102	2	10.20	24.33	±	2.33	92287.70	327.29	47261.30	84988.20	235.20	842.05
102	2	10.20	24.33	17	2.33	-60386.10	-1158.71	2251.48	14176.30	-87.47	2446.27
102	2	10.20	24.33	18	2.33	-70575.30	-1147.16	653.15	11008.00	-128.71	2279.80
102	2	10.20	24.33	19	2.33	-63636.50	-1115.25	5172.92	5204.30	-109.21	2310.38
102	2	10.20	24.33	20	2.33	-67324.80	-1190.62	-2268.28	19979.90	-106.97	2415.68
102	2	10.20	24.33	21	2.33	-44205.30	-882.44	1870.05	10994.60	-58.29	1866.15
102	2	10.20	24.33	22	2.33	-54394.40	-870.89	271.72	7826.28	-99.53	1699.68
102	2	10.20	24.33	23	2.33	-47455.70	-838.98	4791.48	2022.61	-80.03	1730.27
102	2	10.20	24.33	24	2.33	-51144.00	-914.35	-2649.71	16798.30	-77.80	1835.57
102	2	10.20	24.33	25	2.33	-40372.90	-849.28	1725.34	10067.80	-43.93	1752.27
102	2	10.20	24.33	26	2.33	-50562.00	-837.73	127.01	6899.49	-85.18	1585.79
102	2	10.20	24.33	27	2.33	-43623.30	-805.82	4646.77	1095.82	-65.67	1616.38
102	2	10.20	24.33	28	2.33	-47311.60	-881.19	-2794.42	15871.50	-63.44	1721.68
102	2	10.20	24.33	29	2.33	-38982.00	-836.01	1665.17	9709.24	-38.43	1707.03
102	2	10.20	24.33	30	2.33	-49171.20	-824.46	66.84	6540.93	-79.67	1540.56
102	2	10.20	24.33	31	2.33	-42232.40	-792.55	4586.61	737.26	-60.17	1571.14
102	2	10.20	24.33	32	2.33	-45920.70	-867.92	-2854.59	15512.90	-57.93	1676.44
102	3	10.20	24.33	1	2.33	-74026.90	1275.10	-16820.00	16314.60	-428.80	-1492.19
102	3	10.20	24.33	±	2.33	146783.00	3346.24	75169.80	99308.50	343.56	3937.76
102	3	10.20	24.33	2	2.33	-67268.40	1417.03	-13007.00	14504.20	-438.94	-1683.36
102	3	10.20	24.33	±	2.33	114647.00	2587.50	58188.90	77214.90	216.86	3055.51
102	3	10.20	24.33	3	2.33	-74026.90	1275.10	-16820.00	16314.60	-428.80	-1492.19
102	3	10.20	24.33	±	2.33	74596.80	1923.77	29562.80	42498.40	202.88	2309.81
102	3	10.20	24.33	4	2.33	-67268.40	1417.03	-13007.00	14504.20	-438.94	-1683.36
102	3	10.20	24.33	±	2.33	58303.40	1485.79	22962.30	32887.50	126.00	1792.44
102	3	10.20	24.33	5	2.33	-74026.90	1275.10	-16820.00	16314.60	-428.80	-1492.19
102	3	10.20	24.33	±	2.33	153516.00	3161.29	91721.50	115955.00	316.43	3650.39
102	3	10.20	24.33	6	2.33	-67268.40	1417.03	-13007.00	14504.20	-438.94	-1683.36
102	3	10.20	24.33	±	2.33	119849.00	2447.16	70883.70	90394.30	202.86	2832.31
102	3	10.20	24.33	7	2.33	-74026.90	1275.10	-16820.00	16314.60	-428.80	-1492.19
102	3	10.20	24.33	±	2.33	87102.60	1580.29	60301.70	73412.40	152.50	1776.12
102	3	10.20	24.33	8	2.33	-67268.40	1417.03	-13007.00	14504.20	-438.94	-1683.36
102	3	10.20	24.33	±	2.33	67964.00	1225.18	46538.40	57363.60	100.00	1377.92
102	3	10.20	24.33	9	2.33	-11356.40	2591.22	18537.90	-472.57	-522.85	-3264.87
102	3	10.20	24.33	±	2.33	146783.00	3346.24	75169.80	99308.50	343.56	3937.76
102	3	10.20	24.33	10	2.33	-18114.90	2449.29	14724.80	1337.78	-512.70	-3073.70
102	3	10.20	24.33	±	2.33	114647.00	2587.50	58188.90	77214.90	216.86	3055.51
102	3	10.20	24.33	11	2.33	-11356.40	2591.22	18537.90	-472.57	-522.85	-3264.87
102	3	10.20	24.33	±	2.33	74596.80	1923.77	29562.80	42498.40	202.88	2309.81
102	3	10.20	24.33	12	2.33	-18114.90	2449.29	14724.80	1337.78	-512.70	-3073.70
102	3	10.20	24.33	±	2.33	58303.40	1485.79	22962.30	32887.50	126.00	1792.44
102	3	10.20	24.33	13	2.33	-11356.40	2591.22	18537.90	-472.57	-522.85	-3264.87
102	3	10.20	24.33	±	2.33	153516.00	3161.29	91721.50	115955.00	316.43	3650.39
102	3	10.20	24.33	14	2.33	-18114.90	2449.29	14724.80	1337.78	-512.70	-3073.70
102	3	10.20	24.33	±	2.33	119849.00	2447.16	70883.70	90394.30	202.86	2832.31
102	3	10.20	24.33	15	2.33	-11356.40	2591.22	18537.90	-472.57	-522.85	-3264.87
102	3	10.20	24.33	±	2.33	87102.60	1580.29	60301.70	73412.40	152.50	1776.12
102	3	10.20	24.33	16	2.33	-18114.90	2449.29	14724.80	1337.78	-512.70	-3073.70
102	3	10.20	24.33	±	2.33	67964.00	1225.18	46538.40	57363.60	100.00	1377.92
102	3	10.20	24.33	17	2.33	-59785.20	2882.94	2248.69	13272.50	-755.45	-3423.10
102	3	10.20	24.33	18	2.33	-67485.70	2702.11	650.30	12130.00	-733.09	-3301.40
102	3	10.20	24.33	19	2.33	-62292.40	2733.32	5087.52	8790.25	-739.68	-3279.20
102	3	10.20	24.33	20	2.33	-64978.50	2851.73	-2188.53	16612.20	-748.86	-3445.30
102	3	10.20	24.33	21	2.33	-44036.30	2200.04	1867.20	10012.70	-566.53	-2609.94
102	3	10.20	24.33	22	2.33	-51736.80	2019.21	268.80	8870.28	-544.16	-2488.24
102	3	10.20	24.33	23	2.33	-46543.50	2050.42	4706.03	5530.50	-550.76	-2466.04
102	3	10.20	24.33	24	2.33	-49229.60	2168.83	-2570.03	13352.50	-559.93	-2632.14

Relazione di calcolo

102	3	10.20	24.33	25	2.33	-40224.40	2073.59	1719.22	8919.51	-509.32	-2487.81
102	3	10.20	24.33	26	2.33	-47924.90	1892.76	120.82	7777.09	-486.96	-2366.12
102	3	10.20	24.33	27	2.33	-42731.60	1923.96	4558.05	4437.31	-493.56	-2343.92
102	3	10.20	24.33	28	2.33	-45417.70	2042.38	-2718.01	12259.30	-502.73	-2510.01
102	3	10.20	24.33	29	2.33	-38841.40	2023.57	1658.12	8492.21	-487.00	-2439.38
102	3	10.20	24.33	30	2.33	-46541.90	1842.75	59.72	7349.79	-464.64	-2317.68
102	3	10.20	24.33	31	2.33	-41348.60	1873.95	4496.95	4010.01	-471.23	-2295.48
102	3	10.20	24.33	32	2.33	-44034.70	1992.37	-2779.11	11832.00	-480.41	-2461.58
102	3	10.20	24.33	1	3.56	-74026.90	1275.10	-16820.00	16314.60	-428.80	-1492.19
102	3	10.20	24.33	±	3.56	146783.00	3346.24	75169.80	99308.50	343.56	3937.76
102	3	10.20	24.33	2	3.56	-67268.40	1417.03	-13007.00	14504.20	-438.94	-1683.36
102	3	10.20	24.33	±	3.56	114647.00	2587.50	58188.90	77214.90	216.86	3055.51
102	3	10.20	24.33	3	3.56	-74026.90	1275.10	-16820.00	16314.60	-428.80	-1492.19
102	3	10.20	24.33	±	3.56	74596.80	1923.77	29562.80	42498.40	202.88	2309.81
102	3	10.20	24.33	4	3.56	-67268.40	1417.03	-13007.00	14504.20	-438.94	-1683.36
102	3	10.20	24.33	±	3.56	58303.40	1485.79	22962.30	32887.50	126.00	1792.44
102	3	10.20	24.33	5	3.56	-74026.90	1275.10	-16820.00	16314.60	-428.80	-1492.19
102	3	10.20	24.33	±	3.56	153516.00	3161.29	91721.50	115955.00	316.43	3650.39
102	3	10.20	24.33	6	3.56	-67268.40	1417.03	-13007.00	14504.20	-438.94	-1683.36
102	3	10.20	24.33	±	3.56	119849.00	2447.16	70883.70	90394.30	202.86	2832.31
102	3	10.20	24.33	7	3.56	-74026.90	1275.10	-16820.00	16314.60	-428.80	-1492.19
102	3	10.20	24.33	±	3.56	87102.60	1580.29	60301.70	73412.40	152.50	1776.12
102	3	10.20	24.33	8	3.56	-67268.40	1417.03	-13007.00	14504.20	-438.94	-1683.36
102	3	10.20	24.33	±	3.56	67964.00	1225.18	46538.40	57363.60	100.00	1377.92
102	3	10.20	24.33	9	3.56	-11356.40	2591.22	18537.90	-472.57	-522.85	-3264.87
102	3	10.20	24.33	±	3.56	146783.00	3346.24	75169.80	99308.50	343.56	3937.76
102	3	10.20	24.33	10	3.56	-18114.90	2449.29	14724.80	1337.78	-512.70	-3073.70
102	3	10.20	24.33	±	3.56	114647.00	2587.50	58188.90	77214.90	216.86	3055.51
102	3	10.20	24.33	11	3.56	-11356.40	2591.22	18537.90	-472.57	-522.85	-3264.87
102	3	10.20	24.33	±	3.56	74596.80	1923.77	29562.80	42498.40	202.88	2309.81
102	3	10.20	24.33	12	3.56	-18114.90	2449.29	14724.80	1337.78	-512.70	-3073.70
102	3	10.20	24.33	±	3.56	58303.40	1485.79	22962.30	32887.50	126.00	1792.44
102	3	10.20	24.33	13	3.56	-11356.40	2591.22	18537.90	-472.57	-522.85	-3264.87
102	3	10.20	24.33	±	3.56	153516.00	3161.29	91721.50	115955.00	316.43	3650.39
102	3	10.20	24.33	14	3.56	-18114.90	2449.29	14724.80	1337.78	-512.70	-3073.70
102	3	10.20	24.33	±	3.56	119849.00	2447.16	70883.70	90394.30	202.86	2832.31
102	3	10.20	24.33	15	3.56	-11356.40	2591.22	18537.90	-472.57	-522.85	-3264.87
102	3	10.20	24.33	±	3.56	87102.60	1580.29	60301.70	73412.40	152.50	1776.12
102	3	10.20	24.33	16	3.56	-18114.90	2449.29	14724.80	1337.78	-512.70	-3073.70
102	3	10.20	24.33	±	3.56	67964.00	1225.18	46538.40	57363.60	100.00	1377.92
102	3	10.20	24.33	17	3.56	-59785.20	2882.94	2248.69	13272.50	-755.45	-3423.10
102	3	10.20	24.33	18	3.56	-67485.70	2702.11	650.30	12130.00	-733.09	-3301.40
102	3	10.20	24.33	19	3.56	-62292.40	2733.32	5087.52	8790.25	-739.68	-3279.20
102	3	10.20	24.33	20	3.56	-64978.50	2851.73	-2188.53	16612.20	-748.86	-3445.30
102	3	10.20	24.33	21	3.56	-44036.30	2200.04	1867.20	10012.70	-566.53	-2609.94
102	3	10.20	24.33	22	3.56	-51736.80	2019.21	268.80	8870.28	-544.16	-2488.24
102	3	10.20	24.33	23	3.56	-46543.50	2050.42	4706.03	5530.50	-550.76	-2466.04
102	3	10.20	24.33	24	3.56	-49229.60	2168.83	-2570.03	13352.50	-559.93	-2632.14
102	3	10.20	24.33	25	3.56	-40224.40	2073.59	1719.22	8919.51	-509.32	-2487.81
102	3	10.20	24.33	26	3.56	-47924.90	1892.76	120.82	7777.09	-486.96	-2366.12
102	3	10.20	24.33	27	3.56	-42731.60	1923.96	4558.05	4437.31	-493.56	-2343.92
102	3	10.20	24.33	28	3.56	-45417.70	2042.38	-2718.01	12259.30	-502.73	-2510.01
102	3	10.20	24.33	29	3.56	-38841.40	2023.57	1658.12	8492.21	-487.00	-2439.38
102	3	10.20	24.33	30	3.56	-46541.90	1842.75	59.72	7349.79	-464.64	-2317.68
102	3	10.20	24.33	31	3.56	-41348.60	1873.95	4496.95	4010.01	-471.23	-2295.48
102	3	10.20	24.33	32	3.56	-44034.70	1992.37	-2779.11	11832.00	-480.41	-2461.58
103	1	12.22	24.33	1	-0.25	19237.90	-1265.03	10861.80	29496.40	-1233.36	1662.66
103	1	12.22	24.33	±	-0.25	380678.00	7775.09	151229.00	282450.00	6669.49	8689.05
103	1	12.22	24.33	2	-0.25	7120.23	-939.51	8327.64	25741.40	-993.64	1226.82
103	1	12.22	24.33	±	-0.25	298555.00	6022.81	117569.00	221355.00	5203.60	6765.41
103	1	12.22	24.33	3	-0.25	19237.90	-1265.03	10861.80	29496.40	-1233.36	1662.66
103	1	12.22	24.33	±	-0.25	218220.00	4459.74	80112.90	116819.00	3782.70	5072.72
103	1	12.22	24.33	4	-0.25	7120.23	-939.51	8327.64	25741.40	-993.64	1226.82
103	1	12.22	24.33	±	-0.25	171143.00	3449.48	62288.80	91588.10	2949.04	3948.27
103	1	12.22	24.33	5	-0.25	19237.90	-1265.03	10861.80	29496.40	-1233.36	1662.66
103	1	12.22	24.33	±	-0.25	360599.00	7360.81	153228.00	335941.00	6379.15	8091.48
103	1	12.22	24.33	6	-0.25	7120.23	-939.51	8327.64	25741.40	-993.64	1226.82
103	1	12.22	24.33	±	-0.25	282809.00	5709.71	119112.00	263219.00	4980.49	6302.29
103	1	12.22	24.33	7	-0.25	19237.90	-1265.03	10861.80	29496.40	-1233.36	1662.66
103	1	12.22	24.33	±	-0.25	180929.00	3690.36	83825.70	216161.00	3243.49	3962.94
103	1	12.22	24.33	8	-0.25	7120.23	-939.51	8327.64	25741.40	-993.64	1226.82
103	1	12.22	24.33	±	-0.25	141899.00	2868.03	65154.30	169336.00	2534.70	3088.19
103	1	12.22	24.33	9	-0.25	-93127.70	1753.46	-12637.20	-5323.49	989.52	-2378.74
103	1	12.22	24.33	±	-0.25	380678.00	7775.09	151229.00	282450.00	6669.49	8689.05
103	1	12.22	24.33	10	-0.25	-81010.00	1427.94	-10103.00	-1568.45	749.80	-1942.91
103	1	12.22	24.33	±	-0.25	298555.00	6022.81	117569.00	221355.00	5203.60	6765.41
103	1	12.22	24.33	11	-0.25	-93127.70	1753.46	-12637.20	-5323.49	989.52	-2378.74
103	1	12.22	24.33	±	-0.25	218220.00	4459.74	80112.90	116819.00	3782.70	5072.72
103	1	12.22	24.33	12	-0.25	-81010.00	1427.94	-10103.00	-1568.45	749.80	-1942.91

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103	1	12.22	24.33	±	-0.25	171143.00	3449.48	62288.80	91588.10	2949.04	3948.27
103	1	12.22	24.33	13	-0.25	-93127.70	1753.46	-12637.20	-5323.49	989.52	-2378.74
103	1	12.22	24.33	±	-0.25	360599.00	7360.81	153228.00	335941.00	6379.15	8091.48
103	1	12.22	24.33	14	-0.25	-81010.00	1427.94	-10103.00	-1568.45	749.80	-1942.91
103	1	12.22	24.33	±	-0.25	282809.00	5709.71	119112.00	263219.00	4980.49	6302.29
103	1	12.22	24.33	15	-0.25	-93127.70	1753.46	-12637.20	-5323.49	989.52	-2378.74
103	1	12.22	24.33	±	-0.25	180929.00	3690.36	83825.70	216161.00	3243.49	3962.94
103	1	12.22	24.33	16	-0.25	-81010.00	1427.94	-10103.00	-1568.45	749.80	-1942.91
103	1	12.22	24.33	±	-0.25	141899.00	2868.03	65154.30	169336.00	2534.70	3088.19
103	1	12.22	24.33	17	-0.25	-57216.80	563.23	-2228.77	15819.60	35.62	-597.45
103	1	12.22	24.33	18	-0.25	-41828.60	122.89	186.10	20267.00	-424.66	-335.77
103	1	12.22	24.33	19	-0.25	-38416.50	212.01	7048.15	1854.08	-276.81	-301.31
103	1	12.22	24.33	20	-0.25	-60628.90	474.11	-9090.82	34232.50	-112.24	-631.91
103	1	12.22	24.33	21	-0.25	-45587.60	480.62	-2013.76	11342.50	85.21	-489.75
103	1	12.22	24.33	22	-0.25	-30199.40	40.29	401.11	15789.90	-375.07	-228.07
103	1	12.22	24.33	23	-0.25	-26787.30	129.40	7263.16	-2622.96	-227.21	-193.61
103	1	12.22	24.33	24	-0.25	-48999.80	391.51	-8875.81	29755.40	-62.65	-524.21
103	1	12.22	24.33	25	-0.25	-44900.10	468.85	-2068.23	10269.90	102.11	-488.91
103	1	12.22	24.33	26	-0.25	-29511.90	28.51	346.64	14717.30	-358.17	-227.23
103	1	12.22	24.33	27	-0.25	-26099.80	117.63	7208.69	-3695.56	-210.32	-192.77
103	1	12.22	24.33	28	-0.25	-48312.20	379.73	-8930.28	28682.90	-45.75	-523.37
103	1	12.22	24.33	29	-0.25	-44639.00	464.38	-2095.12	9862.78	108.22	-488.88
103	1	12.22	24.33	30	-0.25	-29250.80	24.05	319.75	14310.20	-352.06	-227.20
103	1	12.22	24.33	31	-0.25	-25838.60	113.16	7181.80	-4102.72	-204.20	-192.74
103	1	12.22	24.33	32	-0.25	-48051.10	375.27	-8957.17	28275.70	-39.63	-523.34
103	1	12.22	24.33	1	1.10	19237.90	-1265.03	10861.80	29496.40	-1233.36	1662.66
103	1	12.22	24.33	±	1.10	380678.00	7775.09	151229.00	282450.00	6669.49	8689.05
103	1	12.22	24.33	2	1.10	7120.23	-939.51	8327.64	25741.40	-993.64	1226.82
103	1	12.22	24.33	±	1.10	298555.00	6022.81	117569.00	221355.00	5203.60	6765.41
103	1	12.22	24.33	3	1.10	19237.90	-1265.03	10861.80	29496.40	-1233.36	1662.66
103	1	12.22	24.33	±	1.10	218220.00	4459.74	80112.90	116819.00	3782.70	5072.72
103	1	12.22	24.33	4	1.10	7120.23	-939.51	8327.64	25741.40	-993.64	1226.82
103	1	12.22	24.33	±	1.10	171143.00	3449.48	62288.80	91588.10	2949.04	3948.27
103	1	12.22	24.33	5	1.10	19237.90	-1265.03	10861.80	29496.40	-1233.36	1662.66
103	1	12.22	24.33	±	1.10	360599.00	7360.81	153228.00	335941.00	6379.15	8091.48
103	1	12.22	24.33	6	1.10	7120.23	-939.51	8327.64	25741.40	-993.64	1226.82
103	1	12.22	24.33	±	1.10	282809.00	5709.71	119112.00	263219.00	4980.49	6302.29
103	1	12.22	24.33	7	1.10	19237.90	-1265.03	10861.80	29496.40	-1233.36	1662.66
103	1	12.22	24.33	±	1.10	180929.00	3690.36	83825.70	216161.00	3243.49	3962.94
103	1	12.22	24.33	8	1.10	7120.23	-939.51	8327.64	25741.40	-993.64	1226.82
103	1	12.22	24.33	±	1.10	141899.00	2868.03	65154.30	169336.00	2534.70	3088.19
103	1	12.22	24.33	9	1.10	-93127.70	1753.46	-12637.20	-5323.49	989.52	-2378.74
103	1	12.22	24.33	±	1.10	380678.00	7775.09	151229.00	282450.00	6669.49	8689.05
103	1	12.22	24.33	10	1.10	-81010.00	1427.94	-10103.00	-1568.45	749.80	-1942.91
103	1	12.22	24.33	±	1.10	298555.00	6022.81	117569.00	221355.00	5203.60	6765.41
103	1	12.22	24.33	11	1.10	-93127.70	1753.46	-12637.20	-5323.49	989.52	-2378.74
103	1	12.22	24.33	±	1.10	218220.00	4459.74	80112.90	116819.00	3782.70	5072.72
103	1	12.22	24.33	12	1.10	-81010.00	1427.94	-10103.00	-1568.45	749.80	-1942.91
103	1	12.22	24.33	±	1.10	171143.00	3449.48	62288.80	91588.10	2949.04	3948.27
103	1	12.22	24.33	13	1.10	-93127.70	1753.46	-12637.20	-5323.49	989.52	-2378.74
103	1	12.22	24.33	±	1.10	360599.00	7360.81	153228.00	335941.00	6379.15	8091.48
103	1	12.22	24.33	14	1.10	-81010.00	1427.94	-10103.00	-1568.45	749.80	-1942.91
103	1	12.22	24.33	±	1.10	282809.00	5709.71	119112.00	263219.00	4980.49	6302.29
103	1	12.22	24.33	15	1.10	-93127.70	1753.46	-12637.20	-5323.49	989.52	-2378.74
103	1	12.22	24.33	±	1.10	180929.00	3690.36	83825.70	216161.00	3243.49	3962.94
103	1	12.22	24.33	16	1.10	-81010.00	1427.94	-10103.00	-1568.45	749.80	-1942.91
103	1	12.22	24.33	±	1.10	141899.00	2868.03	65154.30	169336.00	2534.70	3088.19
103	1	12.22	24.33	17	1.10	-57216.80	563.23	-2228.77	15819.60	35.62	-597.45
103	1	12.22	24.33	18	1.10	-41828.60	122.89	186.10	20267.00	-424.66	-335.77
103	1	12.22	24.33	19	1.10	-38416.50	212.01	7048.15	1854.09	-276.81	-301.31
103	1	12.22	24.33	20	1.10	-60628.90	474.11	-9090.82	34232.50	-112.24	-631.91
103	1	12.22	24.33	21	1.10	-45587.60	480.62	-2013.76	11342.50	85.21	-489.75
103	1	12.22	24.33	22	1.10	-30199.40	40.29	401.11	15789.90	-375.07	-228.07
103	1	12.22	24.33	23	1.10	-26787.30	129.40	7263.16	-2622.96	-227.21	-193.61
103	1	12.22	24.33	24	1.10	-48999.80	391.51	-8875.81	29755.40	-62.65	-524.21
103	1	12.22	24.33	25	1.10	-44900.10	468.85	-2068.23	10269.90	102.11	-488.91
103	1	12.22	24.33	26	1.10	-29511.90	28.51	346.64	14717.30	-358.17	-227.23
103	1	12.22	24.33	27	1.10	-26099.80	117.63	7208.69	-3695.56	-210.32	-192.77
103	1	12.22	24.33	28	1.10	-48312.20	379.73	-8930.28	28682.90	-45.75	-523.37
103	1	12.22	24.33	29	1.10	-44639.00	464.38	-2095.12	9862.78	108.22	-488.88
103	1	12.22	24.33	30	1.10	-29250.80	24.05	319.75	14310.20	-352.06	-227.20
103	1	12.22	24.33	31	1.10	-25838.60	113.16	7181.80	-4102.72	-204.20	-192.74
103	1	12.22	24.33	32	1.10	-48051.10	375.27	-8957.17	28275.70	-39.63	-523.34
103	2	12.22	24.33	1	1.10	9378.81	-226.43	10998.70	22617.70	-466.22	158.03
103	2	12.22	24.33	±	1.10	294704.00	1299.29	156223.00	208469.00	2415.53	2113.13
103	2	12.22	24.33	2	1.10	285.95	-202.37	8472.41	20473.10	-395.56	153.04
103	2	12.22	24.33	±	1.10	231052.00	999.15	121455.00	163481.00	1893.99	1627.00
103	2	12.22	24.33	3	1.10	9378.81	-226.43	10998.70	22617.70	-466.22	158.03
103	2	12.22	24.33	±	1.10	168619.00	743.45	82424.30	87453.60	1367.83	1246.69

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103	2	12.22	24.33	4	1.10	285.95	-202.37	8472.41	20473.10	-395.56	153.04
103	2	12.22	24.33	±	1.10	132190.00	567.96	64085.40	68574.50	1072.49	961.26
103	2	12.22	24.33	5	1.10	9378.81	-226.43	10998.70	22617.70	-466.22	158.03
103	2	12.22	24.33	±	1.10	279641.00	1232.80	158794.00	246081.00	2313.66	1948.04
103	2	12.22	24.33	6	1.10	285.95	-202.37	8472.41	20473.10	-395.56	153.04
103	2	12.22	24.33	±	1.10	219256.00	953.73	123447.00	192985.00	1814.14	1497.80
103	2	12.22	24.33	7	1.10	9378.81	-226.43	10998.70	22617.70	-466.22	158.03
103	2	12.22	24.33	±	1.10	140645.00	619.98	87200.10	157304.00	1178.65	940.09
103	2	12.22	24.33	8	1.10	285.95	-202.37	8472.41	20473.10	-395.56	153.04
103	2	12.22	24.33	±	1.10	110283.00	483.59	67784.70	123369.00	924.20	721.32
103	2	12.22	24.33	9	1.10	-74938.00	-3.29	-12427.10	2730.98	188.95	111.83
103	2	12.22	24.33	±	1.10	294704.00	1299.29	156223.00	208469.00	2415.53	2113.13
103	2	12.22	24.33	10	1.10	-65845.20	-27.35	-9900.78	4875.60	118.29	116.81
103	2	12.22	24.33	±	1.10	231052.00	999.15	121455.00	163481.00	1893.99	1627.00
103	2	12.22	24.33	11	1.10	-74938.00	-3.29	-12427.10	2730.98	188.95	111.83
103	2	12.22	24.33	±	1.10	168619.00	743.45	82424.30	87453.60	1367.83	1246.69
103	2	12.22	24.33	12	1.10	-65845.20	-27.35	-9900.78	4875.60	118.29	116.81
103	2	12.22	24.33	±	1.10	132190.00	567.96	64085.40	68574.50	1072.49	961.26
103	2	12.22	24.33	13	1.10	-74938.00	-3.29	-12427.10	2730.98	188.95	111.83
103	2	12.22	24.33	±	1.10	279641.00	1232.80	158794.00	246081.00	2313.66	1948.04
103	2	12.22	24.33	14	1.10	-65845.20	-27.35	-9900.78	4875.60	118.29	116.81
103	2	12.22	24.33	±	1.10	219256.00	953.73	123447.00	192985.00	1814.14	1497.80
103	2	12.22	24.33	15	1.10	-74938.00	-3.29	-12427.10	2730.98	188.95	111.83
103	2	12.22	24.33	±	1.10	140645.00	619.98	87200.10	157304.00	1178.65	940.09
103	2	12.22	24.33	16	1.10	-65845.20	-27.35	-9900.78	4875.60	118.29	116.81
103	2	12.22	24.33	±	1.10	110283.00	483.59	67784.70	123369.00	924.20	721.32
103	2	12.22	24.33	17	1.10	-50317.20	-104.31	-1981.30	17615.50	-140.01	338.79
103	2	12.22	24.33	18	1.10	-38017.90	-201.53	445.45	20220.90	-310.93	99.76
103	2	12.22	24.33	19	1.10	-36235.40	-191.01	7620.15	7747.16	-246.45	232.40
103	2	12.22	24.33	20	1.10	-52099.70	-114.84	-9156.00	30089.30	-204.49	206.14
103	2	12.22	24.33	21	1.10	-39914.50	-68.53	-1828.39	12920.30	-82.04	282.12
103	2	12.22	24.33	22	1.10	-27615.20	-165.74	598.36	15525.60	-252.96	43.09
103	2	12.22	24.33	23	1.10	-25832.70	-155.22	7773.06	3051.88	-188.48	175.74
103	2	12.22	24.33	24	1.10	-41697.00	-79.05	-9003.09	25394.00	-146.52	149.47
103	2	12.22	24.33	25	1.10	-39202.50	-66.90	-1895.96	11800.10	-60.89	262.33
103	2	12.22	24.33	26	1.10	-26903.20	-164.12	530.78	14405.40	-231.81	23.30
103	2	12.22	24.33	27	1.10	-25120.70	-153.59	7705.49	1931.66	-167.33	155.94
103	2	12.22	24.33	28	1.10	-40985.00	-77.42	-9070.67	24273.80	-125.37	129.68
103	2	12.22	24.33	29	1.10	-38929.30	-66.25	-1927.56	11371.70	-53.17	254.44
103	2	12.22	24.33	30	1.10	-26629.90	-163.47	499.19	13977.00	-224.10	15.41
103	2	12.22	24.33	31	1.10	-24847.40	-152.94	7673.89	1503.27	-159.62	148.06
103	2	12.22	24.33	32	1.10	-40711.80	-76.78	-9102.26	23845.40	-117.65	121.79
103	2	12.22	24.33	1	2.33	9378.81	-226.43	10998.70	22617.70	-466.22	158.03
103	2	12.22	24.33	±	2.33	294704.00	1299.29	156223.00	208469.00	2415.53	2113.13
103	2	12.22	24.33	2	2.33	285.95	-202.37	8472.41	20473.10	-395.56	153.04
103	2	12.22	24.33	±	2.33	231052.00	999.15	121455.00	163481.00	1893.99	1627.00
103	2	12.22	24.33	3	2.33	9378.81	-226.43	10998.70	22617.70	-466.22	158.03
103	2	12.22	24.33	±	2.33	168619.00	743.45	82424.30	87453.60	1367.83	1246.69
103	2	12.22	24.33	4	2.33	285.95	-202.37	8472.41	20473.10	-395.56	153.04
103	2	12.22	24.33	±	2.33	132190.00	567.96	64085.40	68574.50	1072.49	961.26
103	2	12.22	24.33	5	2.33	9378.81	-226.43	10998.70	22617.70	-466.22	158.03
103	2	12.22	24.33	±	2.33	279641.00	1232.80	158794.00	246081.00	2313.66	1948.04
103	2	12.22	24.33	6	2.33	285.95	-202.37	8472.41	20473.10	-395.56	153.04
103	2	12.22	24.33	±	2.33	219256.00	953.73	123447.00	192985.00	1814.14	1497.80
103	2	12.22	24.33	7	2.33	9378.81	-226.43	10998.70	22617.70	-466.22	158.03
103	2	12.22	24.33	±	2.33	140645.00	619.98	87200.10	157304.00	1178.65	940.09
103	2	12.22	24.33	8	2.33	285.95	-202.37	8472.41	20473.10	-395.56	153.04
103	2	12.22	24.33	±	2.33	110283.00	483.59	67784.70	123369.00	924.20	721.32
103	2	12.22	24.33	9	2.33	-74938.00	-3.29	-12427.10	2730.98	188.95	111.83
103	2	12.22	24.33	±	2.33	294704.00	1299.29	156223.00	208469.00	2415.53	2113.13
103	2	12.22	24.33	10	2.33	-65845.20	-27.35	-9900.78	4875.60	118.29	116.81
103	2	12.22	24.33	±	2.33	231052.00	999.15	121455.00	163481.00	1893.99	1627.00
103	2	12.22	24.33	11	2.33	-74938.00	-3.29	-12427.10	2730.98	188.95	111.83
103	2	12.22	24.33	±	2.33	168619.00	743.45	82424.30	87453.60	1367.83	1246.69
103	2	12.22	24.33	12	2.33	-65845.20	-27.35	-9900.78	4875.60	118.29	116.81
103	2	12.22	24.33	±	2.33	132190.00	567.96	64085.40	68574.50	1072.49	961.26
103	2	12.22	24.33	13	2.33	-74938.00	-3.29	-12427.10	2730.98	188.95	111.83
103	2	12.22	24.33	±	2.33	279641.00	1232.80	158794.00	246081.00	2313.66	1948.04
103	2	12.22	24.33	14	2.33	-65845.20	-27.35	-9900.78	4875.60	118.29	116.81
103	2	12.22	24.33	±	2.33	219256.00	953.73	123447.00	192985.00	1814.14	1497.80
103	2	12.22	24.33	15	2.33	-74938.00	-3.29	-12427.10	2730.98	188.95	111.83
103	2	12.22	24.33	±	2.33	140645.00	619.98	87200.10	157304.00	1178.65	940.09
103	2	12.22	24.33	16	2.33	-65845.20	-27.35	-9900.78	4875.60	118.29	116.81
103	2	12.22	24.33	±	2.33	110283.00	483.59	67784.70	123369.00	924.20	721.32
103	2	12.22	24.33	17	2.33	-50317.20	-104.31	-1981.30	17615.50	-140.01	338.79
103	2	12.22	24.33	18	2.33	-38017.90	-201.53	445.45	20220.90	-310.93	99.76
103	2	12.22	24.33	19	2.33	-36235.40	-191.01	7620.15	7747.16	-246.45	232.40
103	2	12.22	24.33	20	2.33	-52099.70	-114.84	-9156.00	30089.30	-204.49	206.14
103	2	12.22	24.33	21	2.33	-39914.50	-68.53	-1828.39	12920.30	-82.04	282.12

Relazione di calcolo

103	2	12.22	24.33	22	2.33	-27615.20	-165.74	598.36	15525.60	-252.96	43.09
103	2	12.22	24.33	23	2.33	-25832.70	-155.22	7773.06	3051.88	-188.48	175.74
103	2	12.22	24.33	24	2.33	-41697.00	-79.05	-9003.09	25394.00	-146.52	149.47
103	2	12.22	24.33	25	2.33	-39202.50	-66.90	-1895.96	11800.10	-60.89	262.33
103	2	12.22	24.33	26	2.33	-26903.20	-164.12	530.78	14405.40	-231.81	23.30
103	2	12.22	24.33	27	2.33	-25120.70	-153.59	7705.49	1931.66	-167.33	155.94
103	2	12.22	24.33	28	2.33	-40985.00	-77.42	-9070.67	24273.80	-125.37	129.68
103	2	12.22	24.33	29	2.33	-38929.30	-66.25	-1927.56	11371.70	-53.17	254.44
103	2	12.22	24.33	30	2.33	-26629.90	-163.47	499.19	13977.00	-224.10	15.41
103	2	12.22	24.33	31	2.33	-24847.40	-152.94	7673.89	1503.27	-159.62	148.06
103	2	12.22	24.33	32	2.33	-40711.80	-76.78	-9102.26	23845.40	-117.65	121.79
103	3	12.22	24.33	1	2.33	-626.82	-709.36	11189.60	14678.60	-135.16	876.86
103	3	12.22	24.33	±	2.33	209343.00	4336.49	152892.00	146236.00	1171.95	4418.28
103	3	12.22	24.33	2	2.33	-6754.18	-537.97	8641.37	14226.30	-147.86	654.54
103	3	12.22	24.33	±	2.33	163524.00	3291.93	118873.00	114067.00	760.91	3397.10
103	3	12.22	24.33	3	2.33	-626.82	-709.36	11189.60	14678.60	-135.16	876.86
103	3	12.22	24.33	±	2.33	119725.00	2537.13	80974.70	63543.20	692.27	2734.05
103	3	12.22	24.33	4	2.33	-6754.18	-537.97	8641.37	14226.30	-147.86	654.54
103	3	12.22	24.33	±	2.33	93430.80	1922.43	62963.90	49673.00	445.29	2107.29
103	3	12.22	24.33	5	2.33	-626.82	-709.36	11189.60	14678.60	-135.16	876.86
103	3	12.22	24.33	±	2.33	198723.00	4029.97	154942.00	169287.00	1079.10	3879.90
103	3	12.22	24.33	6	2.33	-6754.18	-537.97	8641.37	14226.30	-147.86	654.54
103	3	12.22	24.33	±	2.33	155365.00	3064.66	120458.00	131884.00	706.96	2975.35
103	3	12.22	24.33	7	2.33	-626.82	-709.36	11189.60	14678.60	-135.16	876.86
103	3	12.22	24.33	±	2.33	100003.00	1967.88	84781.60	106354.00	519.84	1734.20
103	3	12.22	24.33	8	2.33	-6754.18	-537.97	8641.37	14226.30	-147.86	654.54
103	3	12.22	24.33	±	2.33	78278.60	1500.36	65906.50	82761.70	345.10	1324.03
103	3	12.22	24.33	9	2.33	-57445.00	879.94	-12439.60	10484.20	-252.87	-1184.65
103	3	12.22	24.33	±	2.33	209343.00	4336.49	152892.00	146236.00	1171.95	4418.28
103	3	12.22	24.33	10	2.33	-51317.60	708.54	-9891.37	10936.50	-240.17	-962.34
103	3	12.22	24.33	±	2.33	163524.00	3291.93	118873.00	114067.00	760.91	3397.10
103	3	12.22	24.33	11	2.33	-57445.00	879.94	-12439.60	10484.20	-252.87	-1184.65
103	3	12.22	24.33	±	2.33	119725.00	2537.13	80974.70	63543.20	692.27	2734.05
103	3	12.22	24.33	12	2.33	-51317.60	708.54	-9891.37	10936.50	-240.17	-962.34
103	3	12.22	24.33	±	2.33	93430.80	1922.43	62963.90	49673.00	445.29	2107.29
103	3	12.22	24.33	13	2.33	-57445.00	879.94	-12439.60	10484.20	-252.87	-1184.65
103	3	12.22	24.33	±	2.33	198723.00	4029.97	154942.00	169287.00	1079.10	3879.90
103	3	12.22	24.33	14	2.33	-51317.60	708.54	-9891.37	10936.50	-240.17	-962.34
103	3	12.22	24.33	±	2.33	155365.00	3064.66	120458.00	131884.00	706.96	2975.35
103	3	12.22	24.33	15	2.33	-57445.00	879.94	-12439.60	10484.20	-252.87	-1184.65
103	3	12.22	24.33	±	2.33	100003.00	1967.88	84781.60	106354.00	519.84	1734.20
103	3	12.22	24.33	16	2.33	-51317.60	708.54	-9891.37	10936.50	-240.17	-962.34
103	3	12.22	24.33	±	2.33	78278.60	1500.36	65906.50	82761.70	345.10	1324.03
103	3	12.22	24.33	17	2.33	-43937.00	243.37	-1895.22	18535.90	-314.09	-177.91
103	3	12.22	24.33	18	2.33	-34765.80	35.46	583.68	19100.20	-331.07	-237.99
103	3	12.22	24.33	19	2.33	-34674.10	25.19	7490.24	12142.50	-284.67	-75.94
103	3	12.22	24.33	20	2.33	-44028.70	253.64	-8801.78	25493.70	-360.49	-339.96
103	3	12.22	24.33	21	2.33	-34637.70	207.40	-1767.76	13860.10	-230.28	-129.03
103	3	12.22	24.33	22	2.33	-25466.40	-0.51	711.14	14424.40	-247.27	-189.11
103	3	12.22	24.33	23	2.33	-25374.70	-10.78	7617.70	7466.64	-200.86	-27.07
103	3	12.22	24.33	24	2.33	-34729.40	217.67	-8674.32	20817.80	-276.69	-291.08
103	3	12.22	24.33	25	2.33	-33905.20	194.18	-1833.42	12732.40	-197.70	-125.01
103	3	12.22	24.33	26	2.33	-24734.00	-13.73	645.48	13296.80	-214.68	-185.09
103	3	12.22	24.33	27	2.33	-24642.30	-24.00	7552.04	6339.00	-168.28	-23.04
103	3	12.22	24.33	28	2.33	-33996.90	204.45	-8739.98	19690.20	-244.10	-287.06
103	3	12.22	24.33	29	2.33	-33621.50	189.24	-1864.45	12299.20	-185.52	-123.86
103	3	12.22	24.33	30	2.33	-24450.30	-18.67	614.45	12863.60	-202.51	-183.93
103	3	12.22	24.33	31	2.33	-24358.60	-28.94	7521.01	5905.82	-156.10	-21.89
103	3	12.22	24.33	32	2.33	-33713.20	199.51	-8771.01	19257.00	-231.93	-285.90
103	3	12.22	24.33	1	3.56	-626.82	-709.36	11189.60	14678.60	-135.16	876.86
103	3	12.22	24.33	±	3.56	209343.00	4336.49	152892.00	146236.00	1171.95	4418.28
103	3	12.22	24.33	2	3.56	-6754.18	-537.97	8641.37	14226.30	-147.86	654.54
103	3	12.22	24.33	±	3.56	163524.00	3291.93	118873.00	114067.00	760.91	3397.10
103	3	12.22	24.33	3	3.56	-626.82	-709.36	11189.60	14678.60	-135.16	876.86
103	3	12.22	24.33	±	3.56	119725.00	2537.13	80974.70	63543.20	692.27	2734.05
103	3	12.22	24.33	4	3.56	-6754.18	-537.97	8641.37	14226.30	-147.86	654.54
103	3	12.22	24.33	±	3.56	93430.80	1922.43	62963.90	49673.00	445.29	2107.29
103	3	12.22	24.33	5	3.56	-626.82	-709.36	11189.60	14678.60	-135.16	876.86
103	3	12.22	24.33	±	3.56	198723.00	4029.97	154942.00	169287.00	1079.10	3879.90
103	3	12.22	24.33	6	3.56	-6754.18	-537.97	8641.37	14226.30	-147.86	654.54
103	3	12.22	24.33	±	3.56	155365.00	3064.66	120458.00	131884.00	706.96	2975.35
103	3	12.22	24.33	7	3.56	-626.82	-709.36	11189.60	14678.60	-135.16	876.86
103	3	12.22	24.33	±	3.56	100003.00	1967.88	84781.60	106354.00	519.84	1734.20
103	3	12.22	24.33	8	3.56	-6754.18	-537.97	8641.37	14226.30	-147.86	654.54
103	3	12.22	24.33	±	3.56	78278.60	1500.36	65906.50	82761.70	345.10	1324.03
103	3	12.22	24.33	9	3.56	-57445.00	879.94	-12439.60	10484.20	-252.87	-1184.65
103	3	12.22	24.33	±	3.56	209343.00	4336.49	152892.00	146236.00	1171.95	4418.28
103	3	12.22	24.33	10	3.56	-51317.60	708.54	-9891.37	10936.50	-240.17	-962.34
103	3	12.22	24.33	±	3.56	163524.00	3291.93	118873.00	114067.00	760.91	3397.10

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103	3	12.22	24.33	11	3.56	-57445.00	879.94	-12439.60	10484.20	-252.87	-1184.65
103	3	12.22	24.33	±	3.56	119725.00	2537.13	80974.70	63543.20	692.27	2734.05
103	3	12.22	24.33	12	3.56	-51317.60	708.54	-9891.37	10936.50	-240.17	-962.34
103	3	12.22	24.33	±	3.56	93430.80	1922.43	62963.90	49673.00	445.29	2107.29
103	3	12.22	24.33	13	3.56	-57445.00	879.94	-12439.60	10484.20	-252.87	-1184.65
103	3	12.22	24.33	±	3.56	198723.00	4029.97	154942.00	169287.00	1079.10	3879.90
103	3	12.22	24.33	14	3.56	-51317.60	708.54	-9891.37	10936.50	-240.17	-962.34
103	3	12.22	24.33	±	3.56	155365.00	3064.66	120458.00	131884.00	706.96	2975.35
103	3	12.22	24.33	15	3.56	-57445.00	879.94	-12439.60	10484.20	-252.87	-1184.65
103	3	12.22	24.33	±	3.56	100003.00	1967.88	84781.60	106354.00	519.84	1734.20
103	3	12.22	24.33	16	3.56	-51317.60	708.54	-9891.37	10936.50	-240.17	-962.34
103	3	12.22	24.33	±	3.56	78278.60	1500.36	65906.50	82761.70	345.10	1324.03
103	3	12.22	24.33	17	3.56	-43937.00	243.37	-1895.22	18535.90	-314.09	-177.91
103	3	12.22	24.33	18	3.56	-34765.80	35.46	583.68	19100.20	-331.07	-237.99
103	3	12.22	24.33	19	3.56	-34674.10	25.19	7490.24	12142.50	-284.67	-75.94
103	3	12.22	24.33	20	3.56	-44028.70	253.64	-8801.78	25493.70	-360.49	-339.96
103	3	12.22	24.33	21	3.56	-34637.70	207.40	-1767.76	13860.10	-230.28	-129.03
103	3	12.22	24.33	22	3.56	-25466.40	-0.51	711.14	14424.40	-247.27	-189.11
103	3	12.22	24.33	23	3.56	-25374.70	-10.78	7617.70	7466.64	-200.86	-27.07
103	3	12.22	24.33	24	3.56	-34729.40	217.67	-8674.32	20817.80	-276.69	-291.08
103	3	12.22	24.33	25	3.56	-33905.20	194.18	-1833.42	12732.40	-197.70	-125.01
103	3	12.22	24.33	26	3.56	-24734.00	-13.73	645.48	13296.80	-214.68	-185.09
103	3	12.22	24.33	27	3.56	-24642.30	-24.00	7552.04	6339.00	-168.28	-23.04
103	3	12.22	24.33	28	3.56	-33996.90	204.45	-8739.98	19690.20	-244.10	-287.06
103	3	12.22	24.33	29	3.56	-33621.50	189.24	-1864.45	12299.20	-185.52	-123.86
103	3	12.22	24.33	30	3.56	-24450.30	-18.67	614.45	12863.60	-202.51	-183.93
103	3	12.22	24.33	31	3.56	-24358.60	-28.94	7521.01	5905.82	-156.10	-21.89
103	3	12.22	24.33	32	3.56	-33713.20	199.51	-8771.01	19257.00	-231.93	-285.90
106	1	11.21	26.00	1	-0.25	-14982.40	-26535.40	-88.16	202.74	-21680.50	855.60
106	1	11.21	26.00	±	-0.25	249081.00	128874.00	7677.73	2825.90	101065.00	4292.52
106	1	11.21	26.00	2	-0.25	-15738.00	-20726.10	6.42	169.51	-17645.00	657.66
106	1	11.21	26.00	±	-0.25	195298.00	100166.00	5956.69	2206.65	79160.70	3346.18
106	1	11.21	26.00	3	-0.25	-14982.40	-26535.40	-88.16	202.74	-21680.50	855.60
106	1	11.21	26.00	±	-0.25	114224.00	74686.60	3301.86	1219.39	57100.60	2561.00
106	1	11.21	26.00	4	-0.25	-15738.00	-20726.10	6.42	169.51	-17645.00	657.66
106	1	11.21	26.00	±	-0.25	89558.20	58015.30	2561.79	952.21	44720.00	1997.14
106	1	11.21	26.00	5	-0.25	-14982.40	-26535.40	-88.16	202.74	-21680.50	855.60
106	1	11.21	26.00	±	-0.25	279258.00	120845.00	8940.05	3284.30	96999.40	3913.90
106	1	11.21	26.00	6	-0.25	-15738.00	-20726.10	6.42	169.51	-17645.00	657.66
106	1	11.21	26.00	±	-0.25	218961.00	93977.80	6935.93	2564.56	75983.30	3049.89
106	1	11.21	26.00	7	-0.25	-14982.40	-26535.40	-88.16	202.74	-21680.50	855.60
106	1	11.21	26.00	±	-0.25	170267.00	59777.40	5646.18	2070.71	49549.60	1857.84
106	1	11.21	26.00	8	-0.25	-15738.00	-20726.10	6.42	169.51	-17645.00	657.66
106	1	11.21	26.00	±	-0.25	133504.00	46523.50	4380.39	1616.90	38819.10	1446.90
106	1	11.21	26.00	9	-0.25	-21989.30	27333.80	788.87	-105.41	15740.20	-979.83
106	1	11.21	26.00	±	-0.25	249081.00	128874.00	7677.73	2825.90	101065.00	4292.52
106	1	11.21	26.00	10	-0.25	-21233.60	21524.50	694.29	-72.18	11704.70	-781.89
106	1	11.21	26.00	±	-0.25	195298.00	100166.00	5956.69	2206.65	79160.70	3346.18
106	1	11.21	26.00	11	-0.25	-21989.30	27333.80	788.87	-105.41	15740.20	-979.83
106	1	11.21	26.00	±	-0.25	114224.00	74686.60	3301.86	1219.39	57100.60	2561.00
106	1	11.21	26.00	12	-0.25	-21233.60	21524.50	694.29	-72.18	11704.70	-781.89
106	1	11.21	26.00	±	-0.25	89558.20	58015.30	2561.79	952.21	44720.00	1997.14
106	1	11.21	26.00	13	-0.25	-21989.30	27333.80	788.87	-105.41	15740.20	-979.83
106	1	11.21	26.00	±	-0.25	279258.00	120845.00	8940.05	3284.30	96999.40	3913.90
106	1	11.21	26.00	14	-0.25	-21233.60	21524.50	694.29	-72.18	11704.70	-781.89
106	1	11.21	26.00	±	-0.25	218961.00	93977.80	6935.93	2564.56	75983.30	3049.89
106	1	11.21	26.00	15	-0.25	-21989.30	27333.80	788.87	-105.41	15740.20	-979.83
106	1	11.21	26.00	±	-0.25	170267.00	59777.40	5646.18	2070.71	49549.60	1857.84
106	1	11.21	26.00	16	-0.25	-21233.60	21524.50	694.29	-72.18	11704.70	-781.89
106	1	11.21	26.00	±	-0.25	133504.00	46523.50	4380.39	1616.90	38819.10	1446.90
106	1	11.21	26.00	17	-0.25	-24060.90	3107.90	516.78	76.40	-1821.43	-117.05
106	1	11.21	26.00	18	-0.25	-26868.30	-2554.20	519.72	67.14	-7975.10	-53.80
106	1	11.21	26.00	19	-0.25	-38524.80	-2235.37	1001.06	-95.10	-5969.90	41.62
106	1	11.21	26.00	20	-0.25	-12404.40	2789.07	35.43	238.64	-3826.64	-212.47
106	1	11.21	26.00	21	-0.25	-18005.00	3078.87	388.79	58.73	-555.57	-96.72
106	1	11.21	26.00	22	-0.25	-20812.40	-2583.23	391.73	49.47	-6709.24	-33.47
106	1	11.21	26.00	±	-0.25	-32469.00	-2264.40	873.08	-112.77	-4704.03	61.95
106	1	11.21	26.00	24	-0.25	-6348.49	2760.04	-92.56	220.97	-2560.77	-192.15
106	1	11.21	26.00	25	-0.25	-17315.30	3184.95	359.79	54.74	-69.44	-94.54
106	1	11.21	26.00	26	-0.25	-20122.80	-2477.16	362.73	45.48	-6223.12	-31.29
106	1	11.21	26.00	27	-0.25	-31779.30	-2158.32	844.08	-116.76	-4217.91	64.13
106	1	11.21	26.00	28	-0.25	-5658.83	2866.11	-121.55	216.98	-2074.65	-189.96
106	1	11.21	26.00	29	-0.25	-17082.10	3230.27	348.88	53.29	106.70	-93.74
106	1	11.21	26.00	30	-0.25	-19889.50	-2431.83	351.82	44.03	-6046.97	-30.49
106	1	11.21	26.00	31	-0.25	-31546.10	-2113.00	833.17	-118.21	-4041.76	64.93
106	1	11.21	26.00	32	-0.25	-5425.57	2911.44	-132.46	215.53	-1898.50	-189.16
106	1	11.21	26.00	1	1.10	-14982.40	-26535.40	-88.16	202.74	-21680.50	855.60
106	1	11.21	26.00	±	1.10	249081.00	128874.00	7677.73	2825.90	101065.00	4292.52
106	1	11.21	26.00	2	1.10	-15738.00	-20726.10	6.42	169.51	-17645.00	657.66

Relazione di calcolo

106	1	11.21	26.00	±	1.10	195298.00	100166.00	5956.69	2206.65	79160.70	3346.18
106	1	11.21	26.00	3	1.10	-14982.40	-26535.40	-88.16	202.74	-21680.50	855.60
106	1	11.21	26.00	±	1.10	114224.00	74686.60	3301.86	1219.39	57100.60	2561.00
106	1	11.21	26.00	4	1.10	-15738.00	-20726.10	6.42	169.51	-17645.00	657.66
106	1	11.21	26.00	±	1.10	89558.20	58015.30	2561.79	952.21	44720.00	1997.14
106	1	11.21	26.00	5	1.10	-14982.40	-26535.40	-88.16	202.74	-21680.50	855.60
106	1	11.21	26.00	±	1.10	279258.00	120845.00	8940.05	3284.30	96999.40	3913.90
106	1	11.21	26.00	6	1.10	-15738.00	-20726.10	6.42	169.51	-17645.00	657.66
106	1	11.21	26.00	±	1.10	218961.00	93977.80	6935.93	2564.56	75983.30	3049.89
106	1	11.21	26.00	7	1.10	-21989.30	27333.80	788.87	202.74	-21680.50	855.60
106	1	11.21	26.00	±	1.10	170267.00	59777.40	5646.18	2070.71	49549.60	1857.84
106	1	11.21	26.00	8	1.10	-15738.00	-20726.10	6.42	169.51	-17645.00	657.66
106	1	11.21	26.00	±	1.10	133504.00	46523.50	4380.39	1616.90	38819.10	1446.90
106	1	11.21	26.00	9	1.10	-21989.30	27333.80	788.87	-105.41	15740.20	-979.83
106	1	11.21	26.00	±	1.10	249081.00	128874.00	7677.73	2825.90	101065.00	4292.52
106	1	11.21	26.00	10	1.10	-21233.60	21524.50	694.29	-72.18	11704.70	-781.89
106	1	11.21	26.00	±	1.10	195298.00	100166.00	5956.69	2206.65	79160.70	3346.18
106	1	11.21	26.00	11	1.10	-21989.30	27333.80	788.87	-105.41	15740.20	-979.83
106	1	11.21	26.00	±	1.10	114224.00	74686.60	3301.86	1219.39	57100.60	2561.00
106	1	11.21	26.00	12	1.10	-21233.60	21524.50	694.29	-72.18	11704.70	-781.89
106	1	11.21	26.00	±	1.10	89558.20	58015.30	2561.79	952.21	44720.00	1997.14
106	1	11.21	26.00	13	1.10	-21989.30	27333.80	788.87	-105.41	15740.20	-979.83
106	1	11.21	26.00	±	1.10	279258.00	120845.00	8940.05	3284.30	96999.40	3913.90
106	1	11.21	26.00	14	1.10	-21233.60	21524.50	694.29	-72.18	11704.70	-781.89
106	1	11.21	26.00	±	1.10	218961.00	93977.80	6935.93	2564.56	75983.30	3049.89
106	1	11.21	26.00	15	1.10	-21989.30	27333.80	788.87	-105.41	15740.20	-979.83
106	1	11.21	26.00	±	1.10	170267.00	59777.40	5646.18	2070.71	49549.60	1857.84
106	1	11.21	26.00	16	1.10	-21233.60	21524.50	694.29	-72.18	11704.70	-781.89
106	1	11.21	26.00	±	1.10	133504.00	46523.50	4380.39	1616.90	38819.10	1446.90
106	1	11.21	26.00	17	1.10	-24060.90	3107.90	516.78	76.40	-1821.43	-117.05
106	1	11.21	26.00	18	1.10	-26868.30	-2554.20	519.72	67.14	-7975.10	-53.80
106	1	11.21	26.00	19	1.10	-38524.80	-2235.37	1001.06	-95.10	-5969.90	41.62
106	1	11.21	26.00	20	1.10	-12404.40	2789.07	35.43	238.64	-3826.64	-212.47
106	1	11.21	26.00	21	1.10	-18005.00	3078.87	388.79	58.73	-555.57	-96.72
106	1	11.21	26.00	22	1.10	-20812.40	-2583.23	391.73	49.47	-6709.24	-33.47
106	1	11.21	26.00	23	1.10	-32469.00	-2264.40	873.08	-112.77	-4704.03	61.95
106	1	11.21	26.00	24	1.10	-6348.49	2760.04	-92.56	220.97	-2560.77	-192.15
106	1	11.21	26.00	25	1.10	-17315.30	3184.95	359.79	54.74	-69.44	-94.54
106	1	11.21	26.00	26	1.10	-20122.80	-2477.16	362.73	45.48	-6223.12	-31.29
106	1	11.21	26.00	27	1.10	-31779.30	-2158.32	844.08	-116.76	-4217.91	64.13
106	1	11.21	26.00	28	1.10	-5658.83	2866.11	-121.55	216.98	-2074.65	-189.96
106	1	11.21	26.00	29	1.10	-17082.10	3230.27	348.88	53.29	106.70	-93.74
106	1	11.21	26.00	30	1.10	-19889.50	-2431.83	351.82	44.03	-6046.97	-30.49
106	1	11.21	26.00	31	1.10	-31546.10	-2113.00	833.17	-118.21	-4041.76	64.93
106	1	11.21	26.00	32	1.10	-5425.57	2911.44	-132.46	215.53	-1898.50	-189.16
106	2	11.21	26.00	1	1.10	-13847.80	-26791.60	-3.01	129.35	-14641.10	359.44
106	2	11.21	26.00	±	1.10	192039.00	140852.00	465.31	803.51	64743.20	1272.67
106	2	11.21	26.00	2	1.10	-14561.10	-20465.20	-20.99	123.52	-12269.40	282.74
106	2	11.21	26.00	±	1.10	150598.00	109478.00	362.51	629.18	50770.60	997.01
106	2	11.21	26.00	3	1.10	-13847.80	-26791.60	-3.01	129.35	-14641.10	359.44
106	2	11.21	26.00	±	1.10	87388.40	81580.90	182.06	349.51	36405.80	712.72
106	2	11.21	26.00	4	1.10	-14561.10	-20465.20	-20.99	123.52	-12269.40	282.74
106	2	11.21	26.00	±	1.10	68527.60	63371.40	140.80	273.71	28548.40	558.30
106	2	11.21	26.00	5	1.10	-13847.80	-26791.60	-3.01	129.35	-14641.10	359.44
106	2	11.21	26.00	±	1.10	216331.00	132150.00	569.18	929.63	62401.30	1231.06
106	2	11.21	26.00	6	1.10	-14561.10	-20465.20	-20.99	123.52	-12269.40	282.74
106	2	11.21	26.00	±	1.10	169653.00	102772.00	445.02	727.88	48934.90	964.47
106	2	11.21	26.00	7	1.10	-13847.80	-26791.60	-3.01	129.35	-14641.10	359.44
106	2	11.21	26.00	±	1.10	132503.00	65419.90	374.97	583.73	32056.60	635.45
106	2	11.21	26.00	8	1.10	-14561.10	-20465.20	-20.99	123.52	-12269.40	282.74
106	2	11.21	26.00	±	1.10	103915.00	50917.20	294.02	457.01	25139.30	497.88
106	2	11.21	26.00	9	1.10	-20461.90	31872.10	-169.78	75.27	7351.04	-351.81
106	2	11.21	26.00	±	1.10	192039.00	140852.00	465.31	803.51	64743.20	1272.67
106	2	11.21	26.00	10	1.10	-19748.70	25545.70	-151.80	81.10	4979.38	-275.11
106	2	11.21	26.00	±	1.10	150598.00	109478.00	362.51	629.18	50770.60	997.01
106	2	11.21	26.00	11	1.10	-20461.90	31872.10	-169.78	75.27	7351.04	-351.81
106	2	11.21	26.00	±	1.10	87388.40	81580.90	182.06	349.51	36405.80	712.72
106	2	11.21	26.00	12	1.10	-19748.70	25545.70	-151.80	81.10	4979.38	-275.11
106	2	11.21	26.00	±	1.10	68527.60	63371.40	140.80	273.71	28548.40	558.30
106	2	11.21	26.00	13	1.10	-20461.90	31872.10	-169.78	75.27	7351.04	-351.81
106	2	11.21	26.00	±	1.10	216331.00	132150.00	569.18	929.63	62401.30	1231.06
106	2	11.21	26.00	14	1.10	-19748.70	25545.70	-151.80	81.10	4979.38	-275.11
106	2	11.21	26.00	±	1.10	169653.00	102772.00	445.02	727.88	48934.90	964.47
106	2	11.21	26.00	15	1.10	-20461.90	31872.10	-169.78	75.27	7351.04	-351.81
106	2	11.21	26.00	±	1.10	132503.00	65419.90	374.97	583.73	32056.60	635.45
106	2	11.21	26.00	16	1.10	-19748.70	25545.70	-151.80	81.10	4979.38	-275.11
106	2	11.21	26.00	±	1.10	103915.00	50917.20	294.02	457.01	25139.30	497.88
106	2	11.21	26.00	17	1.10	-22647.60	6440.76	-135.02	153.69	-3697.76	14.90
106	2	11.21	26.00	18	1.10	-24795.00	170.30	-113.79	150.16	-7776.61	-0.43

Relazione di calcolo

106	2	11.21	26.00	19	1.10	-33222.50	576.62	-142.15	113.38	-6235.32	10.63
106	2	11.21	26.00	20	1.10	-14220.10	6034.45	-106.66	190.47	-5239.06	3.84
106	2	11.21	26.00	21	1.10	-16996.50	5679.00	-104.83	116.07	-2244.06	12.89
106	2	11.21	26.00	22	1.10	-19143.90	-591.46	-83.60	112.53	-6322.91	-2.44
106	2	11.21	26.00	23	1.10	-27571.40	-185.15	-111.96	75.75	-4781.62	8.62
106	2	11.21	26.00	24	1.10	-8569.00	5272.68	-76.47	152.85	-3785.35	1.82
106	2	11.21	26.00	25	1.10	-16311.20	5674.11	-98.93	107.41	-1774.24	11.92
106	2	11.21	26.00	26	1.10	-18458.60	-596.35	-77.71	103.88	-5853.09	-3.40
106	2	11.21	26.00	27	1.10	-26886.10	-190.03	-106.07	67.09	-4311.80	7.66
106	2	11.21	26.00	28	1.10	-7883.67	5267.80	-70.57	144.19	-3315.53	0.86
106	2	11.21	26.00	29	1.10	-16081.20	5675.48	-97.01	104.08	-1605.58	11.48
106	2	11.21	26.00	30	1.10	-18228.50	-594.98	-75.78	100.54	-5684.43	-3.85
106	2	11.21	26.00	31	1.10	-26656.10	-188.66	-104.14	63.76	-4143.14	7.22
106	2	11.21	26.00	32	1.10	-7653.66	5269.16	-68.65	140.86	-3146.88	0.42
106	2	11.21	26.00	1	2.33	-13847.80	-26791.60	-3.01	129.35	-14641.10	359.44
106	2	11.21	26.00	±	2.33	192039.00	140852.00	465.31	803.51	64743.20	1272.67
106	2	11.21	26.00	2	2.33	-14561.10	-20465.20	-20.99	123.52	-12269.40	282.74
106	2	11.21	26.00	±	2.33	150598.00	109478.00	362.51	629.18	50770.60	997.01
106	2	11.21	26.00	3	2.33	-13847.80	-26791.60	-3.01	129.35	-14641.10	359.44
106	2	11.21	26.00	±	2.33	87388.40	81580.90	182.06	349.51	36405.80	712.72
106	2	11.21	26.00	4	2.33	-14561.10	-20465.20	-20.99	123.52	-12269.40	282.74
106	2	11.21	26.00	±	2.33	68527.60	63371.40	140.80	273.71	28548.40	558.30
106	2	11.21	26.00	5	2.33	-13847.80	-26791.60	-3.01	129.35	-14641.10	359.44
106	2	11.21	26.00	±	2.33	216331.00	132150.00	569.18	929.63	62401.30	1231.06
106	2	11.21	26.00	6	2.33	-14561.10	-20465.20	-20.99	123.52	-12269.40	282.74
106	2	11.21	26.00	±	2.33	169653.00	102772.00	445.02	727.88	48934.90	964.47
106	2	11.21	26.00	7	2.33	-13847.80	-26791.60	-3.01	129.35	-14641.10	359.44
106	2	11.21	26.00	±	2.33	132503.00	65419.90	374.97	583.73	32056.60	635.45
106	2	11.21	26.00	8	2.33	-14561.10	-20465.20	-20.99	123.52	-12269.40	282.74
106	2	11.21	26.00	±	2.33	103915.00	50917.20	294.02	457.01	25139.30	497.88
106	2	11.21	26.00	9	2.33	-20461.90	31872.10	-169.78	75.27	7351.04	-351.81
106	2	11.21	26.00	±	2.33	192039.00	140852.00	465.31	803.51	64743.20	1272.67
106	2	11.21	26.00	10	2.33	-19748.70	25545.70	-151.80	81.10	4979.38	-275.11
106	2	11.21	26.00	±	2.33	150598.00	109478.00	362.51	629.18	50770.60	997.01
106	2	11.21	26.00	11	2.33	-20461.90	31872.10	-169.78	75.27	7351.04	-351.81
106	2	11.21	26.00	±	2.33	87388.40	81580.90	182.06	349.51	36405.80	712.72
106	2	11.21	26.00	12	2.33	-19748.70	25545.70	-151.80	81.10	4979.38	-275.11
106	2	11.21	26.00	±	2.33	68527.60	63371.40	140.80	273.71	28548.40	558.30
106	2	11.21	26.00	13	2.33	-20461.90	31872.10	-169.78	75.27	7351.04	-351.81
106	2	11.21	26.00	±	2.33	216331.00	132150.00	569.18	929.63	62401.30	1231.06
106	2	11.21	26.00	14	2.33	-19748.70	25545.70	-151.80	81.10	4979.38	-275.11
106	2	11.21	26.00	±	2.33	169653.00	102772.00	445.02	727.88	48934.90	964.47
106	2	11.21	26.00	15	2.33	-20461.90	31872.10	-169.78	75.27	7351.04	-351.81
106	2	11.21	26.00	±	2.33	132503.00	65419.90	374.97	583.73	32056.60	635.45
106	2	11.21	26.00	16	2.33	-19748.70	25545.70	-151.80	81.10	4979.38	-275.11
106	2	11.21	26.00	±	2.33	103915.00	50917.20	294.02	457.01	25139.30	497.88
106	2	11.21	26.00	17	2.33	-22647.60	6440.76	-135.02	153.69	-3697.76	14.90
106	2	11.21	26.00	18	2.33	-24795.00	170.30	-113.79	150.16	-7776.61	-0.43
106	2	11.21	26.00	19	2.33	-33222.50	576.62	-142.15	113.38	-6235.32	10.63
106	2	11.21	26.00	20	2.33	-14220.10	6034.45	-106.66	190.47	-5239.06	3.84
106	2	11.21	26.00	21	2.33	-16996.50	5679.00	-104.83	116.07	-2244.06	12.89
106	2	11.21	26.00	22	2.33	-19143.90	-591.46	-83.60	112.53	-6322.91	-2.44
106	2	11.21	26.00	23	2.33	-27571.40	-185.15	-111.96	75.75	-4781.62	8.62
106	2	11.21	26.00	24	2.33	-8569.00	5272.68	-76.47	152.85	-3785.35	1.82
106	2	11.21	26.00	25	2.33	-16311.20	5674.11	-98.93	107.41	-1774.24	11.92
106	2	11.21	26.00	26	2.33	-18458.60	-596.35	-77.71	103.88	-5853.09	-3.40
106	2	11.21	26.00	27	2.33	-26886.10	-190.03	-106.07	67.09	-4311.80	7.66
106	2	11.21	26.00	28	2.33	-7883.67	5267.80	-70.57	144.19	-3315.53	0.86
106	2	11.21	26.00	29	2.33	-16081.20	5675.48	-97.01	104.08	-1605.58	11.48
106	2	11.21	26.00	30	2.33	-18228.50	-594.98	-75.78	100.54	-5684.43	-3.85
106	2	11.21	26.00	31	2.33	-26656.10	-188.66	-104.14	63.76	-4143.14	7.22
106	2	11.21	26.00	32	2.33	-7653.66	5269.16	-68.65	140.86	-3146.88	0.42
106	3	11.21	26.00	1	2.33	-12552.60	-28313.60	-417.83	33.49	-7970.10	405.35
106	3	11.21	26.00	±	2.33	132354.00	133714.00	4521.62	414.52	36484.60	3150.85
106	3	11.21	26.00	2	2.33	-13144.80	-22298.20	-365.63	31.69	-7043.45	296.80
106	3	11.21	26.00	±	2.33	103362.00	103978.00	3466.08	264.24	28045.90	2457.11
106	3	11.21	26.00	3	2.33	-12552.60	-28313.60	-417.83	33.49	-7970.10	405.35
106	3	11.21	26.00	±	2.33	59719.90	77400.20	1934.11	185.96	20556.10	1822.95
106	3	11.21	26.00	4	2.33	-13144.80	-22298.20	-365.63	31.69	-7043.45	296.80
106	3	11.21	26.00	±	2.33	46597.10	60152.20	1481.57	120.08	15770.70	1421.35
106	3	11.21	26.00	5	2.33	-12552.60	-28313.60	-417.83	33.49	-7970.10	405.35
106	3	11.21	26.00	±	2.33	149867.00	125524.00	5280.87	471.00	35103.50	2959.24
106	3	11.21	26.00	6	2.33	-13144.80	-22298.20	-365.63	31.69	-7043.45	296.80
106	3	11.21	26.00	±	2.33	117101.00	97663.10	4049.67	297.92	27031.10	2308.04
106	3	11.21	26.00	7	2.33	-12552.60	-28313.60	-417.83	33.49	-7970.10	405.35
106	3	11.21	26.00	±	2.33	92245.20	62189.80	3344.16	290.85	17991.30	1467.10
106	3	11.21	26.00	8	2.33	-13144.80	-22298.20	-365.63	31.69	-7043.45	296.80
106	3	11.21	26.00	±	2.33	72113.80	48424.00	2565.37	182.62	13886.10	1144.50
106	3	11.21	26.00	9	2.33	-18043.60	27466.10	66.28	16.82	622.63	-601.20

Relazione di calcolo

106	3	11.21	26.00	±	2.33	132354.00	133714.00	4521.62	414.52	36484.60	3150.85
106	3	11.21	26.00	10	2.33	-17451.40	21450.80	14.07	18.61	-304.02	-492.65
106	3	11.21	26.00	±	2.33	103362.00	103978.00	3466.08	264.24	28045.90	2457.11
106	3	11.21	26.00	11	2.33	-18043.60	27466.10	66.28	16.82	622.63	-601.20
106	3	11.21	26.00	±	2.33	59719.90	77400.20	1934.11	185.96	20556.10	1822.95
106	3	11.21	26.00	12	2.33	-17451.40	21450.80	14.07	18.61	-304.02	-492.65
106	3	11.21	26.00	±	2.33	46597.10	60152.20	1481.57	120.08	15770.70	1421.35
106	3	11.21	26.00	13	2.33	-18043.60	27466.10	66.28	16.82	622.63	-601.20
106	3	11.21	26.00	±	2.33	149867.00	125524.00	5280.87	471.00	35103.50	2959.24
106	3	11.21	26.00	14	2.33	-17451.40	21450.80	14.07	18.61	-304.02	-492.65
106	3	11.21	26.00	±	2.33	117101.00	97663.10	4049.67	297.92	27031.10	2308.04
106	3	11.21	26.00	15	2.33	-18043.60	27466.10	66.28	16.82	622.63	-601.20
106	3	11.21	26.00	±	2.33	92245.20	62189.80	3344.16	290.85	17991.30	1467.10
106	3	11.21	26.00	16	2.33	-17451.40	21450.80	14.07	18.61	-304.02	-492.65
106	3	11.21	26.00	±	2.33	72113.80	48424.00	2565.37	182.62	13886.10	1144.50
106	3	11.21	26.00	17	2.33	-20547.60	2050.96	-228.95	47.74	-4511.29	-97.58
106	3	11.21	26.00	18	2.33	-22055.60	-3916.83	-259.77	38.44	-6795.27	-156.95
106	3	11.21	26.00	19	2.33	-27046.70	-3488.88	62.20	50.89	-5677.85	18.18
106	3	11.21	26.00	20	2.33	-15556.60	1623.01	-550.92	35.29	-5628.70	-272.71
106	3	11.21	26.00	21	2.33	-15456.90	2320.30	-170.64	36.38	-3094.42	-68.06
106	3	11.21	26.00	22	2.33	-16965.00	-3647.49	-201.46	27.08	-5378.40	-127.43
106	3	11.21	26.00	23	2.33	-21956.00	-3219.54	120.51	39.53	-4260.98	47.70
106	3	11.21	26.00	24	2.33	-10465.90	1892.35	-492.61	23.93	-4211.83	-243.19
106	3	11.21	26.00	25	2.33	-14771.50	2489.90	-162.86	31.64	-2677.69	-68.44
106	3	11.21	26.00	26	2.33	-16279.50	-3477.89	-193.68	22.35	-4961.67	-127.81
106	3	11.21	26.00	27	2.33	-21270.60	-3049.94	128.29	34.80	-3844.26	47.32
106	3	11.21	26.00	28	2.33	-9780.46	2061.95	-484.83	19.19	-3795.11	-243.57
106	3	11.21	26.00	29	2.33	-14544.10	2560.16	-160.37	29.80	-2531.75	-68.24
106	3	11.21	26.00	30	2.33	-16052.10	-3407.63	-191.19	20.51	-4815.72	-127.61
106	3	11.21	26.00	31	2.33	-21043.10	-2979.68	130.78	32.96	-3698.31	47.52
106	3	11.21	26.00	32	2.33	-9553.04	2132.21	-482.34	17.35	-3649.16	-243.37
106	3	11.21	26.00	1	3.56	-12552.60	-28313.60	-417.83	33.49	-7970.10	405.35
106	3	11.21	26.00	±	3.56	132354.00	133714.00	4521.62	414.52	36484.60	3150.85
106	3	11.21	26.00	2	3.56	-13144.80	-22298.20	-365.63	31.69	-7043.45	296.80
106	3	11.21	26.00	±	3.56	103362.00	103978.00	3466.08	264.24	28045.90	2457.11
106	3	11.21	26.00	3	3.56	-12552.60	-28313.60	-417.83	33.49	-7970.10	405.35
106	3	11.21	26.00	±	3.56	59719.90	77400.20	1934.11	185.96	20556.10	1822.95
106	3	11.21	26.00	4	3.56	-13144.80	-22298.20	-365.63	31.69	-7043.45	296.80
106	3	11.21	26.00	±	3.56	46597.10	60152.20	1481.57	120.08	15770.70	1421.35
106	3	11.21	26.00	5	3.56	-12552.60	-28313.60	-417.83	33.49	-7970.10	405.35
106	3	11.21	26.00	±	3.56	149867.00	125524.00	5280.87	471.00	35103.50	2959.24
106	3	11.21	26.00	6	3.56	-13144.80	-22298.20	-365.63	31.69	-7043.45	296.80
106	3	11.21	26.00	±	3.56	117101.00	97663.10	4049.67	297.92	27031.10	2308.04
106	3	11.21	26.00	7	3.56	-12552.60	-28313.60	-417.83	33.49	-7970.10	405.35
106	3	11.21	26.00	±	3.56	92245.20	62189.80	3344.16	290.85	17991.30	1467.10
106	3	11.21	26.00	8	3.56	-13144.80	-22298.20	-365.63	31.69	-7043.45	296.80
106	3	11.21	26.00	±	3.56	72113.80	48424.00	2565.37	182.62	13886.10	1144.50
106	3	11.21	26.00	9	3.56	-18043.60	27466.10	66.28	16.82	622.63	-601.20
106	3	11.21	26.00	±	3.56	132354.00	133714.00	4521.62	414.52	36484.60	3150.85
106	3	11.21	26.00	10	3.56	-17451.40	21450.80	14.07	18.61	-304.02	-492.65
106	3	11.21	26.00	±	3.56	103362.00	103978.00	3466.08	264.24	28045.90	2457.11
106	3	11.21	26.00	11	3.56	-18043.60	27466.10	66.28	16.82	622.63	-601.20
106	3	11.21	26.00	±	3.56	59719.90	77400.20	1934.11	185.96	20556.10	1822.95
106	3	11.21	26.00	12	3.56	-17451.40	21450.80	14.07	18.61	-304.02	-492.65
106	3	11.21	26.00	±	3.56	46597.10	60152.20	1481.57	120.08	15770.70	1421.35
106	3	11.21	26.00	13	3.56	-18043.60	27466.10	66.28	16.82	622.63	-601.20
106	3	11.21	26.00	±	3.56	149867.00	125524.00	5280.87	471.00	35103.50	2959.24
106	3	11.21	26.00	14	3.56	-17451.40	21450.80	14.07	18.61	-304.02	-492.65
106	3	11.21	26.00	±	3.56	117101.00	97663.10	4049.67	297.92	27031.10	2308.04
106	3	11.21	26.00	15	3.56	-18043.60	27466.10	66.28	16.82	622.63	-601.20
106	3	11.21	26.00	±	3.56	92245.20	62189.80	3344.16	290.85	17991.30	1467.10
106	3	11.21	26.00	16	3.56	-17451.40	21450.80	14.07	18.61	-304.02	-492.65
106	3	11.21	26.00	±	3.56	72113.80	48424.00	2565.37	182.62	13886.10	1144.50
106	3	11.21	26.00	17	3.56	-20547.60	2050.96	-228.95	47.74	-4511.29	-97.58
106	3	11.21	26.00	18	3.56	-22055.60	-3916.83	-259.77	38.44	-6795.27	-156.95
106	3	11.21	26.00	19	3.56	-27046.70	-3488.88	62.20	50.89	-5677.85	18.18
106	3	11.21	26.00	20	3.56	-15556.60	1623.01	-550.92	35.29	-5628.70	-272.71
106	3	11.21	26.00	21	3.56	-15456.90	2320.30	-170.64	36.38	-3094.42	-68.06
106	3	11.21	26.00	22	3.56	-16965.00	-3647.49	-201.46	27.08	-5378.40	-127.43
106	3	11.21	26.00	23	3.56	-21956.00	-3219.54	120.51	39.53	-4260.98	47.70
106	3	11.21	26.00	24	3.56	-10465.90	1892.35	-492.61	23.93	-4211.83	-243.19
106	3	11.21	26.00	25	3.56	-14771.50	2489.90	-162.86	31.64	-2677.69	-68.44
106	3	11.21	26.00	26	3.56	-16279.50	-3477.89	-193.68	22.35	-4961.67	-127.81
106	3	11.21	26.00	27	3.56	-21270.60	-3049.94	128.29	34.80	-3844.26	47.32
106	3	11.21	26.00	28	3.56	-9780.46	2061.95	-484.83	19.19	-3795.11	-243.57
106	3	11.21	26.00	29	3.56	-14544.10	2560.16	-160.37	29.80	-2531.75	-68.24
106	3	11.21	26.00	30	3.56	-16052.10	-3407.63	-191.19	20.51	-4815.72	-127.61
106	3	11.21	26.00	31	3.56	-21043.10	-2979.68	130.78	32.96	-3698.31	47.52
106	3	11.21	26.00	32	3.56	-9553.04	2132.21	-482.34	17.35	-3649.16	-243.37

Relazione di calcolo

202	1	10.20	24.33	1	3.56	-45670.80	1694.84	-11592.80	10787.40	539.24	-1726.42
202	1	10.20	24.33	±	3.56	108149.00	1290.49	60800.60	67752.60	840.08	1070.30
202	1	10.20	24.33	2	3.56	-41056.40	1679.90	-8523.14	8930.02	531.69	-1742.55
202	1	10.20	24.33	±	3.56	83970.60	926.02	47453.70	51521.50	631.38	676.63
202	1	10.20	24.33	3	3.56	-45670.80	1694.84	-11592.80	10787.40	539.24	-1726.42
202	1	10.20	24.33	±	3.56	54897.50	775.48	26404.50	28356.40	502.51	628.11
202	1	10.20	24.33	4	3.56	-41056.40	1679.90	-8523.14	8930.02	531.69	-1742.55
202	1	10.20	24.33	±	3.56	42713.30	556.95	20660.40	21133.50	377.11	394.97
202	1	10.20	24.33	5	3.56	-45670.80	1694.84	-11592.80	10787.40	539.24	-1726.42
202	1	10.20	24.33	±	3.56	113210.00	1168.25	70407.70	80076.70	763.99	991.75
202	1	10.20	24.33	6	3.56	-41056.40	1679.90	-8523.14	8930.02	531.69	-1742.55
202	1	10.20	24.33	±	3.56	87764.80	837.56	54872.70	61545.00	575.06	630.17
202	1	10.20	24.33	7	3.56	-45670.80	1694.84	-11592.80	10787.40	539.24	-1726.42
202	1	10.20	24.33	±	3.56	64296.20	548.46	44246.20	51244.00	361.21	482.22
202	1	10.20	24.33	8	3.56	-41056.40	1679.90	-8523.14	8930.02	531.69	-1742.55
202	1	10.20	24.33	±	3.56	49759.60	392.66	34438.50	39748.50	272.52	308.69
202	1	10.20	24.33	9	3.56	-2881.97	1556.35	16872.00	-6435.83	469.20	-1876.02
202	1	10.20	24.33	±	3.56	108149.00	1290.49	60800.60	67752.60	840.08	1070.30
202	1	10.20	24.33	10	3.56	-7496.39	1571.28	13802.30	-4578.45	476.75	-1859.89
202	1	10.20	24.33	±	3.56	83970.60	926.02	47453.70	51521.50	631.38	676.63
202	1	10.20	24.33	11	3.56	-2881.97	1556.35	16872.00	-6435.83	469.20	-1876.02
202	1	10.20	24.33	±	3.56	54897.50	775.48	26404.50	28356.40	502.51	628.11
202	1	10.20	24.33	12	3.56	-7496.39	1571.28	13802.30	-4578.45	476.75	-1859.89
202	1	10.20	24.33	±	3.56	42713.30	556.95	20660.40	21133.50	377.11	394.97
202	1	10.20	24.33	13	3.56	-2881.97	1556.35	16872.00	-6435.83	469.20	-1876.02
202	1	10.20	24.33	±	3.56	113210.00	1168.25	70407.70	80076.70	763.99	991.75
202	1	10.20	24.33	14	3.56	-7496.39	1571.28	13802.30	-4578.45	476.75	-1859.89
202	1	10.20	24.33	±	3.56	87764.80	837.56	54872.70	61545.00	575.06	630.17
202	1	10.20	24.33	15	3.56	-2881.97	1556.35	16872.00	-6435.83	469.20	-1876.02
202	1	10.20	24.33	±	3.56	64296.20	548.46	44246.20	51244.00	361.21	482.22
202	1	10.20	24.33	16	3.56	-7496.39	1571.28	13802.30	-4578.45	476.75	-1859.89
202	1	10.20	24.33	±	3.56	49759.60	392.66	34438.50	39748.50	272.52	308.69
202	1	10.20	24.33	17	3.56	-31394.70	2393.73	4976.10	2332.43	804.29	-2556.17
202	1	10.20	24.33	18	3.56	-37134.20	2320.25	2884.00	2352.59	743.59	-2577.33
202	1	10.20	24.33	19	3.56	-33331.50	2372.92	5205.37	383.37	790.07	-2561.51
202	1	10.20	24.33	20	3.56	-35197.40	2341.06	2654.73	4301.65	757.81	-2571.99
202	1	10.20	24.33	21	3.56	-23176.40	1815.73	4007.40	1865.14	609.05	-1932.70
202	1	10.20	24.33	22	3.56	-28916.00	1742.24	1915.30	1885.31	548.36	-1953.86
202	1	10.20	24.33	23	3.56	-25113.20	1794.92	4236.67	-83.92	594.84	-1938.04
202	1	10.20	24.33	24	3.56	-26979.20	1763.05	1686.03	3834.36	562.58	-1948.52
202	1	10.20	24.33	25	3.56	-21811.00	1706.64	3765.92	2070.42	556.19	-1831.13
202	1	10.20	24.33	26	3.56	-27550.60	1633.16	1673.82	2090.59	495.49	-1852.29
202	1	10.20	24.33	27	3.56	-23747.80	1685.83	3995.19	121.36	541.97	-1836.47
202	1	10.20	24.33	28	3.56	-25613.80	1653.97	1444.55	4039.65	509.71	-1846.95
202	1	10.20	24.33	29	3.56	-21406.60	1662.33	3685.62	2165.70	534.57	-1790.64
202	1	10.20	24.33	30	3.56	-27146.20	1588.85	1593.52	2185.87	473.87	-1811.80
202	1	10.20	24.33	31	3.56	-23343.40	1641.52	3914.89	216.65	520.35	-1795.98
202	1	10.20	24.33	32	3.56	-25209.40	1609.66	1364.25	4134.93	488.09	-1806.46
202	1	10.20	24.33	1	4.49	-45670.80	1694.84	-11592.80	10787.40	539.24	-1726.42
202	1	10.20	24.33	±	4.49	108149.00	1290.49	60800.60	67752.60	840.08	1070.30
202	1	10.20	24.33	2	4.49	-41056.40	1679.90	-8523.14	8930.02	531.69	-1742.55
202	1	10.20	24.33	±	4.49	83970.60	926.02	47453.70	51521.50	631.38	676.63
202	1	10.20	24.33	3	4.49	-45670.80	1694.84	-11592.80	10787.40	539.24	-1726.42
202	1	10.20	24.33	±	4.49	54897.50	775.48	26404.50	28356.40	502.51	628.11
202	1	10.20	24.33	4	4.49	-41056.40	1679.90	-8523.14	8930.02	531.69	-1742.55
202	1	10.20	24.33	±	4.49	42713.30	556.95	20660.40	21133.50	377.11	394.97
202	1	10.20	24.33	5	4.49	-45670.80	1694.84	-11592.80	10787.40	539.24	-1726.42
202	1	10.20	24.33	±	4.49	113210.00	1168.25	70407.70	80076.70	763.99	991.75
202	1	10.20	24.33	6	4.49	-41056.40	1679.90	-8523.14	8930.02	531.69	-1742.55
202	1	10.20	24.33	±	4.49	87764.80	837.56	54872.70	61545.00	575.06	630.17
202	1	10.20	24.33	7	4.49	-45670.80	1694.84	-11592.80	10787.40	539.24	-1726.42
202	1	10.20	24.33	±	4.49	64296.20	548.46	44246.20	51244.00	361.21	482.22
202	1	10.20	24.33	8	4.49	-41056.40	1679.90	-8523.14	8930.02	531.69	-1742.55
202	1	10.20	24.33	±	4.49	49759.60	392.66	34438.50	39748.50	272.52	308.69
202	1	10.20	24.33	9	4.49	-2881.97	1556.35	16872.00	-6435.83	469.20	-1876.02
202	1	10.20	24.33	±	4.49	108149.00	1290.49	60800.60	67752.60	840.08	1070.30
202	1	10.20	24.33	10	4.49	-7496.39	1571.28	13802.30	-4578.45	476.75	-1859.89
202	1	10.20	24.33	±	4.49	83970.60	926.02	47453.70	51521.50	631.38	676.63
202	1	10.20	24.33	11	4.49	-2881.97	1556.35	16872.00	-6435.83	469.20	-1876.02
202	1	10.20	24.33	±	4.49	54897.50	775.48	26404.50	28356.40	502.51	628.11
202	1	10.20	24.33	12	4.49	-7496.39	1571.28	13802.30	-4578.45	476.75	-1859.89
202	1	10.20	24.33	±	4.49	42713.30	556.95	20660.40	21133.50	377.11	394.97
202	1	10.20	24.33	13	4.49	-2881.97	1556.35	16872.00	-6435.83	469.20	-1876.02
202	1	10.20	24.33	±	4.49	113210.00	1168.25	70407.70	80076.70	763.99	991.75
202	1	10.20	24.33	14	4.49	-7496.39	1571.28	13802.30	-4578.45	476.75	-1859.89
202	1	10.20	24.33	±	4.49	87764.80	837.56	54872.70	61545.00	575.06	630.17
202	1	10.20	24.33	15	4.49	-2881.97	1556.35	16872.00	-6435.83	469.20	-1876.02
202	1	10.20	24.33	±	4.49	64296.20	548.46	44246.20	51244.00	361.21	482.22
202	1	10.20	24.33	16	4.49	-7496.39	1571.28	13802.30	-4578.45	476.75	-1859.89

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202	1	10.20	24.33	±	4.49	49759.60	392.66	34438.50	39748.50	272.52	308.69
202	1	10.20	24.33	17	4.49	-31394.70	2393.73	4976.10	2332.43	804.29	-2556.17
202	1	10.20	24.33	18	4.49	-37134.20	2320.25	2884.00	2352.59	743.59	-2577.33
202	1	10.20	24.33	19	4.49	-33331.50	2372.92	5205.37	383.37	790.07	-2561.51
202	1	10.20	24.33	20	4.49	-35197.40	2341.06	2654.73	4301.65	757.81	-2571.99
202	1	10.20	24.33	21	4.49	-23176.40	1815.73	4007.40	1865.14	609.05	-1932.70
202	1	10.20	24.33	22	4.49	-28916.00	1742.24	1915.30	1885.31	548.36	-1953.86
202	1	10.20	24.33	23	4.49	-25113.20	1794.92	4236.67	-83.92	594.84	-1938.04
202	1	10.20	24.33	24	4.49	-26979.20	1763.05	1686.03	3834.36	562.58	-1948.52
202	1	10.20	24.33	25	4.49	-21811.00	1706.64	3765.92	2070.42	556.19	-1831.13
202	1	10.20	24.33	26	4.49	-27550.60	1633.16	1673.82	2090.59	495.49	-1852.29
202	1	10.20	24.33	27	4.49	-23747.80	1685.83	3995.19	121.37	541.97	-1836.47
202	1	10.20	24.33	28	4.49	-25613.80	1653.97	1444.55	4039.65	509.71	-1846.95
202	1	10.20	24.33	29	4.49	-21406.60	1662.33	3685.62	2165.70	534.57	-1790.64
202	1	10.20	24.33	30	4.49	-27146.20	1588.85	1593.52	2185.87	473.87	-1811.80
202	1	10.20	24.33	31	4.49	-23343.40	1641.52	3914.89	216.65	520.35	-1795.98
202	1	10.20	24.33	32	4.49	-25209.40	1609.66	1364.25	4134.93	488.09	-1806.46
202	2	10.20	24.33	1	4.49	-38295.50	-295.21	-11312.00	9897.84	58.62	1171.81
202	2	10.20	24.33	±	4.49	78151.00	683.54	60247.20	45896.40	243.80	1189.31
202	2	10.20	24.33	2	4.49	-35086.10	-278.64	-8285.42	8475.29	53.68	1112.25
202	2	10.20	24.33	±	4.49	60565.20	534.04	46988.00	34651.80	181.58	931.99
202	2	10.20	24.33	3	4.49	-38295.50	-295.21	-11312.00	9897.84	58.62	1171.81
202	2	10.20	24.33	±	4.49	39622.10	375.61	26129.20	18759.10	145.35	752.03
202	2	10.20	24.33	4	4.49	-35086.10	-278.64	-8285.42	8475.29	53.68	1112.25
202	2	10.20	24.33	±	4.49	30794.30	293.93	20437.80	13781.10	108.19	589.29
202	2	10.20	24.33	5	4.49	-38295.50	-295.21	-11312.00	9897.84	58.62	1171.81
202	2	10.20	24.33	±	4.49	81880.80	672.09	69819.90	54927.10	222.46	1020.00
202	2	10.20	24.33	6	4.49	-35086.10	-278.64	-8285.42	8475.29	53.68	1112.25
202	2	10.20	24.33	±	4.49	63322.10	524.38	54364.20	42049.40	165.77	799.37
202	2	10.20	24.33	7	4.49	-38295.50	-295.21	-11312.00	9897.84	58.62	1171.81
202	2	10.20	24.33	±	4.49	46548.90	354.34	43907.00	35530.50	105.72	437.60
202	2	10.20	24.33	8	4.49	-35086.10	-278.64	-8285.42	8475.29	53.68	1112.25
202	2	10.20	24.33	±	4.49	35914.20	275.99	34136.50	27519.50	78.84	342.98
202	2	10.20	24.33	9	4.49	-8535.32	-141.55	16752.70	-3293.27	12.84	619.50
202	2	10.20	24.33	±	4.49	78151.00	683.54	60247.20	45896.40	243.80	1189.31
202	2	10.20	24.33	10	4.49	-11744.70	-158.12	13726.20	-1870.72	17.78	679.06
202	2	10.20	24.33	±	4.49	60565.20	534.04	46988.00	34651.80	181.58	931.99
202	2	10.20	24.33	11	4.49	-8535.32	-141.55	16752.70	-3293.27	12.84	619.50
202	2	10.20	24.33	±	4.49	39622.10	375.61	26129.20	18759.10	145.35	752.03
202	2	10.20	24.33	12	4.49	-11744.70	-158.12	13726.20	-1870.72	17.78	679.06
202	2	10.20	24.33	±	4.49	30794.30	293.93	20437.80	13781.10	108.19	589.29
202	2	10.20	24.33	13	4.49	-8535.32	-141.55	16752.70	-3293.27	12.84	619.50
202	2	10.20	24.33	±	4.49	81880.80	672.09	69819.90	54927.10	222.46	1020.00
202	2	10.20	24.33	14	4.49	-11744.70	-158.12	13726.20	-1870.72	17.78	679.06
202	2	10.20	24.33	±	4.49	63322.10	524.38	54364.20	42049.40	165.77	799.37
202	2	10.20	24.33	15	4.49	-8535.32	-141.55	16752.70	-3293.27	12.84	619.50
202	2	10.20	24.33	±	4.49	46548.90	354.34	43907.00	35530.50	105.72	437.60
202	2	10.20	24.33	16	4.49	-11744.70	-158.12	13726.20	-1870.72	17.78	679.06
202	2	10.20	24.33	±	4.49	35914.20	275.99	34136.50	27519.50	78.84	342.98
202	2	10.20	24.33	17	4.49	-31037.50	-271.29	5082.79	3869.11	89.34	1355.11
202	2	10.20	24.33	18	4.49	-35226.90	-327.65	3013.56	4512.27	73.84	1299.95
202	2	10.20	24.33	19	4.49	-32476.00	-294.92	5285.34	2900.52	87.39	1348.33
202	2	10.20	24.33	20	4.49	-33788.40	-304.02	2811.01	5480.86	75.79	1306.74
202	2	10.20	24.33	21	4.49	-23082.60	-200.19	4085.25	2928.02	65.62	1025.87
202	2	10.20	24.33	22	4.49	-27272.00	-256.56	2016.01	3571.18	50.11	970.71
202	2	10.20	24.33	23	4.49	-24521.10	-223.81	4287.80	1959.43	63.67	1019.09
202	2	10.20	24.33	24	4.49	-25833.50	-232.93	1813.46	4539.77	52.07	977.49
202	2	10.20	24.33	25	4.49	-21722.40	-192.78	3837.35	2946.92	49.85	952.99
202	2	10.20	24.33	26	4.49	-25911.90	-249.15	1768.12	3590.08	34.34	897.83
202	2	10.20	24.33	27	4.49	-23161.00	-216.41	4039.90	1978.33	47.89	946.20
202	2	10.20	24.33	28	4.49	-24473.30	-225.52	1565.57	4558.67	36.29	904.61
202	2	10.20	24.33	29	4.49	-21320.70	-190.19	3755.00	2980.71	43.48	923.23
202	2	10.20	24.33	30	4.49	-25510.10	-246.56	1685.76	3623.87	27.98	868.07
202	2	10.20	24.33	31	4.49	-22759.20	-213.82	3957.55	2012.12	41.53	916.45
202	2	10.20	24.33	32	4.49	-24071.60	-222.93	1483.21	4592.46	29.93	874.86
202	2	10.20	24.33	1	5.41	-38295.50	-295.21	-11312.00	9897.84	58.62	1171.81
202	2	10.20	24.33	±	5.41	78151.00	683.54	60247.20	45896.40	243.80	1189.31
202	2	10.20	24.33	2	5.41	-35086.10	-278.64	-8285.42	8475.29	53.68	1112.25
202	2	10.20	24.33	±	5.41	60565.20	534.04	46988.00	34651.80	181.58	931.99
202	2	10.20	24.33	3	5.41	-38295.50	-295.21	-11312.00	9897.84	58.62	1171.81
202	2	10.20	24.33	±	5.41	39622.10	375.61	26129.20	18759.10	145.35	752.03
202	2	10.20	24.33	4	5.41	-35086.10	-278.64	-8285.42	8475.29	53.68	1112.25
202	2	10.20	24.33	±	5.41	30794.30	293.93	20437.80	13781.10	108.19	589.29
202	2	10.20	24.33	5	5.41	-38295.50	-295.21	-11312.00	9897.84	58.62	1171.81
202	2	10.20	24.33	±	5.41	81880.80	672.09	69819.90	54927.10	222.46	1020.00
202	2	10.20	24.33	6	5.41	-35086.10	-278.64	-8285.42	8475.29	53.68	1112.25
202	2	10.20	24.33	±	5.41	63322.10	524.38	54364.20	42049.40	165.77	799.37
202	2	10.20	24.33	7	5.41	-38295.50	-295.21	-11312.00	9897.84	58.62	1171.81
202	2	10.20	24.33	±	5.41	46548.90	354.34	43907.00	35530.50	105.72	437.60

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202	2	10.20	24.33	8	5.41	-35086.10	-278.64	-8285.42	8475.29	53.68	1112.25
202	2	10.20	24.33	±	5.41	35914.20	275.99	34136.50	27519.50	78.84	342.98
202	2	10.20	24.33	9	5.41	-8535.32	-141.55	16752.70	-3293.27	12.84	619.50
202	2	10.20	24.33	±	5.41	78151.00	683.54	60247.20	45896.40	243.80	1189.31
202	2	10.20	24.33	10	5.41	-11744.70	-158.12	13726.20	-1870.72	17.78	679.06
202	2	10.20	24.33	±	5.41	60565.20	534.04	46988.00	34651.80	181.58	931.99
202	2	10.20	24.33	11	5.41	-8535.32	-141.55	16752.70	-3293.27	12.84	619.50
202	2	10.20	24.33	±	5.41	39622.10	375.61	26129.20	18759.10	145.35	752.03
202	2	10.20	24.33	12	5.41	-11744.70	-158.12	13726.20	-1870.72	17.78	679.06
202	2	10.20	24.33	±	5.41	30794.30	293.93	20437.80	13781.10	108.19	589.29
202	2	10.20	24.33	13	5.41	-8535.32	-141.55	16752.70	-3293.27	12.84	619.50
202	2	10.20	24.33	±	5.41	81880.80	672.09	69819.90	54927.10	222.46	1020.00
202	2	10.20	24.33	14	5.41	-11744.70	-158.12	13726.20	-1870.72	17.78	679.06
202	2	10.20	24.33	±	5.41	63322.10	524.38	54364.20	42049.40	165.77	799.37
202	2	10.20	24.33	15	5.41	-8535.32	-141.55	16752.70	-3293.27	12.84	619.50
202	2	10.20	24.33	±	5.41	46548.90	354.34	43907.00	35530.50	105.72	437.60
202	2	10.20	24.33	16	5.41	-11744.70	-158.12	13726.20	-1870.72	17.78	679.06
202	2	10.20	24.33	±	5.41	35914.20	275.99	34136.50	27519.50	78.84	342.98
202	2	10.20	24.33	17	5.41	-31037.50	-271.29	5082.79	3869.11	89.34	1355.11
202	2	10.20	24.33	18	5.41	-35226.90	-327.65	3013.56	4512.27	73.84	1299.95
202	2	10.20	24.33	19	5.41	-32476.00	-294.92	5285.34	2900.52	87.39	1348.33
202	2	10.20	24.33	20	5.41	-33788.40	-304.02	2811.01	5480.86	75.79	1306.74
202	2	10.20	24.33	±	5.41	-23082.60	-200.19	4085.25	2928.02	65.62	1025.87
202	2	10.20	24.33	22	5.41	-27272.00	-256.56	2016.01	3571.18	50.11	970.71
202	2	10.20	24.33	23	5.41	-24521.10	-223.81	4287.80	1959.43	63.67	1019.09
202	2	10.20	24.33	24	5.41	-25833.50	-232.93	1813.46	4539.77	52.07	977.49
202	2	10.20	24.33	±	5.41	-21722.40	-192.78	3837.35	2946.92	49.85	952.99
202	2	10.20	24.33	26	5.41	-25911.90	-249.15	1768.12	3590.08	34.34	897.83
202	2	10.20	24.33	27	5.41	-23161.00	-216.41	4039.90	1978.33	47.89	946.20
202	2	10.20	24.33	28	5.41	-24473.30	-225.52	1565.57	4558.67	36.29	904.61
202	2	10.20	24.33	29	5.41	-21320.70	-190.19	3755.00	2980.71	43.48	923.23
202	2	10.20	24.33	±	5.41	-25510.10	-246.56	1685.76	3623.87	27.98	868.07
202	2	10.20	24.33	31	5.41	-22759.20	-213.82	3957.55	2012.12	41.53	916.45
202	2	10.20	24.33	32	5.41	-24071.60	-222.93	1483.21	4592.46	29.93	874.86
202	3	10.20	24.33	1	5.41	-30389.90	359.05	-11357.30	10051.00	45.48	230.11
202	3	10.20	24.33	±	5.41	49089.80	411.38	60359.70	26881.70	116.10	1118.81
202	3	10.20	24.33	2	5.41	-28541.20	348.84	-8324.47	9133.10	41.95	208.73
202	3	10.20	24.33	±	5.41	37908.60	314.15	47076.70	20047.00	78.03	876.35
202	3	10.20	24.33	3	5.41	-30389.90	359.05	-11357.30	10051.00	45.48	230.11
202	3	10.20	24.33	±	5.41	25001.80	252.53	26197.10	11053.90	72.84	683.06
202	3	10.20	24.33	4	5.41	-28541.20	348.84	-8324.47	9133.10	41.95	208.73
202	3	10.20	24.33	±	5.41	19388.90	195.05	20491.30	7968.37	47.70	535.33
202	3	10.20	24.33	5	5.41	-30389.90	359.05	-11357.30	10051.00	45.48	230.11
202	3	10.20	24.33	±	5.41	51260.50	364.33	69921.30	32069.90	100.44	996.53
202	3	10.20	24.33	6	5.41	-28541.20	348.84	-8324.47	9133.10	41.95	208.73
202	3	10.20	24.33	±	5.41	39460.80	274.88	54444.20	24333.40	69.41	780.12
202	3	10.20	24.33	7	5.41	-30389.90	359.05	-11357.30	10051.00	45.48	230.11
202	3	10.20	24.33	±	5.41	29033.00	165.16	43954.30	20689.20	43.76	455.97
202	3	10.20	24.33	8	5.41	-28541.20	348.84	-8324.47	9133.10	41.95	208.73
202	3	10.20	24.33	±	5.41	22271.60	122.12	34173.80	15928.80	31.69	356.62
202	3	10.20	24.33	9	5.41	-13247.40	264.38	16765.70	1539.27	12.75	31.86
202	3	10.20	24.33	±	5.41	49089.80	411.38	60359.70	26881.70	116.10	1118.81
202	3	10.20	24.33	10	5.41	-15096.10	274.59	13732.90	2457.19	16.28	53.24
202	3	10.20	24.33	±	5.41	37908.60	314.15	47076.70	20047.00	78.03	876.35
202	3	10.20	24.33	11	5.41	-13247.40	264.38	16765.70	1539.27	12.75	31.86
202	3	10.20	24.33	±	5.41	25001.80	252.53	26197.10	11053.90	72.84	683.06
202	3	10.20	24.33	12	5.41	-15096.10	274.59	13732.90	2457.19	16.28	53.24
202	3	10.20	24.33	±	5.41	19388.90	195.05	20491.30	7968.37	47.70	535.33
202	3	10.20	24.33	13	5.41	-13247.40	264.38	16765.70	1539.27	12.75	31.86
202	3	10.20	24.33	±	5.41	51260.50	364.33	69921.30	32069.90	100.44	996.53
202	3	10.20	24.33	14	5.41	-15096.10	274.59	13732.90	2457.19	16.28	53.24
202	3	10.20	24.33	±	5.41	39460.80	274.88	54444.20	24333.40	69.41	780.12
202	3	10.20	24.33	15	5.41	-13247.40	264.38	16765.70	1539.27	12.75	31.86
202	3	10.20	24.33	±	5.41	29033.00	165.16	43954.30	20689.20	43.76	455.97
202	3	10.20	24.33	16	5.41	-15096.10	274.59	13732.90	2457.19	16.28	53.24
202	3	10.20	24.33	±	5.41	22271.60	122.12	34173.80	15928.80	31.69	356.62
202	3	10.20	24.33	17	5.41	-29609.60	484.68	5053.75	7429.56	46.30	255.43
202	3	10.20	24.33	18	5.41	-32312.40	462.82	2980.68	8604.99	57.21	151.63
202	3	10.20	24.33	19	5.41	-30593.60	486.88	5252.68	7362.71	49.97	210.96
202	3	10.20	24.33	20	5.41	-31328.40	460.62	2781.76	8671.83	53.53	196.10
202	3	10.20	24.33	±	5.41	-22169.40	365.55	4064.86	5530.25	32.63	203.75
202	3	10.20	24.33	22	5.41	-24872.20	343.69	1991.79	6705.69	43.54	99.96
202	3	10.20	24.33	23	5.41	-23153.40	367.74	4263.79	5463.41	36.30	159.29
202	3	10.20	24.33	24	5.41	-23888.20	341.49	1792.87	6772.53	39.86	144.43
202	3	10.20	24.33	±	5.41	-20851.30	335.39	3821.15	5271.33	25.91	189.00
202	3	10.20	24.33	26	5.41	-23554.00	313.53	1748.08	6446.77	36.82	85.20
202	3	10.20	24.33	27	5.41	-21835.20	337.59	4020.07	5204.49	29.58	144.53
202	3	10.20	24.33	28	5.41	-22570.10	311.33	1549.15	6513.61	33.15	129.67
202	3	10.20	24.33	29	5.41	-20467.30	322.64	3740.76	5207.43	23.66	182.88

Relazione di calcolo

202	3	10.20	24.33	30	5.41	-23170.10	300.78	1667.69	6382.86	34.57	79.09
202	3	10.20	24.33	31	5.41	-21451.20	324.84	3939.68	5140.58	27.34	138.41
202	3	10.20	24.33	32	5.41	-22186.10	298.59	1468.76	6449.70	30.90	123.56
202	3	10.20	24.33	1	6.33	-30389.90	359.05	-11357.30	10051.00	45.48	230.11
202	3	10.20	24.33	±	6.33	49089.80	411.38	60359.70	26881.70	116.10	1118.81
202	3	10.20	24.33	2	6.33	-28541.20	348.84	-8324.47	9133.10	41.95	208.73
202	3	10.20	24.33	±	6.33	37908.60	314.15	47076.70	20047.00	78.03	876.35
202	3	10.20	24.33	3	6.33	-30389.90	359.05	-11357.30	10051.00	45.48	230.11
202	3	10.20	24.33	±	6.33	25001.80	252.53	26197.10	11053.90	72.84	683.06
202	3	10.20	24.33	4	6.33	-28541.20	348.84	-8324.47	9133.10	41.95	208.73
202	3	10.20	24.33	±	6.33	19388.90	195.05	20491.30	7968.37	47.70	535.33
202	3	10.20	24.33	5	6.33	-30389.90	359.05	-11357.30	10051.00	45.48	230.11
202	3	10.20	24.33	±	6.33	51260.50	364.33	69921.30	32069.90	100.44	996.53
202	3	10.20	24.33	6	6.33	-28541.20	348.84	-8324.47	9133.10	41.95	208.73
202	3	10.20	24.33	±	6.33	39460.80	274.88	54444.20	24333.40	69.41	780.12
202	3	10.20	24.33	7	6.33	-30389.90	359.05	-11357.30	10051.00	45.48	230.11
202	3	10.20	24.33	±	6.33	29033.00	165.16	43954.30	20689.20	43.76	455.97
202	3	10.20	24.33	8	6.33	-28541.20	348.84	-8324.47	9133.10	41.95	208.73
202	3	10.20	24.33	±	6.33	22271.60	122.12	34173.80	15928.80	31.69	356.62
202	3	10.20	24.33	9	6.33	-13247.40	264.38	16765.70	1539.27	12.75	31.86
202	3	10.20	24.33	±	6.33	49089.80	411.38	60359.70	26881.70	116.10	1118.81
202	3	10.20	24.33	10	6.33	-15096.10	274.59	13732.90	2457.19	16.28	53.24
202	3	10.20	24.33	±	6.33	37908.60	314.15	47076.70	20047.00	78.03	876.35
202	3	10.20	24.33	11	6.33	-13247.40	264.38	16765.70	1539.27	12.75	31.86
202	3	10.20	24.33	±	6.33	25001.80	252.53	26197.10	11053.90	72.84	683.06
202	3	10.20	24.33	12	6.33	-15096.10	274.59	13732.90	2457.19	16.28	53.24
202	3	10.20	24.33	±	6.33	19388.90	195.05	20491.30	7968.37	47.70	535.33
202	3	10.20	24.33	13	6.33	-13247.40	264.38	16765.70	1539.27	12.75	31.86
202	3	10.20	24.33	±	6.33	51260.50	364.33	69921.30	32069.90	100.44	996.53
202	3	10.20	24.33	14	6.33	-15096.10	274.59	13732.90	2457.19	16.28	53.24
202	3	10.20	24.33	±	6.33	39460.80	274.88	54444.20	24333.40	69.41	780.12
202	3	10.20	24.33	15	6.33	-13247.40	264.38	16765.70	1539.27	12.75	31.86
202	3	10.20	24.33	±	6.33	29033.00	165.16	43954.30	20689.20	43.76	455.97
202	3	10.20	24.33	16	6.33	-15096.10	274.59	13732.90	2457.19	16.28	53.24
202	3	10.20	24.33	±	6.33	22271.60	122.12	34173.80	15928.80	31.69	356.62
202	3	10.20	24.33	17	6.33	-29609.60	484.68	5053.75	7429.56	46.30	255.43
202	3	10.20	24.33	18	6.33	-32312.40	462.82	2980.68	8604.99	57.21	151.63
202	3	10.20	24.33	19	6.33	-30593.60	486.88	5252.68	7362.71	49.97	210.96
202	3	10.20	24.33	20	6.33	-31328.40	460.62	2781.76	8671.83	53.53	196.10
202	3	10.20	24.33	±	6.33	-22169.40	365.55	4064.86	5530.25	32.63	203.75
202	3	10.20	24.33	22	6.33	-24872.20	343.69	1991.79	6705.69	43.54	99.96
202	3	10.20	24.33	23	6.33	-23153.40	367.74	4263.79	5463.41	36.30	159.29
202	3	10.20	24.33	24	6.33	-23888.20	341.49	1792.87	6772.53	39.86	144.43
202	3	10.20	24.33	25	6.33	-20851.30	335.39	3821.15	5271.33	25.91	189.00
202	3	10.20	24.33	26	6.33	-23554.00	313.53	1748.08	6446.77	36.82	85.20
202	3	10.20	24.33	27	6.33	-21835.20	337.59	4020.07	5204.49	29.58	144.53
202	3	10.20	24.33	28	6.33	-22570.10	311.33	1549.15	6513.61	33.15	129.67
202	3	10.20	24.33	29	6.33	-20467.30	322.64	3740.76	5207.43	23.66	182.88
202	3	10.20	24.33	30	6.33	-23170.10	300.78	1667.69	6382.86	34.57	79.09
202	3	10.20	24.33	31	6.33	-21451.20	324.84	3939.68	5140.58	27.34	138.41
202	3	10.20	24.33	32	6.33	-22186.10	298.59	1468.76	6449.70	30.90	123.56
202	4	10.20	24.33	1	6.33	-22739.00	210.04	-11146.70	9688.87	-198.47	342.80
202	4	10.20	24.33	±	6.33	20246.70	2601.30	59714.00	19235.50	841.21	3357.16
202	4	10.20	24.33	2	6.33	-22219.50	290.77	-8148.62	9305.44	-219.88	194.37
202	4	10.20	24.33	±	6.33	15395.70	2032.69	46568.20	14708.20	658.52	2625.90
202	4	10.20	24.33	3	6.33	-22739.00	210.04	-11146.70	9688.87	-198.47	342.80
202	4	10.20	24.33	±	6.33	10262.90	1475.96	25959.50	10605.10	479.07	1946.96
202	4	10.20	24.33	4	6.33	-22219.50	290.77	-8148.62	9305.44	-219.88	194.37
202	4	10.20	24.33	±	6.33	7887.77	1153.27	20304.70	8149.80	375.42	1522.90
202	4	10.20	24.33	5	6.33	-22739.00	210.04	-11146.70	9688.87	-198.47	342.80
202	4	10.20	24.33	±	6.33	21216.10	2487.16	69108.60	18860.00	801.60	3145.96
202	4	10.20	24.33	6	6.33	-22219.50	290.77	-8148.62	9305.44	-219.88	194.37
202	4	10.20	24.33	±	6.33	16005.80	1943.59	53803.50	14359.30	626.92	2460.65
202	4	10.20	24.33	7	6.33	-22739.00	210.04	-11146.70	9688.87	-198.47	342.80
202	4	10.20	24.33	±	6.33	12063.20	1263.98	43406.50	9907.86	405.51	1554.72
202	4	10.20	24.33	8	6.33	-22219.50	290.77	-8148.62	9305.44	-219.88	194.37
202	4	10.20	24.33	±	6.33	9020.73	987.80	33741.70	7501.92	316.74	1216.01
202	4	10.20	24.33	9	6.33	-17922.40	958.67	16653.80	6133.36	-397.01	-1033.54
202	4	10.20	24.33	±	6.33	20246.70	2601.30	59714.00	19235.50	841.21	3357.16
202	4	10.20	24.33	10	6.33	-18441.90	877.94	13655.80	6516.79	-375.60	-885.12
202	4	10.20	24.33	±	6.33	15395.70	2032.69	46568.20	14708.20	658.52	2625.90
202	4	10.20	24.33	11	6.33	-17922.40	958.67	16653.80	6133.36	-397.01	-1033.54
202	4	10.20	24.33	±	6.33	10262.90	1475.96	25959.50	10605.10	479.07	1946.96
202	4	10.20	24.33	12	6.33	-18441.90	877.94	13655.80	6516.79	-375.60	-885.12
202	4	10.20	24.33	±	6.33	7887.77	1153.27	20304.70	8149.80	375.42	1522.90
202	4	10.20	24.33	13	6.33	-17922.40	958.67	16653.80	6133.36	-397.01	-1033.54
202	4	10.20	24.33	±	6.33	21216.10	2487.16	69108.60	18860.00	801.60	3145.96
202	4	10.20	24.33	14	6.33	-18441.90	877.94	13655.80	6516.79	-375.60	-885.12
202	4	10.20	24.33	±	6.33	16005.80	1943.59	53803.50	14359.30	626.92	2460.65

Relazione di calcolo

202	4	10.20	24.33	15	6.33	-17922.40	958.67	16653.80	6133.36	-397.01	-1033.54
202	4	10.20	24.33	±	6.33	12063.20	1263.98	43406.50	9907.86	405.51	1554.72
202	4	10.20	24.33	16	6.33	-18441.90	877.94	13655.80	6516.79	-375.60	-885.12
202	4	10.20	24.33	±	6.33	9020.73	987.80	33741.70	7501.92	316.74	1216.01
202	4	10.20	24.33	17	6.33	-28370.20	888.16	5113.83	10424.80	-458.02	-451.77
202	4	10.20	24.33	18	6.33	-29562.10	717.21	3050.60	12144.80	-383.61	-333.32
202	4	10.20	24.33	19	6.33	-28817.90	781.85	5292.65	11335.60	-422.46	-341.05
202	4	10.20	24.33	20	6.33	-29114.40	823.52	2871.78	11234.00	-419.16	-444.04
202	4	10.20	24.33	21	6.33	-21397.70	696.49	4109.88	7708.00	-355.71	-368.96
202	4	10.20	24.33	22	6.33	-22589.70	525.53	2046.65	9427.97	-281.30	-250.51
202	4	10.20	24.33	23	6.33	-21845.40	590.17	4288.71	8618.76	-320.16	-258.24
202	4	10.20	24.33	24	6.33	-22142.00	631.85	1867.83	8517.21	-316.86	-361.23
202	4	10.20	24.33	25	6.33	-20109.10	678.21	3865.67	7197.54	-341.70	-394.49
202	4	10.20	24.33	26	6.33	-21301.00	507.25	1802.43	8917.51	-267.29	-276.04
202	4	10.20	24.33	27	6.33	-20556.80	571.89	4044.49	8108.30	-306.14	-283.77
202	4	10.20	24.33	28	6.33	-20853.30	613.57	1623.61	8006.75	-302.84	-386.76
202	4	10.20	24.33	29	6.33	-19734.70	669.83	3785.20	7051.13	-334.95	-404.60
202	4	10.20	24.33	30	6.33	-20926.70	498.88	1721.96	8771.10	-260.54	-286.15
202	4	10.20	24.33	31	6.33	-20182.40	563.52	3964.02	7961.89	-299.39	-293.88
202	4	10.20	24.33	32	6.33	-20479.00	605.19	1543.14	7860.34	-296.09	-396.87
202	4	10.20	24.33	1	7.26	-22739.00	210.04	-11146.70	9688.87	-198.47	342.80
202	4	10.20	24.33	±	7.26	20246.70	2601.30	59714.00	19235.50	841.21	3357.16
202	4	10.20	24.33	2	7.26	-22219.50	290.77	-8148.62	9305.44	-219.88	194.37
202	4	10.20	24.33	±	7.26	15395.70	2032.69	46568.20	14708.20	658.52	2625.90
202	4	10.20	24.33	3	7.26	-22739.00	210.04	-11146.70	9688.87	-198.47	342.80
202	4	10.20	24.33	±	7.26	10262.90	1475.96	25959.50	10605.10	479.07	1946.96
202	4	10.20	24.33	4	7.26	-22219.50	290.77	-8148.62	9305.44	-219.88	194.37
202	4	10.20	24.33	±	7.26	7887.77	1153.27	20304.70	8149.80	375.42	1522.90
202	4	10.20	24.33	5	7.26	-22739.00	210.04	-11146.70	9688.87	-198.47	342.80
202	4	10.20	24.33	±	7.26	21216.10	2487.16	69108.60	18860.00	801.60	3145.96
202	4	10.20	24.33	6	7.26	-22219.50	290.77	-8148.62	9305.44	-219.88	194.37
202	4	10.20	24.33	±	7.26	16005.80	1943.59	53803.50	14359.30	626.92	2460.65
202	4	10.20	24.33	7	7.26	-22739.00	210.04	-11146.70	9688.87	-198.47	342.80
202	4	10.20	24.33	±	7.26	12063.20	1263.98	43406.50	9907.86	405.51	1554.72
202	4	10.20	24.33	8	7.26	-22219.50	290.77	-8148.62	9305.44	-219.88	194.37
202	4	10.20	24.33	±	7.26	9020.73	987.80	33741.70	7501.92	316.74	1216.01
202	4	10.20	24.33	9	7.26	-17922.40	958.67	16653.80	6133.36	-397.01	-1033.54
202	4	10.20	24.33	±	7.26	20246.70	2601.30	59714.00	19235.50	841.21	3357.16
202	4	10.20	24.33	10	7.26	-18441.90	877.94	13655.80	6516.79	-375.60	-885.12
202	4	10.20	24.33	±	7.26	15395.70	2032.69	46568.20	14708.20	658.52	2625.90
202	4	10.20	24.33	11	7.26	-17922.40	958.67	16653.80	6133.36	-397.01	-1033.54
202	4	10.20	24.33	±	7.26	10262.90	1475.96	25959.50	10605.10	479.07	1946.96
202	4	10.20	24.33	12	7.26	-18441.90	877.94	13655.80	6516.79	-375.60	-885.12
202	4	10.20	24.33	±	7.26	7887.77	1153.27	20304.70	8149.80	375.42	1522.90
202	4	10.20	24.33	13	7.26	-17922.40	958.67	16653.80	6133.36	-397.01	-1033.54
202	4	10.20	24.33	±	7.26	21216.10	2487.16	69108.60	18860.00	801.60	3145.96
202	4	10.20	24.33	14	7.26	-18441.90	877.94	13655.80	6516.79	-375.60	-885.12
202	4	10.20	24.33	±	7.26	16005.80	1943.59	53803.50	14359.30	626.92	2460.65
202	4	10.20	24.33	15	7.26	-17922.40	958.67	16653.80	6133.36	-397.01	-1033.54
202	4	10.20	24.33	±	7.26	12063.20	1263.98	43406.50	9907.86	405.51	1554.72
202	4	10.20	24.33	16	7.26	-18441.90	877.94	13655.80	6516.79	-375.60	-885.12
202	4	10.20	24.33	±	7.26	9020.73	987.80	33741.70	7501.92	316.74	1216.01
202	4	10.20	24.33	17	7.26	-28370.20	888.16	5113.83	10424.80	-458.02	-451.77
202	4	10.20	24.33	18	7.26	-29562.10	717.21	3050.60	12144.80	-383.61	-333.32
202	4	10.20	24.33	19	7.26	-28817.90	781.85	5292.65	11335.60	-422.46	-341.05
202	4	10.20	24.33	20	7.26	-29114.40	823.52	2871.78	11234.00	-419.16	-444.04
202	4	10.20	24.33	21	7.26	-21397.70	696.49	4109.88	7708.00	-355.71	-368.96
202	4	10.20	24.33	22	7.26	-22589.70	525.53	2046.65	9427.97	-281.30	-250.51
202	4	10.20	24.33	23	7.26	-21845.40	590.17	4288.71	8618.76	-320.16	-258.24
202	4	10.20	24.33	24	7.26	-22142.00	631.85	1867.83	8517.21	-316.86	-361.23
202	4	10.20	24.33	25	7.26	-20109.10	678.21	3865.67	7197.54	-341.70	-394.49
202	4	10.20	24.33	26	7.26	-21301.00	507.25	1802.43	8917.51	-267.29	-276.04
202	4	10.20	24.33	27	7.26	-20556.80	571.89	4044.49	8108.30	-306.14	-283.77
202	4	10.20	24.33	28	7.26	-20853.30	613.57	1623.61	8006.75	-302.84	-386.76
202	4	10.20	24.33	29	7.26	-19734.70	669.83	3785.20	7051.13	-334.95	-404.60
202	4	10.20	24.33	30	7.26	-20926.70	498.88	1721.96	8771.10	-260.54	-286.15
202	4	10.20	24.33	31	7.26	-20182.40	563.52	3964.02	7961.89	-299.39	-293.88
202	4	10.20	24.33	32	7.26	-20479.00	605.19	1543.14	7860.34	-296.09	-396.87
203	1	12.22	24.33	1	3.56	-720.32	258.31	10171.70	827.38	120.97	-71.54
203	1	12.22	24.33	±	3.56	147155.00	2419.99	103418.00	109461.00	1944.88	2784.74
203	1	12.22	24.33	2	3.56	-4814.75	171.47	8201.14	1399.73	70.42	-88.38
203	1	12.22	24.33	±	3.56	114154.00	1720.56	80457.20	84588.10	1391.65	1992.46
203	1	12.22	24.33	3	3.56	-720.32	258.31	10171.70	827.38	120.97	-71.54
203	1	12.22	24.33	±	3.56	84322.80	1502.11	56508.40	49451.60	1206.42	1576.78
203	1	12.22	24.33	4	3.56	-4814.75	171.47	8201.14	1399.73	70.42	-88.38
203	1	12.22	24.33	±	3.56	65237.30	1078.41	43937.30	38514.30	866.96	1117.31
203	1	12.22	24.33	5	3.56	-720.32	258.31	10171.70	827.38	120.97	-71.54
203	1	12.22	24.33	±	3.56	139443.00	2118.10	102172.00	123852.00	1703.45	2667.49
203	1	12.22	24.33	6	3.56	-4814.75	171.47	8201.14	1399.73	70.42	-88.38

Relazione di calcolo

203	1	12.22	24.33	±	3.56	108437.00	1490.09	79525.70	95254.90	1213.28	1925.05
203	1	12.22	24.33	7	3.56	-720.32	258.31	10171.70	827.38	120.97	-71.54
203	1	12.22	24.33	±	3.56	69999.20	941.47	54194.40	76178.20	758.06	1359.03
203	1	12.22	24.33	8	3.56	-4814.75	171.47	8201.14	1399.73	70.42	-88.38
203	1	12.22	24.33	±	3.56	54619.20	650.40	42207.40	58324.20	535.70	992.12
203	1	12.22	24.33	9	3.56	-38687.40	-546.96	-8101.19	6134.69	-347.78	-227.68
203	1	12.22	24.33	±	3.56	147155.00	2419.99	103418.00	109461.00	1944.88	2784.74
203	1	12.22	24.33	10	3.56	-34593.00	-460.12	-6130.61	5562.34	-297.23	-210.84
203	1	12.22	24.33	±	3.56	114154.00	1720.56	80457.20	84588.10	1391.65	1992.46
203	1	12.22	24.33	11	3.56	-38687.40	-546.96	-8101.19	6134.69	-347.78	-227.68
203	1	12.22	24.33	±	3.56	84322.80	1502.11	56508.40	49451.60	1206.42	1576.78
203	1	12.22	24.33	12	3.56	-34593.00	-460.12	-6130.61	5562.34	-297.23	-210.84
203	1	12.22	24.33	±	3.56	65237.30	1078.41	43937.30	38514.30	866.96	1117.31
203	1	12.22	24.33	13	3.56	-38687.40	-546.96	-8101.19	6134.69	-347.78	-227.68
203	1	12.22	24.33	±	3.56	139443.00	2118.10	102172.00	123852.00	1703.45	2667.49
203	1	12.22	24.33	14	3.56	-34593.00	-460.12	-6130.61	5562.34	-297.23	-210.84
203	1	12.22	24.33	±	3.56	108437.00	1490.09	79525.70	95254.90	1213.28	1925.05
203	1	12.22	24.33	15	3.56	-38687.40	-546.96	-8101.19	6134.69	-347.78	-227.68
203	1	12.22	24.33	±	3.56	69999.20	941.47	54194.40	76178.20	758.06	1359.03
203	1	12.22	24.33	16	3.56	-34593.00	-460.12	-6130.61	5562.34	-297.23	-210.84
203	1	12.22	24.33	±	3.56	54619.20	650.40	42207.40	58324.20	535.70	992.12
203	1	12.22	24.33	17	3.56	-29120.70	-152.44	246.06	5088.94	-84.08	-70.24
203	1	12.22	24.33	18	3.56	-22497.50	-197.59	3068.92	4401.45	-173.44	-291.81
203	1	12.22	24.33	19	3.56	-23168.50	-99.36	4732.28	567.76	-94.23	-254.67
203	1	12.22	24.33	20	3.56	-28449.80	-250.68	-1417.29	8922.63	-163.28	-107.38
203	1	12.22	24.33	21	3.56	-23143.30	-114.15	-172.46	3971.36	-57.48	-30.13
203	1	12.22	24.33	22	3.56	-16520.10	-159.29	2650.41	3283.87	-146.84	-251.70
203	1	12.22	24.33	23	3.56	-17191.00	-61.06	4313.76	-549.82	-67.64	-214.56
203	1	12.22	24.33	24	3.56	-22472.40	-212.38	-1835.81	7805.05	-136.69	-67.27
203	1	12.22	24.33	25	3.56	-23043.40	-119.03	-329.34	3854.08	-64.67	-36.65
203	1	12.22	24.33	26	3.56	-16420.20	-164.17	2493.52	3166.59	-154.03	-258.23
203	1	12.22	24.33	27	3.56	-17091.10	-65.94	4156.87	-667.10	-74.83	-221.09
203	1	12.22	24.33	28	3.56	-22372.50	-217.26	-1992.70	7687.77	-143.88	-73.79
203	1	12.22	24.33	29	3.56	-23015.50	-121.75	-376.17	3824.78	-68.73	-38.82
203	1	12.22	24.33	30	3.56	-16392.30	-166.90	2446.69	3137.29	-158.08	-260.40
203	1	12.22	24.33	31	3.56	-17063.20	-68.66	4110.05	-696.40	-78.88	-223.26
203	1	12.22	24.33	32	3.56	-22344.50	-219.98	-2039.52	7658.47	-147.93	-75.96
203	1	12.22	24.33	1	4.49	-720.32	258.31	10171.70	827.38	120.97	-71.54
203	1	12.22	24.33	±	4.49	147155.00	2419.99	103418.00	109461.00	1944.88	2784.74
203	1	12.22	24.33	2	4.49	-4814.75	171.47	8201.14	1399.73	70.42	-88.38
203	1	12.22	24.33	±	4.49	114154.00	1720.56	80457.20	84588.10	1391.65	1992.46
203	1	12.22	24.33	3	4.49	-720.32	258.31	10171.70	827.38	120.97	-71.54
203	1	12.22	24.33	±	4.49	84322.80	1502.11	56508.40	49451.60	1206.42	1576.78
203	1	12.22	24.33	4	4.49	-4814.75	171.47	8201.14	1399.73	70.42	-88.38
203	1	12.22	24.33	±	4.49	65237.30	1078.41	43937.30	38514.30	866.96	1117.31
203	1	12.22	24.33	5	4.49	-720.32	258.31	10171.70	827.38	120.97	-71.54
203	1	12.22	24.33	±	4.49	139443.00	2118.10	102172.00	123852.00	1703.45	2667.49
203	1	12.22	24.33	6	4.49	-4814.75	171.47	8201.14	1399.73	70.42	-88.38
203	1	12.22	24.33	±	4.49	108437.00	1490.09	79525.70	95254.90	1213.28	1925.05
203	1	12.22	24.33	7	4.49	-720.32	258.31	10171.70	827.38	120.97	-71.54
203	1	12.22	24.33	±	4.49	69999.20	941.47	54194.40	76178.20	758.06	1359.03
203	1	12.22	24.33	8	4.49	-4814.75	171.47	8201.14	1399.73	70.42	-88.38
203	1	12.22	24.33	±	4.49	54619.20	650.40	42207.40	58324.20	535.70	992.12
203	1	12.22	24.33	9	4.49	-38687.40	-546.96	-8101.19	6134.69	-347.78	-227.68
203	1	12.22	24.33	±	4.49	147155.00	2419.99	103418.00	109461.00	1944.88	2784.74
203	1	12.22	24.33	10	4.49	-34593.00	-460.12	-6130.61	5562.34	-297.23	-210.84
203	1	12.22	24.33	±	4.49	114154.00	1720.56	80457.20	84588.10	1391.65	1992.46
203	1	12.22	24.33	11	4.49	-38687.40	-546.96	-8101.19	6134.69	-347.78	-227.68
203	1	12.22	24.33	±	4.49	84322.80	1502.11	56508.40	49451.60	1206.42	1576.78
203	1	12.22	24.33	12	4.49	-34593.00	-460.12	-6130.61	5562.34	-297.23	-210.84
203	1	12.22	24.33	±	4.49	65237.30	1078.41	43937.30	38514.30	866.96	1117.31
203	1	12.22	24.33	13	4.49	-38687.40	-546.96	-8101.19	6134.69	-347.78	-227.68
203	1	12.22	24.33	±	4.49	139443.00	2118.10	102172.00	123852.00	1703.45	2667.49
203	1	12.22	24.33	14	4.49	-34593.00	-460.12	-6130.61	5562.34	-297.23	-210.84
203	1	12.22	24.33	±	4.49	108437.00	1490.09	79525.70	95254.90	1213.28	1925.05
203	1	12.22	24.33	15	4.49	-38687.40	-546.96	-8101.19	6134.69	-347.78	-227.68
203	1	12.22	24.33	±	4.49	69999.20	941.47	54194.40	76178.20	758.06	1359.03
203	1	12.22	24.33	16	4.49	-34593.00	-460.12	-6130.61	5562.34	-297.23	-210.84
203	1	12.22	24.33	±	4.49	54619.20	650.40	42207.40	58324.20	535.70	992.12
203	1	12.22	24.33	17	4.49	-29120.70	-152.44	246.06	5088.94	-84.08	-70.24
203	1	12.22	24.33	18	4.49	-22497.50	-197.59	3068.92	4401.45	-173.44	-291.81
203	1	12.22	24.33	19	4.49	-23168.50	-99.36	4732.28	567.76	-94.23	-254.67
203	1	12.22	24.33	20	4.49	-28449.80	-250.68	-1417.29	8922.63	-163.28	-107.38
203	1	12.22	24.33	21	4.49	-23143.30	-114.15	-172.46	3971.36	-57.48	-30.13
203	1	12.22	24.33	22	4.49	-16520.10	-159.29	2650.41	3283.87	-146.84	-251.70
203	1	12.22	24.33	23	4.49	-17191.00	-61.06	4313.76	-549.82	-67.64	-214.56
203	1	12.22	24.33	24	4.49	-22472.40	-212.38	-1835.81	7805.05	-136.69	-67.27
203	1	12.22	24.33	25	4.49	-23043.40	-119.03	-329.34	3854.08	-64.67	-36.65
203	1	12.22	24.33	26	4.49	-16420.20	-164.17	2493.52	3166.59	-154.03	-258.23

Relazione di calcolo

203	1	12.22	24.33	27	4.49	-17091.10	-65.94	4156.87	-667.10	-74.83	-221.09
203	1	12.22	24.33	28	4.49	-22372.50	-217.26	-1992.70	7687.77	-143.88	-73.79
203	1	12.22	24.33	29	4.49	-23015.50	-121.75	-376.17	3824.78	-68.73	-38.82
203	1	12.22	24.33	30	4.49	-16392.30	-166.90	2446.69	3137.29	-158.08	-260.40
203	1	12.22	24.33	31	4.49	-17063.20	-68.66	4110.05	-696.40	-78.88	-223.26
203	1	12.22	24.33	32	4.49	-22344.50	-219.98	-2039.52	7658.47	-147.93	-75.96
203	2	12.22	24.33	1	4.49	-4290.94	-172.23	9705.44	-102.15	-2.18	535.46
203	2	12.22	24.33	±	4.49	105342.00	1374.46	103168.00	77161.40	681.44	3142.59
203	2	12.22	24.33	2	4.49	-7207.38	-162.84	7796.95	649.13	-21.78	380.33
203	2	12.22	24.33	±	4.49	81573.00	1062.90	80211.90	59644.10	466.22	2463.13
203	2	12.22	24.33	3	4.49	-4290.94	-172.23	9705.44	-102.15	-2.18	535.46
203	2	12.22	24.33	±	4.49	60385.60	799.85	56195.10	35433.00	428.51	1983.57
203	2	12.22	24.33	4	4.49	-7207.38	-162.84	7796.95	649.13	-21.78	380.33
203	2	12.22	24.33	±	4.49	46610.40	617.61	43663.50	27631.90	291.75	1555.23
203	2	12.22	24.33	5	4.49	-4290.94	-172.23	9705.44	-102.15	-2.18	535.46
203	2	12.22	24.33	±	4.49	99787.20	1283.84	102193.00	86436.60	588.04	2700.62
203	2	12.22	24.33	6	4.49	-7207.38	-162.84	7796.95	649.13	-21.78	380.33
203	2	12.22	24.33	±	4.49	77498.60	994.23	79495.30	66445.00	404.48	2115.92
203	2	12.22	24.33	7	4.49	-4290.94	-172.23	9705.44	-102.15	-2.18	535.46
203	2	12.22	24.33	±	4.49	50068.80	631.55	54384.30	52658.30	255.05	1162.78
203	2	12.22	24.33	8	4.49	-7207.38	-162.84	7796.95	649.13	-21.78	380.33
203	2	12.22	24.33	±	4.49	39043.60	490.08	42332.60	40262.20	177.09	910.41
203	2	12.22	24.33	9	4.49	-31334.60	-85.20	-7991.76	6864.40	-183.90	-902.97
203	2	12.22	24.33	±	4.49	105342.00	1374.46	103168.00	77161.40	681.44	3142.59
203	2	12.22	24.33	10	4.49	-28418.20	-94.59	-6083.27	6113.11	-164.30	-747.85
203	2	12.22	24.33	±	4.49	81573.00	1062.90	80211.90	59644.10	466.22	2463.13
203	2	12.22	24.33	11	4.49	-31334.60	-85.20	-7991.76	6864.40	-183.90	-902.97
203	2	12.22	24.33	±	4.49	60385.60	799.85	56195.10	35433.00	428.51	1983.57
203	2	12.22	24.33	12	4.49	-28418.20	-94.59	-6083.27	6113.11	-164.30	-747.85
203	2	12.22	24.33	±	4.49	46610.40	617.61	43663.50	27631.90	291.75	1555.23
203	2	12.22	24.33	13	4.49	-31334.60	-85.20	-7991.76	6864.40	-183.90	-902.97
203	2	12.22	24.33	±	4.49	99787.20	1283.84	102193.00	86436.60	588.04	2700.62
203	2	12.22	24.33	14	4.49	-28418.20	-94.59	-6083.27	6113.11	-164.30	-747.85
203	2	12.22	24.33	±	4.49	77498.60	994.23	79495.30	66445.00	404.48	2115.92
203	2	12.22	24.33	15	4.49	-31334.60	-85.20	-7991.76	6864.40	-183.90	-902.97
203	2	12.22	24.33	±	4.49	50068.80	631.55	54384.30	52658.30	255.05	1162.78
203	2	12.22	24.33	16	4.49	-28418.20	-94.59	-6083.27	6113.11	-164.30	-747.85
203	2	12.22	24.33	±	4.49	39043.60	490.08	42332.60	40262.20	177.09	910.41
203	2	12.22	24.33	17	4.49	-25868.20	-111.45	7.64	5179.70	-111.49	-131.62
203	2	12.22	24.33	18	4.49	-21076.60	-213.74	2768.73	4037.12	-134.66	-285.86
203	2	12.22	24.33	19	4.49	-21666.70	-167.06	4455.58	1786.54	-111.22	-166.40
203	2	12.22	24.33	20	4.49	-25278.20	-158.13	-1679.22	7430.28	-134.93	-251.08
203	2	12.22	24.33	21	4.49	-20415.50	-74.77	-344.01	4097.09	-83.12	-87.70
203	2	12.22	24.33	22	4.49	-15623.90	-177.05	2417.08	2954.50	-106.28	-241.93
203	2	12.22	24.33	23	4.49	-16214.00	-130.38	4103.93	703.93	-82.85	-122.47
203	2	12.22	24.33	24	4.49	-19825.50	-121.44	-2030.87	6347.67	-106.56	-207.16
203	2	12.22	24.33	25	4.49	-20255.40	-76.49	-483.01	3977.29	-81.42	-101.13
203	2	12.22	24.33	26	4.49	-15463.70	-178.77	2278.08	2834.70	-104.58	-255.36
203	2	12.22	24.33	27	4.49	-16053.80	-132.10	3964.93	584.13	-81.15	-135.90
203	2	12.22	24.33	28	4.49	-19665.30	-123.16	-2169.87	6227.87	-104.86	-220.59
203	2	12.22	24.33	29	4.49	-20208.60	-77.58	-523.71	3952.42	-81.46	-106.64
203	2	12.22	24.33	30	4.49	-15417.00	-179.86	2237.39	2809.83	-104.62	-260.88
203	2	12.22	24.33	31	4.49	-16007.00	-133.18	3924.24	559.25	-81.19	-141.41
203	2	12.22	24.33	32	4.49	-19618.50	-124.25	-2210.56	6202.99	-104.89	-226.10
203	2	12.22	24.33	1	5.41	-4290.94	-172.23	9705.44	-102.15	-2.18	535.46
203	2	12.22	24.33	±	5.41	105342.00	1374.46	103168.00	77161.40	681.44	3142.59
203	2	12.22	24.33	2	5.41	-7207.38	-162.84	7796.95	649.13	-21.78	380.33
203	2	12.22	24.33	±	5.41	81573.00	1062.90	80211.90	59644.10	466.22	2463.13
203	2	12.22	24.33	3	5.41	-4290.94	-172.23	9705.44	-102.15	-2.18	535.46
203	2	12.22	24.33	±	5.41	60385.60	799.85	56195.10	35433.00	428.51	1983.57
203	2	12.22	24.33	4	5.41	-7207.38	-162.84	7796.95	649.13	-21.78	380.33
203	2	12.22	24.33	±	5.41	46610.40	617.61	43663.50	27631.90	291.75	1555.23
203	2	12.22	24.33	5	5.41	-4290.94	-172.23	9705.44	-102.15	-2.18	535.46
203	2	12.22	24.33	±	5.41	99787.20	1283.84	102193.00	86436.60	588.04	2700.62
203	2	12.22	24.33	6	5.41	-7207.38	-162.84	7796.95	649.13	-21.78	380.33
203	2	12.22	24.33	±	5.41	77498.60	994.23	79495.30	66445.00	404.48	2115.92
203	2	12.22	24.33	7	5.41	-4290.94	-172.23	9705.44	-102.15	-2.18	535.46
203	2	12.22	24.33	±	5.41	50068.80	631.55	54384.30	52658.30	255.05	1162.78
203	2	12.22	24.33	8	5.41	-7207.38	-162.84	7796.95	649.13	-21.78	380.33
203	2	12.22	24.33	±	5.41	39043.60	490.08	42332.60	40262.20	177.09	910.41
203	2	12.22	24.33	9	5.41	-31334.60	-85.20	-7991.76	6864.40	-183.90	-902.97
203	2	12.22	24.33	±	5.41	105342.00	1374.46	103168.00	77161.40	681.44	3142.59
203	2	12.22	24.33	10	5.41	-28418.20	-94.59	-6083.27	6113.11	-164.30	-747.85
203	2	12.22	24.33	±	5.41	81573.00	1062.90	80211.90	59644.10	466.22	2463.13
203	2	12.22	24.33	11	5.41	-31334.60	-85.20	-7991.76	6864.40	-183.90	-902.97
203	2	12.22	24.33	±	5.41	60385.60	799.85	56195.10	35433.00	428.51	1983.57
203	2	12.22	24.33	12	5.41	-28418.20	-94.59	-6083.27	6113.11	-164.30	-747.85
203	2	12.22	24.33	±	5.41	46610.40	617.61	43663.50	27631.90	291.75	1555.23
203	2	12.22	24.33	13	5.41	-31334.60	-85.20	-7991.76	6864.40	-183.90	-902.97

Relazione di calcolo

203	2	12.22	24.33	±	5.41	99787.20	1283.84	102193.00	86436.60	588.04	2700.62
203	2	12.22	24.33	14	5.41	-28418.20	-94.59	-6083.27	6113.11	-164.30	-747.85
203	2	12.22	24.33	±	5.41	77498.60	994.23	79495.30	66445.00	404.48	2115.92
203	2	12.22	24.33	15	5.41	-31334.60	-85.20	-7991.76	6864.40	-183.90	-902.97
203	2	12.22	24.33	±	5.41	50068.80	631.55	54384.30	52658.30	255.05	1162.78
203	2	12.22	24.33	16	5.41	-28418.20	-94.59	-6083.27	6113.11	-164.30	-747.85
203	2	12.22	24.33	±	5.41	39043.60	490.08	42332.60	40262.20	177.09	910.41
203	2	12.22	24.33	17	5.41	-25868.20	-111.45	7.64	5179.70	-111.49	-131.62
203	2	12.22	24.33	18	5.41	-21076.60	-213.74	2768.73	4037.12	-134.66	-285.86
203	2	12.22	24.33	19	5.41	-21666.70	-167.06	4455.58	1786.54	-111.22	-166.40
203	2	12.22	24.33	20	5.41	-25278.20	-158.13	-1679.22	7430.28	-134.93	-251.08
203	2	12.22	24.33	21	5.41	-20415.50	-74.77	-344.01	4097.09	-83.12	-87.70
203	2	12.22	24.33	22	5.41	-15623.90	-177.05	2417.08	2954.50	-106.28	-241.93
203	2	12.22	24.33	23	5.41	-16214.00	-130.38	4103.93	703.93	-82.85	-122.47
203	2	12.22	24.33	24	5.41	-19825.50	-121.44	-2030.87	6347.67	-106.56	-207.16
203	2	12.22	24.33	25	5.41	-20255.40	-76.49	-483.01	3977.29	-81.42	-101.13
203	2	12.22	24.33	26	5.41	-15463.70	-178.77	2278.08	2834.70	-104.58	-255.36
203	2	12.22	24.33	27	5.41	-16053.80	-132.10	3964.93	584.13	-81.15	-135.90
203	2	12.22	24.33	28	5.41	-19665.30	-123.16	-2169.87	6227.87	-104.86	-220.59
203	2	12.22	24.33	29	5.41	-20208.60	-77.58	-523.71	3952.42	-81.46	-106.64
203	2	12.22	24.33	30	5.41	-15417.00	-179.86	2237.39	2809.83	-104.62	-260.88
203	2	12.22	24.33	31	5.41	-16007.00	-133.18	3924.24	559.25	-81.19	-141.41
203	2	12.22	24.33	32	5.41	-19618.50	-124.25	-2210.56	6202.99	-104.89	-226.10
203	3	12.22	24.33	1	5.41	-7216.90	-76.32	9735.62	286.16	204.97	381.69
203	3	12.22	24.33	±	5.41	62676.10	1211.86	103312.00	46506.50	543.46	2891.41
203	3	12.22	24.33	2	5.41	-8962.10	-77.67	7818.44	1213.73	186.33	242.31
203	3	12.22	24.33	±	5.41	48366.70	926.83	80323.00	35978.60	399.04	2265.24
203	3	12.22	24.33	3	5.41	-7216.90	-76.32	9735.62	286.16	204.97	381.69
203	3	12.22	24.33	±	5.41	35984.50	722.46	56289.30	22485.10	324.57	1803.36
203	3	12.22	24.33	4	5.41	-8962.10	-77.67	7818.44	1213.73	186.33	242.31
203	3	12.22	24.33	±	5.41	27652.50	553.70	43736.90	17569.60	233.97	1413.34
203	3	12.22	24.33	5	5.41	-7216.90	-76.32	9735.62	286.16	204.97	381.69
203	3	12.22	24.33	±	5.41	59285.00	1105.81	102312.00	50384.40	495.02	2517.63
203	3	12.22	24.33	6	5.41	-8962.10	-77.67	7818.44	1213.73	186.33	242.31
203	3	12.22	24.33	±	5.41	45926.60	843.97	79585.90	38713.90	370.06	1971.63
203	3	12.22	24.33	7	5.41	-7216.90	-76.32	9735.62	286.16	204.97	381.69
203	3	12.22	24.33	±	5.41	29686.80	525.51	54431.20	29686.90	234.61	1109.20
203	3	12.22	24.33	8	5.41	-8962.10	-77.67	7818.44	1213.73	186.33	242.31
203	3	12.22	24.33	±	5.41	23120.80	399.80	42367.90	22649.40	180.15	868.05
203	3	12.22	24.33	9	5.41	-23399.90	-88.84	-8042.13	8887.37	32.16	-910.82
203	3	12.22	24.33	±	5.41	62676.10	1211.86	103312.00	46506.50	543.46	2891.41
203	3	12.22	24.33	10	5.41	-21654.70	-87.49	-6124.95	7959.80	50.79	-771.43
203	3	12.22	24.33	±	5.41	48366.70	926.83	80323.00	35978.60	399.04	2265.24
203	3	12.22	24.33	11	5.41	-23399.90	-88.84	-8042.13	8887.37	32.16	-910.82
203	3	12.22	24.33	±	5.41	35984.50	722.46	56289.30	22485.10	324.57	1803.36
203	3	12.22	24.33	12	5.41	-21654.70	-87.49	-6124.95	7959.80	50.79	-771.43
203	3	12.22	24.33	±	5.41	27652.50	553.70	43736.90	17569.60	233.97	1413.34
203	3	12.22	24.33	13	5.41	-23399.90	-88.84	-8042.13	8887.37	32.16	-910.82
203	3	12.22	24.33	±	5.41	59285.00	1105.81	102312.00	50384.40	495.02	2517.63
203	3	12.22	24.33	14	5.41	-21654.70	-87.49	-6124.95	7959.80	50.79	-771.43
203	3	12.22	24.33	±	5.41	45926.60	843.97	79585.90	38713.90	370.06	1971.63
203	3	12.22	24.33	15	5.41	-23399.90	-88.84	-8042.13	8887.37	32.16	-910.82
203	3	12.22	24.33	±	5.41	29686.80	525.51	54431.20	29686.90	234.61	1109.20
203	3	12.22	24.33	16	5.41	-21654.70	-87.49	-6124.95	7959.80	50.79	-771.43
203	3	12.22	24.33	±	5.41	23120.80	399.80	42367.90	22649.40	180.15	868.05
203	3	12.22	24.33	17	5.41	-21787.20	-45.94	-2.79	7111.45	129.38	-247.66
203	3	12.22	24.33	18	5.41	-18857.00	-139.56	2764.53	5460.36	180.62	-414.44
203	3	12.22	24.33	19	5.41	-19355.60	-82.34	4448.54	4852.84	163.08	-308.12
203	3	12.22	24.33	20	5.41	-21288.60	-103.16	-1686.79	7718.97	146.92	-353.98
203	3	12.22	24.33	21	5.41	-17050.20	-26.74	-353.44	5627.82	93.30	-173.09
203	3	12.22	24.33	22	5.41	-14120.00	-120.37	2413.88	3976.73	144.54	-339.88
203	3	12.22	24.33	23	5.41	-14618.60	-63.15	4097.89	3369.21	127.00	-233.56
203	3	12.22	24.33	24	5.41	-16551.60	-83.97	-2037.44	6235.34	110.84	-279.42
203	3	12.22	24.33	25	5.41	-16835.00	-32.89	-495.33	5455.25	93.34	-178.78
203	3	12.22	24.33	26	5.41	-13904.80	-126.52	2271.99	3804.16	144.58	-345.57
203	3	12.22	24.33	27	5.41	-14403.40	-69.30	3956.00	3196.64	127.04	-239.25
203	3	12.22	24.33	28	5.41	-16336.40	-90.12	-2179.33	6062.77	110.88	-285.11
203	3	12.22	24.33	29	5.41	-16773.50	-35.77	-536.91	5412.31	92.94	-181.17
203	3	12.22	24.33	30	5.41	-13843.30	-129.40	2230.41	3761.22	144.18	-347.95
203	3	12.22	24.33	31	5.41	-14341.90	-72.17	3914.41	3153.70	126.64	-241.63
203	3	12.22	24.33	32	5.41	-16274.90	-92.99	-2220.92	6019.83	110.48	-287.49
203	3	12.22	24.33	1	6.33	-7216.90	-76.32	9735.62	286.16	204.97	381.69
203	3	12.22	24.33	±	6.33	62676.10	1211.86	103312.00	46506.50	543.46	2891.41
203	3	12.22	24.33	2	6.33	-8962.10	-77.67	7818.44	1213.73	186.33	242.31
203	3	12.22	24.33	±	6.33	48366.70	926.83	80323.00	35978.60	399.04	2265.24
203	3	12.22	24.33	3	6.33	-7216.90	-76.32	9735.62	286.16	204.97	381.69
203	3	12.22	24.33	±	6.33	35984.50	722.46	56289.30	22485.10	324.57	1803.36
203	3	12.22	24.33	4	6.33	-8962.10	-77.67	7818.44	1213.73	186.33	242.31
203	3	12.22	24.33	±	6.33	27652.50	553.70	43736.90	17569.60	233.97	1413.34

Relazione di calcolo

203	3	12.22	24.33	5	6.33	-7216.90	-76.32	9735.62	286.16	204.97	381.69
203	3	12.22	24.33	±	6.33	59285.00	1105.81	102312.00	50384.40	495.02	2517.63
203	3	12.22	24.33	6	6.33	-8962.10	-77.67	7818.44	1213.73	186.33	242.31
203	3	12.22	24.33	±	6.33	45926.60	843.97	79585.90	38713.90	370.06	1971.63
203	3	12.22	24.33	7	6.33	-7216.90	-76.32	9735.62	286.16	204.97	381.69
203	3	12.22	24.33	±	6.33	29686.80	525.51	54431.20	29686.90	234.61	1109.20
203	3	12.22	24.33	8	6.33	-8962.10	-77.67	7818.44	1213.73	186.33	242.31
203	3	12.22	24.33	±	6.33	23120.80	399.80	42367.90	22649.40	180.15	868.05
203	3	12.22	24.33	9	6.33	-23399.90	-88.84	-8042.13	8887.37	32.16	-910.82
203	3	12.22	24.33	±	6.33	62676.10	1211.86	103312.00	46506.50	543.46	2891.41
203	3	12.22	24.33	10	6.33	-21654.70	-87.49	-6124.95	7959.80	50.79	-771.43
203	3	12.22	24.33	±	6.33	48366.70	926.83	80323.00	35978.60	399.04	2265.24
203	3	12.22	24.33	11	6.33	-23399.90	-88.84	-8042.13	8887.37	32.16	-910.82
203	3	12.22	24.33	±	6.33	35984.50	722.46	56289.30	22485.10	324.57	1803.36
203	3	12.22	24.33	12	6.33	-21654.70	-87.49	-6124.95	7959.80	50.79	-771.43
203	3	12.22	24.33	±	6.33	27652.50	553.70	43736.90	17569.60	233.97	1413.34
203	3	12.22	24.33	13	6.33	-23399.90	-88.84	-8042.13	8887.37	32.16	-910.82
203	3	12.22	24.33	±	6.33	59285.00	1105.81	102312.00	50384.40	495.02	2517.63
203	3	12.22	24.33	14	6.33	-21654.70	-87.49	-6124.95	7959.80	50.79	-771.43
203	3	12.22	24.33	±	6.33	45926.60	843.97	79585.90	38713.90	370.06	1971.63
203	3	12.22	24.33	15	6.33	-23399.90	-88.84	-8042.13	8887.37	32.16	-910.82
203	3	12.22	24.33	±	6.33	29686.80	525.51	54431.20	29686.90	234.61	1109.20
203	3	12.22	24.33	16	6.33	-21654.70	-87.49	-6124.95	7959.80	50.79	-771.43
203	3	12.22	24.33	±	6.33	23120.80	399.80	42367.90	22649.40	180.15	868.05
203	3	12.22	24.33	17	6.33	-21787.20	-45.94	-2.79	7111.45	129.38	-247.66
203	3	12.22	24.33	18	6.33	-18857.00	-139.56	2764.54	5460.36	180.62	-414.44
203	3	12.22	24.33	±	6.33	-19355.60	-82.34	4448.54	4852.84	163.08	-308.12
203	3	12.22	24.33	20	6.33	-21288.60	-103.16	-1686.79	7718.97	146.92	-353.98
203	3	12.22	24.33	21	6.33	-17050.20	-26.74	-353.44	5627.82	93.30	-173.09
203	3	12.22	24.33	22	6.33	-14120.00	-120.37	2413.88	3976.73	144.54	-339.88
203	3	12.22	24.33	23	6.33	-14618.60	-63.15	4097.89	3369.21	127.00	-233.56
203	3	12.22	24.33	±	6.33	-16551.60	-83.97	-2037.44	6235.34	110.84	-279.42
203	3	12.22	24.33	25	6.33	-16835.00	-32.89	-495.33	5455.25	93.34	-178.78
203	3	12.22	24.33	26	6.33	-13904.80	-126.52	2271.99	3804.16	144.58	-345.57
203	3	12.22	24.33	±	6.33	-14403.40	-69.30	3956.00	3196.64	127.04	-239.25
203	3	12.22	24.33	28	6.33	-16336.40	-90.12	-2179.33	6062.77	110.88	-285.11
203	3	12.22	24.33	29	6.33	-16773.50	-35.77	-536.91	5412.31	92.94	-181.17
203	3	12.22	24.33	30	6.33	-13843.30	-129.40	2230.41	3761.22	144.18	-347.95
203	3	12.22	24.33	31	6.33	-14341.90	-72.17	3914.41	3153.70	126.64	-241.63
203	3	12.22	24.33	±	6.33	-16274.90	-92.99	-2220.92	6019.83	110.48	-287.49
203	4	12.22	24.33	1	6.33	-10101.70	-518.27	10175.90	641.33	381.70	1029.86
203	4	12.22	24.33	±	6.33	23734.00	2652.17	101721.00	20461.30	2069.71	4007.86
203	4	12.22	24.33	2	6.33	-10729.10	-454.11	8244.11	1645.07	336.99	802.42
203	4	12.22	24.33	±	6.33	18063.80	2064.75	79078.70	15906.30	1619.81	3136.98
203	4	12.22	24.33	3	6.33	-10101.70	-518.27	10175.90	641.33	381.70	1029.86
203	4	12.22	24.33	±	6.33	13697.30	1516.36	55565.30	11724.50	1194.95	2415.29
203	4	12.22	24.33	4	6.33	-10729.10	-454.11	8244.11	1645.07	336.99	802.42
203	4	12.22	24.33	±	6.33	10343.20	1180.71	43170.00	9182.00	936.14	1891.42
203	4	12.22	24.33	5	6.33	-10101.70	-518.27	10175.90	641.33	381.70	1029.86
203	4	12.22	24.33	±	6.33	22342.60	2518.30	100519.00	19389.30	1947.64	3617.76
203	4	12.22	24.33	6	6.33	-10729.10	-454.11	8244.11	1645.07	336.99	802.42
203	4	12.22	24.33	±	6.33	17128.70	1960.22	78185.10	14970.30	1522.84	2830.20
203	4	12.22	24.33	7	6.33	-10101.70	-518.27	10175.90	641.33	381.70	1029.86
203	4	12.22	24.33	±	6.33	11113.20	1267.73	53332.80	9733.55	968.24	1690.82
203	4	12.22	24.33	8	6.33	-10729.10	-454.11	8244.11	1645.07	336.99	802.42
203	4	12.22	24.33	±	6.33	8606.60	986.58	41510.40	7443.84	756.06	1321.67
203	4	12.22	24.33	9	6.33	-15919.10	76.72	-7737.16	9948.85	-32.91	-1079.16
203	4	12.22	24.33	±	6.33	23734.00	2652.17	101721.00	20461.30	2069.71	4007.86
203	4	12.22	24.33	10	6.33	-15291.70	12.55	-5805.39	8945.11	11.80	-851.72
203	4	12.22	24.33	±	6.33	18063.80	2064.75	79078.70	15906.30	1619.81	3136.98
203	4	12.22	24.33	11	6.33	-15919.10	76.72	-7737.16	9948.85	-32.91	-1079.16
203	4	12.22	24.33	±	6.33	13697.30	1516.36	55565.30	11724.50	1194.95	2415.29
203	4	12.22	24.33	12	6.33	-15291.70	12.55	-5805.39	8945.11	11.80	-851.72
203	4	12.22	24.33	±	6.33	10343.20	1180.71	43170.00	9182.00	936.14	1891.42
203	4	12.22	24.33	13	6.33	-15919.10	76.72	-7737.16	9948.85	-32.91	-1079.16
203	4	12.22	24.33	±	6.33	22342.60	2518.30	100519.00	19389.30	1947.64	3617.76
203	4	12.22	24.33	14	6.33	-15291.70	12.55	-5805.39	8945.11	11.80	-851.72
203	4	12.22	24.33	±	6.33	17128.70	1960.22	78185.10	14970.30	1522.84	2830.20
203	4	12.22	24.33	15	6.33	-15919.10	76.72	-7737.16	9948.85	-32.91	-1079.16
203	4	12.22	24.33	±	6.33	11113.20	1267.73	53332.80	9733.55	968.24	1690.82
203	4	12.22	24.33	16	6.33	-15291.70	12.55	-5805.39	8945.11	11.80	-851.72
203	4	12.22	24.33	±	6.33	8606.60	986.58	41510.40	7443.84	756.06	1321.67
203	4	12.22	24.33	17	6.33	-18040.90	-200.23	519.89	8261.64	125.75	18.81
203	4	12.22	24.33	±	6.33	-16849.50	-399.40	3293.81	6307.22	306.22	16.24
203	4	12.22	24.33	19	6.33	-17176.20	-310.17	4887.78	7359.56	224.07	73.72
203	4	12.22	24.33	±	6.33	-17714.20	-289.46	-1074.08	7209.31	207.91	-38.66
203	4	12.22	24.33	21	6.33	-13953.90	-129.53	42.40	6539.89	77.40	7.97
203	4	12.22	24.33	22	6.33	-12762.50	-328.70	2816.32	4585.47	257.87	5.41
203	4	12.22	24.33	23	6.33	-13089.20	-239.47	4410.29	5637.80	175.71	62.88

Relazione di calcolo

203	4	12.22	24.33	24	6.33	-13627.20	-218.76	-1551.57	5487.55	159.55	-49.50
203	4	12.22	24.33	25	6.33	-13685.60	-123.16	-118.92	6325.25	82.23	-14.54
203	4	12.22	24.33	26	6.33	-12494.20	-322.33	2655.00	4370.83	262.70	-17.10
203	4	12.22	24.33	27	6.33	-12820.90	-233.10	4248.97	5423.17	180.54	40.37
203	4	12.22	24.33	28	6.33	-13358.90	-212.39	-1712.89	5272.92	164.38	-72.01
203	4	12.22	24.33	29	6.33	-13606.10	-121.19	-167.60	6272.31	84.16	-23.37
203	4	12.22	24.33	30	6.33	-12414.70	-320.36	2606.32	4317.88	264.63	-25.93
203	4	12.22	24.33	31	6.33	-12741.40	-231.13	4200.29	5370.22	182.48	31.54
203	4	12.22	24.33	32	6.33	-13279.40	-210.42	-1761.57	5219.97	166.32	-80.84
203	4	12.22	24.33	1	7.26	-10101.70	-518.27	10175.90	641.33	381.70	1029.86
203	4	12.22	24.33	±	7.26	23734.00	2652.17	101721.00	20461.30	2069.71	4007.86
203	4	12.22	24.33	2	7.26	-10729.10	-454.11	8244.11	1645.07	336.99	802.42
203	4	12.22	24.33	±	7.26	18063.80	2064.75	79078.70	15906.30	1619.81	3136.98
203	4	12.22	24.33	3	7.26	-10101.70	-518.27	10175.90	641.33	381.70	1029.86
203	4	12.22	24.33	±	7.26	13697.30	1516.36	55565.30	11724.50	1194.95	2415.29
203	4	12.22	24.33	4	7.26	-10729.10	-454.11	8244.11	1645.07	336.99	802.42
203	4	12.22	24.33	±	7.26	10343.20	1180.71	43170.00	9182.00	936.14	1891.42
203	4	12.22	24.33	5	7.26	-10101.70	-518.27	10175.90	641.33	381.70	1029.86
203	4	12.22	24.33	±	7.26	22342.60	2518.30	100519.00	19389.30	1947.64	3617.76
203	4	12.22	24.33	6	7.26	-10729.10	-454.11	8244.11	1645.07	336.99	802.42
203	4	12.22	24.33	±	7.26	17128.70	1960.22	78185.10	14970.30	1522.84	2830.20
203	4	12.22	24.33	7	7.26	-10101.70	-518.27	10175.90	641.33	381.70	1029.86
203	4	12.22	24.33	±	7.26	11113.20	1267.73	53332.80	9733.54	968.24	1690.82
203	4	12.22	24.33	8	7.26	-10729.10	-454.11	8244.11	1645.07	336.99	802.42
203	4	12.22	24.33	±	7.26	8606.60	986.58	41510.40	7443.84	756.06	1321.67
203	4	12.22	24.33	9	7.26	-15919.10	76.72	-7737.16	9948.85	-32.91	-1079.16
203	4	12.22	24.33	±	7.26	23734.00	2652.17	101721.00	20461.30	2069.71	4007.86
203	4	12.22	24.33	10	7.26	-15291.70	12.55	-5805.39	8945.11	11.80	-851.72
203	4	12.22	24.33	±	7.26	18063.80	2064.75	79078.70	15906.30	1619.81	3136.98
203	4	12.22	24.33	11	7.26	-15919.10	76.72	-7737.16	9948.85	-32.91	-1079.16
203	4	12.22	24.33	±	7.26	13697.30	1516.36	55565.30	11724.50	1194.95	2415.29
203	4	12.22	24.33	12	7.26	-15291.70	12.55	-5805.39	8945.11	11.80	-851.72
203	4	12.22	24.33	±	7.26	10343.20	1180.71	43170.00	9182.00	936.14	1891.42
203	4	12.22	24.33	13	7.26	-15919.10	76.72	-7737.16	9948.85	-32.91	-1079.16
203	4	12.22	24.33	±	7.26	22342.60	2518.30	100519.00	19389.30	1947.64	3617.76
203	4	12.22	24.33	14	7.26	-15291.70	12.55	-5805.39	8945.11	11.80	-851.72
203	4	12.22	24.33	±	7.26	17128.70	1960.22	78185.10	14970.30	1522.84	2830.20
203	4	12.22	24.33	15	7.26	-15919.10	76.72	-7737.16	9948.85	-32.91	-1079.16
203	4	12.22	24.33	±	7.26	11113.20	1267.73	53332.80	9733.54	968.24	1690.82
203	4	12.22	24.33	16	7.26	-15291.70	12.55	-5805.39	8945.11	11.80	-851.72
203	4	12.22	24.33	±	7.26	8606.60	986.58	41510.40	7443.84	756.06	1321.67
203	4	12.22	24.33	17	7.26	-18040.90	-200.23	519.89	8261.64	125.75	18.81
203	4	12.22	24.33	18	7.26	-16849.50	-399.40	3293.81	6307.22	306.22	16.24
203	4	12.22	24.33	19	7.26	-17176.20	-310.17	4887.78	7359.56	224.07	73.72
203	4	12.22	24.33	20	7.26	-17714.20	-289.46	-1074.08	7209.31	207.91	-38.66
203	4	12.22	24.33	21	7.26	-13953.90	-129.53	42.40	6539.89	77.40	7.97
203	4	12.22	24.33	22	7.26	-12762.50	-328.70	2816.32	4585.47	257.87	5.41
203	4	12.22	24.33	23	7.26	-13089.20	-239.47	4410.29	5637.80	175.71	62.88
203	4	12.22	24.33	24	7.26	-13627.20	-218.76	-1551.57	5487.55	159.55	-49.50
203	4	12.22	24.33	25	7.26	-13685.60	-123.16	-118.92	6325.25	82.23	-14.54
203	4	12.22	24.33	26	7.26	-12494.20	-322.33	2655.00	4370.83	262.70	-17.10
203	4	12.22	24.33	27	7.26	-12820.90	-233.10	4248.97	5423.17	180.54	40.37
203	4	12.22	24.33	28	7.26	-13358.90	-212.39	-1712.89	5272.92	164.38	-72.01
203	4	12.22	24.33	29	7.26	-13606.10	-121.19	-167.60	6272.31	84.16	-23.37
203	4	12.22	24.33	30	7.26	-12414.70	-320.36	2606.32	4317.88	264.63	-25.93
203	4	12.22	24.33	31	7.26	-12741.40	-231.13	4200.29	5370.22	182.48	31.54
203	4	12.22	24.33	32	7.26	-13279.40	-210.42	-1761.57	5219.97	166.32	-80.84
206	1	11.21	26.00	1	3.56	-9078.64	-15951.30	7.62	20.16	-3010.72	-216.36
206	1	11.21	26.00	±	3.56	90863.70	84326.30	1760.80	855.61	23456.70	1542.68
206	1	11.21	26.00	2	3.56	-9584.80	-12837.70	34.30	9.51	-2726.36	-207.52
206	1	11.21	26.00	±	3.56	70291.00	65592.50	1163.61	617.78	17041.50	1156.59
206	1	11.21	26.00	3	3.56	-9078.64	-15951.30	7.62	20.16	-3010.72	-216.36
206	1	11.21	26.00	±	3.56	40416.70	47744.40	723.88	349.79	13322.00	787.86
206	1	11.21	26.00	4	3.56	-9584.80	-12837.70	34.30	9.51	-2726.36	-207.52
206	1	11.21	26.00	±	3.56	31173.40	37106.60	467.44	249.58	9605.48	582.77
206	1	11.21	26.00	5	3.56	-9078.64	-15951.30	7.62	20.16	-3010.72	-216.36
206	1	11.21	26.00	±	3.56	103770.00	80780.40	2100.91	1023.85	22407.90	1607.61
206	1	11.21	26.00	6	3.56	-9584.80	-12837.70	34.30	9.51	-2726.36	-207.52
206	1	11.21	26.00	±	3.56	80415.50	62881.50	1404.94	743.77	16390.40	1217.27
206	1	11.21	26.00	7	3.56	-9078.64	-15951.30	7.62	20.16	-3010.72	-216.36
206	1	11.21	26.00	±	3.56	64386.20	41159.10	1355.50	662.23	11374.30	908.45
206	1	11.21	26.00	8	3.56	-9584.80	-12837.70	34.30	9.51	-2726.36	-207.52
206	1	11.21	26.00	±	3.56	49976.20	32071.80	915.62	483.57	8396.31	695.46
206	1	11.21	26.00	9	3.56	-13772.20	12920.70	255.04	-78.61	-373.89	-134.36
206	1	11.21	26.00	±	3.56	90863.70	84326.30	1760.80	855.61	23456.70	1542.68
206	1	11.21	26.00	10	3.56	-13266.10	9807.06	228.35	-67.96	-658.25	-143.20
206	1	11.21	26.00	±	3.56	70291.00	65592.50	1163.61	617.78	17041.50	1156.59
206	1	11.21	26.00	11	3.56	-13772.20	12920.70	255.04	-78.61	-373.89	-134.36
206	1	11.21	26.00	±	3.56	40416.70	47744.40	723.88	349.79	13322.00	787.86

Relazione di calcolo

206	1	11.21	26.00	12	3.56	-13266.10	9807.06	228.35	-67.96	-658.25	-143.20
206	1	11.21	26.00	±	3.56	31173.40	37106.60	467.44	249.58	9605.48	582.77
206	1	11.21	26.00	13	3.56	-13772.20	12920.70	255.04	-78.61	-373.89	-134.36
206	1	11.21	26.00	±	3.56	103770.00	80780.40	2100.91	1023.85	22407.90	1607.61
206	1	11.21	26.00	14	3.56	-13266.10	9807.06	228.35	-67.96	-658.25	-143.20
206	1	11.21	26.00	±	3.56	80415.50	62881.50	1404.94	743.77	16390.40	1217.27
206	1	11.21	26.00	15	3.56	-13772.20	12920.70	255.04	-78.61	-373.89	-134.36
206	1	11.21	26.00	±	3.56	64386.20	41159.10	1355.50	662.23	11374.30	908.45
206	1	11.21	26.00	16	3.56	-13266.10	9807.06	228.35	-67.96	-658.25	-143.20
206	1	11.21	26.00	±	3.56	49976.20	32071.80	915.62	483.57	8396.31	695.46
206	1	11.21	26.00	17	3.56	-15169.90	-255.60	191.43	-46.16	-2078.97	-191.03
206	1	11.21	26.00	18	3.56	-16057.50	-4732.86	160.02	-39.03	-3341.85	-311.66
206	1	11.21	26.00	19	3.56	-19022.30	-3053.13	165.78	-56.07	-2462.42	-200.76
206	1	11.21	26.00	20	3.56	-12205.20	-1935.34	185.68	-29.11	-2958.40	-301.93
206	1	11.21	26.00	21	3.56	-11480.20	387.89	150.55	-35.88	-1391.94	-130.00
206	1	11.21	26.00	22	3.56	-12367.80	-4089.38	119.15	-28.75	-2654.82	-250.64
206	1	11.21	26.00	23	3.56	-15332.60	-2409.64	124.90	-45.80	-1775.39	-139.74
206	1	11.21	26.00	24	3.56	-8515.46	-1291.85	144.80	-18.83	-2271.36	-240.91
206	1	11.21	26.00	25	3.56	-11094.10	635.04	147.45	-33.37	-1140.88	-118.97
206	1	11.21	26.00	26	3.56	-11981.70	-3842.23	116.05	-26.25	-2403.76	-239.60
206	1	11.21	26.00	27	3.56	-14946.50	-2162.49	121.80	-43.29	-1524.34	-128.70
206	1	11.21	26.00	28	3.56	-8129.34	-1044.70	141.70	-16.33	-2020.31	-229.87
206	1	11.21	26.00	29	3.56	-10981.60	723.30	147.03	-32.79	-1060.86	-115.04
206	1	11.21	26.00	30	3.56	-11869.20	-3753.96	115.62	-25.66	-2323.74	-235.68
206	1	11.21	26.00	31	3.56	-14834.00	-2074.23	121.38	-42.71	-1444.32	-124.78
206	1	11.21	26.00	32	3.56	-8016.86	-956.44	141.27	-15.75	-1940.29	-225.94
206	1	11.21	26.00	1	4.49	-9078.64	-15951.30	7.62	20.16	-3010.72	-216.36
206	1	11.21	26.00	±	4.49	90863.70	84326.30	1760.80	855.61	23456.70	1542.68
206	1	11.21	26.00	2	4.49	-9584.80	-12837.70	34.30	9.51	-2726.36	-207.52
206	1	11.21	26.00	±	4.49	70291.00	65592.50	1163.61	617.78	17041.50	1156.59
206	1	11.21	26.00	3	4.49	-9078.64	-15951.30	7.62	20.16	-3010.72	-216.36
206	1	11.21	26.00	±	4.49	40416.70	47744.40	723.88	349.79	13322.00	787.86
206	1	11.21	26.00	4	4.49	-9584.80	-12837.70	34.30	9.51	-2726.36	-207.52
206	1	11.21	26.00	±	4.49	31173.40	37106.60	467.44	249.58	9605.48	582.77
206	1	11.21	26.00	5	4.49	-9078.64	-15951.30	7.62	20.16	-3010.72	-216.36
206	1	11.21	26.00	±	4.49	103770.00	80780.40	2100.91	1023.85	22407.90	1607.61
206	1	11.21	26.00	6	4.49	-9584.80	-12837.70	34.30	9.51	-2726.36	-207.52
206	1	11.21	26.00	±	4.49	80415.50	62881.50	1404.94	743.77	16390.40	1217.27
206	1	11.21	26.00	7	4.49	-9078.64	-15951.30	7.62	20.16	-3010.72	-216.36
206	1	11.21	26.00	±	4.49	64386.20	41159.10	1355.50	662.23	11374.30	908.45
206	1	11.21	26.00	8	4.49	-9584.80	-12837.70	34.30	9.51	-2726.36	-207.52
206	1	11.21	26.00	±	4.49	49976.20	32071.80	915.62	483.57	8396.31	695.46
206	1	11.21	26.00	9	4.49	-13772.20	12920.70	255.04	-78.61	-373.89	-134.36
206	1	11.21	26.00	±	4.49	90863.70	84326.30	1760.80	855.61	23456.70	1542.68
206	1	11.21	26.00	10	4.49	-13266.10	9807.06	228.35	-67.96	-658.25	-143.20
206	1	11.21	26.00	±	4.49	70291.00	65592.50	1163.61	617.78	17041.50	1156.59
206	1	11.21	26.00	11	4.49	-13772.20	12920.70	255.04	-78.61	-373.89	-134.36
206	1	11.21	26.00	±	4.49	40416.70	47744.40	723.88	349.79	13322.00	787.86
206	1	11.21	26.00	12	4.49	-13266.10	9807.06	228.35	-67.96	-658.25	-143.20
206	1	11.21	26.00	±	4.49	31173.40	37106.60	467.44	249.58	9605.48	582.77
206	1	11.21	26.00	13	4.49	-13772.20	12920.70	255.04	-78.61	-373.89	-134.36
206	1	11.21	26.00	±	4.49	103770.00	80780.40	2100.91	1023.85	22407.90	1607.61
206	1	11.21	26.00	14	4.49	-13266.10	9807.06	228.35	-67.96	-658.25	-143.20
206	1	11.21	26.00	±	4.49	80415.50	62881.50	1404.94	743.77	16390.40	1217.27
206	1	11.21	26.00	15	4.49	-13772.20	12920.70	255.04	-78.61	-373.89	-134.36
206	1	11.21	26.00	±	4.49	64386.20	41159.10	1355.50	662.23	11374.30	908.45
206	1	11.21	26.00	16	4.49	-13266.10	9807.06	228.35	-67.96	-658.25	-143.20
206	1	11.21	26.00	±	4.49	49976.20	32071.80	915.62	483.57	8396.31	695.46
206	1	11.21	26.00	17	4.49	-15169.90	-255.60	191.43	-46.16	-2078.97	-191.03
206	1	11.21	26.00	18	4.49	-16057.50	-4732.86	160.02	-39.03	-3341.85	-311.66
206	1	11.21	26.00	19	4.49	-19022.30	-3053.13	165.78	-56.07	-2462.42	-200.76
206	1	11.21	26.00	20	4.49	-12205.20	-1935.34	185.68	-29.11	-2958.40	-301.93
206	1	11.21	26.00	21	4.49	-11480.20	387.89	150.55	-35.88	-1391.94	-130.00
206	1	11.21	26.00	22	4.49	-12367.80	-4089.38	119.15	-28.75	-2654.82	-250.64
206	1	11.21	26.00	23	4.49	-15332.60	-2409.64	124.90	-45.80	-1775.39	-139.74
206	1	11.21	26.00	24	4.49	-8515.46	-1291.85	144.80	-18.83	-2271.36	-240.91
206	1	11.21	26.00	25	4.49	-11094.10	635.04	147.45	-33.37	-1140.88	-118.97
206	1	11.21	26.00	26	4.49	-11981.70	-3842.23	116.05	-26.25	-2403.76	-239.60
206	1	11.21	26.00	27	4.49	-14946.50	-2162.49	121.80	-43.29	-1524.34	-128.70
206	1	11.21	26.00	28	4.49	-8129.34	-1044.70	141.70	-16.33	-2020.31	-229.87
206	1	11.21	26.00	29	4.49	-10981.60	723.30	147.03	-32.79	-1060.86	-115.04
206	1	11.21	26.00	30	4.49	-11869.20	-3753.96	115.62	-25.66	-2323.74	-235.68
206	1	11.21	26.00	31	4.49	-14834.00	-2074.23	121.38	-42.71	-1444.32	-124.78
206	1	11.21	26.00	32	4.49	-8016.86	-956.44	141.27	-15.75	-1940.29	-225.94
206	2	11.21	26.00	1	4.49	-7619.47	-13530.20	194.05	133.52	-1313.28	495.38
206	2	11.21	26.00	±	4.49	63904.90	82969.90	933.97	78.47	13808.00	1733.36
206	2	11.21	26.00	2	4.49	-7898.57	-10544.30	201.85	131.65	-1227.41	403.44
206	2	11.21	26.00	±	4.49	49262.20	64382.70	723.19	56.96	9676.11	1356.53
206	2	11.21	26.00	3	4.49	-7619.47	-13530.20	194.05	133.52	-1313.28	495.38

Relazione di calcolo

206	2	11.21	26.00	±	4.49	28358.80	46934.40	408.88	37.00	7917.40	1077.77
206	2	11.21	26.00	4	4.49	-7898.57	-10544.30	201.85	131.65	-1227.41	403.44
206	2	11.21	26.00	±	4.49	21783.60	36379.50	316.18	26.33	5475.63	843.76
206	2	11.21	26.00	5	4.49	-7619.47	-13530.20	194.05	133.52	-1313.28	495.38
206	2	11.21	26.00	±	4.49	73083.00	79544.80	1076.58	86.44	13076.40	1514.31
206	2	11.21	26.00	6	4.49	-7898.57	-10544.30	201.85	131.65	-1227.41	403.44
206	2	11.21	26.00	±	4.49	56454.60	61786.40	834.25	63.54	9273.56	1184.66
206	2	11.21	26.00	7	4.49	-7619.47	-13530.20	194.05	133.52	-1313.28	495.38
206	2	11.21	26.00	±	4.49	45403.90	40573.50	673.72	51.80	6558.80	670.97
206	2	11.21	26.00	8	4.49	-7898.57	-10544.30	201.85	131.65	-1227.41	403.44
206	2	11.21	26.00	±	4.49	35140.80	31557.70	522.44	38.56	4728.04	524.58
206	2	11.21	26.00	9	4.49	-10207.60	14157.00	266.39	116.14	-516.95	-357.13
206	2	11.21	26.00	±	4.49	63904.90	82969.90	933.97	78.47	13808.00	1733.36
206	2	11.21	26.00	10	4.49	-9928.47	11171.20	258.59	118.02	-602.83	-265.19
206	2	11.21	26.00	±	4.49	49262.20	64382.70	723.19	56.96	9676.11	1356.53
206	2	11.21	26.00	11	4.49	-10207.60	14157.00	266.39	116.14	-516.95	-357.13
206	2	11.21	26.00	±	4.49	28358.80	46934.40	408.88	37.00	7917.40	1077.77
206	2	11.21	26.00	12	4.49	-9928.47	11171.20	258.59	118.02	-602.83	-265.19
206	2	11.21	26.00	±	4.49	21783.60	36379.50	316.18	26.33	5475.63	843.76
206	2	11.21	26.00	13	4.49	-10207.60	14157.00	266.39	116.14	-516.95	-357.13
206	2	11.21	26.00	±	4.49	73083.00	79544.80	1076.58	86.44	13076.40	1514.31
206	2	11.21	26.00	14	4.49	-9928.47	11171.20	258.59	118.02	-602.83	-265.19
206	2	11.21	26.00	±	4.49	56454.60	61786.40	834.25	63.54	9273.56	1184.66
206	2	11.21	26.00	15	4.49	-10207.60	14157.00	266.39	116.14	-516.95	-357.13
206	2	11.21	26.00	±	4.49	45403.90	40573.50	673.72	51.80	6558.80	670.97
206	2	11.21	26.00	16	4.49	-9928.47	11171.20	258.59	118.02	-602.83	-265.19
206	2	11.21	26.00	±	4.49	35140.80	31557.70	522.44	38.56	4728.04	524.58
206	2	11.21	26.00	17	4.49	-11936.40	2369.06	325.37	176.77	-1193.90	139.68
206	2	11.21	26.00	18	4.49	-12542.60	-2068.26	332.81	175.20	-1780.64	96.16
206	2	11.21	26.00	19	4.49	-14536.20	-316.92	364.49	175.60	-1327.16	147.08
206	2	11.21	26.00	20	4.49	-9942.70	617.72	293.70	176.37	-1647.38	88.76
206	2	11.21	26.00	21	4.49	-9037.78	2364.91	245.89	134.56	-816.34	108.95
206	2	11.21	26.00	22	4.49	-9644.01	-2072.42	253.33	132.99	-1403.07	65.44
206	2	11.21	26.00	23	4.49	-11637.70	-321.08	285.00	133.39	-949.60	116.35
206	2	11.21	26.00	24	4.49	-7044.12	613.56	214.22	134.16	-1269.81	58.04
206	2	11.21	26.00	25	4.49	-8706.72	2492.39	231.10	127.70	-666.40	95.45
206	2	11.21	26.00	26	4.49	-9312.95	-1944.94	238.54	126.12	-1253.14	51.94
206	2	11.21	26.00	27	4.49	-11306.60	-193.59	270.21	126.52	-799.66	102.85
206	2	11.21	26.00	28	4.49	-6713.06	741.04	199.43	127.30	-1119.88	44.54
206	2	11.21	26.00	29	4.49	-8610.41	2532.10	226.50	125.62	-621.75	90.88
206	2	11.21	26.00	30	4.49	-9216.64	-1905.22	233.94	124.04	-1208.49	47.37
206	2	11.21	26.00	31	4.49	-11210.30	-153.88	265.61	124.45	-755.01	98.28
206	2	11.21	26.00	32	4.49	-6616.75	780.76	194.83	125.22	-1075.23	39.97
206	2	11.21	26.00	1	5.41	-7619.47	-13530.20	194.05	133.52	-1313.28	495.38
206	2	11.21	26.00	±	5.41	63904.90	82969.90	933.97	78.47	13808.00	1733.36
206	2	11.21	26.00	2	5.41	-7898.57	-10544.30	201.85	131.65	-1227.41	403.44
206	2	11.21	26.00	±	5.41	49262.20	64382.70	723.19	56.96	9676.11	1356.53
206	2	11.21	26.00	3	5.41	-7619.47	-13530.20	194.05	133.52	-1313.28	495.38
206	2	11.21	26.00	±	5.41	28358.80	46934.40	408.88	37.00	7917.40	1077.77
206	2	11.21	26.00	4	5.41	-7898.57	-10544.30	201.85	131.65	-1227.41	403.44
206	2	11.21	26.00	±	5.41	21783.60	36379.50	316.18	26.33	5475.63	843.76
206	2	11.21	26.00	5	5.41	-7619.47	-13530.20	194.05	133.52	-1313.28	495.38
206	2	11.21	26.00	±	5.41	73083.00	79544.80	1076.58	86.44	13076.40	1514.32
206	2	11.21	26.00	6	5.41	-7898.57	-10544.30	201.85	131.65	-1227.41	403.44
206	2	11.21	26.00	±	5.41	56454.60	61786.40	834.25	63.54	9273.56	1184.66
206	2	11.21	26.00	7	5.41	-7619.47	-13530.20	194.05	133.52	-1313.28	495.38
206	2	11.21	26.00	±	5.41	45403.90	40573.50	673.72	51.80	6558.80	670.98
206	2	11.21	26.00	8	5.41	-7898.57	-10544.30	201.85	131.65	-1227.41	403.44
206	2	11.21	26.00	±	5.41	35140.80	31557.70	522.44	38.56	4728.04	524.58
206	2	11.21	26.00	9	5.41	-10207.60	14157.00	266.39	116.14	-516.95	-357.13
206	2	11.21	26.00	±	5.41	63904.90	82969.90	933.97	78.47	13808.00	1733.36
206	2	11.21	26.00	10	5.41	-9928.47	11171.20	258.59	118.02	-602.83	-265.19
206	2	11.21	26.00	±	5.41	49262.20	64382.70	723.19	56.96	9676.11	1356.53
206	2	11.21	26.00	11	5.41	-10207.60	14157.00	266.39	116.14	-516.95	-357.13
206	2	11.21	26.00	±	5.41	28358.80	46934.40	408.88	37.00	7917.40	1077.77
206	2	11.21	26.00	12	5.41	-9928.47	11171.20	258.59	118.02	-602.83	-265.19
206	2	11.21	26.00	±	5.41	21783.60	36379.50	316.18	26.33	5475.63	843.76
206	2	11.21	26.00	13	5.41	-10207.60	14157.00	266.39	116.14	-516.95	-357.13
206	2	11.21	26.00	±	5.41	73083.00	79544.80	1076.58	86.44	13076.40	1514.32
206	2	11.21	26.00	14	5.41	-9928.47	11171.20	258.59	118.02	-602.83	-265.19
206	2	11.21	26.00	±	5.41	56454.60	61786.40	834.25	63.54	9273.56	1184.66
206	2	11.21	26.00	15	5.41	-10207.60	14157.00	266.39	116.14	-516.95	-357.13
206	2	11.21	26.00	±	5.41	45403.90	40573.50	673.72	51.80	6558.80	670.98
206	2	11.21	26.00	16	5.41	-9928.47	11171.20	258.59	118.02	-602.83	-265.19
206	2	11.21	26.00	±	5.41	35140.80	31557.70	522.44	38.56	4728.04	524.58
206	2	11.21	26.00	17	5.41	-11936.40	2369.06	325.37	176.77	-1193.90	139.68
206	2	11.21	26.00	18	5.41	-12542.60	-2068.26	332.81	175.20	-1780.64	96.16
206	2	11.21	26.00	19	5.41	-14536.20	-316.92	364.49	175.60	-1327.16	147.08
206	2	11.21	26.00	20	5.41	-9942.70	617.72	293.70	176.37	-1647.38	88.76

Relazione di calcolo

206	2	11.21	26.00	21	5.41	-9037.78	2364.91	245.89	134.56	-816.34	108.95
206	2	11.21	26.00	22	5.41	-9644.01	-2072.42	253.33	132.99	-1403.07	65.44
206	2	11.21	26.00	23	5.41	-11637.70	-321.08	285.00	133.39	-949.60	116.35
206	2	11.21	26.00	24	5.41	-7044.12	613.56	214.22	134.16	-1269.81	58.04
206	2	11.21	26.00	25	5.41	-8706.72	2492.39	231.10	127.70	-666.40	95.45
206	2	11.21	26.00	26	5.41	-9312.95	-1944.94	238.54	126.12	-1253.14	51.94
206	2	11.21	26.00	27	5.41	-11306.60	-193.59	270.21	126.52	-799.66	102.85
206	2	11.21	26.00	28	5.41	-6713.06	741.04	199.43	127.30	-1119.88	44.54
206	2	11.21	26.00	29	5.41	-8610.41	2532.10	226.50	125.62	-621.75	90.88
206	2	11.21	26.00	30	5.41	-9216.64	-1905.22	233.94	124.04	-1208.49	47.37
206	2	11.21	26.00	31	5.41	-11210.30	-153.88	265.61	124.45	-755.01	98.28
206	2	11.21	26.00	32	5.41	-6616.75	780.76	194.83	125.22	-1075.23	39.97
206	3	11.21	26.00	1	5.41	-7335.44	-14279.60	208.22	-17.90	-340.04	482.20
206	3	11.21	26.00	±	5.41	35075.60	83926.10	911.62	590.88	5107.90	1568.45
206	3	11.21	26.00	2	5.41	-7425.03	-11256.30	218.40	-24.81	-470.29	397.14
206	3	11.21	26.00	±	5.41	26818.80	65149.00	707.40	460.93	2846.46	1228.06
206	3	11.21	26.00	3	5.41	-7335.44	-14279.60	208.22	-17.90	-340.04	482.20
206	3	11.21	26.00	±	5.41	15276.40	47491.90	396.74	244.38	3181.32	983.28
206	3	11.21	26.00	4	5.41	-7425.03	-11256.30	218.40	-24.81	-470.29	397.14
206	3	11.21	26.00	±	5.41	11621.70	36826.00	306.91	190.49	1755.35	770.36
206	3	11.21	26.00	5	5.41	-7335.44	-14279.60	208.22	-17.90	-340.04	482.20
206	3	11.21	26.00	±	5.41	40551.40	80436.40	1054.39	702.78	4454.35	1358.04
206	3	11.21	26.00	6	5.41	-7425.03	-11256.30	218.40	-24.81	-470.29	397.14
206	3	11.21	26.00	±	5.41	31094.60	62501.30	819.63	548.45	2508.78	1062.61
206	3	11.21	26.00	7	5.41	-7335.44	-14279.60	208.22	-17.90	-340.04	482.20
206	3	11.21	26.00	±	5.41	25445.80	41011.00	661.88	452.20	1967.59	592.52
206	3	11.21	26.00	8	5.41	-7425.03	-11256.30	218.40	-24.81	-470.29	397.14
206	3	11.21	26.00	±	5.41	19562.50	31908.80	515.34	353.02	1128.24	463.08
206	3	11.21	26.00	9	5.41	-8166.13	13754.50	302.69	-81.98	-1547.79	-306.52
206	3	11.21	26.00	±	5.41	35075.60	83926.10	911.62	590.88	5107.90	1568.45
206	3	11.21	26.00	10	5.41	-8076.55	10731.20	292.50	-75.07	-1417.54	-221.47
206	3	11.21	26.00	±	5.41	26818.80	65149.00	707.40	460.93	2846.46	1228.06
206	3	11.21	26.00	11	5.41	-8166.13	13754.50	302.69	-81.98	-1547.79	-306.52
206	3	11.21	26.00	±	5.41	15276.40	47491.90	396.74	244.38	3181.32	983.28
206	3	11.21	26.00	12	5.41	-8076.55	10731.20	292.50	-75.07	-1417.54	-221.47
206	3	11.21	26.00	±	5.41	11621.70	36826.00	306.91	190.49	1755.35	770.36
206	3	11.21	26.00	13	5.41	-8166.13	13754.50	302.69	-81.98	-1547.79	-306.52
206	3	11.21	26.00	±	5.41	40551.40	80436.40	1054.39	702.78	4454.35	1358.04
206	3	11.21	26.00	14	5.41	-8076.55	10731.20	292.50	-75.07	-1417.54	-221.47
206	3	11.21	26.00	±	5.41	31094.60	62501.30	819.63	548.45	2508.78	1062.61
206	3	11.21	26.00	15	5.41	-8166.13	13754.50	302.69	-81.98	-1547.79	-306.52
206	3	11.21	26.00	±	5.41	25445.80	41011.00	661.88	452.20	1967.59	592.52
206	3	11.21	26.00	16	5.41	-8076.55	10731.20	292.50	-75.07	-1417.54	-221.47
206	3	11.21	26.00	±	5.41	19562.50	31908.80	515.34	353.02	1128.24	463.08
206	3	11.21	26.00	17	5.41	-10602.20	1547.91	363.74	-78.59	-1530.40	163.23
206	3	11.21	26.00	18	5.41	-10833.80	-2932.49	368.72	-75.46	-1395.32	116.01
206	3	11.21	26.00	19	5.41	-11886.70	-1182.99	402.62	-103.91	-1409.12	168.07
206	3	11.21	26.00	20	5.41	-9549.26	-201.59	329.83	-50.14	-1516.60	111.17
206	3	11.21	26.00	21	5.41	-8052.40	1751.38	274.82	-59.29	-1165.36	127.89
206	3	11.21	26.00	22	5.41	-8283.94	-2729.02	279.80	-56.16	-1030.28	80.68
206	3	11.21	26.00	23	5.41	-9336.89	-979.51	313.70	-84.61	-1044.08	132.74
206	3	11.21	26.00	24	5.41	-6999.44	1.88	240.92	-30.84	-1151.56	75.83
206	3	11.21	26.00	25	5.41	-7734.38	1920.82	258.68	-53.48	-1047.15	115.49
206	3	11.21	26.00	26	5.41	-7965.93	-2559.58	263.66	-50.35	-912.07	68.28
206	3	11.21	26.00	27	5.41	-9018.88	-810.07	297.57	-78.80	-925.87	120.34
206	3	11.21	26.00	28	5.41	-6681.43	171.32	224.78	-25.03	-1033.35	63.43
206	3	11.21	26.00	29	5.41	-7635.02	1977.65	252.96	-51.50	-1011.46	111.44
206	3	11.21	26.00	30	5.41	-7866.56	-2502.75	257.94	-48.37	-876.38	64.23
206	3	11.21	26.00	31	5.41	-8919.51	-753.24	291.84	-76.82	-890.17	116.29
206	3	11.21	26.00	32	5.41	-6582.06	228.15	219.06	-23.05	-997.66	59.38
206	3	11.21	26.00	1	6.33	-7335.44	-14279.60	208.22	-17.90	-340.04	482.20
206	3	11.21	26.00	±	6.33	35075.60	83926.10	911.62	590.88	5107.90	1568.45
206	3	11.21	26.00	2	6.33	-7425.03	-11256.30	218.40	-24.81	-470.29	397.14
206	3	11.21	26.00	±	6.33	26818.80	65149.00	707.40	460.93	2846.46	1228.06
206	3	11.21	26.00	3	6.33	-7335.44	-14279.60	208.22	-17.90	-340.04	482.20
206	3	11.21	26.00	±	6.33	15276.40	47491.90	396.74	244.38	3181.32	983.28
206	3	11.21	26.00	4	6.33	-7425.03	-11256.30	218.40	-24.81	-470.29	397.14
206	3	11.21	26.00	±	6.33	11621.70	36826.00	306.91	190.49	1755.35	770.36
206	3	11.21	26.00	5	6.33	-7335.44	-14279.60	208.22	-17.90	-340.04	482.20
206	3	11.21	26.00	±	6.33	40551.40	80436.40	1054.39	702.78	4454.35	1358.04
206	3	11.21	26.00	6	6.33	-7425.03	-11256.30	218.40	-24.81	-470.29	397.14
206	3	11.21	26.00	±	6.33	31094.60	62501.30	819.63	548.45	2508.78	1062.61
206	3	11.21	26.00	7	6.33	-7335.44	-14279.60	208.22	-17.90	-340.04	482.20
206	3	11.21	26.00	±	6.33	25445.80	41011.00	661.88	452.20	1967.59	592.52
206	3	11.21	26.00	8	6.33	-7425.03	-11256.30	218.40	-24.81	-470.29	397.14
206	3	11.21	26.00	±	6.33	19562.50	31908.80	515.34	353.02	1128.24	463.08
206	3	11.21	26.00	9	6.33	-8166.13	13754.50	302.69	-81.98	-1547.79	-306.52
206	3	11.21	26.00	±	6.33	35075.60	83926.10	911.62	590.88	5107.90	1568.45
206	3	11.21	26.00	10	6.33	-8076.55	10731.20	292.50	-75.07	-1417.54	-221.47

Relazione di calcolo

206	3	11.21	26.00	±	6.33	26818.80	65149.00	707.40	460.93	2846.46	1228.06
206	3	11.21	26.00	11	6.33	-8166.13	13754.50	302.69	-81.98	-1547.79	-306.52
206	3	11.21	26.00	±	6.33	15276.40	47491.90	396.74	244.38	3181.32	983.28
206	3	11.21	26.00	12	6.33	-8076.55	10731.20	292.50	-75.07	-1417.54	-221.47
206	3	11.21	26.00	±	6.33	11621.70	36826.00	306.91	190.49	1755.35	770.36
206	3	11.21	26.00	13	6.33	-8166.13	13754.50	302.69	-81.98	-1547.79	-306.52
206	3	11.21	26.00	±	6.33	40551.40	80436.40	1054.39	702.78	4454.35	1358.04
206	3	11.21	26.00	14	6.33	-8076.55	10731.20	292.50	-75.07	-1417.54	-221.47
206	3	11.21	26.00	±	6.33	31094.60	62501.30	819.63	548.45	2508.78	1062.61
206	3	11.21	26.00	15	6.33	-8166.13	13754.50	302.69	-81.98	-1547.79	-306.52
206	3	11.21	26.00	±	6.33	25445.80	41011.00	661.88	452.20	1967.59	592.52
206	3	11.21	26.00	16	6.33	-8076.55	10731.20	292.50	-75.07	-1417.54	-221.47
206	3	11.21	26.00	±	6.33	19562.50	31908.80	515.34	353.02	1128.24	463.08
206	3	11.21	26.00	17	6.33	-10602.20	1547.91	363.74	-78.59	-1530.40	163.23
206	3	11.21	26.00	18	6.33	-10833.80	-2932.49	368.72	-75.46	-1395.32	116.01
206	3	11.21	26.00	19	6.33	-11886.70	-1182.99	402.62	-103.91	-1409.12	168.07
206	3	11.21	26.00	20	6.33	-9549.26	-201.59	329.83	-50.14	-1516.60	111.17
206	3	11.21	26.00	21	6.33	-8052.40	1751.38	274.82	-59.29	-1165.36	127.89
206	3	11.21	26.00	22	6.33	-8283.94	-2729.02	279.80	-56.16	-1030.28	80.68
206	3	11.21	26.00	23	6.33	-9336.89	-979.51	313.70	-84.61	-1044.08	132.74
206	3	11.21	26.00	24	6.33	-6999.44	1.88	240.92	-30.84	-1151.56	75.83
206	3	11.21	26.00	25	6.33	-7734.38	1920.82	258.68	-53.48	-1047.15	115.49
206	3	11.21	26.00	26	6.33	-7965.93	-2559.58	263.66	-50.35	-912.07	68.28
206	3	11.21	26.00	27	6.33	-9018.88	-810.07	297.57	-78.80	-925.87	120.34
206	3	11.21	26.00	28	6.33	-6681.43	171.32	224.78	-25.03	-1033.35	63.43
206	3	11.21	26.00	29	6.33	-7635.02	1977.65	252.96	-51.50	-1011.46	111.44
206	3	11.21	26.00	30	6.33	-7866.56	-2502.75	257.94	-48.37	-876.38	64.23
206	3	11.21	26.00	31	6.33	-8919.51	-753.24	291.84	-76.82	-890.17	116.29
206	3	11.21	26.00	32	6.33	-6582.06	228.15	219.06	-23.05	-997.66	59.38
206	4	11.21	26.00	1	6.33	-6837.95	-13688.50	-445.29	-16.97	1102.22	350.83
206	4	11.21	26.00	±	6.33	11150.40	79666.70	3271.54	872.71	8993.71	2692.72
206	4	11.21	26.00	2	6.33	-6716.08	-10821.80	-385.81	0.26	728.02	238.14
206	4	11.21	26.00	±	6.33	8184.33	61793.90	2554.79	683.30	6946.75	2107.98
206	4	11.21	26.00	3	6.33	-6837.95	-13688.50	-445.29	-16.97	1102.22	350.83
206	4	11.21	26.00	±	6.33	4712.06	45053.00	1356.83	369.57	5135.67	1632.31
206	4	11.21	26.00	4	6.33	-6716.08	-10821.80	-385.81	0.26	728.02	238.14
206	4	11.21	26.00	±	6.33	3411.42	34903.50	1058.86	289.17	3944.27	1278.75
206	4	11.21	26.00	5	6.33	-6837.95	-13688.50	-445.29	-16.97	1102.22	350.83
206	4	11.21	26.00	±	6.33	13110.00	76397.40	3885.43	1024.90	8549.48	2416.10
206	4	11.21	26.00	6	6.33	-6716.08	-10821.80	-385.81	0.26	728.02	238.14
206	4	11.21	26.00	±	6.33	9694.21	59321.90	3035.27	802.75	6637.78	1890.06
206	4	11.21	26.00	7	6.33	-6837.95	-13688.50	-445.29	-16.97	1102.22	350.83
206	4	11.21	26.00	±	6.33	8351.23	38981.50	2496.92	652.22	4310.66	1118.60
206	4	11.21	26.00	8	6.33	-6716.08	-10821.80	-385.81	0.26	728.02	238.14
206	4	11.21	26.00	±	6.33	6215.48	30312.70	1951.18	511.01	3370.47	874.04
206	4	11.21	26.00	9	6.33	-5707.84	12893.60	106.27	142.75	-2367.70	-694.19
206	4	11.21	26.00	±	6.33	11150.40	79666.70	3271.54	872.71	8993.71	2692.72
206	4	11.21	26.00	10	6.33	-5829.71	10026.90	46.79	125.53	-1993.50	-581.49
206	4	11.21	26.00	±	6.33	8184.33	61793.90	2554.79	683.30	6946.75	2107.98
206	4	11.21	26.00	11	6.33	-5707.84	12893.60	106.27	142.75	-2367.70	-694.19
206	4	11.21	26.00	±	6.33	4712.06	45053.00	1356.83	369.57	5135.67	1632.31
206	4	11.21	26.00	12	6.33	-5829.71	10026.90	46.79	125.53	-1993.50	-581.49
206	4	11.21	26.00	±	6.33	3411.42	34903.50	1058.86	289.17	3944.27	1278.75
206	4	11.21	26.00	13	6.33	-5707.84	12893.60	106.27	142.75	-2367.70	-694.19
206	4	11.21	26.00	±	6.33	13110.00	76397.40	3885.43	1024.90	8549.48	2416.10
206	4	11.21	26.00	14	6.33	-5829.71	10026.90	46.79	125.53	-1993.50	-581.49
206	4	11.21	26.00	±	6.33	9694.21	59321.90	3035.27	802.75	6637.78	1890.06
206	4	11.21	26.00	15	6.33	-5707.84	12893.60	106.27	142.75	-2367.70	-694.19
206	4	11.21	26.00	±	6.33	8351.23	38981.50	2496.92	652.22	4310.66	1118.60
206	4	11.21	26.00	16	6.33	-5829.71	10026.90	46.79	125.53	-1993.50	-581.49
206	4	11.21	26.00	±	6.33	6215.48	30312.70	1951.18	511.01	3370.47	874.04
206	4	11.21	26.00	17	6.33	-8744.92	1298.02	-222.91	92.84	-1360.66	-209.28
206	4	11.21	26.00	18	6.33	-8748.51	-2927.55	-234.44	93.34	-514.73	-241.83
206	4	11.21	26.00	19	6.33	-8998.69	-1250.67	-81.26	134.17	-933.43	-143.67
206	4	11.21	26.00	20	6.33	-8494.74	-378.87	-376.10	52.01	-941.96	-307.44
206	4	11.21	26.00	21	6.33	-6656.50	1522.67	-169.03	70.12	-1131.65	-156.68
206	4	11.21	26.00	22	6.33	-6660.08	-2702.91	-180.56	70.62	-285.72	-189.22
206	4	11.21	26.00	23	6.33	-6910.26	-1026.02	-27.37	111.46	-704.42	-91.07
206	4	11.21	26.00	24	6.33	-6406.32	-154.22	-322.21	29.29	-712.95	-254.84
206	4	11.21	26.00	25	6.33	-6362.04	1667.73	-165.19	64.25	-1072.12	-156.13
206	4	11.21	26.00	26	6.33	-6365.62	-2557.84	-176.72	64.75	-226.18	-188.67
206	4	11.21	26.00	27	6.33	-6615.81	-880.95	-23.54	105.58	-644.89	-90.52
206	4	11.21	26.00	28	6.33	-6111.86	-9.15	-318.38	23.41	-653.41	-254.28
206	4	11.21	26.00	29	6.33	-6271.10	1715.35	-163.74	62.64	-1055.71	-155.40
206	4	11.21	26.00	30	6.33	-6274.69	-2510.23	-175.28	63.14	-209.77	-187.95
206	4	11.21	26.00	31	6.33	-6524.87	-833.34	-22.09	103.97	-628.48	-89.79
206	4	11.21	26.00	32	6.33	-6020.92	38.46	-316.93	21.81	-637.00	-253.56
206	4	11.21	26.00	1	7.26	-6837.95	-13688.50	-445.29	-16.97	1102.22	350.83
206	4	11.21	26.00	±	7.26	11150.40	79666.70	3271.54	872.71	8993.71	2692.72

Relazione di calcolo

206	4	11.21	26.00	2	7.26	-6716.08	-10821.80	-385.81	0.26	728.02	238.14
206	4	11.21	26.00	±	7.26	8184.33	61793.90	2554.79	683.30	6946.75	2107.98
206	4	11.21	26.00	3	7.26	-6837.95	-13688.50	-445.29	-16.97	1102.22	350.83
206	4	11.21	26.00	±	7.26	4712.06	45053.00	1356.83	369.57	5135.67	1632.31
206	4	11.21	26.00	4	7.26	-6716.08	-10821.80	-385.81	0.26	728.02	238.14
206	4	11.21	26.00	±	7.26	3411.42	34903.50	1058.86	289.17	3944.27	1278.75
206	4	11.21	26.00	5	7.26	-6837.95	-13688.50	-445.29	-16.97	1102.22	350.83
206	4	11.21	26.00	±	7.26	13110.00	76397.40	3885.43	1024.90	8549.48	2416.10
206	4	11.21	26.00	6	7.26	-6716.08	-10821.80	-385.81	0.26	728.02	238.14
206	4	11.21	26.00	±	7.26	9694.21	59321.90	3035.27	802.75	6637.78	1890.06
206	4	11.21	26.00	7	7.26	-6837.95	-13688.50	-445.29	-16.97	1102.22	350.83
206	4	11.21	26.00	±	7.26	8351.23	38981.50	2496.92	652.22	4310.66	1118.60
206	4	11.21	26.00	8	7.26	-6716.08	-10821.80	-385.81	0.26	728.02	238.14
206	4	11.21	26.00	±	7.26	6215.48	30312.70	1951.18	511.01	3370.47	874.04
206	4	11.21	26.00	9	7.26	-5707.84	12893.60	106.27	142.75	-2367.70	-694.19
206	4	11.21	26.00	±	7.26	11150.40	79666.70	3271.54	872.71	8993.71	2692.72
206	4	11.21	26.00	10	7.26	-5829.71	10026.90	46.79	125.53	-1993.50	-581.49
206	4	11.21	26.00	±	7.26	8184.33	61793.90	2554.79	683.30	6946.75	2107.98
206	4	11.21	26.00	11	7.26	-5707.84	12893.60	106.27	142.75	-2367.70	-694.19
206	4	11.21	26.00	±	7.26	4712.06	45053.00	1356.83	369.57	5135.67	1632.31
206	4	11.21	26.00	12	7.26	-5829.71	10026.90	46.79	125.53	-1993.50	-581.49
206	4	11.21	26.00	±	7.26	3411.42	34903.50	1058.86	289.17	3944.27	1278.75
206	4	11.21	26.00	13	7.26	-5707.84	12893.60	106.27	142.75	-2367.70	-694.19
206	4	11.21	26.00	±	7.26	13110.00	76397.40	3885.43	1024.90	8549.48	2416.10
206	4	11.21	26.00	14	7.26	-5829.71	10026.90	46.79	125.53	-1993.50	-581.49
206	4	11.21	26.00	±	7.26	9694.21	59321.90	3035.27	802.75	6637.78	1890.06
206	4	11.21	26.00	15	7.26	-5707.84	12893.60	106.27	142.75	-2367.70	-694.19
206	4	11.21	26.00	±	7.26	8351.23	38981.50	2496.92	652.22	4310.66	1118.60
206	4	11.21	26.00	16	7.26	-5829.71	10026.90	46.79	125.53	-1993.50	-581.49
206	4	11.21	26.00	±	7.26	6215.48	30312.70	1951.18	511.01	3370.47	874.04
206	4	11.21	26.00	17	7.26	-8744.92	1298.02	-222.91	92.84	-1360.66	-209.28
206	4	11.21	26.00	18	7.26	-8748.51	-2927.55	-234.44	93.34	-514.73	-241.83
206	4	11.21	26.00	19	7.26	-8998.69	-1250.67	-81.26	134.17	-933.43	-143.67
206	4	11.21	26.00	20	7.26	-8494.74	-378.87	-376.10	52.01	-941.96	-307.44
206	4	11.21	26.00	21	7.26	-6656.50	1522.67	-169.03	70.12	-1131.65	-156.68
206	4	11.21	26.00	22	7.26	-6660.08	-2702.91	-180.56	70.62	-285.72	-189.22
206	4	11.21	26.00	23	7.26	-6910.26	-1026.02	-27.37	111.46	-704.42	-91.07
206	4	11.21	26.00	24	7.26	-6406.32	-154.22	-322.21	29.29	-712.95	-254.84
206	4	11.21	26.00	25	7.26	-6362.04	1667.73	-165.19	64.25	-1072.12	-156.13
206	4	11.21	26.00	26	7.26	-6365.62	-2557.84	-176.72	64.75	-226.18	-188.67
206	4	11.21	26.00	27	7.26	-6615.81	-880.95	-23.54	105.58	-644.89	-90.52
206	4	11.21	26.00	28	7.26	-6111.86	-9.15	-318.38	23.41	-653.41	-254.28
206	4	11.21	26.00	29	7.26	-6271.10	1715.35	-163.74	62.64	-1055.71	-155.40
206	4	11.21	26.00	30	7.26	-6274.69	-2510.23	-175.28	63.14	-209.77	-187.95
206	4	11.21	26.00	31	7.26	-6524.87	-833.34	-22.09	103.97	-628.48	-89.79
206	4	11.21	26.00	32	7.26	-6020.92	38.46	-316.93	21.81	-637.00	-253.56
302	1	10.20	24.33	1	7.26	-10450.40	2086.61	361.26	3947.65	682.23	40.52
302	1	10.20	24.33	±	7.26	8596.20	1477.88	29179.00	19838.70	325.21	1655.63
302	1	10.20	24.33	2	7.26	-10429.40	2002.68	980.34	3799.27	656.42	-45.64
302	1	10.20	24.33	±	7.26	6338.71	1102.27	22452.80	15433.00	228.51	1280.88
302	1	10.20	24.33	3	7.26	-10450.40	2086.61	361.26	3947.65	682.23	40.52
302	1	10.20	24.33	±	7.26	4472.48	934.42	15949.50	11287.00	193.02	984.49
302	1	10.20	24.33	4	7.26	-10429.40	2002.68	980.34	3799.27	656.42	-45.64
302	1	10.20	24.33	±	7.26	3396.89	690.21	12472.60	8813.99	131.17	759.86
302	1	10.20	24.33	5	7.26	-10450.40	2086.61	361.26	3947.65	682.23	40.52
302	1	10.20	24.33	±	7.26	8833.16	1267.61	28818.50	18921.70	298.05	1514.58
302	1	10.20	24.33	6	7.26	-10429.40	2002.68	980.34	3799.27	656.42	-45.64
302	1	10.20	24.33	±	7.26	6363.38	955.64	21872.40	14668.60	216.20	1174.47
302	1	10.20	24.33	7	7.26	-10450.40	2086.61	361.26	3947.65	682.23	40.52
302	1	10.20	24.33	±	7.26	4912.56	543.92	15279.90	9584.01	142.58	722.55
302	1	10.20	24.33	8	7.26	-10429.40	2002.68	980.34	3799.27	656.42	-45.64
302	1	10.20	24.33	±	7.26	3442.70	417.90	11394.70	7394.56	108.29	562.25
302	1	10.20	24.33	9	7.26	-10255.60	1308.37	6101.88	2571.76	442.89	-758.41
302	1	10.20	24.33	±	7.26	8596.20	1477.88	29179.00	19838.70	325.21	1655.63
302	1	10.20	24.33	10	7.26	-10276.70	1392.30	5482.80	2720.14	468.70	-672.25
302	1	10.20	24.33	±	7.26	6338.71	1102.27	22452.80	15433.00	228.51	1280.88
302	1	10.20	24.33	11	7.26	-10255.60	1308.37	6101.88	2571.76	442.89	-758.41
302	1	10.20	24.33	±	7.26	4472.48	934.42	15949.50	11287.00	193.02	984.49
302	1	10.20	24.33	12	7.26	-10276.70	1392.30	5482.80	2720.14	468.70	-672.25
302	1	10.20	24.33	±	7.26	3396.89	690.21	12472.60	8813.99	131.17	759.86
302	1	10.20	24.33	13	7.26	-10255.60	1308.37	6101.88	2571.76	442.89	-758.41
302	1	10.20	24.33	±	7.26	8833.16	1267.61	28818.50	18921.70	298.05	1514.58
302	1	10.20	24.33	14	7.26	-10276.70	1392.30	5482.80	2720.14	468.70	-672.25
302	1	10.20	24.33	±	7.26	6363.38	955.64	21872.40	14668.60	216.20	1174.47
302	1	10.20	24.33	15	7.26	-10255.60	1308.37	6101.88	2571.76	442.89	-758.41
302	1	10.20	24.33	±	7.26	4912.56	543.92	15279.90	9584.01	142.58	722.55
302	1	10.20	24.33	16	7.26	-10276.70	1392.30	5482.80	2720.14	468.70	-672.25
302	1	10.20	24.33	±	7.26	3442.70	417.90	11394.70	7394.56	108.29	562.25
302	1	10.20	24.33	17	7.26	-14871.50	2482.01	6053.39	4217.93	780.43	-358.08

Relazione di calcolo

302	1	10.20	24.33	18	7.26	-15392.10	2386.25	3936.17	5838.06	772.11	-448.39
302	1	10.20	24.33	19	7.26	-15116.70	2449.82	4811.32	5320.69	787.46	-334.35
302	1	10.20	24.33	20	7.26	-15147.00	2418.45	5178.24	4735.30	765.08	-472.12
302	1	10.20	24.33	21	7.26	-11211.90	1893.34	4808.20	2983.11	595.80	-268.52
302	1	10.20	24.33	22	7.26	-11732.50	1797.58	2690.98	4603.25	587.49	-358.83
302	1	10.20	24.33	23	7.26	-11457.10	1861.15	3566.13	4085.88	602.83	-244.79
302	1	10.20	24.33	24	7.26	-11487.40	1829.77	3933.05	3500.48	580.45	-382.56
302	1	10.20	24.33	25	7.26	-10310.70	1780.41	4410.50	2546.50	573.85	-309.25
302	1	10.20	24.33	26	7.26	-10831.30	1684.64	2293.28	4166.63	565.54	-399.56
302	1	10.20	24.33	27	7.26	-10555.80	1748.21	3168.43	3649.26	580.88	-285.52
302	1	10.20	24.33	28	7.26	-10586.10	1716.84	3535.35	3063.87	558.51	-423.29
302	1	10.20	24.33	29	7.26	-10092.70	1745.37	4290.18	2449.64	566.72	-313.79
302	1	10.20	24.33	30	7.26	-10613.40	1649.61	2172.96	4069.77	558.40	-404.10
302	1	10.20	24.33	31	7.26	-10337.90	1713.17	3048.11	3552.40	573.75	-290.06
302	1	10.20	24.33	32	7.26	-10368.20	1681.80	3415.03	2967.01	551.37	-427.83
302	1	10.20	24.33	1	7.61	-10450.40	2086.61	361.26	3947.65	682.23	40.52
302	1	10.20	24.33	±	7.61	8596.20	1477.88	29179.00	19838.70	325.21	1655.63
302	1	10.20	24.33	2	7.61	-10429.40	2002.68	980.34	3799.27	656.42	-45.64
302	1	10.20	24.33	±	7.61	6338.71	1102.27	22452.80	15433.00	228.51	1280.88
302	1	10.20	24.33	3	7.61	-10450.40	2086.61	361.26	3947.65	682.23	40.52
302	1	10.20	24.33	±	7.61	4472.48	934.42	15949.50	11287.00	193.02	984.49
302	1	10.20	24.33	4	7.61	-10429.40	2002.68	980.34	3799.27	656.42	-45.64
302	1	10.20	24.33	±	7.61	3396.89	690.21	12472.60	8813.99	131.17	759.86
302	1	10.20	24.33	5	7.61	-10450.40	2086.61	361.26	3947.65	682.23	40.52
302	1	10.20	24.33	±	7.61	8833.16	1267.61	28818.50	18921.70	298.05	1514.58
302	1	10.20	24.33	6	7.61	-10429.40	2002.68	980.34	3799.27	656.42	-45.64
302	1	10.20	24.33	±	7.61	6363.38	955.64	21872.40	14668.60	216.20	1174.47
302	1	10.20	24.33	7	7.61	-10450.40	2086.61	361.26	3947.65	682.23	40.52
302	1	10.20	24.33	±	7.61	4912.56	543.92	15279.90	9584.01	142.58	722.55
302	1	10.20	24.33	8	7.61	-10429.40	2002.68	980.34	3799.27	656.42	-45.64
302	1	10.20	24.33	±	7.61	3442.70	417.90	11394.70	7394.56	108.29	562.25
302	1	10.20	24.33	9	7.61	-10255.60	1308.37	6101.88	2571.76	442.89	-758.41
302	1	10.20	24.33	±	7.61	8596.20	1477.88	29179.00	19838.70	325.21	1655.63
302	1	10.20	24.33	10	7.61	-10276.70	1392.30	5482.80	2720.14	468.70	-672.25
302	1	10.20	24.33	±	7.61	6338.71	1102.27	22452.80	15433.00	228.51	1280.88
302	1	10.20	24.33	11	7.61	-10255.60	1308.37	6101.88	2571.76	442.89	-758.41
302	1	10.20	24.33	±	7.61	4472.48	934.42	15949.50	11287.00	193.02	984.49
302	1	10.20	24.33	12	7.61	-10276.70	1392.30	5482.80	2720.14	468.70	-672.25
302	1	10.20	24.33	±	7.61	3396.89	690.21	12472.60	8813.99	131.17	759.86
302	1	10.20	24.33	13	7.61	-10255.60	1308.37	6101.88	2571.76	442.89	-758.41
302	1	10.20	24.33	±	7.61	8833.16	1267.61	28818.50	18921.70	298.05	1514.58
302	1	10.20	24.33	14	7.61	-10276.70	1392.30	5482.80	2720.14	468.70	-672.25
302	1	10.20	24.33	±	7.61	6363.38	955.64	21872.40	14668.60	216.20	1174.47
302	1	10.20	24.33	15	7.61	-10255.60	1308.37	6101.88	2571.76	442.89	-758.41
302	1	10.20	24.33	±	7.61	4912.56	543.92	15279.90	9584.01	142.58	722.55
302	1	10.20	24.33	16	7.61	-10276.70	1392.30	5482.80	2720.14	468.70	-672.25
302	1	10.20	24.33	±	7.61	3442.70	417.90	11394.70	7394.56	108.29	562.25
302	1	10.20	24.33	17	7.61	-14871.50	2482.01	6053.39	4217.93	780.43	-358.08
302	1	10.20	24.33	18	7.61	-15392.10	2386.25	3936.17	5838.06	772.11	-448.39
302	1	10.20	24.33	19	7.61	-15116.70	2449.82	4811.32	5320.69	787.46	-334.35
302	1	10.20	24.33	20	7.61	-15147.00	2418.45	5178.24	4735.30	765.08	-472.12
302	1	10.20	24.33	21	7.61	-11211.90	1893.34	4808.20	2983.11	595.80	-268.52
302	1	10.20	24.33	22	7.61	-11732.50	1797.58	2690.98	4603.25	587.49	-358.83
302	1	10.20	24.33	23	7.61	-11457.10	1861.15	3566.13	4085.88	602.83	-244.79
302	1	10.20	24.33	24	7.61	-11487.40	1829.77	3933.05	3500.48	580.45	-382.56
302	1	10.20	24.33	25	7.61	-10310.70	1780.41	4410.50	2546.50	573.85	-309.25
302	1	10.20	24.33	26	7.61	-10831.30	1684.64	2293.28	4166.63	565.54	-399.56
302	1	10.20	24.33	27	7.61	-10555.80	1748.21	3168.43	3649.26	580.88	-285.52
302	1	10.20	24.33	28	7.61	-10586.10	1716.84	3535.35	3063.87	558.51	-423.29
302	1	10.20	24.33	29	7.61	-10092.70	1745.37	4290.18	2449.64	566.72	-313.79
302	1	10.20	24.33	30	7.61	-10613.40	1649.61	2172.96	4069.77	558.40	-404.10
302	1	10.20	24.33	31	7.61	-10337.90	1713.17	3048.11	3552.40	573.75	-290.06
302	1	10.20	24.33	32	7.61	-10368.20	1681.80	3415.03	2967.01	551.37	-427.83
302	2	10.20	24.33	1	7.61	-9489.45	1170.47	738.65	4485.12	111.86	1432.44
302	2	10.20	24.33	±	7.61	5916.39	1357.53	28837.40	14574.80	345.10	1928.52
302	2	10.20	24.33	2	7.61	-9538.75	1072.49	1310.50	4419.05	110.90	1363.05
302	2	10.20	24.33	±	7.61	4332.41	1026.30	22183.40	11352.50	269.92	1476.40
302	2	10.20	24.33	3	7.61	-9489.45	1170.47	738.65	4485.12	111.86	1432.44
302	2	10.20	24.33	±	7.61	3143.07	863.30	15806.70	8284.73	199.76	1172.93
302	2	10.20	24.33	4	7.61	-9538.75	1072.49	1310.50	4419.05	110.90	1363.05
302	2	10.20	24.33	±	7.61	2377.27	648.76	12361.80	6475.05	156.38	892.56
302	2	10.20	24.33	5	7.61	-9489.45	1170.47	738.65	4485.12	111.86	1432.44
302	2	10.20	24.33	±	7.61	5981.12	1156.85	28414.30	13912.30	323.96	1724.53
302	2	10.20	24.33	6	7.61	-9538.75	1072.49	1310.50	4419.05	110.90	1363.05
302	2	10.20	24.33	±	7.61	4265.01	880.49	21551.10	10803.30	253.18	1328.41
302	2	10.20	24.33	7	7.61	-9489.45	1170.47	738.65	4485.12	111.86	1432.44
302	2	10.20	24.33	±	7.61	3263.28	490.61	15021.10	7054.46	160.51	794.10
302	2	10.20	24.33	8	7.61	-9538.75	1072.49	1310.50	4419.05	110.90	1363.05
302	2	10.20	24.33	±	7.61	2252.10	377.97	11187.60	5455.00	125.28	617.72

Relazione di calcolo

302	2	10.20	24.33	9	7.61	-9946.60	261.91	6041.28	3872.51	102.98	788.98
302	2	10.20	24.33	±	7.61	5916.39	1357.53	28837.40	14574.80	345.10	1928.52
302	2	10.20	24.33	10	7.61	-9897.30	359.89	5469.43	3938.57	103.94	858.37
302	2	10.20	24.33	±	7.61	4332.41	1026.30	22183.40	11352.50	269.92	1476.40
302	2	10.20	24.33	11	7.61	-9946.60	261.91	6041.28	3872.51	102.98	788.98
302	2	10.20	24.33	±	7.61	3143.07	863.30	15806.70	8284.73	199.76	1172.93
302	2	10.20	24.33	12	7.61	-9897.30	359.89	5469.43	3938.57	103.94	858.37
302	2	10.20	24.33	±	7.61	2377.27	648.76	12361.80	6475.05	156.38	892.56
302	2	10.20	24.33	13	7.61	-9946.60	261.91	6041.28	3872.51	102.98	788.98
302	2	10.20	24.33	±	7.61	5981.12	1156.85	28414.30	13912.30	323.96	1724.53
302	2	10.20	24.33	14	7.61	-9897.30	359.89	5469.43	3938.57	103.94	858.37
302	2	10.20	24.33	±	7.61	4265.01	880.49	21551.10	10803.30	253.18	1328.41
302	2	10.20	24.33	15	7.61	-9946.60	261.91	6041.28	3872.51	102.98	788.98
302	2	10.20	24.33	±	7.61	3263.28	490.61	15021.10	7054.46	160.51	794.10
302	2	10.20	24.33	16	7.61	-9897.30	359.89	5469.43	3938.57	103.94	858.37
302	2	10.20	24.33	±	7.61	2252.10	377.97	11187.60	5455.00	125.28	617.72
302	2	10.20	24.33	17	7.61	-14142.30	1105.61	6282.34	5823.55	101.42	1709.42
302	2	10.20	24.33	18	7.61	-14506.10	1051.20	4178.20	7009.46	130.11	1551.80
302	2	10.20	24.33	19	7.61	-14313.90	1118.30	5030.50	6641.25	118.45	1667.18
302	2	10.20	24.33	20	7.61	-14334.40	1038.52	5430.03	6191.76	113.08	1594.05
302	2	10.20	24.33	21	7.61	-10666.20	841.03	4979.54	4246.71	77.09	1312.45
302	2	10.20	24.33	22	7.61	-11030.00	786.61	2875.40	5432.62	105.78	1154.83
302	2	10.20	24.33	23	7.61	-10837.80	853.71	3727.71	5064.41	94.12	1270.20
302	2	10.20	24.33	24	7.61	-10858.40	773.93	4127.23	4614.92	88.75	1197.08
302	2	10.20	24.33	25	7.61	-9757.78	763.84	4566.59	3710.80	89.97	1216.40
302	2	10.20	24.33	26	7.61	-10121.60	709.42	2462.46	4896.71	118.66	1058.78
302	2	10.20	24.33	27	7.61	-9929.44	776.52	3314.76	4528.50	107.00	1174.15
302	2	10.20	24.33	28	7.61	-9949.94	696.74	3714.29	4079.01	101.63	1101.02
302	2	10.20	24.33	29	7.61	-9536.11	743.40	4442.03	3585.86	93.08	1189.52
302	2	10.20	24.33	30	7.61	-9899.94	688.98	2337.90	4771.77	121.77	1031.90
302	2	10.20	24.33	31	7.61	-9707.77	756.08	3190.20	4403.56	110.11	1147.27
302	2	10.20	24.33	32	7.61	-9728.28	676.30	3589.73	3954.07	104.74	1074.15
302	2	10.20	24.33	1	7.96	-9489.45	1170.47	738.65	4485.12	111.86	1432.44
302	2	10.20	24.33	±	7.96	5916.39	1357.53	28837.40	14574.80	345.10	1928.52
302	2	10.20	24.33	2	7.96	-9538.75	1072.49	1310.50	4419.05	110.90	1363.05
302	2	10.20	24.33	±	7.96	4332.41	1026.30	22183.40	11352.50	269.92	1476.40
302	2	10.20	24.33	3	7.96	-9489.45	1170.47	738.65	4485.12	111.86	1432.44
302	2	10.20	24.33	±	7.96	3143.07	863.30	15806.70	8284.73	199.76	1172.93
302	2	10.20	24.33	4	7.96	-9538.75	1072.49	1310.50	4419.05	110.90	1363.05
302	2	10.20	24.33	±	7.96	2377.27	648.76	12361.80	6475.05	156.38	892.56
302	2	10.20	24.33	5	7.96	-9489.45	1170.47	738.65	4485.12	111.86	1432.44
302	2	10.20	24.33	±	7.96	5981.12	1156.85	28414.30	13912.30	323.96	1724.53
302	2	10.20	24.33	6	7.96	-9538.75	1072.49	1310.50	4419.05	110.90	1363.05
302	2	10.20	24.33	±	7.96	4265.01	880.49	21551.10	10803.30	253.18	1328.41
302	2	10.20	24.33	7	7.96	-9489.45	1170.47	738.65	4485.12	111.86	1432.44
302	2	10.20	24.33	±	7.96	3263.28	490.61	15021.10	7054.46	160.51	794.10
302	2	10.20	24.33	8	7.96	-9538.75	1072.49	1310.50	4419.05	110.90	1363.05
302	2	10.20	24.33	±	7.96	2252.10	377.97	11187.60	5455.00	125.28	617.72
302	2	10.20	24.33	9	7.96	-9946.60	261.91	6041.28	3872.51	102.98	788.98
302	2	10.20	24.33	±	7.96	5916.39	1357.53	28837.40	14574.80	345.10	1928.52
302	2	10.20	24.33	10	7.96	-9897.30	359.89	5469.43	3938.57	103.94	858.37
302	2	10.20	24.33	±	7.96	4332.41	1026.30	22183.40	11352.50	269.92	1476.40
302	2	10.20	24.33	11	7.96	-9946.60	261.91	6041.28	3872.51	102.98	788.98
302	2	10.20	24.33	±	7.96	3143.07	863.30	15806.70	8284.73	199.76	1172.93
302	2	10.20	24.33	12	7.96	-9897.30	359.89	5469.43	3938.57	103.94	858.37
302	2	10.20	24.33	±	7.96	2377.27	648.76	12361.80	6475.05	156.38	892.56
302	2	10.20	24.33	13	7.96	-9946.60	261.91	6041.28	3872.51	102.98	788.98
302	2	10.20	24.33	±	7.96	5981.12	1156.85	28414.30	13912.30	323.96	1724.53
302	2	10.20	24.33	14	7.96	-9897.30	359.89	5469.43	3938.57	103.94	858.37
302	2	10.20	24.33	±	7.96	4265.01	880.49	21551.10	10803.30	253.18	1328.41
302	2	10.20	24.33	15	7.96	-9946.60	261.91	6041.28	3872.51	102.98	788.98
302	2	10.20	24.33	±	7.96	3263.28	490.61	15021.10	7054.46	160.51	794.10
302	2	10.20	24.33	16	7.96	-9897.30	359.89	5469.43	3938.57	103.94	858.37
302	2	10.20	24.33	±	7.96	2252.10	377.97	11187.60	5455.00	125.28	617.72
302	2	10.20	24.33	17	7.96	-14142.30	1105.61	6282.34	5823.55	101.42	1709.42
302	2	10.20	24.33	18	7.96	-14506.10	1051.20	4178.20	7009.46	130.11	1551.80
302	2	10.20	24.33	19	7.96	-14313.90	1118.30	5030.50	6641.25	118.45	1667.18
302	2	10.20	24.33	20	7.96	-14334.40	1038.52	5430.03	6191.76	113.08	1594.05
302	2	10.20	24.33	21	7.96	-10666.20	841.03	4979.54	4246.71	77.09	1312.45
302	2	10.20	24.33	22	7.96	-11030.00	786.61	2875.40	5432.62	105.78	1154.83
302	2	10.20	24.33	23	7.96	-10837.80	853.71	3727.71	5064.41	94.12	1270.20
302	2	10.20	24.33	24	7.96	-10858.40	773.93	4127.23	4614.92	88.75	1197.08
302	2	10.20	24.33	25	7.96	-9757.78	763.84	4566.59	3710.80	89.97	1216.40
302	2	10.20	24.33	26	7.96	-10121.60	709.42	2462.46	4896.71	118.66	1058.78
302	2	10.20	24.33	27	7.96	-9929.44	776.52	3314.76	4528.50	107.00	1174.15
302	2	10.20	24.33	28	7.96	-9949.94	696.74	3714.29	4079.01	101.63	1101.02
302	2	10.20	24.33	29	7.96	-9536.11	743.40	4442.03	3585.86	93.08	1189.52
302	2	10.20	24.33	30	7.96	-9899.94	688.98	2337.90	4771.77	121.77	1031.90
302	2	10.20	24.33	31	7.96	-9707.77	756.08	3190.20	4403.56	110.11	1147.27

Relazione di calcolo

302	2	10.20	24.33	32	7.96	-9728.28	676.30	3589.73	3954.07	104.74	1074.15
302	3	10.20	24.33	1	7.96	-8793.31	1156.76	743.58	4645.98	-232.53	1460.93
302	3	10.20	24.33	±	7.96	3347.80	1433.18	28698.70	9680.93	677.21	1667.16
302	3	10.20	24.33	2	7.96	-8915.13	1059.68	1299.79	4650.43	-198.34	1388.68
302	3	10.20	24.33	±	7.96	2421.69	1078.87	22075.80	7560.94	521.08	1276.05
302	3	10.20	24.33	3	7.96	-8793.31	1156.76	743.58	4645.98	-232.53	1460.93
302	3	10.20	24.33	±	7.96	1877.57	915.40	15746.10	5478.93	431.13	1022.20
302	3	10.20	24.33	4	7.96	-8915.13	1059.68	1299.79	4650.43	-198.34	1388.68
302	3	10.20	24.33	±	7.96	1412.96	684.27	12314.60	4289.81	330.60	778.74
302	3	10.20	24.33	5	7.96	-8793.31	1156.76	743.58	4645.98	-232.53	1460.93
302	3	10.20	24.33	±	7.96	3234.19	1215.26	28254.40	9277.31	576.37	1478.33
302	3	10.20	24.33	6	7.96	-8915.13	1059.68	1299.79	4650.43	-198.34	1388.68
302	3	10.20	24.33	±	7.96	2256.42	922.13	21427.30	7229.49	445.22	1137.06
302	3	10.20	24.33	7	7.96	-8793.31	1156.76	743.58	4645.98	-232.53	1460.93
302	3	10.20	24.33	±	7.96	1666.58	510.68	14921.00	4729.35	243.87	671.53
302	3	10.20	24.33	8	7.96	-8915.13	1059.68	1299.79	4650.43	-198.34	1388.68
302	3	10.20	24.33	±	7.96	1106.02	393.18	11110.20	3674.27	189.72	520.63
302	3	10.20	24.33	9	7.96	-9922.91	256.52	5901.20	4687.25	84.50	790.98
302	3	10.20	24.33	±	7.96	3347.80	1433.18	28698.70	9680.93	677.21	1667.16
302	3	10.20	24.33	10	7.96	-9801.09	353.61	5345.00	4682.80	50.31	863.23
302	3	10.20	24.33	±	7.96	2421.69	1078.87	22075.80	7560.94	521.08	1276.05
302	3	10.20	24.33	11	7.96	-9922.91	256.52	5901.20	4687.25	84.50	790.98
302	3	10.20	24.33	±	7.96	1877.57	915.40	15746.10	5478.93	431.13	1022.20
302	3	10.20	24.33	12	7.96	-9801.09	353.61	5345.00	4682.80	50.31	863.23
302	3	10.20	24.33	±	7.96	1412.96	684.27	12314.60	4289.81	330.60	778.74
302	3	10.20	24.33	13	7.96	-9922.91	256.52	5901.20	4687.25	84.50	790.98
302	3	10.20	24.33	±	7.96	3234.19	1215.26	28254.40	9277.31	576.37	1478.33
302	3	10.20	24.33	14	7.96	-9801.09	353.61	5345.00	4682.80	50.31	863.23
302	3	10.20	24.33	±	7.96	2256.42	922.13	21427.30	7229.49	445.22	1137.06
302	3	10.20	24.33	15	7.96	-9922.91	256.52	5901.20	4687.25	84.50	790.98
302	3	10.20	24.33	±	7.96	1666.58	510.68	14921.00	4729.35	243.87	671.53
302	3	10.20	24.33	16	7.96	-9801.09	353.61	5345.00	4682.80	50.31	863.23
302	3	10.20	24.33	±	7.96	1106.02	393.18	11110.20	3674.27	189.72	520.63
302	3	10.20	24.33	17	7.96	-13819.60	1100.76	6161.93	6781.03	-186.48	1718.13
302	3	10.20	24.33	18	7.96	-14010.60	1027.89	4065.18	7551.77	-138.66	1585.51
302	3	10.20	24.33	19	7.96	-13901.70	1103.10	4908.93	7328.85	-174.84	1690.16
302	3	10.20	24.33	20	7.96	-13928.40	1025.55	5318.17	7003.96	-150.29	1613.48
302	3	10.20	24.33	21	7.96	-10430.50	839.31	4888.93	5017.89	-142.12	1316.45
302	3	10.20	24.33	22	7.96	-10621.40	766.45	2792.18	5788.63	-94.29	1183.82
302	3	10.20	24.33	23	7.96	-10512.60	841.65	3635.93	5565.70	-130.48	1288.48
302	3	10.20	24.33	24	7.96	-10539.30	764.11	4045.17	5240.81	-105.93	1211.79
302	3	10.20	24.33	25	7.96	-9493.96	763.65	4491.60	4423.41	-106.83	1218.91
302	3	10.20	24.33	26	7.96	-9684.93	690.79	2394.85	5194.15	-59.01	1086.29
302	3	10.20	24.33	27	7.96	-9576.08	765.99	3238.61	4971.23	-95.19	1190.94
302	3	10.20	24.33	28	7.96	-9602.82	688.45	3647.85	4646.34	-70.65	1114.26
302	3	10.20	24.33	29	7.96	-9262.63	743.07	4370.77	4281.25	-97.93	1192.27
302	3	10.20	24.33	30	7.96	-9453.60	670.21	2274.02	5051.98	-50.10	1059.64
302	3	10.20	24.33	31	7.96	-9344.74	745.41	3117.77	4829.06	-86.29	1164.30
302	3	10.20	24.33	32	7.96	-9371.48	667.87	3527.01	4504.17	-61.74	1087.61
302	3	10.20	24.33	1	8.31	-8793.31	1156.76	743.58	4645.98	-232.53	1460.93
302	3	10.20	24.33	±	8.31	3347.80	1433.18	28698.70	9680.93	677.21	1667.16
302	3	10.20	24.33	2	8.31	-8915.13	1059.68	1299.79	4650.43	-198.34	1388.68
302	3	10.20	24.33	±	8.31	2421.69	1078.87	22075.80	7560.94	521.08	1276.05
302	3	10.20	24.33	3	8.31	-8793.31	1156.76	743.58	4645.98	-232.53	1460.93
302	3	10.20	24.33	±	8.31	1877.57	915.40	15746.10	5478.93	431.13	1022.20
302	3	10.20	24.33	4	8.31	-8915.13	1059.68	1299.79	4650.43	-198.34	1388.68
302	3	10.20	24.33	±	8.31	1412.96	684.27	12314.60	4289.81	330.60	778.74
302	3	10.20	24.33	5	8.31	-8793.31	1156.76	743.58	4645.98	-232.53	1460.93
302	3	10.20	24.33	±	8.31	3234.19	1215.26	28254.40	9277.31	576.37	1478.33
302	3	10.20	24.33	6	8.31	-8915.13	1059.68	1299.79	4650.43	-198.34	1388.68
302	3	10.20	24.33	±	8.31	2256.42	922.13	21427.30	7229.49	445.22	1137.06
302	3	10.20	24.33	7	8.31	-8793.31	1156.76	743.58	4645.98	-232.53	1460.93
302	3	10.20	24.33	±	8.31	1666.58	510.68	14921.00	4729.35	243.87	671.53
302	3	10.20	24.33	8	8.31	-8915.13	1059.68	1299.79	4650.43	-198.34	1388.68
302	3	10.20	24.33	±	8.31	1106.02	393.18	11110.20	3674.27	189.72	520.63
302	3	10.20	24.33	9	8.31	-9922.91	256.52	5901.20	4687.25	84.50	790.98
302	3	10.20	24.33	±	8.31	3347.80	1433.18	28698.70	9680.93	677.21	1667.16
302	3	10.20	24.33	10	8.31	-9801.09	353.61	5345.00	4682.80	50.31	863.23
302	3	10.20	24.33	±	8.31	2421.69	1078.87	22075.80	7560.94	521.08	1276.05
302	3	10.20	24.33	11	8.31	-9922.91	256.52	5901.20	4687.25	84.50	790.98
302	3	10.20	24.33	±	8.31	1877.57	915.40	15746.10	5478.93	431.13	1022.20
302	3	10.20	24.33	12	8.31	-9801.09	353.61	5345.00	4682.80	50.31	863.23
302	3	10.20	24.33	±	8.31	1412.96	684.27	12314.60	4289.81	330.60	778.74
302	3	10.20	24.33	13	8.31	-9922.91	256.52	5901.20	4687.25	84.50	790.98
302	3	10.20	24.33	±	8.31	3234.19	1215.26	28254.40	9277.31	576.37	1478.33
302	3	10.20	24.33	14	8.31	-9801.09	353.61	5345.00	4682.80	50.31	863.23
302	3	10.20	24.33	±	8.31	2256.42	922.13	21427.30	7229.49	445.22	1137.06
302	3	10.20	24.33	15	8.31	-9922.91	256.52	5901.20	4687.25	84.50	790.98
302	3	10.20	24.33	±	8.31	1666.58	510.68	14921.00	4729.35	243.87	671.53

Relazione di calcolo

302	3	10.20	24.33	16	8.31	-9801.09	353.61	5345.00	4682.80	50.31	863.23
302	3	10.20	24.33	±	8.31	1106.02	393.18	11110.20	3674.27	189.72	520.63
302	3	10.20	24.33	17	8.31	-13819.60	1100.76	6161.93	6781.03	-186.48	1718.13
302	3	10.20	24.33	18	8.31	-14010.60	1027.89	4065.18	7551.77	-138.66	1585.51
302	3	10.20	24.33	19	8.31	-13901.70	1103.10	4908.93	7328.85	-174.84	1690.16
302	3	10.20	24.33	20	8.31	-13928.40	1025.55	5318.17	7003.96	-150.29	1613.48
302	3	10.20	24.33	21	8.31	-10430.50	839.31	4888.93	5017.89	-142.12	1316.45
302	3	10.20	24.33	22	8.31	-10621.40	766.45	2792.18	5788.63	-94.29	1183.82
302	3	10.20	24.33	23	8.31	-10512.60	841.65	3635.93	5565.70	-130.48	1288.48
302	3	10.20	24.33	24	8.31	-10539.30	764.11	4045.17	5240.81	-105.93	1211.79
302	3	10.20	24.33	25	8.31	-9493.96	763.65	4491.60	4423.41	-106.83	1218.91
302	3	10.20	24.33	26	8.31	-9684.93	690.79	2394.85	5194.15	-59.01	1086.29
302	3	10.20	24.33	27	8.31	-9576.08	765.99	3238.61	4971.23	-95.19	1190.94
302	3	10.20	24.33	28	8.31	-9602.82	688.45	3647.85	4646.34	-70.65	1114.26
302	3	10.20	24.33	29	8.31	-9262.63	743.07	4370.77	4281.25	-97.93	1192.27
302	3	10.20	24.33	30	8.31	-9453.60	670.21	2274.02	5051.98	-50.10	1059.64
302	3	10.20	24.33	31	8.31	-9344.74	745.41	3117.77	4829.06	-86.29	1164.30
302	3	10.20	24.33	32	8.31	-9371.48	667.87	3527.01	4504.17	-61.74	1087.61
302	4	10.20	24.33	1	8.31	-7837.63	1804.59	637.83	5038.45	-763.64	482.04
302	4	10.20	24.33	±	8.31	2489.68	2475.72	28267.10	4823.60	1284.23	2571.33
302	4	10.20	24.33	2	8.31	-8026.48	1755.84	1178.96	5115.11	-705.57	340.63
302	4	10.20	24.33	±	8.31	1908.95	1883.40	21745.80	3780.07	979.19	2006.73
302	4	10.20	24.33	3	8.31	-7837.63	1804.59	637.83	5038.45	-763.64	482.04
302	4	10.20	24.33	±	8.31	1514.32	1463.73	15529.50	2638.16	802.90	1520.41
302	4	10.20	24.33	4	8.31	-8026.48	1755.84	1178.96	5115.11	-705.57	340.63
302	4	10.20	24.33	±	8.31	1167.16	1103.36	12145.70	2067.45	608.44	1190.86
302	4	10.20	24.33	5	8.31	-7837.63	1804.59	637.83	5038.45	-763.64	482.04
302	4	10.20	24.33	±	8.31	2226.21	2277.56	27798.80	4761.67	1115.29	2365.29
302	4	10.20	24.33	6	8.31	-8026.48	1755.84	1178.96	5115.11	-705.57	340.63
302	4	10.20	24.33	±	8.31	1697.75	1748.08	21083.90	3731.51	856.05	1839.41
302	4	10.20	24.33	7	8.31	-7837.63	1804.59	637.83	5038.45	-763.64	482.04
302	4	10.20	24.33	±	8.31	1025.01	1095.73	14659.80	2523.14	489.15	1137.77
302	4	10.20	24.33	8	8.31	-8026.48	1755.84	1178.96	5115.11	-705.57	340.63
302	4	10.20	24.33	±	8.31	774.91	852.05	10916.40	1977.25	379.77	880.14
302	4	10.20	24.33	9	8.31	-9588.87	1352.51	5655.68	5749.28	-225.17	-829.29
302	4	10.20	24.33	±	8.31	2489.68	2475.72	28267.10	4823.60	1284.23	2571.33
302	4	10.20	24.33	10	8.31	-9400.01	1401.26	5114.54	5672.62	-283.24	-687.88
302	4	10.20	24.33	±	8.31	1908.95	1883.40	21745.80	3780.07	979.19	2006.73
302	4	10.20	24.33	11	8.31	-9588.87	1352.51	5655.68	5749.28	-225.17	-829.29
302	4	10.20	24.33	±	8.31	1514.32	1463.73	15529.50	2638.16	802.90	1520.41
302	4	10.20	24.33	12	8.31	-9400.01	1401.26	5114.54	5672.62	-283.24	-687.88
302	4	10.20	24.33	±	8.31	1167.16	1103.36	12145.70	2067.45	608.44	1190.86
302	4	10.20	24.33	13	8.31	-9588.87	1352.51	5655.68	5749.28	-225.17	-829.29
302	4	10.20	24.33	±	8.31	2226.21	2277.56	27798.80	4761.67	1115.29	2365.29
302	4	10.20	24.33	14	8.31	-9400.01	1401.26	5114.54	5672.62	-283.24	-687.88
302	4	10.20	24.33	±	8.31	1697.75	1748.08	21083.90	3731.51	856.05	1839.41
302	4	10.20	24.33	15	8.31	-9588.87	1352.51	5655.68	5749.28	-225.17	-829.29
302	4	10.20	24.33	±	8.31	1025.01	1095.73	14659.80	2523.14	489.15	1137.77
302	4	10.20	24.33	16	8.31	-9400.01	1401.26	5114.54	5672.62	-283.24	-687.88
302	4	10.20	24.33	±	8.31	774.91	852.05	10916.40	1977.25	379.77	880.14
302	4	10.20	24.33	17	8.31	-13066.40	2458.74	5883.38	8089.50	-839.75	-304.16
302	4	10.20	24.33	18	8.31	-13095.90	2274.13	3817.91	8429.01	-743.74	-273.14
302	4	10.20	24.33	19	8.31	-13058.30	2378.98	4638.12	8362.07	-812.11	-214.03
302	4	10.20	24.33	20	8.31	-13104.00	2353.89	5063.17	8156.43	-771.37	-363.28
302	4	10.20	24.33	21	8.31	-9868.30	1879.27	4674.76	6056.91	-641.33	-231.92
302	4	10.20	24.33	22	8.31	-9897.83	1694.66	2609.29	6396.42	-545.33	-200.90
302	4	10.20	24.33	23	8.31	-9860.24	1799.51	3429.50	6329.48	-613.70	-141.78
302	4	10.20	24.33	24	8.31	-9905.89	1774.42	3854.55	6123.85	-572.96	-291.04
302	4	10.20	24.33	25	8.31	-8931.64	1714.23	4295.50	5388.70	-562.82	-196.45
302	4	10.20	24.33	26	8.31	-8961.17	1529.63	2230.02	5728.21	-466.82	-165.44
302	4	10.20	24.33	27	8.31	-8923.58	1634.47	3050.24	5661.27	-535.19	-106.32
302	4	10.20	24.33	28	8.31	-8969.23	1609.39	3475.29	5455.63	-494.45	-255.57
302	4	10.20	24.33	29	8.31	-8698.48	1670.85	4179.49	5224.11	-542.41	-189.13
302	4	10.20	24.33	30	8.31	-8728.01	1486.25	2114.02	5563.62	-446.40	-158.12
302	4	10.20	24.33	31	8.31	-8690.42	1591.09	2934.23	5496.68	-514.77	-99.00
302	4	10.20	24.33	32	8.31	-8736.07	1566.01	3359.28	5291.05	-474.03	-248.25
302	4	10.20	24.33	1	8.66	-7837.63	1804.59	637.83	5038.45	-763.64	482.04
302	4	10.20	24.33	±	8.66	2489.68	2475.72	28267.10	4823.60	1284.23	2571.33
302	4	10.20	24.33	2	8.66	-8026.48	1755.84	1178.96	5115.11	-705.57	340.63
302	4	10.20	24.33	±	8.66	1908.95	1883.40	21745.80	3780.07	979.19	2006.73
302	4	10.20	24.33	3	8.66	-7837.63	1804.59	637.83	5038.45	-763.64	482.04
302	4	10.20	24.33	±	8.66	1514.32	1463.73	15529.50	2638.16	802.90	1520.41
302	4	10.20	24.33	4	8.66	-8026.48	1755.84	1178.96	5115.11	-705.57	340.63
302	4	10.20	24.33	±	8.66	1167.16	1103.36	12145.70	2067.45	608.44	1190.86
302	4	10.20	24.33	5	8.66	-7837.63	1804.59	637.83	5038.45	-763.64	482.04
302	4	10.20	24.33	±	8.66	2226.21	2277.56	27798.80	4761.67	1115.29	2365.29
302	4	10.20	24.33	6	8.66	-8026.48	1755.84	1178.96	5115.11	-705.57	340.63
302	4	10.20	24.33	±	8.66	1697.75	1748.08	21083.90	3731.51	856.05	1839.41
302	4	10.20	24.33	7	8.66	-7837.63	1804.59	637.83	5038.45	-763.64	482.04

Relazione di calcolo

302	4	10.20	24.33	±	8.66	1025.01	1095.73	14659.80	2523.14	489.15	1137.77
302	4	10.20	24.33	8	8.66	-8026.48	1755.84	1178.96	5115.11	-705.57	340.63
302	4	10.20	24.33	±	8.66	774.91	852.05	10916.40	1977.25	379.77	880.14
302	4	10.20	24.33	9	8.66	-9588.87	1352.51	5655.68	5749.28	-225.17	-829.29
302	4	10.20	24.33	±	8.66	2489.68	2475.72	28267.10	4823.60	1284.23	2571.33
302	4	10.20	24.33	10	8.66	-9400.01	1401.26	5114.54	5672.62	-283.24	-687.88
302	4	10.20	24.33	±	8.66	1908.95	1883.40	21745.80	3780.07	979.19	2006.73
302	4	10.20	24.33	11	8.66	-9588.87	1352.51	5655.68	5749.28	-225.17	-829.29
302	4	10.20	24.33	±	8.66	1514.32	1463.73	15529.50	2638.16	802.90	1520.41
302	4	10.20	24.33	12	8.66	-9400.01	1401.26	5114.54	5672.62	-283.24	-687.88
302	4	10.20	24.33	±	8.66	1167.16	1103.36	12145.70	2067.45	608.44	1190.86
302	4	10.20	24.33	13	8.66	-9588.87	1352.51	5655.68	5749.28	-225.17	-829.29
302	4	10.20	24.33	±	8.66	2226.21	2277.56	27798.80	4761.67	1115.29	2365.29
302	4	10.20	24.33	14	8.66	-9400.01	1401.26	5114.54	5672.62	-283.24	-687.88
302	4	10.20	24.33	±	8.66	1697.75	1748.08	21083.90	3731.51	856.05	1839.41
302	4	10.20	24.33	15	8.66	-9588.87	1352.51	5655.68	5749.28	-225.17	-829.29
302	4	10.20	24.33	±	8.66	1025.01	1095.73	14659.80	2523.14	489.15	1137.77
302	4	10.20	24.33	16	8.66	-9400.01	1401.26	5114.54	5672.62	-283.24	-687.88
302	4	10.20	24.33	±	8.66	774.91	852.05	10916.40	1977.25	379.77	880.14
302	4	10.20	24.33	17	8.66	-13066.40	2458.74	5883.38	8089.50	-839.75	-304.16
302	4	10.20	24.33	18	8.66	-13095.90	2274.13	3817.91	8429.01	-743.74	-273.14
302	4	10.20	24.33	19	8.66	-13058.30	2378.98	4638.12	8362.07	-812.11	-214.03
302	4	10.20	24.33	20	8.66	-13104.00	2353.89	5063.17	8156.43	-771.37	-363.28
302	4	10.20	24.33	21	8.66	-9868.30	1879.27	4674.76	6056.91	-641.33	-231.92
302	4	10.20	24.33	22	8.66	-9897.83	1694.66	2609.29	6396.42	-545.33	-200.90
302	4	10.20	24.33	23	8.66	-9860.24	1799.51	3429.50	6329.48	-613.70	-141.78
302	4	10.20	24.33	24	8.66	-9905.89	1774.42	3854.55	6123.85	-572.96	-291.04
302	4	10.20	24.33	25	8.66	-8931.64	1714.23	4295.50	5388.70	-562.82	-196.45
302	4	10.20	24.33	26	8.66	-8961.17	1529.63	2230.02	5728.21	-466.82	-165.44
302	4	10.20	24.33	27	8.66	-8923.58	1634.47	3050.23	5661.27	-535.19	-106.32
302	4	10.20	24.33	28	8.66	-8969.23	1609.39	3475.28	5455.63	-494.45	-255.57
302	4	10.20	24.33	29	8.66	-8698.48	1670.85	4179.49	5224.11	-542.41	-189.13
302	4	10.20	24.33	30	8.66	-8728.01	1486.25	2114.01	5563.62	-446.40	-158.12
302	4	10.20	24.33	31	8.66	-8690.42	1591.09	2934.23	5496.68	-514.77	-99.00
302	4	10.20	24.33	32	8.66	-8736.07	1566.01	3359.28	5291.05	-474.03	-248.25
303	1	12.22	24.33	1	7.26	-5417.23	1361.07	8437.39	-4907.55	243.46	55.69
303	1	12.22	24.33	±	7.26	6553.19	3597.39	24092.20	18717.30	1431.29	3927.51
303	1	12.22	24.33	2	7.26	-5565.38	1114.74	7001.04	-3899.46	160.74	-48.58
303	1	12.22	24.33	±	7.26	4681.84	2798.14	18794.30	14638.80	1108.50	3010.69
303	1	12.22	24.33	3	7.26	-5417.23	1361.07	8437.39	-4907.55	243.46	55.69
303	1	12.22	24.33	±	7.26	3972.99	2064.19	13759.80	10319.00	790.61	2322.74
303	1	12.22	24.33	4	7.26	-5565.38	1114.74	7001.04	-3899.46	160.74	-48.58
303	1	12.22	24.33	±	7.26	2808.78	1605.08	10738.50	8060.88	613.22	1772.06
303	1	12.22	24.33	5	7.26	-5417.23	1361.07	8437.39	-4907.55	243.46	55.69
303	1	12.22	24.33	±	7.26	5879.26	3404.57	22898.50	18352.60	1401.10	3612.16
303	1	12.22	24.33	6	7.26	-5565.38	1114.74	7001.04	-3899.46	160.74	-48.58
303	1	12.22	24.33	±	7.26	4245.36	2648.91	17856.20	14368.20	1083.73	2781.80
303	1	12.22	24.33	7	7.26	-5417.23	1361.07	8437.39	-4907.55	243.46	55.69
303	1	12.22	24.33	±	7.26	2721.41	1706.10	11542.90	9641.72	734.53	1737.08
303	1	12.22	24.33	8	7.26	-5565.38	1114.74	7001.04	-3899.46	160.74	-48.58
303	1	12.22	24.33	±	7.26	1998.18	1327.94	8996.32	7558.27	567.21	1346.97
303	1	12.22	24.33	9	7.26	-6790.99	-923.12	-4881.65	4440.34	-523.65	-911.25
303	1	12.22	24.33	±	7.26	6553.19	3597.39	24092.20	18717.30	1431.29	3927.51
303	1	12.22	24.33	10	7.26	-6642.84	-676.78	-3445.30	3432.25	-440.92	-806.98
303	1	12.22	24.33	±	7.26	4681.84	2798.14	18794.30	14638.80	1108.50	3010.69
303	1	12.22	24.33	11	7.26	-6790.99	-923.12	-4881.65	4440.34	-523.65	-911.25
303	1	12.22	24.33	±	7.26	3972.99	2064.19	13759.80	10319.00	790.61	2322.74
303	1	12.22	24.33	12	7.26	-6642.84	-676.78	-3445.30	3432.25	-440.92	-806.98
303	1	12.22	24.33	±	7.26	2808.78	1605.08	10738.50	8060.88	613.22	1772.06
303	1	12.22	24.33	13	7.26	-6790.99	-923.12	-4881.65	4440.34	-523.65	-911.25
303	1	12.22	24.33	±	7.26	5879.26	3404.57	22898.50	18352.60	1401.10	3612.16
303	1	12.22	24.33	14	7.26	-6642.84	-676.78	-3445.30	3432.25	-440.92	-806.98
303	1	12.22	24.33	±	7.26	4245.36	2648.91	17856.20	14368.20	1083.73	2781.80
303	1	12.22	24.33	15	7.26	-6790.99	-923.12	-4881.65	4440.34	-523.65	-911.25
303	1	12.22	24.33	±	7.26	2721.41	1706.10	11542.90	9641.72	734.53	1737.08
303	1	12.22	24.33	16	7.26	-6642.84	-676.78	-3445.30	3432.25	-440.92	-806.98
303	1	12.22	24.33	±	7.26	1998.18	1327.94	8996.32	7558.27	567.21	1346.97
303	1	12.22	24.33	17	7.26	-8225.15	215.37	1554.53	511.90	-223.57	-459.59
303	1	12.22	24.33	18	7.26	-7895.80	364.45	3584.87	-1367.88	-106.81	-763.73
303	1	12.22	24.33	19	7.26	-8104.44	324.01	2428.00	53.18	-170.55	-614.32
303	1	12.22	24.33	20	7.26	-8016.52	255.82	2711.40	-909.16	-159.84	-609.00
303	1	12.22	24.33	21	7.26	-6349.96	146.65	935.93	626.36	-187.54	-311.58
303	1	12.22	24.33	22	7.26	-6020.62	295.73	2966.26	-1253.43	-70.78	-615.72
303	1	12.22	24.33	23	7.26	-6229.25	255.29	1809.40	167.64	-134.51	-466.31
303	1	12.22	24.33	24	7.26	-6141.33	187.09	2092.79	-794.71	-123.80	-461.00
303	1	12.22	24.33	25	7.26	-6288.39	146.80	795.98	685.89	-195.76	-284.62
303	1	12.22	24.33	26	7.26	-5959.04	295.88	2826.31	-1193.90	-79.00	-588.76
303	1	12.22	24.33	27	7.26	-6167.67	255.44	1669.45	227.17	-142.74	-439.35
303	1	12.22	24.33	28	7.26	-6079.75	187.24	1952.84	-735.18	-132.03	-434.04

Relazione di calcolo

303	1	12.22	24.33	29	7.26	-6268.78	144.44	762.71	706.29	-198.47	-275.71
303	1	12.22	24.33	30	7.26	-5939.43	293.52	2793.04	-1173.50	-81.71	-579.85
303	1	12.22	24.33	31	7.26	-6148.07	253.07	1636.18	247.57	-145.45	-430.44
303	1	12.22	24.33	32	7.26	-6060.15	184.88	1919.57	-714.78	-134.74	-425.12
303	1	12.22	24.33	1	7.61	-5417.23	1361.07	8437.39	-4907.55	243.46	55.69
303	1	12.22	24.33	±	7.61	6553.19	3597.39	24092.20	18717.30	1431.29	3927.51
303	1	12.22	24.33	2	7.61	-5565.38	1114.74	7001.04	-3899.46	160.74	-48.58
303	1	12.22	24.33	±	7.61	4681.84	2798.14	18794.30	14638.80	1108.50	3010.69
303	1	12.22	24.33	3	7.61	-5417.23	1361.07	8437.39	-4907.55	243.46	55.69
303	1	12.22	24.33	±	7.61	3972.99	2064.19	13759.80	10319.00	790.61	2322.74
303	1	12.22	24.33	4	7.61	-5565.38	1114.74	7001.04	-3899.46	160.74	-48.58
303	1	12.22	24.33	±	7.61	2808.78	1605.08	10738.50	8060.88	613.22	1772.06
303	1	12.22	24.33	5	7.61	-5417.23	1361.07	8437.39	-4907.55	243.46	55.69
303	1	12.22	24.33	±	7.61	5879.26	3404.57	22898.50	18352.60	1401.10	3612.16
303	1	12.22	24.33	6	7.61	-5565.38	1114.74	7001.04	-3899.46	160.74	-48.58
303	1	12.22	24.33	±	7.61	4245.36	2648.91	17856.20	14368.20	1083.73	2781.80
303	1	12.22	24.33	7	7.61	-5417.23	1361.07	8437.39	-4907.55	243.46	55.69
303	1	12.22	24.33	±	7.61	2721.41	1706.10	11542.90	9641.72	734.53	1737.08
303	1	12.22	24.33	8	7.61	-5565.38	1114.74	7001.04	-3899.46	160.74	-48.58
303	1	12.22	24.33	±	7.61	1998.18	1327.94	8996.32	7558.27	567.21	1346.97
303	1	12.22	24.33	9	7.61	-6790.99	-923.12	-4881.65	4440.34	-523.65	-911.25
303	1	12.22	24.33	±	7.61	6553.19	3597.39	24092.20	18717.30	1431.29	3927.51
303	1	12.22	24.33	10	7.61	-6642.84	-676.78	-3445.30	3432.25	-440.92	-806.98
303	1	12.22	24.33	±	7.61	4681.84	2798.14	18794.30	14638.80	1108.50	3010.69
303	1	12.22	24.33	11	7.61	-6790.99	-923.12	-4881.65	4440.34	-523.65	-911.25
303	1	12.22	24.33	±	7.61	3972.99	2064.19	13759.80	10319.00	790.61	2322.74
303	1	12.22	24.33	12	7.61	-6642.84	-676.78	-3445.30	3432.25	-440.92	-806.98
303	1	12.22	24.33	±	7.61	2808.78	1605.08	10738.50	8060.88	613.22	1772.06
303	1	12.22	24.33	13	7.61	-6790.99	-923.12	-4881.65	4440.34	-523.65	-911.25
303	1	12.22	24.33	±	7.61	5879.26	3404.57	22898.50	18352.60	1401.10	3612.16
303	1	12.22	24.33	14	7.61	-6642.84	-676.78	-3445.30	3432.25	-440.92	-806.98
303	1	12.22	24.33	±	7.61	4245.36	2648.91	17856.20	14368.20	1083.73	2781.80
303	1	12.22	24.33	15	7.61	-6790.99	-923.12	-4881.65	4440.34	-523.65	-911.25
303	1	12.22	24.33	±	7.61	2721.41	1706.10	11542.90	9641.72	734.53	1737.08
303	1	12.22	24.33	16	7.61	-6642.84	-676.78	-3445.30	3432.25	-440.92	-806.98
303	1	12.22	24.33	±	7.61	1998.18	1327.94	8996.32	7558.27	567.21	1346.97
303	1	12.22	24.33	17	7.61	-8225.15	215.37	1554.53	511.90	-223.57	-459.59
303	1	12.22	24.33	18	7.61	-7895.80	364.45	3584.87	-1367.88	-106.81	-763.73
303	1	12.22	24.33	19	7.61	-8104.44	324.01	2428.00	53.18	-170.55	-614.32
303	1	12.22	24.33	20	7.61	-8016.52	255.82	2711.40	-909.16	-159.84	-609.00
303	1	12.22	24.33	21	7.61	-6349.96	146.65	935.93	626.36	-187.54	-311.58
303	1	12.22	24.33	22	7.61	-6020.62	295.73	2966.26	-1253.43	-70.78	-615.72
303	1	12.22	24.33	23	7.61	-6229.25	255.29	1809.40	167.64	-134.51	-466.31
303	1	12.22	24.33	24	7.61	-6141.33	187.09	2092.79	-794.71	-123.80	-461.00
303	1	12.22	24.33	25	7.61	-6288.39	146.80	795.98	685.89	-195.76	-284.62
303	1	12.22	24.33	26	7.61	-5959.04	295.88	2826.31	-1193.90	-79.00	-588.76
303	1	12.22	24.33	27	7.61	-6167.67	255.44	1669.45	227.17	-142.74	-439.35
303	1	12.22	24.33	28	7.61	-6079.75	187.24	1952.84	-735.18	-132.03	-434.04
303	1	12.22	24.33	29	7.61	-6268.78	144.44	762.71	706.29	-198.47	-275.71
303	1	12.22	24.33	30	7.61	-5939.43	293.52	2793.04	-1173.50	-81.71	-579.85
303	1	12.22	24.33	31	7.61	-6148.07	253.07	1636.18	247.57	-145.45	-430.44
303	1	12.22	24.33	32	7.61	-6060.15	184.88	1919.57	-714.78	-134.74	-425.12
303	2	12.22	24.33	1	7.61	-5033.08	919.59	8194.96	-3110.20	-160.05	665.25
303	2	12.22	24.33	±	7.61	4892.41	2244.58	23561.10	14005.80	980.43	2846.75
303	2	12.22	24.33	2	7.61	-5094.11	727.70	6790.37	-2421.25	-172.72	478.71
303	2	12.22	24.33	±	7.61	3492.62	1718.02	18384.30	10958.00	765.36	2164.54
303	2	12.22	24.33	3	7.61	-5033.08	919.59	8194.96	-3110.20	-160.05	665.25
303	2	12.22	24.33	±	7.61	3012.62	1311.00	13532.10	7531.17	577.38	1749.53
303	2	12.22	24.33	4	7.61	-5094.11	727.70	6790.37	-2421.25	-172.72	478.71
303	2	12.22	24.33	±	7.61	2129.60	999.74	10564.60	5885.39	452.07	1326.15
303	2	12.22	24.33	5	7.61	-5033.08	919.59	8194.96	-3110.20	-160.05	665.25
303	2	12.22	24.33	±	7.61	4318.74	2089.29	22279.10	14021.60	905.42	2518.15
303	2	12.22	24.33	6	7.61	-5094.11	727.70	6790.37	-2421.25	-172.72	478.71
303	2	12.22	24.33	±	7.61	3115.03	1604.78	17375.10	10980.80	704.76	1920.91
303	2	12.22	24.33	7	7.61	-5033.08	919.59	8194.96	-3110.20	-160.05	665.25
303	2	12.22	24.33	±	7.61	1947.23	1022.62	11151.10	7560.50	438.08	1139.26
303	2	12.22	24.33	8	7.61	-5094.11	727.70	6790.37	-2421.25	-172.72	478.71
303	2	12.22	24.33	±	7.61	1428.37	789.46	8690.44	5927.83	339.54	873.71
303	2	12.22	24.33	9	7.61	-5599.03	-859.79	-4829.66	3278.38	-277.50	-1064.52
303	2	12.22	24.33	±	7.61	4892.41	2244.58	23561.10	14005.80	980.43	2846.75
303	2	12.22	24.33	10	7.61	-5537.99	-667.90	-3425.07	2589.43	-264.83	-877.97
303	2	12.22	24.33	±	7.61	3492.62	1718.02	18384.30	10958.00	765.36	2164.54
303	2	12.22	24.33	11	7.61	-5599.03	-859.79	-4829.66	3278.38	-277.50	-1064.52
303	2	12.22	24.33	±	7.61	3012.62	1311.00	13532.10	7531.17	577.38	1749.53
303	2	12.22	24.33	12	7.61	-5537.99	-667.90	-3425.07	2589.43	-264.83	-877.97
303	2	12.22	24.33	±	7.61	2129.60	999.74	10564.60	5885.39	452.07	1326.15
303	2	12.22	24.33	13	7.61	-5599.03	-859.79	-4829.66	3278.38	-277.50	-1064.52
303	2	12.22	24.33	±	7.61	4318.74	2089.29	22279.10	14021.60	905.42	2518.15
303	2	12.22	24.33	14	7.61	-5537.99	-667.90	-3425.07	2589.43	-264.83	-877.97

Relazione di calcolo

303	2	12.22	24.33	±	7.61	3115.03	1604.78	17375.10	10980.80	704.76	1920.91
303	2	12.22	24.33	15	7.61	-5599.03	-859.79	-4829.66	3278.38	-277.50	-1064.52
303	2	12.22	24.33	±	7.61	1947.23	1022.62	11151.10	7560.50	438.08	1139.26
303	2	12.22	24.33	16	7.61	-5537.99	-667.90	-3425.07	2589.43	-264.83	-877.97
303	2	12.22	24.33	±	7.61	1428.37	789.46	8690.44	5927.83	339.54	873.71
303	2	12.22	24.33	17	7.61	-7162.95	-9.81	1453.50	733.68	-314.07	-187.95
303	2	12.22	24.33	18	7.61	-6918.63	46.04	3437.95	-635.97	-221.84	-366.70
303	2	12.22	24.33	19	7.61	-7080.42	39.35	2349.33	489.45	-280.08	-261.24
303	2	12.22	24.33	20	7.61	-7001.17	-3.12	2542.12	-391.74	-255.84	-293.41
303	2	12.22	24.33	21	7.61	-5522.53	-12.34	863.73	731.80	-253.87	-122.14
303	2	12.22	24.33	22	7.61	-5278.21	43.52	2848.19	-637.85	-161.64	-300.89
303	2	12.22	24.33	23	7.61	-5439.99	36.82	1759.57	487.57	-219.87	-195.43
303	2	12.22	24.33	24	7.61	-5360.75	-5.65	1952.35	-393.63	-195.63	-227.60
303	2	12.22	24.33	25	7.61	-5458.52	-0.18	723.40	756.71	-262.77	-112.61
303	2	12.22	24.33	26	7.61	-5214.20	55.68	2707.86	-612.95	-170.54	-291.35
303	2	12.22	24.33	27	7.61	-5375.99	48.99	1619.24	512.48	-228.78	-185.89
303	2	12.22	24.33	28	7.61	-5296.74	6.52	1812.02	-368.72	-204.53	-218.07
303	2	12.22	24.33	29	7.61	-5438.21	1.97	690.42	768.92	-264.89	-110.26
303	2	12.22	24.33	30	7.61	-5193.89	57.83	2674.88	-600.74	-172.66	-289.00
303	2	12.22	24.33	31	7.61	-5355.67	51.13	1586.26	524.69	-230.90	-183.54
303	2	12.22	24.33	32	7.61	-5276.43	8.66	1779.04	-356.51	-206.66	-215.72
303	2	12.22	24.33	1	7.96	-5033.08	919.59	8194.96	-3110.20	-160.05	665.25
303	2	12.22	24.33	±	7.96	4892.41	2244.58	23561.10	14005.80	980.43	2846.75
303	2	12.22	24.33	2	7.96	-5094.11	727.70	6790.37	-2421.25	-172.72	478.71
303	2	12.22	24.33	±	7.96	3492.62	1718.02	18384.30	10958.00	765.36	2164.54
303	2	12.22	24.33	3	7.96	-5033.08	919.59	8194.96	-3110.20	-160.05	665.25
303	2	12.22	24.33	±	7.96	3012.62	1311.00	13532.10	7531.17	577.38	1749.53
303	2	12.22	24.33	4	7.96	-5094.11	727.70	6790.37	-2421.25	-172.72	478.71
303	2	12.22	24.33	±	7.96	2129.60	999.74	10564.60	5885.39	452.07	1326.15
303	2	12.22	24.33	5	7.96	-5033.08	919.59	8194.96	-3110.20	-160.05	665.25
303	2	12.22	24.33	±	7.96	4318.74	2089.29	22279.10	14021.60	905.42	2518.15
303	2	12.22	24.33	6	7.96	-5094.11	727.70	6790.37	-2421.25	-172.72	478.71
303	2	12.22	24.33	±	7.96	3115.03	1604.78	17375.10	10980.80	704.76	1920.91
303	2	12.22	24.33	7	7.96	-5033.08	919.59	8194.96	-3110.20	-160.05	665.25
303	2	12.22	24.33	±	7.96	1947.23	1022.62	11151.10	7560.50	438.08	1139.26
303	2	12.22	24.33	8	7.96	-5094.11	727.70	6790.37	-2421.25	-172.72	478.71
303	2	12.22	24.33	±	7.96	1428.37	789.46	8690.44	5927.83	339.54	873.71
303	2	12.22	24.33	9	7.96	-5599.03	-859.79	-4829.66	3278.38	-277.50	-1064.52
303	2	12.22	24.33	±	7.96	4892.41	2244.58	23561.10	14005.80	980.43	2846.75
303	2	12.22	24.33	10	7.96	-5537.99	-667.90	-3425.07	2589.43	-264.83	-877.97
303	2	12.22	24.33	±	7.96	3492.62	1718.02	18384.30	10958.00	765.36	2164.54
303	2	12.22	24.33	11	7.96	-5599.03	-859.79	-4829.66	3278.38	-277.50	-1064.52
303	2	12.22	24.33	±	7.96	3012.62	1311.00	13532.10	7531.17	577.38	1749.53
303	2	12.22	24.33	12	7.96	-5537.99	-667.90	-3425.07	2589.43	-264.83	-877.97
303	2	12.22	24.33	±	7.96	2129.60	999.74	10564.60	5885.39	452.07	1326.15
303	2	12.22	24.33	13	7.96	-5599.03	-859.79	-4829.66	3278.38	-277.50	-1064.52
303	2	12.22	24.33	±	7.96	4318.74	2089.29	22279.10	14021.60	905.42	2518.15
303	2	12.22	24.33	14	7.96	-5537.99	-667.90	-3425.07	2589.43	-264.83	-877.97
303	2	12.22	24.33	±	7.96	3115.03	1604.78	17375.10	10980.80	704.76	1920.91
303	2	12.22	24.33	15	7.96	-5599.03	-859.79	-4829.66	3278.38	-277.50	-1064.52
303	2	12.22	24.33	±	7.96	1947.23	1022.62	11151.10	7560.50	438.08	1139.26
303	2	12.22	24.33	16	7.96	-5537.99	-667.90	-3425.07	2589.43	-264.83	-877.97
303	2	12.22	24.33	±	7.96	1428.37	789.46	8690.44	5927.83	339.54	873.71
303	2	12.22	24.33	17	7.96	-7162.95	-9.81	1453.50	733.68	-314.07	-187.95
303	2	12.22	24.33	18	7.96	-6918.63	46.04	3437.95	-635.97	-221.84	-366.70
303	2	12.22	24.33	19	7.96	-7080.42	39.35	2349.33	489.45	-280.08	-261.24
303	2	12.22	24.33	20	7.96	-7001.17	-3.12	2542.12	-391.74	-255.84	-293.41
303	2	12.22	24.33	21	7.96	-5522.53	-12.34	863.73	731.80	-253.87	-122.14
303	2	12.22	24.33	22	7.96	-5278.21	43.52	2848.19	-637.85	-161.64	-300.89
303	2	12.22	24.33	23	7.96	-5439.99	36.82	1759.57	487.57	-219.87	-195.43
303	2	12.22	24.33	24	7.96	-5360.75	-5.65	1952.35	-393.63	-195.63	-227.60
303	2	12.22	24.33	25	7.96	-5458.52	-0.18	723.40	756.71	-262.77	-112.61
303	2	12.22	24.33	26	7.96	-5214.20	55.68	2707.86	-612.95	-170.54	-291.35
303	2	12.22	24.33	27	7.96	-5375.99	48.99	1619.24	512.48	-228.78	-185.89
303	2	12.22	24.33	28	7.96	-5296.74	6.52	1812.02	-368.72	-204.53	-218.07
303	2	12.22	24.33	29	7.96	-5438.21	1.97	690.42	768.92	-264.89	-110.26
303	2	12.22	24.33	30	7.96	-5193.89	57.83	2674.88	-600.74	-172.66	-289.00
303	2	12.22	24.33	31	7.96	-5355.67	51.13	1586.26	524.69	-230.90	-183.54
303	2	12.22	24.33	32	7.96	-5276.43	8.66	1779.04	-356.51	-206.66	-215.72
303	3	12.22	24.33	1	7.96	-4382.20	859.86	8362.21	-890.45	-425.35	734.58
303	3	12.22	24.33	±	7.96	3303.01	1949.59	23386.50	9495.41	1155.43	2608.85
303	3	12.22	24.33	2	7.96	-4353.49	681.91	6955.64	-517.55	-374.45	528.00
303	3	12.22	24.33	±	7.96	2370.04	1470.44	18247.80	7436.53	897.16	1987.31
303	3	12.22	24.33	3	7.96	-4382.20	859.86	8362.21	-890.45	-425.35	734.58
303	3	12.22	24.33	±	7.96	2107.54	1169.63	13413.40	4932.62	737.17	1594.67
303	3	12.22	24.33	4	7.96	-4353.49	681.91	6955.64	-517.55	-374.45	528.00
303	3	12.22	24.33	±	7.96	1502.92	875.98	10473.00	3860.12	571.47	1214.04
303	3	12.22	24.33	5	7.96	-4382.20	859.86	8362.21	-890.45	-425.35	734.58
303	3	12.22	24.33	±	7.96	2804.03	1767.82	22141.80	9768.85	980.99	2320.83

Relazione di calcolo

303	3	12.22	24.33	6	7.96	-4353.49	681.91	6955.64	-517.55	-374.45	528.00
303	3	12.22	24.33	±	7.96	2026.16	1342.73	17266.10	7655.17	763.11	1768.98
303	3	12.22	24.33	7	7.96	-4382.20	859.86	8362.21	-890.45	-425.35	734.58
303	3	12.22	24.33	±	7.96	1180.87	832.06	11101.80	5440.44	413.20	1059.77
303	3	12.22	24.33	8	7.96	-4353.49	681.91	6955.64	-517.55	-374.45	528.00
303	3	12.22	24.33	±	7.96	864.27	638.80	8649.86	4266.18	322.52	808.57
303	3	12.22	24.33	9	7.96	-4116.02	-790.21	-4680.71	2567.37	46.66	-1181.01
303	3	12.22	24.33	±	7.96	3303.01	1949.59	23386.50	9495.41	1155.43	2608.85
303	3	12.22	24.33	10	7.96	-4144.73	-612.27	-3274.14	2194.47	-4.25	-974.43
303	3	12.22	24.33	±	7.96	2370.04	1470.44	18247.80	7436.53	897.16	1987.31
303	3	12.22	24.33	11	7.96	-4116.02	-790.21	-4680.71	2567.37	46.66	-1181.01
303	3	12.22	24.33	±	7.96	2107.54	1169.63	13413.40	4932.62	737.17	1594.67
303	3	12.22	24.33	12	7.96	-4144.73	-612.27	-3274.14	2194.47	-4.25	-974.43
303	3	12.22	24.33	±	7.96	1502.92	875.98	10473.00	3860.12	571.47	1214.04
303	3	12.22	24.33	13	7.96	-4116.02	-790.21	-4680.71	2567.37	46.66	-1181.01
303	3	12.22	24.33	±	7.96	2804.03	1767.82	22141.80	9768.85	980.99	2320.83
303	3	12.22	24.33	14	7.96	-4144.73	-612.27	-3274.14	2194.47	-4.25	-974.43
303	3	12.22	24.33	±	7.96	2026.16	1342.73	17266.10	7655.17	763.11	1768.98
303	3	12.22	24.33	15	7.96	-4116.02	-790.21	-4680.71	2567.37	46.66	-1181.01
303	3	12.22	24.33	±	7.96	1180.87	832.06	11101.80	5440.44	413.20	1059.77
303	3	12.22	24.33	16	7.96	-4144.73	-612.27	-3274.14	2194.47	-4.25	-974.43
303	3	12.22	24.33	±	7.96	864.27	638.80	8649.86	4266.18	322.52	808.57
303	3	12.22	24.33	17	7.96	-5709.18	10.81	1685.66	1568.88	-256.30	-238.79
303	3	12.22	24.33	18	7.96	-5556.37	27.75	3667.31	702.03	-176.55	-363.22
303	3	12.22	24.33	19	7.96	-5693.07	38.51	2559.48	1498.24	-236.13	-282.29
303	3	12.22	24.33	20	7.96	-5572.48	0.04	2793.49	772.68	-196.72	-319.73
303	3	12.22	24.33	21	7.96	-4396.68	8.69	1039.49	1304.25	-209.33	-168.46
303	3	12.22	24.33	22	7.96	-4243.88	25.63	3021.14	437.40	-129.58	-292.89
303	3	12.22	24.33	23	7.96	-4380.58	36.40	1913.31	1233.60	-189.16	-211.95
303	3	12.22	24.33	24	7.96	-4259.98	-2.07	2147.32	508.05	-149.74	-249.40
303	3	12.22	24.33	25	7.96	-4341.92	23.32	887.00	1275.27	-225.36	-162.13
303	3	12.22	24.33	26	7.96	-4189.11	40.26	2868.65	408.42	-145.61	-286.56
303	3	12.22	24.33	27	7.96	-4325.81	51.02	1760.82	1204.62	-205.19	-205.62
303	3	12.22	24.33	28	7.96	-4205.22	12.55	1994.83	479.07	-165.78	-243.06
303	3	12.22	24.33	29	7.96	-4325.51	26.35	849.92	1271.89	-229.22	-161.00
303	3	12.22	24.33	30	7.96	-4172.71	43.29	2831.58	405.04	-149.47	-285.43
303	3	12.22	24.33	31	7.96	-4309.41	54.06	1723.75	1201.24	-209.06	-204.49
303	3	12.22	24.33	32	7.96	-4188.81	15.59	1957.76	475.69	-169.64	-241.94
303	3	12.22	24.33	1	8.31	-4382.20	859.86	8362.21	-890.45	-425.35	734.58
303	3	12.22	24.33	±	8.31	3303.01	1949.59	23386.50	9495.41	1155.43	2608.85
303	3	12.22	24.33	2	8.31	-4353.49	681.91	6955.64	-517.55	-374.45	528.00
303	3	12.22	24.33	±	8.31	2370.04	1470.44	18247.80	7436.53	897.16	1987.31
303	3	12.22	24.33	3	8.31	-4382.20	859.86	8362.21	-890.45	-425.35	734.58
303	3	12.22	24.33	±	8.31	2107.54	1169.63	13413.40	4932.62	737.17	1594.67
303	3	12.22	24.33	4	8.31	-4353.49	681.91	6955.64	-517.55	-374.45	528.00
303	3	12.22	24.33	±	8.31	1502.92	875.98	10473.00	3860.12	571.47	1214.04
303	3	12.22	24.33	5	8.31	-4382.20	859.86	8362.21	-890.45	-425.35	734.58
303	3	12.22	24.33	±	8.31	2804.03	1767.82	22141.80	9768.85	980.99	2320.83
303	3	12.22	24.33	6	8.31	-4353.49	681.91	6955.64	-517.55	-374.45	528.00
303	3	12.22	24.33	±	8.31	2026.16	1342.73	17266.10	7655.17	763.11	1768.98
303	3	12.22	24.33	7	8.31	-4382.20	859.86	8362.21	-890.45	-425.35	734.58
303	3	12.22	24.33	±	8.31	1180.87	832.06	11101.80	5440.44	413.20	1059.77
303	3	12.22	24.33	8	8.31	-4353.49	681.91	6955.64	-517.55	-374.45	528.00
303	3	12.22	24.33	±	8.31	864.27	638.80	8649.86	4266.18	322.52	808.57
303	3	12.22	24.33	9	8.31	-4116.02	-790.21	-4680.71	2567.37	46.66	-1181.01
303	3	12.22	24.33	±	8.31	3303.01	1949.59	23386.50	9495.41	1155.43	2608.85
303	3	12.22	24.33	10	8.31	-4144.73	-612.27	-3274.14	2194.47	-4.25	-974.43
303	3	12.22	24.33	±	8.31	2370.04	1470.44	18247.80	7436.53	897.16	1987.31
303	3	12.22	24.33	11	8.31	-4116.02	-790.21	-4680.71	2567.37	46.66	-1181.01
303	3	12.22	24.33	±	8.31	2107.54	1169.63	13413.40	4932.62	737.17	1594.67
303	3	12.22	24.33	12	8.31	-4144.73	-612.27	-3274.14	2194.47	-4.25	-974.43
303	3	12.22	24.33	±	8.31	1502.92	875.98	10473.00	3860.12	571.47	1214.04
303	3	12.22	24.33	13	8.31	-4116.02	-790.21	-4680.71	2567.37	46.66	-1181.01
303	3	12.22	24.33	±	8.31	2804.03	1767.82	22141.80	9768.85	980.99	2320.83
303	3	12.22	24.33	14	8.31	-4144.73	-612.27	-3274.14	2194.47	-4.25	-974.43
303	3	12.22	24.33	±	8.31	2026.16	1342.73	17266.10	7655.17	763.11	1768.98
303	3	12.22	24.33	15	8.31	-4116.02	-790.21	-4680.71	2567.37	46.66	-1181.01
303	3	12.22	24.33	±	8.31	1180.87	832.06	11101.80	5440.44	413.20	1059.77
303	3	12.22	24.33	16	8.31	-4144.73	-612.27	-3274.14	2194.47	-4.25	-974.43
303	3	12.22	24.33	±	8.31	864.27	638.80	8649.86	4266.18	322.52	808.57
303	3	12.22	24.33	17	8.31	-5709.18	10.81	1685.66	1568.88	-256.30	-238.79
303	3	12.22	24.33	18	8.31	-5556.37	27.75	3667.31	702.03	-176.55	-363.22
303	3	12.22	24.33	19	8.31	-5693.07	38.51	2559.48	1498.24	-236.13	-282.29
303	3	12.22	24.33	20	8.31	-5572.48	0.04	2793.49	772.68	-196.72	-319.73
303	3	12.22	24.33	21	8.31	-4396.68	8.69	1039.49	1304.25	-209.33	-168.46
303	3	12.22	24.33	22	8.31	-4243.88	25.63	3021.14	437.40	-129.58	-292.89
303	3	12.22	24.33	23	8.31	-4380.58	36.40	1913.31	1233.60	-189.16	-211.95
303	3	12.22	24.33	24	8.31	-4259.98	-2.07	2147.32	508.05	-149.74	-249.40
303	3	12.22	24.33	25	8.31	-4341.92	23.32	887.00	1275.27	-225.36	-162.13

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303	3	12.22	24.33	26	8.31	-4189.11	40.26	2868.65	408.42	-145.61	-286.56
303	3	12.22	24.33	27	8.31	-4325.81	51.02	1760.82	1204.62	-205.19	-205.62
303	3	12.22	24.33	28	8.31	-4205.22	12.55	1994.83	479.07	-165.78	-243.06
303	3	12.22	24.33	29	8.31	-4325.51	26.35	849.92	1271.89	-229.22	-161.00
303	3	12.22	24.33	30	8.31	-4172.71	43.29	2831.58	405.04	-149.47	-285.43
303	3	12.22	24.33	31	8.31	-4309.41	54.06	1723.75	1201.24	-209.06	-204.49
303	3	12.22	24.33	32	8.31	-4188.81	15.59	1957.76	475.69	-169.64	-241.94
303	4	12.22	24.33	1	8.31	-3927.37	998.39	8900.38	1147.50	-762.57	501.19
303	4	12.22	24.33	±	8.31	2419.56	1945.71	23166.90	6071.39	1687.68	2333.39
303	4	12.22	24.33	2	8.31	-3811.18	823.01	7463.39	1192.71	-651.52	296.19
303	4	12.22	24.33	±	8.31	1810.29	1442.96	18074.20	4760.05	1294.49	1789.12
303	4	12.22	24.33	3	8.31	-3927.37	998.39	8900.38	1147.50	-762.57	501.19
303	4	12.22	24.33	±	8.31	1549.34	1168.77	13064.30	2896.89	1074.34	1432.80
303	4	12.22	24.33	4	8.31	-3811.18	823.01	7463.39	1192.71	-651.52	296.19
303	4	12.22	24.33	±	8.31	1150.39	855.13	10201.40	2271.09	821.00	1104.18
303	4	12.22	24.33	5	8.31	-3927.37	998.39	8900.38	1147.50	-762.57	501.19
303	4	12.22	24.33	±	8.31	2045.70	1762.06	22272.30	6636.08	1436.53	2065.91
303	4	12.22	24.33	6	8.31	-3811.18	823.01	7463.39	1192.71	-651.52	296.19
303	4	12.22	24.33	±	8.31	1543.92	1324.44	17362.60	5202.93	1106.46	1575.57
303	4	12.22	24.33	7	8.31	-3927.37	998.39	8900.38	1147.50	-762.57	501.19
303	4	12.22	24.33	±	8.31	855.02	827.72	11402.90	3945.59	607.93	936.06
303	4	12.22	24.33	8	8.31	-3811.18	823.01	7463.39	1192.71	-651.52	296.19
303	4	12.22	24.33	±	8.31	655.72	635.01	8879.94	3093.59	471.82	707.57
303	4	12.22	24.33	9	8.31	-2849.96	-627.85	-4424.58	1566.79	267.24	-1399.73
303	4	12.22	24.33	±	8.31	2419.56	1945.71	23166.90	6071.39	1687.68	2333.39
303	4	12.22	24.33	10	8.31	-2966.15	-452.48	-2987.59	1521.58	156.18	-1194.74
303	4	12.22	24.33	±	8.31	1810.29	1442.96	18074.20	4760.05	1294.49	1789.12
303	4	12.22	24.33	11	8.31	-2849.96	-627.85	-4424.58	1566.79	267.24	-1399.73
303	4	12.22	24.33	±	8.31	1549.34	1168.77	13064.30	2896.89	1074.34	1432.80
303	4	12.22	24.33	12	8.31	-2966.15	-452.48	-2987.59	1521.58	156.18	-1194.74
303	4	12.22	24.33	±	8.31	1150.39	855.13	10201.40	2271.09	821.00	1104.18
303	4	12.22	24.33	13	8.31	-2849.96	-627.85	-4424.58	1566.79	267.24	-1399.73
303	4	12.22	24.33	±	8.31	2045.70	1762.06	22272.30	6636.08	1436.53	2065.91
303	4	12.22	24.33	14	8.31	-2966.15	-452.48	-2987.59	1521.58	156.18	-1194.74
303	4	12.22	24.33	±	8.31	1543.92	1324.44	17362.60	5202.93	1106.46	1575.57
303	4	12.22	24.33	15	8.31	-2849.96	-627.85	-4424.58	1566.79	267.24	-1399.73
303	4	12.22	24.33	±	8.31	855.02	827.72	11402.90	3945.59	607.93	936.06
303	4	12.22	24.33	16	8.31	-2966.15	-452.48	-2987.59	1521.58	156.18	-1194.74
303	4	12.22	24.33	±	8.31	655.72	635.01	8879.94	3093.59	471.82	707.57
303	4	12.22	24.33	17	8.31	-4557.28	233.71	2227.87	2047.48	-329.04	-574.33
303	4	12.22	24.33	18	8.31	-4474.65	223.52	4234.77	1723.68	-246.59	-657.67
303	4	12.22	24.33	19	8.31	-4551.87	237.22	2973.59	2195.38	-310.76	-585.02
303	4	12.22	24.33	20	8.31	-4480.06	220.01	3489.05	1575.78	-264.88	-646.98
303	4	12.22	24.33	21	8.31	-3502.68	181.73	1448.65	1601.35	-265.88	-428.92
303	4	12.22	24.33	22	8.31	-3420.04	171.53	3455.54	1277.55	-183.44	-512.26
303	4	12.22	24.33	23	8.31	-3497.27	185.23	2194.36	1749.24	-247.60	-439.61
303	4	12.22	24.33	24	8.31	-3425.45	168.03	2709.82	1129.65	-201.72	-501.57
303	4	12.22	24.33	25	8.31	-3446.18	189.36	1278.05	1533.35	-284.65	-411.84
303	4	12.22	24.33	26	8.31	-3363.54	179.17	3284.95	1209.55	-202.21	-495.18
303	4	12.22	24.33	27	8.31	-3440.76	192.87	2023.77	1681.25	-266.37	-422.53
303	4	12.22	24.33	28	8.31	-3368.95	175.66	2539.23	1061.65	-220.49	-484.49
303	4	12.22	24.33	29	8.31	-3429.98	190.37	1234.45	1519.04	-288.89	-407.60
303	4	12.22	24.33	30	8.31	-3347.34	180.17	3241.35	1195.25	-206.44	-490.95
303	4	12.22	24.33	31	8.31	-3424.57	193.87	1980.17	1666.94	-270.61	-418.30
303	4	12.22	24.33	32	8.31	-3352.75	176.67	2495.63	1047.35	-224.72	-480.25
303	4	12.22	24.33	1	8.66	-3927.37	998.39	8900.38	1147.50	-762.57	501.19
303	4	12.22	24.33	±	8.66	2419.56	1945.71	23166.90	6071.39	1687.68	2333.39
303	4	12.22	24.33	2	8.66	-3811.18	823.01	7463.39	1192.71	-651.52	296.19
303	4	12.22	24.33	±	8.66	1810.29	1442.96	18074.20	4760.05	1294.49	1789.12
303	4	12.22	24.33	3	8.66	-3927.37	998.39	8900.38	1147.50	-762.57	501.19
303	4	12.22	24.33	±	8.66	1549.34	1168.77	13064.30	2896.89	1074.34	1432.80
303	4	12.22	24.33	4	8.66	-3811.18	823.01	7463.39	1192.71	-651.52	296.19
303	4	12.22	24.33	±	8.66	1150.39	855.13	10201.40	2271.09	821.00	1104.18
303	4	12.22	24.33	5	8.66	-3927.37	998.39	8900.38	1147.50	-762.57	501.19
303	4	12.22	24.33	±	8.66	2045.70	1762.06	22272.30	6636.08	1436.53	2065.91
303	4	12.22	24.33	6	8.66	-3811.18	823.01	7463.39	1192.71	-651.52	296.19
303	4	12.22	24.33	±	8.66	1543.92	1324.44	17362.60	5202.93	1106.46	1575.57
303	4	12.22	24.33	7	8.66	-3927.37	998.39	8900.38	1147.50	-762.57	501.19
303	4	12.22	24.33	±	8.66	855.02	827.72	11402.90	3945.59	607.93	936.06
303	4	12.22	24.33	8	8.66	-3811.18	823.01	7463.39	1192.71	-651.52	296.19
303	4	12.22	24.33	±	8.66	655.72	635.01	8879.94	3093.59	471.82	707.57
303	4	12.22	24.33	9	8.66	-2849.96	-627.85	-4424.58	1566.79	267.24	-1399.73
303	4	12.22	24.33	±	8.66	2419.56	1945.71	23166.90	6071.39	1687.68	2333.39
303	4	12.22	24.33	10	8.66	-2966.15	-452.48	-2987.59	1521.58	156.18	-1194.74
303	4	12.22	24.33	±	8.66	1810.29	1442.96	18074.20	4760.05	1294.49	1789.12
303	4	12.22	24.33	11	8.66	-2849.96	-627.85	-4424.58	1566.79	267.24	-1399.73
303	4	12.22	24.33	±	8.66	1549.34	1168.77	13064.30	2896.89	1074.34	1432.80
303	4	12.22	24.33	12	8.66	-2966.15	-452.48	-2987.59	1521.58	156.18	-1194.74
303	4	12.22	24.33	±	8.66	1150.39	855.13	10201.40	2271.09	821.00	1104.18

Relazione di calcolo

303	4	12.22	24.33	13	8.66	-2849.96	-627.85	-4424.58	1566.79	267.24	-1399.73
303	4	12.22	24.33	±	8.66	2045.70	1762.06	22272.30	6636.08	1436.53	2065.91
303	4	12.22	24.33	14	8.66	-2966.15	-452.48	-2987.59	1521.58	156.18	-1194.74
303	4	12.22	24.33	±	8.66	1543.92	1324.44	17362.60	5202.93	1106.46	1575.57
303	4	12.22	24.33	15	8.66	-2849.96	-627.85	-4424.58	1566.79	267.24	-1399.73
303	4	12.22	24.33	±	8.66	855.02	827.72	11402.90	3945.59	607.93	936.06
303	4	12.22	24.33	16	8.66	-2966.15	-452.48	-2987.59	1521.58	156.18	-1194.74
303	4	12.22	24.33	±	8.66	655.72	635.01	8879.94	3093.59	471.82	707.57
303	4	12.22	24.33	17	8.66	-4557.28	233.71	2227.87	2047.48	-329.04	-574.33
303	4	12.22	24.33	18	8.66	-4474.65	223.52	4234.77	1723.68	-246.59	-657.67
303	4	12.22	24.33	19	8.66	-4551.87	237.22	2973.59	2195.38	-310.76	-585.02
303	4	12.22	24.33	20	8.66	-4480.06	220.01	3489.05	1575.78	-264.88	-646.98
303	4	12.22	24.33	21	8.66	-3502.68	181.73	1448.65	1601.35	-265.88	-428.92
303	4	12.22	24.33	22	8.66	-3420.04	171.53	3455.54	1277.55	-183.44	-512.26
303	4	12.22	24.33	23	8.66	-3497.27	185.23	2194.36	1749.24	-247.60	-439.61
303	4	12.22	24.33	24	8.66	-3425.45	168.03	2709.82	1129.65	-201.72	-501.57
303	4	12.22	24.33	25	8.66	-3446.18	189.36	1278.05	1533.35	-284.65	-411.84
303	4	12.22	24.33	26	8.66	-3363.54	179.17	3284.95	1209.55	-202.21	-495.18
303	4	12.22	24.33	27	8.66	-3440.76	192.87	2023.77	1681.25	-266.37	-422.53
303	4	12.22	24.33	28	8.66	-3368.95	175.66	2539.23	1061.65	-220.49	-484.49
303	4	12.22	24.33	29	8.66	-3429.98	190.37	1234.45	1519.04	-288.89	-407.60
303	4	12.22	24.33	30	8.66	-3347.34	180.17	3241.35	1195.25	-206.44	-490.95
303	4	12.22	24.33	31	8.66	-3424.57	193.87	1980.17	1666.94	-270.61	-418.30
303	4	12.22	24.33	32	8.66	-3352.75	176.67	2495.63	1047.35	-224.72	-480.25
306	1	11.21	26.00	1	7.26	-4567.04	-1732.65	345.95	-53.94	1733.68	-234.27
306	1	11.21	26.00	±	7.26	4386.65	8299.63	723.70	203.09	12029.00	1947.05
306	1	11.21	26.00	2	7.26	-4425.25	-1548.14	309.31	-38.94	1310.67	-209.11
306	1	11.21	26.00	±	7.26	3140.08	5434.08	555.08	153.56	9409.10	1511.80
306	1	11.21	26.00	3	7.26	-4567.04	-1732.65	345.95	-53.94	1733.68	-234.27
306	1	11.21	26.00	±	7.26	2297.56	3994.90	343.99	119.98	6833.77	770.38
306	1	11.21	26.00	4	7.26	-4425.25	-1548.14	309.31	-38.94	1310.67	-209.11
306	1	11.21	26.00	±	7.26	1717.27	2523.44	260.31	90.17	5343.79	591.36
306	1	11.21	26.00	5	7.26	-4567.04	-1732.65	345.95	-53.94	1733.68	-234.27
306	1	11.21	26.00	±	7.26	4484.45	9018.73	793.00	186.99	11488.10	2368.73
306	1	11.21	26.00	6	7.26	-4425.25	-1548.14	309.31	-38.94	1310.67	-209.11
306	1	11.21	26.00	±	7.26	3099.96	6044.69	613.60	142.21	8988.44	1849.54
306	1	11.21	26.00	7	7.26	-4567.04	-1732.65	345.95	-53.94	1733.68	-234.27
306	1	11.21	26.00	±	7.26	2479.19	5330.37	472.69	90.07	5829.24	1553.50
306	1	11.21	26.00	8	7.26	-4425.25	-1548.14	309.31	-38.94	1310.67	-209.11
306	1	11.21	26.00	±	7.26	1642.76	3657.44	368.98	69.09	4562.57	1218.59
306	1	11.21	26.00	9	7.26	-3252.23	-21.73	6.14	85.12	-2188.84	-1.00
306	1	11.21	26.00	±	7.26	4386.65	8299.63	723.70	203.09	12029.00	1947.05
306	1	11.21	26.00	10	7.26	-3394.02	-206.24	42.79	70.12	-1765.83	-26.15
306	1	11.21	26.00	±	7.26	3140.08	5434.08	555.08	153.56	9409.10	1511.80
306	1	11.21	26.00	11	7.26	-3252.23	-21.73	6.14	85.12	-2188.84	-1.00
306	1	11.21	26.00	±	7.26	2297.56	3994.90	343.99	119.98	6833.77	770.38
306	1	11.21	26.00	12	7.26	-3394.02	-206.24	42.79	70.12	-1765.83	-26.15
306	1	11.21	26.00	±	7.26	1717.27	2523.44	260.31	90.17	5343.79	591.36
306	1	11.21	26.00	13	7.26	-3252.23	-21.73	6.14	85.12	-2188.84	-1.00
306	1	11.21	26.00	±	7.26	4484.45	9018.73	793.00	186.99	11488.10	2368.73
306	1	11.21	26.00	14	7.26	-3394.02	-206.24	42.79	70.12	-1765.83	-26.15
306	1	11.21	26.00	±	7.26	3099.96	6044.69	613.60	142.21	8988.44	1849.54
306	1	11.21	26.00	15	7.26	-3252.23	-21.73	6.14	85.12	-2188.84	-1.00
306	1	11.21	26.00	±	7.26	2479.19	5330.37	472.69	90.07	5829.24	1553.50
306	1	11.21	26.00	16	7.26	-3394.02	-206.24	42.79	70.12	-1765.83	-26.15
306	1	11.21	26.00	±	7.26	1642.76	3657.44	368.98	69.09	4562.57	1218.59
306	1	11.21	26.00	17	7.26	-5575.39	-1087.12	285.63	12.36	-870.28	-107.72
306	1	11.21	26.00	18	7.26	-5387.43	-1076.82	237.11	27.08	167.43	-183.89
306	1	11.21	26.00	19	7.26	-5327.43	-948.96	300.32	17.09	-330.40	-58.86
306	1	11.21	26.00	20	7.26	-5635.39	-1214.98	222.42	22.36	-372.45	-232.75
306	1	11.21	26.00	21	7.26	-4265.79	-845.24	221.75	7.88	-785.34	-74.52
306	1	11.21	26.00	22	7.26	-4077.82	-834.94	173.23	22.59	252.36	-150.69
306	1	11.21	26.00	23	7.26	-4017.83	-707.08	236.44	12.60	-245.46	-25.66
306	1	11.21	26.00	24	7.26	-4325.78	-973.10	158.54	17.87	-287.52	-199.55
306	1	11.21	26.00	25	7.26	-4061.68	-872.20	204.94	8.15	-751.42	-78.96
306	1	11.21	26.00	26	7.26	-3873.71	-861.89	156.42	22.86	286.29	-155.14
306	1	11.21	26.00	27	7.26	-3813.72	-734.03	219.63	12.87	-211.54	-30.11
306	1	11.21	26.00	28	7.26	-4121.67	-1000.06	141.73	18.14	-253.59	-203.99
306	1	11.21	26.00	29	7.26	-4003.62	-882.34	200.31	8.24	-746.43	-79.54
306	1	11.21	26.00	30	7.26	-3815.65	-872.04	151.79	22.95	291.27	-155.72
306	1	11.21	26.00	31	7.26	-3755.66	-744.18	215.00	12.96	-206.55	-30.69
306	1	11.21	26.00	32	7.26	-4063.61	-1010.20	137.09	18.23	-248.61	-204.57
306	1	11.21	26.00	1	7.61	-4567.04	-1732.65	345.95	-53.94	1733.68	-234.27
306	1	11.21	26.00	±	7.61	4386.65	8299.63	723.70	203.09	12029.00	1947.05
306	1	11.21	26.00	2	7.61	-4425.25	-1548.14	309.31	-38.94	1310.67	-209.11
306	1	11.21	26.00	±	7.61	3140.08	5434.08	555.08	153.56	9409.10	1511.80
306	1	11.21	26.00	3	7.61	-4567.04	-1732.65	345.95	-53.94	1733.68	-234.27
306	1	11.21	26.00	±	7.61	2297.56	3994.90	343.99	119.98	6833.77	770.38
306	1	11.21	26.00	4	7.61	-4425.25	-1548.14	309.31	-38.94	1310.67	-209.11

Relazione di calcolo

306	1	11.21	26.00	±	7.61	1717.27	2523.44	260.31	90.17	5343.79	591.36
306	1	11.21	26.00	5	7.61	-4567.04	-1732.65	345.95	-53.94	1733.68	-234.27
306	1	11.21	26.00	±	7.61	4484.45	9018.73	793.00	186.99	11488.10	2368.73
306	1	11.21	26.00	6	7.61	-4425.25	-1548.14	309.31	-38.94	1310.67	-209.11
306	1	11.21	26.00	±	7.61	3099.96	6044.69	613.60	142.21	8988.44	1849.54
306	1	11.21	26.00	7	7.61	-4567.04	-1732.65	345.95	-53.94	1733.68	-234.27
306	1	11.21	26.00	±	7.61	2479.19	5330.37	472.69	90.07	5829.24	1553.50
306	1	11.21	26.00	8	7.61	-4425.25	-1548.14	309.31	-38.94	1310.67	-209.11
306	1	11.21	26.00	±	7.61	1642.76	3657.44	368.98	69.09	4562.57	1218.59
306	1	11.21	26.00	9	7.61	-3252.23	-21.73	6.14	85.12	-2188.84	-1.00
306	1	11.21	26.00	±	7.61	4386.65	8299.63	723.70	203.09	12029.00	1947.05
306	1	11.21	26.00	10	7.61	-3394.02	-206.24	42.79	70.12	-1765.83	-26.15
306	1	11.21	26.00	±	7.61	3140.08	5434.08	555.08	153.56	9409.10	1511.80
306	1	11.21	26.00	11	7.61	-3252.23	-21.73	6.14	85.12	-2188.84	-1.00
306	1	11.21	26.00	±	7.61	2297.56	3994.90	343.99	119.98	6833.77	770.38
306	1	11.21	26.00	12	7.61	-3394.02	-206.24	42.79	70.12	-1765.83	-26.15
306	1	11.21	26.00	±	7.61	1717.27	2523.44	260.31	90.17	5343.79	591.36
306	1	11.21	26.00	13	7.61	-3252.23	-21.73	6.14	85.12	-2188.84	-1.00
306	1	11.21	26.00	±	7.61	4484.45	9018.73	793.00	186.99	11488.10	2368.73
306	1	11.21	26.00	14	7.61	-3394.02	-206.24	42.79	70.12	-1765.83	-26.15
306	1	11.21	26.00	±	7.61	3099.96	6044.69	613.60	142.21	8988.44	1849.54
306	1	11.21	26.00	15	7.61	-3252.23	-21.73	6.14	85.12	-2188.84	-1.00
306	1	11.21	26.00	±	7.61	2479.19	5330.37	472.69	90.07	5829.24	1553.50
306	1	11.21	26.00	16	7.61	-3394.02	-206.24	42.79	70.12	-1765.83	-26.15
306	1	11.21	26.00	±	7.61	1642.76	3657.44	368.98	69.09	4562.57	1218.59
306	1	11.21	26.00	17	7.61	-5575.39	-1087.12	285.63	12.36	-870.28	-107.72
306	1	11.21	26.00	18	7.61	-5387.43	-1076.82	237.11	27.08	167.43	-183.89
306	1	11.21	26.00	19	7.61	-5327.43	-948.96	300.32	17.09	-330.40	-58.86
306	1	11.21	26.00	20	7.61	-5635.39	-1214.98	222.42	22.36	-372.45	-232.75
306	1	11.21	26.00	21	7.61	-4265.79	-845.24	221.75	7.88	-785.34	-74.52
306	1	11.21	26.00	22	7.61	-4077.82	-834.94	173.23	22.59	252.36	-150.69
306	1	11.21	26.00	23	7.61	-4017.83	-707.08	236.44	12.60	-245.46	-25.66
306	1	11.21	26.00	24	7.61	-4325.78	-973.10	158.54	17.87	-287.52	-199.55
306	1	11.21	26.00	25	7.61	-4061.68	-872.20	204.94	8.15	-751.42	-78.96
306	1	11.21	26.00	26	7.61	-3873.71	-861.89	156.42	22.86	286.29	-155.14
306	1	11.21	26.00	27	7.61	-3813.72	-734.03	219.63	12.87	-211.54	-30.11
306	1	11.21	26.00	28	7.61	-4121.67	-1000.06	141.73	18.14	-253.59	-203.99
306	1	11.21	26.00	29	7.61	-4003.62	-882.34	200.31	8.24	-746.43	-79.54
306	1	11.21	26.00	30	7.61	-3815.65	-872.04	151.79	22.95	291.27	-155.72
306	1	11.21	26.00	31	7.61	-3755.66	-744.18	215.00	12.96	-206.55	-30.69
306	1	11.21	26.00	32	7.61	-4063.61	-1010.20	137.09	18.23	-248.61	-204.57
306	2	11.21	26.00	1	7.61	-3920.24	-372.71	220.23	19.32	1259.01	297.77
306	2	11.21	26.00	±	7.61	3337.49	7870.05	223.19	446.35	9044.68	729.98
306	2	11.21	26.00	2	7.61	-3795.28	-228.94	198.96	29.55	939.20	253.65
306	2	11.21	26.00	±	7.61	2426.38	5029.13	168.38	348.70	7076.78	555.62
306	2	11.21	26.00	3	7.61	-3920.24	-372.71	220.23	19.32	1259.01	297.77
306	2	11.21	26.00	±	7.61	1758.15	3787.16	112.98	189.72	5094.89	385.68
306	2	11.21	26.00	4	7.61	-3795.28	-228.94	198.96	29.55	939.20	253.65
306	2	11.21	26.00	±	7.61	1321.25	2324.50	84.54	147.99	3986.29	291.96
306	2	11.21	26.00	5	7.61	-3920.24	-372.71	220.23	19.32	1259.01	297.77
306	2	11.21	26.00	±	7.61	3396.58	8553.40	234.10	523.13	8703.91	741.18
306	2	11.21	26.00	6	7.61	-3795.28	-228.94	198.96	29.55	939.20	253.65
306	2	11.21	26.00	±	7.61	2404.04	5610.75	177.68	409.02	6810.27	566.57
306	2	11.21	26.00	7	7.61	-3920.24	-372.71	220.23	19.32	1259.01	297.77
306	2	11.21	26.00	±	7.61	1867.88	5056.24	133.25	332.31	4462.04	406.48
306	2	11.21	26.00	8	7.61	-3795.28	-228.94	198.96	29.55	939.20	253.65
306	2	11.21	26.00	±	7.61	1279.75	3404.66	101.81	260.01	3491.35	312.30
306	2	11.21	26.00	9	7.61	-2761.49	960.40	22.93	114.22	-1706.51	-111.42
306	2	11.21	26.00	±	7.61	3337.49	7870.05	223.19	446.35	9044.68	729.98
306	2	11.21	26.00	10	7.61	-2886.45	816.63	44.20	103.98	-1386.70	-67.29
306	2	11.21	26.00	±	7.61	2426.38	5029.13	168.38	348.70	7076.78	555.62
306	2	11.21	26.00	11	7.61	-2761.49	960.40	22.93	114.22	-1706.51	-111.42
306	2	11.21	26.00	±	7.61	1758.15	3787.16	112.98	189.72	5094.89	385.68
306	2	11.21	26.00	12	7.61	-2886.45	816.63	44.20	103.98	-1386.70	-67.29
306	2	11.21	26.00	±	7.61	1321.25	2324.50	84.54	147.99	3986.29	291.96
306	2	11.21	26.00	13	7.61	-2761.49	960.40	22.93	114.22	-1706.51	-111.42
306	2	11.21	26.00	±	7.61	3396.58	8553.40	234.10	523.13	8703.91	741.18
306	2	11.21	26.00	14	7.61	-2886.45	816.63	44.20	103.98	-1386.70	-67.29
306	2	11.21	26.00	±	7.61	2404.04	5610.75	177.68	409.02	6810.27	566.57
306	2	11.21	26.00	15	7.61	-2761.49	960.40	22.93	114.22	-1706.51	-111.42
306	2	11.21	26.00	±	7.61	1867.88	5056.24	133.25	332.31	4462.04	406.48
306	2	11.21	26.00	16	7.61	-2886.45	816.63	44.20	103.98	-1386.70	-67.29
306	2	11.21	26.00	±	7.61	1279.75	3404.66	101.81	260.01	3491.35	312.30
306	2	11.21	26.00	17	7.61	-4777.39	515.16	169.88	96.11	-761.42	164.57
306	2	11.21	26.00	18	7.61	-4661.19	577.87	154.15	98.47	25.86	144.21
306	2	11.21	26.00	19	7.61	-4564.74	668.26	172.55	116.70	-382.02	190.51
306	2	11.21	26.00	20	7.61	-4873.83	424.77	151.48	77.89	-353.54	118.28
306	2	11.21	26.00	21	7.61	-3647.07	366.53	131.87	72.50	-670.30	125.47
306	2	11.21	26.00	22	7.61	-3530.87	429.23	116.13	74.87	116.97	105.11

Relazione di calcolo

306	2	11.21	26.00	23	7.61	-3434.42	519.63	134.53	93.09	-290.90	151.40
306	2	11.21	26.00	24	7.61	-3743.52	276.13	113.46	54.28	-262.43	79.17
306	2	11.21	26.00	25	7.61	-3452.59	291.77	130.26	67.09	-625.50	107.88
306	2	11.21	26.00	26	7.61	-3336.39	354.47	114.53	69.45	161.77	87.52
306	2	11.21	26.00	27	7.61	-3239.94	444.86	132.93	87.67	-246.10	133.81
306	2	11.21	26.00	28	7.61	-3549.04	201.37	111.86	48.86	-217.63	61.58
306	2	11.21	26.00	29	7.61	-3398.96	262.49	129.45	65.58	-617.39	103.36
306	2	11.21	26.00	30	7.61	-3282.77	325.20	113.71	67.95	169.88	83.00
306	2	11.21	26.00	31	7.61	-3186.32	415.59	132.12	86.17	-237.99	129.29
306	2	11.21	26.00	32	7.61	-3495.41	172.10	111.05	47.36	-209.51	57.06
306	2	11.21	26.00	1	7.96	-3920.24	-372.71	220.23	19.32	1259.01	297.77
306	2	11.21	26.00	±	7.96	3337.49	7870.05	223.19	446.35	9044.68	729.98
306	2	11.21	26.00	2	7.96	-3795.28	-228.94	198.96	29.55	939.20	253.65
306	2	11.21	26.00	±	7.96	2426.38	5029.13	168.38	348.70	7076.78	555.62
306	2	11.21	26.00	3	7.96	-3920.24	-372.71	220.23	19.32	1259.01	297.77
306	2	11.21	26.00	±	7.96	1758.15	3787.16	112.98	189.72	5094.89	385.68
306	2	11.21	26.00	4	7.96	-3795.28	-228.94	198.96	29.55	939.20	253.65
306	2	11.21	26.00	±	7.96	1321.25	2324.50	84.54	147.99	3986.29	291.96
306	2	11.21	26.00	5	7.96	-3920.24	-372.71	220.23	19.32	1259.01	297.77
306	2	11.21	26.00	±	7.96	3396.58	8553.40	234.10	523.13	8703.91	741.18
306	2	11.21	26.00	6	7.96	-3795.28	-228.94	198.96	29.55	939.20	253.65
306	2	11.21	26.00	±	7.96	2404.04	5610.75	177.68	409.02	6810.27	566.57
306	2	11.21	26.00	7	7.96	-3920.24	-372.71	220.23	19.32	1259.01	297.77
306	2	11.21	26.00	±	7.96	1867.88	5056.24	133.25	332.31	4462.04	406.48
306	2	11.21	26.00	8	7.96	-3795.28	-228.94	198.96	29.55	939.20	253.65
306	2	11.21	26.00	±	7.96	1279.75	3404.66	101.81	260.01	3491.35	312.30
306	2	11.21	26.00	9	7.96	-2761.49	960.40	22.93	114.22	-1706.51	-111.42
306	2	11.21	26.00	±	7.96	3337.49	7870.05	223.19	446.35	9044.68	729.98
306	2	11.21	26.00	10	7.96	-2886.45	816.63	44.20	103.98	-1386.70	-67.29
306	2	11.21	26.00	±	7.96	2426.38	5029.13	168.38	348.70	7076.78	555.62
306	2	11.21	26.00	11	7.96	-2761.49	960.40	22.93	114.22	-1706.51	-111.42
306	2	11.21	26.00	±	7.96	1758.15	3787.16	112.98	189.72	5094.89	385.68
306	2	11.21	26.00	12	7.96	-2886.45	816.63	44.20	103.98	-1386.70	-67.29
306	2	11.21	26.00	±	7.96	1321.25	2324.50	84.54	147.99	3986.29	291.96
306	2	11.21	26.00	13	7.96	-2761.49	960.40	22.93	114.22	-1706.51	-111.42
306	2	11.21	26.00	±	7.96	3396.58	8553.40	234.10	523.13	8703.91	741.18
306	2	11.21	26.00	14	7.96	-2886.45	816.63	44.20	103.98	-1386.70	-67.29
306	2	11.21	26.00	±	7.96	2404.04	5610.75	177.68	409.02	6810.27	566.57
306	2	11.21	26.00	15	7.96	-2761.49	960.40	22.93	114.22	-1706.51	-111.42
306	2	11.21	26.00	±	7.96	1867.88	5056.24	133.25	332.31	4462.04	406.48
306	2	11.21	26.00	16	7.96	-2886.45	816.63	44.20	103.98	-1386.70	-67.29
306	2	11.21	26.00	±	7.96	1279.75	3404.66	101.81	260.01	3491.35	312.30
306	2	11.21	26.00	17	7.96	-4777.39	515.16	169.88	96.11	-761.42	164.57
306	2	11.21	26.00	18	7.96	-4661.19	577.87	154.15	98.47	25.86	144.21
306	2	11.21	26.00	19	7.96	-4564.74	668.26	172.55	116.70	-382.02	190.51
306	2	11.21	26.00	20	7.96	-4873.83	424.77	151.48	77.89	-353.54	118.28
306	2	11.21	26.00	21	7.96	-3647.07	366.53	131.87	72.50	-670.30	125.47
306	2	11.21	26.00	22	7.96	-3530.87	429.23	116.13	74.87	116.97	105.11
306	2	11.21	26.00	23	7.96	-3434.42	519.63	134.53	93.09	-290.90	151.40
306	2	11.21	26.00	24	7.96	-3743.52	276.13	113.46	54.28	-262.43	79.17
306	2	11.21	26.00	25	7.96	-3452.59	291.77	130.26	67.09	-625.50	107.88
306	2	11.21	26.00	26	7.96	-3336.39	354.47	114.53	69.45	161.77	87.52
306	2	11.21	26.00	27	7.96	-3239.94	444.86	132.93	87.67	-246.10	133.81
306	2	11.21	26.00	28	7.96	-3549.04	201.37	111.86	48.86	-217.63	61.58
306	2	11.21	26.00	29	7.96	-3398.96	262.49	129.45	65.58	-617.39	103.36
306	2	11.21	26.00	30	7.96	-3282.77	325.20	113.71	67.95	169.88	83.00
306	2	11.21	26.00	31	7.96	-3186.32	415.59	132.12	86.17	-237.99	129.29
306	2	11.21	26.00	32	7.96	-3495.41	172.10	111.05	47.36	-209.51	57.06
306	3	11.21	26.00	1	7.96	-3275.22	-298.29	52.46	-49.50	1008.76	153.03
306	3	11.21	26.00	±	7.96	2963.36	7518.17	743.44	98.60	5688.04	1105.24
306	3	11.21	26.00	2	7.96	-3167.50	-169.50	48.75	-46.27	800.66	97.04
306	3	11.21	26.00	±	7.96	2256.07	4755.02	579.06	75.62	4450.31	859.23
306	3	11.21	26.00	3	7.96	-3275.22	-298.29	52.46	-49.50	1008.76	153.03
306	3	11.21	26.00	±	7.96	1403.67	3566.31	283.80	38.01	3050.34	592.77
306	3	11.21	26.00	4	7.96	-3167.50	-169.50	48.75	-46.27	800.66	97.04
306	3	11.21	26.00	±	7.96	1071.21	2153.04	221.51	29.04	2387.40	460.53
306	3	11.21	26.00	5	7.96	-3275.22	-298.29	52.46	-49.50	1008.76	153.03
306	3	11.21	26.00	±	7.96	3254.55	8249.10	920.15	121.48	5706.92	1108.82
306	3	11.21	26.00	6	7.96	-3167.50	-169.50	48.75	-46.27	800.66	97.04
306	3	11.21	26.00	±	7.96	2473.84	5372.85	716.00	93.33	4463.84	862.46
306	3	11.21	26.00	7	7.96	-3275.22	-298.29	52.46	-49.50	1008.76	153.03
306	3	11.21	26.00	±	7.96	1944.44	4923.75	611.98	80.50	3085.41	599.42
306	3	11.21	26.00	8	7.96	-3167.50	-169.50	48.75	-46.27	800.66	97.04
306	3	11.21	26.00	±	7.96	1475.66	3300.43	475.83	61.93	2412.53	466.53
306	3	11.21	26.00	9	7.96	-2276.28	895.93	18.13	-19.55	-920.95	-366.17
306	3	11.21	26.00	±	7.96	2963.36	7518.17	743.44	98.60	5688.04	1105.24
306	3	11.21	26.00	10	7.96	-2384.01	767.14	21.84	-22.78	-712.85	-310.18
306	3	11.21	26.00	±	7.96	2256.07	4755.02	579.06	75.62	4450.31	859.23
306	3	11.21	26.00	11	7.96	-2276.28	895.93	18.13	-19.55	-920.95	-366.17

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306	3	11.21	26.00	±	7.96	1403.67	3566.31	283.80	38.01	3050.34	592.77
306	3	11.21	26.00	12	7.96	-2384.01	767.14	21.84	-22.78	-712.85	-310.18
306	3	11.21	26.00	±	7.96	1071.21	2153.04	221.51	29.04	2387.40	460.53
306	3	11.21	26.00	13	7.96	-2276.28	895.93	18.13	-19.55	-920.95	-366.17
306	3	11.21	26.00	±	7.96	3254.55	8249.10	920.15	121.48	5706.92	1108.82
306	3	11.21	26.00	14	7.96	-2384.01	767.14	21.84	-22.78	-712.85	-310.18
306	3	11.21	26.00	±	7.96	2473.84	5372.85	716.00	93.33	4463.84	862.46
306	3	11.21	26.00	15	7.96	-2276.28	895.93	18.13	-19.55	-920.95	-366.17
306	3	11.21	26.00	±	7.96	1944.44	4923.75	611.98	80.50	3085.41	599.42
306	3	11.21	26.00	16	7.96	-2384.01	767.14	21.84	-22.78	-712.85	-310.18
306	3	11.21	26.00	±	7.96	1475.66	3300.43	475.83	61.93	2412.53	466.53
306	3	11.21	26.00	17	7.96	-3964.25	499.75	63.79	-55.62	-254.33	-150.16
306	3	11.21	26.00	18	7.96	-3929.38	620.04	43.50	-56.82	250.72	-156.60
306	3	11.21	26.00	19	7.96	-3774.70	684.78	89.89	-53.24	-76.66	-102.79
306	3	11.21	26.00	20	7.96	-4118.93	435.01	17.40	-59.20	73.06	-203.97
306	3	11.21	26.00	21	7.96	-3016.63	347.45	51.04	-41.43	-249.69	-112.88
306	3	11.21	26.00	22	7.96	-2981.77	467.73	30.75	-42.62	255.36	-119.33
306	3	11.21	26.00	23	7.96	-2827.08	532.48	77.14	-39.04	-72.03	-65.52
306	3	11.21	26.00	24	7.96	-3171.32	282.70	4.65	-45.01	77.70	-166.70
306	3	11.21	26.00	25	7.96	-2841.04	268.71	45.92	-35.51	-214.10	-105.79
306	3	11.21	26.00	26	7.96	-2806.17	388.99	25.63	-36.71	290.95	-112.23
306	3	11.21	26.00	27	7.96	-2651.49	453.74	72.02	-33.13	-36.44	-58.42
306	3	11.21	26.00	28	7.96	-2995.73	203.96	-0.47	-39.09	113.28	-159.60
306	3	11.21	26.00	29	7.96	-2793.19	238.68	45.44	-33.93	-208.62	-103.35
306	3	11.21	26.00	30	7.96	-2758.32	358.96	25.15	-35.12	296.43	-109.79
306	3	11.21	26.00	31	7.96	-2603.63	423.71	71.54	-31.54	-30.96	-55.98
306	3	11.21	26.00	32	7.96	-2947.87	173.93	-0.95	-37.51	118.77	-157.16
306	3	11.21	26.00	1	8.31	-3275.22	-298.29	52.46	-49.50	1008.76	153.03
306	3	11.21	26.00	±	8.31	2963.36	7518.17	743.44	98.60	5688.04	1105.24
306	3	11.21	26.00	2	8.31	-3167.50	-169.50	48.75	-46.27	800.66	97.04
306	3	11.21	26.00	±	8.31	2256.07	4755.02	579.06	75.62	4450.31	859.23
306	3	11.21	26.00	3	8.31	-3275.22	-298.29	52.46	-49.50	1008.76	153.03
306	3	11.21	26.00	±	8.31	1403.67	3566.31	283.80	38.01	3050.34	592.77
306	3	11.21	26.00	4	8.31	-3167.50	-169.50	48.75	-46.27	800.66	97.04
306	3	11.21	26.00	±	8.31	1071.21	2153.04	221.51	29.04	2387.40	460.53
306	3	11.21	26.00	5	8.31	-3275.22	-298.29	52.46	-49.50	1008.76	153.03
306	3	11.21	26.00	±	8.31	3254.55	8249.10	920.15	121.48	5706.92	1108.82
306	3	11.21	26.00	6	8.31	-3167.50	-169.50	48.75	-46.27	800.66	97.04
306	3	11.21	26.00	±	8.31	2473.84	5372.85	716.00	93.33	4463.84	862.46
306	3	11.21	26.00	7	8.31	-3275.22	-298.29	52.46	-49.50	1008.76	153.03
306	3	11.21	26.00	±	8.31	1944.44	4923.75	611.98	80.50	3085.41	599.42
306	3	11.21	26.00	8	8.31	-3167.50	-169.50	48.75	-46.27	800.66	97.04
306	3	11.21	26.00	±	8.31	1475.66	3300.43	475.83	61.93	2412.53	466.53
306	3	11.21	26.00	9	8.31	-2276.28	895.93	18.13	-19.55	-920.95	-366.17
306	3	11.21	26.00	±	8.31	2963.36	7518.17	743.44	98.60	5688.04	1105.24
306	3	11.21	26.00	10	8.31	-2384.01	767.14	21.84	-22.78	-712.85	-310.18
306	3	11.21	26.00	±	8.31	2256.07	4755.02	579.06	75.62	4450.31	859.23
306	3	11.21	26.00	11	8.31	-2276.28	895.93	18.13	-19.55	-920.95	-366.17
306	3	11.21	26.00	±	8.31	1403.67	3566.31	283.80	38.01	3050.34	592.77
306	3	11.21	26.00	12	8.31	-2384.01	767.14	21.84	-22.78	-712.85	-310.18
306	3	11.21	26.00	±	8.31	1071.21	2153.04	221.51	29.04	2387.40	460.53
306	3	11.21	26.00	13	8.31	-2276.28	895.93	18.13	-19.55	-920.95	-366.17
306	3	11.21	26.00	±	8.31	3254.55	8249.10	920.15	121.48	5706.92	1108.82
306	3	11.21	26.00	14	8.31	-2384.01	767.14	21.84	-22.78	-712.85	-310.18
306	3	11.21	26.00	±	8.31	2473.84	5372.85	716.00	93.33	4463.84	862.46
306	3	11.21	26.00	15	8.31	-2276.28	895.93	18.13	-19.55	-920.95	-366.17
306	3	11.21	26.00	±	8.31	1944.44	4923.75	611.98	80.50	3085.41	599.42
306	3	11.21	26.00	16	8.31	-2384.01	767.14	21.84	-22.78	-712.85	-310.18
306	3	11.21	26.00	±	8.31	1475.66	3300.43	475.83	61.93	2412.53	466.53
306	3	11.21	26.00	17	8.31	-3964.25	499.75	63.79	-55.62	-254.33	-150.16
306	3	11.21	26.00	18	8.31	-3929.38	620.04	43.50	-56.82	250.72	-156.60
306	3	11.21	26.00	19	8.31	-3774.70	684.78	89.89	-53.24	-76.66	-102.79
306	3	11.21	26.00	20	8.31	-4118.93	435.01	17.40	-59.20	73.06	-203.97
306	3	11.21	26.00	21	8.31	-3016.63	347.45	51.04	-41.43	-249.69	-112.88
306	3	11.21	26.00	22	8.31	-2981.77	467.73	30.75	-42.62	255.36	-119.33
306	3	11.21	26.00	23	8.31	-2827.08	532.48	77.14	-39.04	-72.03	-65.52
306	3	11.21	26.00	24	8.31	-3171.32	282.70	4.65	-45.01	77.70	-166.70
306	3	11.21	26.00	25	8.31	-2841.04	268.71	45.92	-35.51	-214.10	-105.79
306	3	11.21	26.00	26	8.31	-2806.17	388.99	25.63	-36.71	290.95	-112.23
306	3	11.21	26.00	27	8.31	-2651.49	453.74	72.02	-33.13	-36.44	-58.42
306	3	11.21	26.00	28	8.31	-2995.73	203.96	-0.47	-39.09	113.28	-159.60
306	3	11.21	26.00	29	8.31	-2793.19	238.68	45.44	-33.93	-208.62	-103.35
306	3	11.21	26.00	30	8.31	-2758.32	358.96	25.15	-35.12	296.43	-109.79
306	3	11.21	26.00	31	8.31	-2603.63	423.71	71.54	-31.54	-30.96	-55.98
306	3	11.21	26.00	32	8.31	-2947.87	173.93	-0.95	-37.51	118.77	-157.16
306	4	11.21	26.00	1	8.31	-2693.67	-1084.83	-379.42	-120.71	529.79	-373.16
306	4	11.21	26.00	±	8.31	2435.01	7128.35	3805.50	1241.49	2887.82	3234.27
306	4	11.21	26.00	2	8.31	-2606.40	-1007.01	-337.58	-104.93	440.66	-415.88
306	4	11.21	26.00	±	8.31	1896.17	4558.74	2974.56	971.05	2257.84	2534.75

Relazione di calcolo

306	4	11.21	26.00	3	8.31	-2693.67	-1084.83	-379.42	-120.71	529.79	-373.16
306	4	11.21	26.00	±	8.31	963.30	3289.22	1471.77	485.47	1277.68	1476.20
306	4	11.21	26.00	4	8.31	-2606.40	-1007.01	-337.58	-104.93	440.66	-415.88
306	4	11.21	26.00	±	8.31	745.18	2005.94	1151.84	380.08	1000.18	1156.69
306	4	11.21	26.00	5	8.31	-2693.67	-1084.83	-379.42	-120.71	529.79	-373.16
306	4	11.21	26.00	±	8.31	2962.60	7961.19	4681.13	1519.09	3308.39	3636.69
306	4	11.21	26.00	6	8.31	-2606.40	-1007.01	-337.58	-104.93	440.66	-415.88
306	4	11.21	26.00	±	8.31	2314.51	5239.37	3656.84	1187.62	2584.80	2850.48
306	4	11.21	26.00	7	8.31	-2693.67	-1084.83	-379.42	-120.71	529.79	-373.16
306	4	11.21	26.00	±	8.31	1943.11	4835.92	3097.95	1001.00	2058.74	2223.55
306	4	11.21	26.00	8	8.31	-2606.40	-1007.01	-337.58	-104.93	440.66	-415.88
306	4	11.21	26.00	±	8.31	1522.11	3269.96	2418.92	782.28	1607.39	1743.05
306	4	11.21	26.00	9	8.31	-1884.44	-363.19	8.55	25.62	-296.69	-769.29
306	4	11.21	26.00	±	8.31	2435.01	7128.35	3805.50	1241.49	2887.82	3234.27
306	4	11.21	26.00	10	8.31	-1971.71	-441.01	-33.29	9.84	-207.56	-726.57
306	4	11.21	26.00	±	8.31	1896.17	4558.74	2974.56	971.05	2257.84	2534.75
306	4	11.21	26.00	11	8.31	-1884.44	-363.19	8.55	25.62	-296.69	-769.29
306	4	11.21	26.00	±	8.31	963.30	3289.22	1471.77	485.47	1277.68	1476.20
306	4	11.21	26.00	12	8.31	-1971.71	-441.01	-33.29	9.84	-207.56	-726.57
306	4	11.21	26.00	±	8.31	745.18	2005.94	1151.84	380.08	1000.18	1156.69
306	4	11.21	26.00	13	8.31	-1884.44	-363.19	8.55	25.62	-296.69	-769.29
306	4	11.21	26.00	±	8.31	2962.60	7961.19	4681.13	1519.09	3308.39	3636.69
306	4	11.21	26.00	14	8.31	-1971.71	-441.01	-33.29	9.84	-207.56	-726.57
306	4	11.21	26.00	±	8.31	2314.51	5239.37	3656.84	1187.62	2584.80	2850.48
306	4	11.21	26.00	15	8.31	-1884.44	-363.19	8.55	25.62	-296.69	-769.29
306	4	11.21	26.00	±	8.31	1943.11	4835.92	3097.95	1001.00	2058.74	2223.55
306	4	11.21	26.00	16	8.31	-1971.71	-441.01	-33.29	9.84	-207.56	-726.57
306	4	11.21	26.00	±	8.31	1522.11	3269.96	2418.92	782.28	1607.39	1743.05
306	4	11.21	26.00	17	8.31	-3279.67	-1081.91	-199.09	-51.22	-21.67	-817.43
306	4	11.21	26.00	18	8.31	-3336.06	-822.62	-275.86	-71.99	191.13	-814.51
306	4	11.21	26.00	19	8.31	-3169.58	-790.50	-52.53	-0.85	-23.00	-655.93
306	4	11.21	26.00	20	8.31	-3446.15	-1114.03	-422.41	-122.36	192.46	-976.01
306	4	11.21	26.00	21	8.31	-2480.75	-866.14	-143.33	-36.56	-35.65	-620.23
306	4	11.21	26.00	22	8.31	-2537.14	-606.85	-220.10	-57.34	177.14	-617.30
306	4	11.21	26.00	23	8.31	-2370.66	-574.73	3.23	13.80	-36.99	-458.72
306	4	11.21	26.00	24	8.31	-2647.23	-898.26	-366.65	-107.70	178.47	-778.81
306	4	11.21	26.00	25	8.31	-2307.10	-848.48	-148.29	-37.73	2.92	-584.27
306	4	11.21	26.00	26	8.31	-2363.49	-589.19	-225.06	-58.50	215.71	-581.34
306	4	11.21	26.00	27	8.31	-2197.00	-557.07	-1.74	12.64	1.58	-422.76
306	4	11.21	26.00	28	8.31	-2473.58	-880.59	-371.62	-108.87	217.04	-742.85
306	4	11.21	26.00	29	8.31	-2260.86	-853.66	-147.05	-37.16	10.15	-572.69
306	4	11.21	26.00	30	8.31	-2317.25	-594.37	-223.82	-57.93	222.95	-569.76
306	4	11.21	26.00	31	8.31	-2150.77	-562.25	-0.49	13.21	8.82	-411.19
306	4	11.21	26.00	32	8.31	-2427.35	-885.77	-370.37	-108.30	224.28	-731.27
306	4	11.21	26.00	1	8.66	-2693.67	-1084.83	-379.42	-120.71	529.79	-373.16
306	4	11.21	26.00	±	8.66	2435.01	7128.35	3805.50	1241.49	2887.82	3234.27
306	4	11.21	26.00	2	8.66	-2606.40	-1007.01	-337.58	-104.93	440.66	-415.88
306	4	11.21	26.00	±	8.66	1896.17	4558.74	2974.56	971.05	2257.84	2534.75
306	4	11.21	26.00	3	8.66	-2693.67	-1084.83	-379.42	-120.71	529.79	-373.16
306	4	11.21	26.00	±	8.66	963.30	3289.22	1471.77	485.47	1277.68	1476.20
306	4	11.21	26.00	4	8.66	-2606.40	-1007.01	-337.58	-104.93	440.66	-415.88
306	4	11.21	26.00	±	8.66	745.18	2005.94	1151.84	380.08	1000.18	1156.69
306	4	11.21	26.00	5	8.66	-2693.67	-1084.83	-379.42	-120.71	529.79	-373.16
306	4	11.21	26.00	±	8.66	2962.60	7961.19	4681.13	1519.09	3308.39	3636.69
306	4	11.21	26.00	6	8.66	-2606.40	-1007.01	-337.58	-104.93	440.66	-415.88
306	4	11.21	26.00	±	8.66	2314.51	5239.37	3656.84	1187.62	2584.80	2850.48
306	4	11.21	26.00	7	8.66	-2693.67	-1084.83	-379.42	-120.71	529.79	-373.16
306	4	11.21	26.00	±	8.66	1943.11	4835.92	3097.95	1001.00	2058.74	2223.55
306	4	11.21	26.00	8	8.66	-2606.40	-1007.01	-337.58	-104.93	440.66	-415.88
306	4	11.21	26.00	±	8.66	1522.11	3269.96	2418.92	782.28	1607.39	1743.05
306	4	11.21	26.00	9	8.66	-1884.44	-363.19	8.55	25.62	-296.69	-769.29
306	4	11.21	26.00	±	8.66	2435.01	7128.35	3805.50	1241.49	2887.82	3234.27
306	4	11.21	26.00	10	8.66	-1971.71	-441.01	-33.29	9.84	-207.56	-726.57
306	4	11.21	26.00	±	8.66	1896.17	4558.74	2974.56	971.05	2257.84	2534.75
306	4	11.21	26.00	11	8.66	-1884.44	-363.19	8.55	25.62	-296.69	-769.29
306	4	11.21	26.00	±	8.66	963.30	3289.22	1471.77	485.47	1277.68	1476.20
306	4	11.21	26.00	12	8.66	-1971.71	-441.01	-33.29	9.84	-207.56	-726.57
306	4	11.21	26.00	±	8.66	745.18	2005.94	1151.84	380.08	1000.18	1156.69
306	4	11.21	26.00	13	8.66	-1884.44	-363.19	8.55	25.62	-296.69	-769.29
306	4	11.21	26.00	±	8.66	2962.60	7961.19	4681.13	1519.09	3308.39	3636.69
306	4	11.21	26.00	14	8.66	-1971.71	-441.01	-33.29	9.84	-207.56	-726.57
306	4	11.21	26.00	±	8.66	2314.51	5239.37	3656.84	1187.62	2584.80	2850.48
306	4	11.21	26.00	15	8.66	-1884.44	-363.19	8.55	25.62	-296.69	-769.29
306	4	11.21	26.00	±	8.66	1943.11	4835.92	3097.95	1001.00	2058.74	2223.55
306	4	11.21	26.00	16	8.66	-1971.71	-441.01	-33.29	9.84	-207.56	-726.57
306	4	11.21	26.00	±	8.66	1522.11	3269.96	2418.92	782.28	1607.39	1743.05
306	4	11.21	26.00	17	8.66	-3279.67	-1081.91	-199.09	-51.22	-21.67	-817.43
306	4	11.21	26.00	18	8.66	-3336.06	-822.62	-275.86	-71.99	191.13	-814.51
306	4	11.21	26.00	19	8.66	-3169.58	-790.50	-52.53	-0.85	-23.00	-655.93

Relazione di calcolo

306	4	11.21	26.00	20	8.66	-3446.15	-1114.03	-422.41	-122.36	192.46	-976.01
306	4	11.21	26.00	21	8.66	-2480.75	-866.14	-143.33	-36.56	-35.65	-620.23
306	4	11.21	26.00	22	8.66	-2537.14	-606.85	-220.10	-57.34	177.14	-617.30
306	4	11.21	26.00	23	8.66	-2370.66	-574.73	3.23	13.80	-36.99	-458.72
306	4	11.21	26.00	24	8.66	-2647.23	-898.26	-366.65	-107.70	178.47	-778.81
306	4	11.21	26.00	25	8.66	-2307.10	-848.48	-148.29	-37.73	2.92	-584.27
306	4	11.21	26.00	26	8.66	-2363.49	-589.19	-225.06	-58.50	215.71	-581.34
306	4	11.21	26.00	27	8.66	-2197.00	-557.07	-1.74	12.64	1.58	-422.76
306	4	11.21	26.00	28	8.66	-2473.58	-880.59	-371.62	-108.87	217.04	-742.85
306	4	11.21	26.00	29	8.66	-2260.86	-853.66	-147.05	-37.16	10.15	-572.69
306	4	11.21	26.00	30	8.66	-2317.25	-594.37	-223.82	-57.93	222.95	-569.76
306	4	11.21	26.00	31	8.66	-2150.77	-562.25	-0.49	13.21	8.82	-411.19
306	4	11.21	26.00	32	8.66	-2427.35	-885.77	-370.37	-108.30	224.28	-731.27

Criteri di progetto utilizzati

Pilastrini in c.a.

Generali		
Parametri di progetto		
Pilastrino prefabbricato		No
Progettazione dell'armatura con sollecitazioni più gravose		Si
Disaccoppia sovraresistenza		No
Limita fattore di sovraresistenza al massimo valore di struttura		No
Tipo verifica di stabilità		
-Per $N \cdot \Omega - M$ e per $N - c \cdot M$ (standard)		Si
-Per $N \cdot \Omega - c \cdot M$ (doppia)		No
-Per $N \cdot \Omega$ (sforzo normale e momento nullo)		No
-Per $c \cdot M$ (momento e sforzo normale nullo)		No
Max angolo di piegatura ferri <grad>		20.00
Progettazione armatura di ripresa		Si
Minimizzazione armatura di ripresa		No
Minimizzazione area di ferro totale nella sezione		Si
Non progettare riprese ma estendi solo i ferri		Si
Verifiche in relazione		Minimizzate
Ancoraggi		
Lunghezza ancoraggi		
-Lunghezza imposta come multiplo del diametro		60.00
Ancoraggi tutti uguali		Si
Piegatura ancoraggi per discontinuità		Si
Piegatura ancoraggi ferri di ripresa		Si
Armatura a taglio		
Staffatura a spirale pilastrini circolari		No
Cambiare le staffe nei nodi appartenenti all'impalcato 0 se sul nodo incidono elementi		Si
Zone critiche e relative limitazioni del D.M. 08		Interpretazione della normativa Italiana
Considera solo la zona critica alla base della pilastrata (strutture pendolari)		No
Interpretazione di Ast e bst della formula 7.4.28 del D.M. 08		Considera tutti i bracci della staffa esterna (bst= dimensione max della staffa)
Progetta a taglio con traliccio ad inclinazione variabile		Si
-Classe A		
-In zona critica limita ctg θ a		1.00
-In zona non critica limita ctg θ a		2.50
-Classe B		
-In zona critica limita ctg θ a		2.50
-In zona non critica limita ctg θ a		2.50
Verifiche a taglio per elementi esistenti come per elementi nuovi		No
Estendi nel nodo staffe sottostanti anche se non richiesto dalla normativa		No
Prefabbricati		
Parametri di disegno		
Scala disegno sezioni pilastrini		25.00
Scala disegno viste pilastrini		50.00
Creazione tabelle pilastrini		Si
-Tipo di tabella		Armature disposte dal basso verso l'alto
-Max lunghezza tavole <cm>		70.00
-Max altezza tavole <cm>		50.00
Creazione viste pilastrini		
-Disegno ferri dentro pilastrino in vista		Si
-Disegno staffe dentro pilastrino in vista		Si
-Modalità di individuazione ferri		
-Modalità di indicazione ferri		Mediante una tabella

Relazione di calcolo

-Minimizzazione riferimenti			Si
-Modalità di individuazione ferri			Per posizione
-Modalità di indicazione ferri			Mediante una tabella
-Minimizzazione riferimenti			Si

Specifici	1	2	3
Materiali			
-Considera come elemento esistente	No	No	No
-Calcestruzzo			
-Livello di conoscenza	LC2	LC2	LC2
-Fattore di confidenza	1.20	1.20	1.20
-Tipo di calcestruzzo	C28/35	C28/35	C28/35
-Rck calcestruzzo	350.00	350.00	350.00
-Modulo elastico <daN/cmq>	325881.00	325881.00	325881.00
-Resistenza caratteristica cilindrica (Fck)	290.50	290.50	290.50
-Resistenza caratteristica a trazione (Fctk)	19.84	19.84	19.84
-Resistenza media (Fcm) <daN/cmq>	370.50	370.50	370.50
-Resistenza media a trazione (Fctm) <daN/cmq>	28.35	28.35	28.35
-σ amm. calcestruzzo <daN/cmq>	110.00	110.00	110.00
-τc0 <daN/cmq>	6.70	6.70	6.70
-τc1 <daN/cmq>	19.70	19.70	19.70
-Riduci Fcd per tutte le verifiche secondo il D.M. 08	Si	Si	Si
-γc per stati limite ultimi			
-Automatico	x	x	x
-Pari a			
-Acciaio			
-Livello di conoscenza	LC2	LC2	LC2
-Fattore di confidenza	1.20	1.20	1.20
-Tipo di acciaio	B450C	B450C	B450C
-Modulo elastico <daN/cmq>	2060000.00	2060000.00	2060000.00
-Tensione caratteristica di snervamento (Fyk) <daN/cmq>	4500.00	4500.00	4500.00
-Tensione media di snervamento (Fym) <daN/cmq>	4300.00	4300.00	4300.00
-Sigma amm. acciaio <daN/cmq>	2600.00	2600.00	2600.00
-Sigma amm. reti e tralicci <daN/cmq>	2600.00	2600.00	2600.00
-Allungamento per verifiche di duttilità (Agt) <%>	4.00	4.00	4.00
-γs per stati limite ultimi			
-Automatico	x	x	x
-Pari a			
-Coeff. di omogeneizzazione	15.00	15.00	15.00
Parametri per analisi pushover			
Numero fibre	200.00	200.00	200.00
Fattore di confinamento nucleo interno	1.00	1.00	1.00
Fattore di incrudimento acciaio <%>	0.10	0.10	0.10
Parametri per verifiche di duttilità			
Considera formulazione per pareti	No	No	No
Considera rotazione massima di esercizio per determinare SLO e SLD	No	No	No
Modalità di calcolo luce di taglio Lv			
-Lv=L/2	x	x	x
-Lv=M/V			
-Lv=Punto di nullo del momento flettente			
Capacità di rotazione alla corda al collasso			
-Formula C8A.6.1 con fattore di riduzione pari a			
-Formula C8A.6.5	x	x	x
Sforzo normale di verifica per analisi pushover			
-Gravitazionale			
-Dal calcolo	x	x	x
Parametri di calcolo			
Strategia di progetto	RETTANG	RETTANG	CERCHIO
Copriferro reale al bordo staffa <cm>	3.00	5.00	3.00
Diametro staffa teorica <mm>	9.00	9.00	9.00
Continuità dei ferri nei nodi appartenenti all'impalcato 0	Si	Si	Si
Coeff. β in direzione Z locale	1.00	1.00	1.00
Coeff. β in direzione Y locale	1.00	1.00	1.00
Armatura secondo Circ. 65 del 10/04/97	No	No	No
-Raffittimento staffe in testa e al piede del pilastro	Si	Si	No
-Passo <cm>	10.00	10.00	
Parametri di progetto secondo il D.M. 08			
Non progettare in gerarchia delle resistenze	No	No	No
Non effettuare verifiche per CC sismiche (elemento secondario)	No	No	No
Rispetta i disposti del punto 7.4.4.2.2.1 solo per stati limite sismici	No	No	No
Incremento percentuale per piano debole	No	No	No
Non effettuare verifiche dei nodi fra trave e pilastro	No	No	Si
Verifiche a pressoflessione deviata	Si	Si	Si

Relazione di calcolo

Per calcoli secondo il D.M. 08 usa espressione 4.1.10 con esponente	No	No	No
Verifiche a taglio			
Verifiche a taglio per sezioni circolari			
-Usa formulazione sezioni generiche			
-Considera rettangolo inscritto con B/H pari a	1.00	1.00	1.00
Verifiche a taglio per sezioni generiche			
-Considera Vrdu minimo			
-Considera Vrdu calcolato in corrispondenza di bw minimo			
-Considera Vrdu in corrispondenza di bw medio	x	x	x
-Considera Vrdu in corrispondenza di bw massimo			
-Considera sempre Af Staffe non proiettata in direzione del taglio	Si	Si	Si
Armatura a pressoflessione			
Elenco diametri ferri longitudinali 1 <mm>	18	18	18
Elenco diametri ferri longitudinali 2 <mm>			
Elenco diametri ferri longitudinali 3 <mm>			
Elenco diametri ferri longitudinali 4 <mm>			
Elenco diametri ferri longitudinali 5 <mm>			
Elenco diametri ferri longitudinali 6 <mm>			
Elenco diametri ferri longitudinali 7 <mm>			
Max distanza fra i ferri su un lato <cm>	25.00	25.00	25.00
Min. interfero ammissibile <cm>	7.00	7.00	7.00
Distanza fra i ferri di spigolo <cm>	3.00	3.00	3.00
Min. numero ferri per pilastri circolari	8.00	8.00	6.00
Reggistaffe aggiuntivi sezioni non rettangolari	Si	Si	Si
Fattore di riduzione τc_0 per ancoraggio ferri	1.00	1.00	1.00
Armatura a taglio			
Elenco diametri staffe 1 <mm>	8	8	8
Elenco diametri staffe 2 <mm>			
Elenco diametri staffe 3 <mm>			
Elenco diametri staffe 4 <mm>			
Elenco diametri staffe 5 <mm>			
Elenco diametri staffe 6 <mm>			
Elenco diametri staffe 7 <mm>			
Mantieni diametro costante nell'interpiano			
Passi staffe	4.00	4.00	4.00
-Minimo <cm>	Si	Si	Si
-Massimo <cm>	30.00	30.00	30.00
-Incremento <cm>	2.00	2.00	2.00
Tipo di minimizzazione staffatura			
-Minimizza il numero delle staffe			
-Minimizza il peso delle staffe	x	x	x
Max distanza fra ferri non collegati <cm>	20.00	20.00	20.00
Max numero ferri non collegati	1.00	1.00	1.00
Collegamento ferri con staffe anziché con spilli	Si	Si	Si
Ferri orizzontali pareti realizzati con staffe	No	No	No
Quote di alleggerimento armature pilastri prefabbricati			
Quota di alleggerimento n. 1 <m>	0.00	0.00	0.00
Quota di alleggerimento n. 2 <m>	0.00	0.00	0.00
Quota di alleggerimento n. 3 <m>	0.00	0.00	0.00
Quota di alleggerimento n. 4 <m>	0.00	0.00	0.00
Quota di alleggerimento n. 5 <m>	0.00	0.00	0.00
Quota di alleggerimento n. 6 <m>	0.00	0.00	0.00
Quota di alleggerimento n. 7 <m>	0.00	0.00	0.00
Dati per progettazione interattiva sezioni			
Distanza fra ferri su più strati <cm>	1.00	1.00	1.00
Integrare lo scorrimento lungo il tratto	Si	Si	Si
-Lunghezza del tratto <m>	1.00	1.00	1.00
Dati per progettazione agli stati limite			
Gruppo di esigenza			
-Ambiente poco aggressivo	x	x	x
-Ambiente moderatamente aggressivo			
-Ambiente molto aggressivo			
Usa dominio N-M per flessioni rette	No	No	No
-Ricerca della sicurezza con sforzo normale costante			
-Ricerca della sicurezza con eccentricità costante			
Controllo rapporto X/D	No	No	No
Barre da considerare tese per verifiche a taglio			
-Solo le barre con deformazione percentuale rispetto alla barra più tesa non inferiore al <%>	30.00	30.00	30.00
-Tutte le barre in trazione			
Dati per verifiche di resistenza al fuoco			
-Tempo di verifica (REI) <minuti>	120.00	120.00	120.00

Relazione di calcolo

Dimensione MESH <cm>	2.00	2.00	2.00
-Passo di calcolo <secondi>	10.00	10.00	10.00
-Temperatura ambiente <C°>	20.00	20.00	20.00
-Coeff. di convezione a temperatura ambiente <W/mq K>	9.00	9.00	9.00
Calcestruzzo			
-Tipo di aggregati	SILICEI	SILICEI	SILICEI
Massa volumica a secco <daN/mc>	2300.00	2300.00	2300.00
-Umidità iniziale <%>	3.00	3.00	3.00
-Fattore di interpolazione conducibilità	0.50	0.50	0.50
Dati per verifiche FRP			
Rinforzo longitudinale			
Tipo di fibra/resina			
-Vetro/Epossidica			
-Arammidica/Epossidica			
-Carbonio/Epossidica	x	x	x
Resistenza caratteristica (f_{fk}) <daN/cm ² >	49000.00	49000.00	49000.00
Modulo elastico (E_c) <daN/cm ² >	2500000.00	2500000.00	2500000.00
Deformazione caratteristica a rottura per trazione (ϵ_{fk}) <%>	2.00	2.00	2.00
Spessore equivalente (t_f) <mm>	0.17	0.17	0.17
Sistemi di rinforzo			
-Preformati			
-Impregnati in situ	x	x	x
Rinforzo trasversale			
Tipo di fibra/resina			
-Vetro/Epossidica			
-Arammidica/Epossidica			
-Carbonio/Epossidica	x	x	x
Resistenza caratteristica (f_{fk}) <daN/cm ² >	49000.00	49000.00	49000.00
Modulo elastico (E_c) <daN/cm ² >	2500000.00	2500000.00	2500000.00
Deformazione caratteristica a rottura per trazione (ϵ_{fk}) <%>	2.00	2.00	2.00
Spessore equivalente (t_f) <mm>	0.17	0.17	0.17
Sistemi di rinforzo			
-Preformati			
-Impregnati in situ	x	x	x
Trascura resistenza a taglio dei rinforzi	No	No	No
Modalità di carico			
-Lungo termine	x	x	x
-Ciclico			
Coeff. parziale di sicurezza per SLU di distacco (γ_{fd})	1.50	1.50	1.50
Fattore di conversione ambientale (η_a)	0.95	0.95	0.95
Raggio di arrotondamento spigoli (r_c) <cm>	2.00	2.00	2.00
Coeff. condizione di carico (K_d)	1.25	1.25	1.25
Dati per verifiche incamicature in acciaio non CAM			
Resistenza di progetto strisce di collegamento (F_{yd}) <daN/cm ² >	2350.00	2350.00	2350.00

Travi in c.a.

Generali	
Parametri di progetto	
Passo di progettazione <m>	0.30
Tipo di sollecitazioni zone rigide	Costanti
Min. angolo per spinte a vuoto <grad>	10.00
Invertire i ferri anche in presenza di pilastro sottostante	Si
Max differenza larghezza travi continue <cm>	5.00
Progetta a taglio con traliccio ad inclinazione variabile	Si
-Classe A	
-In zona critica limita ctg θ a	1.00
-In zona non critica limita ctg θ a	2.50
-Classe B	
-In zona critica limita ctg θ a	2.50
-In zona non critica limita ctg θ a	2.50
Verifiche a taglio per elementi esistenti come per elementi nuovi	No
Lunghezze e arrotondamenti	
Max lunghezza barre <m>	6.00
Arrotondamento lunghezza ferri <cm>	50.00
Lunghezza ferri nei muri d'estremità <m>	1.20
Min. interfero ammissibile <cm>	2.00
Elenco diametri minimizzazione interferri <mm>	10 12 14 16
Riduzione ancoraggi	
-Nella zona compressa per flessione	No
-Nei punti inferiori della travata	Si
Considerare nel calcolo degli ancoraggi i risvolti specificati nei criteri generali di disegno	No

Relazione di calcolo

Considera indicazione formula 4.1.22 come aggiuntive all'ancoraggio	No
Reggistaffe	
Interruzione reggistaffe in campata	No
Modalità di sovrapposizione reggistaffe	Per garantire la copertura del momento negativo
Modalità di unificazione reggistaffe	Solo se la geometria della travata e la lunghezza totale delle barre lo consentono
Minimi di regolamento	
Min. percentuale di regolamento	
-Per le travi di fondazione	Si
-Per le travi di elevazione	Si
Per le travi di fondazione ai sensi del D.M. 08 considerare 0.2% anzichè 1.4/fyk	Si
Min. di armatura a taglio	
-Per le travi di fondazione	Si
-Per le travi di elevazione	Si
Tipo di armatura per taglio (T.A.)	Mista
Controllo passo e l2Fi	Si
Min. di regolamento a torsione nell'ala	No
Min. di regolamento nell'ala	No
Stampe	
Verifiche a flessione in relazione	Minimizzate
Verifiche a taglio in relazione	Max scorrimento per taglio e torsione
Parametri di disegno	
Scala disegno travi	50.00
Scala disegno sezioni	25.00
Campitura sezioni	Fitta
Disegno sezione travi in falso	Si
Disegna sezioni	Si
Campitura travi in falso	Fitta
Campitura muri	Rada
Tipo di quotatura luci nette trave	Con riferimento ai pilastri superiori
Lunghezza monconi di pilastro	Minimizzata
Linee di riferimento quote	Si
Quotatura zone di staffatura	No
Quotatura zone di staffatura	No
Indicazione numero bracci staffe	Solo se il numero è maggiore di due
Disegno ferri longitudinali	
Disegno ferri dentro la trave	Si
Disegno esploso ferri di parete	No
Distanza fra ferri esplosi <cm>	0.10
Disegno reggistaffe aggiuntivi per travi a T e L	Reggistaffe aggiuntivi tipo 3
Disegno staffe	
Posizione staffe esterne	In automatico
Disegno staffe dentro la sezione	Si

Specifici	1	2
Materiali		
-Considera come elemento esistente	No	No
-Calcestruzzo		
-Livello di conoscenza	LC2	LC2
-Fattore di confidenza	1.20	1.20
-Tipo di calcestruzzo	C28/35	C28/35
-Rck calcestruzzo	350.00	350.00
-Modulo elastico <daN/cmq>	325881.00	325881.00
-Resistenza caratteristica cilindrica (Fck)	290.50	290.50
-Resistenza caratteristica a trazione (Fctk)	19.84	19.84
-Resistenza media (Fcm) <daN/cmq>	370.50	370.50
-Resistenza media a trazione (Fctm) <daN/cmq>	28.35	28.35
-σ amm. calcestruzzo <daN/cmq>	110.00	110.00
-tc0 <daN/cmq>	6.70	6.70
-tc1 <daN/cmq>	19.70	19.70
-Riduci Fcd per tutte le verifiche secondo il D.M. 08	Si	Si
-γc per stati limite ultimi		
-Automatico	x	x
-Pari a		
-Acciaio		
-Livello di conoscenza	LC2	LC2
-Fattore di confidenza	1.20	1.20
-Tipo di acciaio	B450C	B450C
-Modulo elastico <daN/cmq>	2060000.00	2060000.00

Relazione di calcolo

-Tensione caratteristica di snervamento (Fyk) <daN/cm ² >	4500.00	4500.00
-Tensione media di snervamento (Fym) <daN/cm ² >	4300.00	4300.00
-Sigma amm. acciaio <daN/cm ² >	2600.00	2600.00
-Sigma amm. reti e tralicci <daN/cm ² >	2600.00	2600.00
-Allungamento per verifiche di duttilità (Agt) <%>	4.00	4.00
-γ _s per stati limite ultimi		
-Automatico	x	x
-Pari a		
-Coeff. di omogeneizzazione	15.00	15.00
Parametri per analisi pushover		
Numero fibre	200.00	200.00
Fattore di confinamento nucleo interno	1.00	1.00
Fattore di incrudimento acciaio <%>	0.10	0.10
Parametri per verifiche di duttilità		
Considera rotazione massima di esercizio per determinare SLO e SLD	No	No
Modalità di calcolo luce di taglio Lv		
-Lv=L/2	x	x
-Lv=M/V		
-Lv=Punto di nullo del momento flettente		
Capacità di rotazione alla corda al collasso		
-Formula C8A.6.1 con fattore di riduzione pari a		
-Formula C8A.6.5	x	x
Sforzo normale di verifica per analisi pushover		
-Gravitazionale		
-Dal calcolo	x	x
Parametri di calcolo		
Progetto a pressoflessione	Si	Si
-Per tutte le travi		
-Solo per travi inclinate	x	x
-Min. angolo per pressoflessione <grad>	10.00	10.00
-Compressione massima senza progetto a pressoflessione <%>	10.00	10.00
Progetto a torsione	No	No
-Trazione senza progetto a torsione<%>		
Armatura secondo Circ. 65 del 10/04/97	No	No
Non progettare in gerarchia delle resistenze	No	No
Non effettuare verifiche per CC sismiche (elemento secondario)	No	No
Escludi dal calcolo sovrarresistenza per pilastri incidenti	No	No
Rispetta limitazioni geometriche e d'armatura per zone sismiche	Si	Si
Sollecitazioni complanari ad eventuali elementi bidimensionali	No	No
Copriferro teorico superiore <cm>	3.00	3.00
Copriferro teorico inferiore <cm>	3.00	3.00
Min. momento fittizio agli appoggi	No	No
-Denominatore		
Min. momento fittizio in campata	No	No
-Denominatore		
Incremento percentuale momento in campata <%>	10.00	10.00
Usa taglio max per traslazione momento (S.L.)	Si	Si
Limitare momento traslato al valore max di appoggio (S.L.)	No	No
Limitare momento traslato al valore max di campata (S.L.)	No	No
Taglio da momento resistente in fondazione (S.L.)	No	No
Tipo di progetto in doppia armatura (T.A.)		
-Tensioni pari ai valori amm.		
-Tensioni pari ai valori amm. con AfComp/AfTesa minore o pari a	1.00	1.00
-Con AfComp/AfTesa pari a		
Parametri di progettazione armatura		
Max differenza fra diametri per unificazioni	2.00	2.00
Max distanza fra barre per unificazioni <m>	1.00	1.00
Denominatore per individuazione zona di campata	32.00	32.00
Fattore di copertura appoggi (0+1)	0.00	0.00
Fattore di riduzione per ancoraggio ferri	1.00	1.00
Minimizzazione momenti resistenti di appoggio (stati limite D.M. 08)	Si	Si
-Arretramento reggistaffe dall'appoggio <m>	2.00	2.00
-Tolleranza di copertura da sovrapposizione <%>	10.00	10.00
Tipo di distribuzione armatura eccedente in fase di verifica		
-Ripartita proporzionalmente per flessione, torsione e taglio	x	x
-Tutta agente per flessione		
-Tutta agente per taglio		
Armatura a flessione		
Elenco diametri ferri longitudinali 1 <mm>	14	14
Elenco diametri ferri longitudinali 2 <mm>	18	18
Elenco diametri ferri longitudinali 3 <mm>		
Elenco diametri ferri longitudinali 4 <mm>		
Elenco diametri ferri longitudinali 5 <mm>		
Elenco diametri ferri longitudinali 6 <mm>		

Relazione di calcolo

Elenco diametri ferri longitudinali 7 <mm>		
Max differenza fra diametri nella trave	8.00	8.00
Max differenza fra diametri ferri accoppiati	4.00	4.00
Reggistaffe superiori		
-Numero		
-Pari a		
-Max mutua distanza <cm>	25.00	25.00
-Diametro		
-Automatico	x	x
-Pari a <mm>		
-Minimo <mm>		
Reggistaffe inferiori		
-Numero		
-Pari a		
-Max mutua distanza <cm>	25.00	25.00
-Diametro		
-Automatico	x	x
-Pari a <mm>		
-Minimo <mm>		
Armatura a taglio		
Scorrimento (T.A.)		
-Percentuale assorbita dalle staffe <%>	100.00	100.00
-Percentuale assorbita dai ferri piegati <%>	0.00	0.00
-Percentuale assorbita dai ferri di parete <%>	0	0
-Considerare il valore relativo alle staffe come minimo percentuale da adottare	No	No
Variabilità staffe		
-Staffe uguali a passo costante		
-Staffe diverse in tre parti della trave in funzione delle zone critiche	x	x
-Staffe diverse in tre parti della trave in funzione di un multiplo dell'altezza pari a		
Variabilità staffe ala		
-Passi uguali a passi anima	x	x
-Passi multipli di passi anima		
-Passi indipendenti da passi anima		
Min. lunghezza tratto centrale come multiplo dell'altezza della trave	1.10	1.10
Elenco diametri staffe 1 <mm>	8	10
Elenco diametri staffe 2 <mm>		
Elenco diametri staffe 3 <mm>		
Elenco diametri staffe 4 <mm>		
Elenco diametri staffe 5 <mm>		
Elenco diametri staffe 6 <mm>		
Elenco diametri staffe 7 <mm>		
Elenco numero bracci staffe 1	2	2
Elenco numero bracci staffe 2		
Elenco numero bracci staffe 3		
Elenco numero bracci staffe 4		
Elenco numero bracci staffe 5		
Passi staffe		
-Minimo <cm>	4.00	4.00
-Massimo <cm>	32.00	32.00
-Incremento <cm>	4.00	4.00
Elementi costanti		
-Diametro	Si	Si
-Passo	No	No
-Bracci	Si	Si
Tipo di minimizzazione staffatura		
-Minimizza il numero delle staffe	x	x
-Minimizza il peso delle staffe		
Raffittimento staffe all'estremità della trave	No	No
-Passo non superiore a		
Lunghezza max del tratto di calcolo scorrimento		
-Pari al tratto in cui $\tau > \tau_{c0}$	x	x
-Pari a <cm>		
-Come multiplo dell'altezza pari a		
Armatura a taglio e torsione		
Elenco diametri ferri piegati 1 <mm>	14	14
Elenco diametri ferri piegati 2 <mm>	18	18
Elenco diametri ferri piegati 3 <mm>		
Elenco diametri ferri piegati 4 <mm>		
Elenco diametri ferri piegati 5 <mm>		
Elenco diametri ferri piegati 6 <mm>		
Elenco diametri ferri piegati 7 <mm>		
Angolo di piegatura <grad>	45.00	45.00
Posizione primo punto di piegatura		
-Pari al multiplo dell'altezza		
-Distanza <cm>	5.00	5.00
Interasse punti di piegatura		

Relazione di calcolo

-Pari al multiplo dell'altezza		
-Distanza <cm>	25.00	25.00
Tipo di ferri piegati		
-Solo sagomati		
-Solo cavallotti		
-Sia sagomati che cavallotti	x	x
Ferri di parete	Si	Si
-Max distanza fra le barre <cm>	30.00	30.00
Elenco diametri ferri di parete 1 <mm>	10	10
Elenco diametri ferri di parete 2 <mm>		
Elenco diametri ferri di parete 3 <mm>		
Elenco diametri ferri di parete 4 <mm>		
Elenco diametri ferri di parete 5 <mm>		
Elenco diametri ferri di parete 6 <mm>		
Elenco diametri ferri di parete 7 <mm>		
Elenco diametri staffe orizzontali 1 <mm>	8	10
Elenco diametri staffe orizzontali 2 <mm>		
Elenco diametri staffe orizzontali 3 <mm>		
Elenco diametri staffe orizzontali 4 <mm>		
Elenco diametri staffe orizzontali 5 <mm>		
Elenco diametri staffe orizzontali 6 <mm>		
Elenco diametri staffe orizzontali 7 <mm>		
Parametri di disegno		
Risolto ferri superiori	Si	Si
-Pari a <cm>	25.00	25.00
-Pari all'altezza della trave		
Risolto ferri inferiori	Si	Si
-Pari a <cm>	25.00	25.00
-Pari all'altezza della trave		
Risolto ferri laterali	Si	Si
-Pari a <cm>	25.00	25.00
-Pari alla larghezza della trave		
Magrone	Si	Si
-Allargamento laterale <cm>	0.00	0.00
-Altezza <cm>	10.00	10.00
Dati per progettazione interattiva sezioni		
Copriferro reale al bordo staffa <cm>	3.00	3.00
Diametro staffa teorica <mm>	8.00	8.00
Distanza fra ferri su più strati <cm>	1.00	1.00
Integrare lo scorrimento lungo il tratto	Si	Si
-Lunghezza del tratto <m>	1.00	1.00
Dati per progettazione agli stati limite		
Gruppo di esigenza		
-Ambiente poco aggressivo	x	x
-Ambiente moderatamente aggressivo		
-Ambiente molto aggressivo		
Usa dominio N-M per flessioni rette	Si	Si
-Ricerca della sicurezza con sforzo normale costante		
-Ricerca della sicurezza con eccentricità costante	x	x
Controllo rapporto X/D	Si	Si
Barre da considerare tese per verifiche a taglio		
-Solo le barre con deformazione percentuale rispetto alla barra più tesa non inferiore al <%>	30.00	30.00
-Tutte le barre in trazione		
Dati per verifiche di resistenza al fuoco		
-Tempo di verifica (REI) <minuti>	120.00	120.00
Dimensione MESH <cm>	2.00	2.00
-Passo di calcolo <secondi>	10.00	10.00
-Temperatura ambiente <C°>	20.00	20.00
-Coeff. di convezione a temperatura ambiente <W/mq K>	9.00	9.00
Calcestruzzo		
-Tipo di aggregati	SILICEI	SILICEI
Massa volumica a secco <daN/mc>	2300.00	2300.00
-Umidità iniziale <%>	3.00	3.00
-Fattore di interpolazione conducibilità	0.50	0.50
Dati per verifiche FRP		
Rinforzo longitudinale		
Tipo di fibra/resina		
-Vetro/Epossidica		
-Arammidica/Epossidica		
-Carbonio/Epossidica	x	x
Resistenza caratteristica (f_{fk}) <daN/cm ² >	49000.00	49000.00
Modulo elastico (E_c) <daN/cm ² >	2500000.00	2500000.00
Deformazione caratteristica a rottura per trazione (ϵ_{fk}) <%>	2.00	2.00

Relazione di calcolo

Spessore equivalente (t_f) <mm>	0.17	0.17
Sistemi di rinforzo		
-Preformati		
-Impregnati in situ	x	x
Rinforzo trasversale		
Tipo di fibra/resina		
-Vetro/Epossidica		
-Arammidica/Epossidica		
-Carbonio/Epossidica	x	x
Resistenza caratteristica (f_{fk}) <daN/cm ² >	49000.00	49000.00
Modulo elastico (E_c) <daN/cm ² >	2500000.00	2500000.00
Deformazione caratteristica a rottura per trazione (ϵ_{fk}) <%>	2.00	2.00
Spessore equivalente (t_f) <mm>	0.17	0.17
Sistemi di rinforzo		
-Preformati		
-Impregnati in situ	x	x
Modalità di carico		
-Lungo termine	x	x
-Ciclico		
Coeff. parziale SLU di distacco (γ_{fd})	1.50	1.50
Fattore di conversione ambientale (η_a)	0.95	0.95
Raggio di arrotondamento spigoli (r_c) <cm>	2.00	2.00
Coeff. condizione di carico (K_q)	1.25	1.25

Pareti

Generali	
Verifiche a taglio per elementi esistenti come per elementi nuovi	Si
Parametri di disegno	
Scala disegno pareti	50.00
Campitura disegno parete	Rada
Disegno armatura diffusa	No
Disegno prospetto e pianta	Sempre
Stampe	
Tipo di relazione	Sintetica

Specifici	1
Materiali	
-Considera come elemento esistente	No
-Calcestruzzo	
-Livello di conoscenza	LC2
-Fattore di confidenza	1.20
-Tipo di calcestruzzo	C28/35
-Rck calcestruzzo	350.00
-Modulo elastico <daN/cm ² >	325881.00
-Resistenza caratteristica cilindrica (F_{ck})	290.50
-Resistenza caratteristica a trazione (F_{ctk})	19.84
-Resistenza media (F_{cm}) <daN/cm ² >	370.50
-Resistenza media a trazione (F_{ctm}) <daN/cm ² >	28.35
- σ amm. calcestruzzo <daN/cm ² >	110.00
- r_{c0} <daN/cm ² >	6.70
- r_{c1} <daN/cm ² >	19.70
-Riduci F_{cd} per tutte le verifiche secondo il D.M. 08	Si
- γ_c per stati limite ultimi	
-Automatico	x
-Pari a	
-Acciaio	
-Livello di conoscenza	LC2
-Fattore di confidenza	1.20
-Tipo di acciaio	B450C
-Modulo elastico <daN/cm ² >	2060000.00
-Tensione caratteristica di snervamento (F_{yk}) <daN/cm ² >	4500.00
-Tensione media di snervamento (F_{ym}) <daN/cm ² >	4500.00
-Sigma amm. acciaio <daN/cm ² >	2600.00
-Sigma amm. reti e tralicci <daN/cm ² >	2600.00
-Allungamento per verifiche di duttilità (A_{gt}) <%>	4.00
- γ_s per stati limite ultimi	
-Automatico	x
-Pari a	
-Coeff. di omogeneizzazione	15.00
Parametri di calcolo	
Copriferro <cm>	3.00

Relazione di calcolo

Fattore moltiplicativo per calcolo τ_l	1.00
Fattore moltiplicativo per calcolo τ_t	1.00
Fattore di riduzione per ancoraggio ferri	1.00
Lunghezza ancoraggi armature	
-Calcolata in funzione della σ_f	
-Imposta come multiplo del diametro	20.00
Lunghezza minima pari a <m>	0.50
-Inserire solo armatura al centro della parete	No
Modalità di progettazione e verifica armatura verticale	
-In funzione delle zone di incidenza elementi	
-In funzione delle sollecitazioni globali	x
-Inserisci armatura di rinforzo nelle zone di incidenza elementi	Si
-Dimensione minima zone di incidenza elementi	Si
-Pari a multiplo dello spessore	1.00
-Passo di verifica	1.50
-Trascura zone con pilastro inglobato	Si
-Effettuare verifiche nel piano della parete	No
-Elimina armatura diffusa nelle zone di rinforzo	Si
Elimina armatura diffusa nell'architrave	Si
-Effettuare verifiche su sezioni verticali	No
-Passo di verifica	1.00
Controllare resistenza a taglio trasversale come sezione priva di armatura a taglio	Si
Min. Af armatura diffusa <cmq/m>	3.00
Considera come parete debolmente armata ai sensi D.M. 08	No
-Modalità di valutazione parametri nel caso di sisma diverso per X e Y	
-Usa valore massimo	x
-Componi in direzione parete	
-Incremento del 50% delle forze assiali	
Sempre	x
-Solo per analisi sismiche statiche	
-Mai	
Coeff. β per controllo snellezza <m>	1.00
Rispetta i disposti del punto 7.4.4.5.2.1 solo per stati limite sismici	Si
Armatura diffusa	
Considera armatura con rete elettrosaldata	No
Armatura verticale o rete	
Elenco diametri utilizzabili 1 <mm>	12
Elenco diametri utilizzabili 2 <mm>	16
Elenco diametri utilizzabili 3 <mm>	18
Elenco diametri utilizzabili 4 <mm>	
Elenco diametri utilizzabili 5 <mm>	
Elenco diametri utilizzabili 6 <mm>	
Elenco diametri utilizzabili 7 <mm>	
Passi utilizzabili	
-Minimo <cm>	10.00
-Massimo <cm>	20.00
-Incremento <cm>	5.00
-Modalità di completamento armatura	
-Adattata	
-Terminata	x
-Nessuna	
Armatura orizzontale	
Elenco diametri utilizzabili 1 <mm>	10
Elenco diametri utilizzabili 2 <mm>	
Elenco diametri utilizzabili 3 <mm>	
Elenco diametri utilizzabili 4 <mm>	
Elenco diametri utilizzabili 5 <mm>	
Elenco diametri utilizzabili 6 <mm>	
Elenco diametri utilizzabili 7 <mm>	
Passi utilizzabili	
-Minimo <cm>	10.00
-Massimo <cm>	20.00
-Incremento <cm>	5.00
Tipo di armatura orizzontale	
-Dritta	x
-Con risvolti di estremità	
-Modalità di chiusura orizzontale	
-Nessuna chiusura	
-Chiusura con ferri ad U	
-Chiusura con staffe	x
-Lunghezza armatura di chiusura	
-Multiplo dello spessore pari a	
-Lunghezza fissa pari a <cm>	0.50
-Tipo di ottimizzazione armatura	
-Minimizza il peso complessivo dei ferri	x
-Minimizza il numero dei ferri	
Armatura di rinforzo	

Relazione di calcolo

Elenco diametri utilizzabili 1 <mm>	12
Elenco diametri utilizzabili 2 <mm>	18
Elenco diametri utilizzabili 3 <mm>	
Elenco diametri utilizzabili 4 <mm>	
Elenco diametri utilizzabili 5 <mm>	
Elenco diametri utilizzabili 6 <mm>	
Elenco diametri utilizzabili 7 <mm>	
Numero minimo ferri	2.00
Interferro minimo <cm>	10.00
-Aggiungi staffe chiuse	Si
-Stesso diametro armatura diffusa orizzontale	x
-Diametro imposto	
-Stesso passo armatura diffusa orizzontale	x
-Passo imposto	
Armatura secondaria	
Diametro ferri di collegamento <mm>	6.00
Numero ferri di collegamento (a mq)	6.00
Lunghezza ancoraggio ferri di collegamento <cm>	10.00
Dati per progettazione agli stati limite	
Gruppo di esigenza	
-Ambiente poco aggressivo	x
-Ambiente moderatamente aggressivo	
-Ambiente molto aggressivo	
Usa dominio N-M per flessioni rette	No
-Ricerca della sicurezza con sforzo normale costante	
-Ricerca della sicurezza con eccentricità costante	
Controllo rapporto X/D	No
Barre da considerare tese per verifiche a taglio	
-Solo le barre con deformazione percentuale rispetto alla barra più tesa non inferiore al <%>	30.00
-Tutte le barre in trazione	

Solette/Platee

Generali	
Parametri di progetto	
Controllo resistenza a taglio allo S.L.U.	No
Calcolo armature con metodo di Wood	No
Accoppia pilastri per calcolo punzonamento	Si
Verifiche a taglio per elementi esistenti come per elementi nuovi	Si
-Massima distanza come un moltiplicatore dello spessore	1.50
Parametri di disegno	
Disposizione disegno	2A
Particolari nel disegno principale	
-Eliminare le quotature	No
-Eliminare le campiture	No
-Eliminare la numerazione dei pilastri	No
-Eliminare la numerazione delle travi e dei muri	No
Particolari nei disegni secondari	
-Eliminare le quotature	Si
-Eliminare le campiture	Si
-Eliminare la numerazione dei pilastri	Si
-Eliminare la numerazione delle travi e dei muri	Si
Disegno armatura diffusa	No
Posizione particolari punzonamento	In automatico
Copriferro per calcolo lunghezza ferri <cm>	3.50
Risvoltare al bordo i ferri	
-Inferiori	Si
-Superiori	Si
Lunghezza risvolti ferri al bordo	Pari all'altezza meno due volte il copriferro
Disegno particolare ferri al bordo	Si
Scala disegno particolare ferri al bordo	20.00
Calcolo lunghezza ferri semplificato	No
Stampe	
Tipo di relazione	Sintetica

Specifici	1
Materiali	
-Considera come elemento esistente	No
-Calcestruzzo	
-Livello di conoscenza	LC2
-Fattore di confidenza	1.20

Relazione di calcolo

-Tipo di calcestruzzo	C25/30
-Rck calcestruzzo	300.00
-Modulo elastico <daN/cmq>	314472.00
-Resistenza caratteristica cilindrica (Fck)	249.00
-Resistenza caratteristica a trazione (Fctk)	17.91
-Resistenza media (Fcm) <daN/cmq>	370.50
-Resistenza media a trazione (Fctm) <daN/cmq>	28.35
-σ amm. calcestruzzo <daN/cmq>	97.50
-rc0 <daN/cmq>	6.00
-rc1 <daN/cmq>	18.30
-Riduci Fcd per tutte le verifiche secondo il D.M. 08	Si
-γc per stati limite ultimi	
-Automatico	x
-Pari a	
-Acciaio	
-Livello di conoscenza	LC2
-Fattore di confidenza	1.20
-Tipo di acciaio	B450C
-Modulo elastico <daN/cmq>	2060000.00
-Tensione caratteristica di snervamento (Fyk) <daN/cmq>	4500.00
-Tensione media di snervamento (Fym) <daN/cmq>	4500.00
-Sigma amm. acciaio <daN/cmq>	2600.00
-Sigma amm. reti e tralicci <daN/cmq>	2600.00
-Allungamento per verifiche di duttilità (Agt) <*>	4.00
-γs per stati limite ultimi	
-Automatico	x
-Pari a	
-Coeff. di omogeneizzazione	15.00
Armatura a flessione	
Angolo d'armatura <grad>	0.00
Copriferro teorico superiore <cm>	3.00
Copriferro teorico inferiore <cm>	3.00
Tipo di progetto in doppia armatura	
-Tensione pari ai valori amm.	
-Tensione pari ai valori amm. con AfComp/AfTesa minore o pari a	1.00
-Tensione pari ai valori amm. con AfComp/AfTesa pari a	
Min. percentuale di regolamento	
-Platee di fondazione su suolo elastico	Si
-Solette di elevazione	Si
Controlla min. armatura di ripartizione	No
Elenco diametri utilizzabili 1 <mm>	10
Elenco diametri utilizzabili 2 <mm>	12
Elenco diametri utilizzabili 3 <mm>	14
Elenco diametri utilizzabili 4 <mm>	16
Elenco diametri utilizzabili 5 <mm>	
Elenco diametri utilizzabili 6 <mm>	
Elenco diametri utilizzabili 7 <mm>	
Passi utilizzabili	
-Minimo <cm>	15.00
-Massimo <cm>	30.00
-Incremento <cm>	5.00
Uniformizzazione interassi armatura	No
-Sempre	
-Nella stessa direzione	
-Nella stessa posizione	
Uniformizzazione diametri armatura	No
-Sempre	
-Nella stessa direzione	
-Nella stessa posizione	
Tipo di ottimizzazione armatura a flessione	
-Minimizza il numero dei ferri	
-Minimizza il peso complessivo dei ferri	x
Verifiche a taglio	
-Escludi punti di verifica sotto piramidi di punzonamento	No
-Escludi punti di verifica sotto muri/bidimensionali	No
Ancoraggi	
Fattore di riduzione per ancoraggio ferri	1.00
Lunghezza ancoraggi armature	
-Calcolata in funzione della Sigmaf	x
-Imposta come multiplo del diametro	
Lunghezza ancoraggi ferri punzonamento	
-Calcolata in funzione della Sigmaf	x
-Imposta come multiplo del diametro	
Armatura a punzonamento	
Fattore di riduzione altezza soletta/platea	0.90

Relazione di calcolo

Modifica altezza soletta/platea	Si
Allargamento piastra pilastri in acciaio <cm>	5.00
Distanza dal bordo libero	
-Distanza come un moltiplicatore dello spessore	1.00
-Distanza imposta a <cm>	
Moltiplicatore altezza utile per valutare perimetro efficace (D.M. 08)	2.00
Tolleranza di posizionamento barre	
-Distanza come un moltiplicatore dello spessore	0.10
-Distanza imposta a <cm>	
Elenco diametri utilizzabili 1 <mm>	12
Elenco diametri utilizzabili 2 <mm>	14
Elenco diametri utilizzabili 3 <mm>	16
Elenco diametri utilizzabili 4 <mm>	18
Elenco diametri utilizzabili 5 <mm>	20
Elenco diametri utilizzabili 6 <mm>	
Elenco diametri utilizzabili 7 <mm>	
Passi utilizzabili	
-Minimo <cm>	10.00
-Massimo <cm>	20.00
-Incremento <cm>	2.00
Tipo di ottimizzazione armatura a punzonamento	
-Minimizza il numero dei ferri	x
-Minimizza il peso complessivo dei ferri	
Dati per progettazione agli stati limite	
Gruppo di esigenza	
-Ambiente poco aggressivo	x
-Ambiente moderatamente aggressivo	
-Ambiente molto aggressivo	
Usa dominio N-M per flessioni rette	No
-Ricerca della sicurezza con sforzo normale costante	
-Ricerca della sicurezza con eccentricità costante	
Controllo rapporto X/D	No
Barre da considerare tese per verifiche a taglio	
-Solo le barre con deformazione percentuale rispetto	
Incremento <%>	30.00
-Tutte le barre in trazione	

Nuclei

Generali	
Parametri di disegno	
Scala disegno nuclei	25.00
Campitura disegno nucleo	Rada
Quotatura	Si
Armatura a taglio	
Progetta a taglio con traliccio ad inclinazione variabile	Si
-Classe A	
-In zona critica limita ctg θ a	1.00
-In zona non critica limita ctg θ a	2.50
-Classe B	
-In zona critica limita ctg θ a	2.50
-In zona non critica limita ctg θ a	2.50
Verifiche a taglio per elementi esistenti come per elementi nuovi	No
Stampe	
Tipo di relazione	Sintetica

Specifici	1
Materiali	
-Considera come elemento esistente	No
-Calcestruzzo	
-Livello di conoscenza	LC2
-Fattore di confidenza	1.20
-Tipo di calcestruzzo	C28/35
-Rck calcestruzzo	350.00
-Modulo elastico <daN/cm ² >	325881.00
-Resistenza caratteristica cilindrica (Fck)	290.50
-Resistenza caratteristica a trazione (Fctk)	19.84
-Resistenza media (Fcm) <daN/cm ² >	370.50
-Resistenza media a trazione (Fctm) <daN/cm ² >	28.35
- σ amm. calcestruzzo <daN/cm ² >	110.00
- τ_{c0} <daN/cm ² >	6.70
- τ_{c1} <daN/cm ² >	19.70

Relazione di calcolo

-Riduci Fcd per tutte le verifiche secondo il D.M. 08	Si
- γ_c per stati limite ultimi	
-Automatico	x
-Pari a	
-Acciaio	
-Livello di conoscenza	LC2
-Fattore di confidenza	1.20
-Tipo di acciaio	B450C
-Modulo elastico <daN/cm ² >	2060000.00
-Tensione caratteristica di snervamento (Fyk) <daN/cm ² >	4500.00
-Tensione media di snervamento (Fym) <daN/cm ² >	4300.00
-Sigma amm. acciaio <daN/cm ² >	2600.00
-Sigma amm. reti e tralicci <daN/cm ² >	2600.00
-Allungamento per verifiche di duttilità (Agt) <%>	4.00
- γ_s per stati limite ultimi	
-Automatico	x
-Pari a	
-Coeff. di omogeneizzazione	15.00
Parametri di calcolo	
Copriferro <cm>	2.50
Fattore moltiplicativo per calcolo τ_l	1.00
Fattore moltiplicativo per calcolo τ_t	1.00
Fattore di riduzione per ancoraggio ferri	0.70
Lunghezza ancoraggi armature	
-Calcolata in funzione della σ_f	
-Imposta come multiplo del diametro	20.00
Lunghezza minima pari a <m>	0.50
Rispetta prescrizioni relative alle pareti anche nei nuclei	Si
Considera pressoflessione retta per pareti isolate	Si
Armatura secondo Circ. 65 del 10/04/97	No
Conteggiare le riprese in elevazione	Si
Conteggiare le riprese in fondazione	Si
Parametri di calcolo per il D.M. 08	
Inviluppo e traslazione dei momenti flettenti	
Sempre	x
Solo per analisi sismiche statiche	
Mai	
Usa diagramma linearizzato	No
Incremento del 50% delle forze assiali	
Sempre	
Solo per analisi sismiche statiche	x
Mai	
Rispetta i disposti del punto 7.4.4.5.2.1 solo per stati limite sismici	No
Incremento dello sforzo di taglio per strutture in classe B	
Nessun incremento	
Incremento del 50%	x
Incremento di $(q+1)/2$	
Incremento dello sforzo di taglio per strutture in classe A	
Nessun incremento	
Incremento secondo espressioni 7.4.13 o 7.4.14	x
Modalità di calcolo espressione	
-Considera valore imposto pari a	
-Calcola considerando MRd/MEd pari a	1.20
Inviluppo e traslazione sforzi di taglio	
Sempre	
Solo per analisi sismiche statiche	x
Mai	
Modalità di ripartizione taglio di calcolo per pareti con fori	
In funzione delle sollecitazioni agenti nelle zone resistenti (con segno)	
In funzione delle sollecitazioni agenti nelle zone resistenti (in valore assoluto)	
In funzione delle aree delle zone resistenti	x
Modalità di valutazione parametri nel caso di sisma diverso per X e Y	
Usa valore massimo	
Componi in direzione parete	x
Armatura di default	
Diametro armatura verticale <mm>	10.00
Passo armatura verticale <cm>	20.00
Diametro armatura orizzontale <mm>	10.00
Passo armatura orizzontale <cm>	20.00
Modalità di completamento armatura verticale	
-Adattata	x
-Terminata	
-Nessuna	
Tipo di armatura orizzontale	
-Dritta	
-Con risvolti di estremità	x

Relazione di calcolo

-A staffa chiusa	
Armare le pareti corte con staffe	No
-Se più corte di un multiplo dello spessore pari a	
-Se più corte di <cm>	
Armatura secondaria	
Diametro ferri di collegamento <mm>	6.00
Numero ferri di collegamento (a mq)	6.00
Lunghezza ancoraggio ferri di collegamento <cm>	8.00
Armatura di estremità	
Modalità di chiusura estremi liberi delle pareti	
-Nessuna chiusura	x
-Chiusura con ferri ad U	
-Chiusura con staffe	
Lunghezza armatura di chiusura	
-Multiplo dello spessore pari a	1.50
-Lunghezza fissa pari a <cm>	
Modalità di chiusura estremi interni delle pareti	
-Nessuna chiusura	x
-Chiusura con ferri ad U	
-Chiusura con staffe	
Lunghezza armatura di chiusura	
-Multiplo dello spessore pari a	1.00
-Lunghezza fissa pari a <cm>	
Dati per progettazione agli stati limite	
Gruppo di esigenza	
-Ambiente poco aggressivo	x
-Ambiente moderatamente aggressivo	
-Ambiente molto aggressivo	
Usa dominio N-M per flessioni rette	No
-Ricerca della sicurezza con sforzo normale costante	
-Ricerca della sicurezza con eccentricità costante	
Controllo rapporto X/D	No
Barre da considerare tese per verifiche a taglio	
-Solo le barre con deformazione percentuale rispetto	
Diametro armatura orizzontale <%>	30.00
-Tutte le barre in trazione	

Solai

Generali	
Parametri di disegno	
Eliminare le quotature esterne ed interne	Si
Eliminare le quotature dei pilastri	Si
Eliminare le dimensioni delle travi e dei muri	Si
Eliminare la numerazione delle travi e dei muri	Si
Eliminare le campiture	No
Eliminare il disegno del cerchio intorno al numero del pilastro	No
Disegnare i particolari dei tipi di solai utilizzati	Si
Disegnare esploso armatura ferri lateralmente alla carpenteria	Si

Specifici	1	6
Materiali		
Calcestruzzo		
-Tipo di calcestruzzo	C28/35	C28/35
-Rck calcestruzzo <daN/cm ² >	350.00	350.00
-Modulo elastico <daN/cm ² >	325881.00	325881.00
-Resistenza caratteristica cilindrica (Fck) <daN/cm ² >	290.50	290.50
-Resistenza caratteristica a trazione (Fctk) <daN/cm ² >	19.84	19.84
-γ _c per stati limite ultimi		
-Automatico	x	x
-Pari a		
-σ amm. calcestruzzo <daN/cm ² >	110.00	110.00
-rc0 <daN/cm ² >	6.70	6.70
-rc1 <daN/cm ² >	19.70	19.70
Acciaio		
-D.M. 92/96		
-Tipo di acciaio (Fe B 22+44 k)	44	44
-Modulo elastico <daN/cm ² >	2.06E+06	2.06E+06
-Tensione caratteristica di snervamento (Fyk) <daN/cm ² >	4300.00	4300.00
-Sigma amm. acciaio <daN/cm ² >	2600.00	2600.00
-Sigma amm. reti e tralicci <daN/cm ² >	2600.00	2600.00
-D.M. 08		

Relazione di calcolo

-Tipo di acciaio (B450A+B450C)	B450C	B450C
-Modulo elastico <daN/cm²>	2.06E+06	2.06E+06
-Tensione caratteristica di snervamento (Fyk) <daN/cm²>	4500.00	4500.00
- γ_s per stati limite ultimi		
-Automatico	x	x
-Pari a		
Coeff. di omogeneizzazione	15.00	15.00
Parametri di calcolo		
Tipo di solaio	1	6
Elenco ditte	SICAP	SICAP
Tipo di portanza	1	2
Metodi di calcolo per l'autoportanza con tralicci		
-P-Critico	x	
-Omega UNI 10011		
-Omega con contributo della suola inferiore		
-Beton - Kalender		
Interasse solaio <cm>	50.00	120.00
Larghezza della nervatura <cm>	12.00	40.00
Copriferro teorico superiore <cm>	2.00	2.00
Copriferro teorico inferiore <cm>	2.00	2.00
Spessore lastra predalles <cm>	4.00	5.00
Numero travetti precompressi	1.00	1.00
Categoria dei carichi concentrati D.M. 92/96	1	2
Categoria dei carichi concentrati D.M. 08	1	4
Min. momento fittizio agli appoggi	si	si
-Denominatore	20.00	25.00
Min. momento fittizio in campata	si	si
-Denominatore	20.00	25.00
Spuntamento parabole travi	No	No
Spuntamento parabole muri	No	No
Massimo banchinaggio <cm>	0.00	0.00
Armatura a flessione e a taglio		
Elenco diametri utilizzabili 1 <mm>	8	12
Elenco diametri utilizzabili 2 <mm>	10	14
Elenco diametri utilizzabili 3 <mm>	12	16
Elenco diametri utilizzabili 4 <mm>	14	18
Elenco diametri utilizzabili 5 <mm>	18	
Elenco diametri utilizzabili 6 <mm>		
Elenco diametri utilizzabili 7 <mm>		
Tipo di tralicci	2ø5+1ø7	2ø5+1ø7
Tipo di reti	ø820x20	ø820x20
Diametro minimo ferri compressi <mm>	10.00	10.00
Diametro massimo ferri compressi <mm>	12.00	12.00
Sporgenza minima ferri agli appoggi <cm>	50.00	50.00
Barre di ammaraggio sugli appoggi centrali	No	No
Armatura inferiore a sbalzo	No	No
Ferri superiori in campata	No	No
-Diametro <mm>		
-Lunghezza minima ferri in campata come percentuale della luce	80.00	80.00
Spezzoni in campata		
-Nessuno		
-Massimo due ferri di diversa lunghezza		
-Massimo un ferro	x	x
Armatura a taglio		
-Ferri piegati a 45°	x	x
-Sagomati a greca		
-Lunghezza risolto ferri <cm>	15.00	15.00
-Lunghezza ganci d'estremità superiori <cm>	15.00	15.00
-Lunghezza ganci d'estremità inferiori <cm>	15.00	15.00
Verifiche di deformabilità e fessurazione		
Gruppo di esigenza		
-Ambiente poco aggressivo	x	x
-Ambiente moderatamente aggressivo		
-Ambiente molto aggressivo		
Armatura sensibile	No	No
Modalità di calcolo della freccia		
-Con sezione interamente reagente		
-Con sezione fessurata	x	x
-Con metodo di integrazione		
-Calcolo freccia viscosa	si	No
-Grado di umidità	75	75
-Tempo di applicazione del carico	30	30

Verifiche e armature travi

Relazione di calcolo

Simbologia

Caso	=	Caso di verifica
Xg	=	Coordinata progressiva (dal primo nodo) in cui viene effettuato il progetto/verifica
CC	=	Combinazione delle condizioni di carico elementari
		c = momento fittizio in campata
		a = momento fittizio agli appoggi
		TG = taglio da gerarchia delle resistenze
		T = momento traslato per taglio
		e = eccentricità aggiuntiva in caso di compressione o pressoflessione
TCC	=	Tipo di combinazione di carico
		SLU = Stato limite ultimo
		SLU S = Stato limite ultimo (azione sismica)
		SLE R = Stato limite d'esercizio, combinazione rara
		SLE F = Stato limite d'esercizio, combinazione frequente
		SLE Q = Stato limite d'esercizio, combinazione quasi permanente
		SLD = Stato limite di danno
		SLV = Stato limite di salvaguardia della vita
		SIC = Stato limite di prevenzione del collasso
		SLO = Stato limite di operatività
		SLU I = Stato limite di resistenza al fuoco
El	=	Elemento (asta) in cui viene effettuato il progetto/verifica (progressivo sul numero di aste)
Sez.	=	Numero della sezione
Crit.	=	Numero del criterio di progetto
X	=	Coordinata progressiva rispetto al nodo iniziale
AfE S	=	Area di ferro effettiva totale presente nel punto di verifica, superiore
AfE I	=	Area di ferro effettiva totale presente nel punto di verifica, inferiore
AfEP S	=	Area di ferro effettiva parziale presente nella CC considerata, per la sollecitazione indicata, superiore
AfEP I	=	Area di ferro effettiva parziale presente nella CC considerata, per la sollecitazione indicata, inferiore
My	=	Momento flettente intorno all'asse Y
Myu	=	Momento ultimo intorno all'asse Y
Sic.	=	Sicurezza a rottura
σ_r sup	=	Tensione nel ferro - superiore
σ_r inf	=	Tensione nel ferro - inferiore
σ_c	=	Tensione nel calcestruzzo
Tz	=	Taglio in dir. Z
X0	=	Coordinata progressiva (dal nodo iniziale) dell'inizio del tratto
X1	=	Coordinata progressiva (dal nodo iniziale) della fine del tratto
Lung.	=	Lunghezza del tratto di progettazione
Staff.	=	Staffatura adottata
AfE St.	=	Area di ferro effettiva della staffatura (d'anima per travi a T o L)
bw	=	Larghezza membratura resistente al taglio
Vsdu	=	Taglio agente nella direzione del momento ultimo
ctg θ	=	Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo
VRsd	=	Taglio ultimo lato armatura
VRcd	=	Taglio ultimo lato calcestruzzo
Vrdu	=	Taglio ultimo assorbibile dal solo calcestruzzo
Sic.T	=	Sicurezza a rottura per taglio
c	=	Ricoprimento dell'armatura
s	=	Distanza minima tra le barre
K3	=	Coefficiente di forma del diagramma delle tensioni prima della fessurazione
s_{zm}	=	Distanza media tra le fessure
Φ	=	Diametro della barra
A_s	=	Area complessiva dei ferri nell'area di calcestruzzo efficace
$A_{c\ eff}$	=	Area di calcestruzzo efficace
σ_s	=	Tensione nell'acciaio nella sezione fessurata
σ_{sr}	=	Tensione nell'acciaio corrispondente al raggiungimento della resistenza a trazione nel calcestruzzo
ϵ_{sm}	=	Deformazione unitaria media dell'armatura (*1000)
Wk	=	Apertura delle fessure
Tipo	=	Tipologia
		2C = Doppia C lato labbri
		2Cdx = Doppia C lato costola
		2I = Doppia I
		2L = Doppia L lato labbri
		2Ldx = Doppia L lato costole
		C = C
		Cdx = C destra
		Cir. = Circolare
		Cir.c = Circolare cava
		I = I
		L = L
		Ldx = L destra
		Om. = Omega
		Pg = Pi greco
		Pr = Poligono regolare
		Prc = Poligono regolare cavo
		Pc = Per coordinate
		Ia = Inerzie assegnate
		R = Rettangolare
		Rc = Rettangolare cava
		T = T
		U = U
		Ur = U rovescia
		V = V
		Vr = V rovescia
		Z = Z
		Zdx = Z destra
		Ts = T stondata
		Ls = L stondata
		Cs = C stondata
		Is = I stondata
		Dis. = Disegnata
B	=	Base
H	=	Altezza
Cf sup	=	Copriferro superiore
Cf inf	=	Copriferro inferiore
Clc	=	Tipo di calcestruzzo
Fck	=	Resistenza caratteristica cilindrica a compressione del calcestruzzo
Fctk	=	Resistenza caratteristica a trazione del calcestruzzo
Fcd	=	Resistenza di calcolo a compressione del calcestruzzo
Fctd	=	Resistenza di calcolo a trazione del calcestruzzo
Acc.	=	Tipo di acciaio
Fyk	=	Tensione caratteristica di snervamento dell'acciaio
Fyd	=	Resistenza di calcolo dell'acciaio

Travata n. 101

Relazione di calcolo

Nodi: 106 107 -71 108

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.27	9	SLV	1	26.94	6.16	4.62	6.16	3.29	-4417.43	-5106.92	1.156
2.24	17	SLU	1	223.87	4.62	4.62	4.62	4.19	2128.05	3558.78	1.672
4.50	1	SLV	1	449.92	6.63	5.09	6.63	3.87	-4734.67	-5475.17	1.156
4.90	9	SLV	2	20.00	6.63	5.09	6.63	3.68	-4962.16	-5474.72	1.103
7.33	18	SLU	2	263.12	4.62	4.62	4.62	4.24	2157.16	3601.89	1.670
9.45	1	SLV	3	60.00	6.16	4.62	6.16	3.42	-4593.64	-5106.86	1.112
0.27	10	SLD	1	26.94	6.16	4.62	6.16	3.29	-3848.33	-5969.55	1.551
2.24	2	SLD	1	223.87	4.62	4.62	4.62	4.19	1408.48	4177.48	2.966
4.50	2	SLD	1	449.92	6.63	5.09	6.63	3.87	-4136.49	-6395.01	1.546
4.90	10	SLD	2	20.00	6.63	5.09	6.63	3.68	-4409.12	-6395.07	1.450
7.33	10	SLD	2	263.12	4.62	4.62	4.62	4.24	1468.92	4227.29	2.878
9.45	2	SLD	3	60.00	6.16	4.62	6.16	3.42	-3971.11	-5969.50	1.503

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.27	18	SLU	1	26.94	4.62	5110.00	1.33	3848.06
0.27	10	SLD	1	26.94	4.62	4098.77	1.33	3086.55
2.24	9	SLV	1	223.87	4.62	1295.24	0.43	3022.02
2.24	10	SLD	1	223.87	4.62	1019.29	0.43	2378.17
4.50	17	SLU	1	449.92	5.09	-3969.39	1.21	3267.64
4.50	2	SLD	1	449.92	5.09	-3435.41	1.21	2828.06
4.90	18	SLU	2	20.00	5.09	4827.96	1.40	3436.34
4.90	10	SLD	2	20.00	5.09	3848.50	1.40	2739.20
7.33	9	SLV	2	263.12	4.62	1115.60	0.37	2983.12
7.33	10	SLD	2	263.12	4.62	875.28	0.37	2340.49
9.45	1	SLV	3	60.00	4.62	-4419.03	1.19	3698.44
9.45	2	SLD	3	60.00	4.62	-3994.75	1.19	3343.35

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.27	22	SLE R	1	26.94	6.16	4.62	-2235.65	1780.28	-515.22	57.30
0.27	30	SLE Q	1	26.94	6.16	4.62	-1862.06	1482.79	-429.12	47.73
2.24	21	SLE R	1	223.87	4.62	4.62	1578.95	-368.86	1658.74	44.87
2.24	29	SLE Q	1	223.87	4.62	4.62	1307.92	-305.54	1374.01	37.17
4.50	21	SLE R	1	449.92	6.63	5.09	-2460.75	1824.65	-553.01	60.64
4.50	29	SLE Q	1	449.92	6.63	5.09	-2048.29	1518.81	-460.32	50.48
4.90	22	SLE R	2	20.00	6.63	5.09	-2929.71	2172.39	-658.41	72.20
4.90	30	SLE Q	2	20.00	6.63	5.09	-2479.43	1838.51	-557.21	61.10
7.33	22	SLE R	2	263.12	4.62	4.62	1603.79	-374.66	1684.83	45.57
7.33	30	SLE Q	2	263.12	4.62	4.62	1347.19	-314.72	1415.27	38.28
9.45	21	SLE R	3	60.00	6.16	4.62	-2095.13	1668.38	-482.83	53.70
9.45	29	SLE Q	3	60.00	6.16	4.62	-1794.49	1428.97	-413.55	46.00

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	S _{sm} <mm>	Φ	A _s <cm²>	A _{s,eff} <cm²>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
42	0.27	30	SLE Q	1	2	2	26.94	-1862.06	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1482.79	1580.14	0.31	0.07
46	0.27	26	SLE F	1	2	2	26.94	-1969.84	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1568.61	1580.14	0.38	0.08
89	2.24	29	SLE Q	1	2	2	223.87	1307.92	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1374.01	1991.52	0.27	0.07
93	2.24	25	SLE F	1	2	2	223.87	1384.62	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1454.59	1991.52	0.28	0.07
137	4.50	29	SLE Q	1	2	2	449.92	-2048.29	21.00	170.00	0.13	148.91	18.00	6.63	537.00	1518.81	1498.97	0.38	0.10
141	4.50	25	SLE F	1	2	2	449.92	-2166.38	21.00	170.00	0.13	148.91	18.00	6.63	537.00	1606.38	1498.97	0.44	0.11
186	4.90	30	SLE Q	2	2	2	20.00	-2479.43	21.00	170.00	0.13	148.91	18.00	6.63	537.00	1838.51	1498.97	0.60	0.15
190	4.90	26	SLE F	2	2	2	20.00	-2607.81	21.00	170.00	0.13	148.91	18.00	6.63	537.00	1933.70	1498.97	0.66	0.17
234	7.33	30	SLE Q	2	2	2	263.12	1347.19	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1415.27	1991.52	0.27	0.07
238	7.33	26	SLE F	2	2	2	263.12	1421.13	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1492.94	1991.52	0.29	0.07
281	9.45	29	SLE Q	3	2	2	60.00	-1794.49	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1428.97	1580.14	0.28	0.06
285	9.45	25	SLE F	3	2	2	60.00	-1879.66	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1496.80	1580.14	0.32	0.07

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
18 SLU	0.25	0.48	0.23	ø10/ 4 2 br.	39.27	0.40	5173.10	1.07	34000.10	34000.20	34000.10	6.57
18 SLU	0.48	4.27	3.79	ø10/16 2 br.	9.82	0.40	4528.01	2.50	19880.40	23500.40	19880.40	4.39
TG	4.27	4.50	0.23	ø10/ 4 2 br.	39.27	0.40	4734.51	1.07	34000.10	34000.20	34000.10	7.18
18 SLU	4.90	5.13	0.23	ø10/ 4 2 br.	39.27	0.40	4827.96	1.07	34000.10	34000.20	34000.10	7.04
18 SLU	5.13	9.22	4.09	ø10/16 2 br.	9.82	0.40	4371.58	2.50	19880.40	23500.40	19880.40	4.55
1 SLV	9.22	9.45	0.23	ø10/ 4 2 br.	39.27	0.40	4419.03	1.07	34000.10	34000.20	34000.10	7.69

Travata n. 102

Relazione di calcolo

Nodi: -73 112 113 114

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
5.68	17	SLU	1	25.00	8.17	5.62	8.17	3.98	-5986.34	-6668.20	1.114
6.18	9	SLV	2	25.00	8.17	5.62	8.17	4.20	-4325.62	-6670.23	1.542
8.38	18	SLU	2	245.39	4.62	4.62	4.62	4.24	1611.23	3599.39	2.234
10.43	1	SLV	2	449.92	6.16	4.62	6.16	3.50	-3946.98	-5106.81	1.294
10.83	9	SLV	3	20.00	6.16	4.62	6.16	3.38	-4239.01	-5106.86	1.205
13.22	18	SLU	3	259.01	4.62	4.62	4.62	4.31	2088.75	3652.35	1.749
15.38	1	SLV	3	474.84	4.62	4.62	4.62	3.46	-3710.61	-3897.51	1.050
5.68	2	SLD	1	25.00	8.17	5.62	8.17	3.98	-4775.36	-7781.37	1.629
6.18	10	SLD	2	25.00	8.17	5.62	8.17	4.20	-3812.43	-7782.01	2.041
8.38	10	SLD	2	245.39	4.62	4.62	4.62	4.24	1035.95	4224.42	4.078
10.43	2	SLD	2	449.92	6.16	4.62	6.16	3.50	-3452.54	-5969.44	1.729
10.83	10	SLD	3	20.00	6.16	4.62	6.16	3.38	-3803.26	-5969.49	1.570
13.22	10	SLD	3	259.01	4.62	4.62	4.62	4.31	1382.10	4285.57	3.101
15.38	2	SLD	3	474.84	4.62	4.62	4.62	3.46	-3269.48	-4566.67	1.397

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
5.68	17	SLU	1	25.00	5.62	5957.09	1.65	3616.30
5.68	2	SLD	1	25.00	5.62	4002.41	1.65	2429.69
6.18	18	SLU	2	25.00	5.62	4276.64	1.42	3011.94
6.18	10	SLD	2	25.00	5.62	3478.39	1.42	2449.75
8.38	1	SLV	2	245.39	4.62	-1125.89	0.38	2985.35
8.38	2	SLD	2	245.39	4.62	-888.76	0.38	2356.58
10.43	17	SLU	2	449.92	4.62	-4057.41	1.12	3620.13
10.43	2	SLD	2	449.92	4.62	-3341.09	1.12	2981.01
10.83	18	SLU	3	20.00	4.62	4644.75	1.24	3747.31
10.83	10	SLD	3	20.00	4.62	3549.51	1.24	2863.69
13.22	1	SLV	3	259.01	4.62	-911.09	0.31	2938.84
13.22	2	SLD	3	259.01	4.62	-718.31	0.31	2316.99
15.38	17	SLU	3	474.84	4.62	-4256.84	1.16	3663.31
15.38	2	SLD	3	474.84	4.62	-3306.20	1.16	2845.22

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
5.68	21	SLE R	1	25.00	8.17	5.62	-4453.08	2700.60	-962.67	100.81
5.68	29	SLE Q	1	25.00	8.17	5.62	-3708.32	2248.94	-801.67	83.95
6.18	22	SLE R	2	25.00	8.17	5.62	-2424.69	1470.47	-524.17	54.89
6.18	30	SLE Q	2	25.00	8.17	5.62	-2029.08	1230.55	-438.65	45.94
8.38	22	SLE R	2	245.39	4.62	4.62	1196.76	-279.58	1257.24	34.01
8.38	30	SLE Q	2	245.39	4.62	4.62	999.67	-233.53	1050.19	28.41
10.43	21	SLE R	2	449.92	6.16	4.62	-2075.51	1652.75	-478.31	53.20
10.43	29	SLE Q	2	449.92	6.16	4.62	-1734.10	1380.88	-399.63	44.45
10.83	22	SLE R	3	20.00	6.16	4.62	-2728.61	2172.83	-628.82	69.94
10.83	30	SLE Q	3	20.00	6.16	4.62	-2288.90	1822.68	-527.49	58.67
13.22	22	SLE R	3	259.01	4.62	4.62	1549.63	-362.01	1627.94	44.03
13.22	30	SLE Q	3	259.01	4.62	4.62	1286.05	-300.43	1351.03	36.54
15.38	21	SLE R	3	474.84	4.62	4.62	-2074.66	2179.50	-484.66	58.95
15.38	29	SLE Q	3	474.84	4.62	4.62	-1737.18	1824.96	-405.82	49.36

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cmq>	σ _{st} <daN/cmq>	ε _{sm}	Wk <mm>
41	5.68	29	SLE Q	1	2	2	25.00	-3708.32	21.00	113.33	0.13	124.87	18.00	8.17	546.35	2248.94	1263.29	0.92	0.20
45	5.68	25	SLE F	1	2	2	25.00	-3920.52	21.00	113.33	0.13	124.87	18.00	8.17	546.35	2377.63	1263.29	0.99	0.21
90	6.18	30	SLE Q	2	2	2	25.00	-2029.08	21.00	113.33	0.13	124.87	18.00	8.17	546.35	1230.55	1263.29	0.28	0.06
94	6.18	26	SLE F	2	2	2	25.00	-2142.79	21.00	113.33	0.13	124.87	18.00	8.17	546.35	1299.51	1263.29	0.33	0.07
138	8.38	30	SLE Q	2	2	2	245.39	999.67	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1050.19	1991.52	0.20	0.05
142	8.38	26	SLE F	2	2	2	245.39	1055.58	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1108.92	1991.52	0.22	0.06
185	10.43	29	SLE Q	2	2	2	449.92	-1734.10	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1380.88	1580.14	0.27	0.06
189	10.43	25	SLE F	2	2	2	449.92	-1831.72	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1458.63	1580.14	0.29	0.06
234	10.83	30	SLE Q	3	2	2	20.00	-2288.90	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1822.68	1580.14	0.55	0.12
238	10.83	26	SLE F	3	2	2	20.00	-2414.60	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1922.78	1580.14	0.62	0.13
282	13.22	30	SLE Q	3	2	2	259.01	1286.05	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1351.03	1991.52	0.26	0.07
286	13.22	26	SLE F	3	2	2	259.01	1361.73	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1430.54	1991.52	0.28	0.07
329	15.38	29	SLE Q	3	2	2	474.84	-1737.18	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1824.96	1991.52	0.36	0.09
333	15.38	25	SLE F	3	2	2	474.84	-1832.90	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1925.52	1991.52	0.43	0.11

Staffe - Verifiche armatura

CC	X0	X1	Lung.	Staff.	AfE St.	bw	Vsdu	ctgθ	VRsd	VRcd	Vrdu	Sic.T
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Relazione di calcolo

	<m>	<m>	<m>		<cmq/m>	<m>	<daN>		<daN>	<daN>	<daN>	
17 SLU	0.00	5.45	5.45	ø10/16 2 br.	9.82	0.40	5510.12	2.50	19880.40	23500.40	19880.40	3.61
17 SLU	5.45	5.68	0.23	ø10/ 4 2 br.	39.27	0.40	5957.09	1.07	34000.10	34000.20	34000.10	5.71
TG	6.18	6.41	0.23	ø10/ 4 2 br.	39.27	0.40	4824.67	1.07	34000.10	34000.20	34000.10	7.05
TG	6.41	10.20	3.79	ø10/16 2 br.	9.82	0.40	4548.89	2.50	19880.40	23500.40	19880.40	4.37
TG	10.20	10.43	0.23	ø10/ 4 2 br.	39.27	0.40	4588.32	1.07	34000.10	34000.20	34000.10	7.41
18 SLU	10.83	11.06	0.23	ø10/ 4 2 br.	39.27	0.40	4644.75	1.07	34000.10	34000.20	34000.10	7.32
TG	11.06	15.15	4.09	ø10/16 2 br.	9.82	0.40	4227.34	2.50	19880.40	23500.40	19880.40	4.70
17 SLU	15.15	15.38	0.23	ø10/ 4 2 br.	39.27	0.40	4256.84	1.07	34000.10	34000.20	34000.10	7.99

Travata n. 103

Nodi: -74 118 -75 119 -76 151

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
3.26	1	SLV	1	17.50	4.62	4.62	4.62	3.48	-3610.42	-3897.51	1.080
3.61	18	SLU	2	17.50	7.16	4.62	7.16	2.29	-5667.48	-5882.41	1.038
5.47	19	SLU	2	203.83	4.62	4.62	4.62	4.30	3135.50	3644.53	1.162
7.72	1	SLV	3	188.27	8.17	6.63	8.17	4.00	-5650.99	-6668.46	1.180
8.07	9	SLV	4	17.50	8.17	6.63	8.17	4.90	-3764.60	-6673.67	1.773
10.53	1	SLV	5	0.00	4.62	4.62	4.62	3.93	2505.85	3350.76	1.337
12.93	1	SLV	5	239.84	4.62	4.62	4.62	3.53	-3717.25	-3897.50	1.048
3.26	2	SLD	1	17.50	4.62	4.62	4.62	3.48	-3250.73	-4566.72	1.405
3.61	10	SLD	2	17.50	7.16	4.62	7.16	2.29	-4852.29	-6878.34	1.418
5.47	6	SLD	2	203.83	4.62	4.62	4.62	4.30	2147.62	4276.52	1.991
7.72	2	SLD	3	188.27	8.17	6.63	8.17	4.00	-5124.72	-7781.43	1.518
8.07	10	SLD	4	17.50	8.17	6.63	8.17	4.90	-3448.74	-7783.53	2.257
10.53	2	SLD	5	0.00	4.62	4.62	4.62	3.93	2152.22	3937.20	1.829
12.93	2	SLD	5	239.84	4.62	4.62	4.62	3.53	-3183.07	-4566.75	1.435

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
3.26	17	SLU	1	17.50	4.62	4131.42	1.14	3636.16
3.26	2	SLD	1	17.50	4.62	3158.03	1.14	2779.45
3.61	18	SLU	2	17.50	4.62	9096.83	2.32	3913.04
3.61	10	SLD	2	17.50	4.62	6257.12	2.32	2691.53
5.47	9	SLV	2	203.83	4.62	1065.04	0.32	3328.95
5.47	10	SLD	2	203.83	4.62	840.12	0.32	2625.92
7.72	17	SLU	3	188.27	6.63	-8841.44	2.62	3368.21
7.72	2	SLD	3	188.27	6.63	-6626.18	2.62	2524.29
8.07	18	SLU	4	17.50	6.63	4451.30	1.72	2581.50
8.07	10	SLD	4	17.50	6.63	3254.81	1.72	1887.61
10.53	9	SLV	5	0.00	4.62	2232.19	0.69	3224.90
10.53	10	SLD	5	0.00	4.62	1878.49	0.69	2713.90
12.93	1	SLV	5	239.84	4.62	-3923.38	1.09	3591.11
12.93	2	SLD	5	239.84	4.62	-3569.68	1.09	3267.36

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _s <daN/cm²>
3.26	21	SLE R	1	17.50	4.62	4.62	-2429.07	2551.82	-567.46	69.02
3.26	29	SLE Q	1	17.50	4.62	4.62	-2004.53	2105.82	-468.28	56.96
3.61	22	SLE R	2	17.50	7.16	4.62	-4210.90	2900.25	-959.11	102.53
3.61	30	SLE Q	2	17.50	7.16	4.62	-3455.49	2379.96	-787.05	84.14
5.47	23	SLE R	2	203.83	4.62	4.62	2320.40	-542.07	2437.65	65.94
5.47	31	SLE Q	2	203.83	4.62	4.62	1890.43	-441.63	1985.96	53.72
7.72	21	SLE R	3	188.27	8.17	6.63	-4020.15	2434.86	-835.93	88.44
7.72	29	SLE Q	3	188.27	8.17	6.63	-3293.93	1995.02	-684.92	72.46
8.07	22	SLE R	4	17.50	8.17	6.63	-2800.82	1696.35	-582.39	61.61
8.07	30	SLE Q	4	17.50	8.17	6.63	-2360.13	1429.45	-490.75	51.92
10.53	21	SLE R	5	0.00	4.62	4.62	1043.81	-243.84	1096.55	29.66
10.53	29	SLE Q	5	0.00	4.62	4.62	909.54	-212.48	955.50	25.85
12.93	21	SLE R	5	239.84	4.62	4.62	-1562.66	1641.63	-365.06	44.40
12.93	29	SLE Q	5	239.84	4.62	4.62	-1324.71	1391.65	-309.47	37.64

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cm²>	A _{c,eff} <cm²>	σ _s <daN/cm²>	σ _{s,r} <daN/cm²>	s _{sm}	Wk <mm>
41	3.26	29	SLE Q	1	2	2	17.50	-2004.53	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2105.82	1991.52	0.57	0.14
45	3.26	25	SLE F	1	2	2	17.50	-2126.86	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2234.33	1991.52	0.65	0.17
90	3.61	30	SLE Q	2	2	2	17.50	-3455.49	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2379.96	1398.12	0.96	0.21
94	3.61	26	SLE F	2	2	2	17.50	-3670.61	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2528.13	1398.12	1.04	0.23

Relazione di calcolo

139	5.47	31	SLE Q	2	2	2	203.83	1890.43	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1985.96	1991.52	0.48	0.12
143	5.47	27	SLE F	2	2	2	203.83	2013.73	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2115.49	1991.52	0.57	0.15
185	7.72	29	SLE Q	3	2	2	188.27	-3293.93	21.00	113.33	0.13	124.87	18.00	8.17	546.35	1995.02	1297.97	0.76	0.16
189	7.72	25	SLE F	3	2	2	188.27	-3501.02	21.00	113.33	0.13	124.87	18.00	8.17	546.35	2120.44	1297.97	0.84	0.18
234	8.07	30	SLE Q	4	2	2	17.50	-2360.13	21.00	113.33	0.13	124.87	18.00	8.17	546.35	1429.45	1297.97	0.41	0.09
238	8.07	26	SLE F	4	2	2	17.50	-2486.00	21.00	113.33	0.13	124.87	18.00	8.17	546.35	1505.68	1297.97	0.46	0.10
281	10.53	29	SLE Q	5	2	2	0.00	909.54	23.00	170.00	0.13	150.70	14.00	4.62	458.21	955.50	1991.52	0.19	0.05
285	10.53	25	SLE F	5	2	2	0.00	947.28	23.00	170.00	0.13	150.70	14.00	4.62	458.21	995.15	1991.52	0.19	0.05
329	12.93	29	SLE Q	5	2	2	239.84	-1324.71	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1391.65	1991.52	0.27	0.07
333	12.93	25	SLE F	5	2	2	239.84	-1393.12	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1463.52	1991.52	0.28	0.07

Staffe - Verifiche armatura

CC	X0	X1	Lung.	Staff.	AfE St.	bw	Vsdu	ctgθ	VRsd	VRcd	Vrdu	Sic.T
<cm>	<cm>	<cm>	<cm>		<cmq/m>	<cm>	<daN>		<daN>	<daN>	<daN>	
17 SLU	0.00	3.03	3.03	ø10/16 2 br.	9.82	0.40	3684.45	2.50	19880.40	23500.40	19880.40	5.40
17 SLU	3.03	3.26	0.23	ø10/ 4 2 br.	39.27	0.40	4131.42	1.07	34000.10	34000.20	34000.10	8.23
18 SLU	3.61	3.84	0.23	ø10/ 4 2 br.	39.27	0.40	9096.83	1.07	34000.10	34000.20	34000.10	3.74
18 SLU	3.84	7.49	3.65	ø10/16 2 br.	9.82	0.40	7978.21	2.50	19880.40	23500.40	19880.40	2.49
17 SLU	7.49	7.72	0.23	ø10/ 4 2 br.	39.27	0.40	8841.44	1.07	34000.10	34000.20	34000.10	3.85
TG	8.07	8.30	0.23	ø10/ 4 2 br.	39.27	0.40	4910.73	1.07	34000.10	34000.20	34000.10	6.92
TG	8.30	12.70	4.41	ø10/16 2 br.	9.82	0.40	4634.96	2.50	19880.40	23500.40	19880.40	4.29
TG	12.70	12.93	0.23	ø10/ 4 2 br.	39.27	0.40	4563.98	1.07	34000.10	34000.20	34000.10	7.45

Travata n. 104

Nodi: 121 -80

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Acc.	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	X	AfE S	AfE I	AfEP S	AfEP I	My	Myu	Sic.
<cm>				<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
0.25	9	SLV	1	24.71	4.62	4.62	4.62	3.95	-2975.53	-3897.22	1.310
0.25	10	SLD	1	24.71	4.62	4.62	4.62	3.95	-2648.72	-4567.27	1.724

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg	CC	TCC	El	X	AfE I	Tz	AfEP I	σ _f inf
<cm>				<cm>	<cmq>	<daN>	<cmq>	<daN/cmq>
0.25	9	SLV	1	24.71	4.62	2152.84	0.67	3207.72
0.25	10	SLD	1	24.71	4.62	1986.21	0.67	2959.44

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	X	AfE S	AfE I	My	σ _f sup	σ _f inf	σ _c
<cm>				<cm>	<cmq>	<cmq>	<daNm>	<daN/cmq>	<daN/cmq>	<daN/cmq>
0.25	22	SLE R	1	24.71	4.62	4.62	-1720.75	1807.70	-401.99	48.90
0.25	30	SLE Q	1	24.71	4.62	4.62	-1521.45	1598.33	-355.43	43.23

Verifiche stato limite di formazione delle fessure

Caso	Xg	CC	TCC	El	Sez.	Crit.	X	My	c	s	K3	S _{rm}	Φ	A _s	A _{c eff}	σ _s	σ _{sr}	ε _{sm}	Wk
	<cm>						<cm>	<daNm>	<mm>	<mm>		<mm>		<cmq>	<cmq>	<daN/cmq>	<daN/cmq>		<mm>
42	0.25	30	SLE Q	1	2	2	24.71	-1521.45	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1598.33	1991.52	0.31	0.08
46	0.25	26	SLE F	1	2	2	24.71	-1577.37	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1657.08	1991.52	0.32	0.08

Staffe - Verifiche armatura

CC	X0	X1	Lung.	Staff.	AfE St.	bw	Vsdu	ctgθ	VRsd	VRcd	Vrdu	Sic.T
<cm>	<cm>	<cm>	<cm>		<cmq/m>	<cm>	<daN>		<daN>	<daN>	<daN>	
9 SLV	0.25	0.48	0.23	ø10/ 4 2 br.	39.27	0.40	2152.84	1.07	34000.10	34000.20	34000.10	15.79
9 SLV	0.48	3.38	2.90	ø10/16 2 br.	9.82	0.40	2078.80	2.50	19880.40	23500.40	19880.40	9.56

Travata n. 105

Nodi: -81 -82 123 124 153

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Acc.	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	X	AfE S	AfE I	AfEP S	AfEP I	My	Myu	Sic.
<cm>				<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
6.17	1	SLV	2	20.00	4.62	4.08	4.62	3.75	-1743.83	-3897.36	2.235
6.57	18	SLU	3	20.00	4.62	8.70	4.62	5.77	-3895.65	-3896.40	1.000
8.53	17	SLU	3	215.92	4.62	4.62	4.62	4.37	2712.20	3700.82	1.365
10.65	17	SLU	3	428.50	10.18	6.63	10.18	4.28	-4913.70	-8204.41	1.670
11.01	18	SLU	4	17.50	10.18	6.63	10.18	4.44	-6806.07	-8207.47	1.206
13.54	17	SLU	4	271.23	4.62	7.63	4.62	7.41	4018.34	6085.18	1.514
15.87	17	SLU	4	504.00	7.16	7.63	7.16	4.80	-5051.94	-5892.16	1.166
6.17	2	SLD	2	20.00	4.62	4.08	4.62	3.75	-1444.08	-4567.03	3.163

Relazione di calcolo

6.57	10	SLD	3	20.00	4.62	8.70	4.62	5.77	-3455.14	-4568.97	1.322
8.53	2	SLD	3	215.92	4.62	4.62	4.62	4.37	1680.27	4341.54	2.584
10.65	2	SLD	3	428.50	10.18	6.63	10.18	4.28	-4031.51	-9567.07	2.373
11.01	10	SLD	4	17.50	10.18	6.63	10.18	4.44	-5172.72	-9568.76	1.850
13.54	2	SLD	4	271.23	4.62	7.63	4.62	7.41	2450.28	7101.42	2.898
15.87	2	SLD	4	504.00	7.16	7.63	7.16	4.80	-3957.43	-6876.67	1.738

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
6.17	1	SLV	2	20.00	4.08	1110.27	0.33	3371.92
6.17	2	SLD	2	20.00	4.08	948.84	0.33	2881.63
6.57	18	SLU	3	20.00	8.70	6436.10	2.93	2194.50
6.57	10	SLD	3	20.00	8.70	4425.96	2.93	1509.11
8.53	9	SLV	3	215.92	4.62	720.25	0.25	2897.51
8.53	10	SLD	3	215.92	4.62	569.97	0.25	2292.93
10.65	17	SLU	3	428.50	6.63	-6934.47	2.35	2956.11
10.65	2	SLD	3	428.50	6.63	-4706.83	2.35	2006.48
11.01	18	SLU	4	17.50	6.63	8197.20	2.19	3743.81
11.01	10	SLD	4	17.50	6.63	5368.76	2.19	2452.01
13.54	9	SLV	4	271.23	7.63	558.32	0.22	2511.56
13.54	10	SLD	4	271.23	7.63	442.79	0.22	1991.88
15.87	17	SLU	4	504.00	7.63	-7478.71	2.83	2638.12
15.87	2	SLD	4	504.00	7.63	-4916.54	2.83	1734.31

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _s <daN/cmq>
6.17	21	SLE R	2	20.00	4.62	4.08	-487.29	511.99	-116.67	14.06
6.17	29	SLE Q	2	20.00	4.62	4.08	-415.31	436.36	-99.44	11.99
6.57	22	SLE R	3	20.00	4.62	8.70	-2902.09	3048.22	-569.66	74.16
6.57	30	SLE Q	3	20.00	4.62	8.70	-2402.29	2523.26	-471.55	61.38
8.53	21	SLE R	3	215.92	4.62	4.62	2005.18	-468.43	2106.50	56.98
8.53	29	SLE Q	3	215.92	4.62	4.62	1634.12	-381.75	1716.69	46.43
10.65	21	SLE R	3	428.50	10.18	6.63	-3646.19	1788.26	-742.95	74.84
10.65	29	SLE Q	3	428.50	10.18	6.63	-2976.10	1459.61	-606.41	61.09
11.01	22	SLE R	4	17.50	10.18	6.63	-5052.25	2477.86	-1029.45	103.70
11.01	30	SLE Q	4	17.50	10.18	6.63	-4153.17	2036.90	-846.25	85.25
13.54	21	SLE R	4	271.23	4.62	7.63	2973.44	-673.43	1926.71	70.90
13.54	29	SLE Q	4	271.23	4.62	7.63	2435.84	-551.68	1578.36	58.08
15.87	21	SLE R	4	504.00	7.16	7.63	-3744.04	2570.82	-756.65	83.72
15.87	29	SLE Q	4	504.00	7.16	7.63	-3046.73	2092.02	-615.73	68.13

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{em} <mm>	Φ	A _s <cmq>	A _{c,eff} <cmq>	σ _s <daN/cmq>	σ _{sz} <daN/cmq>	ε _{sm}	Wk <mm>
41	6.17	29	SLE Q	2	2	2	20.00	-415.31	23.00	170.00	0.13	150.34	14.00	4.62	458.21	436.36	2009.75	0.08	0.02
45	6.17	25	SLE F	2	2	2	20.00	-437.26	23.00	170.00	0.13	150.34	14.00	4.62	458.21	459.42	2009.75	0.09	0.02
90	6.57	30	SLE Q	3	2	2	20.00	-2402.29	23.00	170.00	0.13	153.20	14.00	4.62	458.21	2523.26	2059.29	0.82	0.21
94	6.57	26	SLE F	3	2	2	20.00	-2543.83	23.00	170.00	0.13	153.20	14.00	4.62	458.21	2671.92	2059.29	0.91	0.24
137	8.53	29	SLE Q	3	2	2	215.92	1634.12	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1716.69	1991.52	0.33	0.09
141	8.53	25	SLE F	3	2	2	215.92	1740.40	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1828.35	1991.52	0.36	0.09
185	10.65	29	SLE Q	3	2	2	428.50	-2976.10	21.00	113.33	0.13	118.04	18.00	10.18	603.64	1459.61	1107.81	0.50	0.10
189	10.65	25	SLE F	3	2	2	428.50	-3168.41	21.00	113.33	0.13	118.04	18.00	10.18	603.64	1553.93	1107.81	0.56	0.11
234	11.01	30	SLE Q	4	2	2	17.50	-4153.17	21.00	113.33	0.13	118.04	18.00	10.18	603.64	2036.90	1107.81	0.84	0.17
238	11.01	26	SLE F	4	2	2	17.50	-4409.29	21.00	113.33	0.13	118.04	18.00	10.18	603.64	2162.52	1107.81	0.91	0.18
281	13.54	29	SLE Q	4	2	2	271.23	2435.84	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1578.36	1340.37	0.49	0.12
285	13.54	25	SLE F	4	2	2	271.23	2588.97	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1677.59	1340.37	0.55	0.14
329	15.87	29	SLE Q	4	2	2	504.00	-3046.73	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2092.02	1437.60	0.78	0.17
333	15.87	25	SLE F	4	2	2	504.00	-3247.48	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2229.86	1437.60	0.86	0.19

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T	
1	SLV	0.00	5.94	5.94	ø10/16 2 br.	9.82	0.40	1050.47	2.50	19880.40	23500.40	19880.40	18.93
1	SLV	5.94	6.17	0.23	ø10/ 4 2 br.	39.27	0.40	1110.27	1.07	34000.10	34000.20	34000.10	30.62
18	SLU	6.57	6.80	0.23	ø10/ 4 2 br.	39.27	0.40	6436.10	1.07	34000.10	34000.20	34000.10	5.28
TG		6.80	10.43	3.63	ø10/16 2 br.	9.82	0.40	6751.11	2.50	19880.40	23500.40	19880.40	2.94
TG		10.43	10.65	0.23	ø10/ 4 2 br.	39.27	0.40	7203.78	1.07	34000.10	34000.20	34000.10	4.72
18	SLU	11.01	11.23	0.23	ø10/ 4 2 br.	39.27	0.40	8197.20	1.07	34000.10	34000.20	34000.10	4.15
18	SLU	11.23	15.64	4.41	ø10/16 2 br.	9.82	0.40	7458.29	2.50	19880.40	23500.40	19880.40	2.67
17	SLU	15.64	15.87	0.23	ø10/ 4 2 br.	39.27	0.40	7478.71	1.07	34000.10	34000.20	34000.10	4.55

Travata n. 106

Nodi: 130 131

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.17	1	SLV	1	17.50	4.62	4.62	4.62	4.21	-1637.60	-3897.06	2.380
3.83	9	SLV	1	383.16	4.62	4.62	4.62	4.23	-1499.41	-3897.07	2.599
0.17	2	SLD	1	17.50	4.62	4.62	4.62	4.21	-1357.84	-4567.57	3.364
3.83	10	SLD	1	383.16	4.62	4.62	4.62	4.23	-1220.19	-4567.58	3.743

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.17	1	SLV	1	17.50	4.62	1221.20	0.41	3005.99
0.17	2	SLD	1	17.50	4.62	1068.33	0.41	2629.71
3.83	9	SLV	1	383.16	4.62	-1146.85	0.38	2989.89
3.83	10	SLD	1	383.16	4.62	-993.98	0.38	2591.36

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.17	22	SLE R	1	17.50	4.62	4.62	-417.78	438.89	-97.60	11.87
0.17	30	SLE Q	1	17.50	4.62	4.62	-403.11	423.48	-94.17	11.45
3.83	21	SLE R	1	383.16	4.62	4.62	-257.42	270.42	-60.14	7.31
3.83	29	SLE Q	1	383.16	4.62	4.62	-266.96	280.45	-62.36	7.59

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
42	0.17	30	SLE Q	1	2	2	17.50	-403.11	23.00	170.00	0.13	150.70	14.00	4.62	458.21	423.48	1991.52	0.08	0.02
46	0.17	26	SLE F	1	2	2	17.50	-406.92	23.00	170.00	0.13	150.70	14.00	4.62	458.21	427.48	1991.52	0.08	0.02
89	3.83	29	SLE Q	1	2	2	383.16	-266.96	23.00	170.00	0.13	150.70	14.00	4.62	458.21	280.45	1991.52	0.05	0.01
93	3.83	25	SLE F	1	2	2	383.16	-264.59	23.00	170.00	0.13	150.70	14.00	4.62	458.21	277.96	1991.52	0.05	0.01

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.17	0.41	0.23	ø10/ 4 2 br.	39.27	0.40	2522.62	1.07	34000.10	34000.20	34000.10	13.48
TG	0.41	3.60	3.20	ø10/16 2 br.	9.82	0.40	2462.82	2.50	19880.40	23500.40	19880.40	8.07
TG	3.60	3.83	0.23	ø10/ 4 2 br.	39.27	0.40	2517.69	1.07	34000.10	34000.20	34000.10	13.50

Travata n. 107

Nodi: -91 -92

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.00	9	SLV	1	0.00	4.62	4.62	4.62	4.32	960.11	3661.72	3.814
2.22	9	SLV	1	221.86	4.62	4.62	4.62	4.22	-1156.76	-3897.08	3.369
0.00	10	SLD	1	0.00	4.62	4.62	4.62	4.32	758.72	4296.39	5.663
2.22	10	SLD	1	221.86	4.62	4.62	4.62	4.22	-980.90	-4567.60	4.657

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.00	1	SLV	1	0.00	4.62	873.79	0.30	2930.76
0.00	2	SLD	1	0.00	4.62	712.01	0.30	2388.13
2.22	9	SLV	1	221.86	4.62	-1203.21	0.40	3002.09
2.22	10	SLD	1	221.86	4.62	-1041.42	0.40	2598.43

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.00	21	SLE R	1	0.00	4.62	4.62	74.30	-17.36	78.05	2.11
0.00	29	SLE Q	1	0.00	4.62	4.62	68.39	-15.98	71.84	1.94
2.22	21	SLE R	1	221.86	4.62	4.62	-419.94	441.16	-98.10	11.93
2.22	29	SLE Q	1	221.86	4.62	4.62	-378.42	397.54	-88.40	10.75

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
41	0.00	29	SLE Q	1	2	2	0.00	68.39	23.00	170.00	0.13	150.70	14.00	4.62	458.21	71.84	1991.52	0.01	0.00
45	0.00	25	SLE F	1	2	2	0.00	69.77	23.00	170.00	0.13	150.70	14.00	4.62	458.21	73.29	1991.52	0.01	0.00
89	2.22	29	SLE Q	1	2	2	221.86	-378.42	23.00	170.00	0.13	150.70	14.00	4.62	458.21	397.54	1991.52	0.08	0.02
93	2.22	25	SLE F	1	2	2	221.86	-390.25	23.00	170.00	0.13	150.70	14.00	4.62	458.21	409.97	1991.52	0.08	0.02

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.00	0.23	0.23	ø10/ 4 2 br.	39.27	0.40	3656.45	1.07	34000.10	34000.20	34000.10	9.30
TG	0.23	1.99	1.76	ø10/16 2 br.	9.82	0.40	3633.38	2.50	19880.40	23500.40	19880.40	5.47
TG	1.99	2.22	0.23	ø10/ 4 2 br.	39.27	0.40	3693.18	1.07	34000.10	34000.20	34000.10	9.21

Travata n. 108

Nodi: 141 142 159

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	1	SLV	1	373.53	4.62	4.62	4.62	3.54	-3792.32	-5456.03	1.439
0.78	9	SLV	1	315.59	4.62	4.62	4.62	3.73	2151.69	4450.32	2.068
3.74	9	SLV	1	20.00	5.09	5.09	5.09	3.79	-4505.91	-5991.34	1.330
4.14	19	SLU	2	20.00	5.09	5.09	5.09	3.60	-5577.36	-5991.45	1.074
0.20	2	SLD	1	373.53	4.62	4.62	4.62	3.54	-3198.44	-6346.55	1.984
0.78	10	SLD	1	315.59	4.62	4.62	4.62	3.73	1707.08	5185.10	3.037
3.74	10	SLD	1	20.00	5.09	5.09	5.09	3.79	-3942.22	-6963.40	1.766
4.14	2	SLD	2	20.00	5.09	5.09	5.09	3.60	-4770.10	-6963.49	1.460

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.20	1	SLV	1	373.53	4.62	-3879.37	1.08	3607.94
0.20	2	SLD	1	373.53	4.62	-3551.96	1.08	3303.44
0.78	1	SLV	1	315.59	4.62	-3026.14	0.88	3423.18
0.78	2	SLD	1	315.59	4.62	-2698.73	0.88	3052.82
3.74	9	SLV	1	20.00	5.09	4362.25	1.29	3368.75
3.74	10	SLD	1	20.00	5.09	4034.85	1.29	3115.91
4.14	19	SLU	2	20.00	5.09	5304.30	1.49	3553.85
4.14	2	SLD	2	20.00	5.09	3661.28	1.49	2453.04

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.20	22	SLE R	1	373.53	4.62	4.62	-1063.65	793.58	-203.04	20.41
0.20	30	SLE Q	1	373.53	4.62	4.62	-1107.77	826.50	-211.47	21.26
0.78	21	SLE R	1	315.59	4.62	4.62	158.37	-30.23	118.16	3.04
0.78	29	SLE Q	1	315.59	4.62	4.62	141.44	-27.00	105.53	2.71
3.74	21	SLE R	1	20.00	5.09	5.09	-2091.59	1419.45	-385.56	38.15
3.74	29	SLE Q	1	20.00	5.09	5.09	-1960.41	1330.43	-361.38	35.76
4.14	23	SLE R	2	20.00	5.09	5.09	-4163.69	2825.68	-767.53	75.95
4.14	31	SLE Q	2	20.00	5.09	5.09	-3553.81	2411.79	-655.10	64.82

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
42	0.20	30	SLE Q	1	3	1	373.53	-1107.77	23.00	120.00	0.16	140.21	14.00	4.62	364.56	826.50	1977.14	0.16	0.04
46	0.20	26	SLE F	1	3	1	373.53	-1094.42	23.00	120.00	0.16	140.21	14.00	4.62	364.56	816.54	1977.14	0.16	0.04
89	0.78	29	SLE Q	1	3	1	315.59	141.44	23.00	120.00	0.16	140.21	14.00	4.62	364.56	105.53	1977.14	0.02	0.00
93	0.78	25	SLE F	1	3	1	315.59	146.64	23.00	120.00	0.16	140.21	14.00	4.62	364.56	109.41	1977.14	0.02	0.01
137	3.74	29	SLE Q	1	3	1	20.00	-1960.41	21.00	240.00	0.14	169.93	18.00	5.09	406.81	1330.43	1837.62	0.26	0.07
141	3.74	25	SLE F	1	3	1	20.00	-1999.65	21.00	240.00	0.14	169.93	18.00	5.09	406.81	1357.06	1837.62	0.26	0.08
187	4.14	31	SLE Q	2	3	1	20.00	-3553.81	21.00	240.00	0.14	169.93	18.00	5.09	406.81	2411.79	1837.62	0.83	0.24
191	4.14	27	SLE F	2	3	1	20.00	-3726.73	21.00	240.00	0.14	169.93	18.00	5.09	406.81	2529.14	1837.62	0.90	0.26

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.52	0.32	ø8/ 8 2 br.	12.57	0.30	5419.96	2.01	28399.80	28399.80	28399.80	5.24
TG	0.52	3.42	2.90	ø8/20 2 br.	5.03	0.30	5018.81	2.50	14161.80	24522.20	14161.80	2.82
TG	3.42	3.74	0.32	ø8/ 8 2 br.	12.57	0.30	5490.02	2.01	28399.80	28399.80	28399.80	5.17
19 SLU	4.14	4.46	0.32	ø8/ 8 2 br.	12.57	0.30	5304.30	2.01	28399.80	28399.80	28399.80	5.35
19 SLU	4.46	9.50	5.04	ø8/20 2 br.	5.03	0.30	4791.01	2.50	14161.80	24522.20	14161.80	2.96

Travata n. 109

Nodi: 143 160

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
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Relazione di calcolo

2R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
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Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	1	SLV	1	20.00	6.16	4.62	6.16	3.23	-4068.12	-5106.96	1.255
1.94	17	SLU	1	194.36	4.62	4.62	4.62	4.21	2160.48	3574.53	1.655
3.80	9	SLV	1	379.84	6.16	4.62	6.16	3.16	-4490.49	-5106.97	1.137
0.20	2	SLD	1	20.00	6.16	4.62	6.16	3.23	-3608.14	-5969.59	1.654
1.94	10	SLD	1	194.36	4.62	4.62	4.62	4.21	1535.83	4195.72	2.732
3.80	10	SLD	1	379.84	6.16	4.62	6.16	3.16	-4014.30	-5969.62	1.487

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cm>
0.20	18	SLU	1	20.00	4.62	5421.19	1.39	3913.04
0.20	2	SLD	1	20.00	4.62	4717.66	1.39	3405.23
1.94	1	SLV	1	194.36	4.62	1229.06	0.41	3007.69
1.94	2	SLD	1	194.36	4.62	968.90	0.41	2371.04
3.80	17	SLU	1	379.84	4.62	-5695.03	1.46	3913.04
3.80	10	SLD	1	379.84	4.62	-4909.25	1.46	3373.13

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cm>	σ_f inf <daN/cm>	σ_c <daN/cm>
0.20	22	SLE R	1	20.00	6.16	4.62	-2145.33	1708.36	-494.40	54.99
0.20	30	SLE Q	1	20.00	6.16	4.62	-1988.05	1583.11	-458.16	50.96
1.94	21	SLE R	1	194.36	4.62	4.62	1634.89	-381.93	1717.50	46.46
1.94	29	SLE Q	1	194.36	4.62	4.62	1510.88	-352.96	1587.23	42.93
3.80	21	SLE R	1	379.84	6.16	4.62	-2523.06	2009.15	-581.45	64.67
3.80	29	SLE Q	1	379.84	6.16	4.62	-2336.93	1860.93	-538.56	59.90

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s_{rm} <mm>	Φ	A_s <cmq>	$A_{c\ eff}$ <cmq>	σ_s <daN/cm>	σ_{sr} <daN/cm>	ϵ_{sm}	Wk <mm>
42	0.20	30	SLE Q	1	2	2	20.00	-1988.05	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1583.11	1580.14	0.39	0.08
46	0.20	26	SLE F	1	2	2	20.00	-2033.07	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1618.96	1580.14	0.41	0.09
89	1.94	29	SLE Q	1	2	2	194.36	1510.88	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1587.23	1991.52	0.31	0.08
93	1.94	25	SLE F	1	2	2	194.36	1546.29	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1624.43	1991.52	0.32	0.08
137	3.80	29	SLE Q	1	2	2	379.84	-2336.93	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1860.93	1580.14	0.58	0.12
141	3.80	25	SLE F	1	2	2	379.84	-2390.06	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1903.24	1580.14	0.61	0.13

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.43	0.23	$\emptyset 10/4\ 2\ br.$	39.27	0.40	6048.31	1.07	34000.10	34000.20	34000.10	5.62
TG	0.43	3.57	3.14	$\emptyset 10/16\ 2\ br.$	9.82	0.40	5569.36	2.50	19880.40	23500.40	19880.40	3.57
TG	3.57	3.80	0.23	$\emptyset 10/4\ 2\ br.$	39.27	0.40	6063.76	1.07	34000.10	34000.20	34000.10	5.61

Travata n. 110

Nodi: 136 143 -106

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm>	Fctk <daN/cm>	Fcd <daN/cm>	Fctd <daN/cm>	Acc.	Fyk <daN/cm>	Fyd <daN/cm>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.17	5	SLV	1	17.50	4.62	4.62	4.62	3.17	-3069.76	-3897.74	1.270
1.68	18	SLU	1	168.38	4.62	4.62	4.62	4.28	2007.78	3632.20	1.809
3.16	13	SLV	1	316.48	4.62	4.62	4.62	3.00	-3062.10	-3897.88	1.273
3.51	5	SLV	2	17.50	4.62	4.62	4.62	3.68	-2123.07	-3897.38	1.836
0.17	6	SLD	1	17.50	4.62	4.62	4.62	3.17	-2741.01	-4566.27	1.666
1.68	14	SLD	1	168.38	4.62	4.62	4.62	4.28	1239.20	4262.27	3.440
3.16	14	SLD	1	316.48	4.62	4.62	4.62	3.00	-2756.55	-4566.00	1.656
3.51	6	SLD	2	17.50	4.62	4.62	4.62	3.68	-1863.74	-4566.97	2.450

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cm>
0.17	20	SLU	1	17.50	4.62	5684.10	1.45	3913.04
0.17	6	SLD	1	17.50	4.62	4178.10	1.45	2876.29
1.68	5	SLV	1	168.38	4.62	992.09	0.34	2956.38
1.68	6	SLD	1	168.38	4.62	779.98	0.34	2324.29
3.16	19	SLU	1	316.48	4.62	-6323.09	1.62	3913.04
3.16	14	SLD	1	316.48	4.62	-4547.29	1.62	2814.09
3.51	5	SLV	2	17.50	4.62	3247.86	0.94	3444.83

Relazione di calcolo

3.51	6	SLD	2	17.50	4.62	2958.02	0.94	3137.42
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Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.17	24	SLE R	1	17.50	4.62	4.62	-1926.08	2023.41	-449.95	54.73
0.17	32	SLE Q	1	17.50	4.62	4.62	-1581.59	1661.51	-369.48	44.94
1.68	22	SLE R	1	168.38	4.62	4.62	1482.67	-346.37	1557.59	42.13
1.68	30	SLE Q	1	168.38	4.62	4.62	1199.68	-280.26	1260.30	34.09
3.16	23	SLE R	1	316.48	4.62	4.62	-2055.89	2159.77	-480.28	58.42
3.16	31	SLE Q	1	316.48	4.62	4.62	-1678.06	1762.86	-392.01	47.68
3.51	24	SLE R	2	17.50	4.62	4.62	-1150.02	1208.13	-268.66	32.68
3.51	32	SLE Q	2	17.50	4.62	4.62	-955.64	1003.93	-223.25	27.16

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.17	32	SLE Q	1	2	2	17.50	-1581.59	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1661.51	1991.52	0.32	0.08
48	0.17	28	SLE F	1	2	2	17.50	-1680.22	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1765.12	1991.52	0.34	0.09
90	1.68	30	SLE Q	1	2	2	168.38	1199.68	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1260.30	1991.52	0.24	0.06
94	1.68	26	SLE F	1	2	2	168.38	1280.49	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1345.20	1991.52	0.26	0.07
139	3.16	31	SLE Q	1	2	2	316.48	-1678.06	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1762.86	1991.52	0.34	0.09
143	3.16	27	SLE F	1	2	2	316.48	-1785.90	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1876.14	1991.52	0.40	0.10
188	3.51	32	SLE Q	2	2	2	17.50	-955.64	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1003.93	1991.52	0.19	0.05
192	3.51	28	SLE F	2	2	2	17.50	-1011.28	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1062.38	1991.52	0.21	0.05

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.17	0.41	0.23	ø10/ 4 2 br.	39.27	0.40	5771.82	1.07	34000.10	34000.20	34000.10	5.89
19 SLU	0.41	2.96	2.55	ø10/16 2 br.	9.82	0.40	5403.84	2.50	19880.40	23500.40	19880.40	3.68
19 SLU	2.96	3.19	0.23	ø10/ 4 2 br.	39.27	0.40	6436.19	1.07	34000.10	34000.20	34000.10	5.28
5 SLV	3.49	3.72	0.23	ø10/ 4 2 br.	39.27	0.40	3277.61	1.07	34000.10	34000.20	34000.10	10.37
5 SLV	3.72	5.01	1.29	ø10/16 2 br.	9.82	0.40	2999.16	2.50	19880.40	23500.40	19880.40	6.63

Travata n. 111

Nodi: 126 -94

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.15	20	SLU	1	15.00	7.63	7.63	7.63	4.89	-5825.12	-6258.58	1.074
0.15	6	SLD	1	15.00	7.63	7.63	7.63	4.89	-4227.83	-7301.86	1.727

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.15	20	SLU	1	15.00	7.63	7120.01	2.75	2591.13
0.15	6	SLD	1	15.00	7.63	4573.98	2.75	1664.57

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.15	24	SLE R	1	15.00	7.63	7.63	-4317.29	2787.74	-868.81	94.49
0.15	32	SLE Q	1	15.00	7.63	7.63	-3550.30	2292.48	-714.46	77.70

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.15	32	SLE Q	1	2	2	15.00	-3550.30	21.00	170.00	0.13	144.75	18.00	7.63	583.13	2292.48	1376.98	0.91	0.22
48	0.15	28	SLE F	1	2	2	15.00	-3769.97	21.00	170.00	0.13	144.75	18.00	7.63	583.13	2434.32	1376.98	0.99	0.24

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
20 SLU	0.15	0.38	0.23	ø10/ 4 2 br.	39.27	0.40	7120.01	1.07	34000.10	34000.20	34000.10	4.78
20 SLU	0.38	5.30	4.92	ø10/16 2 br.	9.82	0.40	6587.61	2.50	19880.40	23500.40	19880.40	3.02

Travata n. 112

Nodi: 120 -80 -81 127 -95

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
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Relazione di calcolo

3R	30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
2R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	20	SLU	1	117.70	8.70	7.63	8.70	4.30	-9294.94	-10048.40	1.081
2.83	17	SLU	2	98.31	4.62	7.63	4.62	7.46	6257.20	8667.40	1.385
5.27	19	SLU	3	15.00	10.18	7.63	10.18	3.79	-9554.21	-11641.00	1.218
5.57	5	SLV	4	15.00	10.18	4.62	10.18	4.18	-2276.03	-8202.34	3.604
0.20	6	SLD	1	117.70	8.70	7.63	8.70	4.30	-6986.43	-11651.90	1.668
2.83	2	SLD	2	98.31	4.62	7.63	4.62	7.46	4166.04	10052.80	2.413
5.27	14	SLD	3	15.00	10.18	7.63	10.18	3.79	-7219.69	-13512.60	1.872
5.57	6	SLD	4	15.00	10.18	4.62	10.18	4.18	-2095.41	-9565.97	4.565

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.20	17	SLU	1	117.70	7.63	-11498.60	3.33	3448.40
0.20	6	SLD	1	117.70	7.63	-8265.38	3.33	2478.77
2.83	13	SLV	2	98.31	7.63	488.05	0.17	2807.06
2.83	14	SLD	2	98.31	7.63	387.74	0.17	2230.10
5.27	19	SLU	3	15.00	7.63	15024.60	3.84	3913.04
5.27	14	SLD	3	15.00	7.63	10153.60	3.84	2644.43
5.57	20	SLU	4	15.00	4.62	1326.25	0.44	3028.73
5.57	6	SLD	4	15.00	4.62	1196.06	0.44	2731.42

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.20	24	SLE R	1	117.70	8.70	7.63	-6978.60	2808.59	-1073.19	98.32
0.20	32	SLE Q	1	117.70	8.70	7.63	-6154.15	2476.78	-946.40	86.70
2.83	21	SLE R	2	98.31	4.62	7.63	4685.89	-831.12	2155.91	76.01
2.83	29	SLE Q	2	98.31	4.62	7.63	4106.86	-728.42	1889.51	66.62
5.27	23	SLE R	3	15.00	10.18	7.63	-7162.60	2479.93	-1076.92	96.33
5.27	31	SLE Q	3	15.00	10.18	7.63	-6255.80	2165.96	-940.58	84.13
5.57	24	SLE R	4	15.00	10.18	4.62	-1604.91	790.19	-352.86	34.95
5.57	32	SLE Q	4	15.00	10.18	4.62	-1468.05	722.81	-322.77	31.97

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
44	0.20	32	SLE Q	1	3	1	117.70	-6154.15	21.00	60.00	0.14	100.55	18.00	8.70	408.54	2476.78	1240.85	1.05	0.18
48	0.20	28	SLE F	1	3	1	117.70	-6389.05	21.00	60.00	0.14	100.55	18.00	8.70	408.54	2571.32	1240.85	1.10	0.19
89	2.83	29	SLE Q	2	3	1	98.31	4106.86	21.00	120.00	0.14	123.70	18.00	7.63	451.85	1889.51	1341.94	0.69	0.14
93	2.83	25	SLE F	2	3	1	98.31	4273.29	21.00	120.00	0.14	123.70	18.00	7.63	451.85	1966.08	1341.94	0.73	0.15
139	5.27	31	SLE Q	3	3	1	15.00	-6255.80	21.00	80.00	0.14	102.17	18.00	10.18	458.62	2165.96	1125.01	0.91	0.16
143	5.27	27	SLE F	3	3	1	15.00	-6513.63	21.00	80.00	0.14	102.17	18.00	10.18	458.62	2255.24	1125.01	0.96	0.17
188	5.57	32	SLE Q	4	2	2	15.00	-1468.05	21.00	113.33	0.13	118.04	18.00	10.18	603.64	722.81	1089.11	0.14	0.03
192	5.57	28	SLE F	4	2	2	15.00	-1508.41	21.00	113.33	0.13	118.04	18.00	10.18	603.64	742.68	1089.11	0.14	0.03

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.52	0.32	ø8/ 8 2 br.	12.57	0.30	11503.90	2.01	28399.80	28399.80	28399.80	2.47
19 SLU	0.52	4.95	4.43	ø8/20 2 br.	5.03	0.30	12588.00	2.50	14161.80	24522.20	14161.80	1.13
19 SLU	4.95	5.27	0.32	ø8/ 8 2 br.	12.57	0.30	15024.60	2.01	28399.80	28399.80	28399.80	1.89
20 SLU	5.57	5.80	0.23	ø10/ 4 2 br.	39.27	0.40	1326.25	1.07	34000.10	34000.20	34000.10	25.64
20 SLU	5.80	10.71	4.92	ø10/16 2 br.	9.82	0.40	1248.51	2.50	19880.40	23500.40	19880.40	15.92

Travata n. 113

Nodi: 106 -72 112 -75

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.30	20	SLU	1	30.22	6.16	4.62	6.16	2.57	-4764.16	-5106.16	1.072
2.29	20	SLU	1	228.88	4.62	4.62	4.62	4.28	2986.85	3626.98	1.214
3.78	19	SLU	2	45.74	7.70	4.62	7.70	1.12	-6099.66	-6265.34	1.027
4.13	20	SLU	3	17.50	7.70	4.62	7.70	3.75	-4004.57	-6304.09	1.574
0.30	10	SLD	1	30.22	6.16	4.62	6.16	2.57	-4064.99	-5969.92	1.469
2.29	14	SLD	1	228.88	4.62	4.62	4.62	4.28	1958.34	4256.27	2.173
3.78	2	SLD	2	45.74	7.70	4.62	7.70	1.12	-5348.60	-7351.20	1.374
4.13	10	SLD	3	17.50	7.70	4.62	7.70	3.75	-3595.69	-7359.23	2.047

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.30	20	SLU	1	30.22	4.62	8025.94	2.05	3913.04
0.30	10	SLD	1	30.22	4.62	5482.28	2.05	2672.88
2.29	1	SLV	1	228.88	4.62	-1087.97	0.34	3179.77
2.29	2	SLD	1	228.88	4.62	-897.72	0.34	2623.72
3.78	19	SLU	2	45.74	4.62	-13705.90	3.50	3913.04
3.78	2	SLD	2	45.74	4.62	-9378.95	3.50	2677.70
4.13	9	SLV	3	17.50	4.62	2929.51	0.87	3375.90
4.13	10	SLD	3	17.50	4.62	2683.06	0.87	3091.90

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.30	24	SLE R	1	30.22	6.16	4.62	-3535.52	2815.38	-814.78	90.62
0.30	32	SLE Q	1	30.22	6.16	4.62	-2882.85	2295.66	-664.37	73.89
2.29	24	SLE R	1	228.88	4.62	4.62	2208.81	-516.00	2320.42	62.76
2.29	32	SLE Q	1	228.88	4.62	4.62	1796.14	-419.60	1886.90	51.04
3.78	23	SLE R	2	45.74	7.70	4.62	-4529.07	2911.79	-1024.98	107.70
3.78	31	SLE Q	2	45.74	7.70	4.62	-3705.08	2382.04	-838.50	88.11
4.13	24	SLE R	3	17.50	7.70	4.62	-2975.71	1913.12	-673.44	70.76
4.13	32	SLE Q	3	17.50	7.70	4.62	-2441.42	1569.61	-552.52	58.06

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
44	0.30	32	SLE Q	1	2	2	30.22	-2882.85	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2295.66	1580.14	0.85	0.18
48	0.30	28	SLE F	1	2	2	30.22	-3070.41	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2445.01	1580.14	0.94	0.20
92	2.29	32	SLE Q	1	2	2	228.88	1796.14	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1886.90	1991.52	0.41	0.10
96	2.29	28	SLE F	1	2	2	228.88	1914.17	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2010.90	1991.52	0.50	0.13
139	3.78	31	SLE Q	2	2	2	45.74	-3705.08	23.00	85.00	0.13	108.17	14.00	7.70	496.66	2382.04	1332.19	0.98	0.18
143	3.78	27	SLE F	2	2	2	45.74	-3939.43	23.00	85.00	0.13	108.17	14.00	7.70	496.66	2532.71	1332.19	1.06	0.19
188	4.13	32	SLE Q	3	2	2	17.50	-2441.42	23.00	85.00	0.13	108.17	14.00	7.70	496.66	1569.61	1332.19	0.49	0.09
192	4.13	28	SLE F	3	2	2	17.50	-2595.12	23.00	85.00	0.13	108.17	14.00	7.70	496.66	1668.43	1332.19	0.55	0.10

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T	
20	SLU	0.29	0.52	0.23	ø10/ 4 2 br.	39.27	0.40	8076.83	1.07	34000.10	34000.20	34000.10	4.21
19	SLU	0.52	3.55	3.03	ø10/16 2 br.	9.82	0.40	11930.00	2.50	19880.40	23500.40	19880.40	1.67
19	SLU	3.55	3.78	0.23	ø10/ 4 2 br.	39.27	0.40	13705.90	1.07	34000.10	34000.20	34000.10	2.48
9	SLV	4.13	4.36	0.23	ø10/ 4 2 br.	39.27	0.40	2929.51	1.07	34000.10	34000.20	34000.10	11.61
9	SLV	4.36	6.26	1.91	ø10/16 2 br.	9.82	0.40	2869.71	2.50	19880.40	23500.40	19880.40	6.93

Travata n. 114

Nodi: 119 124 -89

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	9	SLV	1	20.00	6.16	4.62	6.16	2.82	-4559.63	-5106.80	1.120
2.01	19	SLU	1	201.12	4.62	4.62	4.62	4.21	2786.09	3573.48	1.283
3.95	1	SLV	1	395.20	8.17	5.62	8.17	3.54	-5025.00	-6664.08	1.326
4.45	20	SLU	2	25.00	8.17	5.62	8.17	3.60	-5479.18	-6664.65	1.216
0.20	10	SLD	1	20.00	6.16	4.62	6.16	2.82	-4080.76	-5969.77	1.463
2.01	2	SLD	1	201.12	4.62	4.62	4.62	4.21	1714.76	4194.47	2.446
3.95	2	SLD	1	395.20	8.17	5.62	8.17	3.54	-4536.29	-7780.07	1.715
4.45	10	SLD	2	25.00	8.17	5.62	8.17	3.60	-4537.48	-7780.25	1.715

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.20	20	SLU	1	20.00	4.62	7038.45	1.80	3913.04
0.20	10	SLD	1	20.00	4.62	5157.15	1.80	2867.13
2.01	9	SLV	1	201.12	4.62	1233.49	0.41	3008.65
2.01	10	SLD	1	201.12	4.62	975.61	0.41	2379.64
3.95	19	SLU	1	395.20	5.62	-7454.01	2.08	3576.96
3.95	2	SLD	1	395.20	5.62	-5380.91	2.08	2582.14
4.45	20	SLU	2	25.00	5.62	7329.16	2.02	3620.90
4.45	10	SLD	2	25.00	5.62	4954.52	2.02	2447.73

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Relazione di calcolo

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.20	24	SLE R	1	20.00	6.16	4.62	-2922.69	2327.38	-673.55	74.91
0.20	32	SLE Q	1	20.00	6.16	4.62	-2416.06	1923.94	-556.79	61.93
2.01	23	SLE R	1	201.12	4.62	4.62	2057.91	-480.75	2161.90	58.48
2.01	31	SLE Q	1	201.12	4.62	4.62	1669.57	-390.03	1753.93	47.44
3.95	23	SLE R	1	395.20	8.17	5.62	-3490.02	2116.55	-754.47	79.01
3.95	31	SLE Q	1	395.20	8.17	5.62	-2837.42	1720.78	-613.39	64.23
4.45	24	SLE R	2	25.00	8.17	5.62	-4068.45	2467.35	-879.52	92.10
4.45	32	SLE Q	2	25.00	8.17	5.62	-3344.26	2028.16	-722.96	75.71

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s_{sm} <mm>	Φ	A_s <cmq>	$A_{c,eff}$ <cmq>	σ_s <daN/cmq>	σ_{sr} <daN/cmq>	ϵ_{sm}	Wk <mm>
44	0.20	32	SLE Q	1	2	2	20.00	-2416.06	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1923.94	1580.14	0.62	0.13
48	0.20	28	SLE F	1	2	2	20.00	-2559.20	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2037.93	1580.14	0.69	0.15
91	2.01	31	SLE Q	1	2	2	201.12	1669.57	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1753.93	1991.52	0.34	0.09
95	2.01	27	SLE F	1	2	2	201.12	1781.00	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1871.00	1991.52	0.39	0.10
139	3.95	31	SLE Q	1	2	2	395.20	-2837.42	21.00	113.33	0.13	124.87	18.00	8.17	546.35	1720.78	1263.29	0.61	0.13
143	3.95	27	SLE F	1	2	2	395.20	-3024.70	21.00	113.33	0.13	124.87	18.00	8.17	546.35	1834.36	1263.29	0.68	0.14
188	4.45	32	SLE Q	2	2	2	25.00	-3344.26	21.00	113.33	0.13	124.87	18.00	8.17	546.35	2028.16	1263.29	0.79	0.17
192	4.45	28	SLE F	2	2	2	25.00	-3550.94	21.00	113.33	0.13	124.87	18.00	8.17	546.35	2153.49	1263.29	0.87	0.18

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <mm>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
20 SLU	0.20	0.43	0.23	$\emptyset 10 / 4$ 2 br.	39.27	0.40	7038.45	1.07	34000.10	34000.20	34000.10	4.83
19 SLU	0.43	3.72	3.29	$\emptyset 10 / 16$ 2 br.	9.82	0.40	6570.68	2.50	19880.40	23500.40	19880.40	3.03
19 SLU	3.72	3.95	0.23	$\emptyset 10 / 4$ 2 br.	39.27	0.40	7454.01	1.07	34000.10	34000.20	34000.10	4.56
20 SLU	4.45	4.68	0.23	$\emptyset 10 / 4$ 2 br.	39.27	0.40	7329.16	1.07	34000.10	34000.20	34000.10	4.64
20 SLU	4.68	8.34	3.66	$\emptyset 10 / 16$ 2 br.	9.82	0.40	6546.69	2.50	19880.40	23500.40	19880.40	3.04

Travata n. 115

Nodi: 133 -93 139 142

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.17	20	SLU	1	252.62	11.25	7.63	11.25	4.19	-8044.87	-8999.79	1.119
2.10	17	SLU	1	59.94	4.62	7.63	4.62	7.34	5489.38	6028.54	1.098
4.10	19	SLU	2	15.00	11.78	7.63	11.78	4.05	-8359.53	-9386.62	1.123
4.40	9	SLV	3	15.00	6.16	7.63	6.16	4.37	-6456.18	-7199.98	1.115
5.92	1	SLV	3	166.38	4.62	7.63	4.62	5.55	-4399.56	-5455.30	1.240
0.17	10	SLD	1	252.62	11.25	7.63	11.25	4.19	-6402.98	-10499.70	1.640
2.10	2	SLD	1	59.94	4.62	7.63	4.62	7.34	3383.02	7035.65	2.080
4.10	2	SLD	2	15.00	11.78	7.63	11.78	4.05	-6118.25	-10958.20	1.791
4.40	10	SLD	3	15.00	6.16	7.63	6.16	4.37	-5621.57	-8359.46	1.487
5.92	2	SLD	3	166.38	4.62	7.63	4.62	5.55	-3444.10	-6345.19	1.842

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cmq>
0.17	20	SLU	1	252.62	7.63	-13480.90	3.45	3913.04
0.17	10	SLD	1	252.62	7.63	-8815.38	3.45	2558.80
2.10	9	SLV	1	59.94	7.63	-1050.63	0.30	3559.02
2.10	10	SLD	1	59.94	7.63	-834.24	0.30	2825.98
4.10	19	SLU	2	15.00	7.63	14008.80	3.58	3913.04
4.10	2	SLD	2	15.00	7.63	9092.78	3.58	2539.87
4.40	9	SLV	3	15.00	7.63	9541.83	3.26	2924.32
4.40	10	SLD	3	15.00	7.63	8359.36	3.26	2561.92
5.92	1	SLV	3	166.38	7.63	-6081.88	2.09	2913.20
5.92	2	SLD	3	166.38	7.63	-4899.41	2.09	2346.80

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.17	24	SLE R	1	252.62	11.25	7.63	-5964.21	2654.13	-1160.63	115.52
0.17	32	SLE Q	1	252.62	11.25	7.63	-4869.40	2166.93	-947.58	94.32
2.10	21	SLE R	1	59.94	4.62	7.63	4052.68	-917.86	2626.04	96.63
2.10	29	SLE Q	1	59.94	4.62	7.63	3277.26	-742.24	2123.58	78.14
4.10	23	SLE R	2	15.00	11.78	7.63	-6186.67	2633.58	-1198.29	118.20
4.10	31	SLE Q	2	15.00	11.78	7.63	-5031.96	2142.03	-974.64	96.14
4.40	24	SLE R	3	15.00	6.16	7.63	-3313.57	1861.97	-533.59	52.09

Relazione di calcolo

4.40	32	SLE Q	3	15.00	6.16	7.63	-2706.72	1520.97	-435.87	42.55
5.92	24	SLE R	3	166.38	4.62	7.63	201.41	-35.72	92.67	3.27
5.92	32	SLE Q	3	166.38	4.62	7.63	186.30	-33.04	85.72	3.02

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	S _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.17	32	SLE Q	1	2	2	252.62	-4869.40	21.00	68.00	0.13	100.80	18.00	11.25	564.81	2166.93	1031.11	0.93	0.16
48	0.17	28	SLE F	1	2	2	252.62	-5180.04	21.00	68.00	0.13	100.80	18.00	11.25	564.81	2305.17	1031.11	1.01	0.17
89	2.10	29	SLE Q	1	2	2	59.94	3277.26	21.00	170.00	0.13	144.75	18.00	7.63	583.13	2123.58	1340.37	0.83	0.20
93	2.10	25	SLE F	1	2	2	59.94	3499.67	21.00	170.00	0.13	144.75	18.00	7.63	583.13	2267.70	1340.37	0.91	0.22
139	4.10	31	SLE Q	2	2	2	15.00	-5031.96	21.00	56.67	0.13	94.17	18.00	11.78	534.59	2142.03	1010.14	0.92	0.15
143	4.10	27	SLE F	2	2	2	15.00	-5362.65	21.00	56.67	0.13	94.17	18.00	11.78	534.59	2282.80	1010.14	1.00	0.16
188	4.40	32	SLE Q	3	3	1	15.00	-2706.72	23.00	80.00	0.16	116.41	14.00	6.16	373.65	1520.97	1621.45	0.32	0.06
192	4.40	28	SLE F	3	3	1	15.00	-2886.33	23.00	80.00	0.16	116.41	14.00	6.16	373.65	1621.90	1621.45	0.39	0.08
235	5.92	31	SLE Q	3	3	1	166.38	-108.81	23.00	120.00	0.16	141.39	14.00	4.62	364.56	80.84	2039.14	0.02	0.00
240	5.92	28	SLE F	3	3	1	166.38	193.46	21.00	120.00	0.14	123.70	18.00	7.63	451.85	89.01	1341.94	0.02	0.00

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
20 SLU	0.17	0.41	0.23	ø10/ 4 2 br.	39.27	0.40	13480.90	1.07	34000.10	34000.20	34000.10	2.52
19 SLU	0.41	3.87	3.47	ø10/16 2 br.	9.82	0.40	12407.50	2.50	19880.40	23500.40	19880.40	1.60
19 SLU	3.87	4.10	0.23	ø10/ 4 2 br.	39.27	0.40	14008.80	1.07	34000.10	34000.20	34000.10	2.43
TG	4.40	4.72	0.32	ø8/ 8 2 br.	12.57	0.30	11380.70	2.01	28399.80	28399.80	28399.80	2.50
TG	4.72	5.60	0.87	ø8/20 2 br.	5.03	0.30	10395.80	2.50	14161.80	24522.20	14161.80	1.36
TG	5.60	5.92	0.32	ø8/ 8 2 br.	12.57	0.30	9341.20	2.01	28399.80	28399.80	28399.80	3.04

Travata n. 116

Nodi: 103 107 113 -76

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.15	1	SLV	1	15.00	4.62	4.62	4.62	3.71	2634.03	3181.83	1.208
2.19	1	SLV	1	219.38	4.62	4.62	4.62	3.61	-3888.67	-3897.43	1.002
2.54	20	SLU	2	17.50	9.71	4.62	9.71	1.39	-6945.10	-7740.35	1.115
4.35	20	SLU	2	197.74	4.62	7.63	4.62	7.24	4875.70	5951.44	1.221
6.14	19	SLU	2	377.62	9.71	11.72	9.71	6.76	-7049.88	-7873.52	1.117
6.50	9	SLV	3	17.50	9.71	4.08	9.71	3.34	-4030.43	-7828.56	1.942
0.15	2	SLD	1	15.00	4.62	4.62	4.62	3.71	2007.27	3741.92	1.864
2.19	2	SLD	1	219.38	4.62	4.62	4.62	3.61	-3232.24	-4566.86	1.413
2.54	10	SLD	2	17.50	9.71	4.62	9.71	1.39	-5792.93	-9105.96	1.572
4.35	10	SLD	2	197.74	4.62	7.63	4.62	7.24	2924.96	6946.15	2.375
6.14	2	SLD	2	377.62	9.71	11.72	9.71	6.76	-5924.78	-9163.07	1.547
6.50	10	SLD	3	17.50	9.71	4.08	9.71	3.34	-3579.88	-9142.40	2.554

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.15	9	SLV	1	15.00	4.62	3090.91	0.91	3410.85
0.15	10	SLD	1	15.00	4.62	2491.64	0.91	2749.55
2.19	1	SLV	1	219.38	4.62	-3525.87	1.01	3505.03
2.19	2	SLD	1	219.38	4.62	-2926.60	1.01	2909.31
2.54	20	SLU	2	17.50	4.62	12628.00	3.23	3913.04
2.54	10	SLD	2	17.50	4.62	8439.00	3.23	2615.01
4.35	1	SLV	2	197.74	7.63	-1249.40	0.39	3168.01
4.35	2	SLD	2	197.74	7.63	-984.93	0.39	2497.42
6.14	19	SLU	2	377.62	11.72	-12684.30	4.96	2559.02
6.14	2	SLD	2	377.62	11.72	-8470.46	4.96	1708.89
6.50	9	SLV	3	17.50	4.08	2842.82	0.75	3796.14
6.50	10	SLD	3	17.50	4.08	2520.14	0.75	3365.24

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.15	24	SLE R	1	15.00	4.62	4.62	-327.89	344.46	-76.60	9.32
0.15	32	SLE Q	1	15.00	4.62	4.62	-336.38	353.38	-78.58	9.56
2.19	23	SLE R	1	219.38	4.62	4.62	-1178.16	1237.70	-275.23	33.48
2.19	31	SLE Q	1	219.38	4.62	4.62	-942.25	989.86	-220.12	26.77
2.54	24	SLE R	2	17.50	9.71	4.62	-5143.09	2649.20	-1136.76	113.64
2.54	32	SLE Q	2	17.50	9.71	4.62	-4165.27	2145.53	-920.63	92.04
4.35	24	SLE R	2	197.74	4.62	7.63	3594.02	-813.98	2328.83	85.69
4.35	32	SLE Q	2	197.74	4.62	7.63	2882.49	-652.83	1867.78	68.73
6.14	23	SLE R	2	377.62	9.71	11.72	-5221.04	2663.86	-897.32	95.43

Relazione di calcolo

6.14	31	SLE Q	2	377.62	9.71	11.72	-4225.31	2155.83	-726.19	77.23
6.50	24	SLE R	3	17.50	9.71	4.08	-2385.71	1230.29	-538.60	53.60
6.50	32	SLE Q	3	17.50	9.71	4.08	-2001.77	1032.30	-451.92	44.97

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.15	32	SLE Q	1	2	2	15.00	-336.38	23.00	170.00	0.13	150.70	14.00	4.62	458.21	353.38	1991.52	0.07	0.02
48	0.15	28	SLE F	1	2	2	15.00	-332.31	23.00	170.00	0.13	150.70	14.00	4.62	458.21	349.11	1991.52	0.07	0.02
91	2.19	31	SLE Q	1	2	2	219.38	-942.25	23.00	170.00	0.13	150.70	14.00	4.62	458.21	989.86	1991.52	0.19	0.05
95	2.19	27	SLE F	1	2	2	219.38	-1012.68	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1063.85	1991.52	0.21	0.05
140	2.54	32	SLE Q	2	2	2	17.50	-4165.27	21.00	85.00	0.13	110.55	18.00	9.71	556.01	2145.53	1112.01	0.90	0.17
144	2.54	28	SLE F	2	2	2	17.50	-4444.27	21.00	85.00	0.13	110.55	18.00	9.71	556.01	2289.24	1112.01	0.98	0.18
188	4.35	32	SLE Q	2	2	2	197.74	2882.49	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1867.78	1340.37	0.67	0.17
192	4.35	28	SLE F	2	2	2	197.74	3086.56	21.00	170.00	0.13	144.75	18.00	7.63	583.13	2000.01	1340.37	0.75	0.19
235	6.14	31	SLE Q	2	2	2	377.62	-4225.31	21.00	85.00	0.13	110.55	18.00	9.71	556.01	2155.83	1177.09	0.89	0.17
239	6.14	27	SLE F	2	2	2	377.62	-4508.78	21.00	85.00	0.13	110.55	18.00	9.71	556.01	2300.46	1177.09	0.97	0.18
284	6.50	32	SLE Q	3	2	2	17.50	-2001.77	21.00	85.00	0.13	110.55	18.00	9.71	556.01	1032.30	1096.65	0.22	0.04
288	6.50	28	SLE F	3	2	2	17.50	-2112.81	21.00	85.00	0.13	110.55	18.00	9.71	556.01	1089.56	1096.65	0.26	0.05

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.15	0.38	0.23	ø10/ 4 2 br.	39.27	0.40	3951.21	1.07	34000.10	34000.20	34000.10	8.61
TG	0.38	1.96	1.58	ø10/16 2 br.	9.82	0.40	3870.75	2.50	19880.40	23500.40	19880.40	5.14
TG	1.96	2.19	0.23	ø10/ 4 2 br.	39.27	0.40	3990.05	1.07	34000.10	34000.20	34000.10	8.52
20 SLU	2.54	2.77	0.23	ø10/ 4 2 br.	39.27	0.40	12628.00	1.07	34000.10	34000.20	34000.10	2.69
19 SLU	2.77	5.92	3.14	ø10/16 2 br.	9.82	0.40	11072.40	2.50	19880.40	23500.40	19880.40	1.80
19 SLU	5.92	6.14	0.23	ø10/ 4 2 br.	39.27	0.40	12684.30	1.07	34000.10	34000.20	34000.10	2.68
9 SLV	6.50	6.72	0.23	ø10/ 4 2 br.	39.27	0.40	2842.82	1.07	34000.10	34000.20	34000.10	11.96
9 SLV	6.72	8.63	1.91	ø10/16 2 br.	9.82	0.40	2783.02	2.50	19880.40	23500.40	19880.40	7.14

Travata n. 117

Nodi: 151 153 155

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.15	20	SLU	1	405.20	11.25	7.63	11.25	4.09	-7947.33	-8996.38	1.132
2.05	19	SLU	1	214.93	4.62	7.63	4.62	7.29	5871.36	5989.16	1.020
4.05	19	SLU	1	15.00	13.32	7.63	13.32	3.93	-9162.50	-10472.00	1.143
4.35	20	SLU	2	15.00	8.70	4.62	8.70	3.15	-6382.85	-7067.25	1.107
0.15	10	SLD	1	405.20	11.25	7.63	11.25	4.09	-7017.96	-10497.40	1.496
2.05	2	SLD	1	214.93	4.62	7.63	4.62	7.29	3794.98	6989.92	1.842
4.05	2	SLD	1	15.00	13.32	7.63	13.32	3.93	-7699.51	-12261.80	1.593
4.35	10	SLD	2	15.00	8.70	4.62	8.70	3.15	-4955.54	-8254.54	1.666

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.15	20	SLU	1	405.20	7.63	-13881.50	3.55	3913.04
0.15	10	SLD	1	405.20	7.63	-9800.29	3.55	2762.59
2.05	9	SLV	1	214.93	7.63	-1335.43	0.35	3861.35
2.05	10	SLD	1	214.93	7.63	-1055.31	0.35	3051.39
4.05	19	SLU	1	15.00	7.63	14505.20	3.71	3913.04
4.05	2	SLD	1	15.00	7.63	10170.70	3.71	2743.73
4.35	20	SLU	2	15.00	4.62	5748.89	1.47	3913.04
4.35	10	SLD	2	15.00	4.62	3890.72	1.47	2648.26

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.15	24	SLE R	1	405.20	11.25	7.63	-5943.07	2644.73	-1156.52	115.11
0.15	32	SLE Q	1	405.20	11.25	7.63	-5085.75	2263.21	-989.68	98.51
2.05	23	SLE R	1	214.93	4.62	7.63	4373.28	-990.47	2833.78	104.27
2.05	31	SLE Q	1	214.93	4.62	7.63	3720.40	-842.61	2410.73	88.71
4.05	23	SLE R	1	15.00	13.32	7.63	-6838.37	2588.71	-1307.58	126.14
4.05	31	SLE Q	1	15.00	13.32	7.63	-5806.77	2198.19	-1110.33	107.11
4.35	24	SLE R	2	15.00	8.70	4.62	-4748.23	2714.66	-1061.75	108.55
4.35	32	SLE Q	2	15.00	8.70	4.62	-3973.27	2271.60	-888.46	90.83

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.15	32	SLE Q	1	2	2	405.20	-5085.75	21.00	68.00	0.13	100.80	18.00	11.25	564.81	2263.21	1031.11	0.98	0.17
48	0.15	28	SLE F	1	2	2	405.20	-5329.81	21.00	68.00	0.13	100.80	18.00	11.25	564.81	2371.82	1031.11	1.04	0.18

Relazione di calcolo

91	2.05	31	SLE Q	1	2	2	214.93	3720.40	21.00	170.00	0.13	144.75	18.00	7.63	583.13	2410.73	1340.37	0.99	0.24
95	2.05	27	SLE F	1	2	2	214.93	3907.37	21.00	170.00	0.13	144.75	18.00	7.63	583.13	2531.88	1116.97	1.11	0.27
138	4.05	30	SLE Q	1	2	2	15.00	-5696.86	21.00	48.57	0.13	87.90	18.00	13.32	535.59	2156.59	775.66	0.98	0.15
143	4.05	27	SLE F	1	2	2	15.00	-6101.64	21.00	48.57	0.13	87.90	18.00	13.32	535.59	2309.82	930.79	1.03	0.15
188	4.35	32	SLE Q	2	2	2	15.00	-3973.27	21.00	85.00	0.13	114.00	18.00	8.70	531.81	2271.60	1202.11	0.95	0.18
192	4.35	28	SLE F	2	2	2	15.00	-4194.87	21.00	85.00	0.13	114.00	18.00	8.70	531.81	2398.29	1202.11	1.02	0.20

Staffe - Verifiche armatura

CC	X0	X1	Lung.	Staff.	AfE St.	bw	Vsdu	ctgθ	VRsd	VRcd	Vrdu	Sic.T
	<m>	<m>	<m>		<cmq/m>	<m>	<daN>		<daN>	<daN>	<daN>	
20 SLU	0.15	0.38	0.23	ø10/ 4 2 br.	39.27	0.40	13881.50	1.07	34000.10	34000.20	34000.10	2.45
19 SLU	0.38	3.82	3.44	ø10/16 2 br.	9.82	0.40	12836.50	2.50	19880.40	23500.40	19880.40	1.55
19 SLU	3.82	4.05	0.23	ø10/ 4 2 br.	39.27	0.40	14505.20	1.07	34000.10	34000.20	34000.10	2.34
20 SLU	4.35	4.58	0.23	ø10/ 4 2 br.	39.27	0.40	5748.89	1.07	34000.10	34000.20	34000.10	5.91
20 SLU	4.58	8.34	3.76	ø10/16 2 br.	9.82	0.40	5249.54	2.50	19880.40	23500.40	19880.40	3.79

Travata n. 118

Nodi: 149 -71

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Acc.	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	X	AfE S	AfE I	AfEP S	AfEP I	My	Myu	Sic.
<m>				<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
0.00	1	SLV	1	0.00	4.62	4.62	4.62	4.24	1320.91	3598.96	2.725
2.37	1	SLV	1	236.88	4.62	4.62	4.62	4.16	-1375.58	-3897.09	2.833
0.00	2	SLD	1	0.00	4.62	4.62	4.62	4.24	1025.89	4223.89	4.117
2.37	2	SLD	1	236.88	4.62	4.62	4.62	4.16	-1156.51	-4567.51	3.949

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg	CC	TCC	El	X	AfE I	Tz	AfEP I	σ _f inf
<m>				<cm>	<cmq>	<daN>	<cmq>	<daN/cm²>
0.00	9	SLV	1	0.00	4.62	1127.71	0.38	2985.74
0.00	10	SLD	1	0.00	4.62	922.01	0.38	2441.13
2.37	1	SLV	1	236.88	4.62	-1395.57	0.46	3043.74
2.37	2	SLD	1	236.88	4.62	-1189.87	0.46	2595.11

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	X	AfE S	AfE I	My	σ _f sup	σ _f inf	σ _c
<m>				<cm>	<cmq>	<cmq>	<daNm>	<daN/cm²>	<daN/cm²>	<daN/cm²>
0.00	24	SLE R	1	0.00	4.62	4.62	-96.59	101.47	-22.57	2.74
0.00	32	SLE Q	1	0.00	4.62	4.62	-76.54	80.41	-17.88	2.18
2.37	23	SLE R	1	236.88	4.62	4.62	-421.58	442.88	-98.49	11.98
2.37	31	SLE Q	1	236.88	4.62	4.62	-387.48	407.06	-90.52	11.01

Verifiche stato limite di formazione delle fessure

Caso	Xg	CC	TCC	El	Sez.	Crit.	X	My	c	s	K3	s _{rm}	φ	A _s	A _c eff	σ _s	σ _{sr}	ε _{sm}	Wk
	<m>						<cm>	<daNm>	<mm>	<mm>		<mm>		<cmq>	<cmq>	<daN/cm²>	<daN/cm²>		<mm>
44	0.00	32	SLE Q	1	2	2	0.00	-76.54	23.00	170.00	0.13	150.70	14.00	4.62	458.21	80.41	1991.52	0.02	0.00
48	0.00	28	SLE F	1	2	2	0.00	-82.21	23.00	170.00	0.13	150.70	14.00	4.62	458.21	86.37	1991.52	0.02	0.00
91	2.37	31	SLE Q	1	2	2	236.88	-387.48	23.00	170.00	0.13	150.70	14.00	4.62	458.21	407.06	1991.52	0.08	0.02
95	2.37	27	SLE F	1	2	2	236.88	-397.80	23.00	170.00	0.13	150.70	14.00	4.62	458.21	417.90	1991.52	0.08	0.02

Staffe - Verifiche armatura

CC	X0	X1	Lung.	Staff.	AfE St.	bw	Vsdu	ctgθ	VRsd	VRcd	Vrdu	Sic.T
	<m>	<m>	<m>		<cmq/m>	<m>	<daN>		<daN>	<daN>	<daN>	
TG	0.00	0.23	0.23	ø10/ 4 2 br.	39.27	0.40	3443.04	1.07	34000.10	34000.20	34000.10	9.88
TG	0.23	2.14	1.91	ø10/16 2 br.	9.82	0.40	3410.33	2.50	19880.40	23500.40	19880.40	5.83
TG	2.14	2.37	0.23	ø10/ 4 2 br.	39.27	0.40	3470.13	1.07	34000.10	34000.20	34000.10	9.80

Travata n. 119

Nodi: 105 108 114 152 154 129 -90 138 159

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Acc.	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
3	R	30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	X	AfE S	AfE I	AfEP S	AfEP I	My	Myu	Sic.
<m>				<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
0.20	9	SLV	1	211.88	6.63	9.17	6.63	6.95	-7450.96	-7737.42	1.038
2.12	1	SLV	1	20.00	6.63	9.17	6.63	6.29	-7358.25	-7736.38	1.051
2.52	9	SLV	2	375.12	6.63	9.17	6.63	5.23	-7394.71	-7734.42	1.046
4.33	18	SLU	2	194.30	6.63	5.09	6.63	4.29	3846.76	5081.84	1.321
6.07	1	SLV	2	20.44	6.63	5.09	6.63	2.70	-7375.67	-7718.12	1.046
6.46	1	SLV	3	211.53	6.63	5.09	6.63	3.42	3998.90	4089.58	1.023

Relazione di calcolo

8.43	9	SLV	3	15.00	6.63	6.63	6.63	4.57	4044.77	5402.22	1.336
8.73	9	SLV	4	405.20	6.63	6.63	6.63	4.88	-5504.39	-7733.67	1.405
9.19	1	SLV	4	358.77	6.63	6.63	6.63	5.06	2797.54	5960.30	2.131
12.64	1	SLV	4	14.64	6.63	6.63	6.63	4.87	-5411.36	-7733.62	1.429
12.94	9	SLV	5	308.47	6.63	6.63	6.63	4.44	-6995.88	-7732.57	1.105
15.82	9	SLV	5	20.00	13.26	7.63	13.26	4.98	3605.84	5864.35	1.626
16.22	20	SLU	6	69.84	13.26	7.63	13.26	3.65	-10935.80	-14701.80	1.344
18.57	20	SLU	7	254.79	6.63	14.26	6.63	13.24	6939.99	15103.20	2.176
20.92	1	SLV	7	20.00	10.18	6.63	10.18	3.14	-10668.10	-11586.40	1.086
21.32	20	SLU	8	166.44	10.18	6.63	10.18	5.06	-5812.59	-11696.00	2.012
0.20	10	SLD	1	211.88	6.63	9.17	6.63	6.95	-5923.42	-8974.01	1.515
2.12	2	SLD	1	20.00	6.63	9.17	6.63	6.29	-6003.08	-8974.28	1.495
2.52	10	SLD	2	375.12	6.63	9.17	6.63	5.23	-6527.05	-8974.75	1.375
4.33	10	SLD	2	194.30	6.63	5.09	6.63	4.29	2710.28	5914.19	2.182
6.07	2	SLD	2	20.44	6.63	5.09	6.63	2.70	-6435.07	-8967.87	1.394
6.46	2	SLD	3	211.53	6.63	5.09	6.63	3.42	2863.95	4770.87	1.666
8.43	10	SLD	3	15.00	6.63	6.63	6.63	4.57	2998.26	6283.78	2.096
8.73	10	SLD	4	405.20	6.63	6.63	6.63	4.88	-4652.06	-8974.06	1.929
9.19	10	SLD	4	358.77	6.63	6.63	6.63	5.06	-2870.99	-8974.45	3.126
12.64	2	SLD	4	14.64	6.63	6.63	6.63	4.87	-4595.24	-8974.08	1.953
12.94	10	SLD	5	308.47	6.63	6.63	6.63	4.44	-5804.82	-8973.07	1.546
15.82	2	SLD	5	20.00	13.26	7.63	13.26	4.98	-7449.79	-17392.50	2.335
16.22	10	SLD	6	69.84	13.26	7.63	13.26	3.65	-10096.60	-17275.40	1.711
18.57	10	SLD	7	254.79	6.63	14.26	6.63	13.24	4658.40	17466.10	3.749
20.92	2	SLD	7	20.00	10.18	6.63	10.18	3.14	-9712.95	-13485.60	1.388
21.32	10	SLD	8	166.44	10.18	6.63	10.18	5.06	-4301.50	-13549.70	3.150

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.20	9	SLV	1	211.88	9.17	-8009.80	2.22	3605.58
0.20	10	SLD	1	211.88	9.17	-6507.48	2.22	2929.32
2.12	1	SLV	1	20.00	9.17	8746.29	2.89	3030.03
2.12	2	SLD	1	20.00	9.17	7243.96	2.89	2509.57
2.52	20	SLU	2	375.12	9.17	-9637.99	3.94	2444.08
2.52	10	SLD	2	375.12	9.17	-8096.56	3.94	2053.19
4.33	1	SLV	2	194.30	5.09	2382.87	0.80	2979.83
4.33	2	SLD	2	194.30	5.09	1873.16	0.80	2342.42
6.07	19	SLU	2	20.44	5.09	9345.82	2.39	3913.04
6.07	2	SLD	2	20.44	5.09	7895.07	2.39	3305.62
6.46	9	SLV	3	211.53	5.09	-6373.89	1.67	3813.43
6.46	10	SLD	3	211.53	5.09	-5364.83	1.67	3209.72
8.43	1	SLV	3	15.00	6.63	5935.24	2.06	2885.25
8.43	2	SLD	3	15.00	6.63	4926.18	2.06	2394.73
8.73	9	SLV	4	405.20	6.63	-4575.56	1.75	2618.61
8.73	10	SLD	4	405.20	6.63	-4148.83	1.75	2374.40
9.19	9	SLV	4	358.77	6.63	-3953.46	1.57	2524.77
9.19	10	SLD	4	358.77	6.63	-3526.74	1.57	2252.25
12.64	1	SLV	4	14.64	6.63	4613.90	1.76	2624.40
12.64	2	SLD	4	14.64	6.63	4187.17	1.76	2381.68
12.94	9	SLV	5	308.47	6.63	-7207.13	2.19	3288.29
12.94	10	SLD	5	308.47	6.63	-6344.69	2.19	2894.80
15.82	1	SLV	5	20.00	7.63	8055.05	2.65	3034.63
15.82	2	SLD	5	20.00	7.63	7192.61	2.65	2709.72
16.22	20	SLU	6	69.84	7.63	-15571.00	3.98	3913.04
16.22	10	SLD	6	69.84	7.63	-11373.40	3.98	2858.16
18.57	1	SLV	7	254.79	14.26	1802.69	1.02	1768.66
18.57	2	SLD	7	254.79	14.26	1415.29	1.02	1388.57
20.92	19	SLU	7	20.00	6.63	13670.20	3.49	3913.04
20.92	2	SLD	7	20.00	6.63	10183.50	3.49	2915.00
21.32	20	SLU	8	166.44	6.63	-3969.41	1.57	2527.17
21.32	10	SLD	8	166.44	6.63	-2869.13	1.57	1826.67

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.20	24	SLE R	1	211.88	6.63	9.17	-542.30	283.04	-81.43	7.94
0.20	32	SLE Q	1	211.88	6.63	9.17	-556.48	290.44	-83.56	8.15
2.12	23	SLE R	1	20.00	6.63	9.17	-1392.36	726.71	-209.07	20.39
2.12	31	SLE Q	1	20.00	6.63	9.17	-1241.29	647.86	-186.38	18.18
2.52	24	SLE R	2	375.12	6.63	9.17	-3949.58	2061.40	-593.04	57.84
2.52	32	SLE Q	2	375.12	6.63	9.17	-3476.13	1814.29	-521.95	50.91
4.33	22	SLE R	2	194.30	6.63	5.09	2875.46	-494.42	1946.37	49.79
4.33	30	SLE Q	2	194.30	6.63	5.09	2488.11	-427.82	1684.17	43.09
6.07	23	SLE R	2	20.44	6.63	5.09	-3564.87	1875.50	-633.08	59.51
6.07	31	SLE Q	2	20.44	6.63	5.09	-3125.03	1644.10	-554.97	52.16
6.46	24	SLE R	3	211.53	6.63	5.09	-1420.41	747.28	-252.25	23.71
6.46	32	SLE Q	3	211.53	6.63	5.09	-1289.32	678.32	-228.97	21.52

Relazione di calcolo

8.43	23	SLE R	3	15.00	6.63	6.63	-970.67	508.87	-161.39	15.38
8.43	31	SLE Q	3	15.00	6.63	6.63	-865.72	453.85	-143.94	13.72
8.73	24	SLE R	4	405.20	6.63	6.63	-1937.47	1015.71	-322.14	30.70
8.73	32	SLE Q	4	405.20	6.63	6.63	-1647.69	863.79	-273.96	26.11
9.19	24	SLE R	4	358.77	6.63	6.63	-635.11	332.95	-105.60	10.06
9.19	32	SLE Q	4	358.77	6.63	6.63	-563.56	295.44	-93.70	8.93
12.64	23	SLE R	4	14.64	6.63	6.63	-2046.87	1073.06	-340.33	32.44
12.64	31	SLE Q	4	14.64	6.63	6.63	-1722.71	903.12	-286.43	27.30
12.94	24	SLE R	5	308.47	6.63	6.63	-1777.05	931.61	-295.47	28.16
12.94	32	SLE Q	5	308.47	6.63	6.63	-1612.65	845.42	-268.13	25.56
15.82	23	SLE R	5	20.00	13.26	7.63	-3271.70	879.87	-473.01	40.86
15.82	31	SLE Q	5	20.00	13.26	7.63	-2883.99	775.60	-416.96	36.02
16.22	24	SLE R	6	69.84	13.26	7.63	-8206.32	2206.96	-1186.44	102.50
16.22	32	SLE Q	6	69.84	13.26	7.63	-7158.16	1925.07	-1034.90	89.41
18.57	24	SLE R	7	254.79	6.63	14.26	5184.79	-768.79	1305.26	65.56
18.57	32	SLE Q	7	254.79	6.63	14.26	4482.26	-664.62	1128.40	56.67
20.92	23	SLE R	7	20.00	10.18	6.63	-7388.48	2565.52	-1154.10	102.59
20.92	31	SLE Q	7	20.00	10.18	6.63	-6358.20	2207.77	-993.17	88.29
21.32	24	SLE R	8	166.44	10.18	6.63	-4328.90	1503.13	-676.19	60.11
21.32	32	SLE Q	8	166.44	10.18	6.63	-3666.82	1273.24	-572.77	50.92

Verifiche stato limite di formazione delle fessure

Caso	Xg	CC	TCC	El	Sez.	Crit.	X	My	c	s	K3	s _{rm}	Φ	A _s	A _{c,eff}	σ _s	σ _{sz}	s _{sm}	Wk
	<m>						<mm>	<daNm>	<mm>	<mm>		<mm>		<cmq>	<cmq>	<daN/cmq>	<daN/cmq>		<mm>
44	0.20	32	SLE Q	1	3	1	211.88	-556.48	21.00	120.00	0.14	131.36	18.00	6.63	425.13	290.44	1559.96	0.06	0.01
48	0.20	28	SLE F	1	3	1	211.88	-551.29	21.00	120.00	0.14	131.36	18.00	6.63	425.13	287.73	1559.96	0.06	0.01
91	2.12	31	SLE Q	1	3	1	20.00	-1241.29	21.00	120.00	0.14	131.36	18.00	6.63	425.13	647.86	1559.96	0.13	0.03
95	2.12	27	SLE F	1	3	1	20.00	-1287.02	21.00	120.00	0.14	131.36	18.00	6.63	425.13	671.73	1559.96	0.13	0.03
140	2.52	32	SLE Q	2	3	1	375.12	-3476.13	21.00	120.00	0.14	131.36	18.00	6.63	425.13	1814.29	1545.36	0.56	0.13
144	2.52	28	SLE F	2	3	1	375.12	-3611.10	21.00	120.00	0.14	131.36	18.00	6.63	425.13	1884.74	1545.36	0.61	0.14
186	4.33	30	SLE Q	2	3	1	194.30	2488.11	21.00	240.00	0.14	170.91	18.00	5.09	406.81	1684.17	1866.40	0.33	0.10
190	4.33	26	SLE F	2	3	1	194.30	2599.29	21.00	240.00	0.14	170.91	18.00	5.09	406.81	1759.43	1866.40	0.37	0.11
235	6.07	31	SLE Q	2	3	1	20.44	-3125.03	21.00	120.00	0.14	129.32	18.00	6.63	425.13	1644.10	1496.65	0.47	0.10
239	6.07	27	SLE F	2	3	1	20.44	-3250.07	21.00	120.00	0.14	129.32	18.00	6.63	425.13	1709.89	1496.65	0.51	0.11
284	6.46	32	SLE Q	3	3	1	211.53	-1289.32	21.00	120.00	0.14	129.32	18.00	6.63	425.13	678.32	1496.65	0.13	0.03
288	6.46	28	SLE F	3	3	1	211.53	-1329.35	21.00	120.00	0.14	129.32	18.00	6.63	425.13	699.38	1496.65	0.14	0.03
331	8.43	31	SLE Q	3	3	1	15.00	-865.72	21.00	120.00	0.14	130.13	18.00	6.63	425.13	453.85	1518.48	0.09	0.02
335	8.43	27	SLE F	3	3	1	15.00	-895.45	21.00	120.00	0.14	130.13	18.00	6.63	425.13	469.43	1518.48	0.09	0.02
380	8.73	32	SLE Q	4	3	1	405.20	-1647.69	21.00	120.00	0.14	130.13	18.00	6.63	425.13	863.79	1518.48	0.17	0.04
384	8.73	28	SLE F	4	3	1	405.20	-1729.65	21.00	120.00	0.14	130.13	18.00	6.63	425.13	906.76	1518.48	0.18	0.04
428	9.19	32	SLE Q	4	3	1	358.77	-563.56	21.00	120.00	0.14	130.13	18.00	6.63	425.13	295.44	1518.48	0.06	0.01
432	9.19	28	SLE F	4	3	1	358.77	-583.24	21.00	120.00	0.14	130.13	18.00	6.63	425.13	305.76	1518.48	0.06	0.01
475	12.64	31	SLE Q	4	3	1	14.64	-1722.71	21.00	120.00	0.14	130.13	18.00	6.63	425.13	903.12	1518.48	0.18	0.04
479	12.64	27	SLE F	4	3	1	14.64	-1815.06	21.00	120.00	0.14	130.13	18.00	6.63	425.13	951.53	1518.48	0.18	0.04
524	12.94	32	SLE Q	5	3	1	308.47	-1612.65	21.00	120.00	0.14	130.13	18.00	6.63	425.13	845.42	1518.48	0.16	0.04
528	12.94	28	SLE F	5	3	1	308.47	-1658.62	21.00	120.00	0.14	130.13	18.00	6.63	425.13	869.52	1518.48	0.17	0.04
571	15.82	31	SLE Q	5	3	1	20.00	-2883.99	21.00	48.00	0.13	84.61	18.00	13.26	457.41	775.60	951.16	0.15	0.02
575	15.82	27	SLE F	5	3	1	20.00	-2997.90	21.00	48.00	0.13	84.61	18.00	13.26	457.41	806.24	963.13	0.16	0.02
620	16.22	32	SLE Q	6	3	1	69.84	-7158.16	21.00	48.00	0.13	84.61	18.00	13.26	457.41	1925.07	933.22	0.82	0.12
624	16.22	28	SLE F	6	3	1	69.84	-7456.75	21.00	48.00	0.13	84.61	18.00	13.26	457.41	2005.37	933.22	0.87	0.12
668	18.57	32	SLE Q	7	3	1	254.79	4482.26	21.00	48.00	0.13	81.90	18.00	14.26	459.68	1128.40	879.90	0.38	0.05
672	18.57	28	SLE F	7	3	1	254.79	4683.90	21.00	48.00	0.13	81.90	18.00	14.26	459.68	1179.16	879.90	0.41	0.06
715	20.92	31	SLE Q	7	3	1	20.00	-6358.20	21.00	80.00	0.13	101.79	18.00	10.18	458.62	2207.77	1116.06	0.93	0.16
719	20.92	27	SLE F	7	3	1	20.00	-6651.88	21.00	80.00	0.13	101.79	18.00	10.18	458.62	2309.74	1116.06	0.99	0.17
764	21.32	32	SLE Q	8	3	1	166.44	-3666.82	21.00	80.00	0.13	101.79	18.00	10.18	458.62	1273.24	1116.06	0.38	0.07
768	21.32	28	SLE F	8	3	1	166.44	-3856.68	21.00	80.00	0.13	101.79	18.00	10.18	458.62	1339.16	1116.06	0.42	0.07

Staffe - Verifiche armatura

CC	X0	X1	Lung.	Staff.	AfE St.	bw	Vsdu	ctgθ	VRsd	VRcd	Vrdu	Sic. T
	<m>	<m>	<m>		<cmq/m>	<m>	<daN>		<daN>	<daN>	<daN>	
TG	0.20	0.52	0.32	ø8/ 8 2 br.	12.57	0.30	9270.36	2.01	28399.80	28399.80	28399.80	3.06
TG	0.52	1.80	1.28	ø8/20 2 br.	5.03	0.30	9192.00	2.50	14161.80	24522.20	14161.80	1.54
TG	1.80	2.12	0.32	ø8/ 8 2 br.	12.57	0.30	9663.21	2.01	28399.80	28399.80	28399.80	2.94
20 SLU	2.52	2.84	0.32	ø8/ 8 2 br.	12.57	0.30	9637.99	2.01	28399.80	28399.80	28399.80	2.95
TG	2.84	5.75	2.91	ø8/20 2 br.	5.03	0.30	8942.59	2.50	14161.80	24522.20	14161.80	1.58
TG	5.75	6.07	0.32	ø8/ 8 2 br.	12.57	0.30	10051.00	2.01	28399.80	28399.80	28399.80	2.83
TG	6.46	6.78	0.32	ø8/ 8 2 br.	12.57	0.30	8150.53	2.01	28399.80	28399.80	28399.80	3.48
TG	6.78	8.10	1.32	ø8/20 2 br.	5.03	0.30	7672.08	2.50	14161.80	24522.20	14161.80	1.85
TG	8.10	8.42	0.32	ø8/ 8 2 br.	12.57	0.30	7469.40	2.01	28399.80	28399.80	28399.80	3.80
TG	8.73	9.05	0.32	ø8/ 8 2 br.	12.57	0.30	6063.95	2.01	28399.80	28399.80	28399.80	4.68
TG	9.05	12.32	3.27	ø8/20 2 br.	5.03	0.30	5638.37	2.50	14161.80	24522.20	14161.80	2.51
TG	12.32	12.64	0.32	ø8/ 8 2 br.	12.57	0.30	6067.09	2.01	28399.80	28399.80	28399.80	4.68
TG	12.94	13.26	0.32	ø8/ 8 2 br.	12.57	0.30	8324.45	2.01	28399.80	28399.80	28399.80	3.41
TG	13.26	15.50	2.24	ø8/20 2 br.	5.03	0.30	9818.80	2.50	14161.80	24522.20	14161.80	1.44
TG	15.50	15.82	0.32	ø8/ 8 2 br.	12.57	0.30	10622.80	2.01	28399.80	28399.80	28399.80	2.67
20 SLU	16.22	16.54	0.32	ø8/ 8 2 br.	12.57	0.30	15571.00	2.01	28399.80	28399.80	28399.80	1.82
20 SLU	16.54	20.60	4.06	ø8/16 2 br.	6.28	0.30	14402.50	2.50	17702.20	24522.20	17702.20	1.23
19 SLU	20.60	20.92	0.32	ø8/ 8 2 br.	12.57	0.30	13670.20	2.01	28399.80	28399.80	28399.80	2.08
20 SLU	21.32	21.64	0.32	ø8/ 8 2 br.	12.57	0.30	3969.41	2.01	28399.80	28399.80	28399.80	7.15
20 SLU	21.64	22.98	1.34	ø8/20 2 br.	5.03	0.30	3860.20	2.50	14161.80	24522.20	14161.80	3.67

Travata n. 120

Nodi: 147 101 102 103

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Acc.	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>

Relazione di calcolo

3R	30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
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Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
1.89	17	SLU	1	25.16	15.27	15.27	15.27	12.49	-17253.10	-17497.20	1.014
2.39	9	SLV	2	479.91	15.27	15.27	15.27	11.22	-9981.23	-17476.40	1.751
6.65	1	SLV	2	54.59	7.63	7.63	7.63	5.50	-5378.43	-8868.96	1.649
6.99	1	SLV	2	20.02	7.63	7.63	7.63	5.35	-7179.02	-8867.90	1.235
7.40	1	SLV	3	291.99	7.63	7.63	7.63	5.27	5971.88	6193.44	1.037
10.07	1	SLV	3	24.60	7.63	7.63	7.63	5.05	-8583.74	-8865.77	1.033
1.89	2	SLD	1	25.16	15.27	15.27	15.27	12.49	-12577.10	-20188.40	1.605
2.39	10	SLD	2	479.91	15.27	15.27	15.27	11.22	-8662.08	-20165.20	2.328
6.65	2	SLD	2	54.59	7.63	7.63	7.63	5.50	-4431.13	-10281.10	2.320
6.99	2	SLD	2	20.02	7.63	7.63	7.63	5.35	-6047.52	-10280.60	1.700
7.40	10	SLD	3	291.99	7.63	7.63	7.63	5.27	-7005.22	-10280.40	1.468
10.07	2	SLD	3	24.60	7.63	7.63	7.63	5.05	-7139.42	-10279.80	1.440

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
1.89	20	SLU	1	25.16	15.27	10877.60	2.78	3913.04
1.89	6	SLD	1	25.16	15.27	7895.98	2.78	2840.45
2.39	9	SLV	2	479.91	15.27	-6327.82	4.05	1563.45
2.39	10	SLD	2	479.91	15.27	-5794.95	4.05	1431.79
6.65	1	SLV	2	54.59	7.63	4953.67	2.13	2323.31
6.65	2	SLD	2	54.59	7.63	4420.79	2.13	2073.38
6.99	1	SLV	2	20.02	7.63	5463.57	2.29	2390.10
6.99	2	SLD	2	20.02	7.63	4930.70	2.29	2156.99
7.40	9	SLV	3	291.99	7.63	-8943.49	2.37	3780.52
7.40	10	SLD	3	291.99	7.63	-7841.23	2.37	3314.58
10.07	1	SLV	3	24.60	7.63	8969.68	2.59	3467.11
10.07	2	SLD	3	24.60	7.63	7867.42	2.59	3041.05

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
1.89	21	SLE R	1	25.16	15.27	15.27	-13073.50	3014.24	-1453.74	127.73
1.89	29	SLE Q	1	25.16	15.27	15.27	-12156.40	2802.79	-1351.76	118.77
2.39	22	SLE R	2	479.91	15.27	15.27	-4141.54	954.88	-460.53	40.46
2.39	30	SLE Q	2	479.91	15.27	15.27	-4026.70	928.40	-447.76	39.34
6.65	21	SLE R	2	54.59	7.63	7.63	-1109.96	506.75	-173.82	16.28
6.65	29	SLE Q	2	54.59	7.63	7.63	-1102.28	503.24	-172.62	16.17
6.99	21	SLE R	2	20.02	7.63	7.63	-2072.91	946.38	-324.62	30.41
6.99	29	SLE Q	2	20.02	7.63	7.63	-2071.36	945.67	-324.38	30.38
7.40	22	SLE R	3	291.99	7.63	7.63	-1832.60	836.66	-286.99	26.88
7.40	30	SLE Q	3	291.99	7.63	7.63	-1726.07	788.03	-270.30	25.32
10.07	21	SLE R	3	24.60	7.63	7.63	-2322.47	1060.31	-363.70	34.07
10.07	29	SLE Q	3	24.60	7.63	7.63	-2068.78	944.49	-323.97	30.35

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{cr} <mm>	Φ	A _s <cmq>	A _{s,eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
41	1.89	29	SLE Q	1	3	1	25.16	-12156.40	21.00	48.00	0.14	81.85	18.00	15.27	461.95	2802.79	912.07	1.29	0.18
46	1.89	26	SLE F	1	3	1	25.16	-12390.20	21.00	48.00	0.14	81.85	18.00	15.27	461.95	2856.71	760.06	1.34	0.19
90	2.39	30	SLE Q	2	3	1	479.91	-4026.70	21.00	48.00	0.14	81.85	18.00	15.27	461.95	928.40	912.07	0.23	0.03
94	2.39	26	SLE F	2	3	1	479.91	-4059.60	21.00	48.00	0.14	81.85	18.00	15.27	461.95	935.99	912.07	0.24	0.03
137	6.65	29	SLE Q	2	3	1	54.59	-1102.28	21.00	120.00	0.14	125.19	18.00	7.63	451.85	503.24	1378.67	0.10	0.02
141	6.65	25	SLE F	2	3	1	54.59	-1103.64	21.00	120.00	0.14	125.19	18.00	7.63	451.85	503.86	1378.67	0.10	0.02
185	6.99	29	SLE Q	2	3	1	20.02	-2071.36	21.00	120.00	0.14	125.19	18.00	7.63	451.85	945.67	1378.67	0.18	0.04
189	6.99	25	SLE F	2	3	1	20.02	-2070.90	21.00	120.00	0.14	125.19	18.00	7.63	451.85	945.46	1378.67	0.18	0.04
234	7.40	30	SLE Q	3	3	1	291.99	-1726.07	21.00	120.00	0.14	125.19	18.00	7.63	451.85	788.03	1378.67	0.15	0.03
238	7.40	26	SLE F	3	3	1	291.99	-1757.86	21.00	120.00	0.14	125.19	18.00	7.63	451.85	802.54	1378.67	0.16	0.03
281	10.07	29	SLE Q	3	3	1	24.60	-2068.78	21.00	120.00	0.14	125.19	18.00	7.63	451.85	944.49	1378.67	0.18	0.04
285	10.07	25	SLE F	3	3	1	24.60	-2141.80	21.00	120.00	0.14	125.19	18.00	7.63	451.85	977.83	1378.67	0.19	0.04

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T	
20	SLU	0.00	1.57	1.57	ø8/20 2 br.	5.03	0.30	10263.70	2.50	14161.80	24522.20	14161.80	1.38
20	SLU	1.57	1.89	0.32	ø8/ 8 2 br.	12.57	0.30	10877.60	2.01	28399.80	28399.80	28399.80	2.61
TG	2.39	2.71	0.32	ø8/ 8 2 br.	12.57	0.30	8590.29	2.01	28399.80	28399.80	28399.80	3.31	
TG	2.71	6.67	3.96	ø8/20 2 br.	5.03	0.30	8113.70	2.50	14161.80	24522.20	14161.80	1.75	
TG	6.67	6.99	0.32	ø8/ 8 2 br.	12.57	0.30	8166.32	2.01	28399.80	28399.80	28399.80	3.48	
TG	7.40	7.72	0.32	ø8/ 8 2 br.	12.57	0.30	9380.50	2.01	28399.80	28399.80	28399.80	3.03	
TG	7.72	9.75	2.03	ø8/20 2 br.	5.03	0.30	8555.90	2.50	14161.80	24522.20	14161.80	1.66	
TG	9.75	10.07	0.32	ø8/ 8 2 br.	12.57	0.30	9476.60	2.01	28399.80	28399.80	28399.80	3.00	

Travata n. 121

Nodi: 101 104 110

Relazione di calcolo

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.15	17	SLU	1	396.89	7.16	7.63	7.16	4.26	-5312.43	-5890.88	1.109
2.02	18	SLU	1	209.97	4.62	7.63	4.62	7.37	4494.60	6055.67	1.347
3.94	18	SLU	1	17.51	7.70	4.62	7.70	1.99	-5823.36	-6286.03	1.079
4.29	5	SLV	2	286.82	4.62	4.62	4.62	3.72	-3019.92	-3897.35	1.291
6.99	13	SLV	2	17.51	4.62	4.62	4.62	3.80	-2646.31	-3897.30	1.473
0.15	6	SLD	1	396.89	7.16	7.63	7.16	4.26	-4275.90	-6876.98	1.608
2.02	10	SLD	1	209.97	4.62	7.63	4.62	7.37	2760.02	7067.19	2.561
3.94	14	SLD	1	17.51	7.70	4.62	7.70	1.99	-4494.32	-7355.05	1.637
4.29	6	SLD	2	286.82	4.62	4.62	4.62	3.72	-2641.55	-4566.98	1.729
6.99	14	SLD	2	17.51	4.62	4.62	4.62	3.80	-2244.91	-4567.11	2.034

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.15	17	SLU	1	396.89	7.63	-10016.00	3.37	2970.49
0.15	6	SLD	1	396.89	7.63	-6538.52	3.37	1939.15
2.02	5	SLV	1	209.97	7.63	-741.08	0.26	2847.55
2.02	6	SLD	1	209.97	7.63	-582.63	0.26	2238.72
3.94	18	SLU	1	17.51	4.62	10294.40	2.63	3913.04
3.94	14	SLD	1	17.51	4.62	6708.19	2.63	2549.87
4.29	5	SLV	2	286.82	4.62	-3058.65	0.90	3403.86
4.29	6	SLD	2	286.82	4.62	-2769.15	0.90	3081.69
6.99	13	SLV	2	17.51	4.62	2711.13	0.81	3328.61
6.99	14	SLD	2	17.51	4.62	2421.63	0.81	2973.18

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.15	21	SLE R	1	396.89	7.16	7.63	-3929.65	2698.27	-794.16	87.87
0.15	29	SLE Q	1	396.89	7.16	7.63	-3173.04	2178.75	-641.26	70.95
2.02	22	SLE R	1	209.97	4.62	7.63	3319.64	-751.84	2151.04	79.15
2.02	30	SLE Q	1	209.97	4.62	7.63	2691.49	-609.58	1744.02	64.17
3.94	22	SLE R	1	17.51	7.70	4.62	-4306.34	2768.60	-974.57	102.40
3.94	30	SLE Q	1	17.51	7.70	4.62	-3483.33	2239.47	-788.32	82.83
4.29	21	SLE R	2	286.82	4.62	4.62	-1564.93	1644.01	-365.58	44.47
4.29	29	SLE Q	2	286.82	4.62	4.62	-1310.78	1377.02	-306.21	37.25
6.99	22	SLE R	2	17.51	4.62	4.62	-1021.17	1072.78	-238.56	29.02
6.99	30	SLE Q	2	17.51	4.62	4.62	-834.53	876.70	-194.95	23.71

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
41	0.15	29	SLE Q	1	2	2	396.89	-3173.04	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2178.75	1437.60	0.83	0.18
45	0.15	25	SLE F	1	2	2	396.89	-3388.31	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2326.56	1437.60	0.91	0.20
90	2.02	30	SLE Q	1	2	2	209.97	2691.49	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1744.02	1340.37	0.60	0.15
94	2.02	26	SLE F	1	2	2	209.97	2871.35	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1860.56	1340.37	0.67	0.16
138	3.94	30	SLE Q	1	2	2	17.51	-3483.33	23.00	85.00	0.13	108.17	14.00	7.70	496.66	2239.47	1332.19	0.89	0.16
142	3.94	26	SLE F	1	2	2	17.51	-3718.70	23.00	85.00	0.13	108.17	14.00	7.70	496.66	2390.80	1110.16	1.04	0.19
185	4.29	29	SLE Q	2	2	2	286.82	-1310.78	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1377.02	1991.52	0.27	0.07
189	4.29	25	SLE F	2	2	2	286.82	-1384.35	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1454.30	1991.52	0.28	0.07
234	6.99	30	SLE Q	2	2	2	17.51	-834.53	23.00	170.00	0.13	150.70	14.00	4.62	458.21	876.70	1991.52	0.17	0.04
238	6.99	26	SLE F	2	2	2	17.51	-887.41	23.00	170.00	0.13	150.70	14.00	4.62	458.21	932.25	1991.52	0.18	0.05

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	VRdu <daN>	Sic.T	
17	SLU	0.15	0.38	0.23	ø10/ 4 2 br.	39.27	0.40	10016.00	1.07	34000.10	34000.20	34000.10	3.39
18	SLU	0.38	3.74	3.36	ø10/16 2 br.	9.82	0.40	9197.90	2.50	19880.40	23500.40	19880.40	2.16
18	SLU	3.74	3.97	0.23	ø10/ 4 2 br.	39.27	0.40	10428.10	1.07	34000.10	34000.20	34000.10	3.26
TG		4.27	4.50	0.23	ø10/ 4 2 br.	39.27	0.40	4195.64	1.07	34000.10	34000.20	34000.10	8.10
TG		4.50	6.78	2.28	ø10/16 2 br.	9.82	0.40	3960.76	2.50	19880.40	23500.40	19880.40	5.02
TG		6.78	7.01	0.23	ø10/ 4 2 br.	39.27	0.40	4170.80	1.07	34000.10	34000.20	34000.10	8.15

Travata n. 122

Nodi: 103 149 105

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
3	R	30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Relazione di calcolo

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	9	SLV	1	394.84	8.70	7.63	8.70	4.57	-8676.08	-10053.10	1.159
3.41	9	SLV	1	74.03	4.62	7.63	4.62	5.92	4249.98	6934.42	1.632
4.75	1	SLV	2	15.30	7.16	7.63	7.16	4.94	-7444.41	-8336.04	1.120
0.20	10	SLD	1	394.84	8.70	7.63	8.70	4.57	-7742.47	-11654.70	1.505
3.41	10	SLD	1	74.03	4.62	7.63	4.62	5.92	3747.50	8051.59	2.149
4.75	2	SLD	2	15.30	7.16	7.63	7.16	4.94	-6477.09	-9667.64	1.493

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cm>
0.20	18	SLU	1	394.84	7.63	-8555.69	3.06	2795.14
0.20	10	SLD	1	394.84	7.63	-7381.40	3.06	2411.50
3.41	1	SLV	1	74.03	7.63	4016.07	1.71	2345.78
3.41	2	SLD	1	74.03	7.63	3582.82	1.71	2092.72
4.75	17	SLU	2	15.30	7.63	6969.78	2.69	2587.40
4.75	2	SLD	2	15.30	7.63	5879.18	2.69	2182.54

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cm>	σ_f inf <daN/cm>	σ_c <daN/cm>
0.20	22	SLE R	1	394.84	8.70	7.63	-4932.66	1985.19	-758.56	69.49
0.20	30	SLE Q	1	394.84	8.70	7.63	-4476.49	1801.60	-688.41	63.07
3.41	22	SLE R	1	74.03	4.62	7.63	2188.85	-388.23	1007.06	35.50
3.41	30	SLE Q	1	74.03	4.62	7.63	1987.49	-352.52	914.42	32.24
4.75	21	SLE R	2	15.30	7.16	7.63	-3380.05	1640.98	-533.86	50.59
4.75	29	SLE Q	2	15.30	7.16	7.63	-3094.51	1502.35	-488.76	46.32

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s_{sm} <mm>	Φ	A_s <cmq>	A_c eff <cmq>	σ_s <daN/cm>	σ_{sr} <daN/cm>	ϵ_{sm}	Wk <mm>
42	0.20	30	SLE Q	1	3	1	394.84	-4476.49	21.00	60.00	0.14	100.55	18.00	8.70	408.54	1801.60	1240.85	0.67	0.11
46	0.20	26	SLE F	1	3	1	394.84	-4606.31	21.00	60.00	0.14	100.55	18.00	8.70	408.54	1853.84	1240.85	0.70	0.12
90	3.41	30	SLE Q	1	3	1	74.03	1987.49	21.00	120.00	0.14	123.70	18.00	7.63	451.85	914.42	1341.94	0.18	0.04
94	3.41	26	SLE F	1	3	1	74.03	2046.04	21.00	120.00	0.14	123.70	18.00	7.63	451.85	941.35	1341.94	0.18	0.04
137	4.75	29	SLE Q	2	3	1	15.30	-3094.51	21.00	80.00	0.14	115.15	18.00	7.16	407.88	1502.35	1438.17	0.40	0.08
141	4.75	25	SLE F	2	3	1	15.30	-3174.91	21.00	80.00	0.14	115.15	18.00	7.16	407.88	1541.39	1438.17	0.42	0.08

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.52	0.32	$\emptyset 8 / 8$ 2 br.	12.57	0.30	8690.06	2.01	28399.80	28399.80	28399.80	3.27
TG	0.52	4.42	3.91	$\emptyset 8 / 20$ 2 br.	5.03	0.30	7957.99	2.50	14161.80	24522.20	14161.80	1.78
TG	4.42	4.74	0.32	$\emptyset 8 / 8$ 2 br.	12.57	0.30	8213.01	2.01	28399.80	28399.80	28399.80	3.46

Travata n. 123

Nodi: 102 106

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm>	Fctk <daN/cm>	Fcd <daN/cm>	Fctd <daN/cm>	Acc.	Fyk <daN/cm>	Fyd <daN/cm>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.10	20	SLU	1	10.05	6.16	4.62	6.16	2.78	-3926.43	-5106.72	1.301
1.95	19	SLU	1	195.03	4.62	4.62	4.62	4.41	3051.91	3731.85	1.223
3.92	19	SLU	1	392.45	6.16	4.62	6.16	2.65	-4802.42	-5106.35	1.063
0.10	6	SLD	1	10.05	6.16	4.62	6.16	2.78	-3300.34	-5969.81	1.809
1.95	14	SLD	1	195.03	4.62	4.62	4.62	4.41	1853.10	4377.38	2.362
3.92	14	SLD	1	392.45	6.16	4.62	6.16	2.65	-3827.02	-5969.86	1.560

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cm>
0.10	20	SLU	1	10.05	4.62	7190.42	1.84	3913.04
0.10	6	SLD	1	10.05	4.62	4817.37	1.84	2621.62
1.95	5	SLV	1	195.03	4.62	660.15	0.21	3154.49
1.95	6	SLD	1	195.03	4.62	521.70	0.21	2492.90
3.92	19	SLU	1	392.45	4.62	-7685.94	1.96	3913.04
3.92	14	SLD	1	392.45	4.62	-5104.13	1.96	2598.60

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cm>	σ_f inf <daN/cm>	σ_c <daN/cm>
0.10	24	SLE R	1	10.05	6.16	4.62	-2915.02	2321.27	-671.78	74.72

Relazione di calcolo

0.10	32	SLE Q	1	10.05	6.16	4.62	-2389.06	1902.44	-550.57	61.23
1.95	23	SLE R	1	195.03	4.62	4.62	2254.66	-526.71	2368.59	64.07
1.95	31	SLE Q	1	195.03	4.62	4.62	1831.02	-427.75	1923.55	52.03
3.92	23	SLE R	1	392.45	6.16	4.62	-3557.69	2833.03	-819.89	91.19
3.92	31	SLE Q	1	392.45	6.16	4.62	-2895.86	2306.01	-667.37	74.22

Verifiche stato limite di formazione delle fessure

Caso	Xg <cm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.10	32	SLE Q	1	2	2	10.05	-2389.06	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1902.44	1580.14	0.60	0.13
48	0.10	28	SLE F	1	2	2	10.05	-2538.27	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2021.26	1580.14	0.68	0.14
91	1.95	31	SLE Q	1	2	2	195.03	1831.02	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1923.55	1991.52	0.43	0.11
95	1.95	27	SLE F	1	2	2	195.03	1952.19	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2050.84	1991.52	0.53	0.13
139	3.92	31	SLE Q	1	2	2	392.45	-2895.86	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2306.01	1580.14	0.86	0.18
143	3.92	27	SLE F	1	2	2	392.45	-3085.84	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2457.29	1580.14	0.95	0.20

Staffe - Verifiche armatura

CC	X0 <cm>	X1 <cm>	Lung. <cm>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
20 SLU	0.10	0.33	0.23	ø10/ 4 2 br.	39.27	0.40	7190.42	1.07	34000.10	34000.20	34000.10	4.73
19 SLU	0.33	3.69	3.36	ø10/16 2 br.	9.82	0.40	6787.61	2.50	19880.40	23500.40	19880.40	2.93
19 SLU	3.69	3.92	0.23	ø10/ 4 2 br.	39.27	0.40	7686.16	1.07	34000.10	34000.20	34000.10	4.42

Travata n. 124

Nodi: 148 104 106

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
7R		50.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
1.90	17	SLU	1	25.20	22.90	17.81	22.90	15.24	-15171.30	-18165.00	1.197
2.40	9	SLV	2	480.94	22.90	17.81	22.90	13.04	-7001.64	-18099.70	2.585
4.79	19	SLU	2	242.24	7.63	7.63	7.63	6.95	2173.93	5794.54	2.665
7.03	1	SLV	2	17.79	7.63	7.63	7.63	5.63	-5937.47	-6333.57	1.067
1.90	2	SLD	1	25.20	22.90	17.81	22.90	15.24	-11878.30	-21014.70	1.769
2.40	10	SLD	2	480.94	22.90	17.81	22.90	13.04	-6217.87	-20955.60	3.370
4.79	2	SLD	2	242.24	7.63	7.63	7.63	6.95	1344.49	6779.05	5.042
7.03	2	SLD	2	17.79	7.63	7.63	7.63	5.63	-5214.36	-7403.42	1.420

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <cm>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
1.90	17	SLU	1	25.20	17.81	10069.40	2.57	3913.04
1.90	2	SLD	1	25.20	17.81	7758.35	2.57	3014.95
2.40	18	SLU	2	480.94	17.81	-6110.83	4.77	1280.19
2.40	10	SLD	2	480.94	17.81	-4952.89	4.77	1037.60
4.79	9	SLV	2	242.24	7.63	-1563.16	0.69	2277.85
4.79	10	SLD	2	242.24	7.63	-1237.82	0.69	1803.75
7.03	17	SLU	2	17.79	7.63	5645.60	2.01	2812.61
7.03	2	SLD	2	17.79	7.63	4600.15	2.01	2291.77

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
1.90	21	SLE R	1	25.20	22.90	17.81	-11468.60	2530.06	-1388.23	131.73
1.90	29	SLE Q	1	25.20	22.90	17.81	-10498.80	2316.13	-1270.84	120.59
2.40	22	SLE R	2	480.94	22.90	17.81	-4052.87	894.10	-490.58	46.55
2.40	30	SLE Q	2	480.94	22.90	17.81	-3471.58	765.86	-420.22	39.88
4.79	23	SLE R	2	242.24	7.63	7.63	1607.33	-278.56	1030.85	31.66
4.79	31	SLE Q	2	242.24	7.63	7.63	1312.95	-227.54	842.05	25.87
7.03	21	SLE R	2	17.79	7.63	7.63	-3261.98	2092.05	-565.32	64.26
7.03	29	SLE Q	2	17.79	7.63	7.63	-2680.94	1719.40	-464.63	52.82

Verifiche stato limite di formazione delle fessure

Caso	Xg <cm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
41	1.90	29	SLE Q	1	7	2	25.20	-10498.80	21.00	55.00	0.13	83.22	18.00	22.90	769.13	2316.13	798.13	1.06	0.15
45	1.90	25	SLE F	1	7	2	25.20	-10777.20	21.00	55.00	0.13	83.22	18.00	22.90	769.13	2377.54	798.13	1.09	0.15
90	2.40	30	SLE Q	2	7	2	480.94	-3471.58	21.00	55.00	0.13	83.22	18.00	22.90	769.13	765.86	798.13	0.17	0.02
94	2.40	26	SLE F	2	7	2	480.94	-3637.52	21.00	55.00	0.13	83.22	18.00	22.90	769.13	802.47	798.13	0.20	0.03
139	4.79	31	SLE Q	2	7	2	242.24	1312.95	21.00	220.00	0.13	167.37	18.00	7.63	690.22	842.05	1613.48	0.16	0.05
143	4.79	27	SLE F	2	7	2	242.24	1397.82	21.00	220.00	0.13	167.37	18.00	7.63	690.22	896.48	1613.48	0.17	0.05
185	7.03	29	SLE Q	2	7	2	17.79	-2680.94	21.00	220.00	0.13	167.37	18.00	7.63	690.22	1719.40	1613.48	0.47	0.13
189	7.03	25	SLE F	2	7	2	17.79	-2845.73	21.00	220.00	0.13	167.37	18.00	7.63	690.22	1825.10	1613.48	0.54	0.15

Staffe - Verifiche armatura

Relazione di calcolo

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
17 SLU	-0.00	1.67	1.67	ø10/16 2 br.	9.82	0.50	9968.71	2.50	19880.40	29375.60	19880.40	1.99
17 SLU	1.67	1.90	0.23	ø10/ 4 2 br.	39.27	0.50	10069.50	1.30	41206.30	41206.30	41206.30	4.09
TG	2.40	2.63	0.23	ø10/ 4 2 br.	39.27	0.50	8527.30	1.30	41206.30	41206.30	41206.30	4.83
TG	2.63	6.83	4.20	ø10/16 2 br.	9.82	0.50	8170.86	2.50	19880.40	29375.60	19880.40	2.43
TG	6.83	7.06	0.23	ø10/ 4 2 br.	39.27	0.50	7241.79	1.30	41206.30	41206.30	41206.30	5.69

Travata n. 125

Nodi: -70 110 111 -72

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
1.90	1	SLV	1	25.07	6.63	10.18	6.63	8.25	-4931.59	-5474.36	1.110
2.41	9	SLV	2	25.07	6.63	10.18	6.63	8.19	-4901.48	-5474.39	1.117
4.25	9	SLV	2	209.11	13.26	10.18	13.26	7.05	3471.64	5805.99	1.672
4.60	18	SLU	3	17.58	13.26	10.18	13.26	6.43	-5528.46	-10570.50	1.912
1.90	2	SLD	1	25.07	6.63	10.18	6.63	8.25	-4037.89	-6392.94	1.583
2.41	10	SLD	2	25.07	6.63	10.18	6.63	8.19	-3870.46	-6392.96	1.652
4.25	2	SLD	2	209.11	13.26	10.18	13.26	7.05	-4479.47	-12302.00	2.746
4.60	10	SLD	3	17.58	13.26	10.18	13.26	6.43	-4679.84	-12290.10	2.626

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <cm>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
1.90	1	SLV	1	25.07	10.18	3969.36	1.93	2060.37
1.90	2	SLD	1	25.07	10.18	3185.83	1.93	1653.66
2.41	9	SLV	2	25.07	10.18	5881.43	1.99	2956.94
2.41	10	SLD	2	25.07	10.18	4819.65	1.99	2423.12
4.25	1	SLV	2	209.11	10.18	-7059.65	3.13	2258.80
4.25	2	SLD	2	209.11	10.18	-5997.87	3.13	1919.07
4.60	18	SLU	3	17.58	10.18	7673.82	3.75	2047.02
4.60	10	SLD	3	17.58	10.18	5259.38	3.75	1402.96

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
1.90	21	SLE R	1	25.07	6.63	10.18	-994.47	735.03	-183.78	21.44
1.90	29	SLE Q	1	25.07	6.63	10.18	-916.64	677.50	-169.39	19.76
2.41	22	SLE R	2	25.07	6.63	10.18	-229.11	169.34	-42.34	4.94
2.41	30	SLE Q	2	25.07	6.63	10.18	-268.23	198.25	-49.57	5.78
4.25	21	SLE R	2	209.11	13.26	10.18	-1561.27	591.01	-274.63	26.97
4.25	29	SLE Q	2	209.11	13.26	10.18	-1254.43	474.86	-220.66	21.67
4.60	22	SLE R	3	17.58	13.26	10.18	-4103.51	1553.37	-721.82	70.87
4.60	30	SLE Q	3	17.58	13.26	10.18	-3367.09	1274.60	-592.28	58.15

Verifiche stato limite di formazione delle fessure

Caso	Xg <cm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
41	1.90	29	SLE Q	1	2	2	25.07	-916.64	21.00	170.00	0.13	148.91	18.00	6.63	537.00	677.50	1566.90	0.13	0.03
45	1.90	25	SLE F	1	2	2	25.07	-939.57	21.00	170.00	0.13	148.91	18.00	6.63	537.00	694.45	1566.90	0.13	0.03
90	2.41	30	SLE Q	2	2	2	25.07	-268.23	21.00	170.00	0.13	148.91	18.00	6.63	537.00	198.25	1566.90	0.04	0.01
94	2.41	26	SLE F	2	2	2	25.07	-254.84	21.00	170.00	0.13	148.91	18.00	6.63	537.00	188.35	1566.90	0.04	0.01
137	4.25	29	SLE Q	2	2	2	209.11	-1254.43	21.00	68.00	0.13	96.33	18.00	13.26	600.02	474.86	967.94	0.09	0.02
141	4.25	25	SLE F	2	2	2	209.11	-1344.67	21.00	68.00	0.13	96.33	18.00	13.26	600.02	509.02	967.94	0.10	0.02
186	4.60	30	SLE Q	3	2	2	17.58	-3367.09	21.00	68.00	0.13	96.33	18.00	13.26	600.02	1274.60	935.87	0.45	0.07
190	4.60	26	SLE F	3	2	2	17.58	-3577.10	21.00	68.00	0.13	96.33	18.00	13.26	600.02	1354.09	935.87	0.50	0.08

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
1 SLV	0.00	1.67	1.67	ø10/16 2 br.	9.82	0.40	3905.76	2.50	19880.40	23500.40	19880.40	5.09
1 SLV	1.67	1.90	0.23	ø10/ 4 2 br.	39.27	0.40	3969.39	1.07	34000.10	34000.20	34000.10	8.57
TG	2.41	2.64	0.23	ø10/ 4 2 br.	39.27	0.40	8336.29	1.07	34000.10	34000.20	34000.10	4.08
TG	2.64	4.04	1.41	ø10/16 2 br.	9.82	0.40	10594.80	2.50	19880.40	23500.40	19880.40	1.88
TG	4.04	4.27	0.23	ø10/ 4 2 br.	39.27	0.40	10940.10	1.07	34000.10	34000.20	34000.10	3.11
18 SLU	4.57	4.80	0.23	ø10/ 4 2 br.	39.27	0.40	7751.59	1.07	34000.10	34000.20	34000.10	4.39
18 SLU	4.80	8.72	3.92	ø10/16 2 br.	9.82	0.40	7029.67	2.50	19880.40	23500.40	19880.40	2.83

Travata n. 127

Nodi: 150 116

Caratteristiche delle sezioni e dei materiali utilizzati

Relazione di calcolo

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
2.20	9	SLV	1	24.61	4.62	4.62	4.62	3.83	2261.63	3277.35	1.449
2.20	2	SLD	1	24.61	4.62	4.62	4.62	3.83	-2086.84	-4567.16	2.189

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <cm>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
2.20	1	SLV	1	24.61	4.62	2593.58	0.79	3303.16
2.20	2	SLD	1	24.61	4.62	2120.15	0.79	2700.20

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
2.20	21	SLE R	1	24.61	4.62	4.62	-376.09	395.10	-87.86	10.69
2.20	29	SLE Q	1	24.61	4.62	4.62	-348.72	366.34	-81.46	9.91

Verifiche stato limite di formazione delle fessure

Caso	Xg <cm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cm²>	A _c eff <cm²>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
41	2.20	29	SLE Q	1	2	2	24.61	-348.72	23.00	170.00	0.13	150.70	14.00	4.62	458.21	366.34	1991.52	0.07	0.02
45	2.20	25	SLE F	1	2	2	24.61	-355.96	23.00	170.00	0.13	150.70	14.00	4.62	458.21	373.95	1991.52	0.07	0.02

Staffe - Verifiche armatura

CC	X0 <cm>	X1 <cm>	Lung. <cm>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T	
1	SLV	0.00	1.97	1.97	ø10/16 2 br.	9.82	0.40	2528.95	2.50	19880.40	23500.40	19880.40	7.86
1	SLV	1.97	2.20	0.23	ø10/ 4 2 br.	39.27	0.40	2593.58	1.07	34000.10	34000.20	34000.10	13.11

Travata n. 128

Nodi: 116 117

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	9	SLV	1	167.29	6.16	7.63	6.16	4.78	-5653.85	-7200.87	1.274
1.79	1	SLV	1	8.02	4.62	7.63	4.62	5.51	-5278.57	-5455.33	1.033
0.20	10	SLD	1	167.29	6.16	7.63	6.16	4.78	-4619.74	-8359.24	1.809
1.79	2	SLD	1	8.02	4.62	7.63	4.62	5.51	-4139.72	-6345.19	1.533

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <cm>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.20	9	SLV	1	167.29	7.63	-8461.84	2.86	2963.40
0.20	10	SLD	1	167.29	7.63	-7097.68	2.86	2485.66
1.79	1	SLV	1	8.02	7.63	7447.55	2.12	3508.27
1.79	2	SLD	1	8.02	7.63	6083.39	2.12	2865.66

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.20	22	SLE R	1	167.29	6.16	7.63	-1126.43	632.97	-181.39	17.71
0.20	30	SLE Q	1	167.29	6.16	7.63	-1031.22	579.47	-166.06	16.21
1.79	21	SLE R	1	8.02	4.62	7.63	-208.78	155.11	-34.72	3.62
1.79	30	SLE Q	1	8.02	4.62	7.63	207.08	-36.73	95.28	3.36

Verifiche stato limite di formazione delle fessure

Caso	Xg <cm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cm²>	A _c eff <cm²>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
42	0.20	30	SLE Q	1	3	1	167.29	-1031.22	23.00	80.00	0.16	116.41	14.00	6.16	373.65	579.47	1621.45	0.11	0.02
46	0.20	26	SLE F	1	3	1	167.29	-1053.92	23.00	80.00	0.16	116.41	14.00	6.16	373.65	592.22	1621.45	0.11	0.02
89	1.79	29	SLE Q	1	3	1	8.02	-186.23	23.00	120.00	0.16	141.39	14.00	4.62	364.56	138.36	2039.14	0.03	0.01
93	1.79	25	SLE F	1	3	1	8.02	-198.62	23.00	120.00	0.16	141.39	14.00	4.62	364.56	147.56	2039.14	0.03	0.01

Staffe - Verifiche armatura

CC	X0 <cm>	X1 <cm>	Lung. <cm>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.52	0.32	ø8/ 8 2 br.	12.57	0.30	10209.60	2.01	28399.80	28399.80	28399.80	2.78

Relazione di calcolo

TG	0.52	1.49	0.98	ø8/20 2 br.	5.03	0.30	9555.94	2.50	14161.80	24522.20	14161.80	1.48
TG	1.49	1.81	0.32	ø8/ 8 2 br.	12.57	0.30	8587.89	2.01	28399.80	28399.80	28399.80	3.31

Travata n. 129

Nodi: 116 120

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
3	R	30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.23	5	SLV	1	22.51	4.62	7.63	4.62	5.55	-3196.04	-5455.32	1.707
1.87	13	SLV	1	186.90	4.62	7.63	4.62	5.03	-4865.66	-5455.47	1.121
0.23	6	SLD	1	22.51	4.62	7.63	4.62	5.55	-2562.66	-6345.19	2.476
1.87	14	SLD	1	186.90	4.62	7.63	4.62	5.03	-4193.53	-6345.49	1.513

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.23	5	SLV	1	22.51	7.63	4797.94	2.08	2302.91
0.23	6	SLD	1	22.51	7.63	4004.14	2.08	1921.90
1.87	13	SLV	1	186.90	7.63	-6607.99	2.60	2540.01
1.87	14	SLD	1	186.90	7.63	-5814.18	2.60	2234.88

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.23	21	SLE R	1	22.51	4.62	7.63	-368.22	273.56	-61.22	6.39
0.23	29	SLE Q	1	22.51	4.62	7.63	-331.79	246.50	-55.17	5.76
1.87	22	SLE R	1	186.90	4.62	7.63	-2065.36	1534.43	-343.42	35.84
1.87	30	SLE Q	1	186.90	4.62	7.63	-1832.64	1361.53	-304.72	31.81

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{s,eff} <cmq>	σ _s <daN/cm²>	σ _{s,r} <daN/cm²>	ε _{sm}	Wk <mm>
41	0.23	29	SLE Q	1	3	1	22.51	-331.79	23.00	120.00	0.16	141.39	14.00	4.62	364.56	246.50	2039.14	0.05	0.01
45	0.23	25	SLE F	1	3	1	22.51	-339.79	23.00	120.00	0.16	141.39	14.00	4.62	364.56	252.44	2039.14	0.05	0.01
90	1.87	30	SLE Q	1	3	1	186.90	-1832.64	23.00	120.00	0.16	141.39	14.00	4.62	364.56	1361.53	2039.14	0.26	0.06
94	1.87	26	SLE F	1	3	1	186.90	-1903.43	23.00	120.00	0.16	141.39	14.00	4.62	364.56	1414.12	2039.14	0.27	0.07

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.23	0.55	0.32	ø8/ 8 2 br.	12.57	0.30	8939.28	2.01	28399.80	28399.80	28399.80	3.18
TG	0.55	1.55	1.00	ø8/20 2 br.	5.03	0.30	8509.92	2.50	14161.80	24522.20	14161.80	1.66
TG	1.55	1.87	0.32	ø8/ 8 2 br.	12.57	0.30	9297.42	2.01	28399.80	28399.80	28399.80	3.05

Travata n. 130

Nodi: 110 -73 117 -74 122 -82 -86

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.27	20	SLU	1	332.33	7.70	7.63	7.70	4.59	-6154.97	-6306.61	1.025
2.42	20	SLU	1	117.09	4.62	7.63	4.62	7.46	4707.52	6119.17	1.300
4.27	19	SLU	2	24.28	11.78	12.72	11.78	7.87	-8727.53	-9480.35	1.086
4.77	20	SLU	3	113.35	7.16	5.09	7.16	3.52	-5031.09	-5888.85	1.170
6.97	18	SLU	4	236.67	4.62	4.62	4.62	4.43	2490.76	3750.98	1.506
9.14	19	SLU	4	20.00	6.16	4.62	6.16	3.11	-4171.98	-5107.00	1.224
9.54	5	SLV	5	56.20	4.62	4.62	4.62	2.84	-2982.86	-3897.99	1.307
0.27	6	SLD	1	332.33	7.70	7.63	7.70	4.59	-4477.15	-7358.71	1.644
2.42	14	SLD	1	117.09	4.62	7.63	4.62	7.46	2935.06	7140.91	2.433
4.27	14	SLD	2	24.28	11.78	12.72	11.78	7.87	-6082.97	-11013.50	1.811
4.77	14	SLD	3	113.35	7.16	5.09	7.16	3.52	-3956.28	-6877.42	1.738
6.97	10	SLD	4	236.67	4.62	4.62	4.62	4.43	1617.39	4399.49	2.720
9.14	14	SLD	4	20.00	6.16	4.62	6.16	3.11	-3341.92	-5969.63	1.786
9.54	6	SLD	5	56.20	4.62	4.62	4.62	2.84	-2671.51	-4565.76	1.709

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg	CC	TCC	El	X	AfE I	Tz	AfEP I	σ _f inf
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Relazione di calcolo

<m>				<cm>	<cmq>	<daN>	<cmq>	<daN/cmq>
0.27	20	SLU	1	332.33	7.63	-8411.44	3.05	2760.30
0.27	14	SLD	1	332.33	7.63	-5468.69	3.05	1794.61
2.42	13	SLV	1	117.09	7.63	-528.71	0.18	2961.10
2.42	14	SLD	1	117.09	7.63	-414.81	0.18	2323.19
4.27	19	SLU	2	24.28	12.72	14472.20	4.85	2980.92
4.27	14	SLD	2	24.28	12.72	9273.24	4.85	1910.06
4.77	20	SLU	3	113.35	5.09	-5663.81	1.57	3600.57
4.77	10	SLD	3	113.35	5.09	-4242.35	1.57	2696.93
6.97	13	SLV	4	236.67	4.62	528.38	0.19	2855.96
6.97	14	SLD	4	236.67	4.62	417.50	0.19	2256.62
9.14	19	SLU	4	20.00	4.62	5918.81	1.51	3913.04
9.14	14	SLD	4	20.00	4.62	4002.61	1.51	2646.21
9.54	20	SLU	5	56.20	4.62	-6947.31	1.78	3913.04
9.54	14	SLD	5	56.20	4.62	-5440.77	1.78	3064.49

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	X	AfE S	AfE I	My	σ _f sup	σ _f inf	σ _c
<m>				<cm>	<cmq>	<cmq>	<daNm>	<daN/cmq>	<daN/cmq>	<daN/cmq>
0.27	24	SLE R	1	332.33	7.70	7.63	-4565.20	2924.62	-918.17	99.64
0.27	32	SLE Q	1	332.33	7.70	7.63	-3743.65	2398.30	-752.93	81.71
2.42	24	SLE R	1	117.09	4.62	7.63	3477.13	-787.51	2253.09	82.91
2.42	32	SLE Q	1	117.09	4.62	7.63	2814.04	-637.33	1823.43	67.10
4.27	23	SLE R	2	24.28	11.78	12.72	-6459.32	2730.73	-1060.74	108.63
4.27	31	SLE Q	2	24.28	11.78	12.72	-5256.94	2222.41	-863.28	88.41
4.77	24	SLE R	3	113.35	7.16	5.09	-3742.49	2576.11	-836.00	89.85
4.77	32	SLE Q	3	113.35	7.16	5.09	-3106.81	2138.54	-694.01	74.59
6.97	22	SLE R	4	236.67	4.62	4.62	1845.81	-431.20	1939.08	52.45
6.97	30	SLE Q	4	236.67	4.62	4.62	1522.32	-355.63	1599.25	43.26
9.14	23	SLE R	4	20.00	6.16	4.62	-3105.73	2473.13	-715.73	79.60
9.14	31	SLE Q	4	20.00	6.16	4.62	-2582.46	2056.45	-595.14	66.19
9.54	24	SLE R	5	56.20	4.62	4.62	-1900.07	1996.08	-443.88	53.99
9.54	32	SLE Q	5	56.20	4.62	4.62	-1604.81	1685.91	-374.90	45.60

Verifiche stato limite di formazione delle fessure

Caso	Xg	CC	TCC	El	Sez.	Crit.	X	My	c	s	K3	s _{zm}	Φ	A _s	A _{c eff}	σ _s	σ _{sr}	ε _{sm}	Wk
	<m>						<cm>	<daNm>	<mm>	<mm>		<mm>		<cmq>	<cmq>	<daN/cmq>	<daN/cmq>		<mm>
44	0.27	32	SLE Q	1	2	2	332.33	-3743.65	23.00	85.00	0.13	108.95	14.00	7.70	496.66	2398.30	1368.50	0.97	0.18
48	0.27	28	SLE F	1	2	2	332.33	-3977.76	23.00	85.00	0.13	108.95	14.00	7.70	496.66	2548.28	1368.50	1.06	0.20
92	2.42	32	SLE Q	1	2	2	117.09	2814.04	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1823.43	1340.37	0.65	0.16
96	2.42	28	SLE F	1	2	2	117.09	3003.61	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1946.27	1340.37	0.72	0.18
139	4.27	31	SLE Q	2	2	2	24.28	-5256.94	21.00	56.67	0.13	94.17	18.00	11.78	534.59	2222.41	1046.56	0.96	0.15
143	4.27	27	SLE F	2	2	2	24.28	-5600.89	21.00	56.67	0.13	94.17	18.00	11.78	534.59	2367.82	1046.56	1.04	0.17
188	4.77	32	SLE Q	3	2	2	113.35	-3106.81	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2138.54	1405.26	0.81	0.18
192	4.77	28	SLE F	3	2	2	113.35	-3288.65	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2263.71	1405.26	0.89	0.20
234	6.97	30	SLE Q	4	2	2	236.67	1522.32	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1599.25	1991.52	0.31	0.08
238	6.97	26	SLE F	4	2	2	236.67	1614.84	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1696.45	1991.52	0.33	0.08
283	9.14	31	SLE Q	4	2	2	20.00	-2582.46	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2056.45	1580.14	0.70	0.15
287	9.14	27	SLE F	4	2	2	20.00	-2731.23	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2174.92	1580.14	0.78	0.16
332	9.54	32	SLE Q	5	2	2	56.20	-1604.81	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1685.91	1991.52	0.33	0.08
336	9.54	28	SLE F	5	2	2	56.20	-1690.67	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1776.10	1991.52	0.34	0.09

Staffe - Verifiche armatura

CC	X0	X1	Lung.	Staff.	AfE St.	bw	Vsdu	ctgθ	VRsd	VRcd	Vrdu	Sic. T
	<m>	<m>	<m>		<cmq/m>	<m>	<daN>		<daN>	<daN>	<daN>	
20 SLU	0.24	0.47	0.23	ø10/ 4 2 br.	39.27	0.40	8461.27	1.07	34000.10	34000.20	34000.10	4.02
19 SLU	0.47	4.04	3.56	ø10/16 2 br.	9.82	0.40	13831.40	2.50	19880.40	23500.40	19880.40	1.44
19 SLU	4.04	4.27	0.23	ø10/ 4 2 br.	39.27	0.40	14472.30	1.07	34000.10	34000.20	34000.10	2.35
20 SLU	4.78	5.01	0.23	ø10/ 4 2 br.	39.27	0.40	5660.11	1.07	34000.10	34000.20	34000.10	6.01
20 SLU	5.01	8.91	3.91	ø10/16 2 br.	9.82	0.40	5568.12	2.50	19880.40	23500.40	19880.40	3.57
19 SLU	8.91	9.14	0.23	ø10/ 4 2 br.	39.27	0.40	5918.81	1.07	34000.10	34000.20	34000.10	5.74
20 SLU	9.54	9.77	0.23	ø10/ 4 2 br.	39.27	0.40	6947.31	1.07	34000.10	34000.20	34000.10	4.89
20 SLU	9.77	11.75	1.98	ø10/16 2 br.	9.82	0.40	6321.19	2.50	19880.40	23500.40	19880.40	3.15

Travata n. 131

Nodi: 147 148 -70 109 150 115 121 125 -88 156 134 140

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Acc.	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	X	AfE S	AfE I	AfEP S	AfEP I	My	Myu	Sic.
<m>				<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
7.80	9	SLV	3	25.03	12.25	10.18	12.25	6.64	-12007.40	-14023.40	1.168
8.31	5	SLV	4	368.08	12.25	10.18	12.25	7.13	-5788.70	-14040.50	2.425
11.27	5	SLV	4	72.05	4.62	4.62	4.62	3.69	2139.56	4403.39	2.058
12.16	9	SLV	5	25.14	4.62	4.62	4.62	2.91	-5222.98	-5456.37	1.045
12.67	1	SLV	6	418.90	4.62	4.62	4.62	3.50	-4686.35	-5456.07	1.164
13.43	9	SLV	6	342.22	4.62	4.62	4.62	3.72	1987.57	4431.00	2.229
16.60	9	SLV	6	25.06	4.62	4.62	4.62	3.57	-4664.41	-5456.06	1.170

Relazione di calcolo

17.11	1	SLV	7	419.02	4.62	4.62	4.62	3.21	-5168.50	-5456.19	1.056
19.09	17	SLU	7	220.67	4.62	4.62	4.62	4.11	2248.82	4873.44	2.167
21.05	9	SLV	7	25.02	6.16	4.62	6.16	2.93	-5683.67	-7193.28	1.266
21.55	1	SLV	8	0.47	6.16	4.62	6.16	2.00	-6706.36	-7183.39	1.071
23.52	17	SLU	9	164.14	4.62	4.62	4.62	4.10	3162.65	4866.17	1.539
25.48	9	SLV	10	25.11	6.63	6.63	6.63	3.49	-6851.14	-7725.79	1.128
25.99	1	SLV	11	418.75	6.63	6.63	6.63	3.83	-7323.33	-7728.75	1.055
28.05	17	SLU	11	212.78	4.62	4.62	4.62	4.06	3723.45	4820.63	1.295
29.92	9	SLV	11	25.11	6.16	4.62	6.16	2.41	-6629.47	-7188.08	1.084
7.80	10	SLD	3	25.03	12.25	10.18	12.25	6.64	-11033.70	-16219.10	1.470
8.31	6	SLD	4	368.08	12.25	10.18	12.25	7.13	-5121.25	-16232.90	3.170
11.27	6	SLD	4	72.05	4.62	4.62	4.62	3.69	1749.87	5131.00	2.932
12.16	10	SLD	5	25.14	4.62	4.62	4.62	2.91	-4468.82	-6347.11	1.420
12.67	2	SLD	6	418.90	4.62	4.62	4.62	3.50	-4024.82	-6346.57	1.577
13.43	10	SLD	6	342.22	4.62	4.62	4.62	3.72	1542.68	5162.87	3.347
16.60	10	SLD	6	25.06	4.62	4.62	4.62	3.57	-4005.48	-6346.48	1.584
17.11	2	SLD	7	419.02	4.62	4.62	4.62	3.21	-4512.00	-6346.82	1.407
19.09	2	SLD	7	220.67	4.62	4.62	4.62	4.11	1370.24	5673.32	4.140
21.05	10	SLD	7	25.02	6.16	4.62	6.16	2.93	-5023.70	-8357.71	1.664
21.55	2	SLD	8	0.47	6.16	4.62	6.16	2.00	-5913.57	-8354.52	1.413
23.52	2	SLD	9	164.14	4.62	4.62	4.62	4.10	2149.07	5664.93	2.636
25.48	10	SLD	10	25.11	6.63	6.63	6.63	3.49	-6188.56	-8970.51	1.450
25.99	2	SLD	11	418.75	6.63	6.63	6.63	3.83	-6618.25	-8971.50	1.356
28.05	2	SLD	11	212.78	4.62	4.62	4.62	4.06	2668.48	5612.32	2.103
29.92	10	SLD	11	25.11	6.16	4.62	6.16	2.41	-5884.58	-8356.04	1.420

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
7.80	9	SLV	3	25.03	10.18	11931.70	3.54	3373.69
7.80	10	SLD	3	25.03	10.18	10913.30	3.54	3085.75
8.31	17	SLU	4	368.08	10.18	-5458.37	3.05	1792.06
8.31	6	SLD	4	368.08	10.18	-4593.97	3.05	1508.27
11.27	13	SLV	4	72.05	4.62	3202.52	0.93	3461.38
11.27	14	SLD	4	72.05	4.62	2857.40	0.93	3088.37
12.16	9	SLV	5	25.14	4.62	6678.67	1.71	3913.04
12.16	10	SLD	5	25.14	4.62	5910.85	1.71	3463.17
12.67	17	SLU	6	418.90	4.62	-4107.07	1.12	3657.25
12.67	2	SLD	6	418.90	4.62	-3721.62	1.12	3314.01
13.43	1	SLV	6	342.22	4.62	-3098.22	0.90	3438.79
13.43	2	SLD	6	342.22	4.62	-2762.94	0.90	3066.66
16.60	9	SLV	6	25.06	4.62	3748.45	1.05	3579.59
16.60	10	SLD	6	25.06	4.62	3413.18	1.05	3259.42
17.11	17	SLU	7	419.02	4.62	-5517.96	1.41	3913.04
17.11	2	SLD	7	419.02	4.62	-4525.79	1.41	3209.45
19.09	9	SLV	7	220.67	4.62	1594.81	0.51	3113.25
19.09	10	SLD	7	220.67	4.62	1260.69	0.51	2461.02
21.05	18	SLU	7	25.02	4.62	6613.71	1.69	3913.04
21.05	10	SLD	7	25.02	4.62	5201.68	1.69	3077.61
21.55	20	SLU	8	0.47	4.62	-10253.20	2.62	3913.04
21.55	6	SLD	8	0.47	4.62	-8108.55	2.62	3094.56
23.52	9	SLV	9	164.14	4.62	1617.17	0.52	3118.09
23.52	10	SLD	9	164.14	4.62	1279.14	0.52	2466.33
25.48	18	SLU	10	25.11	6.63	11530.00	3.14	3667.75
25.48	10	SLD	10	25.11	6.63	8806.75	3.14	2801.46
25.99	17	SLU	11	418.75	6.63	-9350.87	2.80	3339.01
25.99	2	SLD	11	418.75	6.63	-7496.29	2.80	2676.77
28.05	9	SLV	11	212.78	4.62	1759.39	0.56	3148.89
28.05	10	SLD	11	212.78	4.62	1391.04	0.56	2489.63
29.92	18	SLU	11	25.11	4.62	8657.40	2.21	3913.04
29.92	10	SLD	11	25.11	4.62	7050.56	2.21	3186.77

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
7.80	22	SLE R	3	25.03	12.25	10.18	-8322.95	2396.57	-1113.97	98.48
7.80	30	SLE Q	3	25.03	12.25	10.18	-7626.14	2195.93	-1020.71	90.23
8.31	21	SLE R	4	368.08	12.25	10.18	-3240.52	933.10	-433.72	38.34
8.31	29	SLE Q	4	368.08	12.25	10.18	-2769.52	797.47	-370.68	32.77
11.27	21	SLE R	4	72.05	4.62	4.62	443.33	-84.63	330.77	8.51
11.27	29	SLE Q	4	72.05	4.62	4.62	377.63	-72.09	281.75	7.25
12.16	22	SLE R	5	25.14	4.62	4.62	-2229.51	1663.43	-425.60	42.78
12.16	30	SLE Q	5	25.14	4.62	4.62	-1820.18	1358.03	-347.46	34.93
12.67	21	SLE R	6	418.90	4.62	4.62	-2037.30	1520.02	-388.91	39.09
12.67	29	SLE Q	6	418.90	4.62	4.62	-1697.13	1266.22	-323.97	32.56
13.43	21	SLE R	6	342.22	4.62	4.62	-137.16	102.34	-26.18	2.63
13.43	29	SLE Q	6	342.22	4.62	4.62	-115.86	86.44	-22.12	2.22
16.60	22	SLE R	6	25.06	4.62	4.62	-2020.97	1507.84	-385.79	38.78

Relazione di calcolo

16.60	30	SLE Q	6	25.06	4.62	4.62	-1686.85	1258.55	-322.01	32.37
17.11	21	SLE R	7	419.02	4.62	4.62	-2682.87	2001.67	-512.14	51.48
17.11	29	SLE Q	7	419.02	4.62	4.62	-2202.07	1642.95	-420.36	42.25
19.09	21	SLE R	7	220.67	4.62	4.62	1660.07	-316.90	1238.57	31.85
19.09	29	SLE Q	7	220.67	4.62	4.62	1342.47	-256.27	1001.61	25.76
21.05	22	SLE R	7	25.02	6.16	4.62	-3238.46	1831.12	-593.83	56.31
21.05	30	SLE Q	7	25.02	6.16	4.62	-2702.57	1528.11	-495.57	46.99
21.55	21	SLE R	8	0.47	6.16	4.62	-3633.46	2054.46	-666.26	63.18
21.55	29	SLE Q	8	0.47	6.16	4.62	-3147.76	1779.83	-577.20	54.74
23.52	21	SLE R	9	164.14	4.62	4.62	2378.34	-454.01	1774.47	45.64
23.52	29	SLE Q	9	164.14	4.62	4.62	2129.11	-406.43	1588.52	40.85
25.48	22	SLE R	10	25.11	6.63	6.63	-4320.38	2264.93	-718.34	68.46
25.48	30	SLE Q	10	25.11	6.63	6.63	-3864.12	2025.74	-642.48	61.23
25.99	21	SLE R	11	418.75	6.63	6.63	-4684.57	2455.86	-778.89	74.23
25.99	29	SLE Q	11	418.75	6.63	6.63	-4141.48	2171.15	-688.60	65.63
28.05	21	SLE R	11	212.78	4.62	4.62	2793.10	-533.19	2083.92	53.59
28.05	29	SLE Q	11	212.78	4.62	4.62	2461.73	-469.93	1836.68	47.24
29.92	22	SLE R	11	25.11	6.16	4.62	-3670.34	2075.32	-673.03	63.82
29.92	30	SLE Q	11	25.11	6.16	4.62	-3268.74	1848.24	-599.38	56.84

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _s eff <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	δ _{sm}	Wk <mm>
42	7.80	30	SLE Q	3	3	1	25.03	-7626.14	21.00	48.00	0.14	86.95	18.00	12.25	439.75	2195.93	990.84	0.96	0.14
46	7.80	26	SLE F	3	3	1	25.03	-7823.96	21.00	48.00	0.14	86.95	18.00	12.25	439.75	2252.89	990.84	0.99	0.15
89	8.31	29	SLE Q	4	3	1	368.08	-2769.52	21.00	48.00	0.14	86.95	18.00	12.25	439.75	797.47	990.84	0.15	0.02
93	8.31	25	SLE F	4	3	1	368.08	-2904.53	21.00	48.00	0.14	86.95	18.00	12.25	439.75	836.35	990.84	0.16	0.02
137	11.27	29	SLE Q	4	3	1	72.05	377.63	23.00	120.00	0.16	140.21	14.00	4.62	364.56	281.75	1977.14	0.05	0.01
141	11.27	25	SLE F	4	3	1	72.05	396.73	23.00	120.00	0.16	140.21	14.00	4.62	364.56	296.00	1977.14	0.06	0.01
186	12.16	30	SLE Q	5	3	1	25.14	-1820.18	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1358.03	1977.14	0.26	0.06
190	12.16	26	SLE F	5	3	1	25.14	-1936.79	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1445.03	1977.14	0.28	0.07
233	12.67	29	SLE Q	6	3	1	418.90	-1697.13	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1266.22	1977.14	0.25	0.06
237	12.67	25	SLE F	6	3	1	418.90	-1794.15	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1338.61	1977.14	0.26	0.06
281	13.43	29	SLE Q	6	3	1	342.22	-115.86	23.00	120.00	0.16	140.21	14.00	4.62	364.56	86.44	1977.14	0.02	0.00
285	13.43	25	SLE F	6	3	1	342.22	-121.92	23.00	120.00	0.16	140.21	14.00	4.62	364.56	90.96	1977.14	0.02	0.00
330	16.60	30	SLE Q	6	3	1	25.06	-1686.85	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1258.55	1977.14	0.24	0.06
334	16.60	26	SLE F	6	3	1	25.06	-1782.87	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1330.19	1977.14	0.26	0.06
377	17.11	29	SLE Q	7	3	1	419.02	-2202.07	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1642.95	1977.14	0.32	0.08
381	17.11	25	SLE F	7	3	1	419.02	-2339.38	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1745.40	1977.14	0.34	0.08
425	19.09	29	SLE Q	7	3	1	220.67	1342.47	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1001.61	1977.14	0.19	0.05
429	19.09	25	SLE F	7	3	1	220.67	1433.53	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1069.55	1977.14	0.21	0.05
474	21.05	30	SLE Q	7	3	1	25.02	-2702.97	23.00	80.00	0.16	115.47	14.00	6.16	373.65	1528.11	1575.60	0.35	0.07
478	21.05	26	SLE F	7	3	1	25.02	-2855.17	23.00	80.00	0.16	115.47	14.00	6.16	373.65	1634.40	1575.60	0.41	0.08
521	21.55	29	SLE Q	8	3	1	0.47	-3147.76	23.00	80.00	0.16	115.47	14.00	6.16	373.65	1779.83	1575.60	0.53	0.10
525	21.55	25	SLE F	8	3	1	0.47	-3287.29	23.00	80.00	0.16	115.47	14.00	6.16	373.65	1858.73	1575.60	0.58	0.11
569	23.52	29	SLE Q	9	3	1	164.14	2129.11	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1588.52	1977.14	0.31	0.07
573	23.52	25	SLE F	9	3	1	164.14	2200.15	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1641.52	1977.14	0.32	0.08
618	25.48	30	SLE Q	10	3	1	25.11	-3864.12	21.00	120.00	0.14	130.13	18.00	6.63	425.13	2025.74	1518.48	0.71	0.16
622	25.48	26	SLE F	10	3	1	25.11	-3994.11	21.00	120.00	0.14	130.13	18.00	6.63	425.13	2093.89	1518.48	0.75	0.17
665	25.99	29	SLE Q	11	3	1	418.75	-4141.48	21.00	120.00	0.14	130.13	18.00	6.63	425.13	2171.15	1518.48	0.80	0.18
669	25.99	25	SLE F	11	3	1	418.75	-4296.90	21.00	120.00	0.14	130.13	18.00	6.63	425.13	2252.62	1518.48	0.85	0.19
713	28.05	29	SLE Q	11	3	1	212.78	2461.73	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1836.68	1977.14	0.38	0.09
717	28.05	25	SLE F	11	3	1	212.78	2556.38	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1907.30	1977.14	0.43	0.10
762	29.92	30	SLE Q	11	3	1	25.11	-3268.74	23.00	80.00	0.16	115.47	14.00	6.16	373.65	1848.24	1575.60	0.57	0.11
766	29.92	26	SLE F	11	3	1	25.11	-3383.30	23.00	80.00	0.16	115.47	14.00	6.16	373.65	1913.02	1575.60	0.61	0.12

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
9 SLV	0.00	7.48	7.48	ø8/20 2 br.	5.03	0.30	11147.20	2.50	14161.80	24522.20	14161.80	1.27
9 SLV	7.48	7.80	0.32	ø8/ 8 2 br.	12.57	0.30	11931.70	2.01	28399.80	28399.80	28399.80	2.38
TG	8.31	8.63	0.32	ø8/ 8 2 br.	12.57	0.30	7627.47	2.01	28399.80	28399.80	28399.80	3.72
TG	8.63	11.84	3.22	ø8/20 2 br.	5.03	0.30	7116.24	2.50	14161.80	24522.20	14161.80	1.99
9 SLV	11.84	12.16	0.32	ø8/ 8 2 br.	12.57	0.30	6678.67	2.01	28399.80	28399.80	28399.80	4.25
TG	12.67	12.99	0.32	ø8/ 8 2 br.	12.57	0.30	4812.61	2.01	28399.80	28399.80	28399.80	5.90
TG	12.99	16.28	3.30	ø8/20 2 br.	5.03	0.30	4430.95	2.50	14161.80	24522.20	14161.80	3.20
TG	16.28	16.60	0.32	ø8/ 8 2 br.	12.57	0.30	4790.57	2.01	28399.80	28399.80	28399.80	5.93
TG	17.11	17.43	0.32	ø8/ 8 2 br.	12.57	0.30	5924.84	2.01	28399.80	28399.80	28399.80	4.79
TG	17.43	20.73	3.30	ø8/20 2 br.	5.03	0.30	5855.42	2.50	14161.80	24522.20	14161.80	2.42
18 SLU	20.73	21.05	0.32	ø8/ 8 2 br.	12.57	0.30	6613.71	2.01	28399.80	28399.80	28399.80	4.29
TG	21.55	21.87	0.32	ø8/ 8 2 br.	12.57	0.30	8127.77	2.01	28399.80	28399.80	28399.80	3.49
18 SLU	21.87	25.16	3.30	ø8/20 2 br.	5.03	0.30	7349.15	2.50	14161.80	24522.20	14161.80	1.93
18 SLU	25.16	25.48	0.32	ø8/ 8 2 br.	12.57	0.30	11530.00	2.01	28399.80	28399.80	28399.80	2.46
17 SLU	25.99	26.31	0.32	ø8/ 8 2 br.	12.57	0.30	9350.87	2.01	28399.80	28399.80	28399.80	3.04
TG	26.31	29.60	3.30	ø8/20 2 br.	5.03	0.30	7950.49	2.50	14161.80	24522.20	14161.80	1.78
TG	29.60	29.92	0.32	ø8/ 8 2 br.	12.57	0.30	8915.46	2.01	28399.80	28399.80	28399.80	3.19

Travata n. 132

Nodi: 118 123 -87 131 -91 137

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	X	AfE S	AfE I	AfEP S	AfEP I	My	Myu	Sic.
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Relazione di calcolo

<m>				<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
0.20	9	SLV	1	20.00	4.62	4.62	4.62	3.33	-2944.99	-3897.63	1.323
1.97	19	SLU	1	197.33	4.62	4.62	4.62	4.37	1919.24	3702.20	1.929
4.04	19	SLU	1	404.47	6.16	4.62	6.16	3.18	-4095.43	-5106.98	1.247
4.39	20	SLU	2	146.23	8.70	7.63	8.70	4.51	-6693.32	-7082.69	1.058
6.29	17	SLU	3	204.89	4.62	7.63	4.62	7.36	4211.83	6041.86	1.435
8.16	19	SLU	3	17.50	8.70	7.63	8.70	4.55	-6878.95	-7083.06	1.030
8.51	9	SLV	4	47.50	8.70	7.63	8.70	4.67	-4118.72	-7084.11	1.720
9.90	20	SLU	5	120.28	4.62	7.63	4.62	6.83	1934.27	5634.74	2.913
10.95	1	SLV	5	15.00	4.62	7.63	4.62	4.99	-2870.01	-3896.73	1.358
0.20	10	SLD	1	20.00	4.62	4.62	4.62	3.33	-2656.33	-4566.49	1.719
1.97	6	SLD	1	197.33	4.62	4.62	4.62	4.37	1275.25	4343.16	3.406
4.04	2	SLD	1	404.47	6.16	4.62	6.16	3.18	-3426.27	-5969.61	1.742
4.39	10	SLD	2	146.23	8.70	7.63	8.70	4.51	-4948.08	-8259.25	1.669
6.29	2	SLD	3	204.89	4.62	7.63	4.62	7.36	2652.66	7051.13	2.658
8.16	2	SLD	3	17.50	8.70	7.63	8.70	4.55	-5089.27	-8259.42	1.623
8.51	10	SLD	4	47.50	8.70	7.63	8.70	4.67	-3768.57	-8259.76	2.192
9.90	10	SLD	5	120.28	4.62	7.63	4.62	6.83	1451.78	6578.25	4.531
10.95	2	SLD	5	15.00	4.62	7.63	4.62	4.99	-2503.16	-4568.37	1.825

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg	CC	TCC	El	X	AfE I	Tz	AfEP I	σ _f inf
<m>				<cm>	<cmq>	<daN>	<cmq>	<daN/cmq>
0.20	20	SLU	1	20.00	4.62	4886.74	1.29	3799.71
0.20	10	SLD	1	20.00	4.62	3502.17	1.29	2723.13
1.97	9	SLV	1	197.33	4.62	714.87	0.25	2896.35
1.97	10	SLD	1	197.33	4.62	568.06	0.25	2301.54
4.04	19	SLU	1	404.47	4.62	-5638.84	1.44	3913.04
4.04	2	SLD	1	404.47	4.62	-3927.03	1.44	2725.14
4.39	20	SLU	2	146.23	7.63	-11312.10	3.13	3617.80
4.39	14	SLD	2	146.23	7.63	-7341.55	3.13	2347.95
6.29	1	SLV	3	204.89	7.63	739.98	0.28	2661.45
6.29	2	SLD	3	204.89	7.63	587.08	0.28	2111.52
8.16	19	SLU	3	17.50	7.63	11407.80	3.08	3697.99
8.16	2	SLD	3	17.50	7.63	7366.76	3.08	2388.04
8.51	20	SLU	4	47.50	7.63	-8037.18	2.96	2711.27
8.51	10	SLD	4	47.50	7.63	-6264.36	2.96	2113.23
9.90	1	SLV	5	120.28	7.63	1486.16	0.80	1853.14
9.90	2	SLD	5	120.28	7.63	1183.61	0.80	1475.88
10.95	19	SLU	5	15.00	7.63	6700.33	2.64	2536.16
10.95	2	SLD	5	15.00	7.63	5399.10	2.64	2043.62

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	X	AfE S	AfE I	My	σ _f sup	σ _f inf	σ _c
<m>				<cm>	<cmq>	<cmq>	<daNm>	<daN/cmq>	<daN/cmq>	<daN/cmq>
0.20	24	SLE R	1	20.00	4.62	4.62	-1984.81	2085.11	-463.67	56.40
0.20	32	SLE Q	1	20.00	4.62	4.62	-1665.22	1749.36	-389.01	47.32
1.97	23	SLE R	1	197.33	4.62	4.62	1421.80	-332.15	1493.64	40.40
1.97	31	SLE Q	1	197.33	4.62	4.62	1167.50	-272.74	1226.50	33.18
4.04	23	SLE R	1	404.47	6.16	4.62	-3039.00	2420.00	-700.36	77.89
4.04	31	SLE Q	1	404.47	6.16	4.62	-2479.11	1974.15	-571.32	63.54
4.39	24	SLE R	2	146.23	8.70	7.63	-4961.43	2824.10	-988.49	104.03
4.39	32	SLE Q	2	146.23	8.70	7.63	-4054.14	2307.66	-807.73	85.00
6.29	21	SLE R	3	204.89	4.62	7.63	3112.55	-704.94	2016.85	74.21
6.29	29	SLE Q	3	204.89	4.62	7.63	2526.50	-572.21	1637.11	60.24
8.16	23	SLE R	3	17.50	8.70	7.63	-5100.15	2903.06	-1016.13	106.93
8.16	31	SLE Q	3	17.50	8.70	7.63	-4173.32	2375.50	-831.47	87.50
8.51	24	SLE R	4	47.50	8.70	7.63	-3034.14	1727.07	-604.51	63.62
8.51	32	SLE Q	4	47.50	8.70	7.63	-2566.88	1461.10	-511.41	53.82
9.90	24	SLE R	5	120.28	4.62	7.63	1449.38	-328.26	939.16	34.56
9.90	32	SLE Q	5	120.28	4.62	7.63	1262.76	-285.99	818.24	30.11
10.95	23	SLE R	5	15.00	4.62	7.63	-1409.32	1480.16	-288.87	36.95
10.95	31	SLE Q	5	15.00	4.62	7.63	-1242.54	1304.99	-254.69	32.58

Verifiche stato limite di formazione delle fessure

Caso	Xg	CC	TCC	El	Sez.	Crit.	X	My	c	s	K3	s _{sm}	Φ	A _s	A _s eff	σ _s	σ _{sr}	δ _{sm}	Wk
	<m>						<cm>	<daNm>	<mm>	<mm>		<mm>		<cmq>	<cmq>	<daN/cmq>	<daN/cmq>		<mm>
44	0.20	32	SLE Q	1	2	2	20.00	-1665.22	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1749.36	1991.52	0.34	0.09
48	0.20	28	SLE F	1	2	2	20.00	-1754.98	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1843.66	1991.52	0.37	0.10
91	1.97	31	SLE Q	1	2	2	197.33	1167.50	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1226.50	1991.52	0.24	0.06
95	1.97	27	SLE F	1	2	2	197.33	1240.33	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1303.01	1991.52	0.25	0.06
139	4.04	31	SLE Q	1	2	2	404.47	-2479.11	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1974.15	1580.14	0.65	0.14
143	4.04	27	SLE F	1	2	2	404.47	-2640.54	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2102.70	1580.14	0.73	0.15
188	4.39	32	SLE Q	2	2	2	146.23	-4054.14	21.00	85.00	0.13	114.00	18.00	8.70	531.81	2307.66	1235.07	0.96	0.19
192	4.39	28	SLE F	2	2	2	146.23	-4313.06	21.00	85.00	0.13	114.00	18.00	8.70	531.81	2455.04	1235.07	1.04	0.20
233	6.29	29	SLE Q	3	2	2	204.89	2526.50	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1637.11	1340.37	0.53	0.13
237	6.29	25	SLE F	3	2	2	204.89	2694.39	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1745.90	1340.37	0.60	0.15
283	8.16	31	SLE Q	3	2	2	17.50	-4173.32	21.00	85.00	0.13	114.00	18.00	8.70	531.81	2375.50	1235.07	1.00	0.19
287	8.16	27	SLE F	3	2	2	17.50	-4437.86	21.00	85.00	0.13	114.00	18.00	8.70	531.81	2526.08	1235.07	1.08	0.21
332	8.51	32	SLE Q	4	2	2	47.50	-2566.88	21.00	85.00	0.13	114.00	18.00	8.70	531.81	1461.10	1235.07	0.46	0.09
336	8.51	28	SLE F	4	2	2	47.50	-2702.30	21.00	85.00	0.13	114.00	18.00	8.70	531.81	1538.18	1235.07	0.51	0.10
380	9.90	32	SLE Q	5	2	2	120.28	1262.76	21.00	170.00	0.13	144.75	18.00	7.63	583.13	818.24	1340.37	0.16	0.04

Relazione di calcolo

384	9.90	28	SLE F	5	2	2	120.28	1316.15	21.00	170.00	0.13	144.75	18.00	7.63	583.13	852.83	1340.37	0.17	0.04
427	10.95	31	SLE Q	5	2	2	15.00	-1242.54	23.00	170.00	0.13	152.59	14.00	4.62	458.21	1304.99	2052.39	0.25	0.07
431	10.95	27	SLE F	5	2	2	15.00	-1288.61	23.00	170.00	0.13	152.59	14.00	4.62	458.21	1353.38	2052.39	0.26	0.07

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.43	0.23	ø10/ 4 2 br.	39.27	0.40	4909.91	1.07	34000.10	34000.20	34000.10	6.92
19 SLU	0.43	3.81	3.38	ø10/16 2 br.	9.82	0.40	5012.73	2.50	19880.40	23500.40	19880.40	3.97
19 SLU	3.81	4.04	0.23	ø10/ 4 2 br.	39.27	0.40	5638.84	1.07	34000.10	34000.20	34000.10	6.03
20 SLU	4.42	4.65	0.23	ø10/ 4 2 br.	39.27	0.40	11151.60	1.07	34000.10	34000.20	34000.10	3.05
19 SLU	4.65	7.93	3.30	ø10/16 2 br.	9.82	0.40	10009.60	2.50	19880.40	23500.40	19880.40	1.99
19 SLU	7.93	8.16	0.23	ø10/ 4 2 br.	39.27	0.40	11407.80	1.07	34000.10	34000.20	34000.10	2.98
TG	8.51	8.74	0.23	ø10/ 4 2 br.	39.27	0.40	9249.71	1.07	34000.10	34000.20	34000.10	3.68
TG	8.74	10.72	1.98	ø10/16 2 br.	9.82	0.40	8377.02	2.50	19880.40	23500.40	19880.40	2.37
TG	10.72	10.95	0.23	ø10/ 4 2 br.	39.27	0.40	7835.22	1.07	34000.10	34000.20	34000.10	4.34

Travata n. 134

Nodi: -88 126 127 128 -86 -87

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
2.59	1	SLV	1	20.00	4.62	4.62	4.62	3.71	-2271.89	-3897.38	1.715
2.99	9	SLV	2	20.00	4.62	4.62	4.62	2.93	-3439.39	-3897.94	1.133
4.17	18	SLU	2	138.06	4.62	4.62	4.62	4.07	1629.61	3460.52	2.124
5.25	1	SLV	2	246.18	4.62	4.62	4.62	3.03	-3150.88	-3897.83	1.237
5.75	9	SLV	3	25.10	4.62	4.62	4.62	3.37	-3121.01	-3897.57	1.249
7.59	1	SLV	3	209.49	4.62	4.62	4.62	3.49	-2103.76	-3897.51	1.853
7.84	1	SLV	3	234.42	4.62	4.62	4.62	3.37	-3193.33	-3897.60	1.221
8.29	9	SLV	4	22.50	4.62	4.62	4.62	3.09	-2251.64	-3897.77	1.731
2.59	2	SLD	1	20.00	4.62	4.62	4.62	3.71	-1975.89	-4566.98	2.311
2.99	10	SLD	2	20.00	4.62	4.62	4.62	2.93	-3031.88	-4565.90	1.506
4.17	10	SLD	2	138.06	4.62	4.62	4.62	4.07	1151.35	4064.00	3.530
5.25	2	SLD	2	246.18	4.62	4.62	4.62	3.03	-2727.28	-4566.04	1.674
5.75	10	SLD	3	25.10	4.62	4.62	4.62	3.37	-2643.63	-4566.56	1.727
7.59	2	SLD	3	209.49	4.62	4.62	4.62	3.49	-1725.79	-4566.70	2.646
7.84	2	SLD	3	234.42	4.62	4.62	4.62	3.37	-2699.73	-4566.53	1.691
8.29	10	SLD	4	22.50	4.62	4.62	4.62	3.09	-2000.11	-4566.16	2.283

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
2.59	1	SLV	1	20.00	4.62	3104.01	0.91	3413.68
2.59	2	SLD	1	20.00	4.62	2868.94	0.91	3155.17
2.99	18	SLU	2	20.00	4.62	6601.21	1.69	3913.04
2.99	10	SLD	2	20.00	4.62	5593.15	1.69	3315.49
4.17	1	SLV	2	138.06	4.62	-1722.74	0.55	3114.59
4.17	2	SLD	2	138.06	4.62	-1355.28	0.55	2450.25
5.25	17	SLU	2	246.18	4.62	-6202.48	1.59	3913.04
5.25	2	SLD	2	246.18	4.62	-5272.16	1.59	3326.12
5.75	9	SLV	3	25.10	4.62	4683.83	1.25	3755.78
5.75	10	SLD	3	25.10	4.62	4219.96	1.25	3383.82
7.59	1	SLV	3	209.49	4.62	-4071.31	1.12	3623.14
7.59	2	SLD	3	209.49	4.62	-3607.44	1.12	3210.34
7.84	1	SLV	3	234.42	4.62	-4669.81	1.24	3752.74
7.84	2	SLD	3	234.42	4.62	-4205.94	1.24	3379.97
8.29	19	SLU	4	22.50	4.62	5970.74	1.53	3913.04
8.29	14	SLD	4	22.50	4.62	4832.88	1.53	3167.32

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
2.59	21	SLE R	1	20.00	4.62	4.62	-1007.61	1058.53	-235.39	28.63
2.59	29	SLE Q	1	20.00	4.62	4.62	-965.58	1014.37	-225.57	27.44
2.99	22	SLE R	2	20.00	4.62	4.62	-1835.08	1927.81	-428.69	52.14
2.99	30	SLE Q	2	20.00	4.62	4.62	-1637.58	1720.33	-382.56	46.53
4.17	22	SLE R	2	138.06	4.62	4.62	1218.56	-284.67	1280.13	34.63
4.17	30	SLE Q	2	138.06	4.62	4.62	1052.47	-245.87	1105.66	29.91
5.25	21	SLE R	2	246.18	4.62	4.62	-1488.11	1563.31	-347.64	42.29
5.25	29	SLE Q	2	246.18	4.62	4.62	-1278.34	1342.93	-298.63	36.32
5.75	22	SLE R	3	25.10	4.62	4.62	-1216.95	1278.44	-284.29	34.58
5.75	30	SLE Q	3	25.10	4.62	4.62	-1012.96	1064.14	-236.64	28.78

Relazione di calcolo

7.59	21	SLE R	3	209.49	4.62	4.62	-504.30	529.78	-117.81	14.33
7.59	29	SLE Q	3	209.49	4.62	4.62	-434.95	456.93	-101.61	12.36
7.84	21	SLE R	3	234.42	4.62	4.62	-1210.02	1271.17	-282.68	34.38
7.84	29	SLE Q	3	234.42	4.62	4.62	-1013.92	1065.15	-236.86	28.81
8.29	22	SLE R	4	22.50	4.62	4.62	-1326.42	1393.45	-309.87	37.69
8.29	30	SLE Q	4	22.50	4.62	4.62	-1138.52	1196.05	-265.97	32.35

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
41	2.59	29	SLE Q	1	2	2	20.00	-965.58	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1014.37	1991.52	0.20	0.05
45	2.59	25	SLE F	1	2	2	20.00	-978.13	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1027.56	1991.52	0.20	0.05
90	2.99	30	SLE Q	2	2	2	20.00	-1637.58	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1720.33	1991.52	0.33	0.09
94	2.99	26	SLE F	2	2	2	20.00	-1693.27	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1778.84	1991.52	0.35	0.09
138	4.17	30	SLE Q	2	2	2	138.06	1052.47	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1105.66	1991.52	0.21	0.06
142	4.17	26	SLE F	2	2	2	138.06	1099.86	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1155.44	1991.52	0.22	0.06
185	5.25	29	SLE Q	2	2	2	246.18	-1278.34	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1342.93	1991.52	0.26	0.07
189	5.25	25	SLE F	2	2	2	246.18	-1339.05	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1406.72	1991.52	0.27	0.07
234	5.75	30	SLE Q	3	2	2	25.10	-1012.96	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1064.14	1991.52	0.21	0.05
238	5.75	26	SLE F	3	2	2	25.10	-1071.78	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1125.94	1991.52	0.22	0.06
281	7.59	29	SLE Q	3	2	2	209.49	-434.95	23.00	170.00	0.13	150.70	14.00	4.62	458.21	456.93	1991.52	0.09	0.02
285	7.59	25	SLE F	3	2	2	209.49	-454.51	23.00	170.00	0.13	150.70	14.00	4.62	458.21	477.48	1991.52	0.09	0.02
329	7.84	29	SLE Q	3	2	2	234.42	-1013.92	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1065.15	1991.52	0.21	0.05
333	7.84	25	SLE F	3	2	2	234.42	-1069.58	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1123.63	1991.52	0.22	0.06
378	8.29	30	SLE Q	4	2	2	22.50	-1138.52	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1196.05	1991.52	0.23	0.06
382	8.29	26	SLE F	4	2	2	22.50	-1191.35	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1251.56	1991.52	0.24	0.06

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
9 SLV	0.01	2.36	2.35	ø10/16 2 br.	9.82	0.40	3028.10	2.50	19880.40	23500.40	19880.40	6.57
1 SLV	2.36	2.59	0.23	ø10/ 4 2 br.	39.27	0.40	3100.95	1.07	34000.10	34000.20	34000.10	10.96
TG	2.99	3.22	0.23	ø10/ 4 2 br.	39.27	0.40	6985.11	1.07	34000.10	34000.20	34000.10	4.87
TG	3.22	5.02	1.80	ø10/16 2 br.	9.82	0.40	6151.85	2.50	19880.40	23500.40	19880.40	3.23
TG	5.02	5.25	0.23	ø10/ 4 2 br.	39.27	0.40	6949.17	1.07	34000.10	34000.20	34000.10	4.89
TG	5.75	5.98	0.23	ø10/ 4 2 br.	39.27	0.40	5775.56	1.07	34000.10	34000.20	34000.10	5.89
TG	5.98	7.61	1.63	ø10/16 2 br.	9.82	0.40	5221.47	2.50	19880.40	23500.40	19880.40	3.81
TG	7.61	7.84	0.23	ø10/ 4 2 br.	39.27	0.40	5776.64	1.07	34000.10	34000.20	34000.10	5.89
19 SLU	8.29	8.52	0.23	ø10/ 4 2 br.	39.27	0.40	5970.74	1.07	34000.10	34000.20	34000.10	5.69
9 SLV	8.52	12.10	3.58	ø10/16 2 br.	9.82	0.40	1130.36	2.50	19880.40	23500.40	19880.40	17.59

Travata n. 135

Nodi: 128 130 -96

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.17	5	SLV	1	17.50	4.62	4.62	4.62	3.68	-1989.44	-3897.37	1.959
0.53	13	SLV	1	53.21	4.62	4.62	4.62	3.86	890.74	3302.51	3.708
2.28	13	SLV	1	228.37	4.62	5.09	4.62	3.99	-2091.66	-3897.20	1.863
2.69	13	SLV	2	20.13	4.62	9.71	4.62	6.53	-3650.55	-3896.20	1.067
3.96	19	SLU	2	147.51	4.62	4.62	4.62	4.08	1727.00	3474.83	2.012
5.25	5	SLV	2	276.18	4.62	4.62	4.62	3.07	-3510.65	-3897.78	1.110
0.17	6	SLD	1	17.50	4.62	4.62	4.62	3.68	-1700.85	-4566.94	2.685
0.53	14	SLD	1	53.21	4.62	4.62	4.62	3.86	677.58	3881.42	5.728
2.28	14	SLD	1	228.37	4.62	5.09	4.62	3.99	-1820.48	-4567.32	2.509
2.69	14	SLD	2	20.13	4.62	9.71	4.62	6.53	-3194.18	-4569.51	1.431
3.96	6	SLD	2	147.51	4.62	4.62	4.62	4.08	1189.56	4080.55	3.430
5.25	6	SLD	2	276.18	4.62	4.62	4.62	3.07	-3072.71	-4566.10	1.486

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.17	20	SLU	1	17.50	4.62	3240.08	0.94	3443.15
0.17	6	SLD	1	17.50	4.62	2880.45	0.94	3060.98
0.53	5	SLV	1	53.21	4.62	2467.77	0.75	3275.92
0.53	6	SLD	1	53.21	4.62	2202.31	0.75	2923.52
2.28	19	SLU	1	228.37	5.09	-3497.41	1.10	3174.90
2.28	14	SLD	1	228.37	5.09	-3053.97	1.10	2772.35
2.69	20	SLU	2	20.13	9.71	6157.47	3.18	1938.53
2.69	14	SLD	2	20.13	9.71	5273.70	3.18	1660.30
3.96	13	SLV	2	147.51	4.62	1658.82	0.53	3100.75
3.96	14	SLD	2	147.51	4.62	1309.54	0.53	2447.86
5.25	19	SLU	2	276.18	4.62	-6053.78	1.55	3913.04
5.25	6	SLD	2	276.18	4.62	-5224.42	1.55	3376.97

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Relazione di calcolo

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.17	24	SLE R	1	17.50	4.62	4.62	-857.67	901.01	-200.36	24.37
0.17	32	SLE Q	1	17.50	4.62	4.62	-714.94	751.07	-167.02	20.32
0.53	24	SLE R	1	53.21	4.62	4.62	-145.00	152.33	-33.87	4.12
0.53	32	SLE Q	1	53.21	4.62	4.62	-131.18	137.81	-30.64	3.73
2.28	23	SLE R	1	228.37	4.62	5.09	-1057.65	1110.98	-241.87	29.65
2.28	31	SLE Q	1	228.37	4.62	5.09	-894.24	939.33	-204.50	25.07
2.69	24	SLE R	2	20.13	4.62	9.71	-1855.90	1949.61	-350.22	46.35
2.69	32	SLE Q	2	20.13	4.62	9.71	-1631.17	1713.53	-307.81	40.73
3.96	23	SLE R	2	147.51	4.62	4.62	1296.11	-302.79	1361.61	36.83
3.96	31	SLE Q	2	147.51	4.62	4.62	1145.83	-267.68	1203.73	32.56
5.25	23	SLE R	2	276.18	4.62	4.62	-1768.27	1857.62	-413.09	50.25
5.25	31	SLE Q	2	276.18	4.62	4.62	-1572.88	1652.36	-367.44	44.69

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.17	32	SLE Q	1	2	2	17.50	-714.94	23.00	170.00	0.13	150.70	14.00	4.62	458.21	751.07	1991.52	0.15	0.04
48	0.17	28	SLE F	1	2	2	17.50	-755.40	23.00	170.00	0.13	150.70	14.00	4.62	458.21	793.58	1991.52	0.15	0.04
92	0.53	32	SLE Q	1	2	2	53.21	-131.18	23.00	170.00	0.13	150.70	14.00	4.62	458.21	137.81	1991.52	0.03	0.01
96	0.53	28	SLE F	1	2	2	53.21	-134.92	23.00	170.00	0.13	150.70	14.00	4.62	458.21	141.74	1991.52	0.03	0.01
139	2.28	31	SLE Q	1	2	2	228.37	-894.24	23.00	170.00	0.13	151.01	14.00	4.62	458.21	939.33	2001.45	0.18	0.05
143	2.28	27	SLE F	1	2	2	228.37	-941.29	23.00	170.00	0.13	151.01	14.00	4.62	458.21	988.75	2001.45	0.19	0.05
188	2.69	32	SLE Q	2	2	2	20.13	-1631.17	23.00	170.00	0.13	153.75	14.00	4.62	458.21	1713.53	2077.80	0.33	0.09
192	2.69	28	SLE F	2	2	2	20.13	-1695.80	23.00	170.00	0.13	153.75	14.00	4.62	458.21	1781.42	2077.80	0.35	0.09
235	3.96	31	SLE Q	2	2	2	147.51	1145.83	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1203.73	1991.52	0.23	0.06
239	3.96	27	SLE F	2	2	2	147.51	1188.67	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1248.74	1991.52	0.24	0.06
283	5.25	31	SLE Q	2	2	2	276.18	-1572.88	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1652.36	1991.52	0.32	0.08
287	5.25	27	SLE F	2	2	2	276.18	-1628.46	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1710.75	1991.52	0.33	0.09

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <mm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.17	0.41	0.23	ø10/ 4 2 br.	39.27	0.40	5459.46	1.07	34000.10	34000.20	34000.10	6.23
TG	0.41	2.05	1.65	ø10/16 2 br.	9.82	0.40	5022.73	2.50	19880.40	23500.40	19880.40	3.96
TG	2.05	2.28	0.23	ø10/ 4 2 br.	39.27	0.40	5342.29	1.07	34000.10	34000.20	34000.10	6.36
TG	2.69	2.92	0.23	ø10/ 4 2 br.	39.27	0.40	6541.04	1.07	34000.10	34000.20	34000.10	5.20
TG	2.92	5.02	2.10	ø10/16 2 br.	9.82	0.40	6894.67	2.50	19880.40	23500.40	19880.40	2.88
TG	5.02	5.25	0.23	ø10/ 4 2 br.	39.27	0.40	7609.56	1.07	34000.10	34000.20	34000.10	4.47

Travata n. 136

Nodi: 156 157 136

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
3.98	17	SLU	2	30.20	4.62	4.62	4.62	1.50	-3503.16	-3899.40	1.113
3.98	10	SLD	2	30.20	4.62	4.62	4.62	1.50	-3127.15	-4563.02	1.459

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
3.98	17	SLU	2	30.20	4.62	12211.20	3.12	3913.04
3.98	10	SLD	2	30.20	4.62	7907.74	3.12	2534.01

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
3.98	21	SLE R	2	30.20	4.62	4.62	-2615.93	2748.12	-611.11	74.33
3.98	29	SLE Q	2	30.20	4.62	4.62	-2215.84	2327.81	-517.64	62.96

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
41	3.98	29	SLE Q	2	2	2	30.20	-2215.84	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2327.81	1991.52	0.72	0.18
45	3.98	25	SLE F	2	2	2	30.20	-2330.56	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2448.33	1991.52	0.80	0.20

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <mm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T	
18	SLU	-0.00	3.75	3.75	ø10/16 2 br.	9.82	0.40	2724.34	2.50	19880.40	23500.40	19880.40	7.30
17	SLU	3.75	3.98	0.23	ø10/ 4 2 br.	39.27	0.40	12211.20	1.07	34000.10	34000.20	34000.10	2.78

Travata n. 137

Relazione di calcolo

Nodi: 136 -94 -95 158 -96 137 135 -93

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Typo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
3	R	30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.25	18	SLU	1	36.84	7.70	4.62	7.70	1.56	-5784.29	-6277.25	1.085
2.04	17	SLU	2	129.08	4.62	4.62	4.62	4.33	2688.59	3671.51	1.366
3.80	17	SLU	3	10.00	4.62	4.62	4.62	2.70	-3704.62	-3898.11	1.052
4.00	18	SLU	4	192.10	4.62	4.62	4.62	3.33	-2608.64	-3897.59	1.494
5.77	9	SLV	4	15.00	4.62	4.62	4.62	3.88	1038.54	3312.02	3.189
6.07	1	SLV	5	386.06	4.62	4.62	4.62	4.18	-1963.74	-3897.12	1.985
9.73	9	SLV	5	20.00	4.62	4.62	4.62	4.19	-1718.17	-3897.10	2.268
10.13	1	SLV	6	20.00	4.62	4.62	4.62	3.55	-2861.04	-5456.02	1.907
12.00	9	SLV	6	206.81	4.62	4.62	4.62	3.55	-2626.76	-5456.08	2.077
12.30	18	SLU	7	15.05	4.62	4.62	4.62	4.20	-1857.23	-3897.09	2.098
0.25	6	SLD	1	36.84	7.70	4.62	7.70	1.56	-4642.62	-7353.28	1.584
2.04	2	SLD	2	129.08	4.62	4.62	4.62	4.33	1704.73	4307.73	2.527
3.80	14	SLD	3	10.00	4.62	4.62	4.62	2.70	-3314.46	-4565.50	1.377
4.00	10	SLD	4	192.10	4.62	4.62	4.62	3.33	-2304.12	-4566.47	1.982
5.77	2	SLD	4	15.00	4.62	4.62	4.62	3.88	-967.68	-4567.22	4.720
6.07	2	SLD	5	386.06	4.62	4.62	4.62	4.18	-1615.17	-4567.55	2.828
9.73	10	SLD	5	20.00	4.62	4.62	4.62	4.19	-1403.87	-4567.56	3.254
10.13	2	SLD	6	20.00	4.62	4.62	4.62	3.55	-2344.39	-6346.50	2.707
12.00	10	SLD	6	206.81	4.62	4.62	4.62	3.55	-2152.61	-6346.53	2.948
12.30	2	SLD	7	15.05	4.62	4.62	4.62	4.20	-1608.17	-4567.56	2.840

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.25	18	SLU	1	36.84	4.62	-11950.60	3.05	3913.04
0.25	2	SLD	1	36.84	4.62	-7862.68	3.05	2574.51
2.04	5	SLV	2	129.08	4.62	-834.95	0.29	2922.35
2.04	6	SLD	2	129.08	4.62	-656.49	0.29	2297.72
3.80	17	SLU	3	10.00	4.62	7520.18	1.92	3913.04
3.80	14	SLD	3	10.00	4.62	5398.89	1.92	2809.25
4.00	18	SLU	4	192.10	4.62	-4920.04	1.29	3806.92
4.00	10	SLD	4	192.10	4.62	-3815.06	1.29	2951.94
5.77	1	SLV	4	15.00	4.62	2420.79	0.74	3265.74
5.77	2	SLD	4	15.00	4.62	2179.05	0.74	2939.62
6.07	1	SLV	5	386.06	4.62	-1338.76	0.44	3031.44
6.07	2	SLD	5	386.06	4.62	-1157.73	0.44	2621.52
9.73	9	SLV	5	20.00	4.62	1291.43	0.43	3021.19
9.73	10	SLD	5	20.00	4.62	1110.39	0.43	2597.68
10.13	1	SLV	6	20.00	4.62	3861.09	1.07	3603.98
10.13	2	SLD	6	20.00	4.62	3330.79	1.07	3108.99
12.00	9	SLV	6	206.81	4.62	-3826.64	1.06	3596.52
12.00	10	SLD	6	206.81	4.62	-3296.34	1.06	3098.11
12.30	18	SLU	7	15.05	4.62	1271.78	0.42	3016.94
12.30	2	SLD	7	15.05	4.62	1088.47	0.42	2582.09

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.25	22	SLE R	1	36.84	7.70	4.62	-4292.00	2759.37	-971.33	102.06
0.25	30	SLE Q	1	36.84	7.70	4.62	-3524.28	2265.80	-797.59	83.81
2.04	21	SLE R	2	129.08	4.62	4.62	1989.30	-464.72	2089.82	56.53
2.04	29	SLE Q	2	129.08	4.62	4.62	1624.43	-379.48	1706.52	46.16
3.80	21	SLE R	3	10.00	4.62	4.62	-2752.05	2891.12	-642.91	78.20
3.80	29	SLE Q	3	10.00	4.62	4.62	-2273.75	2388.65	-531.17	64.61
4.00	22	SLE R	4	192.10	4.62	4.62	-1937.29	2035.19	-452.57	55.05
4.00	30	SLE Q	4	192.10	4.62	4.62	-1596.58	1677.25	-372.98	45.37
5.77	21	SLE R	4	15.00	4.62	4.62	-198.32	208.34	-46.33	5.64
5.77	29	SLE Q	4	15.00	4.62	4.62	-169.67	178.25	-39.64	4.82
6.07	22	SLE R	5	386.06	4.62	4.62	-416.27	437.31	-97.25	11.83
6.07	30	SLE Q	5	386.06	4.62	4.62	-392.99	412.85	-91.81	11.17
9.73	21	SLE R	5	20.00	4.62	4.62	-286.07	300.53	-66.83	8.13
9.73	29	SLE Q	5	20.00	4.62	4.62	-302.63	317.92	-70.70	8.60
10.13	22	SLE R	6	20.00	4.62	4.62	-576.65	430.23	-110.08	11.06
10.13	30	SLE Q	6	20.00	4.62	4.62	-559.45	417.40	-106.80	10.73
12.00	21	SLE R	6	206.81	4.62	4.62	-556.02	414.84	-106.14	10.67
12.00	29	SLE Q	6	206.81	4.62	4.62	-512.46	382.34	-97.83	9.83
12.30	22	SLE R	7	15.05	4.62	4.62	-1391.11	1461.41	-324.98	39.53

Relazione di calcolo

12.30	30	SLE Q	7	15.05	4.62	4.62	-1197.54	1258.05	-279.76	34.03
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Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _m <mm>	Φ	A _s <cmq>	A _{s,eff} <cmq>	σ _s <daN/cmq>	σ _{sz} <daN/cmq>	ε _{sm}	Wk <mm>
42	0.25	30	SLE Q	1	2	2	36.84	-3524.28	23.00	85.00	0.13	108.17	14.00	7.70	496.66	2265.80	1332.19	0.91	0.17
46	0.25	26	SLE F	1	2	2	36.84	-3743.75	23.00	85.00	0.13	108.17	14.00	7.70	496.66	2406.90	1332.19	0.99	0.18
89	2.04	29	SLE Q	2	2	2	129.08	1624.43	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1706.52	1991.52	0.33	0.08
93	2.04	25	SLE F	2	2	2	129.08	1728.63	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1815.98	1991.52	0.35	0.09
137	3.80	29	SLE Q	3	2	2	10.00	-2273.75	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2388.65	1991.52	0.76	0.19
141	3.80	25	SLE F	3	2	2	10.00	-2410.18	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2531.98	1991.52	0.85	0.22
186	4.00	30	SLE Q	4	2	2	192.10	-1596.58	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1677.25	1991.52	0.33	0.08
190	4.00	26	SLE F	4	2	2	192.10	-1693.71	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1779.29	1991.52	0.35	0.09
233	5.77	29	SLE Q	4	2	2	15.00	-169.67	23.00	170.00	0.13	150.70	14.00	4.62	458.21	178.25	1991.52	0.03	0.01
237	5.77	25	SLE F	4	2	2	15.00	-177.90	23.00	170.00	0.13	150.70	14.00	4.62	458.21	186.89	1991.52	0.04	0.01
282	6.07	30	SLE Q	5	2	2	386.06	-392.99	23.00	170.00	0.13	150.70	14.00	4.62	458.21	412.85	1991.52	0.08	0.02
286	6.07	26	SLE F	5	2	2	386.06	-399.40	23.00	170.00	0.13	150.70	14.00	4.62	458.21	419.59	1991.52	0.08	0.02
329	9.73	29	SLE Q	5	2	2	20.00	-302.63	23.00	170.00	0.13	150.70	14.00	4.62	458.21	317.92	1991.52	0.06	0.02
333	9.73	25	SLE F	5	2	2	20.00	-298.03	23.00	170.00	0.13	150.70	14.00	4.62	458.21	313.09	1991.52	0.06	0.02
378	10.13	30	SLE Q	6	3	1	20.00	-559.45	23.00	120.00	0.16	140.21	14.00	4.62	364.56	417.40	1977.14	0.08	0.02
382	10.13	26	SLE F	6	3	1	20.00	-563.01	23.00	120.00	0.16	140.21	14.00	4.62	364.56	420.06	1977.14	0.08	0.02
425	12.00	29	SLE Q	6	3	1	206.81	-512.46	23.00	120.00	0.16	140.21	14.00	4.62	364.56	382.34	1977.14	0.07	0.02
429	12.00	25	SLE F	6	3	1	206.81	-526.64	23.00	120.00	0.16	140.21	14.00	4.62	364.56	392.92	1977.14	0.08	0.02
474	12.30	30	SLE Q	7	2	2	15.05	-1197.54	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1258.05	1991.52	0.24	0.06
478	12.30	26	SLE F	7	2	2	15.05	-1252.54	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1315.84	1991.52	0.26	0.07

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic. T
18 SLU	0.25	0.48	0.23	ø10/ 4 2 br.	39.27	0.40	11950.60	1.07	34000.10	34000.20	34000.10	2.85
18 SLU	0.48	3.57	3.09	ø10/16 2 br.	9.82	0.40	11872.90	2.50	19880.40	23500.40	19880.40	1.67
17 SLU	3.57	3.80	0.23	ø10/ 4 2 br.	39.27	0.40	7520.18	1.07	34000.10	34000.20	34000.10	4.52
TG	4.00	4.23	0.23	ø10/ 4 2 br.	39.27	0.40	6193.00	1.07	34000.10	34000.20	34000.10	5.49
TG	4.23	5.54	1.31	ø10/16 2 br.	9.82	0.40	5640.83	2.50	19880.40	23500.40	19880.40	3.52
TG	5.54	5.77	0.23	ø10/ 4 2 br.	39.27	0.40	5945.28	1.07	34000.10	34000.20	34000.10	5.72
TG	6.07	6.30	0.23	ø10/ 4 2 br.	39.27	0.40	2511.40	1.07	34000.10	34000.20	34000.10	13.54
TG	6.30	9.50	3.20	ø10/16 2 br.	9.82	0.40	2451.60	2.50	19880.40	23500.40	19880.40	8.11
TG	9.50	9.73	0.23	ø10/ 4 2 br.	39.27	0.40	2508.32	1.07	34000.10	34000.20	34000.10	13.55
TG	10.13	10.45	0.32	ø8/ 8 2 br.	12.57	0.30	6569.62	2.01	28399.80	28399.80	28399.80	4.32
TG	10.45	11.68	1.23	ø8/20 2 br.	5.03	0.30	6095.33	2.50	14161.80	24522.20	14161.80	2.32
TG	11.68	12.00	0.32	ø8/ 8 2 br.	12.57	0.30	6563.56	2.01	28399.80	28399.80	28399.80	4.33
18 SLU	12.30	12.53	0.23	ø10/ 4 2 br.	39.27	0.40	1271.78	1.07	34000.10	34000.20	34000.10	26.73
18 SLU	12.53	16.13	3.61	ø10/16 2 br.	9.82	0.40	1192.44	2.50	19880.40	23500.40	19880.40	16.67

Travata n. 138

Nodi: 132 -92 135 141

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	9	SLV	1	45.00	4.62	4.62	4.62	3.24	-3693.01	-3897.67	1.055
0.65	1	SLV	2	206.12	4.62	4.62	4.62	3.55	1782.71	3051.27	1.712
2.51	1	SLV	2	20.04	4.62	4.62	4.62	3.19	-3424.28	-3897.71	1.138
2.91	9	SLV	3	315.48	4.62	4.62	4.62	2.67	-5039.12	-5456.47	1.083
4.54	20	SLU	3	152.23	4.62	4.62	4.62	4.04	2580.99	4799.01	1.859
5.91	1	SLV	3	15.08	4.62	4.62	4.62	2.95	-4149.73	-5456.34	1.315
0.20	10	SLD	1	45.00	4.62	4.62	4.62	3.24	-3153.12	-4566.36	1.448
0.65	2	SLD	2	206.12	4.62	4.62	4.62	3.55	1418.18	3591.01	2.532
2.51	2	SLD	2	20.04	4.62	4.62	4.62	3.19	-2963.31	-4566.30	1.541
2.91	10	SLD	3	315.48	4.62	4.62	4.62	2.67	-4482.08	-6347.41	1.416
4.54	10	SLD	3	152.23	4.62	4.62	4.62	4.04	1969.27	5587.33	2.837
5.91	2	SLD	3	15.08	4.62	4.62	4.62	2.95	-3562.19	-6347.08	1.782

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.20	9	SLV	1	45.00	4.62	-5360.29	1.37	3902.25
0.20	10	SLD	1	45.00	4.62	-4883.76	1.37	3555.34
0.65	9	SLV	2	206.12	4.62	-3825.22	1.07	3569.85
0.65	10	SLD	2	206.12	4.62	-3399.53	1.07	3172.58
2.51	19	SLU	2	20.04	4.62	5600.06	1.43	3913.04
2.51	2	SLD	2	20.04	4.62	4873.39	1.43	3405.28
2.91	20	SLU	3	315.48	4.62	-7624.87	1.95	3913.04
2.91	10	SLD	3	315.48	4.62	-6359.47	1.95	3263.65
4.54	1	SLV	3	152.23	4.62	1827.77	0.58	3163.69
4.54	2	SLD	3	152.23	4.62	1446.76	0.58	2504.19
5.91	19	SLU	3	15.08	4.62	6519.47	1.67	3913.04

Relazione di calcolo

5.91	2	SLD	3	15.08	4.62	5663.98	1.67	3399.57
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Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.20	24	SLE R	1	45.00	4.62	4.62	-1519.49	1596.27	-354.97	43.18
0.20	32	SLE Q	1	45.00	4.62	4.62	-1283.78	1348.65	-299.90	36.48
0.65	23	SLE R	2	206.12	4.62	4.62	167.93	-39.23	176.41	4.77
0.65	31	SLE Q	2	206.12	4.62	4.62	156.96	-36.67	164.89	4.46
2.51	23	SLE R	2	20.04	4.62	4.62	-1640.09	1722.97	-383.14	46.60
2.51	31	SLE Q	2	20.04	4.62	4.62	-1368.26	1437.40	-319.64	38.88
2.91	24	SLE R	3	315.48	4.62	4.62	-2923.52	2181.22	-558.08	56.10
2.91	32	SLE Q	3	315.48	4.62	4.62	-2555.90	1906.94	-487.91	49.04
4.54	24	SLE R	3	152.23	4.62	4.62	1940.03	-370.34	1447.44	37.23
4.54	32	SLE Q	3	152.23	4.62	4.62	1721.61	-328.64	1284.48	33.03
5.91	23	SLE R	3	15.08	4.62	4.62	-1712.07	1277.36	-326.82	32.85
5.91	31	SLE Q	3	15.08	4.62	4.62	-1529.92	1141.46	-292.05	29.36

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.20	32	SLE Q	1	2	2	45.00	-1283.78	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1348.65	1991.52	0.26	0.07
48	0.20	28	SLE F	1	2	2	45.00	-1350.23	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1418.46	1991.52	0.28	0.07
91	0.65	31	SLE Q	2	2	2	206.12	156.96	23.00	170.00	0.13	150.70	14.00	4.62	458.21	164.89	1991.52	0.03	0.01
95	0.65	27	SLE F	2	2	2	206.12	160.78	23.00	170.00	0.13	150.70	14.00	4.62	458.21	168.91	1991.52	0.03	0.01
139	2.51	31	SLE Q	2	2	2	20.04	-1368.26	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1437.40	1991.52	0.28	0.07
143	2.51	27	SLE F	2	2	2	20.04	-1446.47	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1519.56	1991.52	0.30	0.08
188	2.91	32	SLE Q	3	3	1	315.48	-2555.90	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1906.94	1977.14	0.43	0.10
192	2.91	28	SLE F	3	3	1	315.48	-2662.05	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1986.14	1977.14	0.49	0.12
236	4.54	32	SLE Q	3	3	1	152.23	1721.61	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1284.48	1977.14	0.25	0.06
240	4.54	28	SLE F	3	3	1	152.23	1784.29	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1331.25	1977.14	0.26	0.06
283	5.91	31	SLE Q	3	3	1	15.08	-1529.92	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1141.46	1977.14	0.22	0.05
287	5.91	27	SLE F	3	3	1	15.08	-1580.57	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1179.25	1977.14	0.23	0.05

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.43	0.23	ø10/ 4 2 br.	39.27	0.40	5844.41	1.07	34000.10	34000.20	34000.10	5.82
TG	0.43	2.28	1.85	ø10/16 2 br.	9.82	0.40	5274.07	2.50	19880.40	23500.40	19880.40	3.77
TG	2.28	2.51	0.23	ø10/ 4 2 br.	39.27	0.40	5864.24	1.07	34000.10	34000.20	34000.10	5.80
20 SLU	2.91	3.23	0.32	ø8/ 8 2 br.	12.57	0.30	7625.00	2.01	28399.80	28399.80	28399.80	3.72
TG	3.23	5.59	2.36	ø8/20 2 br.	5.03	0.30	6637.47	2.50	14161.80	24522.20	14161.80	2.13
TG	5.59	5.91	0.32	ø8/ 8 2 br.	12.57	0.30	7513.12	2.01	28399.80	28399.80	28399.80	3.78

Travata n. 139

Nodi: 139 138

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	18	SLU	1	536.49	6.16	4.62	6.16	2.42	-6875.47	-7188.20	1.045
2.88	20	SLU	1	268.19	4.62	4.62	4.62	4.45	5190.32	5266.42	1.015
5.41	17	SLU	1	15.05	6.16	4.62	6.16	2.53	-5636.70	-7189.35	1.275
0.20	2	SLD	1	536.49	6.16	4.62	6.16	2.42	-6108.96	-8356.08	1.368
2.88	10	SLD	1	268.19	4.62	4.62	4.62	4.45	3612.37	6127.25	1.696
5.41	10	SLD	1	15.05	6.16	4.62	6.16	2.53	-5161.58	-8356.44	1.619

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.20	18	SLU	1	536.49	4.62	-8598.53	2.20	3913.04
0.20	2	SLD	1	536.49	4.62	-6462.72	2.20	2941.08
2.88	1	SLV	1	268.19	4.62	-641.42	0.17	3852.59
2.88	2	SLD	1	268.19	4.62	-503.34	0.17	3023.23
5.41	17	SLU	1	15.05	4.62	8181.66	2.09	3913.04
5.41	10	SLD	1	15.05	4.62	6172.35	2.09	2952.05

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.20	22	SLE R	1	536.49	6.16	4.62	-5212.09	2947.07	-955.73	90.63
0.20	30	SLE Q	1	536.49	6.16	4.62	-4803.10	2715.81	-880.74	83.52
2.88	24	SLE R	1	268.19	4.62	4.62	3919.18	-748.15	2924.08	75.20
2.88	32	SLE Q	1	268.19	4.62	4.62	3588.26	-684.98	2677.18	68.85
5.41	21	SLE R	1	15.05	6.16	4.62	-4278.13	2418.98	-784.48	74.39

Relazione di calcolo

5.41	29	SLE Q	1	15.05	6.16	4.62	-3956.11	2236.90	-725.43	68.79
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Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
42	0.20	30	SLE Q	1	3	1	536.49	-4803.10	23.00	80.00	0.16	115.47	14.00	6.16	373.65	2715.81	1575.60	1.10	0.22
46	0.20	26	SLE F	1	3	1	536.49	-4919.29	23.00	80.00	0.16	115.47	14.00	6.16	373.65	2781.51	1575.60	1.13	0.22
92	2.88	32	SLE Q	1	3	1	268.19	3588.26	23.00	120.00	0.16	140.21	14.00	4.62	364.56	2677.18	1977.14	0.95	0.23
96	2.88	28	SLE F	1	3	1	268.19	3683.85	23.00	120.00	0.16	140.21	14.00	4.62	364.56	2748.50	1977.14	0.99	0.24
137	5.41	29	SLE Q	1	3	1	15.05	-3956.11	23.00	80.00	0.16	115.47	14.00	6.16	373.65	2236.90	1575.60	0.82	0.16
141	5.41	25	SLE F	1	3	1	15.05	-4046.91	23.00	80.00	0.16	115.47	14.00	6.16	373.65	2288.24	1575.60	0.85	0.17

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
18 SLU	0.20	0.52	0.32	ø8/ 8 2 br.	12.57	0.30	8598.58	2.01	28399.80	28399.80	28399.80	3.30
18 SLU	0.52	5.09	4.57	ø8/20 2 br.	5.03	0.30	7581.26	2.50	14161.80	24522.20	14161.80	1.87
17 SLU	5.09	5.41	0.32	ø8/ 8 2 br.	12.57	0.30	8180.24	2.01	28399.80	28399.80	28399.80	3.47

Travata n. 140

Nodi: 157 162

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.00	17	SLU	1	505.12	12.79	9.17	12.79	6.56	-9172.86	-10220.70	1.114
2.83	18	SLU	1	222.14	4.62	9.17	4.62	9.10	6430.22	7388.85	1.149
5.05	18	SLU	1	0.00	6.16	9.17	6.16	5.21	-4681.60	-5105.97	1.091
0.00	6	SLD	1	505.12	12.79	9.17	12.79	6.56	-6091.03	-11882.80	1.951
2.83	2	SLD	1	222.14	4.62	9.17	4.62	9.10	3898.96	8614.19	2.209
5.05	14	SLD	1	0.00	6.16	9.17	6.16	5.21	-3213.42	-5967.82	1.857

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _r inf <daN/cmq>
0.00	17	SLU	1	505.12	9.17	-10216.70	2.61	3913.04
0.00	6	SLD	1	505.12	9.17	-6359.92	2.61	2435.87
2.83	13	SLV	1	222.14	9.17	252.60	0.07	3424.71
2.83	14	SLD	1	222.14	9.17	198.46	0.07	2690.72
5.05	18	SLU	1	0.00	9.17	9635.71	3.96	2430.56
5.05	14	SLD	1	0.00	9.17	5952.46	3.96	1501.47

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _r sup <daN/cmq>	σ _r inf <daN/cmq>	σ _c <daN/cmq>
0.00	21	SLE R	1	505.12	12.79	9.17	-6792.33	2666.29	-1238.64	121.63
0.00	29	SLE Q	1	505.12	12.79	9.17	-5572.07	2187.29	-1016.12	99.78
2.83	22	SLE R	1	222.14	4.62	9.17	4751.29	-1056.60	2583.07	106.84
2.83	30	SLE Q	1	222.14	4.62	9.17	3863.63	-859.20	2100.49	86.88
5.05	22	SLE R	1	0.00	6.16	9.17	-3454.76	2743.80	-663.89	78.34
5.05	30	SLE Q	1	0.00	6.16	9.17	-2772.40	2201.86	-532.76	62.86

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
41	0.00	29	SLE Q	1	2	2	505.12	-5572.07	21.00	56.67	0.13	93.20	18.00	12.79	566.38	2187.29	953.95	0.96	0.15
45	0.00	25	SLE F	1	2	2	505.12	-5920.79	21.00	56.67	0.13	93.20	18.00	12.79	566.38	2324.17	953.95	1.03	0.16
90	2.83	30	SLE Q	1	2	2	222.14	3863.63	21.00	113.33	0.13	121.51	18.00	9.17	579.39	2100.49	1152.49	0.87	0.18
96	2.83	28	SLE F	1	2	2	222.14	4117.20	21.00	113.33	0.13	121.51	18.00	9.17	579.39	2238.34	960.41	0.99	0.20
138	5.05	30	SLE Q	1	2	2	0.00	-2772.40	23.00	113.33	0.13	126.56	14.00	6.16	487.68	2201.86	1639.48	0.77	0.17
142	5.05	26	SLE F	1	2	2	0.00	-2967.37	23.00	113.33	0.13	126.56	14.00	6.16	487.68	2356.71	1639.48	0.87	0.19

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
17 SLU	0.00	0.23	0.23	ø10/ 4 2 br.	39.27	0.40	10216.70	1.07	34000.10	34000.20	34000.10	3.33
17 SLU	0.23	4.82	4.59	ø10/16 2 br.	9.82	0.40	9513.74	2.50	19880.40	23500.40	19880.40	2.09
18 SLU	4.82	5.05	0.23	ø10/ 4 2 br.	39.27	0.40	9635.71	1.07	34000.10	34000.20	34000.10	3.53

Travata n. 141

Nodi: 140 162 144

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
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Relazione di calcolo

3R	30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
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Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.15	1	SLV	1	364.50	6.16	9.17	6.16	6.11	-6233.07	-7203.18	1.156
3.80	18	SLU	2	145.06	4.62	9.17	4.62	6.05	5957.38	7082.49	1.189
5.05	17	SLU	2	20.11	8.70	9.17	8.70	4.90	-9473.27	-10058.50	1.062
0.15	2	SLD	1	364.50	6.16	9.17	6.16	6.11	-5702.41	-8358.63	1.466
3.80	2	SLD	2	145.06	4.62	9.17	4.62	6.05	4609.39	8222.79	1.784
5.05	14	SLD	2	20.11	8.70	9.17	8.70	4.90	-8150.01	-11657.90	1.430

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cmq>
0.15	18	SLU	1	364.50	9.17	-6415.24	3.07	2092.76
0.15	2	SLD	1	364.50	9.17	-5379.70	3.07	1754.95
3.80	19	SLU	2	145.06	9.17	10240.80	3.12	3281.88
3.80	14	SLD	2	145.06	9.17	7407.60	3.12	2373.93
5.05	19	SLU	2	20.11	9.17	13485.10	4.27	3158.77
5.05	14	SLD	2	20.11	9.17	9746.15	4.27	2282.95

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.15	22	SLE R	1	364.50	6.16	9.17	-4145.07	2323.94	-627.63	62.20
0.15	30	SLE Q	1	364.50	6.16	9.17	-3800.44	2130.73	-575.45	57.03
3.80	22	SLE R	2	145.06	4.62	9.17	4432.33	-763.09	1711.01	67.94
3.80	30	SLE Q	2	145.06	4.62	9.17	3735.45	-643.11	1441.99	57.25
5.05	21	SLE R	2	20.11	8.70	9.17	-7110.77	2852.26	-1032.17	95.60
5.05	29	SLE Q	2	20.11	8.70	9.17	-6293.57	2524.46	-913.55	84.61

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s_{rm} <mm>	Φ	A_s <cmq>	$A_{c\ eff}$ <cmq>	σ_s <daN/cmq>	σ_{sr} <daN/cmq>	ϵ_{sm}	Wk <mm>
42	0.15	30	SLE Q	1	3	1	364.50	-3800.44	23.00	80.00	0.16	116.85	14.00	6.16	373.65	2130.73	1635.41	0.73	0.14
46	0.15	26	SLE F	1	3	1	364.50	-3898.67	23.00	80.00	0.16	116.85	14.00	6.16	373.65	2185.80	1635.41	0.76	0.15
90	3.80	30	SLE Q	2	3	1	145.06	3735.45	21.00	80.00	0.13	104.93	18.00	9.17	447.44	1441.99	1159.96	0.47	0.08
94	3.80	26	SLE F	2	3	1	145.06	3934.18	21.00	80.00	0.13	104.93	18.00	9.17	447.44	1518.71	1159.96	0.52	0.09
137	5.05	29	SLE Q	2	3	1	20.11	-6293.57	21.00	60.00	0.14	101.11	18.00	8.70	408.54	2524.46	1253.14	1.07	0.18
141	5.05	25	SLE F	2	3	1	20.11	-6527.59	21.00	60.00	0.14	101.11	18.00	8.70	408.54	2618.33	1253.14	1.13	0.19

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.15	0.47	0.32	$\emptyset 8 / 8$ 2 br.	12.57	0.30	6531.71	2.01	28399.80	28399.80	28399.80	4.35
19 SLU	0.47	4.73	4.25	$\emptyset 8 / 20$ 2 br.	5.03	0.30	12696.50	2.50	14161.80	24522.20	14161.80	1.12
19 SLU	4.73	5.05	0.32	$\emptyset 8 / 8$ 2 br.	12.57	0.30	13485.10	2.01	28399.80	28399.80	28399.80	2.11

Travata n. 142

Nodi: 161 145

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.15	5	SLV	1	14.99	4.62	7.63	4.62	5.40	-4015.56	-5455.37	1.359
1.49	5	SLV	1	148.91	4.62	7.63	4.62	5.51	3117.73	6468.05	2.075
0.15	6	SLD	1	14.99	4.62	7.63	4.62	5.40	-3218.54	-6345.28	1.971
1.49	6	SLD	1	148.91	4.62	7.63	4.62	5.51	2480.48	7512.14	3.029

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cmq>
0.15	5	SLV	1	14.99	7.63	5294.99	2.24	2368.02
0.15	6	SLD	1	14.99	7.63	4267.43	2.24	1908.47
1.49	5	SLV	1	148.91	7.63	4929.76	2.12	2320.17
1.49	6	SLD	1	148.91	7.63	3902.21	2.12	1836.56

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.15	24	SLE R	1	14.99	4.62	7.63	-510.53	379.29	-84.89	8.86
0.15	32	SLE Q	1	14.99	4.62	7.63	-476.04	353.67	-79.15	8.26

Relazione di calcolo

1.49	24	SLE R	1	148.91	4.62	7.63	310.53	-55.08	142.87	5.04
1.49	32	SLE Q	1	148.91	4.62	7.63	290.80	-51.58	133.79	4.72

Verifiche stato limite di formazione delle fessure

Caso	Xg <cm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	S _{rm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.15	32	SLE Q	1	3	1	14.99	-476.04	23.00	120.00	0.16	141.39	14.00	4.62	364.56	353.67	2039.14	0.07	0.02
48	0.15	28	SLE F	1	3	1	14.99	-485.32	23.00	120.00	0.16	141.39	14.00	4.62	364.56	360.56	2039.14	0.07	0.02
92	1.49	32	SLE Q	1	3	1	148.91	290.80	21.00	120.00	0.14	123.70	18.00	7.63	451.85	133.79	1341.94	0.03	0.01
96	1.49	28	SLE F	1	3	1	148.91	296.12	21.00	120.00	0.14	123.70	18.00	7.63	451.85	136.24	1341.94	0.03	0.01

Staffe - Verifiche armatura

CC	X0 <cm>	X1 <cm>	Lung. <cm>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.15	0.47	0.32	ø8/ 8 2 br.	12.57	0.30	9075.50	2.01	28399.80	28399.80	28399.80	3.13
TG	0.47	1.16	0.70	ø8/20 2 br.	5.03	0.30	8988.67	2.50	14161.80	24522.20	14161.80	1.58
TG	1.16	1.48	0.32	ø8/ 8 2 br.	12.57	0.30	8979.72	2.01	28399.80	28399.80	28399.80	3.16

Travata n. 143

Nodi: 144 -106 146 145

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
3	R	30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.25	1	SLV	1	115.24	4.62	4.62	4.62	3.51	-4088.28	-5456.09	1.335
1.40	13	SLV	2	280.08	4.62	4.62	4.62	3.95	1457.71	4698.18	3.223
4.05	9	SLV	2	15.00	4.62	4.62	4.62	3.79	-2802.37	-5455.97	1.947
4.35	1	SLV	3	291.86	4.62	4.62	4.62	3.67	-3080.03	-5455.99	1.771
7.12	1	SLV	3	15.00	4.62	4.62	4.62	3.73	2759.98	4449.42	1.612
0.25	2	SLD	1	115.24	4.62	4.62	4.62	3.51	-3631.72	-6346.56	1.748
1.40	14	SLD	2	280.08	4.62	4.62	4.62	3.95	1148.98	5470.84	4.761
4.05	10	SLD	2	15.00	4.62	4.62	4.62	3.79	-2375.10	-6346.31	2.672
4.35	2	SLD	3	291.86	4.62	4.62	4.62	3.67	-2571.50	-6346.44	2.468
7.12	10	SLD	3	15.00	4.62	4.62	4.62	3.73	-2572.41	-6346.36	2.467

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <cm>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.25	1	SLV	1	115.24	4.62	-4031.60	1.11	3640.90
0.25	2	SLD	1	115.24	4.62	-3697.39	1.11	3339.08
1.40	1	SLV	2	280.08	4.62	-2155.83	0.67	3234.73
1.40	2	SLD	2	280.08	4.62	-1891.16	0.67	2837.61
4.05	9	SLV	2	15.00	4.62	2795.49	0.83	3373.24
4.05	10	SLD	2	15.00	4.62	2530.83	0.83	3053.88
4.35	1	SLV	3	291.86	4.62	-3316.89	0.95	3486.14
4.35	2	SLD	3	291.86	4.62	-2910.82	0.95	3059.34
7.12	9	SLV	3	15.00	4.62	3029.47	0.88	3423.90
7.12	10	SLD	3	15.00	4.62	2623.39	0.88	2964.96

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.25	22	SLE R	1	115.24	4.62	4.62	-2237.95	1669.72	-427.21	42.94
0.25	30	SLE Q	1	115.24	4.62	4.62	-2021.99	1508.60	-385.99	38.80
1.40	22	SLE R	2	280.08	4.62	4.62	-20.30	15.15	-3.88	0.39
1.40	29	SLE Q	2	280.08	4.62	4.62	44.11	-8.42	32.91	0.85
4.05	21	SLE R	2	15.00	4.62	4.62	-985.19	735.04	-188.07	18.90
4.05	29	SLE Q	2	15.00	4.62	4.62	-855.15	638.03	-163.24	16.41
4.35	22	SLE R	3	291.86	4.62	4.62	-911.17	679.82	-173.94	17.48
4.35	30	SLE Q	3	291.86	4.62	4.62	-773.95	577.44	-147.74	14.85
7.12	21	SLE R	3	15.00	4.62	4.62	-448.44	334.58	-85.60	8.60
7.12	29	SLE Q	3	15.00	4.62	4.62	-393.37	293.49	-75.09	7.55

Verifiche stato limite di formazione delle fessure

Caso	Xg <cm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	S _{rm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
42	0.25	30	SLE Q	1	3	1	115.24	-2021.99	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1508.60	1977.14	0.29	0.07
46	0.25	26	SLE F	1	3	1	115.24	-2083.55	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1554.53	1977.14	0.30	0.07
89	1.40	29	SLE Q	2	3	1	280.08	44.11	23.00	120.00	0.16	140.21	14.00	4.62	364.56	32.91	1977.14	0.01	0.00
93	1.40	25	SLE F	2	3	1	280.08	35.23	23.00	120.00	0.16	140.21	14.00	4.62	364.56	26.28	1977.14	0.01	0.00
137	4.05	29	SLE Q	2	3	1	15.00	-855.15	23.00	120.00	0.16	140.21	14.00	4.62	364.56	638.03	1977.14	0.12	0.03
141	4.05	25	SLE F	2	3	1	15.00	-892.33	23.00	120.00	0.16	140.21	14.00	4.62	364.56	665.76	1977.14	0.13	0.03
186	4.35	30	SLE Q	3	3	1	291.86	-773.95	23.00	120.00	0.16	140.21	14.00	4.62	364.56	577.44	1977.14	0.11	0.03
190	4.35	26	SLE F	3	3	1	291.86	-813.08	23.00	120.00	0.16	140.21	14.00	4.62	364.56	606.63	1977.14	0.12	0.03
233	7.12	29	SLE Q	3	3	1	15.00	-393.37	23.00	120.00	0.16	140.21	14.00	4.62	364.56	293.49	1977.14	0.06	0.01
237	7.12	25	SLE F	3	3	1	15.00	-409.22	23.00	120.00	0.16	140.21	14.00	4.62	364.56	305.32	1977.14	0.06	0.01

Staffe - Verifiche armatura

CC	X0 <cm>	X1 <cm>	Lung. <cm>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.25	0.57	0.32	ø8/ 8 2 br.	12.57	0.30	4748.86	2.01	28399.80	28399.80	28399.80	5.98
TG	0.57	3.68	3.11	ø8/20 2 br.	5.03	0.30	4390.13	2.50	14161.80	24522.20	14161.80	3.23
TG	3.68	4.00	0.32	ø8/ 8 2 br.	12.57	0.30	4608.23	2.01	28399.80	28399.80	28399.80	6.16
TG	4.40	4.72	0.32	ø8/ 8 2 br.	12.57	0.30	4819.89	2.01	28399.80	28399.80	28399.80	5.89
TG	4.72	6.75	2.03	ø8/20 2 br.	5.03	0.30	4520.30	2.50	14161.80	24522.20	14161.80	3.13
TG	6.75	7.07	0.32	ø8/ 8 2 br.	12.57	0.30	4792.34	2.01	28399.80	28399.80	28399.80	5.93

Travata n. 149

Nodi: 132 -89 133 155 -90

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.17	1	SLV	1	17.50	4.62	7.63	4.62	5.77	-3411.91	-3896.41	1.142
2.01	19	SLU	1	201.07	4.62	7.63	4.62	6.41	3934.20	5305.18	1.348
3.79	17	SLU	2	177.53	12.25	8.17	12.25	5.05	-5278.90	-9776.92	1.852
4.19	18	SLU	3	20.00	12.25	8.17	12.25	5.80	-8538.43	-9799.34	1.148
0.17	2	SLD	1	17.50	4.62	7.63	4.62	5.77	-3119.29	-4568.96	1.465
2.01	2	SLD	1	201.07	4.62	7.63	4.62	6.41	2666.55	6198.18	2.324
3.79	2	SLD	2	177.53	12.25	8.17	12.25	5.05	-4210.71	-11388.50	2.705
4.19	2	SLD	3	20.00	12.25	8.17	12.25	5.80	-5984.01	-11403.90	1.906

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <cm>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.17	18	SLU	1	17.50	7.63	4091.51	1.86	2194.42
0.17	2	SLD	1	17.50	7.63	3225.56	1.86	1729.98
2.01	18	SLU	1	201.07	7.63	3471.06	1.22	2838.55
2.01	2	SLD	1	201.07	7.63	2748.29	1.22	2247.48
3.79	17	SLU	2	177.53	8.17	-7836.18	3.12	2509.39
3.79	2	SLD	2	177.53	8.17	-5437.66	3.12	1741.31
4.19	18	SLU	3	20.00	8.17	9284.94	2.37	3913.04
4.19	2	SLD	3	20.00	8.17	6006.04	2.37	2531.18

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.17	22	SLE R	1	17.50	4.62	7.63	-2518.95	2645.57	-516.32	66.04
0.17	30	SLE Q	1	17.50	4.62	7.63	-2114.42	2220.70	-433.40	55.43
2.01	23	SLE R	1	201.07	4.62	7.63	2914.87	-660.17	1888.76	69.50
2.01	31	SLE Q	1	201.07	4.62	7.63	2395.36	-542.51	1552.13	57.11
3.79	21	SLE R	2	177.53	12.25	8.17	-3919.71	1605.59	-742.41	72.97
3.79	29	SLE Q	2	177.53	12.25	8.17	-3215.80	1317.25	-609.09	59.87
4.19	22	SLE R	3	20.00	12.25	8.17	-6338.88	2596.52	-1200.61	118.01
4.19	30	SLE Q	3	20.00	12.25	8.17	-5260.49	2154.79	-996.36	97.94

Verifiche stato limite di formazione delle fessure

Caso	Xg <cm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
42	0.17	30	SLE Q	1	2	2	17.50	-2114.42	23.00	170.00	0.13	152.59	14.00	4.62	458.21	2220.70	2052.39	0.62	0.16
46	0.17	26	SLE F	1	2	2	17.50	-2228.38	23.00	170.00	0.13	152.59	14.00	4.62	458.21	2340.39	2052.39	0.70	0.18
91	2.01	31	SLE Q	1	2	2	201.07	2395.36	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1552.13	1340.37	0.47	0.12
95	2.01	27	SLE F	1	2	2	201.07	2543.65	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1648.22	1340.37	0.54	0.13
137	3.79	29	SLE Q	2	2	2	177.53	-3215.80	21.00	68.00	0.13	97.41	18.00	12.25	569.19	1317.25	963.95	0.47	0.08
141	3.79	25	SLE F	2	2	2	177.53	-3418.85	21.00	68.00	0.13	97.41	18.00	12.25	569.19	1400.43	963.95	0.52	0.09
186	4.19	30	SLE Q	3	2	2	20.00	-5260.49	21.00	68.00	0.13	97.41	18.00	12.25	569.19	2154.79	963.95	0.94	0.16
190	4.19	26	SLE F	3	2	2	20.00	-5568.57	21.00	68.00	0.13	97.41	18.00	12.25	569.19	2280.99	963.95	1.01	0.17

Staffe - Verifiche armatura

CC	X0 <cm>	X1 <cm>	Lung. <cm>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.17	0.41	0.23	ø10/ 4 2 br.	39.27	0.40	4223.14	1.07	34000.10	34000.20	34000.10	8.05
17 SLU	0.41	3.56	3.15	ø10/16 2 br.	9.82	0.40	7097.27	2.50	19880.40	23500.40	19880.40	2.80
17 SLU	3.56	3.79	0.23	ø10/ 4 2 br.	39.27	0.40	7836.18	1.07	34000.10	34000.20	34000.10	4.34
18 SLU	4.19	4.42	0.23	ø10/ 4 2 br.	39.27	0.40	9284.94	1.07	34000.10	34000.20	34000.10	3.66
18 SLU	4.42	9.55	5.13	ø10/16 2 br.	9.82	0.40	8546.04	2.50	19880.40	23500.40	19880.40	2.33

Travata n. 201

Nodi: 206 207 208

Relazione di calcolo

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.27	9	SLV	1	26.94	4.62	4.62	4.62	4.04	-3284.00	-3897.17	1.187
4.50	1	SLV	1	449.92	4.62	5.09	4.62	4.55	-2656.77	-3896.94	1.467
4.90	9	SLV	2	20.00	4.62	5.09	4.62	4.01	-3804.44	-3897.21	1.024
8.20	9	SLV	2	349.89	4.62	4.62	4.62	4.02	1812.32	3423.42	1.889
9.45	1	SLV	2	474.84	4.62	4.62	4.62	3.69	-3470.82	-3897.38	1.123
0.27	10	SLD	1	26.94	4.62	4.62	4.62	4.04	-2776.12	-4567.41	1.645
4.50	2	SLD	1	449.92	4.62	5.09	4.62	4.55	-2149.02	-4567.91	2.126
4.90	10	SLD	2	20.00	4.62	5.09	4.62	4.01	-3342.48	-4567.34	1.366
8.20	10	SLD	2	349.89	4.62	4.62	4.62	4.02	1576.57	4021.13	2.551
9.45	2	SLD	2	474.84	4.62	4.62	4.62	3.69	-3000.34	-4566.98	1.522

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.27	9	SLV	1	26.94	4.62	1805.83	0.58	3132.58
0.27	10	SLD	1	26.94	4.62	1565.72	0.58	2716.06
4.50	1	SLV	1	449.92	5.09	-1509.88	0.54	2784.38
4.50	2	SLD	1	449.92	5.09	-1269.77	0.54	2341.59
4.90	18	SLU	2	20.00	5.09	3421.59	1.08	3160.00
4.90	10	SLD	2	20.00	5.09	3106.25	1.08	2868.77
8.20	1	SLV	2	349.89	4.62	-1891.04	0.60	3151.03
8.20	2	SLD	2	349.89	4.62	-1686.04	0.60	2809.44
9.45	17	SLU	2	474.84	4.62	-3198.19	0.93	3434.08
9.45	2	SLD	2	474.84	4.62	-2931.10	0.93	3147.29

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.27	22	SLE R	1	26.94	4.62	4.62	-1091.28	1146.43	-254.94	31.01
0.27	30	SLE Q	1	26.94	4.62	4.62	-1011.09	1062.18	-236.20	28.73
4.50	21	SLE R	1	449.92	4.62	5.09	-370.24	388.91	-84.67	10.38
4.50	29	SLE Q	1	449.92	4.62	5.09	-384.86	404.26	-88.01	10.79
4.90	22	SLE R	2	20.00	4.62	5.09	-1874.69	1969.22	-428.71	52.56
4.90	30	SLE Q	2	20.00	4.62	5.09	-1738.05	1825.70	-397.46	48.73
8.20	22	SLE R	2	349.89	4.62	4.62	813.64	-190.07	854.75	23.12
8.20	30	SLE Q	2	349.89	4.62	4.62	757.65	-177.00	795.93	21.53
9.45	21	SLE R	2	474.84	4.62	4.62	-1510.23	1586.54	-352.81	42.91
9.45	29	SLE Q	2	474.84	4.62	4.62	-1366.16	1435.20	-319.15	38.82

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
42	0.27	30	SLE Q	1	2	2	26.94	-1011.09	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1062.18	1991.52	0.21	0.05
46	0.27	26	SLE F	1	2	2	26.94	-1028.98	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1080.98	1991.52	0.21	0.05
89	4.50	29	SLE Q	1	2	2	449.92	-384.86	23.00	170.00	0.13	151.01	14.00	4.62	458.21	404.26	2001.45	0.08	0.02
93	4.50	25	SLE F	1	2	2	449.92	-380.54	23.00	170.00	0.13	151.01	14.00	4.62	458.21	399.73	2001.45	0.08	0.02
138	4.90	30	SLE Q	2	2	2	20.00	-1738.05	23.00	170.00	0.13	151.01	14.00	4.62	458.21	1825.70	2001.45	0.35	0.09
142	4.90	26	SLE F	2	2	2	20.00	-1764.38	23.00	170.00	0.13	151.01	14.00	4.62	458.21	1853.35	2001.45	0.38	0.10
186	8.20	30	SLE Q	2	2	2	349.89	757.65	23.00	170.00	0.13	150.70	14.00	4.62	458.21	795.93	1991.52	0.15	0.04
190	8.20	26	SLE F	2	2	2	349.89	767.21	23.00	170.00	0.13	150.70	14.00	4.62	458.21	805.98	1991.52	0.16	0.04
233	9.45	29	SLE Q	2	2	2	474.84	-1366.16	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1435.20	1991.52	0.28	0.07
237	9.45	25	SLE F	2	2	2	474.84	-1397.40	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1468.01	1991.52	0.29	0.07

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.27	0.50	0.23	ø10/ 4 2 br.	39.27	0.40	2378.28	1.07	34000.10	34000.20	34000.10	14.30
TG	0.50	4.27	3.77	ø10/16 2 br.	9.82	0.40	2318.48	2.50	19880.40	23500.40	19880.40	8.57
TG	4.27	4.50	0.23	ø10/ 4 2 br.	39.27	0.40	2283.44	1.07	34000.10	34000.20	34000.10	14.89
TG	4.90	5.13	0.23	ø10/ 4 2 br.	39.27	0.40	3828.44	1.07	34000.10	34000.20	34000.10	8.88
TG	5.13	9.22	4.09	ø10/16 2 br.	9.82	0.40	3653.95	2.50	19880.40	23500.40	19880.40	5.44
TG	9.22	9.45	0.23	ø10/ 4 2 br.	39.27	0.40	3884.35	1.07	34000.10	34000.20	34000.10	8.75

Travata n. 202

Nodi: -179 212 213 214

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Relazione di calcolo

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
5.68	17	SLU	1	25.00	9.17	6.63	9.17	4.89	-6826.48	-7447.93	1.091
6.18	9	SLV	2	25.00	12.25	6.63	12.25	5.26	-3985.88	-9783.59	2.455
9.41	9	SLV	2	347.62	4.62	4.62	4.62	4.02	1289.34	3427.62	2.658
10.43	1	SLV	2	449.92	4.62	4.62	4.62	3.76	-3183.26	-3897.35	1.224
10.83	9	SLV	3	20.00	4.62	4.62	4.62	3.63	-3502.14	-3897.41	1.113
13.26	18	SLU	3	262.58	4.62	4.62	4.62	4.36	1652.12	3691.05	2.234
15.38	1	SLV	3	474.84	4.62	4.62	4.62	3.71	-2945.48	-3897.36	1.323
5.68	2	SLD	1	25.00	9.17	6.63	9.17	4.89	-5687.26	-8680.86	1.526
6.18	10	SLD	2	25.00	12.25	6.63	12.25	5.26	-3539.48	-11393.10	3.219
9.41	10	SLD	2	347.62	4.62	4.62	4.62	4.02	1060.19	4026.02	3.797
10.43	2	SLD	2	449.92	4.62	4.62	4.62	3.76	-2767.34	-4567.04	1.650
10.83	10	SLD	3	20.00	4.62	4.62	4.62	3.63	-3142.04	-4566.89	1.453
13.26	10	SLD	3	262.58	4.62	4.62	4.62	4.36	1277.05	4330.29	3.391
15.38	2	SLD	3	474.84	4.62	4.62	4.62	3.71	-2570.31	-4567.02	1.777

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cmq>
5.68	17	SLU	1	25.00	6.63	6695.78	1.74	3841.19
5.68	2	SLD	1	25.00	6.63	4910.25	1.74	2816.88
6.18	18	SLU	2	25.00	6.63	3288.85	1.37	2406.14
6.18	10	SLD	2	25.00	6.63	2994.61	1.37	2190.87
9.41	1	SLV	2	347.62	4.62	-1871.71	0.59	3146.85
9.41	2	SLD	2	347.62	4.62	-1668.78	0.59	2805.66
10.43	1	SLV	2	449.92	4.62	-2885.65	0.86	3366.40
10.43	2	SLD	2	449.92	4.62	-2682.72	0.86	3129.66
10.83	18	SLU	3	20.00	4.62	3459.57	0.99	3490.68
10.83	10	SLD	3	20.00	4.62	2975.64	0.99	3002.40
13.26	1	SLV	3	262.58	4.62	-758.27	0.26	2905.75
13.26	2	SLD	3	262.58	4.62	-596.63	0.26	2286.32
15.38	17	SLU	3	474.84	4.62	-3080.24	0.90	3408.54
15.38	2	SLD	3	474.84	4.62	-2700.38	0.90	2988.18

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
5.68	21	SLE R	1	25.00	9.17	6.63	-5184.54	2809.06	-1067.06	109.90
5.68	29	SLE Q	1	25.00	9.17	6.63	-4688.88	2540.50	-965.04	99.39
6.18	22	SLE R	2	25.00	12.25	6.63	-2175.75	893.88	-434.80	42.27
6.18	30	SLE Q	2	25.00	12.25	6.63	-1994.75	819.52	-398.63	38.76
9.41	22	SLE R	2	347.62	4.62	4.62	291.50	-68.10	306.23	8.28
9.41	30	SLE Q	2	347.62	4.62	4.62	266.77	-62.32	280.25	7.58
10.43	21	SLE R	2	449.92	4.62	4.62	-1441.32	1514.15	-336.71	40.96
10.43	29	SLE Q	2	449.92	4.62	4.62	-1327.50	1394.58	-310.12	37.72
10.83	22	SLE R	3	20.00	4.62	4.62	-2058.21	2162.22	-480.82	58.49
10.83	30	SLE Q	3	20.00	4.62	4.62	-1895.25	1991.02	-442.75	53.85
13.26	22	SLE R	3	262.58	4.62	4.62	1257.02	-293.65	1320.54	35.72
13.26	30	SLE Q	3	262.58	4.62	4.62	1154.66	-269.74	1213.00	32.81
15.38	21	SLE R	3	474.84	4.62	4.62	-1401.04	1471.84	-327.30	39.81
15.38	29	SLE Q	3	474.84	4.62	4.62	-1272.07	1336.35	-297.17	36.15

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s_{rm} <mm>	ϕ	A_s <cmq>	$A_{s,eff}$ <cmq>	σ_s <daN/cmq>	σ_{sf} <daN/cmq>	ϵ_{sm}	Wk <mm>
41	5.68	29	SLE Q	1	2	2	25.00	-4688.88	21.00	113.33	0.13	121.51	18.00	9.17	579.39	2540.50	1174.35	1.10	0.23
45	5.68	25	SLE F	1	2	2	25.00	-4788.52	21.00	113.33	0.13	121.51	18.00	9.17	579.39	2594.48	1174.35	1.13	0.23
90	6.18	30	SLE Q	2	2	2	25.00	-1994.75	21.00	68.00	0.13	97.58	18.00	12.25	571.54	819.52	983.37	0.16	0.03
94	6.18	26	SLE F	2	2	2	25.00	-2030.23	21.00	68.00	0.13	97.58	18.00	12.25	571.54	834.10	983.37	0.16	0.03
138	9.41	30	SLE Q	2	2	2	347.62	266.77	23.00	170.00	0.13	150.70	14.00	4.62	458.21	280.25	1991.52	0.05	0.01
142	9.41	26	SLE F	2	2	2	347.62	272.26	23.00	170.00	0.13	150.70	14.00	4.62	458.21	286.01	1991.52	0.06	0.01
185	10.43	29	SLE Q	2	2	2	449.92	-1327.50	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1394.58	1991.52	0.27	0.07
189	10.43	25	SLE F	2	2	2	449.92	-1349.84	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1418.05	1991.52	0.28	0.07
234	10.83	30	SLE Q	3	2	2	20.00	-1895.25	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1991.02	1991.52	0.48	0.12
238	10.83	26	SLE F	3	2	2	20.00	-1927.41	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2024.81	1991.52	0.51	0.13
282	13.26	30	SLE Q	3	2	2	262.58	1154.66	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1213.00	1991.52	0.24	0.06
286	13.26	26	SLE F	3	2	2	262.58	1174.35	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1233.69	1991.52	0.24	0.06
329	15.38	29	SLE Q	3	2	2	474.84	-1272.07	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1336.35	1991.52	0.26	0.07
333	15.38	25	SLE F	3	2	2	474.84	-1299.97	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1365.24	1991.52	0.27	0.07

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T	
18	SLU	0.00	5.45	5.45	$\emptyset 10/16$ 2 br.	9.82	0.40	7216.95	2.50	19880.40	23500.40	19880.40	2.75
17	SLU	5.45	5.68	0.23	$\emptyset 10/$ 4 2 br.	39.27	0.40	6695.78	1.07	34000.10	34000.20	34000.10	5.08
TG	6.18	6.41	0.23	$\emptyset 10/$ 4 2 br.	39.27	0.40	5164.75	1.07	34000.10	34000.20	34000.10	6.58	
TG	6.41	10.20	3.79	$\emptyset 10/16$ 2 br.	9.82	0.40	4936.79	2.50	19880.40	23500.40	19880.40	4.03	
TG	10.20	10.43	0.23	$\emptyset 10/$ 4 2 br.	39.27	0.40	4057.62	1.07	34000.10	34000.20	34000.10	8.38	
TG	10.83	11.06	0.23	$\emptyset 10/$ 4 2 br.	39.27	0.40	3809.18	1.07	34000.10	34000.20	34000.10	8.93	
TG	11.06	15.15	4.09	$\emptyset 10/16$ 2 br.	9.82	0.40	3581.22	2.50	19880.40	23500.40	19880.40	5.55	

Relazione di calcolo

TG	15.15	15.38	0.23	ø10/ 4 2 br.	39.27	0.40	3793.89	1.07	34000.10	34000.20	34000.10	8.96
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Travata n. 203

Nodi: -180 218 -181 219 -182 249

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
3.26	1	SLV	1	17.50	4.62	5.09	4.62	4.05	-3296.33	-3897.19	1.182
3.61	9	SLV	2	17.50	6.16	9.71	6.16	6.39	-4323.47	-5105.53	1.181
5.52	19	SLU	2	208.86	4.62	4.62	4.62	4.31	2410.85	3655.29	1.516
7.72	1	SLV	3	188.27	6.16	9.71	6.16	6.50	-4520.50	-5105.47	1.129
8.07	9	SLV	4	17.50	4.62	5.09	4.62	4.01	-3314.31	-3897.21	1.176
10.53	1	SLV	5	0.00	4.62	4.62	4.62	4.01	2170.29	3417.13	1.575
12.93	1	SLV	5	239.84	4.62	4.62	4.62	3.72	-2573.67	-3897.35	1.514
3.26	2	SLD	1	17.50	4.62	5.09	4.62	4.05	-2979.44	-4567.42	1.533
3.61	10	SLD	2	17.50	6.16	9.71	6.16	6.39	-3987.10	-5967.01	1.497
5.52	6	SLD	2	208.86	4.62	4.62	4.62	4.31	1878.13	4288.97	2.284
7.72	2	SLD	3	188.27	6.16	9.71	6.16	6.50	-4101.44	-5966.93	1.455
8.07	10	SLD	4	17.50	4.62	5.09	4.62	4.01	-3038.63	-4567.34	1.503
10.53	2	SLD	5	0.00	4.62	4.62	4.62	4.01	1870.62	4013.89	2.146
12.93	2	SLD	5	239.84	4.62	4.62	4.62	3.72	-2160.05	-4567.02	2.114

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
3.26	17	SLU	1	17.50	5.09	3237.65	1.04	3123.86
3.26	2	SLD	1	17.50	5.09	2827.41	1.04	2728.04
3.61	18	SLU	2	17.50	9.71	6561.44	3.31	1980.15
3.61	10	SLD	2	17.50	9.71	5147.94	3.31	1553.57
5.52	9	SLV	2	208.86	4.62	899.32	0.31	2936.29
5.52	10	SLD	2	208.86	4.62	706.46	0.31	2306.57
7.72	17	SLU	3	188.27	9.71	-6249.02	3.21	1947.96
7.72	2	SLD	3	188.27	9.71	-5295.79	3.21	1650.82
8.07	18	SLU	4	17.50	5.09	3412.27	1.08	3158.17
8.07	10	SLD	4	17.50	5.09	2773.56	1.08	2567.02
10.53	9	SLV	5	0.00	4.62	1919.95	0.61	3157.29
10.53	10	SLD	5	0.00	4.62	1636.64	0.61	2691.40
12.93	1	SLV	5	239.84	4.62	-3071.79	0.90	3406.71
12.93	2	SLD	5	239.84	4.62	-2788.48	0.90	3092.51

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
3.26	21	SLE R	1	17.50	4.62	5.09	-2059.79	2163.66	-471.04	57.75
3.26	29	SLE Q	1	17.50	4.62	5.09	-1884.69	1979.73	-430.99	52.84
3.61	22	SLE R	2	17.50	6.16	9.71	-3139.13	2492.74	-591.48	70.27
3.61	30	SLE Q	2	17.50	6.16	9.71	-2827.95	2245.63	-532.85	63.31
5.52	23	SLE R	2	208.86	4.62	4.62	1830.66	-427.66	1923.17	52.02
5.52	31	SLE Q	2	208.86	4.62	4.62	1657.31	-387.17	1741.06	47.09
7.72	21	SLE R	3	188.27	6.16	9.71	-2934.22	2330.02	-552.87	65.69
7.72	29	SLE Q	3	188.27	6.16	9.71	-2649.41	2103.86	-499.21	59.31
8.07	22	SLE R	4	17.50	4.62	5.09	-2275.88	2390.65	-520.45	63.81
8.07	30	SLE Q	4	17.50	4.62	5.09	-2091.83	2197.31	-478.36	58.65
10.53	21	SLE R	5	0.00	4.62	4.62	895.68	-209.24	940.95	25.45
10.53	29	SLE Q	5	0.00	4.62	4.62	825.38	-192.82	867.09	23.45
12.93	21	SLE R	5	239.84	4.62	4.62	-773.62	812.71	-180.73	21.98
12.93	29	SLE Q	5	239.84	4.62	4.62	-728.61	765.42	-170.21	20.70

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cm²>	A _s eff <cm²>	σ _s <daN/cm²>	σ _{sf} <daN/cm²>	ε _{sm}	Wk <mm>
41	3.26	29	SLE Q	1	2	2	17.50	-1884.69	23.00	170.00	0.13	151.01	14.00	4.62	458.21	1979.73	2001.45	0.47	0.12
45	3.26	25	SLE F	1	2	2	17.50	-1917.49	23.00	170.00	0.13	151.01	14.00	4.62	458.21	2014.18	2001.45	0.50	0.13
90	3.61	30	SLE Q	2	2	2	17.50	-2827.95	23.00	113.33	0.13	126.79	14.00	6.16	487.68	2245.63	1641.99	0.80	0.17
94	3.61	26	SLE F	2	2	2	17.50	-2892.45	23.00	113.33	0.13	126.79	14.00	6.16	487.68	2296.85	1641.99	0.83	0.18
139	5.52	31	SLE Q	2	2	2	208.86	1657.31	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1741.06	1991.52	0.34	0.09
143	5.52	27	SLE F	2	2	2	208.86	1691.33	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1776.79	1991.52	0.35	0.09
185	7.72	29	SLE Q	3	2	2	188.27	-2649.41	23.00	113.33	0.13	126.79	14.00	6.16	487.68	2103.86	1641.99	0.71	0.15
189	7.72	25	SLE F	3	2	2	188.27	-2707.90	23.00	113.33	0.13	126.79	14.00	6.16	487.68	2150.30	1641.99	0.74	0.16
234	8.07	30	SLE Q	4	2	2	17.50	-2091.83	23.00	170.00	0.13	151.01	14.00	4.62	458.21	2197.31	2001.45	0.62	0.16
238	8.07	26	SLE F	4	2	2	17.50	-2128.57	23.00	170.00	0.13	151.01	14.00	4.62	458.21	2235.90	2001.45	0.65	0.17
281	10.53	29	SLE Q	5	2	2	0.00	825.38	23.00	170.00	0.13	150.70	14.00	4.62	458.21	867.09	1991.52	0.17	0.04
285	10.53	25	SLE F	5	2	2	0.00	841.29	23.00	170.00	0.13	150.70	14.00	4.62	458.21	883.80	1991.52	0.17	0.04
329	12.93	29	SLE Q	5	2	2	239.84	-728.61	23.00	170.00	0.13	150.70	14.00	4.62	458.21	765.42	1991.52	0.15	0.04
333	12.93	25	SLE F	5	2	2	239.84	-736.46	23.00	170.00	0.13	150.70	14.00	4.62	458.21	773.67	1991.52	0.15	0.04

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
17 SLU	0.00	3.03	3.03	ø10/16 2 br.	9.82	0.40	2909.43	2.50	19880.40	23500.40	19880.40	6.83
17 SLU	3.03	3.26	0.23	ø10/ 4 2 br.	39.27	0.40	3237.65	1.07	34000.10	34000.20	34000.10	10.50
TG	3.61	3.84	0.23	ø10/ 4 2 br.	39.27	0.40	7319.48	1.07	34000.10	34000.20	34000.10	4.65
TG	3.84	7.49	3.65	ø10/16 2 br.	9.82	0.40	6785.63	2.50	19880.40	23500.40	19880.40	2.93
TG	7.49	7.72	0.23	ø10/ 4 2 br.	39.27	0.40	7299.32	1.07	34000.10	34000.20	34000.10	4.66
TG	8.07	8.30	0.23	ø10/ 4 2 br.	39.27	0.40	3865.11	1.07	34000.10	34000.20	34000.10	8.80
TG	8.30	12.70	4.41	ø10/16 2 br.	9.82	0.40	3684.96	2.50	19880.40	23500.40	19880.40	5.40
TG	12.70	12.93	0.23	ø10/ 4 2 br.	39.27	0.40	3912.92	1.07	34000.10	34000.20	34000.10	8.69

Travata n. 204

Nodi: 221 -186

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.25	9	SLV	1	24.71	4.62	4.62	4.62	3.84	-2757.29	-3897.28	1.413
0.25	10	SLD	1	24.71	4.62	4.62	4.62	3.84	-2473.82	-4567.13	1.846

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.25	18	SLU	1	24.71	4.62	2577.58	0.78	3299.69
0.25	10	SLD	1	24.71	4.62	2319.02	0.78	2968.70

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.25	22	SLE R	1	24.71	4.62	4.62	-1644.43	1727.53	-384.16	46.73
0.25	30	SLE Q	1	24.71	4.62	4.62	-1499.25	1575.01	-350.24	42.60

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cm²>	σ _{sc} <daN/cm²>	ε _{sm}	Wk <mm>
42	0.25	30	SLE Q	1	2	2	24.71	-1499.25	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1575.01	1991.52	0.31	0.08
46	0.25	26	SLE F	1	2	2	24.71	-1529.43	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1606.72	1991.52	0.31	0.08

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
18 SLU	0.25	0.48	0.23	ø10/ 4 2 br.	39.27	0.40	2577.58	1.07	34000.10	34000.20	34000.10	13.19
18 SLU	0.48	3.38	2.90	ø10/16 2 br.	9.82	0.40	2309.28	2.50	19880.40	23500.40	19880.40	8.61

Travata n. 205

Nodi: -187 223 224 251

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
3.23	1	SLV	1	20.00	4.62	4.62	4.62	4.18	-1823.00	-3897.11	2.138
3.63	9	SLV	2	20.00	4.62	4.62	4.62	3.40	-2958.44	-3897.56	1.317
5.56	17	SLU	2	213.07	4.62	4.62	4.62	4.41	1927.82	3734.19	1.937
7.72	1	SLV	2	428.50	4.62	5.09	4.62	3.65	-3676.31	-3897.41	1.060
8.07	18	SLU	3	17.50	7.16	5.09	7.16	3.44	-5137.35	-5888.61	1.146
10.71	18	SLU	3	282.29	4.62	4.62	4.62	4.47	3172.24	3777.57	1.191
12.93	1	SLV	3	504.00	4.62	4.62	4.62	3.29	-2982.20	-3897.61	1.307
3.23	2	SLD	1	20.00	4.62	4.62	4.62	4.18	-1541.22	-4567.52	2.964
3.63	10	SLD	2	20.00	4.62	4.62	4.62	3.40	-2701.41	-4566.60	1.690
5.56	2	SLD	2	213.07	4.62	4.62	4.62	4.41	1370.99	4380.11	3.195
7.72	2	SLD	2	428.50	4.62	5.09	4.62	3.65	-3414.87	-4566.91	1.337
8.07	10	SLD	3	17.50	7.16	5.09	7.16	3.44	-4450.92	-6877.47	1.545
10.71	10	SLD	3	282.29	4.62	4.62	4.62	4.47	2171.80	4430.18	2.040
12.93	2	SLD	3	504.00	4.62	4.62	4.62	3.29	-2754.34	-4566.44	1.658

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
3.23	1	SLV	1	20.00	4.62	1328.05	0.44	3029.12
3.23	2	SLD	1	20.00	4.62	1162.07	0.44	2650.55
3.63	18	SLU	2	20.00	4.62	4518.69	1.21	3720.02
3.63	10	SLD	2	20.00	4.62	3534.63	1.21	2909.88
5.56	9	SLV	2	213.07	4.62	591.88	0.21	2869.71
5.56	10	SLD	2	213.07	4.62	464.96	0.21	2254.35
7.72	17	SLU	2	428.50	5.09	-5000.90	1.44	3470.32
7.72	2	SLD	2	428.50	5.09	-3876.28	1.44	2689.90
8.07	18	SLU	3	17.50	5.09	6058.61	1.65	3678.15
8.07	10	SLD	3	17.50	5.09	4503.87	1.65	2734.27
10.71	1	SLV	3	282.29	4.62	-490.62	0.15	3242.79
10.71	2	SLD	3	282.29	4.62	-388.48	0.15	2567.69
12.93	17	SLU	3	504.00	4.62	-5110.25	1.33	3848.11
12.93	2	SLD	3	504.00	4.62	-3867.53	1.33	2912.32

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
3.23	21	SLE R	1	20.00	4.62	4.62	-586.92	616.58	-137.11	16.68
3.23	29	SLE Q	1	20.00	4.62	4.62	-577.00	606.15	-134.79	16.40
3.63	22	SLE R	2	20.00	4.62	4.62	-2019.38	2121.42	-471.75	57.38
3.63	30	SLE Q	2	20.00	4.62	4.62	-1820.69	1912.69	-425.33	51.74
5.56	21	SLE R	2	213.07	4.62	4.62	1463.00	-341.77	1536.93	41.57
5.56	29	SLE Q	2	213.07	4.62	4.62	1325.68	-309.69	1392.67	37.67
7.72	21	SLE R	2	428.50	4.62	5.09	-2772.98	2912.81	-634.13	77.74
7.72	29	SLE Q	2	428.50	4.62	5.09	-2519.22	2646.26	-576.10	70.63
8.07	22	SLE R	3	17.50	7.16	5.09	-3904.10	2687.35	-872.11	93.73
8.07	30	SLE Q	3	17.50	7.16	5.09	-3528.82	2429.03	-788.27	84.72
10.71	22	SLE R	3	282.29	4.62	4.62	2402.68	-561.29	2524.09	68.27
10.71	30	SLE Q	3	282.29	4.62	4.62	2165.87	-505.97	2275.32	61.54
12.93	21	SLE R	3	504.00	4.62	4.62	-2155.88	2264.82	-503.64	61.26
12.93	29	SLE Q	3	504.00	4.62	4.62	-1973.31	2073.03	-460.99	56.07

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
41	3.23	29	SLE Q	1	2	2	20.00	-577.00	23.00	170.00	0.13	150.70	14.00	4.62	458.21	606.15	1991.52	0.12	0.03
45	3.23	25	SLE F	1	2	2	20.00	-574.83	23.00	170.00	0.13	150.70	14.00	4.62	458.21	603.88	1991.52	0.12	0.03
90	3.63	30	SLE Q	2	2	2	20.00	-1820.69	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1912.69	1991.52	0.43	0.11
94	3.63	26	SLE F	2	2	2	20.00	-1863.45	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1957.62	1991.52	0.46	0.12
137	5.56	29	SLE Q	2	2	2	213.07	1325.68	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1392.67	1991.52	0.27	0.07
141	5.56	25	SLE F	2	2	2	213.07	1352.33	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1420.67	1991.52	0.28	0.07
185	7.72	29	SLE Q	2	2	2	428.50	-2519.22	23.00	170.00	0.13	151.01	14.00	4.62	458.21	2646.26	2001.45	0.92	0.24
189	7.72	25	SLE F	2	2	2	428.50	-2568.16	23.00	170.00	0.13	151.01	14.00	4.62	458.21	2697.66	2001.45	0.95	0.24
234	8.07	30	SLE Q	3	2	2	17.50	-3528.82	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2429.03	1405.26	0.98	0.22
238	8.07	26	SLE F	3	2	2	17.50	-3605.57	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2481.86	1405.26	1.01	0.23
282	10.71	30	SLE Q	3	2	2	282.29	2165.87	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2275.32	1991.52	0.68	0.17
286	10.71	26	SLE F	3	2	2	282.29	2214.70	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2326.62	1991.52	0.72	0.18
329	12.93	29	SLE Q	3	2	2	504.00	-1973.31	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2073.03	1991.52	0.54	0.14
333	12.93	25	SLE F	3	2	2	504.00	-2005.96	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2107.32	1991.52	0.57	0.15

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <mm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic. T	
1	SLV	0.00	3.00	3.00	ø10/16 2 br.	9.82	0.40	1268.25	2.50	19880.40	23500.40	19880.40	15.68
1	SLV	3.00	3.23	0.23	ø10/ 4 2 br.	39.27	0.40	1328.05	1.07	34000.10	34000.20	34000.10	25.60
TG		3.63	3.86	0.23	ø10/ 4 2 br.	39.27	0.40	4966.26	1.07	34000.10	34000.20	34000.10	6.85
TG		3.86	7.49	3.63	ø10/16 2 br.	9.82	0.40	4600.57	2.50	19880.40	23500.40	19880.40	4.32
17	SLU	7.49	7.72	0.23	ø10/ 4 2 br.	39.27	0.40	5000.90	1.07	34000.10	34000.20	34000.10	6.80
18	SLU	8.07	8.30	0.23	ø10/ 4 2 br.	39.27	0.40	6058.61	1.07	34000.10	34000.20	34000.10	5.61
18	SLU	8.30	12.70	4.41	ø10/16 2 br.	9.82	0.40	5532.34	2.50	19880.40	23500.40	19880.40	3.59
TG		12.70	12.93	0.23	ø10/ 4 2 br.	39.27	0.40	5226.87	1.07	34000.10	34000.20	34000.10	6.50

Travata n. 206

Nodi: 230 231 232 -193 233 253 -194

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.17	9	SLV	1	17.50	4.62	4.62	4.62	4.25	-1477.11	-3897.05	2.638
3.83	9	SLV	1	383.16	9.24	4.62	9.24	4.30	889.13	3643.35	4.098
4.23	1	SLV	2	20.00	4.62	4.62	4.62	4.08	1709.77	3472.56	2.031
6.08	1	SLV	2	204.36	4.62	4.62	4.62	3.95	-1964.37	-3897.22	1.984
6.43	1	SLV	3	17.50	4.62	4.62	4.62	3.71	-2608.48	-3897.35	1.494

Relazione di calcolo

8.26	19	SLU	3	201.07	4.62	4.62	4.62	3.86	2804.49	3299.32	1.176
10.04	17	SLU	4	177.53	4.62	5.62	4.62	3.90	-3785.09	-3897.24	1.030
10.44	18	SLU	5	20.00	7.70	5.62	7.70	3.90	-6141.24	-6304.64	1.027
0.17	10	SLD	1	17.50	4.62	4.62	4.62	4.25	-1237.72	-4567.64	3.690
3.83	10	SLD	1	383.16	9.24	4.62	9.24	4.30	668.01	4279.96	6.407
4.23	2	SLD	2	20.00	4.62	4.62	4.62	4.08	1390.70	4077.91	2.932
6.08	2	SLD	2	204.36	4.62	4.62	4.62	3.95	-1687.56	-4567.27	2.706
6.43	2	SLD	3	17.50	4.62	4.62	4.62	3.71	-2420.38	-4566.98	1.887
8.26	2	SLD	3	201.07	4.62	4.62	4.62	3.86	2169.95	3877.72	1.787
10.04	2	SLD	4	177.53	4.62	5.62	4.62	3.90	-3449.93	-4567.21	1.324
10.44	2	SLD	5	20.00	7.70	5.62	7.70	3.90	-4858.37	-7359.13	1.515

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.17	9	SLV	1	17.50	4.62	1100.20	0.37	2979.78
0.17	10	SLD	1	17.50	4.62	979.81	0.37	2653.73
3.83	1	SLV	1	383.16	4.62	-945.17	0.32	2946.22
3.83	2	SLD	1	383.16	4.62	-824.78	0.32	2570.96
4.23	1	SLV	2	20.00	4.62	-1668.94	0.54	3102.94
4.23	2	SLD	2	20.00	4.62	-1361.47	0.54	2531.28
6.08	1	SLV	2	204.36	4.62	-2148.27	0.67	3206.73
6.08	2	SLD	2	204.36	4.62	-1840.79	0.67	2747.76
6.43	18	SLU	3	17.50	4.62	3117.41	0.91	3416.59
6.43	2	SLD	3	17.50	4.62	2617.10	0.91	2868.26
8.26	18	SLU	3	201.07	4.62	2496.96	0.76	3296.84
8.26	2	SLD	3	201.07	4.62	2139.83	0.76	2825.31
10.04	17	SLU	4	177.53	5.62	-5594.05	1.72	3246.21
10.04	2	SLD	4	177.53	5.62	-4400.54	1.72	2553.63
10.44	18	SLU	5	20.00	5.62	6728.49	1.72	3913.04
10.44	2	SLD	5	20.00	5.62	4911.73	1.72	2856.48

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.17	22	SLE R	1	17.50	4.62	4.62	-460.70	483.98	-107.62	13.09
0.17	30	SLE Q	1	17.50	4.62	4.62	-437.93	460.06	-102.31	12.44
3.83	21	SLE R	1	383.16	9.24	4.62	-122.78	66.32	-27.28	2.75
3.83	29	SLE Q	1	383.16	9.24	4.62	-148.33	80.12	-32.96	3.33
4.23	21	SLE R	2	20.00	4.62	4.62	348.09	-81.32	365.68	9.89
4.23	29	SLE Q	2	20.00	4.62	4.62	308.11	-71.98	323.68	8.76
6.08	21	SLE R	2	204.36	4.62	4.62	-805.44	846.14	-188.16	22.89
6.08	29	SLE Q	2	204.36	4.62	4.62	-748.71	786.55	-174.91	21.28
6.43	22	SLE R	3	17.50	4.62	4.62	-1977.89	2077.84	-462.06	56.20
6.43	30	SLE Q	3	17.50	4.62	4.62	-1780.54	1870.52	-415.95	50.59
8.26	23	SLE R	3	201.07	4.62	4.62	2128.48	-497.24	2236.04	60.48
8.26	31	SLE Q	3	201.07	4.62	4.62	1930.54	-450.99	2028.09	54.86
10.04	21	SLE R	4	177.53	4.62	5.62	-2890.53	3036.04	-645.50	79.85
10.04	29	SLE Q	4	177.53	4.62	5.62	-2658.68	2792.52	-593.72	73.44
10.44	22	SLE R	5	20.00	7.70	5.62	-4668.27	2997.13	-1014.47	107.75
10.44	30	SLE Q	5	20.00	7.70	5.62	-4261.21	2735.79	-926.01	98.35

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _s eff <cmq>	σ _s <daN/cmq>	σ _{s2} <daN/cmq>	s _{sm}	Wk <mm>
42	0.17	30	SLE Q	1	2	2	17.50	-437.93	23.00	170.00	0.13	150.70	14.00	4.62	458.21	460.06	1991.52	0.09	0.02
46	0.17	26	SLE F	1	2	2	17.50	-443.86	23.00	170.00	0.13	150.70	14.00	4.62	458.21	466.29	1991.52	0.09	0.02
89	3.83	29	SLE Q	1	2	2	383.16	-148.33	23.00	68.00	0.13	97.54	14.00	9.24	500.60	80.12	1166.21	0.02	0.00
93	3.83	25	SLE F	1	2	2	383.16	-141.80	23.00	68.00	0.13	97.54	14.00	9.24	500.60	76.59	1166.21	0.01	0.00
137	4.23	29	SLE Q	2	2	2	20.00	308.11	23.00	170.00	0.13	150.70	14.00	4.62	458.21	323.68	1991.52	0.06	0.02
141	4.23	25	SLE F	2	2	2	20.00	315.85	23.00	170.00	0.13	150.70	14.00	4.62	458.21	331.81	1991.52	0.06	0.02
185	6.08	29	SLE Q	2	2	2	204.36	-748.71	23.00	170.00	0.13	150.70	14.00	4.62	458.21	786.55	1991.52	0.15	0.04
189	6.08	25	SLE F	2	2	2	204.36	-758.71	23.00	170.00	0.13	150.70	14.00	4.62	458.21	797.05	1991.52	0.15	0.04
234	6.43	30	SLE Q	3	2	2	17.50	-1780.54	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1870.52	1991.52	0.39	0.10
238	6.43	26	SLE F	3	2	2	17.50	-1824.35	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1916.54	1991.52	0.43	0.11
283	8.26	31	SLE Q	3	2	2	201.07	1930.54	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2028.09	1991.52	0.51	0.13
287	8.26	27	SLE F	3	2	2	201.07	1970.33	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2069.89	1991.52	0.54	0.14
329	10.04	29	SLE Q	4	2	2	177.53	-2658.68	23.00	170.00	0.13	151.36	14.00	4.62	458.21	2792.52	1984.27	1.01	0.26
333	10.04	25	SLE F	4	2	2	177.53	-2700.10	23.00	170.00	0.13	151.36	14.00	4.62	458.21	2836.02	1984.27	1.04	0.27
380	10.44	32	SLE Q	5	2	2	20.00	-4225.61	23.00	85.00	0.13	108.17	14.00	7.70	496.66	2712.94	1099.34	1.21	0.22
382	10.44	26	SLE F	5	2	2	20.00	-4342.58	23.00	85.00	0.13	108.17	14.00	7.70	496.66	2788.03	1319.21	1.20	0.22

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic. T
TG	0.17	0.41	0.23	ø10/ 4 2 br.	39.27	0.40	2618.14	1.07	34000.10	34000.20	34000.10	12.99
TG	0.41	3.60	3.20	ø10/16 2 br.	9.82	0.40	3449.24	2.50	19880.40	23500.40	19880.40	5.76
TG	3.60	3.83	0.23	ø10/ 4 2 br.	39.27	0.40	3509.04	1.07	34000.10	34000.20	34000.10	9.69
TG	4.23	4.46	0.23	ø10/ 4 2 br.	39.27	0.40	4177.06	1.07	34000.10	34000.20	34000.10	8.14
TG	4.46	5.85	1.38	ø10/16 2 br.	9.82	0.40	4174.19	2.50	19880.40	23500.40	19880.40	4.76
TG	5.85	6.08	0.23	ø10/ 4 2 br.	39.27	0.40	4233.99	1.07	34000.10	34000.20	34000.10	8.03
TG	6.43	6.66	0.23	ø10/ 4 2 br.	39.27	0.40	3640.55	1.07	34000.10	34000.20	34000.10	9.34

Relazione di calcolo

17 SLU	6.66	9.81	3.15	ø10/16 2 br.	9.82	0.40	5067.78	2.50	19880.40	23500.40	19880.40	3.92
17 SLU	9.81	10.04	0.23	ø10/ 4 2 br.	39.27	0.40	5594.05	1.07	34000.10	34000.20	34000.10	6.08
18 SLU	10.44	10.67	0.23	ø10/ 4 2 br.	39.27	0.40	6728.49	1.07	34000.10	34000.20	34000.10	5.05
18 SLU	10.67	15.80	5.13	ø10/16 2 br.	9.82	0.40	6202.22	2.50	19880.40	23500.40	19880.40	3.21

Travata n. 208

Nodi: 241 242 257

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	9	SLV	1	373.53	4.62	4.62	4.62	4.05	2041.30	4812.06	2.357
3.74	9	SLV	1	20.00	4.62	5.09	4.62	4.23	-3539.61	-5455.74	1.541
4.14	19	SLU	2	20.00	6.16	5.09	6.16	3.59	-5469.69	-7197.97	1.316
0.20	2	SLD	1	373.53	4.62	4.62	4.62	4.05	-1804.53	-6346.14	3.517
3.74	10	SLD	1	20.00	4.62	5.09	4.62	4.23	-3120.41	-6346.01	2.034
4.14	2	SLD	2	20.00	6.16	5.09	6.16	3.59	-4764.87	-8359.45	1.754

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.20	1	SLV	1	373.53	4.62	-1786.36	0.57	3154.73
0.20	2	SLD	1	373.53	4.62	-1540.73	0.57	2720.94
3.74	9	SLV	1	20.00	5.09	2590.98	0.86	3020.72
3.74	10	SLD	1	20.00	5.09	2345.34	0.86	2734.35
4.14	19	SLU	2	20.00	5.09	5318.80	1.50	3556.70
4.14	2	SLD	2	20.00	5.09	4045.08	1.50	2704.97

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.20	22	SLE R	1	373.53	4.62	4.62	-249.90	186.45	-47.70	4.80
0.20	30	SLE Q	1	373.53	4.62	4.62	-253.69	189.27	-48.43	4.87
3.74	21	SLE R	1	20.00	4.62	5.09	-1704.57	1270.72	-318.14	32.17
3.74	29	SLE Q	1	20.00	4.62	5.09	-1674.59	1248.38	-312.54	31.60
4.14	23	SLE R	2	20.00	6.16	5.09	-4170.09	2355.15	-748.64	71.31
4.14	31	SLE Q	2	20.00	6.16	5.09	-3920.98	2214.46	-703.92	67.05

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
42	0.20	30	SLE Q	1	3	1	373.53	-253.69	23.00	120.00	0.16	140.21	14.00	4.62	364.56	189.27	1977.14	0.04	0.01
46	0.20	26	SLE F	1	3	1	373.53	-254.81	23.00	120.00	0.16	140.21	14.00	4.62	364.56	190.11	1977.14	0.04	0.01
89	3.74	29	SLE Q	1	3	1	20.00	-1674.59	23.00	120.00	0.16	140.40	14.00	4.62	364.56	1248.38	1987.19	0.24	0.06
93	3.74	25	SLE F	1	3	1	20.00	-1676.07	23.00	120.00	0.16	140.40	14.00	4.62	364.56	1249.48	1987.19	0.24	0.06
139	4.14	31	SLE Q	2	3	1	20.00	-3920.98	23.00	80.00	0.16	115.63	14.00	6.16	373.65	2214.46	1583.01	0.80	0.16
143	4.14	27	SLE F	2	3	1	20.00	-3974.14	23.00	80.00	0.16	115.63	14.00	6.16	373.65	2244.48	1583.01	0.82	0.16

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.52	0.32	ø8/ 8 2 br.	12.57	0.30	4023.50	2.01	28399.80	28399.80	28399.80	7.06
TG	0.52	3.42	2.90	ø8/20 2 br.	5.03	0.30	3830.70	2.50	14161.80	24522.20	14161.80	3.70
TG	3.42	3.74	0.32	ø8/ 8 2 br.	12.57	0.30	3965.33	2.01	28399.80	28399.80	28399.80	7.16
19 SLU	4.14	4.46	0.32	ø8/ 8 2 br.	12.57	0.30	5318.80	2.01	28399.80	28399.80	28399.80	5.34
19 SLU	4.46	9.50	5.04	ø8/20 2 br.	5.03	0.30	4794.02	2.50	14161.80	24522.20	14161.80	2.95

Travata n. 209

Nodi: 243 258

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	1	SLV	1	20.00	4.62	4.62	4.62	3.91	-2704.92	-3897.24	1.441
3.80	9	SLV	1	379.84	4.62	4.62	4.62	3.91	-2673.96	-3897.27	1.457
0.20	2	SLD	1	20.00	4.62	4.62	4.62	3.91	-2255.98	-4567.21	2.024
3.80	10	SLD	1	379.84	4.62	4.62	4.62	3.91	-2231.00	-4567.22	2.047

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Relazione di calcolo

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cmq>
0.20	1	SLV	1	20.00	4.62	2300.56	0.71	3239.71
0.20	2	SLD	1	20.00	4.62	2052.71	0.71	2890.68
3.80	9	SLV	1	379.84	4.62	-2293.26	0.71	3238.13
3.80	10	SLD	1	379.84	4.62	-2045.40	0.71	2888.15

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.20	22	SLE R	1	20.00	4.62	4.62	-732.92	769.96	-171.22	20.83
0.20	30	SLE Q	1	20.00	4.62	4.62	-698.03	733.30	-163.07	19.83
3.80	21	SLE R	1	379.84	4.62	4.62	-718.16	754.45	-167.77	20.41
3.80	29	SLE Q	1	379.84	4.62	4.62	-692.45	727.44	-161.76	19.68

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s_{rm} <mm>	Φ	A_s <cmq>	$A_{c\ eff}$ <cmq>	σ_s <daN/cmq>	σ_{sr} <daN/cmq>	ϵ_{sm}	Wk <mm>
42	0.20	30	SLE Q	1	2	2	20.00	-698.03	23.00	170.00	0.13	150.70	14.00	4.62	458.21	733.30	1991.52	0.14	0.04
46	0.20	26	SLE F	1	2	2	20.00	-707.78	23.00	170.00	0.13	150.70	14.00	4.62	458.21	743.55	1991.52	0.14	0.04
89	3.80	29	SLE Q	1	2	2	379.84	-692.45	23.00	170.00	0.13	150.70	14.00	4.62	458.21	727.44	1991.52	0.14	0.04
93	3.80	25	SLE F	1	2	2	379.84	-699.86	23.00	170.00	0.13	150.70	14.00	4.62	458.21	735.23	1991.52	0.14	0.04

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.43	0.23	$\emptyset 10 / 4$ 2 br.	39.27	0.40	3169.10	1.07	34000.10	34000.20	34000.10	10.73
TG	0.43	3.57	3.14	$\emptyset 10 / 16$ 2 br.	9.82	0.40	3020.78	2.50	19880.40	23500.40	19880.40	6.58
TG	3.57	3.80	0.23	$\emptyset 10 / 4$ 2 br.	39.27	0.40	3168.68	1.07	34000.10	34000.20	34000.10	10.73

Travata n. 210

Nodi: 236 243 -209

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.17	5	SLV	1	17.50	4.62	4.62	4.62	3.69	-2686.06	-3897.37	1.451
0.78	13	SLV	1	77.90	4.62	4.62	4.62	3.88	1255.64	3317.12	2.642
3.19	13	SLV	1	318.98	4.62	4.62	4.62	3.60	-2989.60	-3897.43	1.304
3.49	5	SLV	2	15.00	4.62	4.62	4.62	3.82	-2278.38	-3897.29	1.711
0.17	6	SLD	1	17.50	4.62	4.62	4.62	3.69	-2297.21	-4566.94	1.988
0.78	14	SLD	1	77.90	4.62	4.62	4.62	3.88	998.75	3898.28	3.903
3.19	14	SLD	1	318.98	4.62	4.62	4.62	3.60	-2603.17	-4566.85	1.754
3.49	6	SLD	2	15.00	4.62	4.62	4.62	3.82	-1985.09	-4567.12	2.301

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cmq>
0.17	5	SLV	1	17.50	4.62	3199.47	0.93	3434.36
0.17	6	SLD	1	17.50	4.62	2942.33	0.93	3158.33
0.78	5	SLV	1	77.90	4.62	2395.80	0.73	3260.33
0.78	6	SLD	1	77.90	4.62	2138.65	0.73	2910.39
3.19	13	SLV	1	318.98	4.62	-3580.52	1.02	3516.87
3.19	14	SLD	1	318.98	4.62	-3323.37	1.02	3264.29
3.49	5	SLV	2	15.00	4.62	2642.15	0.80	3313.67
3.49	6	SLD	2	15.00	4.62	2369.55	0.80	2971.80

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.17	24	SLE R	1	17.50	4.62	4.62	-1004.95	1055.73	-234.77	28.56
0.17	32	SLE Q	1	17.50	4.62	4.62	-954.01	1002.21	-222.87	27.11
0.78	23	SLE R	1	77.90	4.62	4.62	118.83	-27.76	124.84	3.38
0.78	31	SLE Q	1	77.90	4.62	4.62	111.76	-26.11	117.40	3.18
3.19	23	SLE R	1	318.98	4.62	4.62	-1357.17	1425.75	-317.05	38.56
3.19	31	SLE Q	1	318.98	4.62	4.62	-1266.59	1330.60	-295.89	35.99
3.49	24	SLE R	2	15.00	4.62	4.62	-986.16	1035.99	-230.38	28.02
3.49	32	SLE Q	2	15.00	4.62	4.62	-972.56	1021.70	-227.20	27.64

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s_{rm} <mm>	Φ	A_s <cmq>	$A_{c\ eff}$ <cmq>	σ_s <daN/cmq>	σ_{sr} <daN/cmq>	ϵ_{sm}	Wk <mm>
44	0.17	32	SLE Q	1	2	2	17.50	-954.01	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1002.21	1991.52	0.19	0.05

Relazione di calcolo

48	0.17	28	SLE F	1	2	2	17.50	-969.20	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1018.18	1991.52	0.20	0.05
91	0.78	31	SLE Q	1	2	2	77.90	111.76	23.00	170.00	0.13	150.70	14.00	4.62	458.21	117.40	1991.52	0.02	0.01
95	0.78	27	SLE F	1	2	2	77.90	113.42	23.00	170.00	0.13	150.70	14.00	4.62	458.21	119.15	1991.52	0.02	0.01
139	3.19	31	SLE Q	1	2	2	318.98	-1266.59	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1330.60	1991.52	0.26	0.07
143	3.19	27	SLE F	1	2	2	318.98	-1291.56	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1356.83	1991.52	0.26	0.07
188	3.49	32	SLE Q	2	2	2	15.00	-972.56	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1021.70	1991.52	0.20	0.05
192	3.49	28	SLE F	2	2	2	15.00	-977.02	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1026.39	1991.52	0.20	0.05

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.17	0.41	0.23	ø10/ 4 2 br.	39.27	0.40	4529.56	1.07	34000.10	34000.20	34000.10	7.51
TG	0.41	2.93	2.53	ø10/16 2 br.	9.82	0.40	4191.83	2.50	19880.40	23500.40	19880.40	4.74
TG	2.93	3.16	0.23	ø10/ 4 2 br.	39.27	0.40	4515.69	1.07	34000.10	34000.20	34000.10	7.53
5 SLV	3.51	3.74	0.23	ø10/ 4 2 br.	39.27	0.40	2622.55	1.07	34000.10	34000.20	34000.10	12.96
5 SLV	3.74	5.04	1.29	ø10/16 2 br.	9.82	0.40	2438.92	2.50	19880.40	23500.40	19880.40	8.15

Travata n. 211

Nodi: 226 -197

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.15	20	SLU	1	15.00	4.62	4.62	4.62	3.71	-3279.71	-3897.35	1.188
0.15	6	SLD	1	15.00	4.62	4.62	4.62	3.71	-3059.53	-4566.97	1.493

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σf inf <daN/cmq>
0.15	20	SLU	1	15.00	4.62	3116.50	0.91	3416.39
0.15	6	SLD	1	15.00	4.62	2504.46	0.91	2745.46

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σf sup <daN/cmq>	σf inf <daN/cmq>	σc <daN/cmq>
0.15	24	SLE R	1	15.00	4.62	4.62	-2493.81	2619.83	-582.58	70.86
0.15	32	SLE Q	1	15.00	4.62	4.62	-2323.01	2440.40	-542.68	66.01

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	S _{rm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.15	32	SLE Q	1	2	2	15.00	-2323.01	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2440.40	1991.52	0.79	0.20
48	0.15	28	SLE F	1	2	2	15.00	-2368.77	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2488.47	1991.52	0.82	0.21

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
20 SLU	0.15	0.38	0.23	ø10/ 4 2 br.	39.27	0.40	3116.50	1.07	34000.10	34000.20	34000.10	10.91
19 SLU	0.38	5.30	4.92	ø10/16 2 br.	9.82	0.40	3677.07	2.50	19880.40	23500.40	19880.40	5.41

Travata n. 212

Nodi: 220 -186 227 -198

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	20	SLU	1	117.70	7.70	7.63	7.70	4.86	-5866.66	-6307.34	1.075
2.88	17	SLU	2	253.19	4.62	7.63	4.62	7.49	3818.29	6143.25	1.609
5.27	19	SLU	2	15.00	8.17	6.63	8.17	4.31	-6164.57	-6671.15	1.082
5.57	5	SLV	3	15.00	8.17	6.63	8.17	6.04	-2157.53	-6676.47	3.095
0.20	6	SLD	1	117.70	7.70	7.63	7.70	4.86	-4639.40	-7358.57	1.586
2.88	2	SLD	2	253.19	4.62	7.63	4.62	7.49	2719.54	7168.86	2.636
5.27	14	SLD	2	15.00	8.17	6.63	8.17	4.31	-4876.31	-7782.28	1.596
5.57	6	SLD	3	15.00	8.17	6.63	8.17	6.04	-1929.42	-7782.98	4.034

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σf inf <daN/cmq>
0.20	17	SLU	1	117.70	7.63	-7881.06	2.78	2839.39

Relazione di calcolo

0.20	2	SLD	1	117.70	7.63	-5967.44	2.78	2149.95
2.88	13	SLV	2	253.19	7.63	347.46	0.15	2354.51
2.88	14	SLD	2	253.19	7.63	274.46	0.15	1859.81
5.27	19	SLU	2	15.00	6.63	8282.82	2.32	3565.24
5.27	14	SLD	2	15.00	6.63	5908.45	2.32	2543.22
5.57	5	SLV	3	15.00	6.63	1224.14	0.58	2094.66
5.57	6	SLD	3	15.00	6.63	1145.66	0.58	1960.37

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.20	24	SLE R	1	117.70	7.70	7.63	-4450.91	2851.40	-895.18	97.14
0.20	32	SLE Q	1	117.70	7.70	7.63	-4021.22	2576.13	-808.76	87.77
2.88	21	SLE R	2	253.19	4.62	7.63	2895.22	-655.72	1876.03	69.03
2.88	29	SLE Q	2	253.19	4.62	7.63	2610.09	-591.14	1691.27	62.23
5.27	23	SLE R	2	15.00	8.17	6.63	-4681.79	2835.59	-973.51	102.99
5.27	31	SLE Q	2	15.00	8.17	6.63	-4239.47	2567.69	-881.54	93.26
5.57	24	SLE R	3	15.00	8.17	6.63	-1198.19	725.70	-249.15	26.36
5.57	32	SLE Q	3	15.00	8.17	6.63	-1142.54	691.99	-237.57	25.13

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.20	32	SLE Q	1	2	2	117.70	-4021.22	23.00	85.00	0.13	108.95	14.00	7.70	496.66	2576.13	1368.50	1.07	0.20
48	0.20	28	SLE F	1	2	2	117.70	-4108.55	23.00	85.00	0.13	108.95	14.00	7.70	496.66	2632.07	1368.50	1.10	0.20
89	2.88	29	SLE Q	2	2	2	253.19	2610.09	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1691.27	1340.37	0.56	0.14
93	2.88	25	SLE F	2	2	2	253.19	2666.10	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1727.56	1340.37	0.59	0.14
139	5.27	31	SLE Q	2	2	2	15.00	-4239.47	21.00	113.33	0.13	124.87	18.00	8.17	546.35	2567.69	1297.97	1.09	0.23
143	5.27	27	SLE F	2	2	2	15.00	-4327.64	21.00	113.33	0.13	124.87	18.00	8.17	546.35	2621.10	1297.97	1.12	0.24
188	5.57	32	SLE Q	3	2	2	15.00	-1142.54	21.00	113.33	0.13	124.87	18.00	8.17	546.35	691.99	1297.97	0.13	0.03
192	5.57	28	SLE F	3	2	2	15.00	-1152.50	21.00	113.33	0.13	124.87	18.00	8.17	546.35	698.03	1297.97	0.14	0.03

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T	
17	SLU	0.20	0.43	0.23	ø10/ 4 2 br.	39.27	0.40	7881.06	1.07	34000.10	34000.20	34000.10	4.31
19	SLU	0.43	5.04	4.61	ø10/16 2 br.	9.82	0.40	7434.50	2.50	19880.40	23500.40	19880.40	2.67
19	SLU	5.04	5.27	0.23	ø10/ 4 2 br.	39.27	0.40	8282.82	1.07	34000.10	34000.20	34000.10	4.10
5	SLV	5.57	5.80	0.23	ø10/ 4 2 br.	39.27	0.40	1224.14	1.07	34000.10	34000.20	34000.10	27.77
5	SLV	5.80	10.71	4.92	ø10/16 2 br.	9.82	0.40	1164.34	2.50	19880.40	23500.40	19880.40	17.07

Travata n. 213

Nodi: 206 -177 212 -181

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.30	13	SLV	1	30.22	4.62	4.62	4.62	3.17	-3781.81	-3897.71	1.031
2.21	17	SLU	1	220.90	4.62	4.62	4.62	4.37	1846.81	3697.64	2.002
3.78	1	SLV	2	45.74	6.16	4.62	6.16	2.78	-4035.36	-5106.72	1.265
4.13	9	SLV	3	17.50	4.62	4.62	4.62	3.92	-2960.70	-3897.22	1.316
0.30	14	SLD	1	30.22	4.62	4.62	4.62	3.17	-3496.28	-4566.27	1.306
2.21	6	SLD	1	220.90	4.62	4.62	4.62	4.37	1379.15	4337.84	3.145
3.78	2	SLD	2	45.74	6.16	4.62	6.16	2.78	-3666.46	-5969.82	1.628
4.13	10	SLD	3	17.50	4.62	4.62	4.62	3.92	-2716.15	-4567.23	1.682

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.30	20	SLU	1	30.22	4.62	5673.29	1.45	3913.04
0.30	14	SLD	1	30.22	4.62	4429.85	1.45	3055.40
2.21	13	SLV	1	220.90	4.62	732.69	0.25	2900.21
2.21	14	SLD	1	220.90	4.62	576.02	0.25	2280.04
3.78	19	SLU	2	45.74	4.62	-7204.92	1.84	3913.04
3.78	2	SLD	2	45.74	4.62	-5859.66	1.84	3182.42
4.13	9	SLV	3	17.50	4.62	2255.51	0.70	3229.95
4.13	10	SLD	3	17.50	4.62	2071.10	0.70	2965.87

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.30	24	SLE R	1	30.22	4.62	4.62	-2775.14	2915.37	-648.30	78.86
0.30	32	SLE Q	1	30.22	4.62	4.62	-2518.53	2645.80	-588.36	71.57
2.21	21	SLE R	1	220.90	4.62	4.62	1402.18	-327.56	1473.03	39.84

Relazione di calcolo

2.21	29	SLE Q	1	220.90	4.62	4.62	1271.62	-297.06	1335.88	36.13
3.78	23	SLE R	2	45.74	6.16	4.62	-2653.92	2113.35	-611.61	68.02
3.78	31	SLE Q	2	45.74	6.16	4.62	-2388.80	1902.24	-550.51	61.23
4.13	24	SLE R	3	17.50	4.62	4.62	-2037.54	2140.50	-475.99	57.90
4.13	32	SLE Q	3	17.50	4.62	4.62	-1875.20	1969.96	-438.07	53.28

Verifiche stato limite di formazione delle fessure

Caso	Xg <cm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.30	32	SLE Q	1	2	2	30.22	-2518.53	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2645.80	1991.52	0.92	0.24
48	0.30	28	SLE F	1	2	2	30.22	-2568.34	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2698.13	1991.52	0.95	0.24
89	2.21	29	SLE Q	1	2	2	220.90	1271.62	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1335.88	1991.52	0.26	0.07
93	2.21	25	SLE F	1	2	2	220.90	1296.85	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1362.38	1991.52	0.26	0.07
139	3.78	31	SLE Q	2	2	2	45.74	-2388.80	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1902.24	1580.14	0.60	0.13
143	3.78	27	SLE F	2	2	2	45.74	-2444.44	23.00	113.33	0.13	124.29	14.00	6.16	487.68	1946.54	1580.14	0.63	0.13
188	4.13	32	SLE Q	3	2	2	17.50	-1875.20	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1969.96	1991.52	0.47	0.12
192	4.13	28	SLE F	3	2	2	17.50	-1903.60	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1999.80	1991.52	0.49	0.13

Staffe - Verifiche armatura

CC	X0 <cm>	X1 <cm>	Lung. <cm>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
20	0.30	0.53	0.23	ø10/ 4 2 br.	39.27	0.40	5673.29	1.07	34000.10	34000.20	34000.10	5.99
19	0.53	3.55	3.01	ø10/16 2 br.	9.82	0.40	6617.62	2.50	19880.40	23500.40	19880.40	3.00
19	3.55	3.78	0.23	ø10/ 4 2 br.	39.27	0.40	7204.92	1.07	34000.10	34000.20	34000.10	4.72
9	4.13	4.36	0.23	ø10/ 4 2 br.	39.27	0.40	2255.51	1.07	34000.10	34000.20	34000.10	15.07
9	4.36	6.26	1.91	ø10/16 2 br.	9.82	0.40	2195.71	2.50	19880.40	23500.40	19880.40	9.05

Travata n. 214

Nodi: 219 224 -193

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	9	SLV	1	20.00	4.62	4.62	4.62	3.33	-3440.10	-3897.60	1.133
1.99	19	SLU	1	198.69	4.62	4.62	4.62	4.30	2038.91	3642.22	1.786
3.95	1	SLV	1	395.20	6.16	5.09	6.16	3.58	-4089.03	-5106.75	1.249
4.45	9	SLV	2	25.00	4.62	5.09	4.62	3.61	-3887.21	-3897.40	1.003
0.20	10	SLD	1	20.00	4.62	4.62	4.62	3.33	-3062.81	-4566.50	1.491
1.99	2	SLD	1	198.69	4.62	4.62	4.62	4.30	1445.02	4273.88	2.958
3.95	2	SLD	1	395.20	6.16	5.09	6.16	3.58	-3697.46	-5969.39	1.614
4.45	10	SLD	2	25.00	4.62	5.09	4.62	3.61	-3607.65	-4566.85	1.266

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <cm>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.20	20	SLU	1	20.00	4.62	4908.60	1.29	3804.45
0.20	10	SLD	1	20.00	4.62	4061.64	1.29	3148.00
1.99	9	SLV	1	198.69	4.62	951.59	0.32	2947.61
1.99	10	SLD	1	198.69	4.62	746.67	0.32	2312.86
3.95	19	SLU	1	395.20	5.09	-5333.62	1.51	3535.69
3.95	2	SLD	1	395.20	5.09	-4372.77	1.51	2898.74
4.45	20	SLU	2	25.00	5.09	5166.46	1.47	3502.85
4.45	10	SLD	2	25.00	5.09	3955.13	1.47	2681.57

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.20	24	SLE R	1	20.00	4.62	4.62	-1967.98	2067.43	-459.74	55.92
0.20	32	SLE Q	1	20.00	4.62	4.62	-1760.11	1849.05	-411.18	50.01
1.99	23	SLE R	1	198.69	4.62	4.62	1547.51	-361.51	1625.70	43.97
1.99	31	SLE Q	1	198.69	4.62	4.62	1402.55	-327.65	1473.43	39.85
3.95	23	SLE R	1	395.20	6.16	5.09	-2583.56	2056.46	-583.58	65.31
3.95	31	SLE Q	1	395.20	6.16	5.09	-2345.63	1867.08	-529.84	59.29
4.45	24	SLE R	2	25.00	4.62	5.09	-2916.51	3063.58	-666.95	81.77
4.45	32	SLE Q	2	25.00	4.62	5.09	-2642.06	2775.29	-604.19	74.07

Verifiche stato limite di formazione delle fessure

Caso	Xg <cm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.20	32	SLE Q	1	2	2	20.00	-1760.11	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1849.05	1991.52	0.38	0.10
48	0.20	28	SLE F	1	2	2	20.00	-1805.96	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1897.22	1991.52	0.41	0.11
91	1.99	31	SLE Q	1	2	2	198.69	1402.55	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1473.43	1991.52	0.29	0.07
95	1.99	27	SLE F	1	2	2	198.69	1430.27	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1502.54	1991.52	0.29	0.07
139	3.95	31	SLE Q	1	2	2	395.20	-2345.63	23.00	113.33	0.13	124.54	14.00	6.16	487.68	1867.08	1587.52	0.58	0.12
143	3.95	27	SLE F	1	2	2	395.20	-2390.95	23.00	113.33	0.13	124.54	14.00	6.16	487.68	1903.15	1587.52	0.60	0.13
188	4.45	32	SLE Q	2	2	2	25.00	-2642.06	23.00	170.00	0.13	151.01	14.00	4.62	458.21	2775.29	2001.45	1.00	0.26

Relazione di calcolo

192	4.45	28	SLE F	2	2	2	25.00	-2697.59	23.00	170.00	0.13	151.01	14.00	4.62	458.21	2833.62	2001.45	1.03	0.27
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Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.43	0.23	ø10/ 4 2 br.	39.27	0.40	5337.56	1.07	34000.10	34000.20	34000.10	6.37
TG	0.43	3.72	3.29	ø10/16 2 br.	9.82	0.40	5179.74	2.50	19880.40	23500.40	19880.40	3.84
TG	3.72	3.95	0.23	ø10/ 4 2 br.	39.27	0.40	5606.43	1.07	34000.10	34000.20	34000.10	6.06
20 SLU	4.45	4.68	0.23	ø10/ 4 2 br.	39.27	0.40	5166.46	1.07	34000.10	34000.20	34000.10	6.58
20 SLU	4.68	8.34	3.66	ø10/16 2 br.	9.82	0.40	4610.63	2.50	19880.40	23500.40	19880.40	4.31

Travata n. 215

Nodi: 233 -196 239 242

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.17	20	SLU	1	252.62	7.16	7.63	7.16	4.38	-5427.32	-5891.17	1.085
2.11	17	SLU	1	59.41	4.62	7.63	4.62	7.33	4036.45	6023.49	1.492
4.10	19	SLU	2	15.00	7.16	7.63	7.16	4.44	-5720.83	-5891.33	1.030
4.40	9	SLV	3	15.00	4.62	4.62	4.62	3.09	-4575.32	-5456.24	1.193
5.92	9	SLV	3	166.38	4.62	4.62	4.62	3.59	3000.28	4281.37	1.427
0.17	10	SLD	1	252.62	7.16	7.63	7.16	4.38	-4850.21	-6876.91	1.418
2.11	2	SLD	1	59.41	4.62	7.63	4.62	7.33	2864.07	7029.77	2.454
4.10	2	SLD	2	15.00	7.16	7.63	7.16	4.44	-4769.17	-6876.90	1.442
4.40	10	SLD	3	15.00	4.62	4.62	4.62	3.09	-4066.33	-6346.98	1.561
5.92	10	SLD	3	166.38	4.62	4.62	4.62	3.59	2303.54	4990.37	2.166

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.17	20	SLU	1	252.62	7.63	-9381.19	3.25	2887.33
0.17	10	SLD	1	252.62	7.63	-6947.23	3.25	2138.21
2.11	9	SLV	1	59.41	7.63	-769.65	0.30	2551.00
2.11	10	SLD	1	59.41	7.63	-604.67	0.30	2004.15
4.10	19	SLU	2	15.00	7.63	9830.73	3.19	3078.48
4.10	2	SLD	2	15.00	7.63	7275.17	3.19	2278.21
4.40	9	SLV	3	15.00	4.62	5969.18	1.53	3913.04
4.40	10	SLD	3	15.00	4.62	5214.66	1.53	3418.43
5.92	9	SLV	3	166.38	4.62	3679.78	1.03	3564.72
5.92	10	SLD	3	166.38	4.62	2925.26	1.03	2833.80

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.17	24	SLE R	1	252.62	7.16	7.63	-4113.80	2824.71	-831.38	91.99
0.17	32	SLE Q	1	252.62	7.16	7.63	-3678.30	2525.68	-743.37	82.25
2.11	21	SLE R	1	59.41	4.62	7.63	3062.50	-693.60	1984.42	73.02
2.11	29	SLE Q	1	59.41	4.62	7.63	2768.76	-627.08	1794.09	66.02
4.10	23	SLE R	2	15.00	7.16	7.63	-4345.51	2983.81	-878.21	97.17
4.10	31	SLE Q	2	15.00	7.16	7.63	-3927.72	2696.94	-793.78	87.83
4.40	24	SLE R	3	15.00	4.62	4.62	-2450.44	1828.26	-467.77	47.02
4.40	32	SLE Q	3	15.00	4.62	4.62	-2296.37	1713.31	-438.36	44.06
5.92	23	SLE R	3	166.38	4.62	4.62	-312.75	233.34	-59.70	6.00
5.92	31	SLE Q	3	166.38	4.62	4.62	-273.63	204.15	-52.23	5.25

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
44	0.17	32	SLE Q	1	2	2	252.62	-3678.30	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2525.68	1437.60	1.03	0.23
48	0.17	28	SLE F	1	2	2	252.62	-3771.03	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2589.35	1437.60	1.06	0.24
89	2.11	29	SLE Q	1	2	2	59.41	2768.76	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1794.09	1340.37	0.63	0.15
93	2.11	25	SLE F	1	2	2	59.41	2825.31	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1830.73	1340.37	0.65	0.16
139	4.10	31	SLE Q	2	2	2	15.00	-3927.72	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2696.94	1437.60	1.12	0.25
143	4.10	27	SLE F	2	2	2	15.00	-4009.23	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2752.91	1437.60	1.15	0.26
188	4.40	32	SLE Q	3	3	1	15.00	-2296.37	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1713.31	1977.14	0.33	0.08
192	4.40	28	SLE F	3	3	1	15.00	-2313.83	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1726.34	1977.14	0.34	0.08
235	5.92	31	SLE Q	3	3	1	166.38	-273.63	23.00	120.00	0.16	140.21	14.00	4.62	364.56	204.15	1977.14	0.04	0.01
239	5.92	27	SLE F	3	3	1	166.38	-284.97	23.00	120.00	0.16	140.21	14.00	4.62	364.56	212.62	1977.14	0.04	0.01

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
20 SLU	0.17	0.41	0.23	ø10/ 4 2 br.	39.27	0.40	9381.19	1.07	34000.10	34000.20	34000.10	3.62

Relazione di calcolo

19 SLU	0.41	3.87	3.47	ø10/16 2 br.	9.82	0.40	8719.46	2.50	19880.40	23500.40	19880.40	2.28
19 SLU	3.87	4.10	0.23	ø10/ 4 2 br.	39.27	0.40	9830.73	1.07	34000.10	34000.20	34000.10	3.46
TG	4.40	4.72	0.32	ø8/ 8 2 br.	12.57	0.30	7566.59	2.01	28399.80	28399.80	28399.80	3.75
TG	4.72	5.60	0.87	ø8/20 2 br.	5.03	0.30	7082.62	2.50	14161.80	24522.20	14161.80	2.00
TG	5.60	5.92	0.32	ø8/ 8 2 br.	12.57	0.30	7192.98	2.01	28399.80	28399.80	28399.80	3.95

Travata n. 216

Nodi: 203 207 213 -182

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.15	1	SLV	1	15.00	4.62	4.62	4.62	3.75	1814.55	3211.46	1.770
2.19	1	SLV	1	219.38	4.62	4.62	4.62	3.49	-3370.63	-3897.50	1.156
2.54	20	SLU	2	17.50	6.16	4.62	6.16	2.36	-4922.09	-5105.57	1.037
4.36	20	SLU	2	199.12	4.62	7.63	4.62	7.21	3402.58	5929.77	1.743
6.14	1	SLV	2	377.62	6.16	4.62	6.16	2.39	-4822.96	-5105.61	1.059
6.50	9	SLV	3	17.50	4.62	4.62	4.62	3.89	-3388.35	-3897.27	1.150
0.15	2	SLD	1	15.00	4.62	4.62	4.62	3.75	1381.60	3776.22	2.733
2.19	2	SLD	1	219.38	4.62	4.62	4.62	3.49	-2907.31	-4566.71	1.571
2.54	10	SLD	2	17.50	6.16	4.62	6.16	2.36	-4535.71	-5970.06	1.316
4.36	10	SLD	2	199.12	4.62	7.63	4.62	7.21	2361.49	6920.94	2.931
6.14	2	SLD	2	377.62	6.16	4.62	6.16	2.39	-4465.60	-5970.04	1.337
6.50	10	SLD	3	17.50	4.62	4.62	4.62	3.89	-3048.03	-4567.23	1.498

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.15	9	SLV	1	15.00	4.62	2933.09	0.87	3376.67
0.15	10	SLD	1	15.00	4.62	2515.01	0.87	2895.37
2.19	1	SLV	1	219.38	4.62	-4096.10	1.13	3628.51
2.19	2	SLD	1	219.38	4.62	-3678.02	1.13	3258.16
2.54	20	SLU	2	17.50	4.62	8829.17	2.26	3913.04
2.54	10	SLD	2	17.50	4.62	6672.33	2.26	2957.14
4.36	1	SLV	2	199.12	7.63	-913.32	0.42	2162.71
4.36	2	SLD	2	199.12	7.63	-718.84	0.42	1702.19
6.14	19	SLU	2	377.62	4.62	-8733.14	2.23	3913.04
6.14	2	SLD	2	377.62	4.62	-6605.02	2.23	2959.50
6.50	9	SLV	3	17.50	4.62	2379.27	0.73	3256.75
6.50	10	SLD	3	17.50	4.62	2134.50	0.73	2921.71

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.15	24	SLE R	1	15.00	4.62	4.62	-248.54	261.10	-58.06	7.06
0.15	32	SLE Q	1	15.00	4.62	4.62	-220.15	231.28	-51.43	6.26
2.19	23	SLE R	1	219.38	4.62	4.62	-1389.44	1459.65	-324.59	39.48
2.19	31	SLE Q	1	219.38	4.62	4.62	-1299.14	1364.79	-303.49	36.92
2.54	24	SLE R	2	17.50	6.16	4.62	-3734.81	2974.08	-860.71	95.73
2.54	32	SLE Q	2	17.50	6.16	4.62	-3343.30	2662.32	-770.48	85.69
4.36	24	SLE R	2	199.12	4.62	7.63	2579.59	-584.23	1671.51	61.51
4.36	32	SLE Q	2	199.12	4.62	7.63	2319.83	-525.40	1503.19	55.31
6.14	23	SLE R	2	377.62	6.16	4.62	-3605.32	2870.96	-830.87	92.41
6.14	31	SLE Q	2	377.62	6.16	4.62	-3224.45	2567.68	-743.09	82.65
6.50	24	SLE R	3	17.50	4.62	4.62	-2001.37	2102.50	-467.54	56.87
6.50	32	SLE Q	3	17.50	4.62	4.62	-1859.72	1953.70	-434.45	52.84

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
44	0.15	32	SLE Q	1	2	2	15.00	-220.15	23.00	170.00	0.13	150.70	14.00	4.62	458.21	231.28	1991.52	0.04	0.01
48	0.15	28	SLE F	1	2	2	15.00	-228.16	23.00	170.00	0.13	150.70	14.00	4.62	458.21	239.69	1991.52	0.05	0.01
91	2.19	31	SLE Q	1	2	2	219.38	-1299.14	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1364.79	1991.52	0.27	0.07
95	2.19	27	SLE F	1	2	2	219.38	-1309.43	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1375.60	1991.52	0.27	0.07
140	2.54	32	SLE Q	2	2	2	17.50	-3343.30	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2662.32	1580.14	1.06	0.22
144	2.54	28	SLE F	2	2	2	17.50	-3423.42	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2726.11	1580.14	1.10	0.23
188	4.36	32	SLE Q	2	2	2	199.12	2319.83	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1503.19	1340.37	0.44	0.11
192	4.36	28	SLE F	2	2	2	199.12	2369.46	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1535.35	1340.37	0.46	0.11
235	6.14	31	SLE Q	2	2	2	377.62	-3224.45	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2567.68	1580.14	1.01	0.21
239	6.14	27	SLE F	2	2	2	377.62	-3303.04	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2630.26	1580.14	1.05	0.22
284	6.50	32	SLE Q	3	2	2	17.50	-1859.72	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1953.70	1991.52	0.46	0.12
288	6.50	28	SLE F	3	2	2	17.50	-1884.45	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1979.68	1991.52	0.47	0.12

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
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Relazione di calcolo

TG	0.15	0.38	0.23	ø10/ 4 2 br.	39.27	0.40	4962.76	1.07	34000.10	34000.20	34000.10	6.85
TG	0.38	1.96	1.58	ø10/16 2 br.	9.82	0.40	4706.37	2.50	19880.40	23500.40	19880.40	4.22
TG	1.96	2.19	0.23	ø10/ 4 2 br.	39.27	0.40	5064.11	1.07	34000.10	34000.20	34000.10	6.71
20 SLU	2.54	2.77	0.23	ø10/ 4 2 br.	39.27	0.40	8829.17	1.07	34000.10	34000.20	34000.10	3.85
20 SLU	2.77	5.92	3.14	ø10/16 2 br.	9.82	0.40	7710.71	2.50	19880.40	23500.40	19880.40	2.58
19 SLU	5.92	6.14	0.23	ø10/ 4 2 br.	39.27	0.40	8733.14	1.07	34000.10	34000.20	34000.10	3.89
9 SLV	6.50	6.72	0.23	ø10/ 4 2 br.	39.27	0.40	2379.27	1.07	34000.10	34000.20	34000.10	14.29
9 SLV	6.72	8.63	1.91	ø10/16 2 br.	9.82	0.40	2319.47	2.50	19880.40	23500.40	19880.40	8.57

Travata n. 217

Nodi: 249 251 253

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.15	9	SLV	1	405.20	6.16	4.62	6.16	2.73	-4276.27	-5106.57	1.194
2.00	19	SLU	1	220.35	4.62	4.62	4.62	4.37	3368.97	3699.01	1.098
4.05	19	SLU	1	15.00	9.24	5.62	9.24	3.42	-5293.73	-7475.21	1.412
4.35	20	SLU	2	15.00	6.16	5.62	6.16	4.22	-4637.91	-5106.41	1.101
0.15	10	SLD	1	405.20	6.16	4.62	6.16	2.73	-3897.38	-5969.85	1.532
2.00	2	SLD	1	220.35	4.62	4.62	4.62	4.37	2392.27	4339.45	1.814
4.05	2	SLD	1	15.00	9.24	5.62	9.24	3.42	-4899.39	-8729.90	1.782
4.35	10	SLD	2	15.00	6.16	5.62	6.16	4.22	-3856.31	-5968.71	1.548

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.15	20	SLU	1	405.20	4.62	-7373.15	1.88	3913.04
0.15	10	SLD	1	405.20	4.62	-5675.28	1.88	3011.96
2.00	9	SLV	1	220.35	4.62	-886.67	0.25	3534.07
2.00	10	SLD	1	220.35	4.62	-695.46	0.25	2771.94
4.05	19	SLU	1	15.00	5.62	8138.83	2.20	3698.74
4.05	2	SLD	1	15.00	5.62	6209.79	2.20	2822.08
4.35	20	SLU	2	15.00	5.62	4205.95	1.40	2999.37
4.35	10	SLD	2	15.00	5.62	3141.11	1.40	2240.01

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.15	24	SLE R	1	405.20	6.16	4.62	-2886.32	2298.41	-665.17	73.98
0.15	32	SLE Q	1	405.20	6.16	4.62	-2583.11	2056.96	-595.29	66.21
2.00	23	SLE R	1	220.35	4.62	4.62	2553.30	-596.48	2682.33	72.55
2.00	31	SLE Q	1	220.35	4.62	4.62	2293.55	-535.80	2409.45	65.17
4.05	23	SLE R	1	15.00	9.24	5.62	-4021.51	2168.15	-859.25	87.56
4.05	31	SLE Q	1	15.00	9.24	5.62	-3624.41	1954.06	-774.40	78.91
4.35	24	SLE R	2	15.00	6.16	5.62	-3524.96	2804.61	-778.63	87.74
4.35	32	SLE Q	2	15.00	6.16	5.62	-3212.49	2555.99	-709.61	79.96

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
44	0.15	32	SLE Q	1	2	2	405.20	-2583.11	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2056.96	1580.14	0.70	0.15
48	0.15	28	SLE F	1	2	2	405.20	-2646.13	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2107.15	1580.14	0.74	0.16
91	2.00	31	SLE Q	1	2	2	220.35	2293.55	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2409.45	1991.52	0.77	0.20
95	2.00	27	SLE F	1	2	2	220.35	2344.28	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2462.74	1991.52	0.80	0.21
139	4.05	31	SLE Q	1	2	2	15.00	-3624.41	23.00	68.00	0.13	97.54	14.00	9.24	500.60	1954.06	1152.23	0.78	0.13
143	4.05	27	SLE F	1	2	2	15.00	-3703.55	23.00	68.00	0.13	97.54	14.00	9.24	500.60	1996.72	1152.23	0.81	0.13
188	4.35	32	SLE Q	2	2	2	15.00	-3212.49	23.00	113.33	0.13	124.83	14.00	6.16	487.68	2555.99	1569.01	1.01	0.21
192	4.35	28	SLE F	2	2	2	15.00	-3274.52	23.00	113.33	0.13	124.83	14.00	6.16	487.68	2605.35	1569.01	1.04	0.22

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
20 SLU	0.15	0.38	0.23	ø10/ 4 2 br.	39.27	0.40	7373.15	1.07	34000.10	34000.20	34000.10	4.61
19 SLU	0.38	3.82	3.44	ø10/16 2 br.	9.82	0.40	7227.23	2.50	19880.40	23500.40	19880.40	2.75
19 SLU	3.82	4.05	0.23	ø10/ 4 2 br.	39.27	0.40	8138.83	1.07	34000.10	34000.20	34000.10	4.18
20 SLU	4.35	4.58	0.23	ø10/ 4 2 br.	39.27	0.40	4205.95	1.07	34000.10	34000.20	34000.10	8.08
20 SLU	4.58	8.34	3.76	ø10/16 2 br.	9.82	0.40	3842.19	2.50	19880.40	23500.40	19880.40	5.17

Travata n. 219

Nodi: 205 208 214 250 252 229 -194 238 257

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Acc.	Fyk	Fyd
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Relazione di calcolo

		<cm>	<cm>	<cm>	<cm>		<daN/cm>	<daN/cm>	<daN/cm>	<daN/cm>		<daN/cm>	<daN/cm>
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cm>	AfE I <cm>	AfEP S <cm>	AfEP I <cm>	My <daNm>	Myu <daNm>	Sic.
0.20	9	SLV	1	211.88	4.62	7.63	4.62	5.93	-5408.46	-5455.18	1.009
2.12	1	SLV	1	20.00	4.62	7.63	4.62	5.27	-4929.20	-5455.42	1.107
2.52	9	SLV	2	375.12	4.62	7.63	4.62	5.26	-5072.13	-5455.40	1.076
5.19	9	SLV	2	107.69	4.62	4.62	4.62	3.58	2914.46	4276.18	1.467
6.07	1	SLV	2	20.44	4.62	4.62	4.62	3.19	-5188.42	-5456.24	1.052
6.46	9	SLV	3	211.53	4.62	4.62	4.62	3.76	-3308.04	-5455.97	1.649
8.43	1	SLV	3	15.00	4.62	4.62	4.62	3.66	-3210.92	-5456.00	1.699
8.73	9	SLV	4	405.20	4.62	4.62	4.62	3.50	-4316.12	-5456.04	1.264
9.84	1	SLV	4	294.67	4.62	4.62	4.62	3.87	2159.85	4603.27	2.131
12.64	1	SLV	4	14.64	5.09	4.62	5.09	3.50	-3820.15	-5991.50	1.568
12.94	9	SLV	5	308.47	5.09	4.62	5.09	3.39	-4744.78	-5991.30	1.263
15.82	1	SLV	5	20.00	6.16	7.63	6.16	5.55	-5774.63	-7202.31	1.247
16.22	9	SLV	6	69.84	6.16	7.63	6.16	4.43	-6972.24	-7200.11	1.033
18.45	18	SLU	7	266.70	4.62	7.63	4.62	6.90	3995.78	8042.00	2.013
20.92	1	SLV	7	20.00	7.70	4.62	7.70	2.46	-8116.93	-8889.10	1.095
21.32	20	SLU	8	166.44	7.70	4.62	7.70	3.35	-6451.93	-8914.16	1.382
0.20	10	SLD	1	211.88	4.62	7.63	4.62	5.93	-4280.98	-6345.05	1.482
2.12	2	SLD	1	20.00	4.62	7.63	4.62	5.27	-4014.54	-6345.37	1.581
2.52	10	SLD	2	375.12	4.62	7.63	4.62	5.26	-4407.22	-6345.33	1.440
5.19	10	SLD	2	107.69	4.62	4.62	4.62	3.58	2462.56	4984.37	2.024
6.07	2	SLD	2	20.44	4.62	4.62	4.62	3.19	-4427.77	-6346.86	1.433
6.46	10	SLD	3	211.53	4.62	4.62	4.62	3.76	-2709.00	-6346.32	2.343
8.43	2	SLD	3	15.00	4.62	4.62	4.62	3.66	-2726.73	-6346.44	2.327
8.73	10	SLD	4	405.20	4.62	4.62	4.62	3.50	-3728.04	-6346.55	1.702
9.84	2	SLD	4	294.67	4.62	4.62	4.62	3.87	1840.67	5361.39	2.913
12.64	2	SLD	4	14.64	5.09	4.62	5.09	3.50	-3337.09	-6963.52	2.087
12.94	10	SLD	5	308.47	5.09	4.62	5.09	3.39	-3988.37	-6963.59	1.746
15.82	2	SLD	5	20.00	6.16	7.63	6.16	5.55	-4855.37	-8358.88	1.722
16.22	10	SLD	6	69.84	6.16	7.63	6.16	4.43	-6361.35	-8359.40	1.314
18.45	10	SLD	7	266.70	4.62	7.63	4.62	6.90	2821.08	9329.24	3.307
20.92	2	SLD	7	20.00	7.70	4.62	7.70	2.46	-7389.44	-10338.70	1.399
21.32	10	SLD	8	166.44	7.70	4.62	7.70	3.35	-5128.73	-10349.30	2.018

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cm>	Tz <daN>	AfEP I <cm>	σ _f inf <daN/cm>
0.20	9	SLV	1	211.88	7.63	-5219.07	1.71	3060.32
0.20	10	SLD	1	211.88	7.63	-4154.82	1.71	2436.28
2.12	1	SLV	1	20.00	7.63	5739.63	2.37	2426.26
2.12	2	SLD	1	20.00	7.63	4675.38	2.37	1976.38
2.52	9	SLV	2	375.12	7.63	-5762.79	2.37	2429.29
2.52	10	SLD	2	375.12	7.63	-5361.24	2.37	2260.02
5.19	1	SLV	2	107.69	4.62	3700.74	1.04	3569.26
5.19	2	SLD	2	107.69	4.62	3299.19	1.04	3181.98
6.07	1	SLV	2	20.44	4.62	5579.21	1.43	3913.04
6.07	2	SLD	2	20.44	4.62	5177.66	1.43	3631.41
6.46	9	SLV	3	211.53	4.62	-2925.03	0.86	3401.29
6.46	10	SLD	3	211.53	4.62	-2374.32	0.86	2760.92
8.43	1	SLV	3	15.00	4.62	3354.17	0.96	3494.22
8.43	2	SLD	3	15.00	4.62	2803.46	0.96	2920.52
8.73	9	SLV	4	405.20	4.62	-4070.49	1.12	3649.33
8.73	10	SLD	4	405.20	4.62	-3798.02	1.12	3405.04
9.84	9	SLV	4	294.67	4.62	-2477.52	0.75	3304.39
9.84	10	SLD	4	294.67	4.62	-2205.04	0.75	2940.97
12.64	1	SLV	4	14.64	4.62	4066.66	1.11	3648.50
12.64	2	SLD	4	14.64	4.62	3794.19	1.11	3404.04
12.94	9	SLV	5	308.47	4.62	-4636.50	1.23	3771.89
12.94	10	SLD	5	308.47	4.62	-4055.63	1.23	3299.34
15.82	1	SLV	5	20.00	7.63	4807.73	2.09	2304.19
15.82	2	SLD	5	20.00	7.63	4226.86	2.09	2025.80
16.22	20	SLU	6	69.84	7.63	-9238.01	3.20	2884.52
16.22	10	SLD	6	69.84	7.63	-7371.12	3.20	2301.59
18.45	1	SLV	7	266.70	7.63	1379.74	0.73	1886.70
18.45	2	SLD	7	266.70	7.63	1088.33	0.73	1488.22
20.92	19	SLU	7	20.00	4.62	8458.56	2.16	3913.04
20.92	2	SLD	7	20.00	4.62	6919.68	2.16	3201.14
21.32	20	SLU	8	166.44	4.62	-4848.71	1.27	3817.84
21.32	10	SLD	8	166.44	4.62	-3777.60	1.27	2974.45

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cm>	AfE I <cm>	My <daNm>	σ _f sup <daN/cm>	σ _f inf <daN/cm>	σ _c <daN/cm>
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Relazione di calcolo

0.20	24	SLE R	1	211.88	4.62	7.63	-353.23	262.43	-58.73	6.13
0.20	32	SLE Q	1	211.88	4.62	7.63	-339.61	252.31	-56.47	5.89
2.12	23	SLE R	1	20.00	4.62	7.63	-843.41	626.59	-140.24	14.64
2.12	31	SLE Q	1	20.00	4.62	7.63	-816.66	606.73	-135.79	14.17
2.52	24	SLE R	2	375.12	4.62	7.63	-2252.48	1673.44	-374.53	39.09
2.52	32	SLE Q	2	375.12	4.62	7.63	-2075.46	1541.93	-345.09	36.02
5.19	24	SLE R	2	107.69	4.62	4.62	940.74	-179.58	701.88	18.05
5.19	32	SLE Q	2	107.69	4.62	4.62	873.70	-166.78	651.86	16.76
6.07	23	SLE R	2	20.44	4.62	4.62	-1920.01	1432.51	-366.52	36.84
6.07	31	SLE Q	2	20.44	4.62	4.62	-1755.42	1309.71	-335.10	33.68
6.46	24	SLE R	3	211.53	4.62	4.62	-646.32	482.22	-123.38	12.40
6.46	32	SLE Q	3	211.53	4.62	4.62	-632.16	471.65	-120.67	12.13
8.43	23	SLE R	3	15.00	4.62	4.62	-1116.04	832.67	-213.04	21.41
8.43	31	SLE Q	3	15.00	4.62	4.62	-1052.58	785.33	-200.93	20.20
8.73	22	SLE R	4	405.20	4.62	4.62	-1784.67	1331.53	-340.68	34.24
8.73	30	SLE Q	4	405.20	4.62	4.62	-1663.17	1240.88	-317.49	31.91
9.84	21	SLE R	4	294.67	4.62	4.62	769.77	-146.94	574.32	14.77
9.84	29	SLE Q	4	294.67	4.62	4.62	723.75	-138.16	539.98	13.89
12.64	23	SLE R	4	14.64	5.09	4.62	-1770.41	1202.61	-333.63	32.84
12.64	31	SLE Q	4	14.64	5.09	4.62	-1646.39	1118.37	-310.26	30.54
12.94	22	SLE R	5	308.47	5.09	4.62	-1423.97	967.28	-268.35	26.41
12.94	30	SLE Q	5	308.47	5.09	4.62	-1338.46	909.20	-252.23	24.83
15.82	21	SLE R	5	20.00	6.16	7.63	-1739.17	977.28	-280.06	27.34
15.82	29	SLE Q	5	20.00	6.16	7.63	-1630.81	916.39	-262.61	25.64
16.22	24	SLE R	6	69.84	6.16	7.63	-4631.85	2602.75	-745.87	72.82
16.22	32	SLE Q	6	69.84	6.16	7.63	-4228.66	2376.18	-680.95	66.48
18.45	22	SLE R	7	266.70	4.62	7.63	3035.61	-538.42	1396.64	49.24
18.45	30	SLE Q	7	266.70	4.62	7.63	2772.91	-491.82	1275.78	44.98
20.92	23	SLE R	7	20.00	7.70	4.62	-5241.58	2392.73	-928.47	84.80
20.92	31	SLE Q	7	20.00	7.70	4.62	-4848.11	2213.12	-858.77	78.44
21.32	24	SLE R	8	166.44	7.70	4.62	-4929.44	2250.24	-873.18	79.75
21.32	32	SLE Q	8	166.44	7.70	4.62	-4688.62	2140.31	-830.52	75.86

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _m <mm>	Φ	A _s <cmq>	A _{s,eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.20	32	SLE Q	1	3	1	211.88	-339.61	23.00	120.00	0.16	141.39	14.00	4.62	364.56	252.31	2039.14	0.05	0.01
48	0.20	28	SLE F	1	3	1	211.88	-344.25	23.00	120.00	0.16	141.39	14.00	4.62	364.56	255.75	2039.14	0.05	0.01
91	2.12	31	SLE Q	1	3	1	20.00	-816.66	23.00	120.00	0.16	141.39	14.00	4.62	364.56	606.73	2039.14	0.12	0.03
95	2.12	27	SLE F	1	3	1	20.00	-816.06	23.00	120.00	0.16	141.39	14.00	4.62	364.56	606.28	2039.14	0.12	0.03
140	2.52	32	SLE Q	2	3	1	375.12	-2075.46	23.00	120.00	0.16	141.39	14.00	4.62	364.56	1541.93	2039.14	0.30	0.07
144	2.52	28	SLE F	2	3	1	375.12	-2111.98	23.00	120.00	0.16	141.39	14.00	4.62	364.56	1569.06	2039.14	0.30	0.07
188	5.19	32	SLE Q	2	3	1	107.69	873.70	23.00	120.00	0.16	140.21	14.00	4.62	364.56	651.86	1977.14	0.13	0.03
192	5.19	28	SLE F	2	3	1	107.69	885.85	23.00	120.00	0.16	140.21	14.00	4.62	364.56	660.92	1977.14	0.13	0.03
235	6.07	31	SLE Q	2	3	1	20.44	-1755.42	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1309.71	1977.14	0.25	0.06
239	6.07	27	SLE F	2	3	1	20.44	-1789.50	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1335.14	1977.14	0.26	0.06
284	6.46	32	SLE Q	3	3	1	211.53	-632.16	23.00	120.00	0.16	140.21	14.00	4.62	364.56	471.65	1977.14	0.09	0.02
288	6.46	28	SLE F	3	3	1	211.53	-629.08	23.00	120.00	0.16	140.21	14.00	4.62	364.56	469.35	1977.14	0.09	0.02
331	8.43	31	SLE Q	3	3	1	15.00	-1052.58	23.00	120.00	0.16	140.21	14.00	4.62	364.56	785.33	1977.14	0.15	0.04
335	8.43	27	SLE F	3	3	1	15.00	-1065.21	23.00	120.00	0.16	140.21	14.00	4.62	364.56	794.75	1977.14	0.15	0.04
378	8.73	30	SLE Q	4	3	1	405.20	-1663.17	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1240.88	1977.14	0.24	0.06
382	8.73	26	SLE F	4	3	1	405.20	-1689.58	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1260.59	1977.14	0.24	0.06
425	9.84	29	SLE Q	4	3	1	294.67	723.75	23.00	120.00	0.16	140.21	14.00	4.62	364.56	539.98	1977.14	0.10	0.02
429	9.84	25	SLE F	4	3	1	294.67	730.96	23.00	120.00	0.16	140.21	14.00	4.62	364.56	545.37	1977.14	0.11	0.03
475	12.64	31	SLE Q	4	3	1	14.64	-1646.39	21.00	240.00	0.14	169.61	18.00	5.09	406.81	1118.37	1828.56	0.22	0.06
479	12.64	27	SLE F	4	3	1	14.64	-1672.23	21.00	240.00	0.14	169.61	18.00	5.09	406.81	1135.92	1828.56	0.22	0.06
522	12.94	30	SLE Q	5	3	1	308.47	-1338.46	21.00	240.00	0.14	169.61	18.00	5.09	406.81	909.20	1828.56	0.18	0.05
526	12.94	26	SLE F	5	3	1	308.47	-1357.42	21.00	240.00	0.14	169.61	18.00	5.09	406.81	922.08	1828.56	0.18	0.05
569	15.82	29	SLE Q	5	3	1	20.00	-1630.81	23.00	80.00	0.16	116.41	14.00	6.16	373.65	916.39	1621.45	0.18	0.04
573	15.82	25	SLE F	5	3	1	20.00	-1644.87	23.00	80.00	0.16	116.41	14.00	6.16	373.65	924.29	1621.45	0.18	0.04
620	16.22	32	SLE Q	6	3	1	69.84	-4228.66	23.00	80.00	0.16	116.41	14.00	6.16	373.65	2376.18	1621.45	0.88	0.18
624	16.22	28	SLE F	6	3	1	69.84	-4311.58	23.00	80.00	0.16	116.41	14.00	6.16	373.65	2422.78	1621.45	0.91	0.18
666	18.45	30	SLE Q	7	3	1	266.70	2772.91	21.00	120.00	0.14	123.70	18.00	7.63	451.85	1275.78	1341.94	0.28	0.06
670	18.45	26	SLE F	7	3	1	266.70	2823.11	21.00	120.00	0.14	123.70	18.00	7.63	451.85	1298.87	1341.94	0.29	0.06
715	20.92	31	SLE Q	7	3	1	20.00	-4848.11	23.00	60.00	0.16	100.72	14.00	7.70	376.64	2213.12	1333.97	0.88	0.15
719	20.92	27	SLE F	7	3	1	20.00	-4928.48	23.00	60.00	0.16	100.72	14.00	7.70	376.64	2249.80	1333.97	0.90	0.15
764	21.32	32	SLE Q	8	3	1	166.44	-4688.62	23.00	60.00	0.16	100.72	14.00	7.70	376.64	2140.31	1333.97	0.84	0.14
768	21.32	28	SLE F	8	3	1	166.44	-4734.99	23.00	60.00	0.16	100.72	14.00	7.70	376.64	2161.48	1333.97	0.85	0.15

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.52	0.32	ø8/ 8 2 br.	12.57	0.30	6642.69	2.01	28399.80	28399.80	28399.80	4.28
TG	0.52	1.80	1.28	ø8/20 2 br.	5.03	0.30	6840.58	2.50	14161.80	24522.20	14161.80	2.07
TG	1.80	2.12	0.32	ø8/ 8 2 br.	12.57	0.30	7033.38	2.01	28399.80	28399.80	28399.80	4.04
TG	2.52	2.84	0.32	ø8/ 8 2 br.	12.57	0.30	6430.94	2.01	28399.80	28399.80	28399.80	4.42
TG	2.84	5.75	2.91	ø8/20 2 br.	5.03	0.30	6408.75	2.50	14161.80	24522.20	14161.80	2.21
TG	5.75	6.07	0.32	ø8/ 8 2 br.	12.57	0.30	7097.67	2.01	28399.80	28399.80	28399.80	4.00
TG	6.46	6.78	0.32	ø8/ 8 2 br.	12.57	0.30	5603.34	2.01	28399.80	28399.80	28399.80	5.07
TG	6.78	8.10	1.32	ø8/20 2 br.	5.03	0.30	5456.10	2.50	14161.80	24522.20	14161.80	2.60
TG	8.10	8.42	0.32	ø8/ 8 2 br.	12.57	0.30	5655.87	2.01	28399.80	28399.80	28399.80	5.02
TG	8.73	9.05	0.32	ø8/ 8 2 br.	12.57	0.30	5279.22	2.01	28399.80	28399.80	28399.80	5.38
TG	9.05	12.32	3.27	ø8/20 2 br.	5.03	0.30	4954.87	2.50	14161.80	24522.20	14161.80	2.86
TG	12.32	12.64	0.32	ø8/ 8 2 br.	12.57	0.30	5416.06	2.01	28399.80	28399.80	28399.80	5.24
TG	12.94	13.26	0.32	ø8/ 8 2 br.	12.57	0.30	6364.86	2.01	28399.80	28399.80	28399.80	4.46
TG	13.26	15.50	2.24	ø8/20 2 br.	5.03	0.30	5911.89	2.50	14161.80	24522.20	14161.80	2.40
TG	15.50	15.82	0.32	ø8/ 8 2 br.	12.57	0.30	5941.01	2.01	28399.80	28399.80	28399.80	4.78

Relazione di calcolo

20 SLU	16.22	16.54	0.32	ø8/ 8 2 br.	12.57	0.30	9238.01	2.01	28399.80	28399.80	28399.80	3.07
20 SLU	16.54	20.60	4.06	ø8/20 2 br.	5.03	0.30	8610.21	2.50	14161.80	24522.20	14161.80	1.64
19 SLU	20.60	20.92	0.32	ø8/ 8 2 br.	12.57	0.30	8458.56	2.01	28399.80	28399.80	28399.80	3.36
20 SLU	21.32	21.64	0.32	ø8/ 8 2 br.	12.57	0.30	4848.71	2.01	28399.80	28399.80	28399.80	5.86
20 SLU	21.64	22.98	1.34	ø8/20 2 br.	5.03	0.30	4598.07	2.50	14161.80	24522.20	14161.80	3.08

Travata n. 220

Nodi: 247 201 202 203

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
1.89	17	SLU	1	25.08	9.17	4.62	9.17	3.22	-9086.94	-10526.00	1.158
2.39	9	SLV	2	480.00	9.17	4.62	9.17	2.88	-8970.57	-10508.40	1.171
3.83	1	SLV	2	336.34	4.62	4.62	4.62	3.52	3488.85	4208.49	1.206
6.99	1	SLV	2	20.02	6.16	4.62	6.16	3.06	-6456.23	-7194.53	1.114
7.40	1	SLV	3	291.99	6.16	4.62	6.16	3.33	3677.52	3994.78	1.086
10.07	1	SLV	3	24.60	4.62	6.16	4.62	4.72	-5375.55	-5455.55	1.015
1.89	2	SLD	1	25.08	9.17	4.62	9.17	3.22	-6889.12	-12230.40	1.775
2.39	10	SLD	2	480.00	9.17	4.62	9.17	2.88	-7865.00	-12218.10	1.553
3.83	2	SLD	2	336.34	4.62	4.62	4.62	3.52	2956.93	4906.27	1.659
6.99	2	SLD	2	20.02	6.16	4.62	6.16	3.06	-5570.06	-8358.11	1.501
7.40	10	SLD	3	291.99	6.16	4.62	6.16	3.33	-5291.42	-8358.81	1.580
10.07	2	SLD	3	24.60	4.62	6.16	4.62	4.72	-4353.69	-6345.66	1.458

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
1.89	20	SLU	1	25.08	4.62	5457.62	1.39	3913.04
1.89	6	SLD	1	25.08	4.62	4054.51	1.39	2907.03
2.39	18	SLU	2	480.00	4.62	-6795.37	1.74	3913.04
2.39	10	SLD	2	480.00	4.62	-6288.63	1.74	3621.24
3.83	9	SLV	2	336.34	4.62	-3978.84	1.10	3629.48
3.83	10	SLD	2	336.34	4.62	-3545.84	1.10	3234.50
6.99	1	SLV	2	20.02	4.62	6079.07	1.55	3913.04
6.99	2	SLD	2	20.02	4.62	5646.07	1.55	3634.32
7.40	9	SLV	3	291.99	4.62	-4920.04	1.28	3833.29
7.40	10	SLD	3	291.99	4.62	-4145.78	1.28	3230.04
10.07	1	SLV	3	24.60	6.16	4474.70	1.44	3103.48
10.07	2	SLD	3	24.60	6.16	3700.44	1.44	2566.48

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
1.89	21	SLE R	1	25.08	9.17	4.62	-6933.37	2676.48	-1193.68	106.27
1.89	29	SLE Q	1	25.08	9.17	4.62	-6555.81	2530.73	-1128.67	100.48
2.39	22	SLE R	2	480.00	9.17	4.62	-4302.48	1660.88	-740.73	65.95
2.39	30	SLE Q	2	480.00	9.17	4.62	-4007.96	1547.19	-690.03	61.43
3.83	21	SLE R	2	336.34	4.62	4.62	1224.14	-233.68	913.32	23.49
3.83	29	SLE Q	2	336.34	4.62	4.62	1102.29	-210.42	822.41	21.15
6.99	21	SLE R	2	20.02	6.16	4.62	-2677.97	1514.20	-491.06	46.57
6.99	29	SLE Q	2	20.02	6.16	4.62	-2475.49	1399.71	-453.93	43.05
7.40	22	SLE R	3	291.99	6.16	4.62	-1762.47	996.55	-323.18	30.65
7.40	30	SLE Q	3	291.99	6.16	4.62	-1626.36	919.59	-298.22	28.28
10.07	21	SLE R	3	24.60	4.62	6.16	-820.20	610.45	-145.65	14.92
10.07	29	SLE Q	3	24.60	4.62	6.16	-783.51	583.14	-139.14	14.26

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cm²>	A _c eff <cm²>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
41	1.89	29	SLE Q	1	3	1	25.08	-6555.81	21.00	80.00	0.13	104.93	18.00	9.17	447.44	2530.73	1159.96	1.10	0.20
45	1.89	25	SLE F	1	3	1	25.08	-6632.49	21.00	80.00	0.13	104.93	18.00	9.17	447.44	2560.33	1159.96	1.12	0.20
90	2.39	30	SLE Q	2	3	1	480.00	-4007.96	21.00	80.00	0.13	104.93	18.00	9.17	447.44	1547.19	1159.96	0.54	0.10
94	2.39	26	SLE F	2	3	1	480.00	-4064.26	21.00	80.00	0.13	104.93	18.00	9.17	447.44	1568.92	1159.96	0.55	0.10
137	3.83	29	SLE Q	2	3	1	336.34	1102.29	23.00	120.00	0.16	140.21	14.00	4.62	364.56	822.41	1977.14	0.16	0.04
141	3.83	25	SLE F	2	3	1	336.34	1128.66	23.00	120.00	0.16	140.21	14.00	4.62	364.56	842.09	1977.14	0.16	0.04
185	6.99	29	SLE Q	2	3	1	20.02	-2475.49	23.00	80.00	0.16	115.47	14.00	6.16	373.65	1399.71	1575.60	0.27	0.05
189	6.99	25	SLE F	2	3	1	20.02	-2515.90	23.00	80.00	0.16	115.47	14.00	6.16	373.65	1422.56	1575.60	0.28	0.05
234	7.40	30	SLE Q	3	3	1	291.99	-1626.36	23.00	80.00	0.16	115.47	14.00	6.16	373.65	919.59	1575.60	0.18	0.04
238	7.40	26	SLE F	3	3	1	291.99	-1656.11	23.00	80.00	0.16	115.47	14.00	6.16	373.65	936.41	1575.60	0.18	0.04
281	10.07	29	SLE Q	3	3	1	24.60	-783.51	23.00	120.00	0.16	140.83	14.00	4.62	364.56	583.14	2009.47	0.11	0.03
285	10.07	25	SLE F	3	3	1	24.60	-789.78	23.00	120.00	0.16	140.83	14.00	4.62	364.56	587.81	2009.47	0.11	0.03

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
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Relazione di calcolo

20 SLU	0.00	1.57	1.57	ø8/20 2 br.	5.03	0.30	5206.08	2.50	14161.80	24522.20	14161.80	2.72
20 SLU	1.57	1.89	0.32	ø8/ 8 2 br.	12.57	0.30	5457.62	2.01	28399.80	28399.80	28399.80	5.20
TG	2.39	2.71	0.32	ø8/ 8 2 br.	12.57	0.30	7486.57	2.01	28399.80	28399.80	28399.80	3.79
TG	2.71	6.67	3.96	ø8/20 2 br.	5.03	0.30	6874.07	2.50	14161.80	24522.20	14161.80	2.06
TG	6.67	6.99	0.32	ø8/ 8 2 br.	12.57	0.30	6719.10	2.01	28399.80	28399.80	28399.80	4.23
TG	7.40	7.72	0.32	ø8/ 8 2 br.	12.57	0.30	5891.84	2.01	28399.80	28399.80	28399.80	4.82
TG	7.72	9.75	2.03	ø8/20 2 br.	5.03	0.30	5623.15	2.50	14161.80	24522.20	14161.80	2.52
TG	9.75	10.07	0.32	ø8/ 8 2 br.	12.57	0.30	4649.59	2.01	28399.80	28399.80	28399.80	6.11

Travata n. 221

Nodi: 201 204 210

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.15	5	SLV	1	396.89	4.62	4.62	4.62	3.86	-2135.69	-3897.27	1.825
1.29	13	SLV	1	282.50	4.62	4.62	4.62	4.19	1070.32	3562.92	3.329
3.94	13	SLV	1	17.51	4.62	4.62	4.62	3.80	-2386.04	-3897.30	1.633
4.29	5	SLV	2	286.82	4.62	4.62	4.62	3.89	-2007.38	-3897.27	1.941
6.99	13	SLV	2	17.51	4.62	4.62	4.62	3.82	-2445.54	-3897.29	1.594
0.15	6	SLD	1	396.89	4.62	4.62	4.62	3.86	-1864.65	-4567.19	2.449
1.29	14	SLD	1	282.50	4.62	4.62	4.62	4.19	947.47	4182.29	4.414
3.94	14	SLD	1	17.51	4.62	4.62	4.62	3.80	-2128.58	-4567.11	2.146
4.29	6	SLD	2	286.82	4.62	4.62	4.62	3.89	-1656.67	-4567.19	2.757
6.99	14	SLD	2	17.51	4.62	4.62	4.62	3.82	-2074.23	-4567.12	2.202

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.15	17	SLU	1	396.89	4.62	-2496.54	0.76	3282.14
0.15	6	SLD	1	396.89	4.62	-2216.89	0.76	2914.50
1.29	5	SLV	1	282.50	4.62	-1277.81	0.42	3018.24
1.29	6	SLD	1	282.50	4.62	-1138.51	0.42	2689.21
3.94	18	SLU	1	17.51	4.62	2719.80	0.82	3330.49
3.94	14	SLD	1	17.51	4.62	2395.81	0.82	2933.76
4.29	5	SLV	2	286.82	4.62	-2384.31	0.73	3257.84
4.29	6	SLD	2	286.82	4.62	-2116.24	0.73	2891.55
6.99	13	SLV	2	17.51	4.62	2646.76	0.80	3314.67
6.99	14	SLD	2	17.51	4.62	2378.68	0.80	2978.95

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.15	21	SLE R	1	396.89	4.62	4.62	-1038.93	1091.43	-242.71	29.52
0.15	29	SLE Q	1	396.89	4.62	4.62	-916.54	962.85	-214.11	26.04
1.29	22	SLE R	1	282.50	4.62	4.62	532.51	-124.40	559.41	15.13
1.29	30	SLE Q	1	282.50	4.62	4.62	517.96	-121.00	544.13	14.72
3.94	22	SLE R	1	17.51	4.62	4.62	-1337.64	1405.23	-312.49	38.01
3.94	30	SLE Q	1	17.51	4.62	4.62	-1227.25	1289.27	-286.70	34.87
4.29	21	SLE R	2	286.82	4.62	4.62	-425.68	447.19	-99.44	12.10
4.29	29	SLE Q	2	286.82	4.62	4.62	-428.28	449.93	-100.05	12.17
6.99	22	SLE R	2	17.51	4.62	4.62	-842.76	885.35	-196.88	23.95
6.99	30	SLE Q	2	17.51	4.62	4.62	-775.20	814.37	-181.09	22.03

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
41	0.15	29	SLE Q	1	2	2	396.89	-916.54	23.00	170.00	0.13	150.70	14.00	4.62	458.21	962.85	1991.52	0.19	0.05
45	0.15	25	SLE F	1	2	2	396.89	-946.27	23.00	170.00	0.13	150.70	14.00	4.62	458.21	994.09	1991.52	0.19	0.05
90	1.29	30	SLE Q	1	2	2	282.50	517.96	23.00	170.00	0.13	150.70	14.00	4.62	458.21	544.13	1991.52	0.11	0.03
94	1.29	26	SLE F	1	2	2	282.50	516.70	23.00	170.00	0.13	150.70	14.00	4.62	458.21	542.81	1991.52	0.11	0.03
138	3.94	30	SLE Q	1	2	2	17.51	-1227.25	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1289.27	1991.52	0.25	0.06
142	3.94	26	SLE F	1	2	2	17.51	-1249.72	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1312.87	1991.52	0.25	0.07
185	4.29	29	SLE Q	2	2	2	286.82	-428.28	23.00	170.00	0.13	150.70	14.00	4.62	458.21	449.93	1991.52	0.09	0.02
189	4.29	25	SLE F	2	2	2	286.82	-422.44	23.00	170.00	0.13	150.70	14.00	4.62	458.21	443.79	1991.52	0.09	0.02
234	6.99	30	SLE Q	2	2	2	17.51	-775.20	23.00	170.00	0.13	150.70	14.00	4.62	458.21	814.37	1991.52	0.16	0.04
238	6.99	26	SLE F	2	2	2	17.51	-788.66	23.00	170.00	0.13	150.70	14.00	4.62	458.21	828.52	1991.52	0.16	0.04

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.15	0.38	0.23	ø10/ 4 2 br.	39.27	0.40	3685.86	1.07	34000.10	34000.20	34000.10	9.22
TG	0.38	3.71	3.33	ø10/16 2 br.	9.82	0.40	3478.96	2.50	19880.40	23500.40	19880.40	5.71
TG	3.71	3.94	0.23	ø10/ 4 2 br.	39.27	0.40	3697.60	1.07	34000.10	34000.20	34000.10	9.20
TG	4.29	4.52	0.23	ø10/ 4 2 br.	39.27	0.40	3936.23	1.07	34000.10	34000.20	34000.10	8.64

Relazione di calcolo

TG	4.52	6.76	2.23	ø10/16 2 br.	9.82	0.40	3737.48	2.50	19880.40	23500.40	19880.40	5.32
TG	6.76	6.99	0.23	ø10/ 4 2 br.	39.27	0.40	3955.90	1.07	34000.10	34000.20	34000.10	8.59

Travata n. 222

Nodi: 203 205

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
3	R	30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	9	SLV	1	469.87	6.16	4.62	6.16	3.37	-5500.92	-7197.22	1.308
3.72	9	SLV	1	118.30	4.62	4.62	4.62	3.73	3033.76	4441.77	1.464
4.75	1	SLV	1	15.05	4.62	4.62	4.62	3.43	-5220.87	-5456.08	1.045
0.20	10	SLD	1	469.87	6.16	4.62	6.16	3.37	-4786.32	-8358.88	1.746
3.72	10	SLD	1	118.30	4.62	4.62	4.62	3.73	2544.05	5175.22	2.034
4.75	2	SLD	1	15.05	4.62	4.62	4.62	3.43	-4435.14	-6346.64	1.431

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.20	9	SLV	1	469.87	4.62	-4718.16	1.25	3789.57
0.20	10	SLD	1	469.87	4.62	-4388.31	1.25	3524.64
3.72	1	SLV	1	118.30	4.62	3057.97	0.89	3430.08
3.72	2	SLD	1	118.30	4.62	2728.12	0.89	3060.09
4.75	1	SLV	1	15.05	4.62	4439.96	1.19	3729.33
4.75	2	SLD	1	15.05	4.62	4110.11	1.19	3452.27

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.20	22	SLE R	1	469.87	6.16	4.62	-2436.66	1377.76	-446.81	42.37
0.20	30	SLE Q	1	469.87	6.16	4.62	-2298.72	1299.76	-421.51	39.97
3.72	22	SLE R	1	118.30	4.62	4.62	883.91	-168.73	659.48	16.96
3.72	30	SLE Q	1	118.30	4.62	4.62	839.32	-160.22	626.21	16.11
4.75	21	SLE R	1	15.05	4.62	4.62	-1826.70	1362.89	-348.71	35.05
4.75	29	SLE Q	1	15.05	4.62	4.62	-1699.95	1268.32	-324.51	32.62

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cm²>	A _{c eff} <cm²>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
42	0.20	30	SLE Q	1	3	1	469.87	-2298.72	23.00	80.00	0.16	115.47	14.00	6.16	373.65	1299.76	1575.60	0.25	0.05
46	0.20	26	SLE F	1	3	1	469.87	-2325.63	23.00	80.00	0.16	115.47	14.00	6.16	373.65	1314.98	1575.60	0.26	0.05
90	3.72	30	SLE Q	1	3	1	118.30	839.32	23.00	120.00	0.16	140.21	14.00	4.62	364.56	626.21	1977.14	0.12	0.03
94	3.72	26	SLE F	1	3	1	118.30	845.65	23.00	120.00	0.16	140.21	14.00	4.62	364.56	630.93	1977.14	0.12	0.03
137	4.75	29	SLE Q	1	3	1	15.05	-1699.95	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1268.32	1977.14	0.25	0.06
141	4.75	25	SLE F	1	3	1	15.05	-1728.55	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1289.66	1977.14	0.25	0.06

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.52	0.32	ø8/ 8 2 br.	12.57	0.30	5537.42	2.01	28399.80	28399.80	28399.80	5.13
TG	0.52	4.43	3.91	ø8/20 2 br.	5.03	0.30	5107.32	2.50	14161.80	24522.20	14161.80	2.77
TG	4.43	4.75	0.32	ø8/ 8 2 br.	12.57	0.30	5139.69	2.01	28399.80	28399.80	28399.80	5.53

Travata n. 223

Nodi: 202 206

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.10	5	SLV	1	10.05	4.62	4.62	4.62	3.84	-2179.24	-3897.30	1.788
2.01	20	SLU	1	201.25	4.62	4.62	4.62	4.41	1348.16	3735.19	2.771
3.92	13	SLV	1	392.45	4.62	4.62	4.62	3.50	-2863.25	-3897.49	1.361
0.10	6	SLD	1	10.05	4.62	4.62	4.62	3.84	-1951.61	-4567.16	2.340
2.01	6	SLD	1	201.25	4.62	4.62	4.62	4.41	966.66	4381.27	4.532
3.92	14	SLD	1	392.45	4.62	4.62	4.62	3.50	-2622.11	-4566.73	1.742

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <cmq>
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Relazione di calcolo

								<daN/cm²>
0.10	20	SLU	1	10.05	4.62	2567.35	0.78	3297.48
0.10	6	SLD	1	10.05	4.62	2202.53	0.78	2828.91
2.01	13	SLV	1	201.25	4.62	-588.15	0.21	2868.91
2.01	14	SLD	1	201.25	4.62	-465.57	0.21	2270.97
3.92	19	SLU	1	392.45	4.62	-4036.39	1.12	3615.58
3.92	14	SLD	1	392.45	4.62	-3219.54	1.12	2883.89

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.10	24	SLE R	1	10.05	4.62	4.62	-1302.12	1367.92	-304.19	37.00
0.10	32	SLE Q	1	10.05	4.62	4.62	-1160.83	1219.49	-271.18	32.99
2.01	24	SLE R	1	201.25	4.62	4.62	1025.28	-239.52	1077.09	29.13
2.01	32	SLE Q	1	201.25	4.62	4.62	940.91	-219.81	988.46	26.74
3.92	23	SLE R	1	392.45	4.62	4.62	-1950.16	2048.71	-455.58	55.41
3.92	31	SLE Q	1	392.45	4.62	4.62	-1784.54	1874.72	-416.89	50.71

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
44	0.10	32	SLE Q	1	2	2	10.05	-1160.83	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1219.49	1991.52	0.24	0.06
48	0.10	28	SLE F	1	2	2	10.05	-1193.42	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1253.72	1991.52	0.24	0.06
92	2.01	32	SLE Q	1	2	2	201.25	940.91	23.00	170.00	0.13	150.70	14.00	4.62	458.21	988.46	1991.52	0.19	0.05
96	2.01	28	SLE F	1	2	2	201.25	956.49	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1004.83	1991.52	0.20	0.05
139	3.92	31	SLE Q	1	2	2	392.45	-1784.54	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1874.72	1991.52	0.40	0.10
143	3.92	27	SLE F	1	2	2	392.45	-1815.69	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1907.44	1991.52	0.42	0.11

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.10	0.33	0.23	ø10/ 4 2 br.	39.27	0.40	4074.57	1.07	34000.10	34000.20	34000.10	8.34
TG	0.33	3.69	3.36	ø10/16 2 br.	9.82	0.40	3871.92	2.50	19880.40	23500.40	19880.40	5.13
TG	3.69	3.92	0.23	ø10/ 4 2 br.	39.27	0.40	4144.87	1.07	34000.10	34000.20	34000.10	8.20

Travata n. 224

Nodi: 248 204 206

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
1.90	17	SLU	1	25.20	10.18	7.16	10.18	5.81	-7693.92	-8229.04	1.070
2.40	9	SLV	2	480.94	12.25	7.16	12.25	4.86	-7318.74	-9768.57	1.335
4.78	17	SLU	2	243.60	4.62	7.63	4.62	7.21	4135.88	5924.72	1.433
7.03	1	SLV	2	17.79	8.70	7.63	8.70	4.65	-6344.98	-7083.98	1.116
1.90	2	SLD	1	25.20	10.18	7.16	10.18	5.81	-6637.98	-9581.14	1.443
2.40	10	SLD	2	480.94	12.25	7.16	12.25	4.86	-6729.36	-11384.40	1.692
4.78	2	SLD	2	243.60	4.62	7.63	4.62	7.21	2841.05	6915.09	2.434
7.03	2	SLD	2	17.79	8.70	7.63	8.70	4.65	-5803.37	-8259.70	1.423

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
1.90	17	SLU	1	25.20	7.16	5307.47	1.36	3913.04
1.90	2	SLD	1	25.20	7.16	4456.91	1.36	3285.95
2.40	18	SLU	2	480.94	7.16	-8863.34	2.31	3844.59
2.40	10	SLD	2	480.94	7.16	-6891.21	2.31	2989.16
4.78	9	SLV	2	243.60	7.63	-1142.53	0.43	2664.57
4.78	10	SLD	2	243.60	7.63	-898.34	0.43	2095.08
7.03	17	SLU	2	17.79	7.63	8379.84	2.98	2810.12
7.03	2	SLD	2	17.79	7.63	6559.82	2.98	2199.79

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
1.90	21	SLE R	1	25.20	10.18	7.16	-5875.35	2879.03	-1174.13	118.81
1.90	29	SLE Q	1	25.20	10.18	7.16	-5526.22	2707.94	-1104.35	111.75
2.40	22	SLE R	2	480.94	12.25	7.16	-5186.42	2128.46	-1017.06	99.26
2.40	30	SLE Q	2	480.94	12.25	7.16	-4677.07	1919.43	-917.18	89.51
4.78	21	SLE R	2	243.60	4.62	7.63	3130.87	-709.09	2028.72	74.65
4.78	29	SLE Q	2	243.60	4.62	7.63	2803.41	-634.92	1816.54	66.84
7.03	21	SLE R	2	17.79	8.70	7.63	-4346.54	2474.10	-865.98	91.13
7.03	29	SLE Q	2	17.79	8.70	7.63	-3916.29	2229.20	-780.26	82.11

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
41	1.90	29	SLE Q	1	2	2	25.20	-5526.22	21.00	113.33	0.13	118.04	18.00	10.18	603.64	2707.94	1105.02	1.21	0.24
45	1.90	25	SLE F	1	2	2	25.20	-5594.74	21.00	113.33	0.13	118.04	18.00	10.18	603.64	2741.52	1105.02	1.22	0.25
90	2.40	30	SLE Q	2	2	2	480.94	-4677.07	21.00	68.00	0.13	97.58	18.00	12.25	571.54	1919.43	968.49	0.81	0.13
94	2.40	26	SLE F	2	2	2	480.94	-4778.89	21.00	68.00	0.13	97.58	18.00	12.25	571.54	1961.21	968.49	0.84	0.14
137	4.78	29	SLE Q	2	2	2	243.60	2803.41	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1816.54	1340.37	0.64	0.16
141	4.78	25	SLE F	2	2	2	243.60	2869.53	21.00	170.00	0.13	144.75	18.00	7.63	583.13	1859.38	1340.37	0.67	0.16
185	7.03	29	SLE Q	2	2	2	17.79	-3916.29	21.00	85.00	0.13	114.00	18.00	8.70	531.81	2229.20	1235.07	0.92	0.18
189	7.03	25	SLE F	2	2	2	17.79	-4001.28	21.00	85.00	0.13	114.00	18.00	8.70	531.81	2277.57	1235.07	0.94	0.18

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
17 SLU	0.00	1.67	1.67	ø10/16 2 br.	9.82	0.40	5227.27	2.50	19880.40	23500.40	19880.40	3.80
17 SLU	1.67	1.90	0.23	ø10/ 4 2 br.	39.27	0.40	5307.47	1.07	34000.10	34000.20	34000.10	6.41
18 SLU	2.40	2.63	0.23	ø10/ 4 2 br.	39.27	0.40	8863.34	1.07	34000.10	34000.20	34000.10	3.84
TG	2.63	6.80	4.17	ø10/16 2 br.	9.82	0.40	8218.41	2.50	19880.40	23500.40	19880.40	2.42
17 SLU	6.80	7.03	0.23	ø10/ 4 2 br.	39.27	0.40	8379.84	1.07	34000.10	34000.20	34000.10	4.06

Travata n. 226

Nodi: -176 210 211 -177

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
1.90	1	SLV	1	25.07	6.63	6.63	6.63	5.37	-4040.61	-5475.40	1.355
2.41	1	SLV	2	25.07	6.63	6.63	6.63	5.15	4117.34	4314.78	1.048
4.25	1	SLV	2	209.11	6.63	11.25	6.63	7.45	-4677.77	-5474.61	1.170
4.60	9	SLV	3	17.58	11.25	11.25	11.25	7.72	-4224.44	-9067.06	2.146
1.90	2	SLD	1	25.07	6.63	6.63	6.63	5.37	-3289.28	-6394.30	1.944
2.41	2	SLD	2	25.07	6.63	6.63	6.63	5.15	3181.05	5052.55	1.588
4.25	2	SLD	2	209.11	6.63	11.25	6.63	7.45	-3912.55	-6393.48	1.634
4.60	10	SLD	3	17.58	11.25	11.25	11.25	7.72	-3904.65	-10540.40	2.699

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
1.90	1	SLV	1	25.07	6.63	3410.05	1.26	2706.39
1.90	2	SLD	1	25.07	6.63	2750.06	1.26	2182.59
2.41	9	SLV	2	25.07	6.63	5486.46	1.48	3710.07
2.41	10	SLD	2	25.07	6.63	4608.19	1.48	3116.17
4.25	1	SLV	2	209.11	11.25	-6454.67	3.80	1699.63
4.25	2	SLD	2	209.11	11.25	-5576.41	3.80	1468.37
4.60	18	SLU	3	17.58	11.25	5784.13	3.53	1640.01
4.60	10	SLD	3	17.58	11.25	4491.33	3.53	1273.45

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
1.90	21	SLE R	1	25.07	6.63	6.63	-707.37	523.81	-149.34	16.69
1.90	29	SLE Q	1	25.07	6.63	6.63	-678.07	502.11	-143.16	16.00
2.41	22	SLE R	2	25.07	6.63	6.63	-341.20	252.66	-72.04	8.05
2.41	30	SLE Q	2	25.07	6.63	6.63	-302.12	223.72	-63.79	7.13
4.25	21	SLE R	2	209.11	6.63	11.25	-1342.83	992.18	-239.03	28.25
4.25	29	SLE Q	2	209.11	6.63	11.25	-1250.21	923.75	-222.55	26.30
4.60	22	SLE R	3	17.58	11.25	11.25	-3092.35	1369.29	-533.55	54.60
4.60	30	SLE Q	3	17.58	11.25	11.25	-2792.01	1236.30	-481.73	49.30

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
41	1.90	29	SLE Q	1	2	2	25.07	-678.07	21.00	170.00	0.13	148.91	18.00	6.63	537.00	502.11	1520.67	0.10	0.02
45	1.90	25	SLE F	1	2	2	25.07	-682.50	21.00	170.00	0.13	148.91	18.00	6.63	537.00	505.39	1520.67	0.10	0.02
90	2.41	30	SLE Q	2	2	2	25.07	-302.12	21.00	170.00	0.13	148.91	18.00	6.63	537.00	223.72	1520.67	0.04	0.01
94	2.41	26	SLE F	2	2	2	25.07	-314.23	21.00	170.00	0.13	148.91	18.00	6.63	537.00	232.69	1520.67	0.05	0.01
137	4.25	29	SLE Q	2	2	2	209.11	-1250.21	21.00	170.00	0.13	148.91	18.00	6.63	537.00	923.75	1571.46	0.18	0.05
141	4.25	25	SLE F	2	2	2	209.11	-1262.74	21.00	170.00	0.13	148.91	18.00	6.63	537.00	933.01	1571.46	0.18	0.05
186	4.60	30	SLE Q	3	2	2	17.58	-2792.01	21.00	68.00	0.13	99.61	18.00	11.25	549.98	1236.30	1062.13	0.38	0.06
190	4.60	26	SLE F	3	2	2	17.58	-2853.85	21.00	68.00	0.13	99.61	18.00	11.25	549.98	1263.69	1062.13	0.40	0.07

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
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Relazione di calcolo

1 SLV	-0.00	1.67	1.67	ø10/16 2 br.	9.82	0.40	3346.78	2.50	19880.40	23500.40	19880.40	5.94
1 SLV	1.67	1.90	0.23	ø10/ 4 2 br.	39.27	0.40	3410.05	1.07	34000.10	34000.20	34000.10	9.97
TG	2.41	2.64	0.23	ø10/ 4 2 br.	39.27	0.40	8215.87	1.07	34000.10	34000.20	34000.10	4.14
TG	2.64	4.02	1.38	ø10/16 2 br.	9.82	0.40	7736.83	2.50	19880.40	23500.40	19880.40	2.57
TG	4.02	4.25	0.23	ø10/ 4 2 br.	39.27	0.40	7234.88	1.07	34000.10	34000.20	34000.10	4.70
18 SLU	4.60	4.83	0.23	ø10/ 4 2 br.	39.27	0.40	5784.13	1.07	34000.10	34000.20	34000.10	5.88
18 SLU	4.83	8.72	3.90	ø10/16 2 br.	9.82	0.40	5144.76	2.50	19880.40	23500.40	19880.40	3.86

Travata n. 227

Nodi: -178 216

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
2.20	9	SLV	1	24.61	4.62	4.62	4.62	3.91	1985.87	3339.85	1.682
2.20	2	SLD	1	24.61	4.62	4.62	4.62	3.91	-1795.35	-4567.23	2.544

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
2.20	1	SLV	1	24.61	4.62	2284.82	0.71	3236.30
2.20	2	SLD	1	24.61	4.62	1873.56	0.71	2653.79

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
2.20	21	SLE R	1	24.61	4.62	4.62	-310.48	326.17	-72.53	8.82
2.20	29	SLE Q	1	24.61	4.62	4.62	-282.39	296.66	-65.97	8.02

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cm²>	A _c eff <cm²>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	s _{sm}	Wk <mm>
41	2.20	29	SLE Q	1	2	2	24.61	-282.39	23.00	170.00	0.13	150.70	14.00	4.62	458.21	296.66	1991.52	0.06	0.01
45	2.20	25	SLE F	1	2	2	24.61	-289.06	23.00	170.00	0.13	150.70	14.00	4.62	458.21	303.66	1991.52	0.06	0.02

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
1 SLV	0.00	1.97	1.97	ø10/16 2 br.	9.82	0.40	2221.26	2.50	19880.40	23500.40	19880.40	8.95
1 SLV	1.97	2.20	0.23	ø10/ 4 2 br.	39.27	0.40	2284.82	1.07	34000.10	34000.20	34000.10	14.88

Travata n. 228

Nodi: 216 217

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.21	1	SLV	1	166.50	4.62	4.62	4.62	3.40	2629.84	2934.59	1.116
1.78	1	SLV	1	8.82	4.62	6.16	4.62	4.74	-3785.08	-3896.82	1.030
0.21	10	SLD	1	166.50	4.62	4.62	4.62	3.40	-2680.89	-4566.58	1.703
1.78	2	SLD	1	8.82	4.62	6.16	4.62	4.74	-3049.50	-4568.09	1.498

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.21	9	SLV	1	166.50	4.62	-4541.91	1.22	3725.04
0.21	10	SLD	1	166.50	4.62	-3684.89	1.22	3022.16
1.78	1	SLV	1	8.82	6.16	4517.02	1.41	3194.12
1.78	2	SLD	1	8.82	6.16	3660.00	1.41	2588.09

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.21	22	SLE R	1	166.50	4.62	4.62	-618.23	649.48	-144.43	17.57
0.21	30	SLE Q	1	166.50	4.62	4.62	-549.69	577.47	-128.41	15.62
1.78	21	SLE R	1	8.82	4.62	6.16	-508.00	533.54	-110.83	13.83
1.78	29	SLE Q	1	8.82	4.62	6.16	-502.87	528.15	-109.71	13.69

Verifiche stato limite di formazione delle fessure

Caso	Xg <mm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
42	0.21	30	SLE Q	1	2	2	166.50	-549.69	23.00	170.00	0.13	150.70	14.00	4.62	458.21	577.47	1991.52	0.11	0.03
46	0.21	26	SLE F	1	2	2	166.50	-568.86	23.00	170.00	0.13	150.70	14.00	4.62	458.21	597.61	1991.52	0.12	0.03
89	1.78	29	SLE Q	1	2	2	8.82	-502.87	23.00	170.00	0.13	151.69	14.00	4.62	458.21	528.15	2023.38	0.10	0.03
93	1.78	25	SLE F	1	2	2	8.82	-497.77	23.00	170.00	0.13	151.69	14.00	4.62	458.21	522.80	2023.38	0.10	0.03

Staffe - Verifiche armatura

CC	X0 <mm>	X1 <mm>	Lung. <mm>	Staff.	AfE St. <cmq/m>	bw <mm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.21	0.44	0.23	ø10/ 4 2 br.	39.27	0.40	5575.31	1.07	34000.10	34000.20	34000.10	6.10
TG	0.44	1.55	1.12	ø10/16 2 br.	9.82	0.40	5408.62	2.50	19880.40	23500.40	19880.40	3.68
TG	1.55	1.78	0.23	ø10/ 4 2 br.	39.27	0.40	4897.85	1.07	34000.10	34000.20	34000.10	6.94

Travata n. 229

Nodi: 216 220

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <mm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.23	13	SLV	1	22.51	4.62	4.62	4.62	3.72	1895.21	3184.97	1.681
1.87	13	SLV	1	186.90	4.62	4.62	4.62	3.45	-2973.57	-3897.54	1.311
0.23	14	SLD	1	22.51	4.62	4.62	4.62	3.72	1448.56	3745.57	2.586
1.87	14	SLD	1	186.90	4.62	4.62	4.62	3.45	-2567.25	-4566.68	1.779

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <mm>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.23	5	SLV	1	22.51	4.62	3073.94	0.90	3407.17
0.23	6	SLD	1	22.51	4.62	2579.76	0.90	2859.42
1.87	13	SLV	1	186.90	4.62	-4291.43	1.17	3670.80
1.87	14	SLD	1	186.90	4.62	-3797.24	1.17	3248.09

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <mm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.23	21	SLE R	1	22.51	4.62	4.62	-216.08	227.00	-50.48	6.14
0.23	29	SLE Q	1	22.51	4.62	4.62	-195.63	205.52	-45.70	5.56
1.87	22	SLE R	1	186.90	4.62	4.62	-1244.03	1306.89	-290.62	35.35
1.87	30	SLE Q	1	186.90	4.62	4.62	-1143.59	1201.38	-267.15	32.50

Verifiche stato limite di formazione delle fessure

Caso	Xg <mm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
41	0.23	29	SLE Q	1	2	2	22.51	-195.63	23.00	170.00	0.13	150.70	14.00	4.62	458.21	205.52	1991.52	0.04	0.01
45	0.23	25	SLE F	1	2	2	22.51	-201.69	23.00	170.00	0.13	150.70	14.00	4.62	458.21	211.88	1991.52	0.04	0.01
90	1.87	30	SLE Q	1	2	2	186.90	-1143.59	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1201.38	1991.52	0.23	0.06
94	1.87	26	SLE F	1	2	2	186.90	-1159.08	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1217.65	1991.52	0.24	0.06

Staffe - Verifiche armatura

CC	X0 <mm>	X1 <mm>	Lung. <mm>	Staff.	AfE St. <cmq/m>	bw <mm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.23	0.46	0.23	ø10/ 4 2 br.	39.27	0.40	5577.35	1.07	34000.10	34000.20	34000.10	6.10
TG	0.46	1.64	1.18	ø10/16 2 br.	9.82	0.40	5314.09	2.50	19880.40	23500.40	19880.40	3.74
TG	1.64	1.87	0.23	ø10/ 4 2 br.	39.27	0.40	5706.60	1.07	34000.10	34000.20	34000.10	5.96

Travata n. 230

Nodi: 210 -179 217 -180 222 -187 -191

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
3	R	30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <mm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.27	20	SLU	1	332.04	4.62	4.62	4.62	3.58	-2898.13	-3897.44	1.345
2.67	20	SLU	1	91.87	4.62	4.62	4.62	4.45	1901.27	3764.79	1.980
4.26	19	SLU	2	24.64	7.16	4.62	7.16	2.00	-5319.35	-5879.10	1.105
4.76	20	SLU	3	113.71	6.16	7.63	6.16	4.98	-5471.22	-7201.23	1.316

Relazione di calcolo

6.98	19	SLU	4	235.89	4.62	7.63	4.62	7.28	3346.43	8462.04	2.529
9.14	19	SLU	4	20.00	4.62	4.62	4.62	2.77	-4751.67	-5456.40	1.148
9.54	5	SLV	5	56.20	4.62	4.62	4.62	3.29	-3623.73	-5456.20	1.506
0.27	6	SLD	1	332.04	4.62	4.62	4.62	3.58	-2648.91	-4566.80	1.724
2.67	14	SLD	1	91.87	4.62	4.62	4.62	4.45	1500.86	4415.42	2.942
4.26	14	SLD	2	24.64	7.16	4.62	7.16	2.00	-4392.94	-6878.55	1.566
4.76	14	SLD	3	113.71	6.16	7.63	6.16	4.98	-4887.86	-8359.15	1.710
6.98	14	SLD	4	235.89	4.62	7.63	4.62	7.28	2435.41	9815.31	4.030
9.14	14	SLD	4	20.00	4.62	4.62	4.62	2.77	-4088.51	-6347.28	1.552
9.54	6	SLD	5	56.20	4.62	4.62	4.62	3.29	-3292.95	-6346.75	1.927

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.27	20	SLU	1	332.04	4.62	-3683.62	1.04	3539.19
0.27	6	SLD	1	332.04	4.62	-2888.30	1.04	2775.06
2.67	13	SLV	1	91.87	4.62	476.52	0.17	2844.73
2.67	14	SLD	1	91.87	4.62	377.42	0.17	2253.10
4.26	19	SLU	2	24.64	4.62	10233.00	2.62	3913.04
4.26	14	SLD	2	24.64	4.62	7524.83	2.62	2877.45
4.76	20	SLU	3	113.71	7.63	-6830.84	2.66	2569.20
4.76	10	SLD	3	113.71	7.63	-5432.55	2.66	2043.28
6.98	5	SLV	4	235.89	7.63	-626.79	0.36	1756.52
6.98	6	SLD	4	235.89	7.63	-495.29	0.36	1388.02
9.14	19	SLU	4	20.00	4.62	7220.21	1.85	3913.04
9.14	14	SLD	4	20.00	4.62	5370.74	1.85	2910.71
9.54	20	SLU	5	56.20	4.62	-5166.99	1.33	3886.76
9.54	14	SLD	5	56.20	4.62	-4630.67	1.33	3483.32

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.27	24	SLE R	1	332.04	4.62	4.62	-2203.77	2315.14	-514.83	62.62
0.27	32	SLE Q	1	332.04	4.62	4.62	-1996.63	2097.53	-466.44	56.74
2.67	24	SLE R	1	91.87	4.62	4.62	1446.29	-337.87	1519.38	41.10
2.67	32	SLE Q	1	91.87	4.62	4.62	1319.86	-308.33	1386.56	37.50
4.26	23	SLE R	2	24.64	7.16	4.62	-4040.55	2782.92	-920.32	98.39
4.26	31	SLE Q	2	24.64	7.16	4.62	-3657.26	2518.93	-833.01	89.05
4.76	24	SLE R	3	113.71	6.16	7.63	-4169.15	2342.74	-671.36	65.54
4.76	32	SLE Q	3	113.71	6.16	7.63	-3800.82	2135.77	-612.05	59.75
6.98	23	SLE R	4	235.89	4.62	7.63	2535.67	-449.75	1166.63	41.13
6.98	31	SLE Q	4	235.89	4.62	7.63	2280.71	-404.52	1049.32	36.99
9.14	23	SLE R	4	20.00	4.62	4.62	-3607.96	2691.88	-688.74	69.23
9.14	31	SLE Q	4	20.00	4.62	4.62	-3242.66	2419.33	-619.00	62.22
9.54	24	SLE R	5	56.20	4.62	4.62	-2376.20	1772.87	-453.60	45.60
9.54	32	SLE Q	5	56.20	4.62	4.62	-2164.49	1614.92	-413.19	41.53

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.27	32	SLE Q	1	2	2	332.04	-1996.63	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2097.53	1991.52	0.56	0.14
48	0.27	28	SLE F	1	2	2	332.04	-2040.49	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2143.60	1991.52	0.59	0.15
92	2.67	32	SLE Q	1	2	2	91.87	1319.86	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1386.56	1991.52	0.27	0.07
96	2.67	28	SLE F	1	2	2	91.87	1344.01	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1411.93	1991.52	0.27	0.07
138	4.26	30	SLE Q	2	2	2	24.64	-3633.64	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2502.67	1165.10	1.08	0.24
143	4.26	27	SLE F	2	2	2	24.64	-3733.94	21.00	113.33	0.13	131.20	18.00	7.16	529.50	2571.75	1398.12	1.06	0.24
188	4.76	32	SLE Q	3	3	1	113.71	-3800.82	23.00	80.00	0.16	116.41	14.00	6.16	373.65	2135.77	1621.45	0.74	0.15
189	4.76	25	SLE F	3	3	1	113.71	-3785.55	23.00	80.00	0.16	116.41	14.00	6.16	373.65	2127.19	1351.21	0.82	0.16
235	6.98	31	SLE Q	4	3	1	235.89	2280.71	21.00	120.00	0.14	123.70	18.00	7.63	451.85	1049.32	1341.94	0.20	0.04
239	6.98	27	SLE F	4	3	1	235.89	2332.40	21.00	120.00	0.14	123.70	18.00	7.63	451.85	1073.10	1341.94	0.21	0.04
283	9.14	31	SLE Q	4	3	1	20.00	-3242.66	23.00	120.00	0.16	140.21	14.00	4.62	364.56	2419.33	1977.14	0.78	0.19
287	9.14	27	SLE F	4	3	1	20.00	-3318.48	23.00	120.00	0.16	140.21	14.00	4.62	364.56	2475.90	1977.14	0.82	0.20
332	9.54	32	SLE Q	5	3	1	56.20	-2164.49	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1614.92	1977.14	0.31	0.07
336	9.54	28	SLE F	5	3	1	56.20	-2206.75	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1646.45	1977.14	0.32	0.08

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.27	0.50	0.23	ø10/ 4 2 br.	39.27	0.40	3753.49	1.07	34000.10	34000.20	34000.10	9.06
19 SLU	0.50	4.03	3.53	ø10/16 2 br.	9.82	0.40	9773.40	2.50	19880.40	23500.40	19880.40	2.03
19 SLU	4.03	4.26	0.23	ø10/ 4 2 br.	39.27	0.40	10233.00	1.07	34000.10	34000.20	34000.10	3.32
20 SLU	4.77	5.09	0.32	ø8/ 8 2 br.	12.57	0.30	6822.91	2.01	28399.80	28399.80	28399.80	4.16
20 SLU	5.09	8.82	3.73	ø8/20 2 br.	5.03	0.30	6374.31	2.50	14161.80	24522.20	14161.80	2.22
19 SLU	8.82	9.14	0.32	ø8/ 8 2 br.	12.57	0.30	7220.21	2.01	28399.80	28399.80	28399.80	3.93
20 SLU	9.54	9.86	0.32	ø8/ 8 2 br.	12.57	0.30	5166.99	2.01	28399.80	28399.80	28399.80	5.50
13 SLV	9.86	11.75	1.89	ø8/20 2 br.	5.03	0.30	4212.40	2.50	14161.80	24522.20	14161.80	3.36

Travata n. 231

Nodi: 247 248 -176 209 -178 215 221 225 254 234 240

Caratteristiche delle sezioni e dei materiali utilizzati

Relazione di calcolo

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
7.80	9	SLV	3	25.03	7.16	6.63	7.16	4.20	-8044.08	-8330.42	1.036
8.31	5	SLV	4	368.08	4.62	6.63	4.62	4.87	-4802.95	-5455.52	1.136
11.03	5	SLV	4	95.98	4.62	4.62	4.62	3.81	1856.79	4539.64	2.445
12.16	9	SLV	5	25.14	4.62	4.62	4.62	3.00	-4792.65	-5456.29	1.138
12.67	5	SLV	6	418.90	4.62	4.62	4.62	3.52	-4323.06	-5456.04	1.262
13.72	13	SLV	6	313.25	4.62	4.62	4.62	3.85	1676.77	4583.83	2.734
16.60	9	SLV	6	25.06	4.62	4.62	4.62	3.56	-4294.63	-5456.02	1.270
17.11	5	SLV	7	419.02	4.62	4.62	4.62	3.21	-4986.25	-5456.20	1.094
19.03	20	SLU	7	226.75	4.62	4.62	4.62	4.17	2141.55	4945.82	2.309
21.04	13	SLV	7	25.04	4.62	4.62	4.62	3.48	-4723.75	-5456.08	1.155
21.55	5	SLV	8	361.83	4.62	4.62	4.62	3.39	-5254.06	-5456.15	1.038
24.56	5	SLV	8	60.30	5.09	5.09	5.09	4.08	2179.24	4843.52	2.223
25.48	13	SLV	9	25.11	5.09	5.09	5.09	3.61	-4865.94	-5991.42	1.231
25.99	5	SLV	10	418.75	5.09	5.09	5.09	3.74	-5136.45	-5991.38	1.166
29.07	5	SLV	10	110.18	4.62	4.62	4.62	3.67	2214.43	4374.80	1.976
29.92	13	SLV	10	25.11	4.62	4.62	4.62	3.40	-5121.75	-5456.11	1.065
7.80	10	SLD	3	25.03	7.16	6.63	7.16	4.20	-7245.23	-9665.60	1.334
8.31	6	SLD	4	368.08	4.62	6.63	4.62	4.87	-4238.42	-6345.58	1.497
11.03	6	SLD	4	95.98	4.62	4.62	4.62	3.81	1599.73	5288.11	3.306
12.16	10	SLD	5	25.14	4.62	4.62	4.62	3.00	-4173.25	-6347.06	1.521
12.67	6	SLD	6	418.90	4.62	4.62	4.62	3.52	-3771.58	-6346.56	1.683
13.72	14	SLD	6	313.25	4.62	4.62	4.62	3.85	1391.04	5338.98	3.838
16.60	10	SLD	6	25.06	4.62	4.62	4.62	3.56	-3758.50	-6346.53	1.689
17.11	6	SLD	7	419.02	4.62	4.62	4.62	3.21	-4423.21	-6346.87	1.435
19.03	2	SLD	7	226.75	4.62	4.62	4.62	4.17	1562.99	5756.93	3.683
21.04	14	SLD	7	25.04	4.62	4.62	4.62	3.48	-4114.89	-6346.57	1.542
21.55	6	SLD	8	361.83	4.62	4.62	4.62	3.39	-4576.68	-6346.68	1.387
24.56	6	SLD	8	60.30	5.09	5.09	5.09	4.08	1770.13	5638.86	3.186
25.48	14	SLD	9	25.11	5.09	5.09	5.09	3.61	-4185.71	-6963.52	1.664
25.99	6	SLD	10	418.75	5.09	5.09	5.09	3.74	-4427.08	-6963.44	1.573
29.07	6	SLD	10	110.18	4.62	4.62	4.62	3.67	1757.33	5098.06	2.901
29.92	14	SLD	10	25.11	4.62	4.62	4.62	3.40	-4396.09	-6346.66	1.444

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cmq>
7.80	9	SLV	3	25.03	6.63	7978.13	2.43	3280.64
7.80	10	SLD	3	25.03	6.63	7129.71	2.43	2931.77
8.31	17	SLU	4	368.08	6.63	-4604.90	1.76	2623.04
8.31	6	SLD	4	368.08	6.63	-4281.55	1.76	2438.85
11.03	13	SLV	4	95.98	4.62	2700.99	0.81	3352.78
11.03	14	SLD	4	95.98	4.62	2407.74	0.81	2988.76
12.16	9	SLV	5	25.14	4.62	6328.04	1.62	3913.04
12.16	10	SLD	5	25.14	4.62	5678.24	1.62	3511.23
12.67	5	SLV	6	418.90	4.62	-3993.38	1.10	3632.63
12.67	6	SLD	6	418.90	4.62	-3717.24	1.10	3381.43
13.72	5	SLV	6	313.25	4.62	-2545.13	0.77	3319.03
13.72	6	SLD	6	313.25	4.62	-2268.99	0.77	2958.91
16.60	13	SLV	6	25.06	4.62	3777.59	1.05	3585.90
16.60	14	SLD	6	25.06	4.62	3501.44	1.05	3323.77
17.11	17	SLU	7	419.02	4.62	-5519.26	1.41	3913.04
17.11	6	SLD	7	419.02	4.62	-4901.89	1.41	3475.34
19.03	13	SLV	7	226.75	4.62	1375.14	0.45	3065.68
19.03	14	SLD	7	226.75	4.62	1077.85	0.45	2402.92
21.04	13	SLV	7	25.04	4.62	4201.11	1.14	3677.61
21.04	14	SLD	7	25.04	4.62	3903.82	1.14	3417.36
21.55	5	SLV	8	361.83	4.62	-4621.52	1.23	3768.64
21.55	6	SLD	8	361.83	4.62	-4273.52	1.23	3484.87
24.56	13	SLV	8	60.30	5.09	3163.68	1.01	3133.25
24.56	14	SLD	8	60.30	5.09	2815.68	1.01	2788.60
25.48	9	SLV	9	25.11	5.09	5260.33	1.48	3545.21
25.48	10	SLD	9	25.11	5.09	4899.78	1.48	3302.22
25.99	5	SLV	10	418.75	5.09	-4633.84	1.35	3422.12
25.99	6	SLD	10	418.75	5.09	-4269.29	1.35	3152.89
29.07	13	SLV	10	110.18	4.62	3311.79	0.95	3485.04
29.07	14	SLD	10	110.18	4.62	2947.23	0.95	3101.41
29.92	13	SLV	10	25.11	4.62	4589.42	1.22	3761.69
29.92	14	SLD	10	25.11	4.62	4224.86	1.22	3462.88

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	X	AfE S	AfE I	My	σ_f sup	σ_f inf	σ_c
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Relazione di calcolo

<m>				<cm>	<cmq>	<cmq>	<daNm>	<daN/cmq>	<daN/cmq>	<daN/cmq>
7.80	22	SLE R	3	25.03	7.16	6.63	-4737.17	2304.70	-779.25	73.22
7.80	30	SLE Q	3	25.03	7.16	6.63	-4464.26	2171.92	-734.36	69.00
8.31	21	SLE R	4	368.08	4.62	6.63	-2434.07	1810.47	-423.12	43.61
8.31	29	SLE Q	4	368.08	4.62	6.63	-2258.33	1679.75	-392.56	40.46
11.03	21	SLE R	4	95.98	4.62	4.62	755.80	-144.28	563.90	14.50
11.03	29	SLE Q	4	95.98	4.62	4.62	699.55	-133.54	521.93	13.42
12.16	22	SLE R	5	25.14	4.62	4.62	-2162.81	1613.66	-412.87	41.50
12.16	30	SLE Q	5	25.14	4.62	4.62	-2008.86	1498.80	-383.48	38.55
12.67	21	SLE R	6	418.90	4.62	4.62	-1971.47	1470.90	-376.34	37.83
12.67	29	SLE Q	6	418.90	4.62	4.62	-1841.60	1374.01	-351.55	35.34
13.72	22	SLE R	6	313.25	4.62	4.62	415.84	-79.38	310.25	7.98
13.72	30	SLE Q	6	313.25	4.62	4.62	391.26	-74.69	291.92	7.51
16.60	22	SLE R	6	25.06	4.62	4.62	-2009.49	1499.27	-383.60	38.56
16.60	30	SLE Q	6	25.06	4.62	4.62	-1880.79	1403.24	-359.03	36.09
17.11	21	SLE R	7	419.02	4.62	4.62	-2664.74	1988.15	-508.68	51.13
17.11	29	SLE Q	7	419.02	4.62	4.62	-2456.80	1833.00	-468.99	47.14
19.03	24	SLE R	7	226.75	4.62	4.62	1628.21	-310.82	1214.80	31.24
19.03	32	SLE Q	7	226.75	4.62	4.62	1497.48	-285.86	1117.26	28.73
21.04	22	SLE R	7	25.04	4.62	4.62	-2150.27	1604.31	-410.47	41.26
21.04	30	SLE Q	7	25.04	4.62	4.62	-1999.00	1491.44	-381.60	38.36
21.55	21	SLE R	8	361.83	4.62	4.62	-2360.74	1761.33	-450.65	45.30
21.55	29	SLE Q	8	361.83	4.62	4.62	-2240.44	1671.58	-427.69	42.99
24.56	21	SLE R	8	60.30	5.09	5.09	381.92	-70.40	259.19	6.97
24.56	29	SLE Q	8	60.30	5.09	5.09	358.42	-66.07	243.24	6.54
25.48	22	SLE R	9	25.11	5.09	5.09	-1906.48	1293.83	-351.44	34.78
25.48	30	SLE Q	9	25.11	5.09	5.09	-1844.78	1251.96	-340.06	33.65
25.99	21	SLE R	10	418.75	5.09	5.09	-2050.46	1391.54	-377.98	37.40
25.99	29	SLE Q	10	418.75	5.09	5.09	-1980.14	1343.82	-365.01	36.12
29.07	21	SLE R	10	110.18	4.62	4.62	169.97	-32.45	126.81	3.26
29.07	29	SLE Q	10	110.18	4.62	4.62	181.44	-34.63	135.37	3.48
29.92	22	SLE R	10	25.11	4.62	4.62	-1999.06	1491.49	-381.61	38.36
29.92	30	SLE Q	10	25.11	4.62	4.62	-1893.93	1413.05	-361.54	36.34

Verifiche stato limite di formazione delle fessure

Caso	Xg	CC	TCC	EI	Sez.	Crit.	X	My	c	s	K3	S _{zm}	Φ	A _s	A _{c,eff}	σ _s	σ _{sr}	ε _{sm}	Wk
<m>	<m>						<cm>	<daNm>	<mm>	<mm>		<mm>		<cmq>	<cmq>	<daN/cmq>	<daN/cmq>		<mm>
42	7.80	30	SLE Q	3	3	1	25.03	-4464.26	21.00	80.00	0.14	114.70	18.00	7.16	407.88	2171.92	1425.58	0.83	0.16
46	7.80	26	SLE F	3	3	1	25.03	-4520.29	21.00	80.00	0.14	114.70	18.00	7.16	407.88	2199.19	1425.58	0.84	0.16
89	8.31	29	SLE Q	4	3	1	368.08	-2258.33	23.00	120.00	0.16	141.02	14.00	4.62	364.56	1679.75	2019.08	0.33	0.08
93	8.31	25	SLE F	4	3	1	368.08	-2292.71	23.00	120.00	0.16	141.02	14.00	4.62	364.56	1705.32	2019.08	0.33	0.08
137	11.03	29	SLE Q	4	3	1	95.98	699.55	23.00	120.00	0.16	140.21	14.00	4.62	364.56	521.93	1977.14	0.10	0.02
141	11.03	25	SLE F	4	3	1	95.98	710.37	23.00	120.00	0.16	140.21	14.00	4.62	364.56	530.00	1977.14	0.10	0.02
186	12.16	30	SLE Q	5	3	1	25.14	-2008.86	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1498.80	1977.14	0.29	0.07
190	12.16	26	SLE F	5	3	1	25.14	-2040.10	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1522.11	1977.14	0.30	0.07
233	12.67	29	SLE Q	6	3	1	418.90	-1841.60	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1374.01	1977.14	0.27	0.06
237	12.67	25	SLE F	6	3	1	418.90	-1867.90	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1393.63	1977.14	0.27	0.06
282	13.72	30	SLE Q	6	3	1	313.25	391.26	23.00	120.00	0.16	140.21	14.00	4.62	364.56	291.92	1977.14	0.06	0.01
286	13.72	26	SLE F	6	3	1	313.25	396.24	23.00	120.00	0.16	140.21	14.00	4.62	364.56	295.63	1977.14	0.06	0.01
330	16.60	30	SLE Q	6	3	1	25.06	-1880.79	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1403.24	1977.14	0.27	0.06
334	16.60	26	SLE F	6	3	1	25.06	-1905.44	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1421.64	1977.14	0.28	0.07
377	17.11	29	SLE Q	7	3	1	419.02	-2456.80	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1833.00	1977.14	0.37	0.09
381	17.11	25	SLE F	7	3	1	419.02	-2499.45	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1864.82	1977.14	0.40	0.09
428	19.03	32	SLE Q	7	3	1	226.75	1497.48	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1117.26	1977.14	0.22	0.05
432	19.03	28	SLE F	7	3	1	226.75	1523.06	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1136.35	1977.14	0.22	0.05
474	21.04	30	SLE Q	7	3	1	25.04	-1999.00	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1491.44	1977.14	0.29	0.07
478	21.04	26	SLE F	7	3	1	25.04	-2029.20	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1513.97	1977.14	0.29	0.07
521	21.55	29	SLE Q	8	3	1	361.83	-2240.44	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1671.58	1977.14	0.32	0.08
525	21.55	25	SLE F	8	3	1	361.83	-2271.55	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1694.79	1977.14	0.33	0.08
569	24.56	29	SLE Q	8	3	1	60.30	358.42	21.00	240.00	0.14	169.93	18.00	5.09	406.81	243.24	1837.62	0.05	0.01
573	24.56	25	SLE F	8	3	1	60.30	364.32	21.00	240.00	0.14	169.93	18.00	5.09	406.81	247.25	1837.62	0.05	0.01
618	25.48	30	SLE Q	9	3	1	25.11	-1844.78	21.00	240.00	0.14	169.93	18.00	5.09	406.81	1251.96	1837.62	0.24	0.07
622	25.48	26	SLE F	9	3	1	25.11	-1864.15	21.00	240.00	0.14	169.93	18.00	5.09	406.81	1265.10	1837.62	0.25	0.07
665	25.99	29	SLE Q	10	3	1	418.75	-1980.14	21.00	240.00	0.14	169.93	18.00	5.09	406.81	1343.82	1837.62	0.26	0.08
669	25.99	25	SLE F	10	3	1	418.75	-2000.75	21.00	240.00	0.14	169.93	18.00	5.09	406.81	1357.80	1837.62	0.26	0.08
713	29.07	29	SLE Q	10	3	1	110.18	181.44	23.00	120.00	0.16	140.21	14.00	4.62	364.56	135.37	1977.14	0.03	0.01
717	29.07	25	SLE F	10	3	1	110.18	178.81	23.00	120.00	0.16	140.21	14.00	4.62	364.56	133.41	1977.14	0.03	0.01
762	29.92	30	SLE Q	10	3	1	25.11	-1893.93	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1413.05	1977.14	0.27	0.07
766	29.92	26	SLE F	10	3	1	25.11	-1923.07	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1434.79	1977.14	0.28	0.07

Staffe - Verifiche armatura

CC	X0	X1	Lung.	Staff.	AfE St.	bw	Vsdu	ctgθ	VRsd	VRcd	Vrdu	Sic.T
	<m>	<m>	<m>		<cmq/m>	<m>	<daN>		<daN>	<daN>	<daN>	
9 SLV	0.00	7.48	7.48	ø8/20 2 br.	5.03	0.30	7541.38	2.50	14161.80	24522.20	14161.80	1.88
9 SLV	7.48	7.80	0.32	ø8/ 8 2 br.	12.57	0.30	7978.13	2.01	28399.80	28399.80	28399.80	3.56
TG	8.31	8.63	0.32	ø8/ 8 2 br.	12.57	0.30	5448.29	2.01	28399.80	28399.80	28399.80	5.21
TG	8.63	11.84	3.22	ø8/20 2 br.	5.03	0.30	5489.07	2.50	14161.80	24522.20	14161.80	2.58
9 SLV	11.84	12.16	0.32	ø8/ 8 2 br.	12.57	0.30	6328.04	2.01	28399.80	28399.80	28399.80	4.49
TG	12.67	12.99	0.32	ø8/ 8 2 br.	12.57	0.30	5074.77	2.01	28399.80	28399.80	28399.80	5.60
TG	12.99	16.28	3.30	ø8/20 2 br.	5.03	0.30	4650.21	2.50	14161.80	24522.20	14161.80	3.05
TG	16.28	16.60	0.32	ø8/ 8 2 br.	12.57	0.30	5061.44	2.01	28399.80	28399.80	28399.80	5.61
TG	17.11	17.43	0.32	ø8/ 8 2 br.	12.57	0.30	5773.44	2.01	28399.80	28399.80	28399.80	4.92
TG	17.43	20.72	3.30	ø8/20 2 br.	5.03	0.30	5231.20	2.50	14161.80	24522.20	14161.80	2.71
TG	20.72	21.04	0.32	ø8/ 8 2 br.	12.57	0.30	5695.41	2.01	28399.80	28399.80	28399.80	4.99
TG	21.55	21.87	0.32	ø8/ 8 2 br.	12.57	0.30	5507.62	2.01	28399.80	28399.80	28399.80	5.16
TG	21.87	25.16	3.30	ø8/20 2 br.	5.03	0.30	5088.48	2.50	14161.80	24522.20	14161.80	2.78
TG	25.16	25.48	0.32	ø8/ 8 2 br.	12.57</							

Relazione di calcolo

TG	25.99	26.31	0.32	ø8/ 8 2 br.	12.57	0.30	5506.61	2.01	28399.80	28399.80	28399.80	5.16
TG	26.31	29.60	3.30	ø8/20 2 br.	5.03	0.30	5026.04	2.50	14161.80	24522.20	14161.80	2.82
TG	29.60	29.92	0.32	ø8/ 8 2 br.	12.57	0.30	5468.62	2.01	28399.80	28399.80	28399.80	5.19

Travata n. 232

Nodi: 218 223 -192 231 237

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	13	SLV	1	20.00	4.62	4.62	4.62	3.63	-2228.07	-3897.44	1.749
1.94	19	SLU	1	193.53	4.62	4.62	4.62	4.43	1406.49	3747.65	2.665
4.04	5	SLV	1	404.47	4.62	4.62	4.62	3.48	-3093.37	-3897.51	1.260
4.39	20	SLU	2	146.23	6.16	4.62	6.16	2.57	-4701.64	-5106.16	1.086
6.28	17	SLU	3	205.61	4.62	4.62	4.62	4.44	3079.85	3755.53	1.219
8.16	19	SLU	3	17.50	6.16	4.62	6.16	2.58	-4715.24	-5106.20	1.083
8.51	13	SLV	4	258.68	4.62	4.62	4.62	3.36	-2980.47	-3897.57	1.308
10.40	13	SLV	4	69.91	4.62	4.62	4.62	3.98	1125.17	3397.14	3.019
10.95	5	SLV	4	15.00	4.62	4.62	4.62	3.65	-1750.27	-3897.42	2.227
0.20	14	SLD	1	20.00	4.62	4.62	4.62	3.63	-1994.62	-4566.91	2.290
1.94	6	SLD	1	193.53	4.62	4.62	4.62	4.43	1090.23	4395.62	4.032
4.04	6	SLD	1	404.47	4.62	4.62	4.62	3.48	-2878.40	-4566.72	1.587
4.39	14	SLD	2	146.23	6.16	4.62	6.16	2.57	-3909.72	-5969.94	1.527
6.28	2	SLD	3	205.61	4.62	4.62	4.62	4.44	2232.77	4404.73	1.973
8.16	2	SLD	3	17.50	6.16	4.62	6.16	2.58	-3934.89	-5969.90	1.517
8.51	14	SLD	4	258.68	4.62	4.62	4.62	3.36	-2709.85	-4566.54	1.685
10.40	14	SLD	4	69.91	4.62	4.62	4.62	3.98	966.04	3990.76	4.131
10.95	6	SLD	4	15.00	4.62	4.62	4.62	3.65	-1484.83	-4566.90	3.076

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.20	20	SLU	1	20.00	4.62	3438.74	0.99	3486.17
0.20	14	SLD	1	20.00	4.62	2759.73	0.99	2797.79
1.94	13	SLV	1	193.53	4.62	540.92	0.19	2858.68
1.94	14	SLD	1	193.53	4.62	424.29	0.19	2242.33
4.04	19	SLU	1	404.47	4.62	-4121.59	1.13	3634.03
4.04	6	SLD	1	404.47	4.62	-3253.67	1.13	2868.78
4.39	20	SLU	2	146.23	4.62	-7999.96	2.04	3913.04
4.39	14	SLD	2	146.23	4.62	-5898.13	2.04	2884.97
6.28	1	SLV	3	205.61	4.62	566.89	0.18	3163.28
6.28	2	SLD	3	205.61	4.62	445.83	0.18	2487.81
8.16	19	SLU	3	17.50	4.62	7974.44	2.04	3913.04
8.16	2	SLD	3	17.50	4.62	5853.07	2.04	2872.09
8.51	20	SLU	4	258.68	4.62	-4721.58	1.25	3763.95
8.51	14	SLD	4	258.68	4.62	-4011.37	1.25	3197.78
10.40	5	SLV	4	69.91	4.62	2012.72	0.63	3177.38
10.40	6	SLD	4	69.91	4.62	1792.74	0.63	2830.12
10.95	19	SLU	4	15.00	4.62	3350.36	0.97	3467.03
10.95	6	SLD	4	15.00	4.62	3018.57	0.97	3123.68

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.20	24	SLE R	1	20.00	4.62	4.62	-1335.70	1403.20	-312.03	37.95
0.20	32	SLE Q	1	20.00	4.62	4.62	-1197.43	1257.94	-279.73	34.03
1.94	23	SLE R	1	193.53	4.62	4.62	1069.03	-249.74	1123.05	30.38
1.94	31	SLE Q	1	193.53	4.62	4.62	973.45	-227.41	1022.64	27.66
4.04	23	SLE R	1	404.47	4.62	4.62	-2339.62	2457.85	-546.56	66.48
4.04	31	SLE Q	1	404.47	4.62	4.62	-2143.75	2252.08	-500.80	60.92
4.39	24	SLE R	2	146.23	6.16	4.62	-3571.37	2843.93	-823.04	91.54
4.39	32	SLE Q	2	146.23	6.16	4.62	-3228.49	2570.89	-744.02	82.75
6.28	21	SLE R	3	205.61	4.62	4.62	2337.76	-546.13	2455.89	66.43
6.28	29	SLE Q	3	205.61	4.62	4.62	2118.92	-495.00	2225.99	60.21
8.16	23	SLE R	3	17.50	6.16	4.62	-3579.81	2850.65	-824.99	91.76
8.16	31	SLE Q	3	17.50	6.16	4.62	-3218.85	2563.21	-741.80	82.50
8.51	24	SLE R	4	258.68	4.62	4.62	-1939.37	2037.37	-453.06	55.11
8.51	32	SLE Q	4	258.68	4.62	4.62	-1784.89	1875.08	-416.97	50.72
10.40	24	SLE R	4	69.91	4.62	4.62	454.16	-106.10	477.11	12.91
10.40	32	SLE Q	4	69.91	4.62	4.62	421.87	-98.55	443.19	11.99
10.95	23	SLE R	4	15.00	4.62	4.62	-661.37	694.79	-154.50	18.79
10.95	31	SLE Q	4	15.00	4.62	4.62	-577.27	606.45	-134.86	16.40

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _{s,eff} <cmq>	σ _s <daN/cmq>	σ _{s,z} <daN/cmq>	s _{sm}	Wk <mm>
44	0.20	32	SLE Q	1	2	2	20.00	-1197.43	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1257.94	1991.52	0.24	0.06
48	0.20	28	SLE F	1	2	2	20.00	-1229.24	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1291.36	1991.52	0.25	0.06
91	1.94	31	SLE Q	1	2	2	193.53	973.45	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1022.64	1991.52	0.20	0.05
95	1.94	27	SLE F	1	2	2	193.53	992.03	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1042.16	1991.52	0.20	0.05
139	4.04	31	SLE Q	1	2	2	404.47	-2143.75	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2252.07	1991.52	0.67	0.17
143	4.04	27	SLE F	1	2	2	404.47	-2178.95	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2289.06	1991.52	0.69	0.18
188	4.39	32	SLE Q	2	2	2	146.23	-3228.49	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2570.89	1580.14	1.01	0.21
192	4.39	28	SLE F	2	2	2	146.23	-3298.06	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2626.29	1580.14	1.04	0.22
233	6.28	29	SLE Q	3	2	2	205.61	2118.92	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2225.99	1991.52	0.65	0.17
237	6.28	25	SLE F	3	2	2	205.61	2161.55	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2270.78	1991.52	0.68	0.17
283	8.16	31	SLE Q	3	2	2	17.50	-3218.85	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2563.21	1580.14	1.01	0.21
287	8.16	27	SLE F	3	2	2	17.50	-3291.67	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2621.20	1580.14	1.04	0.22
332	8.51	32	SLE Q	4	2	2	258.68	-1784.89	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1875.08	1991.52	0.40	0.10
336	8.51	28	SLE F	4	2	2	258.68	-1811.26	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1902.79	1991.52	0.42	0.11
380	10.40	32	SLE Q	4	2	2	69.91	421.87	23.00	170.00	0.13	150.70	14.00	4.62	458.21	443.19	1991.52	0.09	0.02
384	10.40	28	SLE F	4	2	2	69.91	426.53	23.00	170.00	0.13	150.70	14.00	4.62	458.21	448.08	1991.52	0.09	0.02
427	10.95	31	SLE Q	4	2	2	15.00	-577.27	23.00	170.00	0.13	150.70	14.00	4.62	458.21	606.45	1991.52	0.12	0.03
431	10.95	27	SLE F	4	2	2	15.00	-597.52	23.00	170.00	0.13	150.70	14.00	4.62	458.21	627.72	1991.52	0.12	0.03

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.43	0.23	ø10/ 4 2 br.	39.27	0.40	4379.35	1.07	34000.10	34000.20	34000.10	7.76
TG	0.43	3.81	3.38	ø10/16 2 br.	9.82	0.40	4100.40	2.50	19880.40	23500.40	19880.40	4.85
TG	3.81	4.04	0.23	ø10/ 4 2 br.	39.27	0.40	4409.95	1.07	34000.10	34000.20	34000.10	7.71
20 SLU	4.42	4.65	0.23	ø10/ 4 2 br.	39.27	0.40	7888.05	1.07	34000.10	34000.20	34000.10	4.31
19 SLU	4.65	7.93	3.30	ø10/16 2 br.	9.82	0.40	7000.95	2.50	19880.40	23500.40	19880.40	2.84
19 SLU	7.93	8.16	0.23	ø10/ 4 2 br.	39.27	0.40	7974.44	1.07	34000.10	34000.20	34000.10	4.26
TG	8.51	8.74	0.23	ø10/ 4 2 br.	39.27	0.40	5605.39	1.07	34000.10	34000.20	34000.10	6.07
TG	8.74	10.72	1.98	ø10/16 2 br.	9.82	0.40	5091.38	2.50	19880.40	23500.40	19880.40	3.90
TG	10.72	10.95	0.23	ø10/ 4 2 br.	39.27	0.40	5511.25	1.07	34000.10	34000.20	34000.10	6.17

Travata n. 233

Nodi: 225 226 227 228 -191 -192

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.25	9	SLV	1	24.87	4.62	4.62	4.62	3.78	-2307.35	-3897.32	1.689
2.47	1	SLV	1	247.14	4.62	4.62	4.62	3.80	-2243.73	-3897.33	1.737
2.87	9	SLV	2	20.00	4.62	4.62	4.62	3.39	-3132.66	-3897.57	1.244
4.81	9	SLV	2	214.20	4.62	4.62	4.62	3.59	1604.73	3082.42	1.921
5.13	1	SLV	2	246.18	4.62	4.62	4.62	3.42	-2889.79	-3897.54	1.349
5.63	1	SLV	3	25.10	4.62	4.62	4.62	3.55	2064.06	3051.55	1.478
7.73	1	SLV	3	234.42	4.62	4.62	4.62	3.43	-3236.61	-3897.53	1.204
8.18	9	SLV	4	22.50	4.62	4.62	4.62	3.43	-2202.54	-3897.52	1.770
0.25	10	SLD	1	24.87	4.62	4.62	4.62	3.78	-1886.47	-4567.08	2.421
2.47	2	SLD	1	247.14	4.62	4.62	4.62	3.80	-1822.30	-4567.11	2.506
2.87	10	SLD	2	20.00	4.62	4.62	4.62	3.39	-2678.27	-4566.54	1.705
4.81	10	SLD	2	214.20	4.62	4.62	4.62	3.59	1231.01	3627.00	2.946
5.13	2	SLD	2	246.18	4.62	4.62	4.62	3.42	-2419.31	-4566.61	1.888
5.63	10	SLD	3	25.10	4.62	4.62	4.62	3.55	-2131.35	-4566.79	2.143
7.73	2	SLD	3	234.42	4.62	4.62	4.62	3.43	-2730.49	-4566.65	1.672
8.18	10	SLD	4	22.50	4.62	4.62	4.62	3.43	-1962.99	-4566.62	2.326

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.25	9	SLV	1	24.87	4.62	2787.84	0.83	3345.22
0.25	10	SLD	1	24.87	4.62	2408.90	0.83	2890.51
2.47	1	SLV	1	247.14	4.62	-2737.81	0.82	3334.39
2.47	2	SLD	1	247.14	4.62	-2358.87	0.82	2872.87
2.87	9	SLV	2	20.00	4.62	4611.77	1.23	3740.17
2.87	10	SLD	2	20.00	4.62	4202.85	1.23	3408.53
4.81	1	SLV	2	214.20	4.62	-3643.90	1.03	3530.59
4.81	2	SLD	2	214.20	4.62	-3234.98	1.03	3134.39
5.13	1	SLV	2	246.18	4.62	-4445.63	1.20	3704.20
5.13	2	SLD	2	246.18	4.62	-4036.71	1.20	3363.48
5.63	9	SLV	3	25.10	4.62	3823.51	1.07	3569.48
5.63	10	SLD	3	25.10	4.62	3342.31	1.07	3120.25
7.73	1	SLV	3	234.42	4.62	-4371.73	1.19	3688.19
7.73	2	SLD	3	234.42	4.62	-3890.53	1.19	3282.23
8.18	13	SLV	4	22.50	4.62	4378.48	1.19	3689.66
8.18	14	SLD	4	22.50	4.62	3990.58	1.19	3362.78

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.25	22	SLE R	1	24.87	4.62	4.62	-529.97	556.75	-123.81	15.06
0.25	30	SLE Q	1	24.87	4.62	4.62	-493.68	518.63	-115.33	14.03
2.47	21	SLE R	1	247.14	4.62	4.62	-415.47	436.46	-97.06	11.81
2.47	29	SLE Q	1	247.14	4.62	4.62	-426.71	448.27	-99.68	12.13
2.87	22	SLE R	2	20.00	4.62	4.62	-1267.89	1331.96	-296.19	36.03
2.87	30	SLE Q	2	20.00	4.62	4.62	-1170.97	1230.14	-273.55	33.27
4.81	21	SLE R	2	214.20	4.62	4.62	-117.62	123.56	-27.48	3.34
4.81	29	SLE Q	2	214.20	4.62	4.62	-129.75	136.30	-30.31	3.69
5.13	21	SLE R	2	246.18	4.62	4.62	-887.65	932.51	-207.37	25.22
5.13	29	SLE Q	2	246.18	4.62	4.62	-858.09	901.45	-200.46	24.38
5.63	22	SLE R	3	25.10	4.62	4.62	-471.36	495.18	-110.11	13.39
5.63	30	SLE Q	3	25.10	4.62	4.62	-468.42	492.09	-109.43	13.31
7.73	21	SLE R	3	234.42	4.62	4.62	-1118.69	1175.22	-261.34	31.79
7.73	29	SLE Q	3	234.42	4.62	4.62	-1051.20	1104.32	-245.57	29.87
8.18	22	SLE R	4	22.50	4.62	4.62	-1255.50	1318.94	-293.30	35.68
8.18	30	SLE Q	4	22.50	4.62	4.62	-1167.57	1226.57	-272.76	33.18

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	S _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
42	0.25	30	SLE Q	1	2	2	24.87	-493.68	23.00	170.00	0.13	150.70	14.00	4.62	458.21	518.63	1991.52	0.10	0.03
46	0.25	26	SLE F	1	2	2	24.87	-503.73	23.00	170.00	0.13	150.70	14.00	4.62	458.21	529.18	1991.52	0.10	0.03
89	2.47	29	SLE Q	1	2	2	247.14	-426.71	23.00	170.00	0.13	150.70	14.00	4.62	458.21	448.27	1991.52	0.09	0.02
93	2.47	25	SLE F	1	2	2	247.14	-422.70	23.00	170.00	0.13	150.70	14.00	4.62	458.21	444.06	1991.52	0.09	0.02
138	2.87	30	SLE Q	2	2	2	20.00	-1170.97	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1230.14	1991.52	0.24	0.06
142	2.87	26	SLE F	2	2	2	20.00	-1195.44	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1255.85	1991.52	0.24	0.06
185	4.81	29	SLE Q	2	2	2	214.20	-129.75	23.00	170.00	0.13	150.70	14.00	4.62	458.21	136.30	1991.52	0.03	0.01
189	4.81	25	SLE F	2	2	2	214.20	-126.75	23.00	170.00	0.13	150.70	14.00	4.62	458.21	133.15	1991.52	0.03	0.01
233	5.13	29	SLE Q	2	2	2	246.18	-858.09	23.00	170.00	0.13	150.70	14.00	4.62	458.21	901.45	1991.52	0.18	0.04
237	5.13	25	SLE F	2	2	2	246.18	-865.37	23.00	170.00	0.13	150.70	14.00	4.62	458.21	909.10	1991.52	0.18	0.05
282	5.63	30	SLE Q	3	2	2	25.10	-468.42	23.00	170.00	0.13	150.70	14.00	4.62	458.21	492.09	1991.52	0.10	0.02
286	5.63	26	SLE F	3	2	2	25.10	-470.91	23.00	170.00	0.13	150.70	14.00	4.62	458.21	494.70	1991.52	0.10	0.02
329	7.73	29	SLE Q	3	2	2	234.42	-1051.20	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1104.32	1991.52	0.21	0.05
333	7.73	25	SLE F	3	2	2	234.42	-1067.94	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1121.91	1991.52	0.22	0.06
378	8.18	30	SLE Q	4	2	2	22.50	-1167.57	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1226.57	1991.52	0.24	0.06
382	8.18	26	SLE F	4	2	2	22.50	-1186.83	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1246.80	1991.52	0.24	0.06

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.25	0.48	0.23	ø10/ 4 2 br.	39.27	0.40	4270.45	1.07	34000.10	34000.20	34000.10	7.96
TG	0.48	2.24	1.76	ø10/16 2 br.	9.82	0.40	4050.97	2.50	19880.40	23500.40	19880.40	4.91
TG	2.24	2.47	0.23	ø10/ 4 2 br.	39.27	0.40	4268.28	1.07	34000.10	34000.20	34000.10	7.97
TG	2.87	3.10	0.23	ø10/ 4 2 br.	39.27	0.40	5713.35	1.07	34000.10	34000.20	34000.10	5.95
TG	3.10	4.90	1.80	ø10/16 2 br.	9.82	0.40	5166.25	2.50	19880.40	23500.40	19880.40	3.85
TG	4.90	5.13	0.23	ø10/ 4 2 br.	39.27	0.40	5701.77	1.07	34000.10	34000.20	34000.10	5.96
TG	5.63	5.86	0.23	ø10/ 4 2 br.	39.27	0.40	5203.63	1.07	34000.10	34000.20	34000.10	6.53
TG	5.86	7.50	1.63	ø10/16 2 br.	9.82	0.40	4824.15	2.50	19880.40	23500.40	19880.40	4.12
TG	7.50	7.73	0.23	ø10/ 4 2 br.	39.27	0.40	5248.68	1.07	34000.10	34000.20	34000.10	6.48
13 SLV	8.18	8.41	0.23	ø10/ 4 2 br.	39.27	0.40	4378.48	1.07	34000.10	34000.20	34000.10	7.77
9 SLV	8.41	11.98	3.58	ø10/16 2 br.	9.82	0.40	1064.95	2.50	19880.40	23500.40	19880.40	18.67

Travata n. 235

Nodi: 228 230 256

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.17	5	SLV	1	17.50	4.62	4.62	4.62	3.58	-2401.37	-3897.42	1.623
2.08	13	SLV	1	208.47	4.62	4.62	4.62	3.69	-1652.32	-3897.39	2.359
2.28	13	SLV	1	228.37	4.62	4.62	4.62	3.60	-2326.94	-3897.43	1.675
2.69	13	SLV	2	20.13	4.62	4.62	4.62	3.42	-3640.16	-3897.56	1.071
3.05	5	SLV	2	56.16	4.62	4.62	4.62	3.57	1818.30	3066.33	1.686
5.25	5	SLV	2	276.18	4.62	4.62	4.62	3.47	-2959.89	-3897.53	1.317
0.17	6	SLD	1	17.50	4.62	4.62	4.62	3.58	-2034.37	-4566.84	2.245
2.08	14	SLD	1	208.47	4.62	4.62	4.62	3.69	-1352.89	-4566.96	3.376
2.28	14	SLD	1	228.37	4.62	4.62	4.62	3.60	-1958.08	-4566.85	2.332
2.69	14	SLD	2	20.13	4.62	4.62	4.62	3.42	-3080.35	-4566.60	1.482
3.05	14	SLD	2	56.16	4.62	4.62	4.62	3.57	-1755.75	-4566.82	2.601
5.25	6	SLD	2	276.18	4.62	4.62	4.62	3.47	-2483.35	-4566.68	1.839

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
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Relazione di calcolo

0.17	5	SLV	1	17.50	4.62	3659.07	1.04	3533.88
0.17	6	SLD	1	17.50	4.62	3310.10	1.04	3196.85
2.08	13	SLV	1	208.47	4.62	-3201.31	0.93	3434.75
2.08	14	SLD	1	208.47	4.62	-2852.35	0.93	3060.35
2.28	13	SLV	1	228.37	4.62	-3580.51	1.02	3516.86
2.28	14	SLD	1	228.37	4.62	-3231.54	1.02	3174.10
2.69	13	SLV	2	20.13	4.62	4425.05	1.20	3699.74
2.69	14	SLD	2	20.13	4.62	4020.30	1.20	3361.33
3.05	13	SLV	2	56.16	4.62	3737.16	1.05	3550.79
3.05	14	SLD	2	56.16	4.62	3332.41	1.05	3166.22
5.25	5	SLV	2	276.18	4.62	-4189.31	1.15	3648.69
5.25	6	SLD	2	276.18	4.62	-3784.56	1.15	3296.17

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.17	24	SLE R	1	17.50	4.62	4.62	-843.38	886.00	-197.02	23.97
0.17	32	SLE Q	1	17.50	4.62	4.62	-780.78	820.23	-182.40	22.19
2.08	23	SLE R	1	208.47	4.62	4.62	-353.64	371.52	-82.62	10.05
2.08	31	SLE Q	1	208.47	4.62	4.62	-329.87	346.54	-77.06	9.37
2.28	23	SLE R	1	228.37	4.62	4.62	-751.45	789.42	-175.55	21.35
2.28	31	SLE Q	1	228.37	4.62	4.62	-697.89	733.16	-163.03	19.83
2.69	24	SLE R	2	20.13	4.62	4.62	-1246.78	1309.79	-291.26	35.43
2.69	32	SLE Q	2	20.13	4.62	4.62	-1162.32	1221.06	-271.53	33.03
3.05	24	SLE R	2	56.16	4.62	4.62	-355.56	373.53	-83.06	10.10
3.05	32	SLE Q	2	56.16	4.62	4.62	-337.43	354.48	-78.83	9.59
5.25	23	SLE R	2	276.18	4.62	4.62	-917.13	963.48	-214.25	26.06
5.25	31	SLE Q	2	276.18	4.62	4.62	-850.20	893.16	-198.62	24.16

Verifiche stato limite di formazione delle fessure

Caso	Xg <cm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s_{sm} <mm>	Φ	A_s <cmq>	$A_{c\ eff}$ <cmq>	σ_s <daN/cmq>	σ_{sr} <daN/cmq>	ϵ_{sm}	Wk <mm>
44	0.17	32	SLE Q	1	2	2	17.50	-780.78	23.00	170.00	0.13	150.70	14.00	4.62	458.21	820.23	1991.52	0.16	0.04
48	0.17	28	SLE F	1	2	2	17.50	-793.04	23.00	170.00	0.13	150.70	14.00	4.62	458.21	833.12	1991.52	0.16	0.04
91	2.08	31	SLE Q	1	2	2	208.47	-329.87	23.00	170.00	0.13	150.70	14.00	4.62	458.21	346.54	1991.52	0.07	0.02
95	2.08	27	SLE F	1	2	2	208.47	-334.74	23.00	170.00	0.13	150.70	14.00	4.62	458.21	351.66	1991.52	0.07	0.02
139	2.28	31	SLE Q	1	2	2	228.37	-697.89	23.00	170.00	0.13	150.70	14.00	4.62	458.21	733.16	1991.52	0.14	0.04
143	2.28	27	SLE F	1	2	2	228.37	-708.76	23.00	170.00	0.13	150.70	14.00	4.62	458.21	744.58	1991.52	0.14	0.04
188	2.69	32	SLE Q	2	2	2	20.13	-1162.32	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1221.06	1991.52	0.24	0.06
192	2.69	28	SLE F	2	2	2	20.13	-1179.53	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1239.13	1991.52	0.24	0.06
236	3.05	32	SLE Q	2	2	2	56.16	-337.43	23.00	170.00	0.13	150.70	14.00	4.62	458.21	354.48	1991.52	0.07	0.02
240	3.05	28	SLE F	2	2	2	56.16	-341.23	23.00	170.00	0.13	150.70	14.00	4.62	458.21	358.48	1991.52	0.07	0.02
283	5.25	31	SLE Q	2	2	2	276.18	-850.20	23.00	170.00	0.13	150.70	14.00	4.62	458.21	893.16	1991.52	0.17	0.04
287	5.25	27	SLE F	2	2	2	276.18	-863.00	23.00	170.00	0.13	150.70	14.00	4.62	458.21	906.61	1991.52	0.18	0.05

Staffe - Verifiche armatura

CC	X0 <cm>	X1 <cm>	Lung. <cm>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.17	0.41	0.23	$\emptyset 10 / 4 \ 2 \ br.$	39.27	0.40	5320.97	1.07	34000.10	34000.20	34000.10	6.39
TG	0.41	2.05	1.65	$\emptyset 10 / 16 \ 2 \ br.$	9.82	0.40	4882.59	2.50	19880.40	23500.40	19880.40	4.07
TG	2.05	2.28	0.23	$\emptyset 10 / 4 \ 2 \ br.$	39.27	0.40	5314.43	1.07	34000.10	34000.20	34000.10	6.40
TG	2.69	2.92	0.23	$\emptyset 10 / 4 \ 2 \ br.$	39.27	0.40	5125.15	1.07	34000.10	34000.20	34000.10	6.63
TG	2.92	5.02	2.10	$\emptyset 10 / 16 \ 2 \ br.$	9.82	0.40	4687.08	2.50	19880.40	23500.40	19880.40	4.24
TG	5.02	5.25	0.23	$\emptyset 10 / 4 \ 2 \ br.$	39.27	0.40	5110.25	1.07	34000.10	34000.20	34000.10	6.65

Travata n. 236

Nodi: 254 -195 236

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
3.98	13	SLV	2	30.20	4.62	4.62	4.62	3.13	-2132.87	-3897.74	1.827
3.98	14	SLD	2	30.20	4.62	4.62	4.62	3.13	-1878.93	-4566.22	2.430

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <cm>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cmq>
3.98	17	SLU	2	30.20	4.62	5830.29	1.49	3913.04
3.98	10	SLD	2	30.20	4.62	4648.44	1.49	3119.83

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
3.98	21	SLE R	2	30.20	4.62	4.62	-1020.13	1071.68	-238.31	28.99
3.98	29	SLE Q	2	30.20	4.62	4.62	-1008.21	1059.16	-235.53	28.65

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	S _{rm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
41	3.98	29	SLE Q	2	2	2	30.20	-1008.21	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1059.16	1991.52	0.21	0.05
45	3.98	25	SLE F	2	2	2	30.20	-1012.57	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1063.74	1991.52	0.21	0.05

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
5 SLV	-0.00	3.75	3.75	ø10/16 2 br.	9.82	0.40	1096.71	2.50	19880.40	23500.40	19880.40	18.13
17 SLU	3.75	3.98	0.23	ø10/ 4 2 br.	39.27	0.40	5830.29	1.07	34000.10	34000.20	34000.10	5.83

Travata n. 237

Nodi: 236 -197 -198 255 256 237 235 -196

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.25	5	SLV	1	36.84	4.62	4.62	4.62	2.85	-3781.70	-3897.98	1.031
1.34	13	SLV	2	199.23	4.62	4.62	4.62	4.01	1458.99	3414.14	2.340
3.80	13	SLV	3	10.00	4.62	4.62	4.62	3.44	-3211.90	-3897.52	1.213
4.00	9	SLV	4	192.10	4.62	4.62	4.62	3.66	-2319.40	-3897.38	1.680
5.77	1	SLV	4	15.00	4.62	4.62	4.62	3.83	-1770.78	-3897.29	2.201
6.07	1	SLV	5	386.06	4.62	4.62	4.62	3.98	-2407.50	-3897.22	1.619
9.45	9	SLV	5	47.93	4.62	4.62	4.62	4.07	-1458.39	-3897.15	2.672
9.73	9	SLV	5	19.89	4.62	4.62	4.62	4.02	-1961.49	-3897.16	1.987
10.13	1	SLV	6	20.11	4.62	4.62	4.62	4.00	-1671.31	-3897.19	2.332
12.00	9	SLV	6	206.81	4.62	4.62	4.62	4.06	-1437.44	-3897.14	2.711
12.30	1	SLV	7	15.05	4.62	4.62	4.62	4.23	-1549.02	-3897.06	2.516
0.25	6	SLD	1	36.84	4.62	4.62	4.62	2.85	-3421.69	-4565.77	1.334
1.34	14	SLD	2	199.23	4.62	4.62	4.62	4.01	1289.40	4010.41	3.110
3.80	14	SLD	3	10.00	4.62	4.62	4.62	3.44	-2850.16	-4566.62	1.602
4.00	10	SLD	4	192.10	4.62	4.62	4.62	3.66	-2006.13	-4566.95	2.276
5.77	2	SLD	4	15.00	4.62	4.62	4.62	3.83	-1441.26	-4567.16	3.169
6.07	2	SLD	5	386.06	4.62	4.62	4.62	3.98	-2047.52	-4567.30	2.231
9.45	10	SLD	5	47.93	4.62	4.62	4.62	4.07	-1188.21	-4567.40	3.844
9.73	10	SLD	5	19.89	4.62	4.62	4.62	4.02	-1639.09	-4567.34	2.787
10.13	2	SLD	6	20.11	4.62	4.62	4.62	4.00	-1406.26	-4567.31	3.248
12.00	10	SLD	6	206.81	4.62	4.62	4.62	4.06	-1178.21	-4567.42	3.877
12.30	2	SLD	7	15.05	4.62	4.62	4.62	4.23	-1432.28	-4567.59	3.189

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.25	18	SLU	1	36.84	4.62	-6901.76	1.76	3913.04
0.25	2	SLD	1	36.84	4.62	-5663.96	1.76	3211.26
1.34	5	SLV	2	199.23	4.62	-1933.77	0.61	3160.28
1.34	6	SLD	2	199.23	4.62	-1722.91	0.61	2815.69
3.80	17	SLU	3	10.00	4.62	4359.20	1.18	3685.48
3.80	14	SLD	3	10.00	4.62	4070.19	1.18	3441.13
4.00	9	SLV	4	192.10	4.62	-3296.21	0.95	3455.30
4.00	10	SLD	4	192.10	4.62	-2935.49	0.95	3077.18
5.77	1	SLV	4	15.00	4.62	2598.15	0.79	3304.15
5.77	2	SLD	4	15.00	4.62	2237.43	0.79	2845.41
6.07	1	SLV	5	386.06	4.62	-2029.33	0.64	3180.98
6.07	2	SLD	5	386.06	4.62	-1843.05	0.64	2888.99
9.45	9	SLV	5	47.93	4.62	1710.19	0.55	3111.87
9.45	10	SLD	5	47.93	4.62	1523.91	0.55	2772.92
9.73	9	SLV	5	19.89	4.62	1878.46	0.60	3148.31
9.73	10	SLD	5	19.89	4.62	1692.18	0.60	2836.11
10.13	1	SLV	6	20.11	4.62	1963.61	0.62	3166.75
10.13	2	SLD	6	20.11	4.62	1683.14	0.62	2714.44
12.00	9	SLV	6	206.81	4.62	-1745.34	0.56	3119.48
12.00	10	SLD	6	206.81	4.62	-1464.88	0.56	2618.20
12.30	18	SLU	7	15.05	4.62	1147.46	0.38	2990.02
12.30	2	SLD	7	15.05	4.62	1033.45	0.38	2692.94

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.25	22	SLE R	1	36.84	4.62	4.62	-2288.99	2404.66	-534.73	65.04
0.25	30	SLE Q	1	36.84	4.62	4.62	-2178.11	2288.17	-508.83	61.89

Relazione di calcolo

1.34	21	SLE R	2	199.23	4.62	4.62	751.78	-175.62	789.77	21.36
1.34	29	SLE Q	2	199.23	4.62	4.62	705.09	-164.72	740.72	20.04
3.80	21	SLE R	3	10.00	4.62	4.62	-1683.07	1768.12	-393.18	47.83
3.80	29	SLE Q	3	10.00	4.62	4.62	-1585.85	1665.99	-370.47	45.06
4.00	22	SLE R	4	192.10	4.62	4.62	-932.05	979.15	-217.74	26.48
4.00	30	SLE Q	4	192.10	4.62	4.62	-889.94	934.91	-207.90	25.29
5.77	23	SLE R	4	15.00	4.62	4.62	-302.29	317.57	-70.62	8.59
5.77	31	SLE Q	4	15.00	4.62	4.62	-286.09	300.55	-66.83	8.13
6.07	22	SLE R	5	386.06	4.62	4.62	-816.23	857.48	-190.68	23.19
6.07	30	SLE Q	5	386.06	4.62	4.62	-799.77	840.18	-186.84	22.73
9.45	21	SLE R	5	47.93	4.62	4.62	-241.39	253.59	-56.39	6.86
9.45	29	SLE Q	5	47.93	4.62	4.62	-250.85	263.53	-58.60	7.13
9.73	21	SLE R	5	19.89	4.62	4.62	-509.08	534.80	-118.93	14.47
9.73	29	SLE Q	5	19.89	4.62	4.62	-520.69	547.00	-121.64	14.80
10.13	22	SLE R	6	20.11	4.62	4.62	-529.18	555.92	-123.62	15.04
10.13	30	SLE Q	6	20.11	4.62	4.62	-504.76	530.27	-117.92	14.34
12.00	21	SLE R	6	206.81	4.62	4.62	-286.83	301.32	-67.01	8.15
12.00	29	SLE Q	6	206.81	4.62	4.62	-293.82	308.67	-68.64	8.35
12.30	22	SLE R	7	15.05	4.62	4.62	-1116.20	1172.60	-260.76	31.72
12.30	30	SLE Q	7	15.05	4.62	4.62	-1033.35	1085.57	-241.40	29.36

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{em} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	s _{sm}	Wk <mm>
42	0.25	30	SLE Q	1	2	2	36.84	-2178.11	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2288.17	1991.52	0.69	0.18
46	0.25	26	SLE F	1	2	2	36.84	-2210.82	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2322.54	1991.52	0.71	0.18
89	1.34	29	SLE Q	2	2	2	199.23	705.09	23.00	170.00	0.13	150.70	14.00	4.62	458.21	740.72	1991.52	0.14	0.04
93	1.34	25	SLE F	2	2	2	199.23	718.16	23.00	170.00	0.13	150.70	14.00	4.62	458.21	754.45	1991.52	0.15	0.04
137	3.80	29	SLE Q	3	2	2	10.00	-1585.85	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1665.99	1991.52	0.32	0.08
141	3.80	25	SLE F	3	2	2	10.00	-1613.24	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1694.76	1991.52	0.33	0.08
186	4.00	30	SLE Q	4	2	2	192.10	-889.94	23.00	170.00	0.13	150.70	14.00	4.62	458.21	934.91	1991.52	0.18	0.05
190	4.00	26	SLE F	4	2	2	192.10	-902.89	23.00	170.00	0.13	150.70	14.00	4.62	458.21	948.52	1991.52	0.18	0.05
235	5.77	31	SLE Q	4	2	2	15.00	-286.09	23.00	170.00	0.13	150.70	14.00	4.62	458.21	300.55	1991.52	0.06	0.01
239	5.77	27	SLE F	4	2	2	15.00	-290.17	23.00	170.00	0.13	150.70	14.00	4.62	458.21	304.83	1991.52	0.06	0.02
282	6.07	30	SLE Q	5	2	2	386.06	-799.77	23.00	170.00	0.13	150.70	14.00	4.62	458.21	840.18	1991.52	0.16	0.04
286	6.07	26	SLE F	5	2	2	386.06	-803.81	23.00	170.00	0.13	150.70	14.00	4.62	458.21	844.43	1991.52	0.16	0.04
329	9.45	29	SLE Q	5	2	2	47.93	-250.85	23.00	170.00	0.13	150.70	14.00	4.62	458.21	263.53	1991.52	0.05	0.01
333	9.45	25	SLE F	5	2	2	47.93	-248.68	23.00	170.00	0.13	150.70	14.00	4.62	458.21	261.25	1991.52	0.05	0.01
377	9.73	29	SLE Q	5	2	2	19.89	-520.69	23.00	170.00	0.13	150.70	14.00	4.62	458.21	547.00	1991.52	0.11	0.03
381	9.73	25	SLE F	5	2	2	19.89	-518.01	23.00	170.00	0.13	150.70	14.00	4.62	458.21	544.18	1991.52	0.11	0.03
426	10.13	30	SLE Q	6	2	2	20.11	-504.76	23.00	170.00	0.13	150.70	14.00	4.62	458.21	530.27	1991.52	0.10	0.03
430	10.13	26	SLE F	6	2	2	20.11	-511.56	23.00	170.00	0.13	150.70	14.00	4.62	458.21	537.41	1991.52	0.10	0.03
473	12.00	29	SLE Q	6	2	2	206.81	-293.82	23.00	170.00	0.13	150.70	14.00	4.62	458.21	308.67	1991.52	0.06	0.02
477	12.00	25	SLE F	6	2	2	206.81	-289.95	23.00	170.00	0.13	150.70	14.00	4.62	458.21	304.60	1991.52	0.06	0.02
522	12.30	30	SLE Q	7	2	2	15.05	-1033.35	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1085.57	1991.52	0.21	0.05
526	12.30	26	SLE F	7	2	2	15.05	-1050.71	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1103.81	1991.52	0.21	0.05

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic. T
18 SLU	0.25	0.48	0.23	ø10/ 4 2 br.	39.27	0.40	6901.76	1.07	34000.10	34000.20	34000.10	4.93
18 SLU	0.48	3.57	3.09	ø10/16 2 br.	9.82	0.40	6662.25	2.50	19880.40	23500.40	19880.40	2.98
17 SLU	3.57	3.80	0.23	ø10/ 4 2 br.	39.27	0.40	4359.20	1.07	34000.10	34000.20	34000.10	7.80
TG	4.00	4.23	0.23	ø10/ 4 2 br.	39.27	0.40	5344.86	1.07	34000.10	34000.20	34000.10	6.36
TG	4.23	5.54	1.31	ø10/16 2 br.	9.82	0.40	5007.69	2.50	19880.40	23500.40	19880.40	3.97
TG	5.54	5.77	0.23	ø10/ 4 2 br.	39.27	0.40	5269.56	1.07	34000.10	34000.20	34000.10	6.45
TG	6.07	6.30	0.23	ø10/ 4 2 br.	39.27	0.40	3096.79	1.07	34000.10	34000.20	34000.10	10.98
TG	6.30	9.50	3.20	ø10/16 2 br.	9.82	0.40	2958.79	2.50	19880.40	23500.40	19880.40	6.72
TG	9.50	9.73	0.23	ø10/ 4 2 br.	39.27	0.40	3087.82	1.07	34000.10	34000.20	34000.10	11.01
TG	10.13	10.36	0.23	ø10/ 4 2 br.	39.27	0.40	4502.15	1.07	34000.10	34000.20	34000.10	7.55
TG	10.36	11.77	1.41	ø10/16 2 br.	9.82	0.40	4362.30	2.50	19880.40	23500.40	19880.40	4.56
TG	11.77	12.00	0.23	ø10/ 4 2 br.	39.27	0.40	4476.99	1.07	34000.10	34000.20	34000.10	7.59
18 SLU	12.30	12.53	0.23	ø10/ 4 2 br.	39.27	0.40	1147.46	1.07	34000.10	34000.20	34000.10	29.63
18 SLU	12.53	16.13	3.61	ø10/16 2 br.	9.82	0.40	1068.63	2.50	19880.40	23500.40	19880.40	18.60

Travata n. 238

Nodi: 232 235 241

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2	R	40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
3	R	30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	9	SLV	1	251.12	4.62	4.62	4.62	3.49	-2779.85	-3897.51	1.402
0.74	1	SLV	1	196.89	4.62	4.62	4.62	3.77	1251.33	3224.58	2.577
2.51	1	SLV	1	20.04	4.62	4.62	4.62	3.52	-2339.98	-3897.50	1.666
2.91	9	SLV	2	315.48	4.62	4.62	4.62	3.44	-3300.78	-5456.07	1.653
5.31	9	SLV	2	75.29	4.62	4.62	4.62	3.82	1746.11	4551.17	2.606
5.91	1	SLV	2	15.08	4.62	4.62	4.62	3.57	-2738.65	-5456.08	1.992
0.20	10	SLD	1	251.12	4.62	4.62	4.62	3.49	-2389.60	-4566.69	1.911

Relazione di calcolo

0.74	2	SLD	1	196.89	4.62	4.62	4.62	3.77	1007.69	3791.36	3.762
2.51	2	SLD	1	20.04	4.62	4.62	4.62	3.52	-2011.08	-4566.75	2.271
2.91	10	SLD	2	315.48	4.62	4.62	4.62	3.44	-2917.02	-6346.64	2.176
5.31	10	SLD	2	75.29	4.62	4.62	4.62	3.82	1460.83	5301.35	3.629
5.91	2	SLD	2	15.08	4.62	4.62	4.62	3.57	-2318.10	-6346.54	2.738

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.20	9	SLV	1	251.12	4.62	-4070.31	1.12	3622.92
0.20	10	SLD	1	251.12	4.62	-3759.10	1.12	3345.92
0.74	9	SLV	1	196.89	4.62	-2864.36	0.85	3361.79
0.74	10	SLD	1	196.89	4.62	-2553.15	0.85	2996.54
2.51	1	SLV	1	20.04	4.62	3932.70	1.09	3593.13
2.51	2	SLD	1	20.04	4.62	3621.49	1.09	3308.79
2.91	20	SLU	2	315.48	4.62	-4361.89	1.17	3712.42
2.91	10	SLD	2	315.48	4.62	-3997.23	1.17	3402.06
5.31	1	SLV	2	75.29	4.62	2660.09	0.80	3343.92
5.31	2	SLD	2	75.29	4.62	2392.36	0.80	3007.36
5.91	1	SLV	2	15.08	4.62	3771.30	1.05	3584.54
5.91	2	SLD	2	15.08	4.62	3503.56	1.05	3330.06

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.20	24	SLE R	1	251.12	4.62	4.62	-1160.47	1219.11	-271.10	32.98
0.20	32	SLE Q	1	251.12	4.62	4.62	-1047.11	1100.02	-244.62	29.75
0.74	23	SLE R	1	196.89	4.62	4.62	182.62	-42.66	191.84	5.19
0.74	31	SLE Q	1	196.89	4.62	4.62	169.88	-39.68	178.46	4.83
2.51	23	SLE R	1	20.04	4.62	4.62	-966.60	1015.45	-225.81	27.47
2.51	31	SLE Q	1	20.04	4.62	4.62	-878.52	922.91	-205.23	24.96
2.91	24	SLE R	2	315.48	4.62	4.62	-1720.15	1283.40	-328.37	33.01
2.91	32	SLE Q	2	315.48	4.62	4.62	-1595.90	1190.69	-304.65	30.62
5.31	24	SLE R	2	75.29	4.62	4.62	505.03	-96.41	376.80	9.69
5.31	32	SLE Q	2	75.29	4.62	4.62	478.57	-91.36	357.06	9.18
5.91	23	SLE R	2	15.08	4.62	4.62	-952.00	710.28	-181.73	18.27
5.91	31	SLE Q	2	15.08	4.62	4.62	-870.14	649.21	-166.10	16.70

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.20	32	SLE Q	1	2	2	251.12	-1047.11	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1100.02	1991.52	0.21	0.05
48	0.20	28	SLE F	1	2	2	251.12	-1072.27	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1126.46	1991.52	0.22	0.06
91	0.74	31	SLE Q	1	2	2	196.89	169.88	23.00	170.00	0.13	150.70	14.00	4.62	458.21	178.46	1991.52	0.03	0.01
95	0.74	27	SLE F	1	2	2	196.89	170.76	23.00	170.00	0.13	150.70	14.00	4.62	458.21	179.39	1991.52	0.03	0.01
139	2.51	31	SLE Q	1	2	2	20.04	-878.52	23.00	170.00	0.13	150.70	14.00	4.62	458.21	922.91	1991.52	0.18	0.05
143	2.51	27	SLE F	1	2	2	20.04	-894.46	23.00	170.00	0.13	150.70	14.00	4.62	458.21	939.65	1991.52	0.18	0.05
188	2.91	32	SLE Q	2	3	1	315.48	-1595.90	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1190.69	1977.14	0.23	0.06
192	2.91	28	SLE F	2	3	1	315.48	-1618.44	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1207.51	1977.14	0.23	0.06
236	5.31	32	SLE Q	2	3	1	75.29	478.57	23.00	120.00	0.16	140.21	14.00	4.62	364.56	357.06	1977.14	0.07	0.02
240	5.31	28	SLE F	2	3	1	75.29	481.88	23.00	120.00	0.16	140.21	14.00	4.62	364.56	359.52	1977.14	0.07	0.02
283	5.91	31	SLE Q	2	3	1	15.08	-870.14	23.00	120.00	0.16	140.21	14.00	4.62	364.56	649.21	1977.14	0.13	0.03
287	5.91	27	SLE F	2	3	1	15.08	-889.35	23.00	120.00	0.16	140.21	14.00	4.62	364.56	663.54	1977.14	0.13	0.03

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.43	0.23	ø10/ 4 2 br.	39.27	0.40	5564.83	1.07	34000.10	34000.20	34000.10	6.11
TG	0.43	2.28	1.85	ø10/16 2 br.	9.82	0.40	5053.37	2.50	19880.40	23500.40	19880.40	3.93
TG	2.28	2.51	0.23	ø10/ 4 2 br.	39.27	0.40	5554.84	1.07	34000.10	34000.20	34000.10	6.12
TG	2.91	3.23	0.32	ø8/ 8 2 br.	12.57	0.30	6015.95	2.01	28399.80	28399.80	28399.80	4.72
TG	3.23	5.59	2.36	ø8/20 2 br.	5.03	0.30	5422.25	2.50	14161.80	24522.20	14161.80	2.61
TG	5.59	5.91	0.32	ø8/ 8 2 br.	12.57	0.30	5967.81	2.01	28399.80	28399.80	28399.80	4.76

Travata n. 239

Nodi: 239 238

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
3	R	30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	1	SLV	1	536.49	4.62	4.62	4.62	3.67	-3167.97	-5456.00	1.722
2.94	18	SLU	1	262.58	4.62	4.62	4.62	4.44	2037.80	5257.33	2.580
5.41	9	SLV	1	15.05	4.62	4.62	4.62	3.72	-2574.21	-5455.96	2.119
0.20	2	SLD	1	536.49	4.62	4.62	4.62	3.67	-2877.32	-6346.40	2.206
2.94	10	SLD	1	262.58	4.62	4.62	4.62	4.44	1454.50	6116.70	4.205
5.41	10	SLD	1	15.05	4.62	4.62	4.62	3.72	-2310.14	-6346.38	2.747

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cmq>
0.20	18	SLU	1	536.49	4.62	-3304.25	0.95	3483.41
0.20	2	SLD	1	536.49	4.62	-2681.43	0.95	2826.81
2.94	9	SLV	1	262.58	4.62	502.01	0.17	2876.62
2.94	10	SLD	1	262.58	4.62	395.64	0.17	2267.13
5.41	17	SLU	1	15.05	4.62	3091.49	0.90	3437.34
5.41	10	SLD	1	15.05	4.62	2525.91	0.90	2808.48

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.20	22	SLE R	1	536.49	4.62	4.62	-2041.25	1522.96	-389.66	39.17
0.20	30	SLE Q	1	536.49	4.62	4.62	-1881.36	1403.67	-359.14	36.10
2.94	22	SLE R	1	262.58	4.62	4.62	1551.64	-296.20	1157.67	29.77
2.94	30	SLE Q	1	262.58	4.62	4.62	1433.20	-273.59	1069.30	27.50
5.41	21	SLE R	1	15.05	4.62	4.62	-1537.52	1147.14	-293.50	29.50
5.41	29	SLE Q	1	15.05	4.62	4.62	-1405.40	1048.56	-268.28	26.97

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s_{rm} <mm>	Φ	A_s <cmq>	$A_{c\ eff}$ <cmq>	σ_s <daN/cmq>	σ_{sr} <daN/cmq>	ϵ_{sm}	Wk <mm>
42	0.20	30	SLE Q	1	3	1	536.49	-1881.36	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1403.67	1977.14	0.27	0.06
46	0.20	26	SLE F	1	3	1	536.49	-1915.18	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1428.91	1977.14	0.28	0.07
90	2.94	30	SLE Q	1	3	1	262.58	1433.20	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1069.30	1977.14	0.21	0.05
94	2.94	26	SLE F	1	3	1	262.58	1454.16	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1084.94	1977.14	0.21	0.05
137	5.41	29	SLE Q	1	3	1	15.05	-1405.40	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1048.56	1977.14	0.20	0.05
141	5.41	25	SLE F	1	3	1	15.05	-1434.87	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1070.55	1977.14	0.21	0.05

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.52	0.32	ø8/ 8 2 br.	12.57	0.30	4116.62	2.01	28399.80	28399.80	28399.80	6.90
TG	0.52	5.09	4.57	ø8/20 2 br.	5.03	0.30	3843.78	2.50	14161.80	24522.20	14161.80	3.68
TG	5.09	5.41	0.32	ø8/ 8 2 br.	12.57	0.30	4105.45	2.01	28399.80	28399.80	28399.80	6.92

Travata n. 240

Nodi: -195 -208

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
2R		40.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.00	20	SLU	1	505.12	6.16	4.62	6.16	3.28	-4610.77	-5106.91	1.108
2.80	20	SLU	1	225.25	4.62	4.62	4.62	4.53	3206.75	3827.95	1.194
5.05	19	SLU	1	0.00	4.62	4.62	4.62	3.31	-2652.46	-3897.60	1.469
0.00	6	SLD	1	505.12	6.16	4.62	6.16	3.28	-3867.01	-5969.55	1.544
2.80	6	SLD	1	225.25	4.62	4.62	4.62	4.53	2311.24	4488.36	1.942
5.05	14	SLD	1	0.00	4.62	4.62	4.62	3.31	-2344.37	-4566.45	1.948

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cmq>
0.00	20	SLU	1	505.12	4.62	-5171.88	1.34	3861.46
0.00	6	SLD	1	505.12	4.62	-3910.41	1.34	2919.61
2.80	13	SLV	1	225.25	4.62	282.68	0.09	3233.72
2.80	14	SLD	1	225.25	4.62	224.32	0.09	2566.10
5.05	19	SLU	1	0.00	4.62	5014.63	1.31	3827.40
5.05	14	SLD	1	0.00	4.62	3775.79	1.31	2881.86

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.00	24	SLE R	1	505.12	6.16	4.62	-3508.06	2793.51	-808.45	89.92
0.00	32	SLE Q	1	505.12	6.16	4.62	-3316.47	2640.95	-764.30	85.01
2.80	24	SLE R	1	225.25	4.62	4.62	2436.00	-569.08	2559.10	69.22
2.80	32	SLE Q	1	225.25	4.62	4.62	2296.38	-536.46	2412.43	65.25
5.05	23	SLE R	1	0.00	4.62	4.62	-2014.14	2115.92	-470.52	57.23
5.05	31	SLE Q	1	0.00	4.62	4.62	-1877.23	1972.10	-438.54	53.34

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s_{rm} <mm>	Φ	A_s <cmq>	$A_{c\ eff}$ <cmq>	σ_s <daN/cmq>	σ_{sr} <daN/cmq>	ϵ_{sm}	Wk <mm>
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Relazione di calcolo

	<m>					<cm>	<daNm>	<mm>	<mm>	<mm>	<cm>	<cm>	<daN/cmq>	<daN/cmq>	<mm>				
44	0.00	32	SLE Q	1	2	2	505.12	-3316.47	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2640.95	1580.14	1.05	0.22
48	0.00	28	SLE F	1	2	2	505.12	-3371.77	23.00	113.33	0.13	124.29	14.00	6.16	487.68	2684.99	1580.14	1.08	0.23
92	2.80	32	SLE Q	1	2	2	225.25	2296.38	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2412.43	1991.52	0.77	0.20
96	2.80	28	SLE F	1	2	2	225.25	2336.47	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2454.54	1991.52	0.80	0.20
139	5.05	31	SLE Q	1	2	2	0.00	-1877.23	23.00	170.00	0.13	150.70	14.00	4.62	458.21	1972.10	1991.52	0.47	0.12
143	5.05	27	SLE F	1	2	2	0.00	-1915.57	23.00	170.00	0.13	150.70	14.00	4.62	458.21	2012.37	1991.52	0.50	0.13

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.00	0.23	0.23	ø10/ 4 2 br.	39.27	0.40	5211.70	1.07	34000.10	34000.20	34000.10	6.52
TG	0.23	4.82	4.59	ø10/16 2 br.	9.82	0.40	4880.62	2.50	19880.40	23500.40	19880.40	4.07
19 SLU	4.82	5.05	0.23	ø10/ 4 2 br.	39.27	0.40	5014.63	1.07	34000.10	34000.20	34000.10	6.78

Travata n. 241

Nodi: 240 -208 244

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.15	5	SLV	1	364.50	4.62	7.63	4.62	6.07	-4790.26	-5455.16	1.139
3.80	5	SLV	1	0.00	4.62	7.63	4.62	7.05	3250.86	8202.62	2.523
5.05	13	SLV	2	20.11	6.16	7.63	6.16	5.08	-5909.53	-7201.47	1.219
0.15	6	SLD	1	364.50	4.62	7.63	4.62	6.07	-4254.47	-6344.94	1.491
3.80	6	SLD	1	0.00	4.62	7.63	4.62	7.05	2951.22	9515.09	3.224
5.05	14	SLD	2	20.11	6.16	7.63	6.16	5.08	-5365.85	-8359.11	1.558

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.15	5	SLV	1	364.50	7.63	-3283.31	1.56	2104.50
0.15	6	SLD	1	364.50	7.63	-3061.64	1.56	1962.42
3.80	13	SLV	1	0.00	7.63	1066.97	0.59	1814.18
3.80	14	SLD	1	0.00	7.63	845.30	0.59	1437.27
5.05	19	SLU	2	20.11	7.63	6434.05	2.56	2517.22
5.05	14	SLD	2	20.11	7.63	5564.44	2.56	2177.00

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.15	22	SLE R	1	364.50	4.62	7.63	-2474.29	1838.23	-411.41	42.94
0.15	30	SLE Q	1	364.50	4.62	7.63	-2376.66	1765.70	-395.17	41.25
3.80	22	SLE R	1	0.00	4.62	7.63	2003.27	-355.31	921.68	32.49
3.80	30	SLE Q	1	0.00	4.62	7.63	1902.39	-337.42	875.26	30.86
5.05	21	SLE R	2	20.11	6.16	7.63	-3606.15	2026.38	-580.70	56.69
5.05	29	SLE Q	2	20.11	6.16	7.63	-3454.78	1941.32	-556.33	54.31

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
42	0.15	30	SLE Q	1	3	1	364.50	-2376.66	23.00	120.00	0.16	141.39	14.00	4.62	364.56	1765.70	2039.14	0.34	0.08
46	0.15	26	SLE F	1	3	1	364.50	-2403.23	23.00	120.00	0.16	141.39	14.00	4.62	364.56	1785.44	2039.14	0.35	0.08
90	3.80	30	SLE Q	1	3	1	0.00	1902.39	21.00	120.00	0.14	123.70	18.00	7.63	451.85	875.26	1341.94	0.17	0.04
94	3.80	26	SLE F	1	3	1	0.00	1931.48	21.00	120.00	0.14	123.70	18.00	7.63	451.85	888.65	1341.94	0.17	0.04
137	5.05	29	SLE Q	2	3	1	20.11	-3454.78	23.00	80.00	0.16	116.41	14.00	6.16	373.65	1941.32	1621.45	0.61	0.12
141	5.05	25	SLE F	2	3	1	20.11	-3497.69	23.00	80.00	0.16	116.41	14.00	6.16	373.65	1965.43	1621.45	0.63	0.12

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.15	0.47	0.32	ø8/ 8 2 br.	12.57	0.30	4040.88	2.01	28399.80	28399.80	28399.80	7.03
19 SLU	0.47	4.73	4.25	ø8/20 2 br.	5.03	0.30	6088.49	2.50	14161.80	24522.20	14161.80	2.33
19 SLU	4.73	5.05	0.32	ø8/ 8 2 br.	12.57	0.30	6434.05	2.01	28399.80	28399.80	28399.80	4.41

Travata n. 242

Nodi: 259 245

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
6R		30.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
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Relazione di calcolo

<m>				<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
0.15	13	SLV	1	14.99	4.62	4.62	4.62	3.38	2061.01	2855.96	1.386
1.49	5	SLV	1	149.05	4.62	6.16	4.62	4.93	3152.45	4073.20	1.292
0.15	6	SLD	1	14.99	4.62	4.62	4.62	3.38	-2063.28	-4476.32	2.170
1.49	6	SLD	1	149.05	4.62	6.16	4.62	4.93	2522.36	4757.33	1.886

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.15	5	SLV	1	14.99	4.62	4415.77	1.24	3564.87
0.15	6	SLD	1	14.99	4.62	3631.08	1.24	2931.39
1.49	5	SLV	1	149.05	6.16	3650.63	1.23	2972.28
1.49	6	SLD	1	149.05	6.16	2865.95	1.23	2333.40

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.15	24	SLE R	1	14.99	4.62	4.62	-444.42	471.29	-128.05	14.53
0.15	32	SLE Q	1	14.99	4.62	4.62	-420.97	446.42	-121.29	13.76
1.49	24	SLE R	1	149.05	4.62	6.16	386.96	-109.19	311.15	11.48
1.49	32	SLE Q	1	149.05	4.62	6.16	361.02	-101.87	290.29	10.71

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.15	32	SLE Q	1	6	1	14.99	-420.97	23.00	120.00	0.13	126.25	14.00	4.62	364.56	446.42	1603.87	0.09	0.02
48	0.15	28	SLE F	1	6	1	14.99	-427.01	23.00	120.00	0.13	126.25	14.00	4.62	364.56	452.82	1603.87	0.09	0.02
92	1.49	32	SLE Q	1	6	1	149.05	361.02	23.00	80.00	0.13	104.48	14.00	6.16	373.65	290.29	1287.79	0.06	0.01
96	1.49	28	SLE F	1	6	1	149.05	367.76	23.00	80.00	0.13	104.48	14.00	6.16	373.65	295.70	1287.79	0.06	0.01

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.15	0.38	0.23	ø8/ 4 2 br.	25.13	0.30	6277.33	1.23	25022.30	25022.30	25022.30	3.99
TG	0.38	1.26	0.88	ø8/16 2 br.	6.28	0.30	6146.32	2.50	12723.50	17625.30	12723.50	2.07
TG	1.26	1.49	0.23	ø8/ 4 2 br.	25.13	0.30	5644.82	1.23	25022.30	25022.30	25022.30	4.43

Travata n. 243

Nodi: 244 -209 246 245

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
6R		30.00	26.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.25	1	SLV	1	115.12	4.62	4.62	4.62	3.78	-2258.77	-3829.54	1.695
1.52	13	SLV	2	268.37	4.62	4.62	4.62	4.09	995.48	3413.02	3.429
4.05	13	SLV	2	15.16	4.62	4.62	4.62	3.85	-2201.66	-3829.51	1.739
4.35	1	SLV	3	291.70	4.62	4.62	4.62	3.85	-2084.41	-3829.52	1.837
6.92	9	SLV	3	35.34	4.62	4.62	4.62	3.94	-1502.68	-3829.48	2.548
7.12	9	SLV	3	15.16	4.62	4.62	4.62	3.89	-1942.29	-3829.51	1.972
0.25	2	SLD	1	115.12	4.62	4.62	4.62	3.78	-1958.22	-4475.99	2.286
1.52	14	SLD	2	268.37	4.62	4.62	4.62	4.09	817.16	3993.70	4.887
4.05	14	SLD	2	15.16	4.62	4.62	4.62	3.85	-1923.36	-4475.92	2.327
4.35	2	SLD	3	291.70	4.62	4.62	4.62	3.85	-1777.34	-4475.92	2.518
6.92	10	SLD	3	35.34	4.62	4.62	4.62	3.94	-1228.22	-4475.85	3.644
7.12	10	SLD	3	15.16	4.62	4.62	4.62	3.89	-1622.05	-4475.91	2.759

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.25	1	SLV	1	115.12	4.62	-2666.18	0.84	3186.02
0.25	2	SLD	1	115.12	4.62	-2376.18	0.84	2839.48
1.52	5	SLV	2	268.37	4.62	-1564.04	0.53	2947.37
1.52	6	SLD	2	268.37	4.62	-1391.77	0.53	2622.75
4.05	13	SLV	2	15.16	4.62	2422.32	0.77	3133.22
4.05	14	SLD	2	15.16	4.62	2250.06	0.77	2910.40
4.35	1	SLV	3	291.70	4.62	-2422.00	0.77	3133.15
4.35	2	SLD	3	291.70	4.62	-2195.17	0.77	2839.71
6.92	9	SLV	3	35.34	4.62	2082.85	0.68	3059.71
6.92	10	SLD	3	35.34	4.62	1856.02	0.68	2726.49
7.12	9	SLV	3	15.16	4.62	2272.88	0.73	3100.86
7.12	10	SLD	3	15.16	4.62	2046.05	0.73	2791.40

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Relazione di calcolo

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.25	22	SLE R	1	115.12	4.62	4.62	-948.46	1005.80	-273.27	31.01
0.25	30	SLE Q	1	115.12	4.62	4.62	-915.77	971.13	-263.85	29.94
1.52	21	SLE R	2	268.37	4.62	4.62	203.22	-58.55	215.50	6.64
1.52	29	SLE Q	2	268.37	4.62	4.62	191.23	-55.10	202.79	6.25
4.05	21	SLE R	2	15.16	4.62	4.62	-981.29	1040.61	-282.73	32.08
4.05	29	SLE Q	2	15.16	4.62	4.62	-951.00	1008.49	-274.00	31.09
4.35	22	SLE R	3	291.70	4.62	4.62	-729.96	774.09	-210.32	23.87
4.35	30	SLE Q	3	291.70	4.62	4.62	-703.98	746.54	-202.83	23.02
6.92	21	SLE R	3	35.34	4.62	4.62	-274.64	291.25	-79.13	8.98
6.92	29	SLE Q	3	35.34	4.62	4.62	-269.50	285.79	-77.65	8.81
7.12	21	SLE R	3	15.16	4.62	4.62	-514.91	546.04	-148.36	16.83
7.12	29	SLE Q	3	15.16	4.62	4.62	-503.33	533.76	-145.02	16.46

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s_{rm} <mm>	Φ	A_s <cmq>	A_c eff <cmq>	σ_s <daN/cmq>	σ_{sr} <daN/cmq>	ϵ_{sm}	Wk <mm>
42	0.25	30	SLE Q	1	6	1	115.12	-915.77	23.00	120.00	0.13	126.25	14.00	4.62	364.56	971.13	1603.87	0.19	0.04
46	0.25	26	SLE F	1	6	1	115.12	-924.94	23.00	120.00	0.13	126.25	14.00	4.62	364.56	980.86	1603.87	0.19	0.04
89	1.52	29	SLE Q	2	6	1	268.37	191.23	23.00	120.00	0.13	126.25	14.00	4.62	364.56	202.79	1603.87	0.04	0.01
93	1.52	25	SLE F	2	6	1	268.37	194.41	23.00	120.00	0.13	126.25	14.00	4.62	364.56	206.17	1603.87	0.04	0.01
137	4.05	29	SLE Q	2	6	1	15.16	-951.00	23.00	120.00	0.13	126.25	14.00	4.62	364.56	1008.49	1603.87	0.20	0.04
141	4.05	25	SLE F	2	6	1	15.16	-959.56	23.00	120.00	0.13	126.25	14.00	4.62	364.56	1017.57	1603.87	0.20	0.04
186	4.35	30	SLE Q	3	6	1	291.70	-703.98	23.00	120.00	0.13	126.25	14.00	4.62	364.56	746.54	1603.87	0.14	0.03
190	4.35	26	SLE F	3	6	1	291.70	-711.35	23.00	120.00	0.13	126.25	14.00	4.62	364.56	754.35	1603.87	0.15	0.03
233	6.92	29	SLE Q	3	6	1	35.34	-269.50	23.00	120.00	0.13	126.25	14.00	4.62	364.56	285.79	1603.87	0.06	0.01
237	6.92	25	SLE F	3	6	1	35.34	-270.88	23.00	120.00	0.13	126.25	14.00	4.62	364.56	287.25	1603.87	0.06	0.01
281	7.12	29	SLE Q	3	6	1	15.16	-503.33	23.00	120.00	0.13	126.25	14.00	4.62	364.56	533.76	1603.87	0.10	0.02
285	7.12	25	SLE F	3	6	1	15.16	-506.55	23.00	120.00	0.13	126.25	14.00	4.62	364.56	537.17	1603.87	0.10	0.02

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic. T
TG	0.25	0.48	0.23	$\emptyset 8 / 4$ 2 br.	25.13	0.30	3420.08	1.23	25022.30	25022.30	25022.30	7.32
TG	0.48	3.82	3.34	$\emptyset 8 / 16$ 2 br.	6.28	0.30	3230.70	2.50	12723.50	17625.30	12723.50	3.94
TG	3.82	4.05	0.23	$\emptyset 8 / 4$ 2 br.	25.13	0.30	3409.21	1.23	25022.30	25022.30	25022.30	7.34
TG	4.35	4.58	0.23	$\emptyset 8 / 4$ 2 br.	25.13	0.30	3867.14	1.23	25022.30	25022.30	25022.30	6.47
TG	4.58	6.89	2.31	$\emptyset 8 / 16$ 2 br.	6.28	0.30	3651.39	2.50	12723.50	17625.30	12723.50	3.48
TG	6.89	7.12	0.23	$\emptyset 8 / 4$ 2 br.	25.13	0.30	3855.73	1.23	25022.30	25022.30	25022.30	6.49

Travata n. 309

Nodi: 343 351

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
14	R	40.00	24.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.20	1	SLV	1	20.00	4.62	4.62	4.62	4.04	-1929.00	-3535.73	1.833
0.45	1	SLV	1	45.42	4.62	4.62	4.62	4.08	-1507.88	-3535.73	2.345
3.80	9	SLV	1	379.84	4.62	4.62	4.62	4.02	-1979.98	-3535.77	1.786
0.20	2	SLD	1	20.00	4.62	4.62	4.62	4.04	-1612.83	-4151.73	2.574
0.45	2	SLD	1	45.42	4.62	4.62	4.62	4.08	-1235.78	-4151.79	3.360
3.80	10	SLD	1	379.84	4.62	4.62	4.62	4.02	-1672.45	-4151.74	2.482

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cmq>
0.20	1	SLV	1	20.00	4.62	1723.91	0.58	2981.99
0.20	2	SLD	1	20.00	4.62	1550.59	0.58	2682.18
0.45	1	SLV	1	45.42	4.62	1589.55	0.54	2952.89
0.45	2	SLD	1	45.42	4.62	1416.23	0.54	2630.91
3.80	9	SLV	1	379.84	4.62	-1776.36	0.59	2993.34
3.80	10	SLD	1	379.84	4.62	-1603.04	0.59	2701.28

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.20	22	SLE R	1	20.00	4.62	4.62	-577.72	668.92	-149.58	19.07
0.20	30	SLE Q	1	20.00	4.62	4.62	-514.61	595.85	-133.24	16.98
0.45	22	SLE R	1	45.42	4.62	4.62	-325.81	377.24	-84.36	10.75
0.45	30	SLE Q	1	45.42	4.62	4.62	-290.61	336.48	-75.24	9.59
3.80	21	SLE R	1	379.84	4.62	4.62	-671.42	777.42	-173.84	22.16
3.80	29	SLE Q	1	379.84	4.62	4.62	-603.92	699.26	-156.37	19.93

Verifiche stato limite di formazione delle fessure

Relazione di calcolo

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	S _{rm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
42	0.20	30	SLE Q	1	14	1	20.00	-514.61	23.00	170.00	0.13	149.45	14.00	4.62	458.21	595.85	1880.96	0.12	0.03
46	0.20	26	SLE F	1	14	1	20.00	-527.01	23.00	170.00	0.13	149.45	14.00	4.62	458.21	610.21	1880.96	0.12	0.03
90	0.45	30	SLE Q	1	14	1	45.42	-290.61	23.00	170.00	0.13	149.45	14.00	4.62	458.21	336.48	1880.96	0.07	0.02
94	0.45	26	SLE F	1	14	1	45.42	-297.45	23.00	170.00	0.13	149.45	14.00	4.62	458.21	344.41	1880.96	0.07	0.02
137	3.80	29	SLE Q	1	14	1	379.84	-603.92	23.00	170.00	0.13	149.45	14.00	4.62	458.21	699.26	1880.96	0.14	0.03
141	3.80	25	SLE F	1	14	1	379.84	-617.62	23.00	170.00	0.13	149.45	14.00	4.62	458.21	715.12	1880.96	0.14	0.04

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.20	0.41	0.21	ø8/ 4 2 br.	25.13	0.40	2802.87	1.53	28480.00	28480.00	28480.00	10.16
TG	0.41	3.59	3.18	ø8/16 2 br.	6.28	0.40	2694.40	2.50	11617.10	21456.90	11617.10	4.31
TG	3.59	3.80	0.21	ø8/ 4 2 br.	25.13	0.40	2805.91	1.53	28480.00	28480.00	28480.00	10.15

Travata n. 310

Nodi: 336 343 -273

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
14	R	40.00	24.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.17	5	SLV	1	17.50	4.62	4.62	4.62	3.78	-2122.53	-3535.89	1.666
1.01	13	SLV	1	100.85	4.62	4.62	4.62	4.07	831.90	3147.73	3.784
3.19	13	SLV	1	318.98	4.62	4.62	4.62	3.73	-2020.95	-3535.93	1.750
3.49	5	SLV	2	15.00	4.62	4.62	4.62	3.85	-1806.97	-3535.84	1.957
0.17	6	SLD	1	17.50	4.62	4.62	4.62	3.78	-1846.20	-4151.42	2.249
1.01	14	SLD	1	100.85	4.62	4.62	4.62	4.07	691.22	3704.32	5.359
3.19	14	SLD	1	318.98	4.62	4.62	4.62	3.73	-1760.30	-4151.35	2.358
3.49	6	SLD	2	15.00	4.62	4.62	4.62	3.85	-1553.46	-4151.54	2.672

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.17	20	SLU	1	17.50	4.62	2684.10	0.84	3189.90
0.17	6	SLD	1	17.50	4.62	2326.06	0.84	2764.39
1.01	5	SLV	1	100.85	4.62	1613.95	0.55	2958.18
1.01	6	SLD	1	100.85	4.62	1435.84	0.55	2631.73
3.19	19	SLU	1	318.98	4.62	-2875.94	0.89	3231.44
3.19	14	SLD	1	318.98	4.62	-2438.31	0.89	2739.71
3.49	5	SLV	2	15.00	4.62	2410.31	0.77	3130.62
3.49	6	SLD	2	15.00	4.62	2127.18	0.77	2762.87

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.17	24	SLE R	1	17.50	4.62	4.62	-1057.40	1224.33	-273.78	34.90
0.17	32	SLE Q	1	17.50	4.62	4.62	-906.74	1049.88	-234.77	29.93
1.01	23	SLE R	1	100.85	4.62	4.62	253.74	-65.70	293.80	8.37
1.01	31	SLE Q	1	100.85	4.62	4.62	212.92	-55.13	246.53	7.03
3.19	23	SLE R	1	318.98	4.62	4.62	-1024.78	1186.56	-265.33	33.82
3.19	31	SLE Q	1	318.98	4.62	4.62	-874.08	1012.07	-226.31	28.85
3.49	24	SLE R	2	15.00	4.62	4.62	-758.18	877.87	-196.31	25.02
3.49	32	SLE Q	2	15.00	4.62	4.62	-693.76	803.27	-179.63	22.90

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	S _{rm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
44	0.17	32	SLE Q	1	14	1	17.50	-906.74	23.00	170.00	0.13	149.45	14.00	4.62	458.21	1049.88	1880.96	0.20	0.05
48	0.17	28	SLE F	1	14	1	17.50	-936.45	23.00	170.00	0.13	149.45	14.00	4.62	458.21	1084.28	1880.96	0.21	0.05
91	1.01	31	SLE Q	1	14	1	100.85	212.92	23.00	170.00	0.13	149.45	14.00	4.62	458.21	246.53	1880.96	0.05	0.01
95	1.01	27	SLE F	1	14	1	100.85	221.32	23.00	170.00	0.13	149.45	14.00	4.62	458.21	256.26	1880.96	0.05	0.01
139	3.19	31	SLE Q	1	14	1	318.98	-874.08	23.00	170.00	0.13	149.45	14.00	4.62	458.21	1012.07	1880.96	0.20	0.05
143	3.19	27	SLE F	1	14	1	318.98	-904.53	23.00	170.00	0.13	149.45	14.00	4.62	458.21	1047.33	1880.96	0.20	0.05
188	3.49	32	SLE Q	2	14	1	15.00	-693.76	23.00	170.00	0.13	149.45	14.00	4.62	458.21	803.27	1880.96	0.16	0.04
192	3.49	28	SLE F	2	14	1	15.00	-706.23	23.00	170.00	0.13	149.45	14.00	4.62	458.21	817.72	1880.96	0.16	0.04

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.17	0.39	0.21	ø8/ 4 2 br.	25.13	0.40	3888.71	1.53	28480.00	28480.00	28480.00	7.32
TG	0.39	2.98	2.59	ø8/16 2 br.	6.28	0.40	3655.90	2.50	11617.10	21456.90	11617.10	3.18
TG	2.98	3.19	0.21	ø8/ 4 2 br.	25.13	0.40	3900.23	1.53	28480.00	28480.00	28480.00	7.30
5 SLV	3.49	3.70	0.21	ø8/ 4 2 br.	25.13	0.40	2410.31	1.53	28480.00	28480.00	28480.00	11.82
5 SLV	3.70	4.99	1.29	ø8/16 2 br.	6.28	0.40	2274.15	2.50	11617.10	21456.90	11617.10	5.11

Travata n. 311

Nodi: 326 -249

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
14	R	40.00	24.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.15	20	SLU	1	15.00	7.63	4.62	7.63	3.30	-4390.82	-5655.40	1.288
0.15	6	SLD	1	15.00	7.63	4.62	7.63	3.30	-3351.45	-6615.76	1.974

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cmq>
0.15	20	SLU	1	15.00	4.62	4799.76	1.32	3648.02
0.15	6	SLD	1	15.00	4.62	3258.55	1.32	2476.64

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.15	24	SLE R	1	15.00	7.63	4.62	-3305.50	2361.71	-840.27	91.60
0.15	32	SLE Q	1	15.00	7.63	4.62	-2806.84	2005.42	-713.51	77.78

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s_{rm} <mm>	Φ	A_s <cmq>	$A_{c\ eff}$ <cmq>	σ_s <daN/cmq>	σ_{sr} <daN/cmq>	ϵ_{sm}	Wk <mm>
44	0.15	32	SLE Q	1	14	1	15.00	-2806.84	21.00	170.00	0.13	144.75	18.00	7.63	583.13	2005.42	1269.63	0.78	0.19
48	0.15	28	SLE F	1	14	1	15.00	-2906.99	21.00	170.00	0.13	144.75	18.00	7.63	583.13	2076.98	1269.63	0.82	0.20

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
20	SLU	0.15	0.36	0.21	$\emptyset 8/4$ 2 br.	25.13	0.40	4799.76	1.53	28480.00	28480.00	5.93
19	SLU	0.36	5.30	4.94	$\emptyset 8/16$ 2 br.	6.28	0.40	5278.73	2.50	11617.10	21456.90	2.20

Travata n. 312

Nodi: 327 -250

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
14	R	40.00	24.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.15	20	SLU	1	15.00	6.16	4.62	6.16	3.27	-4169.37	-4625.02	1.109
0.15	6	SLD	1	15.00	6.16	4.62	6.16	3.27	-3336.61	-5415.39	1.623

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cmq>
0.15	20	SLU	1	15.00	4.62	4959.51	1.35	3682.61
0.15	6	SLD	1	15.00	4.62	3397.11	1.35	2522.47

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.15	24	SLE R	1	15.00	6.16	4.62	-3139.93	2756.55	-808.26	93.49
0.15	32	SLE Q	1	15.00	6.16	4.62	-2657.99	2333.46	-684.21	79.14

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s_{rm} <mm>	Φ	A_s <cmq>	$A_{c\ eff}$ <cmq>	σ_s <daN/cmq>	σ_{sr} <daN/cmq>	ϵ_{sm}	Wk <mm>
44	0.15	32	SLE Q	1	14	1	15.00	-2657.99	23.00	113.33	0.13	124.11	14.00	6.16	487.68	2333.46	1494.83	0.90	0.19
48	0.15	28	SLE F	1	14	1	15.00	-2754.78	23.00	113.33	0.13	124.11	14.00	6.16	487.68	2418.43	1494.83	0.95	0.20

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
20	SLU	0.15	0.36	0.21	$\emptyset 8/4$ 2 br.	25.13	0.40	4959.51	1.53	28480.00	28480.00	5.74
20	SLU	0.36	5.30	4.94	$\emptyset 8/16$ 2 br.	6.28	0.40	4575.20	2.50	11617.10	21456.90	2.54

Travata n. 331

Relazione di calcolo

Nodi: 325 347 334 340

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Typo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.25	5	SLV	1	361.84	4.62	4.62	4.62	3.53	-4448.83	-5456.03	1.226
1.15	13	SLV	1	271.38	4.62	4.62	4.62	3.78	1886.37	4501.07	2.386
4.19	13	SLV	2	25.11	4.62	5.09	4.62	3.72	-4292.46	-5456.01	1.271
4.69	5	SLV	3	418.75	4.62	5.09	4.62	3.88	-4428.35	-5455.93	1.232
7.84	5	SLV	3	103.84	4.62	4.62	4.62	3.79	1972.69	4513.17	2.288
8.63	13	SLV	3	25.11	4.62	4.62	4.62	3.56	-4152.95	-5456.03	1.314
0.25	6	SLD	1	361.84	4.62	4.62	4.62	3.53	-3807.93	-6346.54	1.667
1.15	14	SLD	1	271.38	4.62	4.62	4.62	3.78	1501.53	5243.59	3.492
4.19	14	SLD	2	25.11	4.62	5.09	4.62	3.72	-3680.50	-6346.39	1.724
4.69	6	SLD	3	418.75	4.62	5.09	4.62	3.88	-3818.21	-6346.24	1.662
7.84	6	SLD	3	103.84	4.62	4.62	4.62	3.79	1555.37	5257.55	3.380
8.63	14	SLD	3	25.11	4.62	4.62	4.62	3.56	-3526.20	-6346.54	1.800

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.25	5	SLV	1	361.84	4.62	-3921.15	1.08	3616.99
0.25	6	SLD	1	361.84	4.62	-3599.41	1.08	3320.21
1.15	5	SLV	1	271.38	4.62	-2839.87	0.84	3382.85
1.15	6	SLD	1	271.38	4.62	-2518.13	0.84	2999.60
4.19	18	SLU	2	25.11	5.09	4689.89	1.37	3433.13
4.19	10	SLD	2	25.11	5.09	4258.43	1.37	3117.29
4.69	5	SLV	3	418.75	5.09	-3970.21	1.21	3291.72
4.69	6	SLD	3	418.75	5.09	-3655.99	1.21	3031.20
7.84	13	SLV	3	103.84	4.62	2796.00	0.83	3373.35
7.84	14	SLD	3	103.84	4.62	2481.77	0.83	2994.24
8.63	13	SLV	3	25.11	4.62	3793.39	1.06	3589.32
8.63	14	SLD	3	25.11	4.62	3479.17	1.06	3292.00

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.25	24	SLE R	1	361.84	4.62	4.62	-1852.51	1382.15	-353.63	35.55
0.25	32	SLE Q	1	361.84	4.62	4.62	-1665.40	1242.55	-317.92	31.96
1.15	23	SLE R	1	271.38	4.62	4.62	240.23	-45.86	179.24	4.61
1.15	31	SLE Q	1	271.38	4.62	4.62	214.78	-41.00	160.25	4.12
4.19	23	SLE R	2	25.11	4.62	5.09	-1827.22	1362.16	-341.03	34.48
4.19	31	SLE Q	2	25.11	4.62	5.09	-1638.74	1221.65	-305.85	30.92
4.69	24	SLE R	3	418.75	4.62	5.09	-1990.05	1483.54	-371.42	37.55
4.69	32	SLE Q	3	418.75	4.62	5.09	-1785.10	1330.76	-333.17	33.69
7.84	24	SLE R	3	103.84	4.62	4.62	184.07	-35.14	137.33	3.53
7.84	32	SLE Q	3	103.84	4.62	4.62	165.23	-31.54	123.27	3.17
8.63	23	SLE R	3	25.11	4.62	4.62	-1600.84	1194.38	-305.59	30.72
8.63	31	SLE Q	3	25.11	4.62	4.62	-1438.21	1073.04	-274.55	27.60

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
44	0.25	32	SLE Q	1	3	1	361.84	-1665.40	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1242.55	1977.14	0.24	0.06
48	0.25	28	SLE F	1	3	1	361.84	-1703.83	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1271.22	1977.14	0.25	0.06
91	1.15	31	SLE Q	1	3	1	271.38	214.78	23.00	120.00	0.16	140.21	14.00	4.62	364.56	160.25	1977.14	0.03	0.01
95	1.15	27	SLE F	1	3	1	271.38	219.23	23.00	120.00	0.16	140.21	14.00	4.62	364.56	163.56	1977.14	0.03	0.01
139	4.19	31	SLE Q	2	3	1	25.11	-1638.74	23.00	120.00	0.16	140.40	14.00	4.62	364.56	1221.65	1987.19	0.24	0.06
143	4.19	27	SLE F	2	3	1	25.11	-1675.84	23.00	120.00	0.16	140.40	14.00	4.62	364.56	1249.30	1987.19	0.24	0.06
188	4.69	32	SLE Q	3	3	1	418.75	-1785.10	23.00	120.00	0.16	140.40	14.00	4.62	364.56	1330.76	1987.19	0.26	0.06
192	4.69	28	SLE F	3	3	1	418.75	-1825.43	23.00	120.00	0.16	140.40	14.00	4.62	364.56	1360.83	1987.19	0.26	0.06
236	7.84	32	SLE Q	3	3	1	103.84	165.23	23.00	120.00	0.16	140.21	14.00	4.62	364.56	123.27	1977.14	0.02	0.01
240	7.84	28	SLE F	3	3	1	103.84	168.68	23.00	120.00	0.16	140.21	14.00	4.62	364.56	125.85	1977.14	0.02	0.01
283	8.63	31	SLE Q	3	3	1	25.11	-1438.21	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1073.04	1977.14	0.21	0.05
287	8.63	27	SLE F	3	3	1	25.11	-1471.25	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1097.69	1977.14	0.21	0.05

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.25	0.57	0.32	ø8/ 8 2 br.	12.57	0.30	5060.69	2.01	28399.80	28399.80	28399.80	5.61
TG	0.57	3.87	3.30	ø8/20 2 br.	5.03	0.30	4645.91	2.50	14161.80	24522.20	14161.80	3.05
TG	3.87	4.19	0.32	ø8/ 8 2 br.	12.57	0.30	5005.69	2.01	28399.80	28399.80	28399.80	5.67
TG	4.69	5.01	0.32	ø8/ 8 2 br.	12.57	0.30	4955.68	2.01	28399.80	28399.80	28399.80	5.73
TG	5.01	8.31	3.30	ø8/20 2 br.	5.03	0.30	4643.90	2.50	14161.80	24522.20	14161.80	3.05
TG	8.31	8.63	0.32	ø8/ 8 2 br.	12.57	0.30	5049.27	2.01	28399.80	28399.80	28399.80	5.62

Travata n. 333

Nodi: 325 326 327 328

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
14	R	40.00	24.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.25	9	SLV	1	24.76	4.62	4.62	4.62	3.91	-1795.52	-3535.82	1.969
2.47	9	SLV	1	247.14	4.62	4.62	4.62	4.01	1344.69	3102.46	2.307
2.87	9	SLV	2	20.00	4.62	4.62	4.62	3.94	-1806.62	-3535.81	1.957
5.13	9	SLV	2	245.79	4.62	4.62	4.62	4.02	1496.82	3112.38	2.079
5.63	1	SLV	3	25.28	4.62	4.62	4.62	3.99	1761.81	3090.78	1.754
7.72	1	SLV	3	234.14	4.62	4.62	4.62	3.86	-2036.85	-3535.86	1.736
0.25	10	SLD	1	24.76	4.62	4.62	4.62	3.91	-1476.69	-4151.59	2.811
2.47	2	SLD	1	247.14	4.62	4.62	4.62	4.01	-1169.46	-4151.73	3.550
2.87	10	SLD	2	20.00	4.62	4.62	4.62	3.94	-1477.58	-4151.65	2.810
5.13	10	SLD	2	245.79	4.62	4.62	4.62	4.02	1128.47	3663.45	3.246
5.63	2	SLD	3	25.28	4.62	4.62	4.62	3.99	1364.82	3638.51	2.666
7.72	2	SLD	3	234.14	4.62	4.62	4.62	3.86	-1661.09	-4151.55	2.499

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.25	9	SLV	1	24.76	4.62	2166.90	0.70	3077.91
0.25	10	SLD	1	24.76	4.62	1882.02	0.70	2673.26
2.47	1	SLV	1	247.14	4.62	-1831.11	0.61	3005.20
2.47	2	SLD	1	247.14	4.62	-1546.23	0.61	2537.65
2.87	9	SLV	2	20.00	4.62	2057.56	0.67	3054.23
2.87	10	SLD	2	20.00	4.62	1763.54	0.67	2617.78
5.13	1	SLV	2	245.79	4.62	-1782.84	0.60	2994.75
5.13	2	SLD	2	245.79	4.62	-1488.81	0.60	2500.85
5.63	9	SLV	3	25.28	4.62	1888.11	0.63	3017.54
5.63	10	SLD	3	25.28	4.62	1535.40	0.63	2453.84
7.72	1	SLV	3	234.14	4.62	-2353.55	0.75	3118.33
7.72	2	SLD	3	234.14	4.62	-2000.83	0.75	2651.00

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.25	22	SLE R	1	24.76	4.62	4.62	-510.72	591.35	-132.24	16.86
0.25	30	SLE Q	1	24.76	4.62	4.62	-473.74	548.52	-122.66	15.63
2.47	21	SLE R	1	247.14	4.62	4.62	-168.09	194.62	-43.52	5.55
2.47	29	SLE Q	1	247.14	4.62	4.62	-180.19	208.63	-46.65	5.95
2.87	22	SLE R	2	20.00	4.62	4.62	-466.47	540.11	-120.78	15.39
2.87	30	SLE Q	2	20.00	4.62	4.62	-441.47	511.17	-114.31	14.57
5.13	21	SLE R	2	245.79	4.62	4.62	-105.51	122.16	-27.32	3.48
5.13	29	SLE Q	2	245.79	4.62	4.62	-132.16	153.02	-34.22	4.36
5.63	21	SLE R	3	25.28	4.62	4.62	154.34	-39.96	178.71	5.09
5.63	29	SLE Q	3	25.28	4.62	4.62	123.01	-31.85	142.43	4.06
7.72	21	SLE R	3	234.14	4.62	4.62	-511.88	592.68	-132.53	16.89
7.72	29	SLE Q	3	234.14	4.62	4.62	-485.66	562.33	-125.75	16.03

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	S _{rm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
42	0.25	30	SLE Q	1	14	1	24.76	-473.74	23.00	170.00	0.13	149.45	14.00	4.62	458.21	548.52	1880.96	0.11	0.03
46	0.25	26	SLE F	1	14	1	24.76	-482.50	23.00	170.00	0.13	149.45	14.00	4.62	458.21	558.67	1880.96	0.11	0.03
89	2.47	29	SLE Q	1	14	1	247.14	-180.19	23.00	170.00	0.13	149.45	14.00	4.62	458.21	208.63	1880.96	0.04	0.01
93	2.47	25	SLE F	1	14	1	247.14	-176.39	23.00	170.00	0.13	149.45	14.00	4.62	458.21	204.24	1880.96	0.04	0.01
138	2.87	30	SLE Q	2	14	1	20.00	-441.47	23.00	170.00	0.13	149.45	14.00	4.62	458.21	511.17	1880.96	0.10	0.03
142	2.87	26	SLE F	2	14	1	20.00	-447.99	23.00	170.00	0.13	149.45	14.00	4.62	458.21	518.71	1880.96	0.10	0.03
185	5.13	29	SLE Q	2	14	1	245.79	-132.16	23.00	170.00	0.13	149.45	14.00	4.62	458.21	153.02	1880.96	0.03	0.01
189	5.13	25	SLE F	2	14	1	245.79	-125.19	23.00	170.00	0.13	149.45	14.00	4.62	458.21	144.96	1880.96	0.03	0.01
233	5.63	29	SLE Q	3	14	1	25.28	123.01	23.00	170.00	0.13	149.45	14.00	4.62	458.21	142.43	1880.96	0.03	0.01
237	5.63	25	SLE F	3	14	1	25.28	129.91	23.00	170.00	0.13	149.45	14.00	4.62	458.21	150.41	1880.96	0.03	0.01
281	7.72	29	SLE Q	3	14	1	234.14	-485.66	23.00	170.00	0.13	149.45	14.00	4.62	458.21	562.33	1880.96	0.11	0.03
285	7.72	25	SLE F	3	14	1	234.14	-491.51	23.00	170.00	0.13	149.45	14.00	4.62	458.21	569.11	1880.96	0.11	0.03

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.25	0.46	0.21	ø8/ 4 2 br.	25.13	0.40	3757.52	1.53	28480.00	28480.00	28480.00	7.58
TG	0.46	2.26	1.80	ø8/16 2 br.	6.28	0.40	3611.40	2.50	11617.10	21456.90	11617.10	3.22
TG	2.26	2.47	0.21	ø8/ 4 2 br.	25.13	0.40	3727.94	1.53	28480.00	28480.00	28480.00	7.64
TG	2.87	3.08	0.21	ø8/ 4 2 br.	25.13	0.40	3598.53	1.53	28480.00	28480.00	28480.00	7.91
TG	3.08	4.92	1.84	ø8/16 2 br.	6.28	0.40	3476.73	2.50	11617.10	21456.90	11617.10	3.34
TG	4.92	5.13	0.21	ø8/ 4 2 br.	25.13	0.40	3573.73	1.53	28480.00	28480.00	28480.00	7.97

Relazione di calcolo

TG	5.63	5.84	0.21	ø8/ 4 2 br.	25.13	0.40	3738.18	1.53	28480.00	28480.00	28480.00	7.62
TG	5.84	7.51	1.67	ø8/16 2 br.	6.28	0.40	3659.63	2.50	11617.10	21456.90	11617.10	3.17
TG	7.51	7.72	0.21	ø8/ 4 2 br.	25.13	0.40	3782.34	1.53	28480.00	28480.00	28480.00	7.53

Travata n. 335

Nodi: 328 330 350

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
14	R	40.00	24.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.17	5	SLV	1	17.50	4.62	4.62	4.62	3.82	-1908.36	-3535.86	1.853
2.28	13	SLV	1	228.37	4.62	4.62	4.62	3.84	-1737.74	-3535.86	2.035
2.69	13	SLV	2	20.13	4.62	4.62	4.62	3.72	-2599.96	-3535.95	1.360
5.25	5	SLV	2	276.18	4.62	4.62	4.62	3.72	-2450.45	-3535.92	1.443
0.17	6	SLD	1	17.50	4.62	4.62	4.62	3.82	-1576.69	-4151.52	2.633
2.28	14	SLD	1	228.37	4.62	4.62	4.62	3.84	-1433.77	-4151.51	2.896
2.69	14	SLD	2	20.13	4.62	4.62	4.62	3.72	-2146.18	-4151.37	1.934
5.25	6	SLD	2	276.18	4.62	4.62	4.62	3.72	-2029.84	-4151.37	2.045

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <cm>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.17	5	SLV	1	17.50	4.62	2498.22	0.79	3149.65
0.17	6	SLD	1	17.50	4.62	2196.79	0.79	2769.63
2.28	13	SLV	1	228.37	4.62	-2457.66	0.78	3140.87
2.28	14	SLD	1	228.37	4.62	-2156.23	0.78	2755.65
2.69	13	SLV	2	20.13	4.62	2896.15	0.90	3235.82
2.69	14	SLD	2	20.13	4.62	2554.65	0.90	2854.27
5.25	5	SLV	2	276.18	4.62	-2900.66	0.90	3236.80
5.25	6	SLD	2	276.18	4.62	-2559.17	0.90	2855.73

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.17	24	SLE R	1	17.50	4.62	4.62	-473.35	548.07	-122.56	15.62
0.17	32	SLE Q	1	17.50	4.62	4.62	-442.05	511.84	-114.45	14.59
2.28	23	SLE R	1	228.37	4.62	4.62	-431.38	499.47	-111.69	14.24
2.28	31	SLE Q	1	228.37	4.62	4.62	-393.93	456.12	-102.00	13.00
2.69	24	SLE R	2	20.13	4.62	4.62	-638.79	739.63	-165.39	21.08
2.69	32	SLE Q	2	20.13	4.62	4.62	-590.18	683.35	-152.81	19.48
5.25	23	SLE R	2	276.18	4.62	4.62	-640.09	741.14	-165.73	21.13
5.25	31	SLE Q	2	276.18	4.62	4.62	-587.86	680.66	-152.21	19.40

Verifiche stato limite di formazione delle fessure

Caso	Xg <cm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _s eff <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
44	0.17	32	SLE Q	1	14	1	17.50	-442.05	23.00	170.00	0.13	149.45	14.00	4.62	458.21	511.84	1880.96	0.10	0.03
48	0.17	28	SLE F	1	14	1	17.50	-448.23	23.00	170.00	0.13	149.45	14.00	4.62	458.21	518.99	1880.96	0.10	0.03
91	2.28	31	SLE Q	1	14	1	228.37	-393.93	23.00	170.00	0.13	149.45	14.00	4.62	458.21	456.12	1880.96	0.09	0.02
95	2.28	27	SLE F	1	14	1	228.37	-401.55	23.00	170.00	0.13	149.45	14.00	4.62	458.21	464.94	1880.96	0.09	0.02
140	2.69	32	SLE Q	2	14	1	20.13	-590.18	23.00	170.00	0.13	149.45	14.00	4.62	458.21	683.35	1880.96	0.13	0.03
144	2.69	28	SLE F	2	14	1	20.13	-599.85	23.00	170.00	0.13	149.45	14.00	4.62	458.21	694.55	1880.96	0.13	0.03
187	5.25	31	SLE Q	2	14	1	276.18	-587.86	23.00	170.00	0.13	149.45	14.00	4.62	458.21	680.66	1880.96	0.13	0.03
191	5.25	27	SLE F	2	14	1	276.18	-598.34	23.00	170.00	0.13	149.45	14.00	4.62	458.21	692.80	1880.96	0.13	0.03

Staffe - Verifiche armatura

CC	X0 <cm>	X1 <cm>	Lung. <cm>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic. T
TG	0.17	0.39	0.21	ø8/ 4 2 br.	25.13	0.40	4174.32	1.53	28480.00	28480.00	28480.00	6.82
TG	0.39	2.07	1.69	ø8/16 2 br.	6.28	0.40	3958.10	2.50	11617.10	21456.90	11617.10	2.94
TG	2.07	2.28	0.21	ø8/ 4 2 br.	25.13	0.40	4170.69	1.53	28480.00	28480.00	28480.00	6.83
TG	2.69	2.90	0.21	ø8/ 4 2 br.	25.13	0.40	3832.70	1.53	28480.00	28480.00	28480.00	7.43
TG	2.90	5.04	2.14	ø8/16 2 br.	6.28	0.40	3616.39	2.50	11617.10	21456.90	11617.10	3.21
TG	5.04	5.25	0.21	ø8/ 4 2 br.	25.13	0.40	3833.02	1.53	28480.00	28480.00	28480.00	7.43

Travata n. 336

Nodi: 347 348 336

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
14	R	40.00	24.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	X	AfE S	AfE I	AfEP S	AfEP I	My	Myu	Sic.
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Relazione di calcolo

<m>				<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
3.97	13	SLV	2	30.20	4.62	4.62	4.62	3.23	-1603.46	-3536.27	2.205
3.97	14	SLD	2	30.20	4.62	4.62	4.62	3.23	-1414.77	-4150.71	2.934

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm>
3.97	17	SLU	2	30.20	4.62	5157.87	1.38	3725.57
3.97	10	SLD	2	30.20	4.62	3689.24	1.38	2664.77

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm>	σ _f inf <daN/cm>	σ _c <daN/cm>
3.97	21	SLE R	2	30.20	4.62	4.62	-834.12	965.79	-215.97	27.53
3.97	29	SLE Q	2	30.20	4.62	4.62	-765.66	886.53	-198.24	25.27

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cm>	σ _{sz} <daN/cm>	ε _{sm}	Wk <mm>
41	3.97	29	SLE Q	2	14	1	30.20	-765.66	23.00	170.00	0.13	149.45	14.00	4.62	458.21	886.53	1880.96	0.17	0.04
45	3.97	25	SLE F	2	14	1	30.20	-778.10	23.00	170.00	0.13	149.45	14.00	4.62	458.21	900.93	1880.96	0.17	0.04

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
5 SLV	-0.00	3.76	3.76	ø8/16 2 br.	6.28	0.40	932.31	2.50	11617.10	21456.90	11617.10	12.46
17 SLU	3.76	3.97	0.21	ø8/ 4 2 br.	25.13	0.40	5157.87	1.53	28480.00	28480.00	28480.00	5.52

Travata n. 337

Nodi: 336 -249 -250 349 -251 -252 -253 350

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm>	Fctk <daN/cm>	Fcd <daN/cm>	Fctd <daN/cm>	Acc.	Fyk <daN/cm>	Fyd <daN/cm>
14	R	40.00	24.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.25	5	SLV	1	36.84	4.62	4.62	4.62	3.05	-2579.53	-3536.42	1.371
3.33	5	SLV	3	56.92	4.62	4.62	4.62	3.30	1321.78	2596.48	1.964
3.80	13	SLV	3	10.00	4.62	4.62	4.62	3.27	-2550.41	-3536.24	1.387
4.00	13	SLV	4	40.52	4.62	4.62	4.62	3.83	-1530.40	-3535.88	2.310
5.77	9	SLV	7	15.00	4.62	4.62	4.62	4.14	826.36	3196.34	3.868
0.25	6	SLD	1	36.84	4.62	4.62	4.62	3.05	-2305.01	-4150.46	1.801
3.33	6	SLD	3	56.92	4.62	4.62	4.62	3.30	1104.45	3066.81	2.777
3.80	14	SLD	3	10.00	4.62	4.62	4.62	3.27	-2256.23	-4150.77	1.840
4.00	14	SLD	4	40.52	4.62	4.62	4.62	3.83	-1340.07	-4151.49	3.098
5.77	10	SLD	7	15.00	4.62	4.62	4.62	4.14	640.21	3760.49	5.874

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm>
0.25	18	SLU	1	36.84	4.62	-6155.31	1.57	3913.04
0.25	2	SLD	1	36.84	4.62	-4483.27	1.57	2850.10
3.33	19	SLU	3	56.92	4.62	4824.64	1.32	3653.41
3.33	14	SLD	3	56.92	4.62	3879.40	1.32	2937.64
3.80	19	SLU	3	10.00	4.62	4971.03	1.35	3685.11
3.80	14	SLD	3	10.00	4.62	3992.01	1.35	2959.35
4.00	13	SLV	4	40.52	4.62	-2486.95	0.79	3147.21
4.00	14	SLD	4	40.52	4.62	-2214.27	0.79	2802.14
5.77	1	SLV	7	15.00	4.62	1388.46	0.48	2909.35
5.77	2	SLD	7	15.00	4.62	1115.16	0.48	2336.68

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm>	σ _f inf <daN/cm>	σ _c <daN/cm>
0.25	22	SLE R	1	36.84	4.62	4.62	-1562.51	1809.17	-404.56	51.57
0.25	30	SLE Q	1	36.84	4.62	4.62	-1352.14	1565.59	-350.09	44.62
3.33	22	SLE R	3	56.92	4.62	4.62	415.55	-107.59	481.15	13.71
3.33	30	SLE Q	3	56.92	4.62	4.62	340.15	-88.07	393.84	11.23
3.80	21	SLE R	3	10.00	4.62	4.62	-1390.53	1610.04	-360.03	45.89
3.80	29	SLE Q	3	10.00	4.62	4.62	-1222.49	1415.48	-316.52	40.35
4.00	21	SLE R	4	40.52	4.62	4.62	-760.83	880.93	-196.99	25.11
4.00	29	SLE Q	4	40.52	4.62	4.62	-663.52	768.26	-171.79	21.90
5.77	22	SLE R	7	15.00	4.62	4.62	23.08	-5.98	26.72	0.76
5.77	30	SLE Q	7	15.00	4.62	4.62	20.01	-5.18	23.16	0.66

Verifiche stato limite di formazione delle fessure

Caso	Xg <cm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
42	0.25	30	SLE Q	1	14	1	36.84	-1352.14	23.00	170.00	0.13	149.45	14.00	4.62	458.21	1565.59	1880.96	0.30	0.08
46	0.25	26	SLE F	1	14	1	36.84	-1393.71	23.00	170.00	0.13	149.45	14.00	4.62	458.21	1613.72	1880.96	0.31	0.08
90	3.33	30	SLE Q	3	14	1	56.92	340.15	23.00	170.00	0.13	149.45	14.00	4.62	458.21	393.84	1880.96	0.08	0.02
94	3.33	26	SLE F	3	14	1	56.92	354.86	23.00	170.00	0.13	149.45	14.00	4.62	458.21	410.87	1880.96	0.08	0.02
137	3.80	29	SLE Q	3	14	1	10.00	-1222.49	23.00	170.00	0.13	149.45	14.00	4.62	458.21	1415.48	1880.96	0.27	0.07
141	3.80	25	SLE F	3	14	1	10.00	-1256.53	23.00	170.00	0.13	149.45	14.00	4.62	458.21	1454.89	1880.96	0.28	0.07
185	4.00	29	SLE Q	4	14	1	40.52	-663.52	23.00	170.00	0.13	149.45	14.00	4.62	458.21	768.26	1880.96	0.15	0.04
189	4.00	25	SLE F	4	14	1	40.52	-682.98	23.00	170.00	0.13	149.45	14.00	4.62	458.21	790.79	1880.96	0.15	0.04
234	5.77	30	SLE Q	7	14	1	15.00	20.01	23.00	170.00	0.13	149.45	14.00	4.62	458.21	23.16	1880.96	0.00	0.00
238	5.77	26	SLE F	7	14	1	15.00	20.51	23.00	170.00	0.13	149.45	14.00	4.62	458.21	23.75	1880.96	0.00	0.00

Staffe - Verifiche armatura

CC	X0 <cm>	X1 <cm>	Lung. <cm>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T	
18	SLU	0.25	0.46	0.21	ø8/ 4 2 br.	25.13	0.40	6155.31	1.53	28480.00	28480.00	28480.00	4.63
18	SLU	0.46	3.59	3.13	ø8/16 2 br.	6.28	0.40	5959.63	2.50	11617.10	21456.90	11617.10	1.95
19	SLU	3.59	3.80	0.21	ø8/ 4 2 br.	25.13	0.40	4971.03	1.53	28480.00	28480.00	28480.00	5.73
TG		4.00	4.21	0.21	ø8/ 4 2 br.	25.13	0.40	4013.27	1.53	28480.00	28480.00	28480.00	7.10
TG		4.21	5.56	1.35	ø8/16 2 br.	6.28	0.40	3962.87	2.50	11617.10	21456.90	11617.10	2.93
TG		5.56	5.77	0.21	ø8/ 4 2 br.	25.13	0.40	3887.00	1.53	28480.00	28480.00	28480.00	7.33

Travata n. 340

Nodi: 348 -272

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
14	R	40.00	24.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.00	20	SLU	1	505.12	6.16	4.62	6.16	3.35	-4088.77	-4625.00	1.131
2.77	20	SLU	1	228.44	4.62	4.62	4.62	4.55	2766.51	3489.36	1.261
5.05	19	SLU	1	0.00	4.62	4.62	4.62	3.36	-2515.93	-3536.17	1.406
0.00	6	SLD	1	505.12	6.16	4.62	6.16	3.35	-3024.02	-5415.34	1.791
2.77	6	SLD	1	228.44	4.62	4.62	4.62	4.55	1771.11	4099.09	2.314
5.05	14	SLD	1	0.00	4.62	4.62	4.62	3.36	-1941.19	-4150.92	2.138

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <cm>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cmq>
0.00	20	SLU	1	505.12	4.62	-4571.09	1.27	3598.51
0.00	6	SLD	1	505.12	4.62	-3072.75	1.27	2418.97
2.77	13	SLV	1	228.44	4.62	197.71	0.06	3046.06
2.77	14	SLD	1	228.44	4.62	153.80	0.06	2369.53
5.05	19	SLU	1	0.00	4.62	4494.50	1.25	3581.92
5.05	14	SLD	1	0.00	4.62	2998.07	1.25	2389.33

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.00	24	SLE R	1	505.12	6.16	4.62	-3078.66	2702.77	-792.49	91.67
0.00	32	SLE Q	1	505.12	6.16	4.62	-2623.72	2303.38	-675.38	78.12
2.77	24	SLE R	1	228.44	4.62	4.62	2078.83	-538.24	2407.00	68.61
2.77	32	SLE Q	1	228.44	4.62	4.62	1758.44	-455.29	2036.04	58.03
5.05	23	SLE R	1	0.00	4.62	4.62	-1892.13	2190.83	-489.90	62.45
5.05	31	SLE Q	1	0.00	4.62	4.62	-1594.67	1846.40	-412.89	52.63

Verifiche stato limite di formazione delle fessure

Caso	Xg <cm>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
43	0.00	31	SLE Q	1	14	1	505.12	-2596.01	23.00	113.33	0.13	124.11	14.00	6.16	487.68	2279.05	1245.70	0.94	0.20
48	0.00	28	SLE F	1	14	1	505.12	-2714.40	23.00	113.33	0.13	124.11	14.00	6.16	487.68	2382.98	1494.83	0.93	0.20
92	2.77	32	SLE Q	1	14	1	228.44	1758.44	23.00	170.00	0.13	149.45	14.00	4.62	458.21	2036.04	1880.96	0.57	0.14
96	2.77	28	SLE F	1	14	1	228.44	1822.55	23.00	170.00	0.13	149.45	14.00	4.62	458.21	2110.26	1880.96	0.62	0.16
139	5.05	31	SLE Q	1	14	1	0.00	-1594.67	23.00	170.00	0.13	149.45	14.00	4.62	458.21	1846.40	1880.96	0.43	0.11
143	5.05	27	SLE F	1	14	1	0.00	-1654.37	23.00	170.00	0.13	149.45	14.00	4.62	458.21	1915.54	1880.96	0.48	0.12

Staffe - Verifiche armatura

CC	X0 <cm>	X1 <cm>	Lung. <cm>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T	
20	SLU	0.00	0.21	0.21	ø8/ 4 2 br.	25.13	0.40	4571.09	1.53	28480.00	28480.00	28480.00	6.23
20	SLU	0.21	4.84	4.63	ø8/16 2 br.	6.28	0.40	4307.51	2.50	11617.10	21456.90	11617.10	2.70
19	SLU	4.84	5.05	0.21	ø8/ 4 2 br.	25.13	0.40	4494.50	1.53	28480.00	28480.00	28480.00	6.34

Travata n. 341

Nodi: 340 -272 344

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.15	5	SLV	1	364.50	4.62	4.62	4.62	3.76	-4114.97	-5455.99	1.326
3.80	5	SLV	1	0.00	4.62	4.62	4.62	4.28	2715.78	5076.70	1.869
5.05	13	SLV	2	20.11	4.62	4.62	4.62	3.12	-4881.24	-5456.23	1.118
0.15	6	SLD	1	364.50	4.62	4.62	4.62	3.76	-3657.11	-6346.33	1.735
3.80	6	SLD	1	0.00	4.62	4.62	4.62	4.28	2475.05	5908.10	2.387
5.05	14	SLD	2	20.11	4.62	4.62	4.62	3.12	-4433.92	-6346.90	1.431

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.15	5	SLV	1	364.50	4.62	-2908.75	0.86	3397.77
0.15	6	SLD	1	364.50	4.62	-2723.11	0.86	3180.92
3.80	13	SLV	1	0.00	4.62	994.72	0.33	2983.31
3.80	14	SLD	1	0.00	4.62	809.08	0.33	2426.55
5.05	17	SLU	2	20.11	4.62	5858.69	1.50	3913.04
5.05	14	SLD	2	20.11	4.62	4679.45	1.50	3125.42

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.15	22	SLE R	1	364.50	4.62	4.62	-2225.74	1660.61	-424.88	42.71
0.15	30	SLE Q	1	364.50	4.62	4.62	-2060.65	1537.44	-393.37	39.54
3.80	22	SLE R	1	0.00	4.62	4.62	1901.16	-362.92	1418.45	36.48
3.80	30	SLE Q	1	0.00	4.62	4.62	1635.81	-312.27	1220.47	31.39
5.05	21	SLE R	2	20.11	4.62	4.62	-3186.02	2377.07	-608.19	61.13
5.05	29	SLE Q	2	20.11	4.62	4.62	-2874.59	2144.71	-548.74	55.16

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
42	0.15	30	SLE Q	1	3	1	364.50	-2060.65	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1537.44	1977.14	0.30	0.07
46	0.15	26	SLE F	1	3	1	364.50	-2095.13	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1563.16	1977.14	0.30	0.07
90	3.80	30	SLE Q	1	3	1	0.00	1635.81	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1220.47	1977.14	0.24	0.06
94	3.80	26	SLE F	1	3	1	0.00	1689.89	23.00	120.00	0.16	140.21	14.00	4.62	364.56	1260.82	1977.14	0.24	0.06
137	5.05	29	SLE Q	2	3	1	20.11	-2874.59	23.00	120.00	0.16	140.21	14.00	4.62	364.56	2144.71	1977.14	0.60	0.14
141	5.05	25	SLE F	2	3	1	20.11	-2935.36	23.00	120.00	0.16	140.21	14.00	4.62	364.56	2190.06	1977.14	0.63	0.15

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.15	0.47	0.32	ø8/ 8 2 br.	12.57	0.30	3473.78	2.01	28399.80	28399.80	28399.80	8.18
17 SLU	0.47	4.73	4.25	ø8/20 2 br.	5.03	0.30	5535.23	2.50	14161.80	24522.20	14161.80	2.56
17 SLU	4.73	5.05	0.32	ø8/ 8 2 br.	12.57	0.30	5858.69	2.01	28399.80	28399.80	28399.80	4.85

Travata n. 342

Nodi: 352 345

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.15	5	SLV	1	14.99	4.62	7.63	4.62	5.17	-3476.98	-5455.43	1.569
1.49	5	SLV	1	149.05	4.62	7.63	4.62	5.65	4583.03	6622.80	1.445
0.15	6	SLD	1	14.99	4.62	7.63	4.62	5.17	-2814.26	-6345.42	2.255
1.49	6	SLD	1	149.05	4.62	7.63	4.62	5.65	3679.91	7691.15	2.090

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ _f inf <daN/cm²>
0.15	5	SLV	1	14.99	7.63	6107.51	2.47	2474.45
0.15	6	SLD	1	14.99	7.63	5000.73	2.47	2026.04
1.49	5	SLV	1	149.05	7.63	5293.92	1.99	2663.24
1.49	6	SLD	1	149.05	7.63	4187.14	1.99	2106.44

Relazione di calcolo

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.15	24	SLE R	1	14.99	4.62	7.63	-572.00	424.96	-95.11	9.93
0.15	32	SLE Q	1	14.99	4.62	7.63	-541.11	402.01	-89.97	9.39
1.49	24	SLE R	1	149.05	4.62	7.63	620.21	-110.00	285.35	10.06
1.49	32	SLE Q	1	149.05	4.62	7.63	581.98	-103.22	267.76	9.44

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s_{rm} <mm>	Φ	A_s <cmq>	$A_{c\ eff}$ <cmq>	σ_s <daN/cmq>	σ_{sz} <daN/cmq>	ϵ_{sm}	Wk <mm>
44	0.15	32	SLE Q	1	3	1	14.99	-541.11	23.00	120.00	0.16	141.39	14.00	4.62	364.56	402.01	2039.14	0.08	0.02
48	0.15	28	SLE F	1	3	1	14.99	-548.95	23.00	120.00	0.16	141.39	14.00	4.62	364.56	407.83	2039.14	0.08	0.02
92	1.49	32	SLE Q	1	3	1	149.05	581.98	21.00	120.00	0.14	123.70	18.00	7.63	451.85	267.76	1341.94	0.05	0.01
96	1.49	28	SLE F	1	3	1	149.05	591.86	21.00	120.00	0.14	123.70	18.00	7.63	451.85	272.31	1341.94	0.05	0.01

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.15	0.47	0.32	$\emptyset 8 / 8$ 2 br.	12.57	0.30	9407.63	2.01	28399.80	28399.80	28399.80	3.02
TG	0.47	1.17	0.70	$\emptyset 8 / 20$ 2 br.	5.03	0.30	9213.72	2.50	14161.80	24522.20	14161.80	1.54
TG	1.17	1.49	0.32	$\emptyset 8 / 8$ 2 br.	12.57	0.30	8999.68	2.01	28399.80	28399.80	28399.80	3.16

Travata n. 343

Nodi: 344 -273 346 345

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
3R		30.00	35.00	3.00	3.00	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	Myu <daNm>	Sic.
0.25	1	SLV	1	115.17	4.62	4.62	4.62	3.77	-3063.28	-5455.95	1.781
1.40	13	SLV	2	280.05	4.62	4.62	4.62	4.02	1381.65	4772.94	3.455
4.05	13	SLV	2	15.16	4.62	4.62	4.62	3.82	-2741.41	-5455.97	1.990
4.35	1	SLV	3	291.70	4.62	4.62	4.62	3.78	-2639.27	-5455.96	2.067
7.12	9	SLV	3	15.16	4.62	4.62	4.62	3.81	-2737.00	-5455.92	1.993
0.25	2	SLD	1	115.17	4.62	4.62	4.62	3.77	-2598.05	-6346.33	2.443
1.40	14	SLD	2	280.05	4.62	4.62	4.62	4.02	1111.13	5557.20	5.001
4.05	14	SLD	2	15.16	4.62	4.62	4.62	3.82	-2337.64	-6346.31	2.715
4.35	2	SLD	3	291.70	4.62	4.62	4.62	3.78	-2201.33	-6346.36	2.883
7.12	10	SLD	3	15.16	4.62	4.62	4.62	3.81	-2240.73	-6346.30	2.832

Stato limite ultimo - Ferri longitudinali - Verifiche armatura a taglio

Xg <m>	CC	TCC	El	X <cm>	AfE I <cmq>	Tz <daN>	AfEP I <cmq>	σ_f inf <daN/cmq>
0.25	1	SLV	1	115.17	4.62	-2887.67	0.85	3393.20
0.25	2	SLD	1	115.17	4.62	-2542.49	0.85	2987.59
1.40	5	SLV	2	280.05	4.62	-1911.25	0.60	3181.77
1.40	6	SLD	2	280.05	4.62	-1667.25	0.60	2775.56
4.05	13	SLV	2	15.16	4.62	2686.89	0.80	3349.72
4.05	14	SLD	2	15.16	4.62	2442.89	0.80	3045.53
4.35	1	SLV	3	291.70	4.62	-2849.36	0.84	3384.90
4.35	2	SLD	3	291.70	4.62	-2511.65	0.84	2983.72
7.12	9	SLV	3	15.16	4.62	2723.67	0.81	3357.69
7.12	10	SLD	3	15.16	4.62	2385.95	0.81	2941.36

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.25	22	SLE R	1	115.17	4.62	4.62	-1062.26	792.55	-202.78	20.38
0.25	30	SLE Q	1	115.17	4.62	4.62	-980.96	731.89	-187.26	18.82
1.40	21	SLE R	2	280.05	4.62	4.62	166.89	-31.86	124.52	3.20
1.40	29	SLE Q	2	280.05	4.62	4.62	168.03	-32.08	125.37	3.22
4.05	21	SLE R	2	15.16	4.62	4.62	-983.51	733.79	-187.75	18.87
4.05	29	SLE Q	2	15.16	4.62	4.62	-930.39	694.16	-177.61	17.85
4.35	22	SLE R	3	291.70	4.62	4.62	-723.77	540.00	-138.16	13.89
4.35	30	SLE Q	3	291.70	4.62	4.62	-668.08	498.45	-127.53	12.82
7.12	21	SLE R	3	15.16	4.62	4.62	-523.36	390.47	-99.91	10.04
7.12	29	SLE Q	3	15.16	4.62	4.62	-504.07	376.09	-96.22	9.67

Verifiche stato limite di formazione delle fessure

Caso	Xg <m>	CC	TCC	El	Sez.	Crit.	X <cm>	My <daNm>	c <mm>	s <mm>	K3	s_{rm} <mm>	Φ	A_s <cmq>	$A_{c\ eff}$ <cmq>	σ_s <daN/cmq>	σ_{sz} <daN/cmq>	ϵ_{sm}	Wk <mm>
42	0.25	30	SLE Q	1	3	1	115.17	-980.96	23.00	120.00	0.16	140.21	14.00	4.62	364.56	731.89	1977.14	0.14	0.03
46	0.25	26	SLE F	1	3	1	115.17	-997.65	23.00	120.00	0.16	140.21	14.00	4.62	364.56	744.34	1977.14	0.14	0.03
89	1.40	29	SLE Q	2	3	1	280.05	168.03	23.00	120.00	0.16	140.21	14.00	4.62	364.56	125.37	1977.14	0.02	0.01

Relazione di calcolo

93	1.40	25	SLE F	2	3	1	280.05	167.82	23.00	120.00	0.16	140.21	14.00	4.62	364.56	125.21	1977.14	0.02	0.01
137	4.05	29	SLE Q	2	3	1	15.16	-930.39	23.00	120.00	0.16	140.21	14.00	4.62	364.56	694.16	1977.14	0.13	0.03
141	4.05	25	SLE F	2	3	1	15.16	-940.93	23.00	120.00	0.16	140.21	14.00	4.62	364.56	702.03	1977.14	0.14	0.03
186	4.35	30	SLE Q	3	3	1	291.70	-668.08	23.00	120.00	0.16	140.21	14.00	4.62	364.56	498.45	1977.14	0.10	0.02
190	4.35	26	SLE F	3	3	1	291.70	-679.38	23.00	120.00	0.16	140.21	14.00	4.62	364.56	506.88	1977.14	0.10	0.02
233	7.12	29	SLE Q	3	3	1	15.16	-504.07	23.00	120.00	0.16	140.21	14.00	4.62	364.56	376.09	1977.14	0.07	0.02
237	7.12	25	SLE F	3	3	1	15.16	-507.75	23.00	120.00	0.16	140.21	14.00	4.62	364.56	378.83	1977.14	0.07	0.02

Staffe - Verifiche armatura

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
TG	0.25	0.57	0.32	ø8/ 8 2 br.	12.57	0.30	4139.88	2.01	28399.80	28399.80	28399.80	6.86
TG	0.57	3.73	3.16	ø8/20 2 br.	5.03	0.30	3885.04	2.50	14161.80	24522.20	14161.80	3.65
TG	3.73	4.05	0.32	ø8/ 8 2 br.	12.57	0.30	4125.92	2.01	28399.80	28399.80	28399.80	6.88
TG	4.35	4.67	0.32	ø8/ 8 2 br.	12.57	0.30	4840.85	2.01	28399.80	28399.80	28399.80	5.87
TG	4.67	6.80	2.13	ø8/20 2 br.	5.03	0.30	4555.23	2.50	14161.80	24522.20	14161.80	3.11
TG	6.80	7.12	0.32	ø8/ 8 2 br.	12.57	0.30	4828.18	2.01	28399.80	28399.80	28399.80	5.88

Verifiche e armature pilastri

Simbologia

- Xg = Coordinata progressiva (dal primo nodo) in cui viene effettuato il progetto/verifica
- CC = Combinazione delle condizioni di carico elementari
- e = eccentricità aggiuntiva in caso di compressione o pressoflessione
- α = amplificazione per gerarchia delle resistenze
- TG = taglio da gerarchia delle resistenze
- TCC = Tipo di combinazione di carico
- SLU = Stato limite ultimo
- SLU S = Stato limite ultimo (azione sismica)
- SLE R = Stato limite d'esercizio, combinazione rara
- SLE F = Stato limite d'esercizio, combinazione frequente
- SLE Q = Stato limite d'esercizio, combinazione quasi permanente
- SLD = Stato limite di danno
- SLV = Stato limite di salvaguardia della vita
- SLC = Stato limite di prevenzione del collasso
- SLO = Stato limite di operatività
- SLU I = Stato limite di resistenza al fuoco
- El = Elemento (asta) in cui viene effettuato il progetto/verifica (progressivo sul numero di aste)
- Sez. = Numero della sezione
- X = Coordinata progressiva rispetto al nodo iniziale
- N = Sforzo normale
- Mz = Momento flettente intorno all'asse Z
- My = Momento flettente intorno all'asse Y
- α_y = Fattore di amplificazione momenti My per gerarchia delle resistenze
- My ver. = Momento flettente di verifica intorno all'asse Y
- c = Ricoprimento dell'armatura
- s = Distanza minima tra le barre
- K3 = Coefficiente di forma del diagramma delle tensioni prima della fessurazione
- s_{sm} = Distanza media tra le fessure
- Φ = Diametro della barra
- A_s = Area complessiva dei ferri nell'area di calcestruzzo efficace
- A_{c eff} = Area di calcestruzzo efficace
- σ_s = Tensione nell'acciaio nella sezione fessurata
- σ_{sr} = Tensione nell'acciaio corrispondente al raggiungimento della resistenza a trazione nel calcestruzzo
- ε_{sm} = Deformazione unitaria media dell'armatura (*1000)
- Wk = Apertura delle fessure
- α_z = Fattore di amplificazione momenti Mz per gerarchia delle resistenze
- Mz ver. = Momento flettente di verifica intorno all'asse Z
- Nu = Sforzo normale ultimo
- Myu,s = Momento resistente (ridotto per stabilità) intorno all'asse Y
- Myu = Momento ultimo intorno all'asse Y
- Mzu,s = Momento resistente (ridotto per stabilità) intorno all'asse Z
- Mzu = Momento ultimo intorno all'asse Z
- α = Angolo asse neutro a rottura
- ε_v = Deformazione nell'acciaio (*1000)
- Sic. = Sicurezza a rottura
- l₀ = Lunghezza libera di inflessione
- λ = Snellezza massima
- λ* = Snellezza limite
- AfT = Area di ferro tesa
- AfC = Area di ferro compressa
- σ_c = Tensione nel calcestruzzo
- σ_f = Tensione nel ferro
- X0 = Coordinata progressiva (dal nodo iniziale) dell'inizio del tratto
- X1 = Coordinata progressiva (dal nodo iniziale) della fine del tratto
- Staff. = Staffatura adottata
- Br_y = Numero bracci in dir. Y locale
- Br_z = Numero bracci in dir. Z locale
- bw_y = Larghezza membratura resistente al taglio in dir. Y
- Vsdu_y = Taglio agente in dir. Y

Relazione di calcolo

$ctg\theta_{,y}$ = Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo in dir. Y
 $VRsd_{,y}$ = Taglio ultimo lato armatura in dir. Y
 $VRcd_{,y}$ = Taglio ultimo lato calcestruzzo in dir. Y
 $bw_{,z}$ = Larghezza membratura resistente al taglio in dir. Z
 $Vsdu_{,z}$ = Taglio agente in dir. Z
 $ctg\theta_{,z}$ = Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo in dir. Z
 $VRsd_{,z}$ = Taglio ultimo lato armatura in dir. Z
 $VRcd_{,z}$ = Taglio ultimo lato calcestruzzo in dir. Z
 Sic.T = Sicurezza a rottura per taglio
 Nodo = Numero del nodo
 Conf. = Nodo confinato
 S = Si
 N = No
 F. = Identificativo faccia del nodo
 Y+ = Faccia sul lato positivo Y locale pilastro
 Z+ = Faccia sul lato positivo Z locale pilastro
 Y- = Faccia sul lato negativo Y locale pilastro
 Z- = Faccia sul lato negativo Z locale pilastro
 Mod. = Modalità di verifica faccia
 I = Interna
 E = Esterna
 Br. = Numero bracci
 As1 = Area di ferro superiore delle travi incidenti sulla faccia
 As2 = Area di ferro inferiore delle travi incidenti sulla faccia
 Bj = Larghezza effettiva utile del nodo
 Hjc = Distanza tra armature pilastro
 Hjw = Distanza tra armature trave
 Ash = Area totale della sezione della staffa
 Rgsn = Rapporto geometrico di staffatura nodo (7.4.29)
 Tipo = Tipologia
 2C = Doppia C lato labbri
 2Cdx = Doppia C lato costola
 2I = Doppia I
 2L = Doppia L lato labbri
 2Ldx = Doppia L lato costole
 C = C
 Cdx = C destra
 Cir. = Circolare
 Cir.c = Circolare cava
 I = I
 L = L
 Ldx = L destra
 Om. = Omega
 Pg = Pi greco
 Pr = Poligono regolare
 Prc = Poligono regolare cavo
 Pc = Per coordinate
 Ia = Inerzie assegnate
 R = Rettangolare
 Rc = Rettangolare cava
 T = T
 U = U
 Ur = U rovescia
 V = V
 Vr = V rovescia
 Z = Z
 Zdx = Z destra
 Ts = T stondata
 Ls = L stondata
 Cs = C stondata
 Is = I stondata
 Dis. = Disegnata
 B = Base
 H = Altezza
 R = Raggio
 Cf = Copriferro
 Cls = Tipo di calcestruzzo
 Fck = Resistenza caratteristica cilindrica a compressione del calcestruzzo
 Fctk = Resistenza caratteristica a trazione del calcestruzzo
 Fcd = Resistenza di calcolo a compressione del calcestruzzo
 Fctd = Resistenza di calcolo a trazione del calcestruzzo
 Acc. = Tipo di acciaio
 Fyk = Tensione caratteristica di snervamento dell'acciaio
 Fyd = Resistenza di calcolo dell'acciaio
 bw = Larghezza membratura resistente al taglio
 Vsdu = Taglio agente nella direzione del momento ultimo
 $ctg\theta$ = Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo
 $VRsd$ = Taglio ultimo lato armatura
 $VRcd$ = Taglio ultimo lato calcestruzzo

Pilastrata n. 1

Relazione di calcolo

Nodi: 1 101 201

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Typo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
5	R	30.00	50.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _r	Sic.
3.56	1 (α)	SLV	2	5	0.00	-10830.90	-8828.64	2.17	-19162.50	-3992.05	1.10	-4391.26	-10830.90	-19164.00	-4408.95	213.75	5.58	1.000
6.91	1	SLV	2	5	335.00	-9574.69	6833.86			3043.12			-9574.68	15973.80	7213.82	53.44	4.81	2.343
-0.25	2	SLD	1	5	0.00	-29578.10	-10774.50			-2479.63			-29578.10	-24717.40	-5888.17	213.75	5.59	2.298
-0.25	2	SLD	1	5	0.00	-29578.10	-10774.50			-2479.63			-29578.10	-24717.40	-5888.17	213.75	5.59	2.298
3.21	2	SLD	1	5	346.00	-28280.60	6040.26			2579.67			-28280.60	21368.40	8933.93	50.63	4.88	3.526
3.56	2	SLD	2	5	0.00	-11183.40	-7791.14			-3668.03			-11183.40	-19110.00	-8916.80	233.44	5.46	2.449
6.91	2	SLD	2	5	335.00	-9927.17	5733.70			2712.12			-9927.16	18972.20	8866.80	53.44	5.52	3.302

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	30.73
-0.25	1	3.81	43.99	30.73
3.21	1	3.81	43.99	30.73

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Myu <daNm>	Mzu,s <daNm>	Mzu <daNm>	α <grad>
-0.25	1	SLV	1	5	0.00	-28790.00	-13175.70			-2832.82			-28790.00	-20297.10	-20996.90	-4320.34	-4461.66	213.75
-0.25	1	SLV	1	5	0.00	-28790.00	-13175.70			-2832.82			-28790.00	-20297.10	-20996.90	-4320.34	-4461.66	213.75
3.21	15 (α)	SLV	1	5	346.00	-30506.90	4747.03	3.43	16284.40	2301.62	1.23	2837.21	-30506.90	21194.80	21968.70	3492.20	3601.74	28.8

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
-0.25	21	SLE R	1	5	0.00	-35137.90	-1538.74	-2663.63	2.54	22.90	52.39	654.70
-0.25	29	SLE Q	1	5	0.00	-32359.70	-1264.96	-2420.03	2.54	22.90	46.02	579.97
-0.25	21	SLE R	1	5	0.00	-35137.90	-1538.74	-2663.63	2.54	22.90	52.39	654.70
-0.25	29	SLE Q	1	5	0.00	-32359.70	-1264.96	-2420.03	2.54	22.90	46.02	579.97
3.21	21	SLE R	1	5	346.00	-33840.40	2666.25	4860.05	10.18	15.27	90.24	1052.72
3.21	29	SLE Q	1	5	346.00	-31062.20	2183.23	4386.15	7.63	17.81	77.54	914.04
3.56	21	SLE R	2	5	0.00	-13220.90	-3012.94	-4716.12	15.27	10.18	100.77	1517.85
3.56	29	SLE Q	2	5	0.00	-12419.00	-2552.21	-4360.54	15.27	10.18	88.82	1312.17
6.91	21	SLE R	2	5	335.00	-11964.70	1716.07	1873.23	12.72	12.72	47.61	534.54
6.91	29	SLE Q	2	5	335.00	-11162.70	1554.68	1886.33	12.72	12.72	44.97	505.94

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
-0.25	29	SLE Q	1	5	0.00	-32359.70	-2420.03	-1264.96	39.00	252.00	0.13	221.16	18.00	2.54	262.28	72.62	232.87	0.01	0.01
-0.25	29	SLE Q	1	5	0.00	-32359.70	-2420.03	-1264.96	39.00	252.00	0.13	221.16	18.00	2.54	262.28	72.62	232.87	0.01	0.01
3.21	29	SLE Q	1	5	346.00	-31062.20	4386.15	2183.23	39.00	102.00	0.13	173.64	18.00	7.63	638.19	566.91	588.88	0.13	0.04
3.56	29	SLE Q	2	5	0.00	-12419.00	-4360.54	-2552.21	39.00	102.00	0.13	164.58	18.00	12.72	935.60	1312.17	963.32	0.47	0.13
6.91	29	SLE Q	2	5	335.00	-11162.70	1886.33	1554.68	39.00	102.00	0.13	168.23	18.00	12.72	987.15	505.94	794.87	0.10	0.03

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	V _{sdu,y} <daN>	ctgθ _y	V _{Rsd,y} <daN>	V _{Rcd,y} <daN>	b _{w,z} <cm>	V _{sdu,z} <daN>	ctgθ _z	V _{Rsd,z} <daN>	V _{Rcd,z} <daN>	Sic. T
-0.25	0.33	ø8/10	2	2	17	SLV	0.50	1637.77	2.50	22216.30	38085.50	0.30	2856.07	2.50	39918.40	41059.50	13.56
-0.25	0.33	ø8/10	2	2	10 (TG)	SLD	0.50	3993.89	2.50	25548.70	52501.00	0.30	15442.50	2.50	45906.20	56600.70	2.97
-0.25	0.33	ø8/10	2	2	4 (TG)	SLD	0.50	7619.70	2.50	25548.70	52266.20	0.30	9169.63	2.50	45906.20	56347.50	3.35
-0.25	0.33	ø8/10	2	2	9 (TG)	SLV	0.50	1897.00	2.50	22216.30	36574.50	0.30	14581.40	2.48	39634.40	39634.40	2.72
-0.25	0.33	ø8/10	2	2	7 (TG)	SLV	0.50	6335.35	2.50	22216.30	36183.20	0.30	7773.37	2.47	39387.20	39387.20	3.51
0.33	2.63	ø8/20	2	2	17	SLV	0.50	1637.77	2.50	11108.10	38049.00	0.30	2856.07	2.50	19959.20	41020.10	6.78
0.33	2.63	ø8/20	2	2	10 (TG)	SLD	0.50	3993.89	2.50	12774.30	52501.00	0.30	15442.50	2.50	22953.10	56600.70	1.49
0.33	2.63	ø8/20	2	2	4 (TG)	SLD	0.50	7619.70	2.50	12774.30	52266.20	0.30	9169.63	2.50	22953.10	56347.50	1.68
0.33	2.63	ø8/20	2	2	9 (TG)	SLV	0.50	1702.02	2.50	11108.10	35774.50	0.30	14271.50	2.50	19959.20	38568.00	1.40
0.33	2.63	ø8/20	2	2	9 (TG)	SLV	0.50	1897.00	2.50	11108.10	36574.50	0.30	14581.40	2.50	19959.20	39430.50	1.37
0.33	2.63	ø8/20	2	2	7 (TG)	SLV	0.50	6335.35	2.50	11108.10	36183.20	0.30	7773.37	2.50	19959.20	39008.60	1.75
2.63	3.21	ø8/10	2	2	17	SLV	0.50	1637.77	2.50	22216.30	37903.00	0.30	2856.07	2.50	39918.40	40862.80	13.56
2.63	3.21	ø8/10	2	2	10 (TG)	SLD	0.50	3993.89	2.50	25548.70	52501.00	0.30	15442.50	2.50	45906.20	56600.70	2.97
2.63	3.21	ø8/10	2	2	4 (TG)	SLD	0.50	7619.70	2.50	25548.70	52266.20	0.30	9169.63	2.50	45906.20	56347.50	3.35
2.63	3.21	ø8/10	2	2	9 (TG)	SLV	0.50	1897.00	2.50	22216.30	36574.50	0.30	14581.40	2.48	39634.40	39634.40	2.72
2.63	3.21	ø8/10	2	2	7 (TG)	SLV	0.50	6335.35	2.50	22216.30	36183.20	0.30	7773.37	2.47	39387.20	39387.20	3.51
3.56	4.12	ø8/10	2	2	17	SLV	0.50	1877.84	2.50	22216.30	34311.40	0.30	2565.36	2.39	38182.60	38182.60	11.83
3.56	4.12	ø8/10	2	2	10 (TG)	SLD	0.50	4136.48	2.50	25548.70	49705.40	0.30	14191.80	2.50	45906.20	53586.80	3.23
3.56	4.12	ø8/10	2	2	16 (TG)	SLD	0.50	7979.17	2.50	25548.70	49510.90	0.30	7056.91	2.50	45906.20	53377.10	3.20
3.56	4.12	ø8/10	2	2	16 (TG)	SLD	0.50	7994.99	2.50	25548.70	49620.30	0.30	7181.22	2.50	45906.20	53495.10	3.20
3.56	4.12	ø8/10	2	2	9 (TG)	SLV	0.50	1818.12	2.50	22216.30	33365.10	0.30	13376.20	2.35	37558.90	37558.90	2.81
3.56	4.12	ø8/10	2	2	13 (TG)	SLV	0.50	6733.09	2.50	22216.30	33700.50	0.30	5964.68	2.37	37781.20	37781.20	3.30
4.12	6.35	ø8/20	2	2	17	SLV	0.50	1877.84	2.50	11108.10	34276.10	0.30	2565.36	2.50	19959.20	36952.60	5.92
4.12	6.35	ø8/20	2	2	10 (TG)	SLD	0.50	4136.48	2.50	12774.30	49705.40	0.30	14191.80	2.50	22953.10	53586.80	1.62
4.12	6.35	ø8/20	2	2	16 (TG)	SLD	0.50	7979.17	2.50	12774.30	49510.90	0.30	7056.91	2.50	22953.10	53377.10	1.60
4.12	6.35	ø8/20	2	2	16 (TG)	SLD	0.50	7994.99	2.50	12774.30	49620.30	0.30	7181.22	2.50	22953.10	53495.10	1.60
4.12	6.35																

Relazione di calcolo

6.35	6.91	ø8/10	2	2	16 (TG)	SLD	0.50	7994.99	2.50	25548.70	49620.30	0.30	7181.22	2.50	45906.20	53495.10	3.20
6.35	6.91	ø8/10	2	2	9 (TG)	SLV	0.50	1818.12	2.50	22216.30	33365.10	0.30	13376.20	2.35	37558.90	37558.90	2.81
6.35	6.91	ø8/10	2	2	13 (TG)	SLV	0.50	6733.09	2.50	22216.30	33700.50	0.30	5964.68	2.37	37781.20	37781.20	3.30

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
101	N	ø8/ 6	Y+	E	2	7.16	7.63	0.50	0.20	0.20	4.02	1.07
			Z+	I	2	15.27	15.27	0.30	0.40	0.29	6.03	1.78
			Z-	I	2	15.27	15.27	0.30	0.40	0.29	6.03	1.78
201	N	ø8/ 6	Y+	E	2	4.62	4.62	0.50	0.20	0.20	4.02	1.07
			Z+	I	2	9.17	4.62	0.30	0.40	0.29	6.03	1.78
			Z-	I	2	9.17	4.62	0.30	0.40	0.29	6.03	1.78

Pilastrata n. 2

Nodi: 2 102 202

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
1	R	30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	αy	My ver. <daNm>	Mz <daNm>	αz	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α	εr	Sic.
3.56	11 (a)	SLV	2	1	0.00	-8308.24	-3379.60	3.59	-12143.40	-1659.81	2.03	-3374.91	-8308.24	-12256.30	-3463.44	208.13	5.63	1.011
6.91	1	SLV	2	1	335.00	-6347.07	9536.53			1794.59			-6352.55	12787.20	2382.30	19.69	6.51	1.340
-0.25	10	SLD	1	1	0.00	-19974.40	6308.46			-1263.90			-19976.10	16442.70	-3270.13	340.31	6.44	2.606
-0.25	10	SLD	1	1	0.00	-19974.40	6308.46			-1263.90			-19976.10	16442.70	-3270.13	340.31	6.44	2.606
3.21	10	SLD	1	1	346.00	-18936.40	-3840.24			1251.97			-18936.40	-15195.00	5052.73	149.06	5.58	3.964
3.56	2	SLD	2	1	0.00	-7674.14	-6811.79			-1967.36			-7685.50	-14496.20	-4043.20	205.31	6.69	2.123
6.91	2	SLD	2	1	335.00	-6669.14	7755.18			1602.56			-6669.15	14965.60	3088.77	19.69	7.34	1.930

Dati per verifiche di stabilità

Xg <cm>	El	l ₀ <cm>	λ	λ*
-0.25	1	3.81	43.99	27.73
-0.25	1	3.81	43.99	27.73
3.21	1	3.81	43.99	27.73

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	αy	My ver. <daNm>	Mz <daNm>	αz	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Myu <daNm>	Mzu,s <daNm>	Mzu <daNm>	α	εr	Sic.
-0.25	9	SLV	1	1	0.00	-19398.00	7969.65			-1456.94			-19398.00	13488.60	14094.70	-2398.61	-2496.35	340.3		
-0.25	9	SLV	1	1	0.00	-19398.00	7969.65			-1456.94			-19398.00	13488.60	14094.70	-2398.61	-2496.35	340.3		
3.21	15 (a)	SLV	1	1	346.00	-20489.10	-2460.23	2.90	-7128.61	1194.26	1.97	2350.52	-20489.10	-12501.40	-13016.20	4054.55	4220.72	146.2		

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	24	SLE R	1	1	0.00	-24312.80	-767.16	553.70	0.00	20.36	31.46	404.67
-0.25	32	SLE Q	1	1	0.00	-22165.50	-620.11	461.33	0.00	20.36	27.23	353.62
-0.25	24	SLE R	1	1	0.00	-24312.80	-767.16	553.70	0.00	20.36	31.46	404.67
-0.25	32	SLE Q	1	1	0.00	-22165.50	-620.11	461.33	0.00	20.36	27.23	353.62
3.21	24	SLE R	1	1	346.00	-23274.80	1296.63	-539.64	2.54	17.81	38.15	468.99
3.21	32	SLE Q	1	1	346.00	-21127.50	1037.06	-392.74	0.00	20.36	31.50	393.01
3.56	21	SLE R	2	1	0.00	-9446.01	-1580.04	-643.19	10.18	10.18	44.35	512.80
3.56	29	SLE Q	2	1	0.00	-8809.74	-1316.71	-685.04	10.18	10.18	39.05	417.62
6.91	21	SLE R	2	1	335.00	-8441.01	1047.23	1658.01	10.18	10.18	48.21	568.01
6.91	29	SLE Q	2	1	335.00	-7804.74	932.05	1528.86	10.18	10.18	43.66	509.23

Verifiche stato limite di formazione delle fessure

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
3.56	29	SLE Q	2	1	0.00	-8809.74	-685.04	-1316.71	39.00	102.00	0.13	170.77	18.00	10.18	818.53	417.62	792.20	0.08	0.02
6.91	29	SLE Q	2	1	335.00	-7804.74	1528.86	932.05	39.00	102.00	0.13	163.92	18.00	10.18	741.02	509.23	807.30	0.10	0.03

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.33	ø8/12	2	2	18	SLU	0.40	779.05	2.50	18513.50	29817.20	0.30	427.66	2.50	25889.50	31272.50	23.76
-0.25	0.33	ø8/12	2	2	20	SLU	0.40	804.65	2.50	18513.50	29818.70	0.30	407.48	2.50	25889.50	31274.00	23.01
-0.25	0.33	ø8/12	2	2	10 (TG)	SLD	0.40	2372.80	2.50	21290.60	41611.50	0.30	10602.80	2.50	29772.90	43642.30	2.81
-0.25	0.33	ø8/12	2	2	16 (TG)	SLD	0.40	5699.85	2.50	21290.60	41394.70	0.30	6415.84	2.50	29772.90	43415.00	3.74
-0.25	0.33	ø8/12	2	2	9 (TG)	SLV	0.40	1714.58	2.50	18513.50	28901.90	0.30	9258.89	2.50	25889.50	30312.40	2.80
-0.25	0.33	ø8/12	2	2	15 (TG)	SLV	0.40	4590.25	2.50	18513.50	28625.50	0.30	5638.34	2.50	25889.50	30022.50	4.03
0.33	2.63	ø8/20	2	2	18	SLU	0.40	779.05	2.50	11108.10	29788.00	0.30	427.66	2.50	15533.70	31241.80	14.26
0.33	2.63	ø8/20	2	2	20	SLU	0.40	804.65	2.50	11108.10	29789.50	0.30	407.48	2.50	15533.70	31243.40	13.80
0.33	2.63	ø8/20	2	2	10 (TG)	SLD	0.40	2372.80	2.50	12774.30	41611.50	0.30	10602.80	2.50	17863.70	43642.30	1.68
0.33	2.63	ø8/20	2	2	16 (TG)	SLD	0.40	5699.85	2.50	12774.30	41394.70	0.30	6415.84	2.50	17863.70	43415.00	2.24
0.33	2.63	ø8/20	2	2	9 (TG)	SLV	0.40	1714.58	2.50	11108.10	28901.90	0.30	9258.89	2.50	15533.70	30312.40	1.68
0.33	2.63	ø8/20	2	2	15 (TG)	SLV	0.40	4590.25	2.50	11108.10	28625.50	0.30	5638.34	2.50	15533.70	30022.50	2.42
2.63	3.21	ø8/12	2	2	18	SLU	0.40	779.05	2.50	18513.50	29671.30	0.30	427.66	2.50	25889.50	31119.30	23.76
2.63	3.21	ø8/12	2	2	20	SLU	0.40	804.65	2.50	18513.50	29672.70	0.30	407.48	2.50	25889.50	31120.90	23.01
2.63	3.21	ø8/12	2	2	10 (TG)	SLD	0.40	2372.80	2.50	21290.60	41611.50	0.30	10602.80	2.50	29772.90	43642.30	2.81
2.63	3.21	ø8/12	2	2	16 (TG)	SLD	0.40	5699.85	2.50	21290.60	41394.70	0.30	6415.84	2.50	29772.90	43415.00	3.74

Relazione di calcolo

2.63	3.21	ø8/12	2	2	9 (TG)	SLV	0.40	1714.58	2.50	18513.50	28901.90	0.30	9258.89	2.50	25889.50	30312.40	2.80
2.63	3.21	ø8/12	2	2	15 (TG)	SLV	0.40	4590.25	2.50	18513.50	28625.50	0.30	5638.34	2.50	25889.50	30022.50	4.03
3.56	4.12	ø8/12	2	2	17	SLV	0.40	1045.66	2.50	18513.50	27258.60	0.30	856.89	2.50	25889.50	28588.90	17.71
3.56	4.12	ø8/12	2	2	20	SLV	0.40	1048.81	2.50	18513.50	27267.30	0.30	661.85	2.50	25889.50	28598.10	17.65
3.56	4.12	ø8/12	2	2	10 (TG)	SLD	0.40	1911.45	2.50	21290.60	39640.50	0.30	10059.50	2.50	29772.90	41575.20	2.96
3.56	4.12	ø8/12	2	2	16 (TG)	SLD	0.40	5203.60	2.50	21290.60	39559.00	0.30	7190.57	2.50	29772.90	41489.60	4.09
3.56	4.12	ø8/12	2	2	1 (TG)	SLV	0.40	1456.73	2.50	18513.50	26792.30	0.30	8680.98	2.50	25889.50	28099.90	2.98
3.56	4.12	ø8/12	2	2	7 (TG)	SLV	0.40	4000.82	2.50	18513.50	26691.80	0.30	4943.90	2.50	25889.50	27994.50	4.63
4.12	6.35	ø8/20	2	2	17	SLV	0.40	1045.66	2.50	11108.10	27230.30	0.30	856.89	2.50	15533.70	28559.30	10.62
4.12	6.35	ø8/20	2	2	20	SLV	0.40	1048.81	2.50	11108.10	27239.00	0.30	661.85	2.50	15533.70	28568.40	10.59
4.12	6.35	ø8/20	2	2	10 (TG)	SLD	0.40	1911.45	2.50	12774.30	39640.50	0.30	10059.50	2.50	17863.70	41575.20	1.78
4.12	6.35	ø8/20	2	2	16 (TG)	SLD	0.40	5203.60	2.50	12774.30	39559.00	0.30	7190.57	2.50	17863.70	41489.60	2.45
4.12	6.35	ø8/20	2	2	1 (TG)	SLV	0.40	1456.73	2.50	11108.10	26792.30	0.30	8680.98	2.50	15533.70	28099.90	1.79
4.12	6.35	ø8/20	2	2	7 (TG)	SLV	0.40	4000.82	2.50	11108.10	26691.80	0.30	4943.90	2.50	15533.70	27994.50	2.78
6.35	6.91	ø8/12	2	2	17	SLV	0.40	1045.66	2.50	18513.50	27117.20	0.30	856.89	2.50	25889.50	28440.70	17.71
6.35	6.91	ø8/12	2	2	20	SLV	0.40	1048.81	2.50	18513.50	27126.00	0.30	661.85	2.50	25889.50	28449.80	17.65
6.35	6.91	ø8/12	2	2	10 (TG)	SLD	0.40	1911.45	2.50	21290.60	39640.50	0.30	10059.50	2.50	29772.90	41575.20	2.96
6.35	6.91	ø8/12	2	2	16 (TG)	SLD	0.40	5203.60	2.50	21290.60	39559.00	0.30	7190.57	2.50	29772.90	41489.60	4.09
6.35	6.91	ø8/12	2	2	1 (TG)	SLV	0.40	1456.73	2.50	18513.50	26792.30	0.30	8680.98	2.50	25889.50	28099.90	2.98
6.35	6.91	ø8/12	2	2	7 (TG)	SLV	0.40	4000.82	2.50	18513.50	26691.80	0.30	4943.90	2.50	25889.50	27994.50	4.63

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
102	N	ø8/ 7	Y+	E	2	6.16	4.62	0.40	0.20	0.20	4.02	1.11
			Z+	I	2	7.63	7.63	0.30	0.30	0.29	5.03	1.48
			Z-	I	2	7.63	7.63	0.30	0.30	0.29	5.03	1.48
202	N	ø8/ 7	Y+	E	2	4.62	4.62	0.40	0.20	0.20	4.02	1.11
			Z+	I	2	6.16	4.62	0.30	0.30	0.29	5.03	1.48
			Z-	I	2	6.16	4.62	0.30	0.30	0.29	5.03	1.48

Pilastrata n. 3

Nodi: 3 103 203

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
1	R	30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _r	Sic.
3.56	5 (α)	SLV	2	1	0.00	-6047.58	5389.06	2.07	11165.00	-1649.13	2.86	-4719.60	-6047.58	12704.80	-5300.78	323.44	4.67	1.136
6.91	9	SLV	2	1	335.00	-4893.43	-8621.44			3395.90			-4893.42	-12930.40	4903.77	146.25	4.85	1.492
-0.25	10	SLD	1	1	0.00	-17315.60	5674.15			-2217.69			-17315.60	16399.70	-6330.39	326.25	4.96	2.886
-0.25	10	SLD	1	1	0.00	-17315.60	5674.15			-2217.69			-17315.60	16399.70	-6330.39	326.25	4.96	2.886
3.21	10	SLD	1	1	346.00	-16277.60	-3816.00			-1457.15			-16277.60	-16311.70	-6324.99	213.75	5.00	4.283
3.56	10	SLD	2	1	0.00	-6127.55	7089.61			-2453.85			-6127.54	15801.20	-5748.82	329.06	5.56	2.241
6.91	10	SLD	2	1	335.00	-5122.55	-7112.39			2676.00			-5122.53	-15712.30	5740.32	149.06	5.60	2.201

Dati per verifiche di stabilità

Xg <cm>	El	l ₀ <cm>	λ	λ*
-0.25	1	3.81	43.99	35.06
-0.25	1	3.81	43.99	35.06
3.21	1	3.81	43.99	35.06

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Myu <daNm>	Mzu,s <daNm>	Mzu <daNm>	α <grad>
-0.25	9	SLV	1	1	0.00	-16766.20	7078.67			-2872.57			-16766.20	13108.40	13538.00	-5149.62	-5331.10	323.4
-0.25	9	SLV	1	1	0.00	-16766.20	7078.67			-2872.57			-16766.20	13108.40	13538.00	-5149.62	-5331.10	323.4
3.21	15 (α)	SLV	1	1	346.00	-16808.80	-2662.29	2.24	-5966.90	-629.76	5.50	-3462.29	-16808.80	-11377.50	-11800.10	-6684.73	-6927.85	226.4

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	22	SLE R	1	1	0.00	-20860.40	135.31	836.36	0.00	25.45	22.57	302.77
-0.25	30	SLE Q	1	1	0.00	-19229.20	102.66	794.28	0.00	25.45	20.75	278.78
-0.25	22	SLE R	1	1	0.00	-20860.40	135.31	836.36	0.00	25.45	22.57	302.77
-0.25	30	SLE Q	1	1	0.00	-19229.20	102.66	794.28	0.00	25.45	20.75	278.78
3.21	22	SLE R	1	1	346.00	-19822.40	-359.75	-1025.01	0.00	25.45	26.43	341.05
3.21	30	SLE Q	1	1	346.00	-18191.20	-298.12	-966.04	0.00	25.45	24.09	311.61
3.56	22	SLE R	2	1	0.00	-7336.50	172.78	1934.90	12.72	12.72	31.56	400.20
3.56	30	SLE Q	2	1	0.00	-6921.23	140.09	1815.92	12.72	12.72	29.18	369.39
6.91	22	SLE R	2	1	335.00	-6331.50	162.19	-1973.65	12.72	12.72	31.79	448.76
6.91	30	SLE Q	2	1	335.00	-5916.23	137.39	-1846.26	12.72	12.72	29.44	416.81

Verifiche stato limite di formazione delle fessure

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
3.56	30	SLE Q	2	1	0.00	-6921.23	1815.92	140.09	39.00	101.33	0.13	153.96	18.00	12.72	787.32	369.39	891.28	0.07	0.02
6.91	30	SLE Q	2	1	335.00	-5916.23	-1846.26	137.39	39.00	101.33	0.13	153.96	18.00	12.72	787.32	416.81	946.51	0.08	0.02

Staffe - Verifiche armatura

Relazione di calcolo

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic. T
-0.25	0.33	ø8/12	2	2	18	SLV	0.40	201.75	2.50	18513.50	29226.00	0.30	682.88	2.50	25889.50	30652.30	37.91
-0.25	0.33	ø8/12	2	2	19	SLV	0.40	272.90	2.50	18513.50	29229.60	0.30	547.17	2.50	25889.50	30656.10	47.32
-0.25	0.33	ø8/12	2	2	4 (TG)	SLD	0.40	3900.85	2.50	21290.60	40990.60	0.30	10457.90	2.50	29772.90	42991.20	2.85
-0.25	0.33	ø8/12	2	2	6 (TG)	SLD	0.40	4007.83	2.50	21290.60	41100.30	0.30	10460.40	2.50	29772.90	43106.20	2.85
-0.25	0.33	ø8/12	2	2	8 (TG)	SLD	0.40	6651.77	2.50	21290.60	40990.50	0.30	7567.28	2.50	29772.90	42991.00	3.20
-0.25	0.33	ø8/12	2	2	7 (TG)	SLV	0.40	2612.65	2.50	18513.50	27881.80	0.30	8837.94	2.50	25889.50	29242.60	2.93
-0.25	0.33	ø8/12	2	2	7 (TG)	SLV	0.40	2692.30	2.50	18513.50	28208.40	0.30	8854.89	2.50	25889.50	29585.10	2.92
-0.25	0.33	ø8/12	2	2	15 (TG)	SLV	0.40	5984.28	2.50	18513.50	27828.40	0.30	4748.27	2.50	25889.50	29186.50	3.09
-0.25	0.33	ø8/12	2	2	15 (TG)	SLV	0.40	6014.48	2.50	18513.50	28155.00	0.30	4934.78	2.50	25889.50	29529.10	3.08
0.33	2.63	ø8/20	2	2	18	SLV	0.40	201.75	2.50	11108.10	29196.80	0.30	682.88	2.50	15533.70	30621.70	22.75
0.33	2.63	ø8/20	2	2	19	SLV	0.40	272.90	2.50	11108.10	29200.40	0.30	547.17	2.50	15533.70	30625.50	28.39
0.33	2.63	ø8/20	2	2	4 (TG)	SLD	0.40	3900.85	2.50	12774.30	40990.60	0.30	10457.90	2.50	17863.70	42991.20	1.71
0.33	2.63	ø8/20	2	2	6 (TG)	SLD	0.40	4007.83	2.50	12774.30	41100.30	0.30	10460.40	2.50	17863.70	43106.20	1.71
0.33	2.63	ø8/20	2	2	8 (TG)	SLD	0.40	6651.77	2.50	12774.30	40990.50	0.30	7567.28	2.50	17863.70	42991.00	1.92
0.33	2.63	ø8/20	2	2	7 (TG)	SLV	0.40	2612.65	2.50	11108.10	27881.80	0.30	8837.94	2.50	15533.70	29242.60	1.76
0.33	2.63	ø8/20	2	2	7 (TG)	SLV	0.40	2692.30	2.50	11108.10	28208.40	0.30	8854.89	2.50	15533.70	29585.10	1.75
0.33	2.63	ø8/20	2	2	15 (TG)	SLV	0.40	5984.28	2.50	11108.10	27828.40	0.30	4748.27	2.50	15533.70	29186.50	1.86
0.33	2.63	ø8/20	2	2	15 (TG)	SLV	0.40	6014.48	2.50	11108.10	28155.00	0.30	4934.78	2.50	15533.70	29529.10	1.85
2.63	3.21	ø8/12	2	2	18	SLV	0.40	201.75	2.50	18513.50	29080.00	0.30	682.88	2.50	25889.50	30499.20	37.91
2.63	3.21	ø8/12	2	2	19	SLV	0.40	272.90	2.50	18513.50	29083.60	0.30	547.17	2.50	25889.50	30503.00	47.32
2.63	3.21	ø8/12	2	2	4 (TG)	SLD	0.40	3900.85	2.50	21290.60	40990.60	0.30	10457.90	2.50	29772.90	42991.20	2.85
2.63	3.21	ø8/12	2	2	6 (TG)	SLD	0.40	4007.83	2.50	21290.60	41100.30	0.30	10460.40	2.50	29772.90	43106.20	2.85
2.63	3.21	ø8/12	2	2	8 (TG)	SLD	0.40	6651.77	2.50	21290.60	40990.50	0.30	7567.28	2.50	29772.90	42991.00	3.20
2.63	3.21	ø8/12	2	2	7 (TG)	SLV	0.40	2612.65	2.50	18513.50	27881.80	0.30	8837.94	2.50	25889.50	29242.60	2.93
2.63	3.21	ø8/12	2	2	7 (TG)	SLV	0.40	2692.30	2.50	18513.50	28208.40	0.30	8854.89	2.50	25889.50	29585.10	2.92
2.63	3.21	ø8/12	2	2	15 (TG)	SLV	0.40	5984.28	2.50	18513.50	27828.40	0.30	4748.27	2.50	25889.50	29186.50	3.09
2.63	3.21	ø8/12	2	2	15 (TG)	SLV	0.40	6014.48	2.50	18513.50	28155.00	0.30	4934.78	2.50	25889.50	29529.10	3.08
3.56	4.12	ø8/12	2	2	18	SLV	0.40	16.81	2.50	18513.50	26896.70	0.30	1499.18	2.50	25889.50	28209.40	17.27
3.56	4.12	ø8/12	2	2	19	SLV	0.40	102.35	2.50	18513.50	26898.00	0.30	1338.24	2.50	25889.50	28210.70	19.35
3.56	4.12	ø8/12	2	2	16 (TG)	SLD	0.40	2911.83	2.50	21290.60	39287.70	0.30	11058.90	2.50	29772.90	41205.20	2.69
3.56	4.12	ø8/12	2	2	12 (TG)	SLD	0.40	6065.56	2.50	21290.60	39286.50	0.30	6557.72	2.50	29772.90	41203.80	3.51
3.56	4.12	ø8/12	2	2	13 (TG)	SLV	0.40	2918.02	2.50	18513.50	26535.80	0.30	8837.42	2.50	25889.50	27830.90	2.93
3.56	4.12	ø8/12	2	2	11 (TG)	SLV	0.40	5280.18	2.50	18513.50	26476.00	0.30	5504.82	2.50	25889.50	27768.20	3.51
4.12	6.35	ø8/20	2	2	18	SLV	0.40	16.81	2.50	11108.10	26868.50	0.30	1499.18	2.50	15533.70	28179.80	10.36
4.12	6.35	ø8/20	2	2	19	SLV	0.40	102.35	2.50	11108.10	26869.70	0.30	1338.24	2.50	15533.70	28181.10	11.61
4.12	6.35	ø8/20	2	2	16 (TG)	SLD	0.40	2911.83	2.50	12774.30	39287.70	0.30	11058.90	2.50	17863.70	41205.20	1.62
4.12	6.35	ø8/20	2	2	12 (TG)	SLD	0.40	6065.56	2.50	12774.30	39286.50	0.30	6557.72	2.50	17863.70	41203.80	2.11
4.12	6.35	ø8/20	2	2	13 (TG)	SLV	0.40	2918.02	2.50	11108.10	26535.80	0.30	8837.42	2.50	15533.70	27830.90	1.76
4.12	6.35	ø8/20	2	2	11 (TG)	SLV	0.40	5280.18	2.50	11108.10	26476.00	0.30	5504.82	2.50	15533.70	27768.20	2.10
6.35	6.91	ø8/12	2	2	18	SLV	0.40	16.81	2.50	18513.50	26755.40	0.30	1499.18	2.50	25889.50	28061.20	17.27
6.35	6.91	ø8/12	2	2	19	SLV	0.40	102.35	2.50	18513.50	26756.60	0.30	1338.24	2.50	25889.50	28062.50	19.35
6.35	6.91	ø8/12	2	2	16 (TG)	SLD	0.40	2911.83	2.50	21290.60	39287.70	0.30	11058.90	2.50	29772.90	41205.20	2.69
6.35	6.91	ø8/12	2	2	12 (TG)	SLD	0.40	6065.56	2.50	21290.60	39286.50	0.30	6557.72	2.50	29772.90	41203.80	3.51
6.35	6.91	ø8/12	2	2	13 (TG)	SLV	0.40	2918.02	2.50	18513.50	26535.80	0.30	8837.42	2.50	25889.50	27830.90	2.93
6.35	6.91	ø8/12	2	2	11 (TG)	SLV	0.40	5280.18	2.50	18513.50	26476.00	0.30	5504.82	2.50	25889.50	27768.20	3.51

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <m>	Hjc <m>	Hjw <m>	Ash <cmq>	Rgsn
103	N	ø8/ 7	Y+	E	2	4.62	4.62	0.40	0.20	0.20	4.02	1.11
			Z+	I	2	6.88	7.63	0.30	0.30	0.29	5.03	1.48
			Z-	I	2	8.70	6.88	0.30	0.30	0.29	5.03	1.48
203	N	ø8/ 7	Y+	E	2	4.62	4.62	0.40	0.20	0.20	4.02	1.11
			Z+	I	2	4.16	4.62	0.30	0.30	0.29	5.03	1.48
			Z-	I	2	6.16	5.55	0.30	0.30	0.29	5.03	1.48

Pilastrata n. 4

Nodi: 4 104 204

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
5	R	30.00	50.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
9	R	35.00	50.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.
3.56	1 (α)	SLV	2	9	0.00	-14668.10	-7349.96	2.38	-17508.90	4808.33	1.51	7258.70	-14668.10	-15280.60	6329.68	137.81	5.20	0.873
7.00	9	SLV	2	9	344.00	-13090.80	-4142.42			-4566.29			-13090.70	-9189.27	-9959.23	250.31	5.10	2.198
-0.25	2	SLD	1	5	0.00	-37293.40	-8844.02			1865.04			-37293.40	-23254.10	5308.34	146.25	5.81	2.639
-0.25	2	SLD	1	5	0.00	-37293.40	-8844.02			1865.04			-37293.40	-23254.10	5308.34	146.25	5.81	2.639
3.30	10	SLD	1	5	355.00	-34082.00	4865.65			-2406.52			-34081.90	17916.10	-9150.25	300.94	4.90	3.706
3.56	10	SLD	2	9	0.00	-14722.90	-5515.00			5048.09			-14722.90	-12457.00	11577.30	112.50	5.67	2.275
7.00	10	SLD	2	9	344.00	-13217.90	-3219.64			-3856.59			-13217.90	-10327.50	-12153.00	253.13	6.10	3.175

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	28.43
-0.25	1	3.81	43.99	28.43
3.30	1	3.81	43.99	28.43

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu, s <daNm>	Myu <daNm>	Mzu, s <daNm>	Mzu <daNm>	α <grad>
-0.25	1	SLV	1	5	0.00	-35244.60	-10794.40			2143.83			-35244.60	-19188.20	-199			

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σc <daN/cmq>	σf <daN/cmq>
-0.25	23	SLE R	1	5	0.00	-40899.10	1091.44	-2129.64	0.00	20.36	47.79	621.42
-0.25	31	SLE Q	1	5	0.00	-36299.10	909.75	-2019.48	0.00	20.36	42.57	554.60
-0.25	23	SLE R	1	5	0.00	-40899.10	1091.44	-2129.64	0.00	20.36	47.79	621.42
-0.25	31	SLE Q	1	5	0.00	-36299.10	909.75	-2019.48	0.00	20.36	42.57	554.60
3.30	23	SLE R	1	5	355.00	-39567.80	-1936.41	4184.91	5.09	15.27	74.69	914.54
3.30	31	SLE Q	1	5	355.00	-34967.90	-1603.62	3942.72	5.09	15.27	66.55	816.58
3.56	23	SLE R	2	9	0.00	-16379.50	3004.35	-3377.80	12.72	7.63	83.04	1089.02
3.56	31	SLE Q	2	9	0.00	-15158.00	2555.08	-3310.25	12.72	7.63	74.73	957.02
7.00	22	SLE R	2	9	344.00	-14891.00	-1504.88	-252.62	7.63	12.72	24.14	258.35
7.00	31	SLE Q	2	9	344.00	-13653.00	-1341.01	171.88	7.63	12.72	21.08	227.51

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _{c,eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
3.30	31	SLE Q	1	5	355.00	-34967.90	3942.72	-1603.62	39.00	102.00	0.13	175.32	18.00	5.09	434.97	290.52	438.16	0.06	0.02
3.56	30	SLE Q	2	9	0.00	-15174.40	-3189.28	2591.15	59.00	107.00	0.13	236.97	18.00	10.18	1103.53	944.53	978.06	0.21	0.09
7.00	31	SLE Q	2	9	344.00	-13653.00	171.88	-1341.01	59.00	182.00	0.13	261.82	18.00	7.63	911.19	63.17	371.31	0.01	0.01

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw,y <cm>	Vsdu,y <daN>	ctgθ _y	VRsd,y <daN>	VRcd,y <daN>	bw,z <cm>	Vsdu,z <daN>	ctgθ _z	VRsd,z <daN>	VRcd,z <daN>	Sic.T
-0.25	0.34	ø8/10	2	2	17	SLU	0.50	1107.91	2.50	22216.30	38469.20	0.30	2335.83	2.50	39918.40	41473.20	17.09
-0.25	0.34	ø8/10	2	2	18	SLU	0.50	1156.87	2.50	22216.30	38469.20	0.30	2159.76	2.50	39918.40	41473.20	18.48
-0.25	0.34	ø8/10	2	2	6 (TG)	SLD	0.50	3424.92	2.50	25548.70	52771.40	0.30	14246.70	2.50	45906.20	56892.20	3.22
-0.25	0.34	ø8/10	2	2	16 (TG)	SLD	0.50	6062.47	2.50	25548.70	52771.10	0.30	9919.28	2.50	45906.20	56827.20	4.21
-0.25	0.34	ø8/10	2	2	1 (TG)	SLV	0.50	2023.15	2.50	22216.30	36760.20	0.30	12873.10	2.49	39751.20	39751.20	3.09
-0.25	0.34	ø8/10	2	2	15 (TG)	SLV	0.50	4948.54	2.50	22216.30	36703.70	0.30	8874.05	2.49	39715.70	39715.70	4.48
0.34	2.71	ø8/20	2	2	17	SLU	0.50	1107.91	2.50	11108.10	38469.20	0.30	2335.83	2.50	19959.20	41473.20	8.54
0.34	2.71	ø8/20	2	2	18	SLU	0.50	1156.87	2.50	11108.10	38469.20	0.30	2159.76	2.50	19959.20	41473.20	9.24
0.34	2.71	ø8/20	2	2	6 (TG)	SLD	0.50	3424.92	2.50	12774.30	52771.40	0.30	14246.70	2.50	22953.10	56892.20	1.61
0.34	2.71	ø8/20	2	2	16 (TG)	SLD	0.50	6062.47	2.50	12774.30	52771.10	0.30	9919.28	2.50	22953.10	56827.20	2.11
0.34	2.71	ø8/20	2	2	1 (TG)	SLV	0.50	2023.15	2.50	11108.10	36760.20	0.30	12873.10	2.50	19959.20	39630.70	1.55
0.34	2.71	ø8/20	2	2	15 (TG)	SLV	0.50	4948.54	2.50	11108.10	36703.70	0.30	8874.05	2.50	19959.20	39569.80	2.24
2.71	3.30	ø8/10	2	2	17	SLU	0.50	1107.91	2.50	22216.30	38469.20	0.30	2335.83	2.50	39918.40	41473.20	17.09
2.71	3.30	ø8/10	2	2	18	SLU	0.50	1156.87	2.50	22216.30	38469.20	0.30	2159.76	2.50	39918.40	41473.20	18.48
2.71	3.30	ø8/10	2	2	6 (TG)	SLD	0.50	3424.92	2.50	25548.70	52771.40	0.30	14246.70	2.50	45906.20	56892.20	3.22
2.71	3.30	ø8/10	2	2	16 (TG)	SLD	0.50	6062.47	2.50	25548.70	52771.10	0.30	9919.28	2.50	45906.20	56827.20	4.21
2.71	3.30	ø8/10	2	2	1 (TG)	SLV	0.50	2023.15	2.50	22216.30	36760.20	0.30	12873.10	2.49	39751.20	39751.20	3.09
2.71	3.30	ø8/10	2	2	15 (TG)	SLV	0.50	4948.54	2.50	22216.30	36703.70	0.30	8874.05	2.49	39715.70	39715.70	4.48
3.56	4.13	ø8/10	2	2	17	SLU	0.50	1653.04	2.50	24871.60	38576.50	0.35	1278.31	2.50	38148.20	41418.30	15.05
3.56	4.13	ø8/10	2	2	18	SLU	0.50	1748.90	2.50	24871.60	38574.90	0.35	1147.45	2.50	38148.20	41416.50	14.22
3.56	4.13	ø8/10	2	2	4 (TG)	SLD	0.50	4813.70	2.50	28602.30	55565.20	0.35	11404.90	2.50	43870.50	59658.40	3.85
3.56	4.13	ø8/10	2	2	10 (TG)	SLD	0.50	8395.42	2.50	28602.30	55486.30	0.35	4641.99	2.50	43870.50	59573.70	3.41
3.56	4.13	ø8/10	2	2	1 (TG)	SLD	0.50	8411.22	2.50	28602.30	55591.80	0.35	4811.67	2.50	43870.50	59687.00	3.40
3.56	4.13	ø8/10	2	2	11 (TG)	SLV	0.50	2703.75	2.50	24871.60	37619.20	0.35	10595.60	2.50	38148.20	40390.40	3.60
3.56	4.13	ø8/10	2	2	11 (TG)	SLV	0.50	6897.88	2.50	24871.60	37619.20	0.35	4464.42	2.50	38148.20	40390.40	3.61
4.13	6.43	ø8/20	2	2	17	SLU	0.50	1653.04	2.50	12435.80	38535.90	0.35	1278.31	2.50	19074.10	41374.70	7.52
4.13	6.43	ø8/20	2	2	18	SLU	0.50	1748.90	2.50	12435.80	38534.30	0.35	1147.45	2.50	19074.10	41372.90	7.11
4.13	6.43	ø8/20	2	2	4 (TG)	SLD	0.50	4813.70	2.50	14301.20	55565.20	0.35	11404.90	2.50	21935.20	59658.40	1.92
4.13	6.43	ø8/20	2	2	10 (TG)	SLD	0.50	8395.42	2.50	14301.20	55486.30	0.35	4641.99	2.50	21935.20	59573.70	1.70
4.13	6.43	ø8/20	2	2	1 (TG)	SLD	0.50	8411.22	2.50	14301.20	55591.80	0.35	4811.67	2.50	21935.20	59687.00	1.70
4.13	6.43	ø8/20	2	2	11 (TG)	SLV	0.50	2703.75	2.50	12435.80	37619.20	0.35	10595.60	2.50	19074.10	40390.40	1.80
4.13	6.43	ø8/20	2	2	11 (TG)	SLV	0.50	6897.88	2.50	12435.80	37619.20	0.35	4464.42	2.50	19074.10	40390.40	1.80
6.43	7.00	ø8/10	2	2	17	SLU	0.50	1653.04	2.50	24871.60	38373.40	0.35	1278.31	2.50	38148.20	41200.20	15.05
6.43	7.00	ø8/10	2	2	18	SLU	0.50	1748.90	2.50	24871.60	38371.80	0.35	1147.45	2.50	38148.20	41198.40	14.22
6.43	7.00	ø8/10	2	2	4 (TG)	SLD	0.50	4813.70	2.50	28602.30	55565.20	0.35	11404.90	2.50	43870.50	59658.40	3.85
6.43	7.00	ø8/10	2	2	10 (TG)	SLD	0.50	8395.42	2.50	28602.30	55486.30	0.35	4641.99	2.50	43870.50	59573.70	3.41
6.43	7.00	ø8/10	2	2	1 (TG)	SLD	0.50	8411.22	2.50	28602.30	55591.80	0.35	4811.67	2.50	43870.50	59687.00	3.40
6.43	7.00	ø8/10	2	2	11 (TG)	SLV	0.50	2703.75	2.50	24871.60	37619.20	0.35	10595.60	2.50	38148.20	40390.40	3.60
6.43	7.00	ø8/10	2	2	11 (TG)	SLV	0.50	6897.88	2.50	24871.60	37619.20	0.35	4464.42	2.50	38148.20	40390.40	3.61

Pilastrata n. 5

Nodi: 5 105 205

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
1	R	30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.
3.56	9 (α)	SLV	2	1	0.00	-2108.62	5378.90	1.10	5916.79	-3876.81	1.48	-5742.70	-2108.63	6336.52	-6156.44	302.34	5.54	1.071
6.91	1	SLV	2	1	335.00	91.40	5070.54			4844.21			152.60	6166.94	6039.56	59.06	5.80	1.231
-0.25	2	SLD	1	1	0.00	-4376.43	-4802.58			-3266.41			-4376.43	-9281.67	-6079.89	225.00	6.31	1.910
-0.25	2	SLD	1	1	0.00	-4376.43	-4802.58			-3266.41			-4376.43	-9281.67	-6079.89	225.00	6.31	1.910
3.21	2	SLD	1	1	346.00	-3338.43	2809.80			2503.41			-3338.44	8110.39	7200.31	56.25	6.14	2.882
3.56	2	SLD	2	1	0.00	-1729.67	-3795.74			-4178.10			-1741.92	-6910.76	-7453.30	244.69	6.74	1.801
6.91	2	SLD	2	1	335.00	-724.67	3918.28			4158.84			-730.50	6890.00	7358.55	64.69	6.82	1.764

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	36.48
-0.25	1	3.81	43.99	36.48
3.21	1	3.81	43.99	36.48

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Relazione di calcolo

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	My _{u,s} <daNm>	My _u <daNm>	Mz _{u,s} <daNm>	Mz _u <daNm>	α <grad>	ε _y
-0.25	1	SLV	1	1	0.00	-2210.52	-6177.19			-3971.47			-2210.52	-7566.24	-7623.11	-4877.84	-4931.17	225.00	5.7
-0.25	1	SLV	1	1	0.00	-2210.52	-6177.19			-3971.47			-2210.52	-7566.24	-7623.11	-4877.84	-4931.17	225.00	5.7
3.21	7 (α)	SLV	1	1	346.00	-6063.47	1754.45	2.36	4138.47	2095.71	1.70	3555.74	-6063.46	6779.75	6931.57	5868.80	5998.76	54.84	5.2

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	24	SLE R	1	1	0.00	-13039.90	-758.35	331.74	2.54	12.72	22.89	281.06
-0.25	32	SLE Q	1	1	0.00	-12530.90	-680.28	341.66	2.54	12.72	21.49	265.36
-0.25	24	SLE R	1	1	0.00	-13039.90	-758.35	331.74	2.54	12.72	22.89	281.06
-0.25	32	SLE Q	1	1	0.00	-12530.90	-680.28	341.66	2.54	12.72	21.49	265.36
3.21	24	SLE R	1	1	346.00	-12001.90	1534.01	-203.42	7.63	7.63	36.80	395.55
3.21	21	SLE R	1	1	346.00	-11631.80	1601.13	-38.99	7.63	7.63	35.59	373.81
3.21	32	SLE Q	1	1	346.00	-11492.90	1386.49	-228.54	7.63	7.63	33.93	369.92
3.56	24	SLE R	2	1	0.00	-4988.06	-2079.21	331.76	7.63	7.63	51.57	1016.50
3.56	21	SLE R	2	1	0.00	-4857.89	-2178.93	140.60	7.63	7.63	49.53	1033.66
3.56	32	SLE Q	2	1	0.00	-4770.93	-1902.38	342.22	7.63	7.63	48.02	927.50
6.91	24	SLE R	2	1	335.00	-3983.06	1783.68	-377.86	7.63	7.63	46.23	916.05
6.91	21	SLE R	2	1	335.00	-3852.89	1902.25	-174.32	7.63	7.63	44.30	939.99
6.91	32	SLE Q	2	1	335.00	-3765.93	1652.39	-363.01	7.63	7.63	43.11	847.39

Verifiche stato limite di formazione delle fessure

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _{c,eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
-0.25	32	SLE Q	1	1	0.00	-12530.90	341.66	-680.28	39.00	252.00	0.13	221.16	18.00	2.54	262.28	4.46	41.08	0.00	0.00
-0.25	32	SLE Q	1	1	0.00	-12530.90	341.66	-680.28	39.00	252.00	0.13	221.16	18.00	2.54	262.28	4.46	41.08	0.00	0.00
3.21	29	SLE Q	1	1	346.00	-11122.90	-64.11	1453.61	39.00	152.00	0.13	186.62	18.00	7.63	663.48	263.69	745.78	0.05	0.02
3.56	29	SLE Q	2	1	0.00	-4640.76	151.06	-2002.11	39.00	152.00	0.13	186.61	18.00	7.63	663.37	944.52	1301.80	0.18	0.06
6.91	29	SLE Q	2	1	335.00	-3635.76	-159.47	1770.96	39.00	152.00	0.13	186.62	18.00	7.63	663.48	871.33	1321.75	0.17	0.05

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.33	ø8/12	2	2	20	SLU	0.40	886.93	2.50	18513.50	27852.40	0.30	171.82	2.50	25889.50	29211.80	20.87
-0.25	0.33	ø8/12	2	2	17	SLU	0.40	948.29	2.50	18513.50	27804.40	0.30	45.99	2.50	25889.50	29161.40	19.52
-0.25	0.33	ø8/12	2	2	10 (TG)	SLD	0.40	2555.11	2.50	21290.60	40944.50	0.30	8025.78	2.50	29772.90	42942.80	3.71
-0.25	0.33	ø8/12	2	2	8 (TG)	SLD	0.40	5428.99	2.50	21290.60	40112.40	0.30	3976.49	2.50	29772.90	42070.10	3.92
-0.25	0.33	ø8/12	2	2	9 (TG)	SLV	0.40	1437.15	2.50	18513.50	28403.40	0.30	7199.10	2.50	25889.50	29789.60	3.60
-0.25	0.33	ø8/12	2	2	15 (TG)	SLV	0.40	4444.88	2.50	18513.50	27767.70	0.30	4200.24	2.50	25889.50	29122.90	4.17
0.33	2.63	ø8/20	2	2	20	SLU	0.40	886.93	2.50	11108.10	27823.20	0.30	171.82	2.50	15533.70	29181.10	12.52
0.33	2.63	ø8/20	2	2	17	SLU	0.40	948.29	2.50	11108.10	27775.20	0.30	45.99	2.50	15533.70	29130.80	11.71
0.33	2.63	ø8/20	2	2	10 (TG)	SLD	0.40	2555.11	2.50	12774.30	40944.50	0.30	8025.78	2.50	17863.70	42942.80	2.23
0.33	2.63	ø8/20	2	2	8 (TG)	SLD	0.40	5428.99	2.50	12774.30	40112.40	0.30	3976.49	2.50	17863.70	42070.10	2.35
0.33	2.63	ø8/20	2	2	9 (TG)	SLV	0.40	1437.15	2.50	11108.10	28403.40	0.30	7199.10	2.50	15533.70	29789.60	2.16
0.33	2.63	ø8/20	2	2	15 (TG)	SLV	0.40	4444.88	2.50	11108.10	27767.70	0.30	4200.24	2.50	15533.70	29122.90	2.50
2.63	3.21	ø8/12	2	2	20	SLU	0.40	886.93	2.50	18513.50	27706.40	0.30	171.82	2.50	25889.50	29058.70	20.87
2.63	3.21	ø8/12	2	2	17	SLU	0.40	948.29	2.50	18513.50	27658.40	0.30	45.99	2.50	25889.50	29008.30	19.52
2.63	3.21	ø8/12	2	2	10 (TG)	SLD	0.40	2555.11	2.50	21290.60	40944.50	0.30	8025.78	2.50	29772.90	42942.80	3.71
2.63	3.21	ø8/12	2	2	8 (TG)	SLD	0.40	5428.99	2.50	21290.60	40112.40	0.30	3976.49	2.50	29772.90	42070.10	3.92
2.63	3.21	ø8/12	2	2	9 (TG)	SLV	0.40	1437.15	2.50	18513.50	28403.40	0.30	7199.10	2.50	25889.50	29789.60	3.60
2.63	3.21	ø8/12	2	2	15 (TG)	SLV	0.40	4444.88	2.50	18513.50	27767.70	0.30	4200.24	2.50	25889.50	29122.90	4.17
3.56	4.12	ø8/12	2	2	20	SLU	0.40	1525.54	2.50	18513.50	26490.30	0.30	254.85	2.50	25889.50	27783.10	12.14
3.56	4.12	ø8/12	2	2	17	SLU	0.40	1590.70	2.50	18513.50	26473.30	0.30	137.03	2.50	25889.50	27765.40	11.64
3.56	4.12	ø8/12	2	2	14 (TG)	SLD	0.40	2527.57	2.50	21290.60	39295.70	0.30	6999.40	2.50	29772.90	41213.50	4.25
3.56	4.12	ø8/12	2	2	8 (TG)	SLD	0.40	5393.12	2.50	21290.60	39020.00	0.30	3047.71	2.50	29772.90	40924.40	3.95
3.56	4.12	ø8/12	2	2	11 (TG)	SLV	0.40	2060.29	2.50	18513.50	26445.30	0.30	5961.33	2.50	25889.50	27736.00	4.34
3.56	4.12	ø8/12	2	2	7 (TG)	SLV	0.40	4337.06	2.50	18513.50	26218.30	0.30	3767.70	2.50	25889.50	27497.90	4.27
4.12	6.35	ø8/20	2	2	20	SLU	0.40	1525.54	2.50	11108.10	26462.00	0.30	254.85	2.50	15533.70	27753.40	7.28
4.12	6.35	ø8/20	2	2	17	SLU	0.40	1590.70	2.50	11108.10	26445.10	0.30	137.03	2.50	15533.70	27735.70	6.98
4.12	6.35	ø8/20	2	2	14 (TG)	SLD	0.40	2527.57	2.50	12774.30	39295.70	0.30	6999.40	2.50	17863.70	41213.50	2.55
4.12	6.35	ø8/20	2	2	8 (TG)	SLD	0.40	5393.12	2.50	12774.30	39020.00	0.30	3047.71	2.50	17863.70	40924.40	2.37
4.12	6.35	ø8/20	2	2	11 (TG)	SLV	0.40	2060.29	2.50	11108.10	26445.30	0.30	5961.33	2.50	15533.70	27736.00	2.61
4.12	6.35	ø8/20	2	2	7 (TG)	SLV	0.40	4337.06	2.50	11108.10	26218.30	0.30	3767.70	2.50	15533.70	27497.90	2.56
6.35	6.91	ø8/12	2	2	20	SLU	0.40	1525.54	2.50	18513.50	26348.90	0.30	254.85	2.50	25889.50	27634.90	12.14
6.35	6.91	ø8/12	2	2	17	SLU	0.40	1590.70	2.50	18513.50	26332.00	0.30	137.03	2.50	25889.50	27617.10	11.64
6.35	6.91	ø8/12	2	2	14 (TG)	SLD	0.40	2527.57	2.50	21290.60	39295.70	0.30	6999.40	2.50	29772.90	41213.50	4.25
6.35	6.91	ø8/12	2	2	8 (TG)	SLD	0.40	5393.12	2.50	21290.60	39020.00	0.30	3047.71	2.50	29772.90	40924.40	3.95
6.35	6.91	ø8/12	2	2	11 (TG)	SLV	0.40	2060.29	2.50	18513.50	26445.30	0.30	5961.33	2.50	25889.50	27736.00	4.34
6.35	6.91	ø8/12	2	2	7 (TG)	SLV	0.40	4337.06	2.50	18513.50	26218.30	0.30	3767.70	2.50	25889.50	27497.90	4.27

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
105	N	ø8 / 7										

Relazione di calcolo

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α_y	My ver. <daNm>	Mz <daNm>	α_z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ϵ_r	Sic.
3.56	7 (α)	SLV	2	9	0.00	-15901.70	939.04	10.03	9418.96	-2289.38	4.56	-10433.60	-15901.80	10556.30	-11593.10	288.28	4.52	1.115
7.00	1	SLV	2	9	344.00	-14129.30	-2705.43			6891.21			-14129.30	-5164.40	13045.50	98.44	5.30	1.895
-0.25	10	SLD	1	5	0.00	-34711.50	-2651.12			3593.33			-34711.50	-9588.91	13282.10	105.47	5.45	3.669
-0.25	10	SLD	1	5	0.00	-34711.50	-2651.12			3593.33			-34711.50	-9588.91	13282.10	105.47	5.45	3.669
3.30	10	SLD	1	5	355.00	-33380.20	1253.23			-2280.67			-33380.20	7590.37	-13539.70	281.25	6.15	5.965
3.56	2	SLD	2	9	0.00	-15746.10	-1957.46			-3831.74			-15746.10	-8041.02	-15484.20	259.45	5.87	4.055
7.00	2	SLD	2	9	344.00	-14241.10	-2202.95			5818.47			-14241.00	-5683.23	15798.00	97.03	6.52	2.699

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	31.32
-0.25	1	3.81	43.99	31.32
3.30	1	3.81	43.99	31.32

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α_y	My ver. <daNm>	Mz <daNm>	α_z	Mz ver. <daNm>	Nu <daN>	Myu, s <daNm>	Myu <daNm>	Mzu, s <daNm>	Mzu <daNm>	α <grad>
-0.25	9	SLV	1	5	0.00	-34571.00	-3289.17			4444.42			-34571.00	-7500.51	-8091.08	10396.70	11240.40	108.28
-0.25	9	SLV	1	5	0.00	-34571.00	-3289.17			4444.42			-34571.00	-7500.51	-8091.08	10396.70	11240.40	108.28
3.30	3 (α)	SLV	1	5	355.00	-33234.30	1172.41	4.12	4833.09	-1458.69	3.65	-5330.82	-33234.30	8868.98	9487.80	-9751.56	-10461.80	291.80

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_f <daN/cmq>
-0.25	22	SLE R	1	5	0.00	-40706.60	726.10	-559.07	0.00	20.36	33.76	459.60
-0.25	30	SLE Q	1	5	0.00	-35251.00	641.10	-475.98	0.00	20.36	29.31	398.66
-0.25	22	SLE R	1	5	0.00	-40706.60	726.10	-559.07	0.00	20.36	33.76	459.60
-0.25	30	SLE Q	1	5	0.00	-35251.00	641.10	-475.98	0.00	20.36	29.31	398.66
3.30	22	SLE R	1	5	355.00	-39375.40	-1003.86	933.75	0.00	20.36	38.36	507.73
3.30	30	SLE Q	1	5	355.00	-33919.70	-860.52	779.29	0.00	20.36	32.84	434.94
3.56	23	SLE R	2	9	0.00	-17661.30	-128.30	-578.43	0.00	25.45	12.48	168.14
3.56	31	SLE Q	2	9	0.00	-16147.50	-156.14	-488.18	0.00	25.45	11.52	154.36
7.00	21	SLE R	2	9	344.00	-16143.70	2332.96	-526.03	12.72	12.72	39.15	373.39
7.00	29	SLE Q	2	9	344.00	-14629.90	2077.26	-448.01	12.72	12.72	34.61	331.75

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c, eff} <cmq>	σ_s <daN/cmq>	σ_{sr} <daN/cmq>	ϵ_{sm}	Wk <mm>
7.00	29	SLE Q	2	9	344.00	-14629.90	-448.01	2077.26	59.00	71.33	0.13	223.82	18.00	10.18	1035.46	292.55	758.60	0.06	0.02

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w, y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w, z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic. T
-0.25	0.34	ø8/10	2	2	19	SLV	0.50	551.16	2.50	22216.30	38469.20	0.30	577.10	2.50	39918.40	41473.20	40.31
-0.25	0.34	ø8/10	2	2	18	SLV	0.50	636.05	2.50	22216.30	38469.20	0.30	557.16	2.50	39918.40	41473.20	34.93
-0.25	0.34	ø8/10	2	2	28 (TG)	SLD	0.50	6458.56	2.50	25548.70	52502.50	0.30	9719.17	2.50	45906.20	56602.30	3.96
-0.25	0.34	ø8/10	2	2	24 (TG)	SLD	0.50	8318.82	2.50	25548.70	52521.30	0.30	5498.70	2.50	45906.20	56622.60	3.07
-0.25	0.34	ø8/10	2	2	27 (TG)	SLV	0.50	3499.47	2.50	22216.30	36478.10	0.30	10171.60	2.48	39573.70	39573.70	3.89
-0.25	0.34	ø8/10	2	2	29 (TG)	SLV	0.50	7382.24	2.50	22216.30	36582.40	0.30	2825.62	2.48	39639.40	39639.40	3.01
0.34	2.71	ø8/20	2	2	19	SLV	0.50	551.16	2.50	11108.10	38469.20	0.30	577.10	2.50	19959.20	41473.20	20.15
0.34	2.71	ø8/20	2	2	18	SLV	0.50	636.05	2.50	11108.10	38469.20	0.30	557.16	2.50	19959.20	41473.20	17.46
0.34	2.71	ø8/20	2	2	28 (TG)	SLD	0.50	6458.56	2.50	12774.30	52502.50	0.30	9719.17	2.50	22953.10	56602.30	1.98
0.34	2.71	ø8/20	2	2	24 (TG)	SLD	0.50	8318.82	2.50	12774.30	52521.30	0.30	5498.70	2.50	22953.10	56622.60	1.54
0.34	2.71	ø8/20	2	2	27 (TG)	SLV	0.50	3499.47	2.50	11108.10	36478.10	0.30	10171.60	2.50	19959.20	39326.60	1.96
0.34	2.71	ø8/20	2	2	29 (TG)	SLV	0.50	7382.24	2.50	11108.10	36582.40	0.30	2825.62	2.50	19959.20	39439.00	1.50
2.71	3.30	ø8/10	2	2	19	SLV	0.50	551.16	2.50	22216.30	38469.20	0.30	577.10	2.50	39918.40	41473.20	40.31
2.71	3.30	ø8/10	2	2	18	SLV	0.50	636.05	2.50	22216.30	38469.20	0.30	557.16	2.50	39918.40	41473.20	34.93
2.71	3.30	ø8/10	2	2	28 (TG)	SLD	0.50	6458.56	2.50	25548.70	52502.50	0.30	9719.17	2.50	45906.20	56602.30	3.96
2.71	3.30	ø8/10	2	2	24 (TG)	SLD	0.50	8318.82	2.50	25548.70	52521.30	0.30	5498.70	2.50	45906.20	56622.60	3.07
2.71	3.30	ø8/10	2	2	27 (TG)	SLV	0.50	3499.47	2.50	22216.30	36478.10	0.30	10171.60	2.48	39573.70	39573.70	3.89
2.71	3.30	ø8/10	2	2	29 (TG)	SLV	0.50	7382.24	2.50	22216.30	36582.40	0.30	2825.62	2.48	39639.40	39639.40	3.01
3.56	4.13	ø8/10	2	2	19	SLV	0.50	904.69	2.50	24871.60	38787.20	0.35	59.45	2.50	38148.20	41644.40	27.49
3.56	4.13	ø8/10	2	2	17	SLV	0.50	939.90	2.50	24871.60	38785.60	0.35	5.19	2.50	38148.20	41642.80	26.46
3.56	4.13	ø8/10	2	2	216 (TG)	SLD	0.50	4430.15	2.50	28602.30	55682.80	0.35	14595.60	2.50	43870.50	59784.70	3.01
3.56	4.13	ø8/10	2	2	212 (TG)	SLD	0.50	10483.00	2.50	28602.30	55693.00	0.35	1561.03	2.50	43870.50	59795.70	2.73
3.56	4.13	ø8/10	2	2	215 (TG)	SLV	0.50	4951.98	2.50	24871.60	37744.80	0.35	10445.40	2.50	38148.20	40525.30	3.65
3.56	4.13	ø8/10	2	2	211 (TG)	SLV	0.50	8317.30	2.50	24871.60	37757.90	0.35	3336.73	2.50	38148.20	40539.40	2.99
4.13	6.43	ø8/20	2	2	19	SLV	0.50	904.69	2.50	12435.80	38746.50	0.35	59.45	2.50	19074.10	41600.80	13.75
4.13	6.43	ø8/20	2	2	17	SLV	0.50	939.90	2.50	12435.80	38745.00	0.35	5.19	2.50	19074.10	41599.10	13.23
4.13	6.43	ø8/20	2	2	216 (TG)	SLD	0.50	4430.15	2.50	14301.20	55682.80	0.35	14595.60	2.50	21935.20	59784.70	1.50
4.13	6.43	ø8/20	2	2	212 (TG)	SLD	0.50	10483.00	2.50	14301.20	55693.00	0.35	1561.03	2.50	21935.20	59795.70	1.36
4.13	6.43	ø8/20	2	2	215 (TG)	SLV	0.50	4951.98	2.50	12435.80	37744.80	0.35	10445.40	2.50	19074.10	40525.30	1.83
4.13	6.43	ø8/20	2	2	211 (TG)	SLV	0.50	8317.30	2.50	12435.80	37757.90	0.35	3336.73	2.50	19074.10	40539.40	1.50
6.43	7.00	ø8/10	2	2	19	SLV	0.50	904.69	2.50	24871.60	38584.00	0.35	59.45	2.50	38148.20	41426.40	27.49
6.43	7.00	ø8/10	2	2	17	SLV	0.50	939.90	2.50	24871.60	38582.50	0.35	5.19	2.50	38148.20	41424.70	26.46
6.43	7.00	ø8/10	2	2	216 (TG)	SLD	0.50	4430.15	2.50	28602.30	55682.80	0.35	14595.60	2.50	43870.50	59784.70	3.01
6.43	7.00	ø8/10	2	2	212 (TG)	SLD	0.50	10483.00	2.50</								

Relazione di calcolo

			Z-	I	2	5.49	4.62	0.36	0.40	0.20	5.03	1.68
206	N	ø8/ 5	Y+	I	2	8.70	4.11	0.50	0.21	0.20	5.03	1.20
			Z+	I	2	4.62	4.11	0.40	0.36	0.20	5.03	1.50
			Y-	I	2	4.11	7.63	0.50	0.21	0.20	5.03	1.20
			Z-	I	2	4.11	4.62	0.36	0.36	0.20	5.03	1.68

Pilastrata n. 7

Nodi: 7 107 207

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Typo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
8	R	35.00	40.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.
3.56	7 (α)	SLV	2	8	0.00	-13095.90	1479.62	5.91	8741.80	-3078.35	2.31	-7111.16	-13095.90	9174.97	-7540.97	310.78	4.19	1.054
7.00	9	SLV	2	8	344.00	-11003.80	-6076.24			5911.83			-11003.80	-8394.23	7989.85	126.56	4.28	1.367
-0.25	10	SLD	1	8	0.00	-27181.80	4308.00			-4143.02			-27181.80	11067.80	-10556.70	306.56	4.29	2.559
-0.25	10	SLD	1	8	0.00	-27181.80	4308.00			-4143.02			-27181.80	11067.80	-10556.70	306.56	4.29	2.559
3.30	10	SLD	1	8	355.00	-25939.30	-1354.95			3497.35			-25939.30	-5104.69	13674.30	104.06	5.26	3.892
3.56	10	SLD	2	8	0.00	-12453.30	3938.84			-5044.49			-12453.30	8597.75	-10925.10	298.13	4.98	2.172
7.00	10	SLD	2	8	344.00	-11249.30	-5089.48			5107.13			-11249.30	-9916.15	9884.54	125.16	4.90	1.942

Dati per verifiche di stabilità

Xg <cm>	El	l ₀ <cm>	λ	λ*
-0.25	1	3.81	37.71	31.28
-0.25	1	3.81	37.71	31.28
3.30	1	3.81	37.71	31.28

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Myu <daNm>	Mzu,s <daNm>	Mzu <daNm>	α <grad>	ε _y
-0.25	9	SLV	1	8	0.00	-26575.30	5481.27			-5023.52			-26575.30	8913.86	9395.03	-8115.41	-8554.11	307.97	3.63
-0.25	9	SLV	1	8	0.00	-26575.30	5481.27			-5023.52			-26575.30	8913.86	9395.03	-8115.41	-8554.11	307.97	3.63
3.30	7 (α)	SLV	1	8	355.00	-27549.90	982.98	4.58	4506.97	2085.05	2.31	4816.58	-27549.90	8191.54	8673.91	8670.96	9196.32	56.25	3.61

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
-0.25	22	SLE R	1	8	0.00	-33835.30	-1262.99	266.12	0.00	20.36	35.26	440.71
-0.25	24	SLE R	1	8	0.00	-33775.80	-1347.37	169.31	0.00	20.36	35.24	439.74
-0.25	30	SLE Q	1	8	0.00	-29353.80	-1018.81	260.54	0.00	20.36	30.05	377.64
-0.25	22	SLE R	1	8	0.00	-33835.30	-1262.99	266.12	0.00	20.36	35.26	440.71
-0.25	24	SLE R	1	8	0.00	-33775.80	-1347.37	169.31	0.00	20.36	35.24	439.74
-0.25	30	SLE Q	1	8	0.00	-29353.80	-1018.81	260.54	0.00	20.36	30.05	377.64
3.30	24	SLE R	1	8	355.00	-32533.30	2184.71	51.82	0.00	20.36	42.46	500.12
3.30	32	SLE Q	1	8	355.00	-28051.80	1741.40	43.05	0.00	20.36	34.93	416.31
3.56	22	SLE R	2	8	0.00	-14534.10	-2947.01	1007.97	10.18	10.18	69.87	836.33
3.56	24	SLE R	2	8	0.00	-14512.50	-2994.81	917.03	10.18	10.18	69.34	840.72
3.56	30	SLE Q	2	8	0.00	-13326.70	-2456.34	921.96	10.18	10.18	59.03	656.26
7.00	22	SLE R	2	8	344.00	-13330.10	2564.76	-1825.17	10.18	10.18	76.23	909.33
7.00	24	SLE R	2	8	344.00	-13308.50	2622.81	-1727.81	10.18	10.18	75.81	911.58
7.00	30	SLE Q	2	8	344.00	-12122.70	2252.49	-1659.43	10.18	10.18	67.64	792.35

Verifiche stato limite di formazione delle fessure

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cm²>	A _{c,eff} <cm²>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
3.56	32	SLE Q	2	8	0.00	-13305.10	831.02	-2504.14	59.00	107.00	0.13	221.42	18.00	10.18	927.62	660.26	882.83	0.13	0.05
7.00	32	SLE Q	2	8	344.00	-12101.10	-1562.07	2310.53	59.00	107.00	0.13	221.40	18.00	10.18	927.45	794.20	882.99	0.15	0.06

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.34	ø8/14	2	2	18	SLV	0.40	1292.18	2.50	17765.40	34338.40	0.35	69.38	2.50	20926.50	35392.40	13.75
-0.25	0.34	ø8/14	2	2	20	SLV	0.40	1331.55	2.50	17765.40	34331.00	0.35	34.88	2.50	20926.50	35384.80	13.34
-0.25	0.34	ø8/14	2	2	2 (TG)	SLD	0.40	5519.25	2.50	20430.20	46382.70	0.35	8076.57	2.50	24065.50	47806.40	2.98
-0.25	0.34	ø8/14	2	2	16 (TG)	SLD	0.40	8710.69	2.50	20430.20	46630.60	0.35	2993.14	2.50	24065.50	48061.90	2.35
-0.25	0.34	ø8/14	2	2	3 (TG)	SLV	0.40	2935.03	2.50	17765.40	32448.10	0.35	8063.31	2.50	20926.50	33444.10	2.60
-0.25	0.34	ø8/14	2	2	15 (TG)	SLV	0.40	7116.54	2.50	17765.40	32290.90	0.35	2918.48	2.50	20926.50	33282.00	2.50
0.34	2.71	ø8/20	2	2	18	SLV	0.40	1292.18	2.50	12435.80	34304.90	0.35	69.38	2.50	14648.60	35357.90	9.62
0.34	2.71	ø8/20	2	2	20	SLV	0.40	1331.55	2.50	12435.80	34297.50	0.35	34.88	2.50	14648.60	35350.20	9.34
0.34	2.71	ø8/20	2	2	2 (TG)	SLD	0.40	5519.25	2.50	14301.20	46382.70	0.35	8076.57	2.50	16845.80	47806.40	2.09
0.34	2.71	ø8/20	2	2	16 (TG)	SLD	0.40	8710.69	2.50	14301.20	46630.60	0.35	2993.14	2.50	16845.80	48061.90	1.64
0.34	2.71	ø8/20	2	2	3 (TG)	SLV	0.40	2935.03	2.50	12435.80	32448.10	0.35	8063.31	2.50	14648.60	33444.10	1.82
0.34	2.71	ø8/20	2	2	15 (TG)	SLV	0.40	7116.54	2.50	12435.80	32290.90	0.35	2918.48	2.50	14648.60	33282.00	1.75
2.71	3.30	ø8/14	2	2	18	SLV	0.40	1292.18	2.50	17765.40	34170.70	0.35	69.38	2.50	20926.50	35219.60	13.75
2.71	3.30	ø8/14	2	2	20	SLV	0.40	1331.55	2.50	17765.40	34163.30	0.35	34.88	2.50	20926.50	35211.90	13.34
2.71	3.30	ø8/14	2	2	2 (TG)	SLD	0.40	5519.25	2.50	20430.20	46382.70	0.35	8076.57	2.50	24065.50	47806.40	2.98
2.71	3.30	ø8/14	2	2	16 (TG)	SLD	0.40	8710.69	2.50	20430.20	46630.60	0.35	2993.14	2.50	24065.50	48061.90	2.35
2.71	3.30	ø8/14	2	2	3 (TG)	SLV	0.40	2935.03	2.50	17765.40	32448.10	0.35	8063.31	2.50	20926.50	33444.10	2.60
2.71	3.30	ø8/14	2	2	15 (TG)	SLV	0.40	7116.54	2.50	17765.40	32290.90	0.35	2918.48	2.50	20926.50	33282.00	2.50
3.56	4.13	ø8/14	2	2	18	SLV	0.40	2134.12	2.50	17765.40	31095.00	0.35	1063.97	2.50	20926.50	32049.50	8.32
3.56	4.13	ø8/14	2	2	20	SLV	0.40	2164.89	2.50	17765.40	31092.30	0.35	1009.24	2.50	20926.50	32046.70	8.21
3.56	4.13	ø8/14	2	2	2 (TG)	SLD	0.40	3843.97	2.50	20430.20	44689.30	0.35	8156.89	2.50	24065.50	46061.00	2.95

Relazione di calcolo

3.56	4.13	ø8/14	2	2	8(TG)	SLD	0.40	7985.40	2.50	20430.20	44555.30	0.35	3040.38	2.50	24065.50	45922.90	2.56
3.56	4.13	ø8/14	2	2	8(TG)	SLD	0.40	7999.13	2.50	20430.20	44636.10	0.35	3138.07	2.50	24065.50	46006.20	2.55
3.56	4.13	ø8/14	2	2	9(TG)	SLV	0.40	2743.37	2.50	17765.40	30321.50	0.35	7057.75	2.50	20926.50	31252.20	2.97
3.56	4.13	ø8/14	2	2	15(TG)	SLV	0.40	6351.18	2.50	17765.40	30253.60	0.35	3060.77	2.50	20926.50	31182.20	2.80
4.13	6.43	ø8/20	2	2	18	SLU	0.40	2134.12	2.50	12435.80	31062.50	0.35	1063.97	2.50	14648.60	32016.00	5.83
4.13	6.43	ø8/20	2	2	20	SLU	0.40	2164.89	2.50	12435.80	31059.80	0.35	1009.24	2.50	14648.60	32013.20	5.74
4.13	6.43	ø8/20	2	2	2(TG)	SLD	0.40	3843.97	2.50	14301.20	44689.30	0.35	8156.89	2.50	16845.80	46061.00	2.07
4.13	6.43	ø8/20	2	2	8(TG)	SLD	0.40	7985.40	2.50	14301.20	44555.30	0.35	3040.38	2.50	16845.80	45922.90	1.79
4.13	6.43	ø8/20	2	2	8(TG)	SLD	0.40	7999.13	2.50	14301.20	44636.10	0.35	3138.07	2.50	16845.80	46006.20	1.79
4.13	6.43	ø8/20	2	2	9(TG)	SLV	0.40	2743.37	2.50	12435.80	30321.50	0.35	7057.75	2.50	14648.60	31252.20	2.08
4.13	6.43	ø8/20	2	2	15(TG)	SLV	0.40	6351.18	2.50	12435.80	30253.60	0.35	3060.77	2.50	14648.60	31182.20	1.96
6.43	7.00	ø8/14	2	2	18	SLU	0.40	2134.12	2.50	17765.40	30932.50	0.35	1063.97	2.50	20926.50	31882.00	8.32
6.43	7.00	ø8/14	2	2	20	SLU	0.40	2164.89	2.50	17765.40	30929.80	0.35	1009.24	2.50	20926.50	31879.20	8.21
6.43	7.00	ø8/14	2	2	2(TG)	SLD	0.40	3843.97	2.50	20430.20	44689.30	0.35	8156.89	2.50	24065.50	46061.00	2.95
6.43	7.00	ø8/14	2	2	8(TG)	SLD	0.40	7985.40	2.50	20430.20	44555.30	0.35	3040.38	2.50	24065.50	45922.90	2.56
6.43	7.00	ø8/14	2	2	8(TG)	SLD	0.40	7999.13	2.50	20430.20	44636.10	0.35	3138.07	2.50	24065.50	46006.20	2.55
6.43	7.00	ø8/14	2	2	9(TG)	SLV	0.40	2743.37	2.50	17765.40	30321.50	0.35	7057.75	2.50	20926.50	31252.20	2.97
6.43	7.00	ø8/14	2	2	15(TG)	SLV	0.40	6351.18	2.50	17765.40	30253.60	0.35	3060.77	2.50	20926.50	31182.20	2.80

Pilastrata n. 8

Nodi: 8 108 208

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _r	Sic.
3.56	9(α)	SLV	2	1	0.00	-4914.20	8920.65	1.13	10043.10	-2713.52	1.37	-3711.81	-4914.19	11438.40	-4062.40	326.25	5.51	1.134
6.91	9	SLV	2	1	335.00	-3909.20	-8725.36			2724.79			-3909.20	-11561.30	3745.81	149.06	5.76	1.330
-0.25	10	SLD	1	1	0.00	-13316.00	6110.54			-1740.52			-13316.00	15133.20	-4125.32	334.69	6.34	2.469
-0.25	10	SLD	1	1	0.00	-13316.00	6110.54			-1740.52			-13316.00	15133.20	-4125.32	334.69	6.34	2.469
3.21	10	SLD	1	1	346.00	-12278.00	-4782.10			1248.88			-12278.50	-15016.20	4110.18	154.69	6.40	3.150
3.56	10	SLD	2	1	0.00	-5747.20	7358.58			-2408.72			-5747.44	13992.80	-4427.20	331.88	6.57	1.895
6.91	10	SLD	2	1	335.00	-4742.20	-7182.84			2425.11			-4742.20	-13613.00	4800.89	149.06	6.42	1.904

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	31.61
-0.25	1	3.81	43.99	31.61
3.21	1	3.81	43.99	31.61

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Mzu,s <daNm>	α <grad>	ε _r		
-0.25	9	SLV	1	1	0.00	-11091.60	7610.59			2323.75			-11091.60	11996.90	12313.60	3722.97	3818.80	30.94	5.00
-0.25	9	SLV	1	1	0.00	-11091.60	7610.59			2323.75			-11091.60	11996.90	12313.60	3722.97	3818.80	30.94	5.00
3.21	9(α)	SLV	1	1	346.00	-10053.60	-5818.00	1.13	-6550.07	1393.19	1.37	1905.73	-10053.60	-12132.30	-12438.90	3400.90	3478.93	151.88	5.00

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
-0.25	24	SLE R	1	1	0.00	-23290.30	-414.38	1006.44	0.00	20.36	30.39	395.55
-0.25	32	SLE Q	1	1	0.00	-21150.20	-335.70	888.62	0.00	20.36	26.82	351.03
-0.25	24	SLE R	1	1	0.00	-23290.30	-414.38	1006.44	0.00	20.36	30.39	395.55
-0.25	32	SLE Q	1	1	0.00	-21150.20	-335.70	888.62	0.00	20.36	26.82	351.03
3.21	24	SLE R	1	1	346.00	-22252.30	901.00	-1403.30	2.54	17.81	41.00	504.28
3.21	32	SLE Q	1	1	346.00	-20112.20	753.40	-1200.83	2.54	17.81	35.28	437.08
3.56	24	SLE R	2	1	0.00	-9291.33	-1508.40	2157.30	12.72	7.63	66.88	882.57
3.56	32	SLE Q	2	1	0.00	-8666.29	-1318.69	1901.94	12.72	7.63	58.50	749.69
6.91	24	SLE R	2	1	335.00	-8286.33	1464.29	-1960.39	12.72	7.63	63.07	851.88
6.91	32	SLE Q	2	1	335.00	-7661.29	1326.02	-1781.06	12.72	7.63	57.14	765.26

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cm²>	A _{s,eff} <cm²>	σ _s <daN/cm²>	σ _{sz} <daN/cm²>	ε _{sm}	Wk <mm>
3.21	32	SLE Q	1	1	346.00	-20112.20	-1200.83	753.40	39.00	252.00	0.13	221.18	18.00	2.54	262.33	42.13	182.63	0.01	0.00
3.56	32	SLE Q	2	1	0.00	-8666.29	1901.94	-1318.69	39.00	102.00	0.13	163.92	18.00	10.18	741.02	749.69	864.95	0.15	0.04
6.91	32	SLE Q	2	1	335.00	-7661.29	-1781.06	1326.02	39.00	102.00	0.13	161.49	18.00	12.72	891.94	765.26	894.17	0.15	0.04

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	V _{sdu,y} <daN>	ctgθ _y	VR _{sd,y} <daN>	VR _{cd,y} <daN>	b _{w,z} <cm>	V _{sdu,z} <daN>	ctgθ _z	VR _{sd,z} <daN>	VR _{cd,z} <daN>	Sic. T
-0.25	0.33	ø8/12	2	2	20	SLU	0.40	519.35	2.50	18513.50	29658.80	0.30	902.90	2.50	25889.50	31106.20	28.67
-0.25	0.33	ø8/12	2	2	17	SLU	0.40	570.24	2.50	18513.50	29713.10	0.30	757.98	2.50	25889.50	31163.30	32.47
-0.25	0.33	ø8/12	2	2	10(TG)	SLD	0.40	2159.05	2.50	21290.60	40063.20	0.30	9865.03	2.50	29772.90	42018.50	3.02
-0.25	0.33	ø8/12	2	2	6(TG)	SLD	0.40	3075.04	2.50	21290.60	42039.60	0.30	10285.00	2.50	29772.90	44091.30	2.89
-0.25	0.33	ø8/12	2	2	8(TG)	SLD	0.40	6049.17	2.50	21290.60	41618.10	0.30	6696.77	2.50	29772.90	43649.20	3.52
-0.25	0.33	ø8/12	2	2	13(TG)	SLV	0.40	1459.76	2.50	18513.50	28994.00	0.30	9454.88	2.50	25889.50	30409.10	2.74
-0.25	0.33	ø8/12	2	2	15(TG)	SLV	0.40	4322.36	2.50	18513.50	27643.40	0.30	5141.01	2.50	25889.50	28992.50	4.28
-0.25	0.33	ø8/12	2	2	7(TG)	SLV	0.40	4467.48	2.50	18513.50	28934.40	0.30	6342.92	2.50	25889.50	30346.60	4.08
0.33	2.63	ø8/20	2	2	20	SLU	0.40	519.35	2.50	11108.10	29629.60	0.30	902.90	2.50	15533.70	31075.60	17.20
0.33	2.63	ø8/20	2	2	17	SLU	0.40	570.24	2.50	11108.10	29683.90	0.30	757.98	2.50	15533.70	31132.60	19.48
0.33	2.63	ø8/20	2	2	10(TG)	SLD	0.40	2159.05	2.50	12774.30	40063.20	0.30	9865.03	2.50	17863.70	42018.50	1.81
0.33	2.63	ø8/20	2	2	6(TG)	SLD	0.40	3075.04	2.50	12774.30	42039.60	0.30	10285.00	2.50	17863.70	44091.30	1.74
0.33	2.63	ø8/20	2	2	8(TG)	SLD	0.40	6049.17	2.50	12774.30	41618.10	0.30	6696.77	2.50	17863.70	43649.20	2.11

Relazione di calcolo

0.33	2.63	ø8/20	2	2	13 (TG)	SLV	0.40	1459.76	2.50	11108.10	28994.00	0.30	9454.88	2.50	15533.70	30409.10	1.64
0.33	2.63	ø8/20	2	2	15 (TG)	SLV	0.40	4322.36	2.50	11108.10	27643.40	0.30	5141.01	2.50	15533.70	28992.50	2.57
0.33	2.63	ø8/20	2	2	17 (TG)	SLV	0.40	4467.48	2.50	11108.10	28934.40	0.30	6342.92	2.50	15533.70	30346.60	2.45
2.63	3.21	ø8/12	2	2	20	SLU	0.40	519.35	2.50	18513.50	29512.80	0.30	902.90	2.50	25889.50	30953.10	28.67
2.63	3.21	ø8/12	2	2	17	SLU	0.40	570.24	2.50	18513.50	29567.10	0.30	757.98	2.50	25889.50	31010.10	32.47
2.63	3.21	ø8/12	2	2	10 (TG)	SLD	0.40	2159.05	2.50	21290.60	40063.20	0.30	9865.03	2.50	29772.90	42018.50	3.02
2.63	3.21	ø8/12	2	2	6 (TG)	SLD	0.40	3075.04	2.50	21290.60	42039.60	0.30	10285.00	2.50	29772.90	44091.30	2.89
2.63	3.21	ø8/12	2	2	8 (TG)	SLD	0.40	6049.17	2.50	21290.60	41618.10	0.30	6696.77	2.50	29772.90	43649.20	3.52
2.63	3.21	ø8/12	2	2	13 (TG)	SLV	0.40	1459.76	2.50	18513.50	28994.00	0.30	9454.88	2.50	25889.50	30409.10	2.74
2.63	3.21	ø8/12	2	2	15 (TG)	SLV	0.40	4322.36	2.50	18513.50	27643.40	0.30	5141.01	2.50	25889.50	28992.50	4.28
2.63	3.21	ø8/12	2	2	17 (TG)	SLV	0.40	4467.48	2.50	18513.50	28934.40	0.30	6342.92	2.50	25889.50	30346.60	4.08
3.56	4.12	ø8/12	2	2	20	SLU	0.40	1180.35	2.50	18513.50	27233.30	0.30	1600.49	2.50	25889.50	28562.40	15.68
3.56	4.12	ø8/12	2	2	17	SLU	0.40	1225.50	2.50	18513.50	27252.50	0.30	1436.10	2.50	25889.50	28582.60	15.11
3.56	4.12	ø8/12	2	2	10 (TG)	SLD	0.40	2058.05	2.50	21290.60	39726.10	0.30	10013.00	2.50	29772.90	41664.90	2.97
3.56	4.12	ø8/12	2	2	8 (TG)	SLD	0.40	5943.87	2.50	21290.60	39661.80	0.30	6074.45	2.50	29772.90	41597.40	3.58
3.56	4.12	ø8/12	2	2	11 (TG)	SLV	0.40	1669.97	2.50	18513.50	26822.20	0.30	8523.61	2.50	25889.50	28131.30	3.04
3.56	4.12	ø8/12	2	2	1 (TG)	SLV	0.40	1696.76	2.50	18513.50	27149.30	0.30	8592.85	2.50	25889.50	28474.30	3.01
3.56	4.12	ø8/12	2	2	15 (TG)	SLV	0.40	3771.32	2.50	18513.50	26714.80	0.30	5449.03	2.50	25889.50	28018.60	4.75
4.12	6.35	ø8/20	2	2	20	SLU	0.40	1180.35	2.50	11108.10	27205.00	0.30	1600.49	2.50	15533.70	28532.80	9.41
4.12	6.35	ø8/20	2	2	17	SLU	0.40	1225.50	2.50	11108.10	27224.30	0.30	1436.10	2.50	15533.70	28552.90	9.06
4.12	6.35	ø8/20	2	2	10 (TG)	SLD	0.40	2058.05	2.50	12774.30	39726.10	0.30	10013.00	2.50	17863.70	41664.90	1.78
4.12	6.35	ø8/20	2	2	8 (TG)	SLD	0.40	5943.87	2.50	12774.30	39661.80	0.30	6074.45	2.50	17863.70	41597.40	2.15
4.12	6.35	ø8/20	2	2	11 (TG)	SLV	0.40	1669.97	2.50	11108.10	26822.20	0.30	8523.61	2.50	15533.70	28131.30	1.82
4.12	6.35	ø8/20	2	2	1 (TG)	SLV	0.40	1696.76	2.50	11108.10	27149.30	0.30	8592.85	2.50	15533.70	28474.30	1.81
4.12	6.35	ø8/20	2	2	15 (TG)	SLV	0.40	3771.32	2.50	11108.10	26714.80	0.30	5449.03	2.50	15533.70	28018.60	2.85
6.35	6.91	ø8/12	2	2	20	SLU	0.40	1180.35	2.50	18513.50	27091.90	0.30	1600.49	2.50	25889.50	28414.20	15.68
6.35	6.91	ø8/12	2	2	17	SLU	0.40	1225.50	2.50	18513.50	27111.20	0.30	1436.10	2.50	25889.50	28434.30	15.11
6.35	6.91	ø8/12	2	2	10 (TG)	SLD	0.40	2058.05	2.50	21290.60	39726.10	0.30	10013.00	2.50	29772.90	41664.90	2.97
6.35	6.91	ø8/12	2	2	8 (TG)	SLD	0.40	5943.87	2.50	21290.60	39661.80	0.30	6074.45	2.50	29772.90	41597.40	3.58
6.35	6.91	ø8/12	2	2	11 (TG)	SLV	0.40	1669.97	2.50	18513.50	26822.20	0.30	8523.61	2.50	25889.50	28131.30	3.04
6.35	6.91	ø8/12	2	2	1 (TG)	SLV	0.40	1696.76	2.50	18513.50	27149.30	0.30	8592.85	2.50	25889.50	28474.30	3.01
6.35	6.91	ø8/12	2	2	15 (TG)	SLV	0.40	3771.32	2.50	18513.50	26714.80	0.30	5449.03	2.50	25889.50	28018.60	4.75

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
108	N	ø8/ 7	Y+	E	2	6.16	4.62	0.40	0.20	0.20	4.02	1.11
			Z+	I	2	6.63	9.17	0.30	0.30	0.29	5.03	1.48
			Z-	I	2	6.63	9.17	0.30	0.30	0.29	5.03	1.48
208	N	ø8/ 7	Y+	E	2	4.62	4.62	0.40	0.20	0.20	4.02	1.11
			Z+	I	2	4.62	7.63	0.30	0.30	0.29	5.03	1.48
			Z-	I	2	4.62	7.63	0.30	0.30	0.29	5.03	1.48

Pilastrata n. 9

Nodi: 9 109 209

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
5	R	30.00	50.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _r	Sic.	
3.56	1	(α)	SLV	2	5	0.00	-6483.39	2811.14	6.62	18620.70	-2491.78	1.10	-2740.96	-6514.96	19779.90	-2996.80	337.50	6.73	1.063
6.91	9		SLV	2	5	335.00	-6099.15	7935.04			1911.98			-6099.14	18670.50	4390.14	33.75	5.81	2.350
-0.25	10		SLD	1	5	0.00	-18881.50	-5916.75			1907.66			-18881.50	-22490.70	6855.85	140.63	5.70	3.782
-0.25	10		SLD	1	5	0.00	-18881.50	-5916.75			1907.66			-18881.50	-22490.70	6855.85	140.63	5.70	3.782
3.21	10		SLD	1	5	346.00	-17584.00	4579.26			972.29			-17587.50	24254.20	4831.39	28.13	6.49	5.283
3.56	10		SLD	2	5	0.00	-7797.89	-7268.55			-1680.10			-7797.89	-22865.20	-4930.29	208.13	7.02	3.135
6.91	10		SLD	2	5	335.00	-6541.64	6621.60			1620.97			-6541.65	22105.70	5747.94	33.75	6.56	3.350

Dati per verifiche di stabilità

Xg <cm>	El	l ₀ <cm>	λ	λ*
-0.25	1	3.81	43.99	38.77
-0.25	1	3.81	43.99	38.77
3.21	1	3.81	43.99	38.77

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Myu <daNm>	Mzu,s <daNm>	Mzu <daNm>	α <grad>	ε _r	
-0.25	9		SLV	1	5	0.00	-17929.90	-7162.23		2507.33			-17929.90	-17739.10	-18165.30	5971.32	6128.45	135.00	4.00	
-0.25	9		SLV	1	5	0.00	-17929.90	-7162.23		2507.33			-17929.90	-17739.10	-18165.30	5971.32	6128.45	135.00	4.00	
3.21	3	(α)	SLV	1	5	346.00	-16622.90	3351.45	3.05	10209.50	1133.53	1.10	1246.88	-16622.90	20650.90	21110.80	2782.20	2849.26	22.50	6.00

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>		
-0.25	23		SLE	R	1	5	0.00	-24250.10	-335.81	-1557.72	0.00	25.45	25.81	343.24
-0.25	31		SLE	Q	1	5	0.00	-22200.00	-310.35	-1502.73	0.00	25.45	24.12	320.17
-0.25	23		SLE	R	1	5	0.00	-24250.10	-335.81	-1557.72	0.00	25.45	25.81	343.24
-0.25	31		SLE	Q	1	5	0.00	-22200.00	-310.35	-1502.73	0.00	25.45	24.12	320.17
3.21	22		SLE	R	1	5	346.00	-23279.40	617.46	2733.36	5.09	20.36	37.20	470.31
3.21	23		SLE	R	1	5	346.00	-22952.60	661.52	2645.99	5.09	20.36	36.97	466.10
3.21	30		SLE	Q	1	5	346.00	-21229.20	559.92	2634.92	5.09	20.36	35.12	442.69
3.56	22		SLE	R	2	5	0.00	-10040.00	-708.44	-3105.16	15.27	10.18	42.61	559.10
3.56	30		SLE	Q	2	5	0.00	-9477.21	-651.46	-2995.95	15.27	10.18	40.57	539.65

Relazione di calcolo

6.91	22	SLE R	2	5	335.00	-8783.71	545.50	2116.36	12.72	12.72	29.82	345.83
6.91	30	SLE Q	2	5	335.00	-8220.96	511.46	2039.38	12.72	12.72	28.53	330.34

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _{c,eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
3.21	31	SLE Q	1	5	346.00	-20902.50	2547.55	603.99	39.00	102.00	0.13	175.33	18.00	5.09	435.02	127.50	409.29	0.02	0.01
3.56	30	SLE Q	2	5	0.00	-9477.21	-2995.95	-651.46	39.00	102.00	0.13	161.29	18.00	10.18	711.28	539.65	923.59	0.10	0.03
6.91	30	SLE Q	2	5	335.00	-8220.96	2039.38	511.46	39.00	102.00	0.13	161.30	18.00	10.18	711.45	319.48	817.33	0.06	0.02

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic. T
-0.25	0.33	ø8/10	2	2	18	SLV	0.50	319.14	2.50	22216.30	36268.00	0.30	1645.82	2.47	39440.90	39440.90	23.96
-0.25	0.33	ø8/10	2	2	17	SLV	0.50	385.57	2.50	22216.30	36218.10	0.30	1505.33	2.47	39409.30	39409.30	26.18
-0.25	0.33	ø8/10	2	2	16	(TG) SLD	0.50	2476.26	2.50	25548.70	51114.40	0.30	16314.40	2.50	45906.20	55105.80	2.81
-0.25	0.33	ø8/10	2	2	2	(TG) SLD	0.50	7232.35	2.50	25548.70	51266.00	0.30	10678.60	2.50	45906.20	55269.30	3.53
-0.25	0.33	ø8/10	2	2	15	(TG) SLV	0.50	1070.41	2.50	22216.30	35174.70	0.30	14418.20	2.43	38742.90	38742.90	2.69
-0.25	0.33	ø8/10	2	2	1	(TG) SLV	0.50	6213.14	2.50	22216.30	35360.70	0.30	6700.42	2.43	38862.50	38862.50	3.58
0.33	2.63	ø8/20	2	2	18	SLV	0.50	319.14	2.50	11108.10	36231.40	0.30	1645.82	2.50	19959.20	39006.70	12.13
0.33	2.63	ø8/20	2	2	17	SLV	0.50	385.57	2.50	11108.10	36181.60	0.30	1505.33	2.50	19959.20	39006.90	13.26
0.33	2.63	ø8/20	2	2	16	(TG) SLD	0.50	2476.26	2.50	12774.30	51114.40	0.30	16314.40	2.50	22953.10	55105.80	1.41
0.33	2.63	ø8/20	2	2	2	(TG) SLD	0.50	7232.35	2.50	12774.30	51266.00	0.30	10678.60	2.50	22953.10	55269.30	1.77
0.33	2.63	ø8/20	2	2	15	(TG) SLV	0.50	1070.41	2.50	11108.10	35174.70	0.30	14418.20	2.50	19959.20	37921.40	1.38
0.33	2.63	ø8/20	2	2	1	(TG) SLV	0.50	6213.14	2.50	11108.10	35360.70	0.30	6700.42	2.50	19959.20	38122.00	1.79
2.63	3.21	ø8/10	2	2	18	SLV	0.50	319.14	2.50	22216.30	36085.50	0.30	1645.82	2.46	39325.20	39325.20	23.89
2.63	3.21	ø8/10	2	2	17	SLV	0.50	385.57	2.50	22216.30	36035.60	0.30	1505.33	2.46	39293.60	39293.60	26.10
2.63	3.21	ø8/10	2	2	16	(TG) SLD	0.50	2476.26	2.50	25548.70	51114.40	0.30	16314.40	2.50	45906.20	55105.80	2.81
2.63	3.21	ø8/10	2	2	2	(TG) SLD	0.50	7232.35	2.50	25548.70	51266.00	0.30	10678.60	2.50	45906.20	55269.30	3.53
2.63	3.21	ø8/10	2	2	15	(TG) SLV	0.50	1070.41	2.50	22216.30	35174.70	0.30	14418.20	2.43	38742.90	38742.90	2.69
2.63	3.21	ø8/10	2	2	1	(TG) SLV	0.50	6213.14	2.50	22216.30	35360.70	0.30	6700.42	2.43	38862.50	38862.50	3.58
3.56	4.12	ø8/10	2	2	18	SLV	0.50	502.99	2.50	22216.30	33763.50	0.30	2011.85	2.37	37822.70	37822.70	18.80
3.56	4.12	ø8/10	2	2	17	SLV	0.50	568.93	2.50	22216.30	33741.10	0.30	1824.81	2.37	37808.00	37808.00	20.72
3.56	4.12	ø8/10	2	2	16	(TG) SLD	0.50	2019.35	2.50	25548.70	49096.10	0.30	15741.30	2.50	45906.20	52929.90	2.92
3.56	4.12	ø8/10	2	2	8	(TG) SLD	0.50	6744.49	2.50	25548.70	49189.10	0.30	10263.90	2.50	45906.20	53030.20	3.79
3.56	4.12	ø8/10	2	2	15	(TG) SLV	0.50	1238.13	2.50	22216.30	33056.30	0.30	13570.40	2.34	37353.10	37353.10	2.75
3.56	4.12	ø8/10	2	2	7	(TG) SLV	0.50	5991.87	2.50	22216.30	33173.50	0.30	7502.14	2.34	37431.40	37431.40	3.71
4.12	6.35	ø8/20	2	2	18	SLV	0.50	502.99	2.50	11108.10	33728.20	0.30	2011.85	2.50	19959.20	36361.90	9.92
4.12	6.35	ø8/20	2	2	17	SLV	0.50	568.93	2.50	11108.10	33705.80	0.30	1824.81	2.50	19959.20	36337.80	10.94
4.12	6.35	ø8/20	2	2	16	(TG) SLD	0.50	2019.35	2.50	12774.30	49096.10	0.30	15741.30	2.50	22953.10	52929.90	1.46
4.12	6.35	ø8/20	2	2	8	(TG) SLD	0.50	6744.49	2.50	12774.30	49189.10	0.30	10263.90	2.50	22953.10	53030.20	1.89
4.12	6.35	ø8/20	2	2	15	(TG) SLV	0.50	1238.13	2.50	11108.10	33056.30	0.30	13570.40	2.50	19959.20	35637.60	1.47
4.12	6.35	ø8/20	2	2	15	(TG) SLV	0.50	1477.93	2.50	11108.10	33286.70	0.30	13580.70	2.50	19959.20	35886.00	1.47
4.12	6.35	ø8/20	2	2	7	(TG) SLV	0.50	5991.87	2.50	11108.10	33173.50	0.30	7502.14	2.50	19959.20	35764.00	1.85
6.35	6.91	ø8/10	2	2	18	SLV	0.50	502.99	2.50	22216.30	33586.80	0.30	2011.85	2.36	37700.00	37700.00	18.74
6.35	6.91	ø8/10	2	2	17	SLV	0.50	568.93	2.50	22216.30	33564.50	0.30	1824.81	2.36	37691.20	37691.20	20.65
6.35	6.91	ø8/10	2	2	16	(TG) SLD	0.50	2019.35	2.50	25548.70	49096.10	0.30	15741.30	2.50	45906.20	52929.90	2.92
6.35	6.91	ø8/10	2	2	8	(TG) SLD	0.50	6744.49	2.50	25548.70	49189.10	0.30	10263.90	2.50	45906.20	53030.20	3.79
6.35	6.91	ø8/10	2	2	15	(TG) SLV	0.50	1238.13	2.50	22216.30	33056.30	0.30	13570.40	2.34	37353.10	37353.10	2.75
6.35	6.91	ø8/10	2	2	7	(TG) SLV	0.50	5991.87	2.50	22216.30	33173.50	0.30	7502.14	2.34	37431.40	37431.40	3.71

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
109	N	ø8/ 9	Z+	I	2	12.25	10.18	0.30	0.40	0.29	4.02	1.19
			Z-	I	2	12.25	10.18	0.30	0.40	0.29	4.02	1.19
209	N	ø8/ 9	Z+	I	2	7.16	6.63	0.30	0.40	0.29	4.02	1.19
			Z-	I	2	4.62	6.63	0.30	0.40	0.29	4.02	1.19

Pilastrata n. 10

Nodi: 10 110 210

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
5	R	30.00	50.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
9	R	35.00	50.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.
3.56	9 (α)	SLV	2	9	0.00	-7038.87	8691.10	1.31	11426.70	1410.13	5.79	8159.82	-7038.90	11594.80	8353.39	60.47	5.11	1.018
7.00	9	SLV	2	9	344.00	-5533.87	-9525.94			2161.54			-5533.87	-15870.30	3784.11	154.69	6.87	1.670
-0.25	10	SLD	1	5	0.00	-16128.40	7104.84			-1247.84			-16128.40	21338.60	-3699.86	334.69	7.84	3.002
-0.25	10	SLD	1	5	0.00	-16128.40	7104.84			-1247.84			-16128.40	21338.60	-3699.86	334.69	7.84	3.002
3.30	10	SLD	1	5	355.00	-14797.10	-3082.36			1023.27			-14797.10	-18653.60	6463.39	135.00	6.31	6.079
3.56	10	SLD	2	9	0.00	-7329.79	7079.08			-2360.11			-7329.82	18119.00	-6009.94	329.06	7.11	2.558
7.00	10	SLD	2	9	344.00	-5824.79	-7792.16			1768.57			-5824.78	-18876.60	4468.33	157.50	8.11	2.428

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <cm>	λ	λ*
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Relazione di calcolo

3.30	11 (α)	SLV	1	5	355.00	-15470.40	-2817.87	1.78	-5029.87	856.73	3.81	3268.02	-15470.40	-11735.00	-12121.20	7405.15	7653.94	115.3
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Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σc <daN/cmq>	σf <daN/cmq>
-0.25	24	SLE R	1	5	0.00	-20950.50	-512.50	781.17	0.00	20.36	22.05	289.89
-0.25	32	SLE Q	1	5	0.00	-18513.70	-394.32	667.89	0.00	20.36	18.71	247.93
-0.25	24	SLE R	1	5	0.00	-20950.50	-512.50	781.17	0.00	20.36	22.05	289.89
-0.25	32	SLE Q	1	5	0.00	-18513.70	-394.32	667.89	0.00	20.36	18.71	247.93
3.30	24	SLE R	1	5	355.00	-19619.30	914.74	-747.33	0.00	20.36	25.72	323.36
3.30	32	SLE Q	1	5	355.00	-17182.50	697.45	-570.23	0.00	20.36	20.73	263.87
3.56	24	SLE R	2	9	0.00	-9093.67	-1314.75	1694.85	12.72	7.63	37.42	429.79
3.56	32	SLE Q	2	9	0.00	-8409.65	-1023.94	1417.34	10.18	10.18	29.33	298.04
7.00	24	SLE R	2	9	344.00	-7588.67	478.88	-1867.16	10.18	10.18	25.66	294.42
7.00	22	SLE R	2	9	344.00	-7619.49	369.88	-1983.20	10.18	10.18	25.18	302.75
7.00	32	SLE Q	2	9	344.00	-6904.65	403.60	-1645.80	10.18	10.18	22.22	246.62

Verifiche stato limite di formazione delle fessure

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sf} <daN/cmq>	ε _{sm}	Wk <mm>
3.56	32	SLE Q	2	9	0.00	-8409.65	1417.34	-1023.94	59.00	107.00	0.13	239.73	18.00	7.63	851.02	298.04	798.36	0.06	0.02
7.00	30	SLE Q	2	9	344.00	-6935.47	-1761.83	294.61	59.00	107.00	0.13	225.78	18.00	10.18	976.91	255.40	950.33	0.05	0.02

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.34	ø8/10	2	2	18	SLV	0.50	511.63	2.50	22216.30	35682.40	0.30	587.28	2.45	39068.60	39068.60	43.42
-0.25	0.34	ø8/10	2	2	17	SLV	0.50	549.17	2.50	22216.30	35647.80	0.30	377.44	2.45	39046.50	39046.50	40.45
-0.25	0.34	ø8/10	2	2	10 (TG)	SLD	0.50	2967.71	2.50	25548.70	50749.20	0.30	13120.60	2.50	45906.20	54712.10	3.50
-0.25	0.34	ø8/10	2	2	8 (TG)	SLD	0.50	6307.89	2.50	25548.70	50369.10	0.30	8020.63	2.50	45906.20	54302.30	4.05
-0.25	0.34	ø8/10	2	2	9 (TG)	SLV	0.50	981.00	2.50	22216.30	34853.50	0.30	12280.20	2.41	38535.30	38535.30	3.14
-0.25	0.34	ø8/10	2	2	15 (TG)	SLV	0.50	5402.79	2.50	22216.30	34536.30	0.30	6327.73	2.40	38329.40	38329.40	4.11
0.34	2.71	ø8/20	2	2	18	SLV	0.50	511.63	2.50	11108.10	35644.90	0.30	587.28	2.50	19959.20	38428.40	21.71
0.34	2.71	ø8/20	2	2	17	SLV	0.50	549.17	2.50	11108.10	35610.40	0.30	377.44	2.50	19959.20	38391.10	20.23
0.34	2.71	ø8/20	2	2	10 (TG)	SLD	0.50	2967.71	2.50	12774.30	50749.20	0.30	13120.60	2.50	22953.10	54712.10	1.75
0.34	2.71	ø8/20	2	2	8 (TG)	SLD	0.50	6307.89	2.50	12774.30	50369.10	0.30	8020.63	2.50	22953.10	54302.30	2.03
0.34	2.71	ø8/20	2	2	9 (TG)	SLV	0.50	981.00	2.50	11108.10	34853.50	0.30	12280.20	2.50	19959.20	37575.10	1.63
0.34	2.71	ø8/20	2	2	15 (TG)	SLV	0.50	5402.79	2.50	11108.10	34536.30	0.30	6327.73	2.50	19959.20	37233.20	2.06
2.71	3.30	ø8/10	2	2	18	SLV	0.50	511.63	2.50	22216.30	35495.20	0.30	587.28	2.44	38948.80	38948.80	43.42
2.71	3.30	ø8/10	2	2	17	SLV	0.50	549.17	2.50	22216.30	35460.60	0.30	377.44	2.44	38926.60	38926.60	40.45
2.71	3.30	ø8/10	2	2	10 (TG)	SLD	0.50	2967.71	2.50	25548.70	50749.20	0.30	13120.60	2.50	45906.20	54712.10	3.50
2.71	3.30	ø8/10	2	2	8 (TG)	SLD	0.50	6307.89	2.50	25548.70	50369.10	0.30	8020.63	2.50	45906.20	54302.30	4.05
2.71	3.30	ø8/10	2	2	9 (TG)	SLV	0.50	981.00	2.50	22216.30	34853.50	0.30	12280.20	2.41	38535.30	38535.30	3.14
2.71	3.30	ø8/10	2	2	15 (TG)	SLV	0.50	5402.79	2.50	22216.30	34536.30	0.30	6327.73	2.40	38329.40	38329.40	4.11
3.56	4.13	ø8/10	2	2	18	SLV	0.50	636.98	2.50	24871.60	37382.80	0.35	1431.79	2.50	38148.20	40136.60	26.64
3.56	4.13	ø8/10	2	2	17	SLV	0.50	701.07	2.50	24871.60	37367.90	0.35	1168.01	2.50	38148.20	40120.60	32.66
3.56	4.13	ø8/10	2	2	12 (TG)	SLD	0.50	2231.27	2.50	28602.30	54823.80	0.35	12597.50	2.50	43870.50	58862.40	3.48
3.56	4.13	ø8/10	2	2	16 (TG)	SLD	0.50	6216.61	2.50	28602.30	54778.00	0.35	8237.55	2.50	43870.50	58813.30	4.60
3.56	4.13	ø8/10	2	2	3 (TG)	SLV	0.50	2666.10	2.50	24871.60	36838.80	0.35	10143.00	2.50	38148.20	39552.50	3.76
3.56	4.13	ø8/10	2	2	15 (TG)	SLV	0.50	5910.64	2.50	24871.60	36857.70	0.35	5355.83	2.50	38148.20	39572.80	4.21
4.13	6.43	ø8/20	2	2	18	SLV	0.50	636.98	2.50	12435.80	37342.10	0.35	1431.79	2.50	19074.10	40093.00	13.32
4.13	6.43	ø8/20	2	2	17	SLV	0.50	701.07	2.50	12435.80	37327.30	0.35	1168.01	2.50	19074.10	40077.00	16.33
4.13	6.43	ø8/20	2	2	12 (TG)	SLD	0.50	2231.27	2.50	14301.20	54823.80	0.35	12597.50	2.50	21935.20	58862.40	1.74
4.13	6.43	ø8/20	2	2	16 (TG)	SLD	0.50	6216.61	2.50	14301.20	54778.00	0.35	8237.55	2.50	21935.20	58813.30	2.30
4.13	6.43	ø8/20	2	2	3 (TG)	SLV	0.50	2666.10	2.50	12435.80	36838.80	0.35	10143.00	2.50	19074.10	39552.50	1.88
4.13	6.43	ø8/20	2	2	15 (TG)	SLV	0.50	5910.64	2.50	12435.80	36857.70	0.35	5355.83	2.50	19074.10	39572.80	2.10
6.43	7.00	ø8/10	2	2	18	SLV	0.50	636.98	2.50	24871.60	37179.70	0.35	1431.79	2.50	38148.20	39918.50	26.64
6.43	7.00	ø8/10	2	2	17	SLV	0.50	701.07	2.50	24871.60	37164.80	0.35	1168.01	2.50	38148.20	39902.60	32.66
6.43	7.00	ø8/10	2	2	12 (TG)	SLD	0.50	2231.27	2.50	28602.30	54823.80	0.35	12597.50	2.50	43870.50	58862.40	3.48
6.43	7.00	ø8/10	2	2	16 (TG)	SLD	0.50	6216.61	2.50	28602.30	54778.00	0.35	8237.55	2.50	43870.50	58813.30	4.60
6.43	7.00	ø8/10	2	2	3 (TG)	SLV	0.50	2666.10	2.50	24871.60	36838.80	0.35	10143.00	2.50	38148.20	39552.50	3.76
6.43	7.00	ø8/10	2	2	15 (TG)	SLV	0.50	5910.64	2.50	24871.60	36857.70	0.35	5355.83	2.50	38148.20	39572.80	4.21

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
110	N	ø8/ 5	Y+	I	2	6.92	4.62	0.50	0.20	0.20	5.03	1.20
			Z+	I	2	6.63	10.18	0.40	0.40	0.20	5.03	1.50
			Y-	I	2	4.62	6.86	0.50	0.20	0.20	5.03	1.20
			Z-	I	2	6.63	10.18	0.40	0.40	0.20	5.03	1.50
210	N	ø8/ 5	Y+	I	2	4.15	4.62	0.50	0.21	0.20	5.03	1.20
			Z+	I	2	6.63	6.63	0.40	0.36	0.20	5.03	1.50
			Y-	I	2	4.62	4.15	0.50	0.21	0.20	5.03	1.20
			Z-	I	2	6.63	6.63	0.40	0.36	0.20	5.03	1.50

Pilastrata n. 11

Nodi: 11 111 211

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
1	R	30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
8	R	35.00	40.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.
3.56	9 (α)	SLV	2	8	0.00	-4964.44	316.63	1.10	348.30	6697.77	1.94	12982.10	-4985.06	110.59	8252.44	89.30	10.61	0.636

Relazione di calcolo

7.00	9	SLV	2	8	344.00	-3760.44	-156.03			-6705.72			-3762.94	-111.93	-8116.60	269.30	10.78	1.210
-0.25	10	SLD	1	1	0.00	-11026.10	-1149.87			2785.97			-11026.10	-3801.90	8981.61	99.84	8.39	3.236
-0.25	10	SLD	1	1	0.00	-11026.10	-1149.87			2785.97			-11026.10	-3801.90	8981.61	99.84	8.39	3.236
3.30	10 (e)	SLD	1	1	355.00	-9961.14	165.52		-199.22	-2191.63		-2191.63	-10003.30	-859.56	-9108.67	268.59	12.56	4.157
3.56	10	SLD	2	8	0.00	-5691.37	207.94			5631.11			-5691.38	443.96	9932.89	89.12	12.32	1.764
7.00	10	SLD	2	8	344.00	-4487.37	-101.78			-5603.68			-4487.38	-124.91	-9726.26	269.30	12.44	1.736

Dati per verifiche di stabilità

Xg <cm>	El	l ₀ <cm>	λ	λ*
-0.25	1	3.81	43.99	36.72
-0.25	1	3.81	43.99	36.72
3.30	1	3.81	43.99	36.72

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	My _{u,s} <daNm>	Myu <daNm>	Mz _{u,s} <daNm>	Mzu <daNm>	α <grad>	ε _y
-0.25	9	SLV	1	1	0.00	-9416.62	-1473.21			3426.26			-9416.63	-3099.82	-3302.53	7166.50	7586.54	101.25	7.
-0.25	9	SLV	1	1	0.00	-9416.62	-1473.21			3426.26			-9416.63	-3099.82	-3302.53	7166.50	7586.54	101.25	7.
3.30	9 (α)	SLV	1	1	355.00	-8351.62	-271.76	1.10	-298.94	-2596.07	1.94	-5031.90	-8351.63	-354.11	-538.90	-7283.69	-7665.60	268.94	11.

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	22	SLE R	1	1	0.00	-19100.60	672.69	-54.50	0.00	15.27	22.79	297.27
-0.25	30	SLE Q	1	1	0.00	-16644.80	569.41	-55.87	0.00	15.27	19.72	257.77
-0.25	22	SLE R	1	1	0.00	-19100.60	672.69	-54.50	0.00	15.27	22.79	297.27
-0.25	30	SLE Q	1	1	0.00	-16644.80	569.41	-55.87	0.00	15.27	19.72	257.77
3.30	22	SLE R	1	1	355.00	-18035.60	-993.30	5.73	0.00	15.27	25.78	323.56
3.30	30	SLE Q	1	1	355.00	-15579.80	-813.93	8.99	0.00	15.27	21.72	273.99
3.56	22	SLE R	2	8	0.00	-8955.38	2244.66	-60.87	7.63	7.63	42.30	647.83
3.56	30	SLE Q	2	8	0.00	-8220.05	1927.07	-55.32	7.63	7.63	36.28	526.32
7.00	22	SLE R	2	8	344.00	-7751.38	-1970.65	115.65	7.63	7.63	38.39	587.87
7.00	30	SLE Q	2	8	344.00	-7016.05	-1769.22	98.54	7.63	7.63	34.35	523.37

Verifiche stato limite di formazione delle fessure

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
3.56	30	SLE Q	2	8	0.00	-8220.05	-55.32	1927.07	59.00	132.00	0.13	232.38	18.00	7.63	746.29	526.32	1161.83	0.10	0.04
7.00	30	SLE Q	2	8	344.00	-7016.05	98.54	-1769.22	59.00	132.00	0.13	232.44	18.00	7.63	746.80	523.37	1193.14	0.10	0.04

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.34	ø8/12	2	2	19	SLV	0.40	547.03	2.50	18513.50	29007.70	0.30	19.93	2.50	25889.50	30423.40	33.84
-0.25	0.34	ø8/12	2	2	18	SLV	0.40	620.54	2.50	18513.50	28961.20	0.30	18.07	2.50	25889.50	30374.70	29.83
-0.25	0.34	ø8/12	2	2	28 (TG)	SLD	0.40	5262.25	2.50	21290.60	40867.70	0.30	5071.38	2.50	29772.90	42862.20	4.05
-0.25	0.34	ø8/12	2	2	2 (TG)	SLD	0.40	6254.35	2.50	21290.60	41279.80	0.30	2323.80	2.50	29772.90	43294.40	3.40
-0.25	0.34	ø8/12	2	2	7 (TG)	SLV	0.40	4247.48	2.50	18513.50	28140.10	0.30	4383.04	2.50	25889.50	29513.50	4.36
-0.25	0.34	ø8/12	2	2	3 (TG)	SLV	0.40	5519.15	2.50	18513.50	28373.20	0.30	1024.10	2.50	25889.50	29757.90	3.35
-0.25	0.34	ø8/12	2	2	1 (TG)	SLV	0.40	5565.32	2.50	18513.50	28665.70	0.30	1481.92	2.50	25889.50	30064.70	3.33
0.34	2.71	ø8/20	2	2	19	SLV	0.40	547.03	2.50	11108.10	28977.70	0.30	19.93	2.50	15533.70	30392.00	20.31
0.34	2.71	ø8/20	2	2	18	SLV	0.40	620.54	2.50	11108.10	28931.20	0.30	18.07	2.50	15533.70	30343.20	17.90
0.34	2.71	ø8/20	2	2	28 (TG)	SLD	0.40	5262.25	2.50	12774.30	40867.70	0.30	5071.38	2.50	17863.70	42862.20	2.43
0.34	2.71	ø8/20	2	2	2 (TG)	SLD	0.40	6254.35	2.50	12774.30	41279.80	0.30	2323.80	2.50	17863.70	43294.40	2.04
0.34	2.71	ø8/20	2	2	7 (TG)	SLV	0.40	4247.48	2.50	11108.10	28140.10	0.30	4383.04	2.50	15533.70	29513.50	2.62
0.34	2.71	ø8/20	2	2	3 (TG)	SLV	0.40	5519.15	2.50	11108.10	28373.20	0.30	1024.10	2.50	15533.70	29757.90	2.01
0.34	2.71	ø8/20	2	2	1 (TG)	SLV	0.40	5565.32	2.50	11108.10	28665.70	0.30	1481.92	2.50	15533.70	30064.70	2.00
2.71	3.30	ø8/12	2	2	19	SLV	0.40	547.03	2.50	18513.50	28857.90	0.30	19.93	2.50	25889.50	30266.30	33.84
2.71	3.30	ø8/12	2	2	18	SLV	0.40	620.54	2.50	18513.50	28811.40	0.30	18.07	2.50	25889.50	30217.50	29.83
2.71	3.30	ø8/12	2	2	28 (TG)	SLD	0.40	5262.25	2.50	21290.60	40867.70	0.30	5071.38	2.50	29772.90	42862.20	4.05
2.71	3.30	ø8/12	2	2	2 (TG)	SLD	0.40	6254.35	2.50	21290.60	41279.80	0.30	2323.80	2.50	29772.90	43294.40	3.40
2.71	3.30	ø8/12	2	2	7 (TG)	SLV	0.40	4247.48	2.50	18513.50	28140.10	0.30	4383.04	2.50	25889.50	29513.50	4.36
2.71	3.30	ø8/12	2	2	3 (TG)	SLV	0.40	5519.15	2.50	18513.50	28373.20	0.30	1024.10	2.50	25889.50	29757.90	3.35
2.71	3.30	ø8/12	2	2	1 (TG)	SLV	0.40	5565.32	2.50	18513.50	28665.70	0.30	1481.92	2.50	25889.50	30064.70	3.33
3.56	4.13	ø8/12	2	2	19	SLV	0.40	1472.74	2.50	20726.30	30202.50	0.35	70.20	2.50	24414.30	31129.60	14.07
3.56	4.13	ø8/12	2	2	18	SLV	0.40	1605.53	2.50	20726.30	30183.20	0.35	67.86	2.50	24414.30	31109.60	12.91
3.56	4.13	ø8/12	2	2	12 (TG)	SLD	0.40	4903.46	2.50	23835.30	43725.70	0.35	3304.39	2.50	28076.40	45067.90	4.86
3.56	4.13	ø8/12	2	2	2 (TG)	SLD	0.40	6735.28	2.50	23835.30	44282.20	0.35	464.23	2.50	28076.40	45641.40	3.54
3.56	4.13	ø8/12	2	2	11 (TG)	SLV	0.40	3942.17	2.50	20726.30	29309.90	0.35	2844.91	2.50	24414.30	30209.50	5.26
3.56	4.13	ø8/12	2	2	1 (TG)	SLV	0.40	5766.25	2.50	20726.30	30016.00	0.35	310.36	2.50	24414.30	30937.30	3.59
4.13	6.43	ø8/20	2	2	19	SLV	0.40	1472.74	2.50	12435.80	30170.00	0.35	70.20	2.50	14648.60	31096.10	8.44
4.13	6.43	ø8/20	2	2	18	SLV	0.40	1605.53	2.50	12435.80	30150.70	0.35	67.86	2.50	14648.60	31076.10	7.75
4.13	6.43	ø8/20	2	2	12 (TG)	SLD	0.40	4903.46	2.50	14301.20	43725.70	0.35	3304.39	2.50	16845.80	45067.90	2.92
4.13	6.43	ø8/20	2	2	2 (TG)	SLD	0.40	6735.28	2.50	14301.20	44282.20	0.35	464.23	2.50	16845.80	45641.40	2.12
4.13	6.43	ø8/20	2	2	11 (TG)	SLV	0.40	3942.17	2.50	12435.80	29309.90	0.35	2844.91	2.50	14648.60	30209.50	3.15
4.13	6.43	ø8/20	2	2	1 (TG)	SLV	0.40	5766.25	2.50	12435.80	30016.00	0.35	310.36	2.50	14648.60	30937.30	2.16
6.43	7.00	ø8/12	2	2	19	SLV	0.40	1472.74	2.50	20726.30	30040.00	0.35	70.20	2.50	24414.30	30962.10	14.07
6.43	7.00	ø8/12	2	2	18	SLV	0.40	1605.53	2.50	20726.30	30020.7						

Relazione di calcolo

			Y-	I	2	11.25	11.25	0.40	0.21	0.20	4.02	1.20
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Pilastrata n. 12

Nodi: 12 112 212

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Typo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
9R		35.00	50.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α_y	My ver. <daNm>	Mz <daNm>	α_z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ϵ_r	Sic.
3.56	15 (a)	SLV	2	9	0.00	-15631.20	-3263.80	2.59	-8463.95	2143.42	2.84	6089.73	-15631.20	-12179.90	8823.27	119.53	4.73	1.442
7.00	1	SLV	2	9	344.00	-14043.60	8439.17			-3951.54			-14043.60	14566.10	-6981.18	312.19	5.01	1.733
-0.25	2	SLD	1	9	0.00	-34784.10	-6107.07			3087.56			-34784.20	-19610.10	9536.03	132.19	4.87	3.187
-0.25	2	SLD	1	9	0.00	-34784.10	-6107.07			3087.56			-34784.20	-19610.10	9536.03	132.19	4.87	3.187
3.30	2	SLD	1	9	355.00	-33231.00	2106.48			-2391.51			-33231.00	12182.30	-13637.50	289.69	5.04	5.738
3.56	2	SLD	2	9	0.00	-15579.20	-5868.33			3345.75			-15579.20	-16410.90	9502.92	126.56	5.54	2.807
7.00	2	SLD	2	9	344.00	-14074.20	7370.40			-3344.45			-14074.20	17713.50	-7883.52	317.81	6.03	2.396

Dati per verifiche di stabilità

Xg <cm>	El	l_0 <cm>	λ	λ^*
-0.25	1	3.81	37.71	31.22
-0.25	1	3.81	37.71	31.22
3.30	1	3.81	37.71	31.22

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α_y	My ver. <daNm>	Mz <daNm>	α_z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Myu <daNm>	Mzu,s <daNm>	Mzu <daNm>	α <grad>
-0.25	1	SLV	1	9	0.00	-35340.60	-7748.87			3785.21			-35340.60	-15519.10	-16275.40	7647.39	7987.07	130.
-0.25	1	SLV	1	9	0.00	-35340.60	-7748.87			3785.21			-35340.60	-15519.10	-16275.40	7647.39	7987.07	130.
3.30	3 (a)	SLV	1	9	355.00	-33284.50	2000.64	1.52	3042.73	-2206.18	2.01	-4431.54	-33284.50	8020.49	8588.51	-11299.30	-12072.70	286.

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_f <daN/cmq>
-0.25	21	SLE R	1	9	0.00	-40283.00	781.76	-612.79	0.00	20.36	29.76	393.21
-0.25	29	SLE Q	1	9	0.00	-35055.10	616.02	-490.59	0.00	20.36	25.10	334.50
-0.25	21	SLE R	1	9	0.00	-40283.00	781.76	-612.79	0.00	20.36	29.76	393.21
-0.25	29	SLE Q	1	9	0.00	-35055.10	616.02	-490.59	0.00	20.36	25.10	334.50
3.30	23	SLE R	1	9	355.00	-38744.90	-1564.61	1115.32	0.00	20.36	38.55	474.48
3.30	31	SLE Q	1	9	355.00	-33517.00	-1250.82	848.35	0.00	20.36	31.81	395.18
3.56	21	SLE R	2	9	0.00	-17091.40	1814.54	-2906.90	10.18	10.18	55.10	559.68
3.56	29	SLE Q	2	9	0.00	-15684.10	1499.65	-2506.04	10.18	10.18	45.83	473.87
7.00	21	SLE R	2	9	344.00	-15586.40	-1360.16	4067.42	10.18	10.18	61.66	754.86
7.00	29	SLE Q	2	9	344.00	-14179.10	-1195.83	3668.22	10.18	10.18	55.02	667.89

Verifiche stato limite di formazione delle fessure

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s_{rm} <mm>	Φ	A_s <cmq>	$A_{c\ eff}$ <cmq>	σ_s <daN/cmq>	σ_{sr} <daN/cmq>	ϵ_{sm}	Wk <mm>
3.56	29	SLE Q	2	9	0.00	-15684.10	-2506.04	1499.65	59.00	107.00	0.13	239.72	18.00	7.63	850.91	400.12	701.50	0.08	0.03
7.00	29	SLE Q	2	9	344.00	-14179.10	3668.22	-1195.83	59.00	107.00	0.13	225.78	18.00	10.18	976.95	667.89	941.34	0.13	0.05

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctg θ_y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctg θ_z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.34	ø8/10	2	2	17	SLU	0.50	877.75	2.50	24871.60	42584.70	0.35	648.77	2.50	38148.20	45721.80	28.34
-0.25	0.34	ø8/10	2	2	19	SLU	0.50	915.68	2.50	24871.60	42586.60	0.35	591.73	2.50	38148.20	45723.80	27.16
-0.25	0.34	ø8/10	2	2	10 (TG)	SLD	0.50	5216.29	2.50	28602.30	58044.60	0.35	12786.70	2.50	43870.50	62320.50	3.43
-0.25	0.34	ø8/10	2	2	16 (TG)	SLD	0.50	8170.99	2.50	28602.30	58027.70	0.35	7768.81	2.50	43870.50	62302.30	3.50
-0.25	0.34	ø8/10	2	2	11 (TG)	SLV	0.50	3421.85	2.50	24871.60	40093.30	0.35	11633.00	2.50	38148.20	43046.80	3.28
-0.25	0.34	ø8/10	2	2	15 (TG)	SLV	0.50	7857.50	2.50	24871.60	40088.10	0.35	3462.11	2.50	38148.20	43041.20	3.17
0.34	2.71	ø8/20	2	2	17	SLU	0.50	877.75	2.50	12435.80	42542.80	0.35	648.77	2.50	19074.10	45676.70	14.17
0.34	2.71	ø8/20	2	2	19	SLU	0.50	915.68	2.50	12435.80	42544.70	0.35	591.73	2.50	19074.10	45678.80	13.58
0.34	2.71	ø8/20	2	2	10 (TG)	SLD	0.50	5216.29	2.50	14301.20	58044.60	0.35	12786.70	2.50	21935.20	62320.50	1.72
0.34	2.71	ø8/20	2	2	16 (TG)	SLD	0.50	8170.99	2.50	14301.20	58027.70	0.35	7768.81	2.50	21935.20	62302.30	1.75
0.34	2.71	ø8/20	2	2	11 (TG)	SLV	0.50	3421.85	2.50	12435.80	40093.30	0.35	11633.00	2.50	19074.10	43046.80	1.64
0.34	2.71	ø8/20	2	2	15 (TG)	SLV	0.50	7857.50	2.50	12435.80	40088.10	0.35	3462.11	2.50	19074.10	43041.20	1.58
2.71	3.30	ø8/10	2	2	17	SLU	0.50	877.75	2.50	24871.60	42375.10	0.35	648.77	2.50	38148.20	45496.70	28.34
2.71	3.30	ø8/10	2	2	19	SLU	0.50	915.68	2.50	24871.60	42377.00	0.35	591.73	2.50	38148.20	45498.70	27.16
2.71	3.30	ø8/10	2	2	10 (TG)	SLD	0.50	5216.29	2.50	28602.30	58044.60	0.35	12786.70	2.50	43870.50	62320.50	3.43
2.71	3.30	ø8/10	2	2	16 (TG)	SLD	0.50	8170.99	2.50	28602.30	58027.70	0.35	7768.81	2.50	43870.50	62302.30	3.50
2.71	3.30	ø8/10	2	2	11 (TG)	SLV	0.50	3421.85	2.50	24871.60	40093.30	0.35	11633.00	2.50	38148.20	43046.80	3.28
2.71	3.30	ø8/10	2	2	15 (TG)	SLV	0.50	7857.50	2.50	24871.60	40088.10	0.35	3462.11	2.50	38148.20	43041.20	3.17
3.56	4.13	ø8/10	2	2	17	SLU	0.50	1228.93	2.50	24871.60	38692.40	0.35	2663.45	2.50	38148.20	41542.70	14.32
3.56	4.13	ø8/10	2	2	19	SLU	0.50	1255.68	2.50	24871.60	38693.30	0.35	2598.31	2.50	38148.20	41543.60	14.68
3.56	4.13	ø8/10	2	2	4 (TG)	SLD	0.50	4029.70	2.50	28602.30	55606.70	0.35	12003.80	2.50	43870.50	59703.00	3.65
3.56	4.13	ø8/10	2	2	14 (TG)	SLD	0.50	7549.74	2.50	28602.30	55614.30	0.35	6795.52	2.50	43870.50	59711.10	3.79
3.56	4.13	ø8/10	2	2	11 (TG)	SLV	0.50	2205.04	2.50	24871.60	37666.30	0.35	10890.80	2.50	38148.20	40441.20	3.50
3.56	4.13	ø8/10	2	2	1 (TG)	SLV	0.50	6541.69	2.50	24871.60	37671.00	0.35	5233.89	2.50	38148.20	40446.10	3.80
4.13	6.43	ø8/20	2	2	17	SLU	0.50	1228.93	2.50	12435.80	38651.80	0.35	2663.45	2.50	19074.10	41499.10	7.16
4.13	6.43	ø8/20	2	2	19	SLU	0.50	1255.68	2.50	12435.80	38652.60	0.35	2598.31	2.50	19074.10	41500.00	7.34
4.13	6.43	ø8/20	2	2	4 (TG)	SLD	0.50	4029.70	2.50	14301.20	55606.70	0.35	12003.80	2.50	21935.20	59703.00	1.83
4.13	6.43	ø8/20	2	2	14 (TG)	SLD	0.50	7549.74	2.50	14301.20	55614.30	0.35	6795.52	2.50	21935.20	59711.10	1.89
4.13	6.43	ø8/20	2	2	11 (TG)	SLV											

Relazione di calcolo

6.43	7.00	ø8/10	2	2	19	SLU	0.50	1255.68	2.50	24871.60	38490.10	0.35	2598.31	2.50	38148.20	41325.50	14.68
6.43	7.00	ø8/10	2	2	4 (TG)	SLD	0.50	4029.70	2.50	28602.30	55606.70	0.35	12003.80	2.50	43870.50	59703.00	3.65
6.43	7.00	ø8/10	2	2	14 (TG)	SLD	0.50	7549.74	2.50	28602.30	55614.30	0.35	6795.52	2.50	43870.50	59711.10	3.79
6.43	7.00	ø8/10	2	2	11 (TG)	SLV	0.50	2205.04	2.50	24871.60	37666.30	0.35	10890.80	2.50	38148.20	40441.00	3.50
6.43	7.00	ø8/10	2	2	1 (TG)	SLV	0.50	6541.69	2.50	24871.60	37671.00	0.35	5233.89	2.50	38148.20	40446.10	3.80

Pilastrata n. 13

Nodi: 13 113 213

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Typo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
8	R	35.00	40.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.
3.56	7 (α)	SLV	2	8	0.00	-13757.90	1227.62	5.59	6867.69	3258.03	2.17	7066.33	-13757.90	7083.94	7305.11	50.63	4.56	1.033
7.00	1	SLV	2	8	344.00	-12489.10	-3630.04			-4992.61			-12489.10	-5847.43	-8121.77	239.06	4.78	1.621
-0.25	2	SLD	1	8	0.00	-30395.70	-3189.51			3580.56			-30395.70	-9087.20	10118.70	126.56	4.58	2.836
-0.25	2	SLD	1	8	0.00	-30395.70	-3189.51			3580.56			-30395.70	-9087.20	10118.70	126.56	4.58	2.836
3.30	2	SLD	1	8	355.00	-29153.20	1114.76			-2711.42			-29153.20	5135.72	-11997.30	286.88	5.74	4.452
3.56	2	SLD	2	8	0.00	-13718.80	2634.56			4023.23			-13718.70	6656.57	9833.88	64.69	5.85	2.469
7.00	2	SLD	2	8	344.00	-12514.80	-2991.13			-4310.47			-12514.80	-6631.31	-9706.03	244.69	5.93	2.240

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	37.71	26.23
-0.25	1	3.81	37.71	26.23
3.30	1	3.81	37.71	26.23

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu, s <daNm>	Myu <daNm>	Mzu, s <daNm>	Mzu <daNm>	α <grad>
-0.25	1	SLV	1	8	0.00	-30344.60	-4129.42			4403.16			-30344.70	-7265.96	-7810.97	7621.41	8186.08	129.38
-0.25	1	SLV	1	8	0.00	-30344.60	-4129.42			4403.16			-30344.70	-7265.96	-7810.97	7621.41	8186.08	129.38
3.30	7 (α)	SLV	1	8	355.00	-29231.90	621.70	4.78	2970.17	-2199.19	2.17	-4769.81	-29231.90	5432.03	5849.68	-8910.98	-9624.04	298.13

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
-0.25	22	SLE R	1	8	0.00	-35235.20	777.30	382.79	0.00	15.27	33.26	433.74
-0.25	30	SLE Q	1	8	0.00	-30590.00	566.46	349.04	0.00	15.27	27.91	367.83
-0.25	22	SLE R	1	8	0.00	-35235.20	777.30	382.79	0.00	15.27	33.26	433.74
-0.25	30	SLE Q	1	8	0.00	-30590.00	566.46	349.04	0.00	15.27	27.91	367.83
3.30	23	SLE R	1	8	355.00	-33979.70	-1721.96	-158.06	0.00	15.27	40.16	490.96
3.30	31	SLE Q	1	8	355.00	-29334.50	-1326.74	-114.67	0.00	15.27	32.81	406.66
3.56	22	SLE R	2	8	0.00	-15083.60	2303.20	707.06	7.63	7.63	52.92	496.52
3.56	23	SLE R	2	8	0.00	-15077.70	2413.86	564.27	7.63	7.63	52.79	504.31
3.56	30	SLE Q	2	8	0.00	-13816.10	1860.96	638.59	7.63	7.63	43.07	419.55
7.00	22	SLE R	2	8	344.00	-13879.60	-2088.69	-885.92	7.63	7.63	52.13	489.90
7.00	23	SLE R	2	8	344.00	-13873.70	-2223.33	-714.35	7.63	7.63	52.01	507.31
7.00	30	SLE Q	2	8	344.00	-12612.10	-1800.92	-824.78	7.63	7.63	45.61	434.58

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c, eff} <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
3.56	31	SLE Q	2	8	0.00	-13810.30	495.80	1971.62	59.00	132.00	0.13	232.38	18.00	7.63	746.29	348.83	716.11	0.07	0.03
7.00	31	SLE Q	2	8	344.00	-12606.30	-653.21	-1935.56	59.00	132.00	0.13	232.44	18.00	7.63	746.79	422.44	780.47	0.08	0.03

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w, y} <cm>	Vsdu _{, y} <daN>	ctgθ _{, y}	V _{Rsd, y} <daN>	V _{Rcd, y} <daN>	b _{w, z} <cm>	Vsdu _{, z} <daN>	ctgθ _{, z}	V _{Rsd, z} <daN>	V _{Rcd, z} <daN>	Sic. T
-0.25	0.34	ø8/14	2	2	18	SLU	0.40	938.87	2.50	17765.40	34453.70	0.35	219.87	2.50	20926.50	35511.20	18.92
-0.25	0.34	ø8/14	2	2	19	SLU	0.40	1014.36	2.50	17765.40	34453.70	0.35	132.75	2.50	20926.50	35511.20	17.51
-0.25	0.34	ø8/14	2	2	10 (TG)	SLD	0.40	5255.96	2.50	20430.20	46745.30	0.35	6801.53	2.50	24065.50	48180.10	3.54
-0.25	0.34	ø8/14	2	2	8 (TG)	SLD	0.40	7445.11	2.50	20430.20	46711.70	0.35	3236.24	2.50	24065.50	48145.50	2.74
-0.25	0.34	ø8/14	2	2	11 (TG)	SLV	0.40	1872.63	2.50	17765.40	32387.90	0.35	7135.38	2.50	20926.50	33382.00	2.93
-0.25	0.34	ø8/14	2	2	15 (TG)	SLV	0.40	6314.18	2.50	17765.40	32379.80	0.35	3121.57	2.50	20926.50	33373.60	2.81
0.34	2.71	ø8/20	2	2	18	SLU	0.40	938.87	2.50	12435.80	34453.70	0.35	219.87	2.50	14648.60	35511.20	13.25
0.34	2.71	ø8/20	2	2	19	SLU	0.40	1014.36	2.50	12435.80	34453.70	0.35	132.75	2.50	14648.60	35511.20	12.26
0.34	2.71	ø8/20	2	2	10 (TG)	SLD	0.40	5255.96	2.50	14301.20	46745.30	0.35	6801.53	2.50	16845.80	48180.10	2.48
0.34	2.71	ø8/20	2	2	8 (TG)	SLD	0.40	7445.11	2.50	14301.20	46711.70	0.35	3236.24	2.50	16845.80	48145.50	1.92
0.34	2.71	ø8/20	2	2	11 (TG)	SLV	0.40	1872.63	2.50	12435.80	32387.90	0.35	7135.38	2.50	14648.60	33382.00	2.05
0.34	2.71	ø8/20	2	2	15 (TG)	SLV	0.40	6314.18	2.50	12435.80	32379.80	0.35	3121.57	2.50	14648.60	33373.60	1.97
2.71	3.30	ø8/14	2	2	18	SLU	0.40	938.87	2.50	17765.40	34401.60	0.35	219.87	2.50	20926.50	35457.50	18.92
2.71	3.30	ø8/14	2	2	19	SLU	0.40	1014.36	2.50	17765.40	34400.00	0.35	132.75	2.50	20926.50	35455.90	17.51
2.71	3.30	ø8/14	2	2	10 (TG)	SLD	0.40	5255.96	2.50	20430.20	46745.30	0.35	6801.53	2.50	24065.50	48180.10	3.54
2.71	3.30	ø8/14	2	2	8 (TG)	SLD	0.40	7445.11	2.50	20430.20	46711.70	0.35	3236.24	2.50	24065.50	48145.50	2.74
2.71	3.30	ø8/14	2	2	11 (TG)	SLV	0.40	1872.63	2.50	17765.40	32387.90	0.35	7135.38	2.50	20926.50	33382.00	2.93
2.71	3.30	ø8/14	2	2	15 (TG)	SLV	0.40	6314.18	2.50	17765.40	32379.80	0.35	3121.57	2.50	20926.50	33373.60	2.81
3.56	4.13	ø8/14	2	2	18	SLU	0.40	1720.37	2.50	17765.40	31185.50	0.35	588.27	2.50	20926.50	32142.80	10.33
3.56	4.13	ø8/14	2	2	19	SLU	0.40	1791.68	2.50	17765.40	31184.80	0.35	496.89	2.50	20926.50	32142.00	9.92
3.56	4.13	ø8/14	2	2	10 (TG)	SLD	0.40	3338.94	2.50	20430.20	44649.30	0.35	6952.09	2.50	24065.50	46019.80	3.46
3.56	4.13	ø8/14	2	2	8 (TG)	SLD	0.40	6580.25	2.50	20430.20	44642.40	0.35	3016.25	2.50	24065.50	46012.60	3.10
3.56	4.13	ø8/14	2	2	11 (TG)	SLV	0.40	2409.50	2.50	17765.40	30291.90	0.35	5995.81	2.50	20926.50	31221.70	3.49
3.56	4.13	ø8/14	2	2	15 (TG)	SLV	0.40	5015.91	2.50	17765.40	30288.80	0.35	3765.41	2.50	20926.50	31218.40	3.54
4.13	6.43	ø8/20	2	2	18	SLU	0.40	1720.37	2.50	12435.80	31153.00	0.35	588.27	2.50	14648.60	32109.30	7.23

Relazione di calcolo

4.13	6.43	ø8/20	2	2	19	SLU	0.40	1791.68	2.50	12435.80	31152.30	0.35	496.89	2.50	14648.60	32108.50	6.94
4.13	6.43	ø8/20	2	2	10 (TG)	SLD	0.40	3338.94	2.50	14301.20	44649.30	0.35	6952.09	2.50	16845.80	46019.80	2.42
4.13	6.43	ø8/20	2	2	8 (TG)	SLD	0.40	6580.25	2.50	14301.20	44642.40	0.35	3016.25	2.50	16845.80	46012.60	2.17
4.13	6.43	ø8/20	2	2	11 (TG)	SLV	0.40	2409.50	2.50	12435.80	30291.90	0.35	5995.81	2.50	14648.60	31221.70	2.44
4.13	6.43	ø8/20	2	2	15 (TG)	SLV	0.40	5015.91	2.50	12435.80	30288.80	0.35	3765.41	2.50	14648.60	31218.40	2.48
6.43	7.00	ø8/14	2	2	18	SLU	0.40	1720.37	2.50	17765.40	31023.10	0.35	588.27	2.50	20926.50	31975.30	10.33
6.43	7.00	ø8/14	2	2	19	SLU	0.40	1791.68	2.50	17765.40	31022.30	0.35	496.89	2.50	20926.50	31974.50	9.92
6.43	7.00	ø8/14	2	2	10 (TG)	SLD	0.40	3338.94	2.50	20430.20	44649.30	0.35	6952.09	2.50	24065.50	46019.80	3.46
6.43	7.00	ø8/14	2	2	8 (TG)	SLD	0.40	6580.25	2.50	20430.20	44642.40	0.35	3016.25	2.50	24065.50	46012.60	3.10
6.43	7.00	ø8/14	2	2	11 (TG)	SLV	0.40	2409.50	2.50	17765.40	30291.90	0.35	5995.81	2.50	20926.50	31221.70	3.49
6.43	7.00	ø8/14	2	2	15 (TG)	SLV	0.40	5015.91	2.50	17765.40	30288.80	0.35	3765.41	2.50	20926.50	31218.40	3.54

Pilastrata n. 14

Nodi: 14 114 214

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
1	R	30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.	
3.56	1	(α)	SLV	2	1	0.00	-6096.84	-7143.92	1.10	-7858.31	-2825.34	1.10	-3107.88	-6096.84	-11335.20	-4369.74	216.56	5.26	1.438
6.91	1	SLV	2	1	335.00	-5091.84	7011.64			2906.84			-5091.85	11008.90	4630.52	39.38	5.19	1.573	
-0.25	2	SLD	1	1	0.00	-17234.50	-5481.40			-1945.95			-17234.50	-14732.30	-5421.10	213.75	5.50	2.699	
-0.25	2	SLD	1	1	0.00	-17234.50	-5481.40			-1945.95			-17234.50	-14732.30	-5421.10	213.75	5.50	2.699	
3.21	2	SLD	1	1	346.00	-16196.50	4031.79			1212.61			-16196.50	15171.80	4594.56	28.13	5.92	3.765	
3.56	2	SLD	2	1	0.00	-6526.39	-5942.24			-2468.62			-6526.39	-13301.10	-5536.18	216.56	5.96	2.239	
6.91	2	SLD	2	1	335.00	-5521.39	5819.53			2548.79			-5521.39	12940.90	5831.08	39.38	5.88	2.234	

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	36.97
-0.25	1	3.81	43.99	36.97
3.21	1	3.81	43.99	36.97

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Mzu,s <daNm>	α <grad>
-0.25	1	SLV	1	1	0.00	-16265.70	-6864.23			-2397.33			-16265.70	-12180.10	-12603.20	-4046.01
-0.25	1	SLV	1	1	0.00	-16265.70	-6864.23			-2397.33			-16265.70	-12180.10	-12603.20	-4046.01
3.21	1	(α)	SLV	1	1	346.00	-15227.70	4869.95	1.10	5356.95	1375.19	1.10	1512.71	-15227.70	12532.80	28.13

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
-0.25	23	SLE R	1	1	0.00	-22840.60	-439.38	-793.08	0.00	20.36	28.41	371.58
-0.25	31	SLE Q	1	1	0.00	-20660.90	-352.62	-676.82	0.00	20.36	24.73	325.75
-0.25	23	SLE R	1	1	0.00	-22840.60	-439.38	-793.08	0.00	20.36	28.41	371.58
-0.25	31	SLE Q	1	1	0.00	-20660.90	-352.62	-676.82	0.00	20.36	24.73	325.75
3.21	23	SLE R	1	1	346.00	-21802.60	844.14	1372.56	2.54	17.81	39.51	487.37
3.21	31	SLE Q	1	1	346.00	-19622.90	682.29	1158.28	2.54	17.81	33.43	416.37
3.56	23	SLE R	2	1	0.00	-8631.88	-1415.04	-2043.89	12.72	7.63	63.10	838.53
3.56	31	SLE Q	2	1	0.00	-8051.56	-1214.31	-1775.57	12.72	7.63	54.23	694.48
6.91	23	SLE R	2	1	335.00	-7626.88	1411.77	1847.47	12.72	7.63	60.26	826.65
6.91	31	SLE Q	2	1	335.00	-7046.56	1272.22	1664.61	12.72	7.63	54.23	736.01

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cm²>	A _{c,eff} <cm²>	σ _s <daN/cm²>	σ _{sc} <daN/cm²>	ε _{sm}	Wk <mm>
3.21	31	SLE Q	1	1	346.00	-19622.90	1158.28	682.29	39.00	252.00	0.13	221.18	18.00	2.54	262.33	29.57	147.15	0.01	0.00
3.56	29	SLE Q	2	1	0.00	-8155.84	-1679.06	-1246.21	39.00	102.00	0.13	177.12	18.00	7.63	667.71	673.41	855.57	0.13	0.04
6.91	29	SLE Q	2	1	335.00	-7150.84	1560.32	1305.38	39.00	102.00	0.13	170.79	18.00	10.18	818.67	714.87	897.12	0.14	0.04

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw,y <cm>	Vsdu,y <daN>	ctgθ _y	VRsd,y <daN>	VRcd,y <daN>	bw,z <cm>	Vsdu,z <daN>	ctgθ _z	VRsd,z <daN>	VRcd,z <daN>	Sic. T
-0.25	0.33	ø8/12	2	2	19	SLU	0.40	499.69	2.50	18513.50	29578.80	0.30	814.90	2.50	25889.50	31022.30	31.77
-0.25	0.33	ø8/12	2	2	17	SLU	0.40	515.32	2.50	18513.50	29611.30	0.30	755.00	2.50	25889.50	31056.40	34.29
-0.25	0.33	ø8/12	2	2	14 (TG)	SLD	0.40	2389.73	2.50	21290.60	41468.80	0.30	10527.40	2.50	29772.90	43492.70	2.83
-0.25	0.33	ø8/12	2	2	16 (TG)	SLD	0.40	5212.75	2.50	21290.60	41257.40	0.30	7208.58	2.50	29772.90	43271.00	4.08
-0.25	0.33	ø8/12	2	2	9 (TG)	SLV	0.40	1246.98	2.50	18513.50	28797.80	0.30	9410.69	2.50	25889.50	30203.30	2.75
-0.25	0.33	ø8/12	2	2	7 (TG)	SLV	0.40	4311.84	2.50	18513.50	27913.10	0.30	5833.11	2.50	25889.50	29275.40	4.29
0.33	2.63	ø8/20	2	2	19	SLU	0.40	499.69	2.50	11108.10	29549.60	0.30	814.90	2.50	15533.70	30991.70	19.06
0.33	2.63	ø8/20	2	2	17	SLU	0.40	515.32	2.50	11108.10	29582.10	0.30	755.00	2.50	15533.70	31025.80	20.57
0.33	2.63	ø8/20	2	2	14 (TG)	SLD	0.40	2389.73	2.50	12774.30	41468.80	0.30	10527.40	2.50	17863.70	43492.70	1.70
0.33	2.63	ø8/20	2	2	16 (TG)	SLD	0.40	5212.75	2.50	12774.30	41257.40	0.30	7208.58	2.50	17863.70	43271.00	2.45
0.33	2.63	ø8/20	2	2	9 (TG)	SLV	0.40	1246.98	2.50	11108.10	28797.80	0.30	9410.69	2.50	15533.70	30203.30	1.65
0.33	2.63	ø8/20	2	2	7 (TG)	SLV	0.40	4311.84	2.50	11108.10	27913.10	0.30	5833.11	2.50	15533.70	29275.40	2.58
2.63	3.21	ø8/12	2	2	19	SLU	0.40	499.69	2.50	18513.50	29432.80	0.30	814.90	2.50	25889.50	30869.20	31.77
2.63	3.21	ø8/12	2	2	17	SLU	0.40	515.32	2.50	18513.50	29465.30	0.30	755.00	2.50	25889.50	30903.30	34.29
2.63	3.21	ø8/12	2	2	14 (TG)	SLD	0.40	2389.73	2.50	21290.60	41468.80	0.30	10527.40	2.50	29772.90	43492.70	2.83
2.63	3.21	ø8/12	2	2	16 (TG)	SLD	0.40	5212.75	2.50	21290.60	41257.40	0.30	7208.58	2.50	29772.90	43271.00	4.08
2.63	3.21	ø8/12	2	2	9 (TG)	SLV	0.40	1246.98	2.50	18513.50	28797.80	0.30	9410.69	2.50	25889.50	30203.30	2.75
2.63	3.21	ø8/12	2	2	7 (TG)	SLV	0.40	4311.84	2.50	18513.50	27913.10	0.30	5833.11	2.50	25889.50	29275.40	4.29
3.56	4.12	ø8/12	2	2	19	SLU	0.40	1119.14	2.50	18513.50	27118.50	0.30	1518.75	2.50	25889.50	28442.00	16.54
3.56	4.12	ø8/12	2	2	17	SLU	0.40	1138.57	2.50	18513.50	27132.00	0.30	1458.81	2.50	25889.50	28456.20	16.26

Relazione di calcolo

3.56	4.12	ø8/12	2	2	10 (TG)	SLD	0.40	2264.06	2.50	21290.60	39588.20	0.30	9618.23	2.50	29772.90	41520.30	3.10
3.56	4.12	ø8/12	2	2	4 (TG)	SLD	0.40	5717.92	2.50	21290.60	39521.80	0.30	5151.23	2.50	29772.90	41450.60	3.72
3.56	4.12	ø8/12	2	2	11 (TG)	SLV	0.40	1787.56	2.50	18513.50	26705.50	0.30	8314.30	2.50	25889.50	28008.90	3.11
3.56	4.12	ø8/12	2	2	1 (TG)	SLV	0.40	1662.22	2.50	18513.50	26850.60	0.30	8358.16	2.50	25889.50	28161.00	3.10
3.56	4.12	ø8/12	2	2	3 (TG)	SLV	0.40	4482.20	2.50	18513.50	26736.40	0.30	5292.52	2.50	25889.50	28041.30	4.13
4.12	6.35	ø8/20	2	2	19	SLV	0.40	1119.14	2.50	11108.10	27090.20	0.30	1518.75	2.50	15533.70	28412.30	9.93
4.12	6.35	ø8/20	2	2	17	SLV	0.40	1138.57	2.50	11108.10	27103.80	0.30	1458.81	2.50	15533.70	28426.50	9.76
4.12	6.35	ø8/20	2	2	10 (TG)	SLD	0.40	2264.06	2.50	12774.30	39588.20	0.30	9618.23	2.50	17863.70	41520.30	1.86
4.12	6.35	ø8/20	2	2	4 (TG)	SLD	0.40	5717.92	2.50	12774.30	39521.80	0.30	5151.23	2.50	17863.70	41450.60	2.23
4.12	6.35	ø8/20	2	2	11 (TG)	SLV	0.40	1787.56	2.50	11108.10	26705.50	0.30	8314.30	2.50	15533.70	28008.90	1.87
4.12	6.35	ø8/20	2	2	1 (TG)	SLV	0.40	1662.22	2.50	11108.10	26850.60	0.30	8358.16	2.50	15533.70	28161.00	1.86
4.12	6.35	ø8/20	2	2	3 (TG)	SLV	0.40	4482.20	2.50	11108.10	26736.40	0.30	5292.52	2.50	15533.70	28041.30	2.48
6.35	6.91	ø8/12	2	2	19	SLV	0.40	1119.14	2.50	18513.50	26977.10	0.30	1518.75	2.50	25889.50	28293.70	16.54
6.35	6.91	ø8/12	2	2	17	SLV	0.40	1138.57	2.50	18513.50	26990.70	0.30	1458.81	2.50	25889.50	28307.90	16.26
6.35	6.91	ø8/12	2	2	10 (TG)	SLD	0.40	2264.06	2.50	21290.60	39588.20	0.30	9618.23	2.50	29772.90	41520.30	3.10
6.35	6.91	ø8/12	2	2	4 (TG)	SLD	0.40	5717.92	2.50	21290.60	39521.80	0.30	5151.23	2.50	29772.90	41450.60	3.72
6.35	6.91	ø8/12	2	2	11 (TG)	SLV	0.40	1787.56	2.50	18513.50	26705.50	0.30	8314.30	2.50	25889.50	28008.90	3.11
6.35	6.91	ø8/12	2	2	1 (TG)	SLV	0.40	1662.22	2.50	18513.50	26850.60	0.30	8358.16	2.50	25889.50	28161.00	3.10
6.35	6.91	ø8/12	2	2	3 (TG)	SLV	0.40	4482.20	2.50	18513.50	26736.40	0.30	5292.52	2.50	25889.50	28041.30	4.13

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <m>	Hjc <m>	Hjw <m>	Ash <cmq>	Rgsn			
114	N	ø8/ 7	Y+	E	2	4.62	4.62	0.40	0.20	0.20	4.02	1.11			
						Z+	I	2	6.63	5.08	0.30	0.30	0.29	5.03	1.48
						Z-	I	2	6.61	5.09	0.30	0.30	0.29	5.03	1.48
214	N	ø8/ 7	Y+	E	2	4.62	4.62	0.40	0.20	0.20	4.02	1.11			
						Z+	I	2	4.62	4.61	0.30	0.30	0.29	5.03	1.48
						Z-	I	2	4.61	4.62	0.30	0.30	0.29	5.03	1.48

Pilastrata n. 15

Nodi: 15 115 215

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
5R		30.00	50.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _r	Sic.
3.56	7 (α)	SLV	2	5	0.00	-7041.09	-1648.27	4.90	-8083.05	-606.92	1.10	-667.61	-7043.91	-13817.30	-1373.54	191.25	11.00	1.712
6.91	9	SLV	2	5	335.00	-5280.42	5607.38			-1774.36			-5280.43	12007.30	-3898.31	323.44	7.06	2.146
-0.25	10	SLD	1	5	0.00	-13098.30	-4407.48			1630.21			-13098.30	-14916.60	5503.59	140.63	7.27	3.383
-0.25	10	SLD	1	5	0.00	-13098.30	-4407.48			1630.21			-13098.30	-14916.60	5503.59	140.63	7.27	3.383
3.21	10	SLD	1	5	346.00	-11800.80	1757.76			-451.13			-11800.80	16040.70	-3971.86	331.88	8.29	9.106
3.56	10	SLD	2	5	0.00	-6830.09	-4128.63			1294.99			-6830.10	-14645.80	4635.63	146.25	8.16	3.550
6.91	10	SLD	2	5	335.00	-5573.84	4450.25			-1416.08			-5573.86	14465.40	-4597.74	326.25	8.27	3.250

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	41.54
-0.25	1	3.81	43.99	41.54
3.21	1	3.81	43.99	41.54

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Myu <daNm>	Mzu,s <daNm>	Mzu <daNm>	α <grad>
-0.25	9	SLV	1	5	0.00	-12472.70	-5613.35			2066.77			-12472.80	-12074.50	-12398.30	4507.23	4630.49	137.81
-0.25	9	SLV	1	5	0.00	-12472.70	-5613.35			2066.77			-12472.80	-12074.50	-12398.30	4507.23	4630.49	137.81
3.21	9 (α)	SLV	1	5	346.00	-11175.20	2260.09	1.41	3196.02	-594.05	1.10	-653.46	-11175.30	13315.80	13653.10	-2946.89	-3014.00	331.88

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _r <daN/cmq>
-0.25	22	SLE R	1	5	0.00	-17228.10	144.80	-271.27	0.00	15.27	13.37	187.64
-0.25	30	SLE Q	1	5	0.00	-15511.50	139.72	-241.60	0.00	15.27	12.12	169.78
-0.25	22	SLE R	1	5	0.00	-17228.10	144.80	-271.27	0.00	15.27	13.37	187.64
-0.25	30	SLE Q	1	5	0.00	-15511.50	139.72	-241.60	0.00	15.27	12.12	169.78
3.21	22	SLE R	1	5	346.00	-15930.60	-9.00	196.09	0.00	15.27	10.62	155.07
3.21	23	SLE R	1	5	346.00	-15724.80	32.57	148.20	0.00	15.27	10.44	152.06
3.21	30	SLE Q	1	5	346.00	-14214.00	-12.35	143.61	0.00	15.27	9.31	136.31
3.56	22	SLE R	2	5	0.00	-8418.76	145.22	-361.65	0.00	15.27	8.88	118.57
3.56	30	SLE Q	2	5	0.00	-7951.89	142.84	-311.48	0.00	15.27	8.25	110.20
6.91	22	SLE R	2	5	335.00	-7162.51	-178.94	434.31	0.00	15.27	9.02	117.44
6.91	30	SLE Q	2	5	335.00	-6695.64	-176.73	404.71	0.00	15.27	8.53	110.79

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	V _{sdu,y} <daN>	ctgθ _y	V _{Rsd,y} <daN>	V _{Rcd,y} <daN>	b _{w,z} <cm>	V _{sdu,z} <daN>	ctgθ _z	V _{Rsd,z} <daN>	V _{Rcd,z} <daN>	Sic. T
-0.25	0.33	ø8/10	2	2	18	SLU	0.50	49.19	2.50	22216.30	35018.30	0.30	163.68	2.42	38642.00	38642.00	>100
-0.25	0.33	ø8/10	2	2	14 (TG)	SLD	0.50	2982.97	2.50	25548.70	50272.50	0.30	10401.20	2.50	45906.20	54198.20	4.41
-0.25	0.33	ø8/10	2	2	12 (TG)	SLD	0.50	4815.58	2.50	25548.70	50195.60	0.30	8228.93	2.50	45906.20	54115.30	5.31
-0.25	0.33	ø8/10	2	2	7 (TG)	SLV	0.50	1281.73	2.50	22216.30	33973.80	0.30	9530.84	2.38	37961.30	37961.30	3.98
-0.25	0.33	ø8/10	2	2	11 (TG)	SLV	0.50	3742.85	2.50	22216.30	34244.50	0.30	7421.88	2.39	38138.80	38138.80	5.14
0.33	2.63	ø8/20	2	2	18	SLU	0.50	49.19	2.50	11108.10	34981.80	0.30	163.68	2.50	19959.20	37713.50	>100

Relazione di calcolo

0.33	2.63	ø8/20	2	2	14 (TG)	SLD	0.50	2982.97	2.50	12774.30	50272.50	0.30	10401.20	2.50	22953.10	54198.20	2.21
0.33	2.63	ø8/20	2	2	12 (TG)	SLD	0.50	4815.58	2.50	12774.30	50195.60	0.30	8228.93	2.50	22953.10	54115.30	2.65
0.33	2.63	ø8/20	2	2	7 (TG)	SLV	0.50	1281.73	2.50	11108.10	33973.80	0.30	9530.84	2.50	19959.20	36626.70	2.09
0.33	2.63	ø8/20	2	2	11 (TG)	SLV	0.50	3742.85	2.50	11108.10	34244.50	0.30	7421.88	2.50	19959.20	36918.50	2.69
2.63	3.21	ø8/10	2	2	18	SLU	0.50	49.19	2.50	22216.30	34835.80	0.30	163.68	2.41	38523.90	38523.90	>100
2.63	3.21	ø8/10	2	2	14 (TG)	SLD	0.50	2982.97	2.50	25548.70	50272.50	0.30	10401.20	2.50	45906.20	54198.20	4.41
2.63	3.21	ø8/10	2	2	12 (TG)	SLD	0.50	4815.58	2.50	25548.70	50195.60	0.30	8228.93	2.50	45906.20	54115.30	5.31
2.63	3.21	ø8/10	2	2	7 (TG)	SLV	0.50	1281.73	2.50	22216.30	33973.80	0.30	9530.84	2.38	37961.30	37961.30	3.98
2.63	3.21	ø8/10	2	2	11 (TG)	SLV	0.50	3742.85	2.50	22216.30	34244.50	0.30	7421.88	2.39	38138.80	38138.80	5.14
3.56	4.12	ø8/10	2	2	18	SLU	0.50	116.61	2.50	22216.30	33488.20	0.30	291.37	2.36	37640.60	37640.60	>100
3.56	4.12	ø8/10	2	2	16 (TG)	SLD	0.50	2121.30	2.50	25548.70	49036.00	0.30	10303.90	2.50	45906.20	52865.10	4.46
3.56	4.12	ø8/10	2	2	12 (TG)	SLD	0.50	3615.56	2.50	25548.70	49077.40	0.30	8071.97	2.50	45906.20	52909.70	5.69
3.56	4.12	ø8/10	2	2	15 (TG)	SLV	0.50	688.04	2.50	22216.30	33028.60	0.30	9234.83	2.34	37334.60	37334.60	4.04
3.56	4.12	ø8/10	2	2	11 (TG)	SLV	0.50	2797.58	2.50	22216.30	33084.60	0.30	7225.91	2.34	37372.00	37372.00	5.17
4.12	6.35	ø8/20	2	2	18	SLU	0.50	116.61	2.50	11108.10	33452.90	0.30	291.37	2.50	19959.20	36065.10	68.50
4.12	6.35	ø8/20	2	2	16 (TG)	SLD	0.50	2121.30	2.50	12774.30	49036.00	0.30	10303.90	2.50	22953.10	52865.10	2.23
4.12	6.35	ø8/20	2	2	12 (TG)	SLD	0.50	3615.56	2.50	12774.30	49077.40	0.30	8071.97	2.50	22953.10	52909.70	2.84
4.12	6.35	ø8/20	2	2	15 (TG)	SLV	0.50	688.04	2.50	11108.10	33028.60	0.30	9234.83	2.50	19959.20	35607.80	2.16
4.12	6.35	ø8/20	2	2	11 (TG)	SLV	0.50	2797.58	2.50	11108.10	33084.60	0.30	7225.91	2.50	19959.20	35668.10	2.76
6.35	6.91	ø8/10	2	2	18	SLU	0.50	116.61	2.50	22216.30	33311.50	0.30	291.37	2.35	37523.30	37523.30	>100
6.35	6.91	ø8/10	2	2	16 (TG)	SLD	0.50	2121.30	2.50	25548.70	49036.00	0.30	10303.90	2.50	45906.20	52865.10	4.46
6.35	6.91	ø8/10	2	2	12 (TG)	SLD	0.50	3615.56	2.50	25548.70	49077.40	0.30	8071.97	2.50	45906.20	52909.70	5.69
6.35	6.91	ø8/10	2	2	15 (TG)	SLV	0.50	688.04	2.50	22216.30	33028.60	0.30	9234.83	2.34	37334.60	37334.60	4.04
6.35	6.91	ø8/10	2	2	11 (TG)	SLV	0.50	2797.58	2.50	22216.30	33084.60	0.30	7225.91	2.34	37372.00	37372.00	5.17

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <m>	Hjc <m>	Hjw <m>	Ash <cmq>	Rgsn
115	N	ø8/ 9	Z+	I	2	4.62	4.62	0.30	0.40	0.29	4.02	1.19
			Z-	I	2	4.62	4.62	0.30	0.40	0.29	4.02	1.19
215	N	ø8/ 9	Z+	I	2	4.62	4.62	0.30	0.40	0.29	4.02	1.19
			Z-	I	2	4.62	4.62	0.30	0.40	0.29	4.02	1.19

Pilastrata n. 16

Nodi: 16 116 216

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
1R		30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _r	Sic.
-0.25	9	SLV	1	1	0.00	-6431.33	4911.69			973.49			-6436.25	12795.80	2383.04	19.69	6.51	2.599
-0.25	9	SLV	1	1	0.00	-6431.33	4911.69			973.49			-6436.25	12795.80	2383.04	19.69	6.51	2.599
3.21	11 (α)	SLV	1	1	346.00	-6847.90	-2544.53	2.06	-5244.22	-292.72	11.73	-3432.97	-6847.92	-9383.11	-6189.13	233.44	4.72	1.793
3.56	5 (α)	SLV	2	1	0.00	-2390.70	3984.97	2.35	9376.53	1038.94	5.37	5582.19	-2390.71	9657.29	5669.41	50.63	4.98	1.026
7.00	9	SLV	2	1	344.00	-1484.79	-5991.55			1122.77			-1484.79	-12283.50	2333.68	160.31	6.95	2.051
-0.25	10	SLD	1	1	0.00	-7017.82	3912.52			748.91			-7017.81	15004.90	3093.62	19.69	7.32	3.846
-0.25	10	SLD	1	1	0.00	-7017.82	3912.52			748.91			-7017.81	15004.90	3093.62	19.69	7.32	3.846
3.21	10	SLD	1	1	346.00	-5979.82	-2834.75			490.39			-5979.82	-15199.10	2568.84	163.13	7.74	5.358
3.56	10	SLD	2	1	0.00	-2702.65	5053.55			-951.05			-2702.65	14784.60	-2556.53	343.13	8.02	2.918
7.00	10	SLD	2	1	344.00	-1670.65	-4772.05			916.14			-1670.65	-14635.80	2563.37	163.13	8.13	3.058

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	22	SLE R	1	1	0.00	-9801.08	-45.26	508.35	0.00	20.36	11.88	158.18
-0.25	30	SLE Q	1	1	0.00	-9215.41	-47.36	476.65	0.00	20.36	11.22	149.24
-0.25	22	SLE R	1	1	0.00	-9801.08	-45.26	508.35	0.00	20.36	11.88	158.18
-0.25	30	SLE Q	1	1	0.00	-9215.41	-47.36	476.65	0.00	20.36	11.22	149.24
3.21	22	SLE R	1	1	346.00	-8763.08	47.79	-532.29	0.00	20.36	11.45	150.74
3.21	30	SLE Q	1	1	346.00	-8177.41	55.61	-491.83	0.00	20.36	10.79	141.63
3.56	22	SLE R	2	1	0.00	-3628.58	-157.23	770.80	10.18	10.18	15.02	167.40
3.56	30	SLE Q	2	1	0.00	-3387.25	-145.90	708.52	10.18	10.18	13.83	154.41
7.00	22	SLE R	2	1	344.00	-2596.58	190.87	-599.01	10.18	10.18	13.24	158.34
7.00	30	SLE Q	2	1	344.00	-2355.25	162.80	-547.27	10.18	10.18	11.84	141.81

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
3.56	30	SLE Q	2	1	0.00	-3387.25	708.52	-145.90	39.00	102.00	0.13	163.92	18.00	10.18	741.02	150.03	806.57	0.03	0.01
7.00	30	SLE Q	2	1	344.00	-2355.25	-547.27	162.80	39.00	102.00	0.13	163.92	18.00	10.18	741.03	141.81	843.20	0.03	0.01

Staffe - Verifiche armatura

X0 <m>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	Vrsd _y <daN>	Vrcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	Vrsd _z <daN>	Vrcd _z <daN>	Sic.T
-0.25	0.33	ø8/12	2	2	18	SLU	0.40	35.37	2.50	18513.50	27316.90	0.30	371.39	2.50	25889.50	28650.10	69.71
-0.25	0.33	ø8/12	2	2	20	SLU	0.40	64.43	2.50	18513.50	27327.00	0.30	312.29	2.50	25889.50	28660.70	82.90
-0.25	0.33	ø8/12	2	2	4 (TG)	SLD	0.40	1680.93	2.50	21290.60	39650.70	0.30	9895.29	2.50	29772.90	41585.80	3.01
-0.25	0.33	ø8/12	2	2	16 (TG)	SLD	0.40	4673.80	2.50	21290.60	39352.50	0.30	5877.45	2.50	29772.90	41273.10	4.56
-0.25	0.33	ø8/12	2	2	3 (TG)	SLV	0.40	1284.77	2.50	18513.50	26863.50	0.30	8524.25	2.50	25889.50	28174.50	3.04
-0.25	0.33	ø8/12	2	2	15 (TG)	SLV	0.40	4657.26	2.50	18513.50	26946.30	0.30	4900.58	2.50	25889.50	28261.40	3.98
0.33	2.63	ø8/20	2	2	18	SLU	0.40	35.37	2.50	11108.10	27287.70	0.30	371.39	2.50	15533.70	28619.40	41.83
0.33	2.63	ø8/20	2	2	20	SLU	0.40	64.43	2.50	11108.10	27297.80	0.30	312.29	2.50	15533.70	28630.10	49.74
0.33	2.63	ø8/20	2	2	4 (TG)	SLD	0.40	1680.93	2.50	12774.30	39650.70	0.30	9895.29	2.50	17863.70	41585.80	1.81
0.33	2.63	ø8/20	2	2	16 (TG)	SLD	0.40	4673.80	2.50	12774.30	39352.50	0.30	5877.45	2.50	17863.70	41273.10	2.73
0.33	2.63	ø8/20	2	2	3 (TG)	SLV	0.40	1284.77	2.50	11108.10	26863.50	0.30	8524.25	2.50	15533.70		

Relazione di calcolo

2.63	3.21	ø8/12	2	2	18	SLU	0.40	35.37	2.50	18513.50	27170.90	0.30	371.39	2.50	25889.50	28497.00	69.71
2.63	3.21	ø8/12	2	2	20	SLU	0.40	64.43	2.50	18513.50	27181.00	0.30	312.29	2.50	25889.50	28507.60	82.90
2.63	3.21	ø8/12	2	2	4 (TG)	SLD	0.40	1680.93	2.50	21290.60	39650.70	0.30	9895.29	2.50	29772.90	41585.80	3.01
2.63	3.21	ø8/12	2	2	16 (TG)	SLD	0.40	4673.80	2.50	21290.60	39352.50	0.30	5877.45	2.50	29772.90	41273.10	4.56
2.63	3.21	ø8/12	2	2	3 (TG)	SLV	0.40	1284.77	2.50	18513.50	26863.50	0.30	8524.25	2.50	25889.50	28174.50	3.04
2.63	3.21	ø8/12	2	2	15 (TG)	SLV	0.40	4657.26	2.50	18513.50	26946.30	0.30	4900.58	2.50	25889.50	28261.40	3.98
3.56	4.13	ø8/12	2	2	18	SLU	0.40	136.17	2.50	18513.50	26265.80	0.30	492.88	2.50	25889.50	27547.70	52.53
3.56	4.13	ø8/12	2	2	20	SLU	0.40	169.05	2.50	18513.50	26269.40	0.30	404.39	2.50	25889.50	27551.50	64.02
3.56	4.13	ø8/12	2	2	12 (TG)	SLD	0.40	1392.88	2.50	21290.60	38812.60	0.30	9550.47	2.50	29772.90	40706.80	3.12
3.56	4.13	ø8/12	2	2	16 (TG)	SLD	0.40	4487.85	2.50	21290.60	38834.80	0.30	6095.64	2.50	29772.90	40730.10	4.74
3.56	4.13	ø8/12	2	2	3 (TG)	SLV	0.40	1880.63	2.50	18513.50	25999.40	0.30	7472.10	2.50	25889.50	27268.30	3.46
3.56	4.13	ø8/12	2	2	15 (TG)	SLV	0.40	4337.19	2.50	18513.50	26028.90	0.30	5022.80	2.50	25889.50	27299.30	4.27
4.13	6.43	ø8/20	2	2	18	SLU	0.40	136.17	2.50	11108.10	26236.80	0.30	492.88	2.50	15533.70	27517.20	31.52
4.13	6.43	ø8/20	2	2	20	SLU	0.40	169.05	2.50	11108.10	26240.40	0.30	404.39	2.50	15533.70	27521.00	38.41
4.13	6.43	ø8/20	2	2	12 (TG)	SLD	0.40	1392.88	2.50	12774.30	38812.60	0.30	9550.47	2.50	17863.70	40706.80	1.87
4.13	6.43	ø8/20	2	2	16 (TG)	SLD	0.40	4487.85	2.50	12774.30	38834.80	0.30	6095.64	2.50	17863.70	40730.10	2.85
4.13	6.43	ø8/20	2	2	3 (TG)	SLV	0.40	1880.63	2.50	11108.10	25999.40	0.30	7472.10	2.50	15533.70	27268.30	2.08
4.13	6.43	ø8/20	2	2	15 (TG)	SLV	0.40	4337.19	2.50	11108.10	26028.90	0.30	5022.80	2.50	15533.70	27299.30	2.56
6.43	7.00	ø8/12	2	2	18	SLU	0.40	136.17	2.50	18513.50	26120.60	0.30	492.88	2.50	25889.50	27395.40	52.53
6.43	7.00	ø8/12	2	2	20	SLU	0.40	169.05	2.50	18513.50	26124.30	0.30	404.39	2.50	25889.50	27399.20	64.02
6.43	7.00	ø8/12	2	2	12 (TG)	SLD	0.40	1392.88	2.50	21290.60	38812.60	0.30	9550.47	2.50	29772.90	40706.80	3.12
6.43	7.00	ø8/12	2	2	16 (TG)	SLD	0.40	4487.85	2.50	21290.60	38834.80	0.30	6095.64	2.50	29772.90	40730.10	4.74
6.43	7.00	ø8/12	2	2	3 (TG)	SLV	0.40	1880.63	2.50	18513.50	25999.40	0.30	7472.10	2.50	25889.50	27268.30	3.46
6.43	7.00	ø8/12	2	2	15 (TG)	SLV	0.40	4337.19	2.50	18513.50	26028.90	0.30	5022.80	2.50	25889.50	27299.30	4.27

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <m>	Hjc <m>	Hjw <m>	Ash <cmq>	Rgsn	
116	N	ø8/ 7	Y+	E	2	4.10	6.78	0.40	0.20	0.29	5.03	1.11	
				Z+	I	2	4.12	7.62	0.36	0.30	0.20	4.02	1.25
				Z-	I	2	6.15	4.12	0.30	0.30	0.29	5.03	1.48
216	N	ø8/ 7	Y+	E	2	4.10	4.10	0.40	0.20	0.20	4.02	1.20	
				Z+	I	2	4.12	4.61	0.36	0.30	0.20	4.02	1.34
				Z-	I	2	4.61	4.12	0.40	0.30	0.20	4.02	1.20

Pilastrata n. 17

Nodi: 17 117 217

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
5	R	30.00	50.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
9	R	35.00	50.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	αy	My ver. <daNm>	Mz <daNm>	αz	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	εr	Sic.
3.56	9 (α)	SLV	2	9	0.00	-11716.60	-3155.07	2.72	-8584.06	6560.80	1.10	7216.88	-11716.60	-10732.60	9276.86	115.31	4.93	1.265
6.91	9	SLV	2	9	335.00	-10251.00	2167.99			-6328.92			-10251.00	3704.79	-11237.50	277.73	6.45	1.769
-0.25	10	SLD	1	5	0.00	-23734.00	-2633.32			2601.26			-23734.00	-11065.90	11303.80	105.47	5.68	4.274
-0.25	10	SLD	1	5	0.00	-23734.00	-2633.32			2601.26			-23734.00	-11065.90	11303.80	105.47	5.68	4.274
3.21	10	SLD	1	5	346.00	-22436.50	1868.46			-1722.56			-22436.50	11707.00	-11008.50	286.88	5.65	6.323
3.56	10	SLD	2	9	0.00	-12323.50	-2770.90			5480.30			-12323.50	-6766.99	13089.00	100.55	6.91	2.399
6.91	10	SLD	2	9	335.00	-10857.90	1750.90			-5393.02			-10857.90	4201.69	-13411.40	276.33	8.03	2.479

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	30.72
-0.25	1	3.81	43.99	30.72
3.21	1	3.81	43.99	30.72

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	αy	My ver. <daNm>	Mz <daNm>	αz	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Myu <daNm>	Mzu,s <daNm>	Mzu <daNm>	α <grad>	εr
-0.25	9	SLV	1	5	0.00	-22019.80	-3158.73			3252.98			-22019.80	-8749.71	-9257.06	8917.52	9415.06	106.88	4.76
-0.25	9	SLV	1	5	0.00	-22019.80	-3158.73			3252.98			-22019.80	-8749.71	-9257.06	8917.52	9415.06	106.88	4.76
3.21	3 (α)	SLV	1	5	346.00	-25560.40	1847.63	3.42	6321.61	910.04	2.28	2078.42	-25560.40	16496.80	17072.10	5410.42	5602.03	47.81	4.63

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	22	SLE R	1	5	0.00	-33806.90	426.21	-978.57	0.00	20.36	29.44	401.76
-0.25	30	SLE Q	1	5	0.00	-29684.40	367.51	-764.33	0.00	20.36	25.19	344.93
-0.25	22	SLE R	1	5	0.00	-33806.90	426.21	-978.57	0.00	20.36	29.44	401.76
-0.25	30	SLE Q	1	5	0.00	-29684.40	367.51	-764.33	0.00	20.36	25.19	344.93
3.21	22	SLE R	1	5	346.00	-32509.40	-491.69	1924.75	0.00	20.36	35.27	468.95
3.21	30	SLE Q	1	5	346.00	-28386.90	-399.38	1523.87	0.00	20.36	29.50	394.42
3.56	22	SLE R	2	9	0.00	-15713.40	2000.70	-1819.40	10.18	10.18	47.34	471.71
3.56	30	SLE Q	2	9	0.00	-14425.90	1746.90	-1444.41	10.18	10.18	39.44	398.36
6.91	22	SLE R	2	9	335.00	-14247.80	-2396.32	265.74	12.72	7.63	39.39	428.05
6.91	30	SLE Q	2	9	335.00	-12960.20	-2152.42	230.17	12.72	7.63	35.24	376.67

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
3.56	30	SLE Q	2	9	0.00	-14425.90	-1444.41	1746.90	59.00	107.00	0.13	236.97	18.00	10.18	1103.53	327.61	692.14	0.06	0.03

Relazione di calcolo

6.91	30	SLE Q	2	9	335.00	-12960.20	230.17	-2152.42	59.00	107.00	0.13	236.99	18.00	10.18	1103.70	376.67	957.20	0.07	0.03
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Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _v <m>	Vsdu _v <daN>	ctgθ _v	VRsd _v <daN>	VRcd _v <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic. T
-0.25	0.33	ø8/10	2	2	19	SLV	0.50	269.53	2.50	22216.30	37958.10	0.30	1201.47	2.50	39918.40	40922.20	33.22
-0.25	0.33	ø8/10	2	2	18	SLV	0.50	341.78	2.50	22216.30	37912.60	0.30	1143.54	2.50	39918.40	40873.10	34.91
-0.25	0.33	ø8/10	2	2	8 (TG)	SLD	0.50	4328.97	2.50	25548.70	51670.10	0.30	13006.30	2.50	45906.20	55704.90	3.53
-0.25	0.33	ø8/10	2	2	10 (TG)	SLD	0.50	7642.28	2.50	25548.70	52379.00	0.30	7381.75	2.50	45906.20	56469.20	3.34
-0.25	0.33	ø8/10	2	2	7 (TG)	SLV	0.50	3666.35	2.50	22216.30	36257.70	0.30	11300.20	2.47	39434.40	39434.40	3.49
-0.25	0.33	ø8/10	2	2	1 (TG)	SLV	0.50	6578.85	2.50	22216.30	36810.20	0.30	5911.50	2.49	39782.60	39782.60	3.38
0.33	2.63	ø8/20	2	2	19	SLV	0.50	269.53	2.50	11108.10	37921.60	0.30	1201.47	2.50	19959.20	40882.80	16.61
0.33	2.63	ø8/20	2	2	18	SLV	0.50	341.78	2.50	11108.10	37876.10	0.30	1143.54	2.50	19959.20	40833.80	17.45
0.33	2.63	ø8/20	2	2	8 (TG)	SLD	0.50	4328.97	2.50	12774.30	51670.10	0.30	13006.30	2.50	22953.10	55704.90	1.76
0.33	2.63	ø8/20	2	2	10 (TG)	SLD	0.50	7642.28	2.50	12774.30	52379.00	0.30	7381.75	2.50	22953.10	56469.20	1.67
0.33	2.63	ø8/20	2	2	15 (TG)	SLV	0.50	3250.99	2.50	11108.10	35300.50	0.30	11055.20	2.50	19959.20	38057.00	1.81
0.33	2.63	ø8/20	2	2	7 (TG)	SLV	0.50	3666.35	2.50	11108.10	36257.70	0.30	11300.20	2.50	19959.20	39088.90	1.77
0.33	2.63	ø8/20	2	2	1 (TG)	SLV	0.50	6578.85	2.50	11108.10	36810.20	0.30	5911.50	2.50	19959.20	39684.60	1.69
2.63	3.21	ø8/10	2	2	19	SLV	0.50	269.53	2.50	22216.30	37775.60	0.30	1201.47	2.50	39918.40	40725.40	33.22
2.63	3.21	ø8/10	2	2	18	SLV	0.50	341.78	2.50	22216.30	37730.10	0.30	1143.54	2.50	39918.40	40676.40	34.91
2.63	3.21	ø8/10	2	2	8 (TG)	SLD	0.50	4328.97	2.50	25548.70	51670.10	0.30	13006.30	2.50	45906.20	55704.90	3.53
2.63	3.21	ø8/10	2	2	10 (TG)	SLD	0.50	7642.28	2.50	25548.70	52379.00	0.30	7381.75	2.50	45906.20	56469.20	3.34
2.63	3.21	ø8/10	2	2	7 (TG)	SLV	0.50	3666.35	2.50	22216.30	36257.70	0.30	11300.20	2.47	39434.40	39434.40	3.49
2.63	3.21	ø8/10	2	2	1 (TG)	SLV	0.50	6578.85	2.50	22216.30	36810.20	0.30	5911.50	2.49	39782.60	39782.60	3.38
3.56	4.12	ø8/10	2	2	19	SLV	0.50	1595.58	2.50	24871.60	38482.30	0.35	905.98	2.50	38148.20	41317.10	15.59
3.56	4.12	ø8/10	2	2	18	SLV	0.50	1713.75	2.50	24871.60	38468.70	0.35	846.38	2.50	38148.20	41302.50	14.51
3.56	4.12	ø8/10	2	2	8 (TG)	SLD	0.50	6922.78	2.50	28602.30	55589.80	0.35	9432.91	2.50	43870.50	59684.90	4.13
3.56	4.12	ø8/10	2	2	2 (TG)	SLD	0.50	9148.34	2.50	28602.30	55733.90	0.35	2733.75	2.50	43870.50	59839.60	3.13
3.56	4.12	ø8/10	2	2	7 (TG)	SLV	0.50	4150.88	2.50	24871.60	37451.10	0.35	9496.12	2.50	38148.20	40210.00	4.02
3.56	4.12	ø8/10	2	2	1 (TG)	SLV	0.50	4341.85	2.50	24871.60	37681.00	0.35	9515.43	2.50	38148.20	40456.80	4.01
3.56	4.12	ø8/10	2	2	9 (TG)	SLV	0.50	7781.59	2.50	24871.60	37764.40	0.35	2057.89	2.50	38148.20	40546.30	3.20
4.12	6.35	ø8/20	2	2	19	SLV	0.50	1595.58	2.50	12435.80	38442.70	0.35	905.98	2.50	19074.10	41274.60	7.79
4.12	6.35	ø8/20	2	2	18	SLV	0.50	1713.75	2.50	12435.80	38429.10	0.35	846.38	2.50	19074.10	41260.00	7.26
4.12	6.35	ø8/20	2	2	8 (TG)	SLD	0.50	6922.78	2.50	14301.20	55589.80	0.35	9432.91	2.50	21935.20	59684.90	2.07
4.12	6.35	ø8/20	2	2	2 (TG)	SLD	0.50	9148.34	2.50	14301.20	55733.90	0.35	2733.75	2.50	21935.20	59839.60	1.56
4.12	6.35	ø8/20	2	2	7 (TG)	SLV	0.50	4150.88	2.50	12435.80	37451.10	0.35	9496.12	2.50	19074.10	40210.00	2.01
4.12	6.35	ø8/20	2	2	1 (TG)	SLV	0.50	4341.85	2.50	12435.80	37681.00	0.35	9515.43	2.50	19074.10	40456.80	2.00
4.12	6.35	ø8/20	2	2	9 (TG)	SLV	0.50	7781.59	2.50	12435.80	37764.40	0.35	2057.89	2.50	19074.10	40546.30	1.60
6.35	6.91	ø8/10	2	2	19	SLV	0.50	1595.58	2.50	24871.60	38284.50	0.35	905.98	2.50	38148.20	41104.70	15.59
6.35	6.91	ø8/10	2	2	18	SLV	0.50	1713.75	2.50	24871.60	38270.90	0.35	846.38	2.50	38148.20	41090.10	14.51
6.35	6.91	ø8/10	2	2	8 (TG)	SLD	0.50	6922.78	2.50	28602.30	55589.80	0.35	9432.91	2.50	43870.50	59684.90	4.13
6.35	6.91	ø8/10	2	2	2 (TG)	SLD	0.50	9148.34	2.50	28602.30	55733.90	0.35	2733.75	2.50	43870.50	59839.60	3.13
6.35	6.91	ø8/10	2	2	7 (TG)	SLV	0.50	4150.88	2.50	24871.60	37451.10	0.35	9496.12	2.50	38148.20	40210.00	4.02
6.35	6.91	ø8/10	2	2	1 (TG)	SLV	0.50	4341.85	2.50	24871.60	37681.00	0.35	9515.43	2.50	38148.20	40456.80	4.01
6.35	6.91	ø8/10	2	2	9 (TG)	SLV	0.50	7781.59	2.50	24871.60	37764.40	0.35	2057.89	2.50	38148.20	40546.30	3.20

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <m>	Hjc <m>	Hjw <m>	Ash <cmq>	Rgsn
117	N	ø8/ 6	Y+	E	2	4.61	7.62	0.45	0.20	0.29	6.03	1.19
			Z+	I	2	11.78	5.08	0.40	0.40	0.20	4.02	1.33
			Z-	I	2	7.15	12.72	0.40	0.40	0.20	4.02	1.33
217	N	ø8/ 6	Y+	E	2	4.61	6.15	0.50	0.21	0.20	4.02	1.07
			Z+	I	2	7.16	7.62	0.40	0.36	0.20	4.02	1.33
			Z-	I	2	6.14	4.62	0.35	0.36	0.29	6.03	1.53

Pilastrata n. 18

Nodi: 18 118 218

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
8R		35.00	40.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.
3.56	13 (α)	SLV	2	8	0.00	-10975.30	3044.67	1.10	3349.13	3559.51	1.87	6673.38	-10975.30	4347.39	8454.22	70.31	5.69	1.273
7.00	9	SLV	2	8	344.00	-9735.72	-3316.99			-4099.94			-9735.71	-6106.70	-7731.64	236.25	4.84	1.868
-0.25	10	SLD	1	8	0.00	-24024.30	2436.14			2666.11			-24024.30	8773.34	9731.55	53.44	4.86	3.628
-0.25	10	SLD	1	8	0.00	-24024.30	2436.14			2666.11			-24024.30	8773.34	9731.55	53.44	4.86	3.628
3.30	10	SLD	1	8	355.00	-22781.80	-1601.10			-1534.64			-22781.80	-9405.11	-9076.93	229.22	4.87	5.894
3.56	10	SLD	2	8	0.00	-10988.50	2721.82			3270.41			-10988.50	7732.45	9126.23	56.25	5.55	2.811
7.00	10	SLD	2	8	344.00	-9784.49	-3000.89			-3470.66			-9784.49	-7691.93	-9009.18	236.25	5.62	2.582

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	37.71	36.01
-0.25	1	3.81	37.71	36.01
3.30	1	3.81	37.71	36.01

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Myu <daNm>	Mzu,s <daNm>	Mzu <daNm>	α <grad>	ε _y
-0.25	9	SLV	1	8	0.00	-23901.70	2945.45			3278.50			-23901.70	6700.84	7116.75	7724.95	8203.29	53.44	4.86
-0.25	9	SLV	1	8	0.00	-23901.70	2945.45			3278.50			-23901.70	6700.84	7116.75	7724.95	8203.29	53.44	4.86
3.30	7 (α)	SLV	1	8	355.00	-22863.30	-1255.87	1.19	-1495.58	-894.17	3.67	-3278.19	-22863.30	-4021.17	-4328.61	-9054.17	-9713.31	250.31	4.86

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Relazione di calcolo

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_f <daN/cmq>
-0.25	22	SLE R	1	8	0.00	-28178.70	702.06	781.16	0.00	15.27	31.89	398.61
-0.25	24	SLE R	1	8	0.00	-28171.20	620.38	869.83	0.00	15.27	31.87	399.02
-0.25	30	SLE Q	1	8	0.00	-24495.40	581.85	632.96	0.00	15.27	26.99	339.53
-0.25	22	SLE R	1	8	0.00	-28178.70	702.06	781.16	0.00	15.27	31.89	398.61
-0.25	24	SLE R	1	8	0.00	-28171.20	620.38	869.83	0.00	15.27	31.87	399.02
-0.25	30	SLE Q	1	8	0.00	-24495.40	581.85	632.96	0.00	15.27	26.99	339.53
3.30	22	SLE R	1	8	355.00	-26936.20	-970.75	-1296.16	0.00	15.27	39.00	462.67
3.30	30	SLE Q	1	8	355.00	-23252.90	-763.82	-1030.37	0.00	15.27	31.92	382.93
3.56	22	SLE R	2	8	0.00	-12216.10	1533.34	2096.50	7.63	7.63	64.82	740.51
3.56	30	SLE Q	2	8	0.00	-11172.90	1292.83	1787.20	7.63	7.63	54.22	581.74
7.00	22	SLE R	2	8	344.00	-11012.10	-1459.31	-2087.15	7.63	7.63	64.24	784.32
7.00	30	SLE Q	2	8	344.00	-9968.92	-1298.71	-1876.29	7.63	7.63	57.40	696.13

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	S _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	σ_{sz} <daN/cmq>	ϵ_{sm}	Wk <mm>
3.56	30	SLE Q	2	8	0.00	-11172.90	1787.20	1292.83	59.00	132.00	0.13	247.51	18.00	7.63	874.65	581.74	850.20	0.11	0.05
7.00	30	SLE Q	2	8	344.00	-9968.92	-1876.29	-1298.71	59.00	132.00	0.13	247.53	18.00	7.63	874.81	696.13	950.59	0.14	0.06

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic. T
-0.25	0.34	ø8/14	2	2	20	SLU	0.40	593.56	2.50	17765.40	33393.40	0.35	826.95	2.50	20926.50	34418.40	25.31
-0.25	0.34	ø8/14	2	2	18	SLU	0.40	626.16	2.50	17765.40	33394.30	0.35	792.98	2.50	20926.50	34419.30	26.39
-0.25	0.34	ø8/14	2	2	8 (TG)	SLD	0.40	4590.68	2.50	20430.20	45974.50	0.35	6978.00	2.50	24065.50	47385.60	3.45
-0.25	0.34	ø8/14	2	2	2 (TG)	SLD	0.40	6251.90	2.50	20430.20	46018.40	0.35	4541.10	2.50	24065.50	47430.90	3.27
-0.25	0.34	ø8/14	2	2	3 (TG)	SLV	0.40	2727.99	2.50	17765.40	31644.60	0.35	6093.38	2.50	20926.50	32615.80	3.43
-0.25	0.34	ø8/14	2	2	3 (TG)	SLV	0.40	5959.62	2.50	17765.40	31644.60	0.35	3116.81	2.50	20926.50	32615.80	2.98
0.34	2.71	ø8/20	2	2	20	SLU	0.40	593.56	2.50	12435.80	33359.80	0.35	826.95	2.50	14648.60	34383.80	17.71
0.34	2.71	ø8/20	2	2	18	SLU	0.40	626.16	2.50	12435.80	33360.80	0.35	792.98	2.50	14648.60	34384.70	18.47
0.34	2.71	ø8/20	2	2	8 (TG)	SLD	0.40	4590.68	2.50	14301.20	45974.50	0.35	6978.00	2.50	16845.80	47385.60	2.41
0.34	2.71	ø8/20	2	2	2 (TG)	SLD	0.40	6251.90	2.50	14301.20	46018.40	0.35	4541.10	2.50	16845.80	47430.90	2.29
0.34	2.71	ø8/20	2	2	3 (TG)	SLV	0.40	2727.99	2.50	12435.80	31644.60	0.35	6093.38	2.50	14648.60	32615.80	2.40
0.34	2.71	ø8/20	2	2	3 (TG)	SLV	0.40	5959.62	2.50	12435.80	31644.60	0.35	3116.81	2.50	14648.60	32615.80	2.09
2.71	3.30	ø8/14	2	2	20	SLU	0.40	593.56	2.50	17765.40	33225.70	0.35	826.95	2.50	20926.50	34245.50	25.31
2.71	3.30	ø8/14	2	2	18	SLU	0.40	626.16	2.50	17765.40	33226.60	0.35	792.98	2.50	20926.50	34246.50	26.39
2.71	3.30	ø8/14	2	2	8 (TG)	SLD	0.40	4590.68	2.50	20430.20	45974.50	0.35	6978.00	2.50	24065.50	47385.60	3.45
2.71	3.30	ø8/14	2	2	2 (TG)	SLD	0.40	6251.90	2.50	20430.20	46018.40	0.35	4541.10	2.50	24065.50	47430.90	3.27
2.71	3.30	ø8/14	2	2	3 (TG)	SLV	0.40	2727.99	2.50	17765.40	31644.60	0.35	6093.38	2.50	20926.50	32615.80	3.43
2.71	3.30	ø8/14	2	2	3 (TG)	SLV	0.40	5959.62	2.50	17765.40	31644.60	0.35	3116.81	2.50	20926.50	32615.80	2.98
3.56	4.13	ø8/14	2	2	20	SLU	0.40	1096.95	2.50	17765.40	30715.50	0.35	1637.68	2.50	20926.50	31658.20	12.78
3.56	4.13	ø8/14	2	2	18	SLU	0.40	1143.22	2.50	17765.40	30715.50	0.35	1616.05	2.50	20926.50	31658.60	12.95
3.56	4.13	ø8/14	2	2	8 (TG)	SLD	0.40	2984.97	2.50	20430.20	44313.50	0.35	7075.80	2.50	24065.50	45673.70	3.40
3.56	4.13	ø8/14	2	2	2 (TG)	SLD	0.40	5905.34	2.50	20430.20	44329.70	0.35	4637.72	2.50	24065.50	45690.40	3.46
3.56	4.13	ø8/14	2	2	7 (TG)	SLV	0.40	2382.85	2.50	17765.40	29959.40	0.35	5964.52	2.50	20926.50	30879.00	3.51
3.56	4.13	ø8/14	2	2	1 (TG)	SLV	0.40	5566.16	2.50	17765.40	29980.10	0.35	1939.22	2.50	20926.50	30900.30	3.19
4.13	6.43	ø8/20	2	2	20	SLU	0.40	1096.95	2.50	12435.80	30683.00	0.35	1637.68	2.50	14648.60	31624.70	8.94
4.13	6.43	ø8/20	2	2	18	SLU	0.40	1143.22	2.50	12435.80	30683.00	0.35	1616.05	2.50	14648.60	31625.10	9.06
4.13	6.43	ø8/20	2	2	8 (TG)	SLD	0.40	2984.97	2.50	14301.20	44313.50	0.35	7075.80	2.50	16845.80	45673.70	2.38
4.13	6.43	ø8/20	2	2	2 (TG)	SLD	0.40	5905.34	2.50	14301.20	44329.70	0.35	4637.72	2.50	16845.80	45690.40	2.42
4.13	6.43	ø8/20	2	2	7 (TG)	SLV	0.40	2382.85	2.50	12435.80	29959.40	0.35	5964.52	2.50	14648.60	30879.00	2.46
4.13	6.43	ø8/20	2	2	1 (TG)	SLV	0.40	5566.16	2.50	12435.80	29980.10	0.35	1939.22	2.50	14648.60	30900.30	2.23
6.43	7.00	ø8/14	2	2	20	SLU	0.40	1096.95	2.50	17765.40	30553.00	0.35	1637.68	2.50	20926.50	31490.80	12.78
6.43	7.00	ø8/14	2	2	18	SLU	0.40	1143.22	2.50	17765.40	30553.00	0.35	1616.05	2.50	20926.50	31491.10	12.95
6.43	7.00	ø8/14	2	2	8 (TG)	SLD	0.40	2984.97	2.50	20430.20	44313.50	0.35	7075.80	2.50	24065.50	45673.70	3.40
6.43	7.00	ø8/14	2	2	2 (TG)	SLD	0.40	5905.34	2.50	20430.20	44329.70	0.35	4637.72	2.50	24065.50	45690.40	3.46
6.43	7.00	ø8/14	2	2	7 (TG)	SLV	0.40	2382.85	2.50	17765.40	29959.40	0.35	5964.52	2.50	20926.50	30879.00	3.51
6.43	7.00	ø8/14	2	2	1 (TG)	SLV	0.40	5566.16	2.50	17765.40	29980.10	0.35	1939.22	2.50	20926.50	30900.30	3.19

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
118	N	ø8/ 7	Y+	I	2	4.62	4.62	0.40	0.21	0.20	4.02	1.20
			Y-	I	2	7.16	4.62	0.40	0.21	0.20	4.02	1.20
			Z-	E	2	4.62	4.62	0.40	0.26	0.20	4.02	1.20
218	N	ø8/ 7	Y+	I	2	4.62	9.71	0.40	0.21	0.20	4.02	1.20
			Y-	I	2	6.16	5.09	0.40	0.21	0.20	4.02	1.20
			Z-	E	2	4.62	4.62	0.40	0.26	0.20	4.02	1.20

Pilastrata n. 19

Nodi: 19 119 219

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
8R		35.00	40.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α_y	My ver. <daNm>	Mz <daNm>	α_z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ϵ_y	Sic.
3.56	15 (a)	SLV	2	8	0.00	-12007.90	3425.32	1.10	3767.85	559.21	17.45	9758.16	-12007.90	3857.05	10446.30	75.94	5.12	1.065
7.00	1	SLV	2	8	344.00	-10718.90	-4235.53			3672.09			-10718.90	-8826.76	7606.60	129.38	4.29	2.079
-0.25	10	SLD	1	8	0.00	-26294.50	3697.55			2044.67			-26294.50	14132.00	7796.29	36.56	4.46	3.820
-0.25	10	SLD	1	8	0.00	-26294.50	3697.55			2044.67			-26294.50	14132.00	7796.29	36.56	4.46	3.820
3.30	10	SLD	1	8	355.00	-25052.00	-2413.03			1164.07			-25052.00	-14680.00	6816.39	149.06	4.74	6.041
3.56	2	SLD	2	8	0.00	-11975.70	3490.79			-2881.84			-11975.70	10977.10	-9095.12	310.78	4.86	3.149
7.00	2	SLD	2	8	344.00	-10771.70	-3867.48			3025.52			-10771.70	-11152.30	8830.88	132.19	4.92	2.897

Relazione di calcolo

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	37.71	33.41
-0.25	1	3.81	37.71	33.41
3.30	1	3.81	37.71	33.41

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	My _{u,s} <daNm>	Myu <daNm>	Mzu _s <daNm>	Mzu <daNm>	α <grad>	ε _r
-0.25	9	SLV	1	8	0.00	-26118.20	4495.64			2671.33			-26118.30	10866.50	11437.00	6419.93	6740.15	39.38	3.73
-0.25	9	SLV	1	8	0.00	-26118.20	4495.64			2671.33			-26118.30	10866.50	11437.00	6419.93	6740.15	39.38	3.73
3.30	9 (α)	SLV	1	8	355.00	-24875.70	-2717.64	1.10	-2989.40	1357.45	2.87	3892.39	-24875.70	-7006.74	-7400.08	9348.22	9905.44	118.13	3.78

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	24	SLE R	1	8	0.00	-31045.60	-260.43	1173.42	0.00	20.36	31.26	400.33
-0.25	32	SLE Q	1	8	0.00	-26921.10	-170.97	964.60	0.00	20.36	26.07	337.31
-0.25	24	SLE R	1	8	0.00	-31045.60	-260.43	1173.42	0.00	20.36	31.26	400.33
-0.25	32	SLE Q	1	8	0.00	-26921.10	-170.97	964.60	0.00	20.36	26.07	337.31
3.30	21	SLE R	1	8	355.00	-29843.00	756.99	-1753.60	0.00	20.36	41.09	489.85
3.30	29	SLE Q	1	8	355.00	-25718.40	577.54	-1375.48	0.00	20.36	33.26	401.76
3.56	21	SLE R	2	8	0.00	-13333.50	-1000.98	2815.49	10.18	10.18	61.30	686.96
3.56	24	SLE R	2	8	0.00	-13317.60	-888.84	2892.98	10.18	10.18	60.45	689.50
3.56	29	SLE Q	2	8	0.00	-12177.00	-811.65	2381.87	10.18	10.18	50.76	531.94
7.00	21	SLE R	2	8	344.00	-12129.50	909.65	-2805.99	10.18	10.18	59.91	717.12
7.00	24	SLE R	2	8	344.00	-12113.60	780.36	-2912.52	10.18	10.18	59.16	727.64
7.00	29	SLE Q	2	8	344.00	-10973.00	793.80	-2513.72	10.18	10.18	53.21	632.22

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	φ	A _s <cmq>	A _{c,eff} <cmq>	σ _s <daN/cmq>	σ _{sz} <daN/cmq>	ε _{sm}	Wk <mm>
3.56	32	SLE Q	2	8	0.00	-12161.10	2459.36	-699.51	59.00	107.00	0.13	217.48	18.00	10.18	883.07	534.94	834.18	0.10	0.04
7.00	32	SLE Q	2	8	344.00	-10957.10	-2620.24	664.51	59.00	107.00	0.13	217.50	18.00	10.18	883.24	643.10	927.83	0.12	0.05

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.34	ø8/14	2	2	20	SLU	0.40	373.89	2.50	17765.40	33874.70	0.35	1130.61	2.50	20926.50	34914.40	18.51
-0.25	0.34	ø8/14	2	2	17	SLU	0.40	436.49	2.50	17765.40	33879.60	0.35	1059.99	2.50	20926.50	34919.50	19.74
-0.25	0.34	ø8/14	2	2	16 (TG)	SLD	0.40	3173.32	2.50	20430.20	46279.60	0.35	9758.45	2.50	24065.50	47700.10	2.47
-0.25	0.34	ø8/14	2	2	2 (TG)	SLD	0.40	6540.73	2.50	20430.20	46212.70	0.35	5928.30	2.50	24065.50	47631.20	3.12
-0.25	0.34	ø8/14	2	2	15 (TG)	SLV	0.40	1578.75	2.50	17765.40	31927.10	0.35	8812.83	2.50	20926.50	32907.10	2.37
-0.25	0.34	ø8/14	2	2	11 (TG)	SLV	0.40	6972.14	2.50	17765.40	31951.50	0.35	3139.05	2.50	20926.50	32932.20	2.55
0.34	2.71	ø8/20	2	2	20	SLU	0.40	373.89	2.50	12435.80	33841.10	0.35	1130.61	2.50	14648.60	34879.80	12.96
0.34	2.71	ø8/20	2	2	17	SLU	0.40	436.49	2.50	12435.80	33846.10	0.35	1059.99	2.50	14648.60	34885.00	13.82
0.34	2.71	ø8/20	2	2	16 (TG)	SLD	0.40	3173.32	2.50	14301.20	46279.60	0.35	9758.45	2.50	16845.80	47700.10	1.73
0.34	2.71	ø8/20	2	2	2 (TG)	SLD	0.40	6540.73	2.50	14301.20	46212.70	0.35	5928.30	2.50	16845.80	47631.20	2.19
0.34	2.71	ø8/20	2	2	15 (TG)	SLV	0.40	1578.75	2.50	12435.80	31927.10	0.35	8812.83	2.50	14648.60	32907.10	1.66
0.34	2.71	ø8/20	2	2	11 (TG)	SLV	0.40	6972.14	2.50	12435.80	31951.50	0.35	3139.05	2.50	14648.60	32932.20	1.78
2.71	3.30	ø8/14	2	2	20	SLU	0.40	373.89	2.50	17765.40	33707.00	0.35	1130.61	2.50	20926.50	34741.60	18.51
2.71	3.30	ø8/14	2	2	17	SLU	0.40	436.49	2.50	17765.40	33711.90	0.35	1059.99	2.50	20926.50	34746.70	19.74
2.71	3.30	ø8/14	2	2	16 (TG)	SLD	0.40	3173.32	2.50	20430.20	46279.60	0.35	9758.45	2.50	24065.50	47700.10	2.47
2.71	3.30	ø8/14	2	2	2 (TG)	SLD	0.40	6540.73	2.50	20430.20	46212.70	0.35	5928.30	2.50	24065.50	47631.20	3.12
2.71	3.30	ø8/14	2	2	15 (TG)	SLV	0.40	1578.75	2.50	17765.40	31927.10	0.35	8812.83	2.50	20926.50	32907.10	2.37
2.71	3.30	ø8/14	2	2	11 (TG)	SLV	0.40	6972.14	2.50	17765.40	31951.50	0.35	3139.05	2.50	20926.50	32932.20	2.55
3.56	4.13	ø8/14	2	2	20	SLU	0.40	656.41	2.50	17765.40	30897.70	0.35	2234.76	2.50	20926.50	31846.10	9.36
3.56	4.13	ø8/14	2	2	17	SLU	0.40	726.60	2.50	17765.40	30899.70	0.35	2181.27	2.50	20926.50	31848.10	9.59
3.56	4.13	ø8/14	2	2	16 (TG)	SLD	0.40	2168.81	2.50	20430.20	44438.00	0.35	9495.61	2.50	24065.50	45802.00	2.53
3.56	4.13	ø8/14	2	2	2 (TG)	SLD	0.40	6549.08	2.50	20430.20	44466.60	0.35	5870.64	2.50	24065.50	45831.50	3.12
3.56	4.13	ø8/14	2	2	7 (TG)	SLV	0.40	2854.91	2.50	17765.40	30096.80	0.35	7356.97	2.50	20926.50	31020.50	2.84
3.56	4.13	ø8/14	2	2	1 (TG)	SLV	0.40	6847.36	2.50	17765.40	30120.30	0.35	1716.88	2.50	20926.50	31044.80	2.59
4.13	6.43	ø8/20	2	2	20	SLU	0.40	656.41	2.50	12435.80	30865.20	0.35	2234.76	2.50	14648.60	31812.60	6.55
4.13	6.43	ø8/20	2	2	17	SLU	0.40	726.60	2.50	12435.80	30867.20	0.35	2181.27	2.50	14648.60	31814.60	6.72
4.13	6.43	ø8/20	2	2	16 (TG)	SLD	0.40	2168.81	2.50	14301.20	44438.00	0.35	9495.61	2.50	16845.80	45802.00	1.77
4.13	6.43	ø8/20	2	2	2 (TG)	SLD	0.40	6549.08	2.50	14301.20	44466.60	0.35	5870.64	2.50	16845.80	45831.50	2.18
4.13	6.43	ø8/20	2	2	7 (TG)	SLV	0.40	2854.91	2.50	12435.80	30096.80	0.35	7356.97	2.50	14648.60	31020.50	1.99
4.13	6.43	ø8/20	2	2	1 (TG)	SLV	0.40	6847.36	2.50	12435.80	30120.30	0.35	1716.88	2.50	14648.60	31044.80	1.82
6.43	7.00	ø8/14	2	2	20	SLU	0.40	656.41	2.50	17765.40	30735.20	0.35	2234.76	2.50	20926.50	31678.60	9.36
6.43	7.00	ø8/14	2	2	17	SLU	0.40	726.60	2.50	17765.40	30737.20	0.35	2181.27	2.50	20926.50	31680.60	9.59
6.43	7.00	ø8/14	2	2	16 (TG)	SLD	0.40	2168.81	2.50	20430.20	44438.00	0.35	9495.61	2.50	24065.50	45802.00	2.53
6.43	7.00	ø8/14	2	2	2 (TG)	SLD	0.40	6549.08	2.50	20430.20	44466.60	0.35	5870.64	2.50	24065.50	45831.50	3.12
6.43	7.00	ø8/14	2	2	7 (TG)	SLV	0.40	2854.91	2.50	17765.40	30096.80	0.35	7356.97	2.50	20926.50	31020.50	2.84
6.43	7.00	ø8/14	2	2	1 (TG)	SLV	0.40	6847.36	2.50	17765.40	30120.30	0.35	1716.88	2.50	20926.50	31044.80	2.59

Caratteristiche nodi trave-pilastrato

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
119	N	ø8/7	Y+	I	2	8.17	6.63	0.40	0.21	0.20	4.02	1.20
			Y-	I	2	8.17	6.63	0.40	0.21	0.20	4.02	1.20
			Z-	E	2	6.16	4.62	0.40	0.26			

Relazione di calcolo

Nodi: 20 120 220

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _r	Sic.
3.56	9 (α)	SLV	2	1	0.00	-8250.11	4973.33	2.10	10445.90	2340.46	1.10	2574.50	-8250.10	12491.00	3129.63	25.31	5.86	1.197
7.00	5	SLV	2	1	344.00	-6717.28	-5717.60			-1698.25			-6717.27	-12089.30	-3449.13	208.13	5.75	2.108
-0.25	10	SLD	1	1	0.00	-19706.20	2267.30			1707.98			-19706.20	11417.30	8525.28	56.25	4.80	5.020
-0.25	10	SLD	1	1	0.00	-19706.20	2267.30			1707.98			-19706.20	11417.30	8525.28	56.25	4.80	5.020
3.21	6	SLD	1	1	346.00	-17583.80	-3223.13			-812.73			-17583.80	-15887.90	-3719.36	202.50	6.31	4.909
3.56	6	SLD	2	1	0.00	-8093.98	5214.47			1519.70			-8126.13	14546.20	4049.59	25.31	6.67	2.780
7.00	6	SLD	2	1	344.00	-7061.98	-5142.90			-1459.82			-7064.18	-14425.60	-4034.08	205.31	6.73	2.802

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	31.71
-0.25	1	3.81	43.99	31.71
3.21	1	3.81	43.99	31.71

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Mzu,s <daNm>	Mzu <daNm>	α <grad>	
-0.25	9	SLV	1	1	0.00	-19040.30	2587.80			2108.72			-19040.30	8452.95	8861.67	7043.39	7391.18	59.06
-0.25	9	SLV	1	1	0.00	-19040.30	2587.80			2108.72			-19040.30	8452.95	8861.67	7043.39	7391.18	59.06
3.21	9 (α)	SLV	1	1	346.00	-18002.30	-3045.68	2.10	-6397.08	-1232.64	1.10	-1355.90	-18002.30	-13162.60	-13716.50	-2748.19	-2846.93	202.50

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
-0.25	24	SLE R	1	1	0.00	-24306.20	311.51	1367.33	0.00	20.36	33.10	430.50
-0.25	32	SLE Q	1	1	0.00	-22034.30	279.77	1202.73	0.00	20.36	29.62	385.96
-0.25	24	SLE R	1	1	0.00	-24306.20	311.51	1367.33	0.00	20.36	33.10	430.50
-0.25	32	SLE Q	1	1	0.00	-22034.30	279.77	1202.73	0.00	20.36	29.62	385.96
3.21	24	SLE R	1	1	346.00	-23268.20	-428.28	-2293.25	5.09	15.27	44.65	554.01
3.21	32	SLE Q	1	1	346.00	-20996.30	-380.95	-2005.65	5.09	15.27	39.37	490.04
3.56	24	SLE R	2	1	0.00	-10167.10	678.34	3503.87	10.18	10.18	68.01	1026.50
3.56	32	SLE Q	2	1	0.00	-9306.42	606.91	3113.97	10.18	10.18	60.52	900.49
7.00	24	SLE R	2	1	344.00	-9135.12	-658.51	-3466.86	12.72	7.63	67.02	1056.67
7.00	32	SLE Q	2	1	344.00	-8274.42	-592.03	-3123.62	12.72	7.63	60.36	949.54

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _{c,eff} <cmq>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
3.21	32	SLE Q	1	1	346.00	-20996.30	-2005.65	-380.95	39.00	102.00	0.13	175.32	18.00	5.09	434.97	88.69	304.37	0.02	0.01
3.56	32	SLE Q	2	1	0.00	-9306.42	3113.97	606.91	39.00	102.00	0.13	163.92	18.00	10.18	741.03	900.49	986.09	0.18	0.05
7.00	32	SLE Q	2	1	344.00	-8274.42	-3123.62	-592.03	39.00	102.00	0.13	163.92	18.00	10.18	741.02	949.54	1020.74	0.19	0.05

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic. T
-0.25	0.33	ø8/12	2	2	20	SLU	0.40	284.92	2.50	18513.50	29826.70	0.30	1403.96	2.50	25889.50	31282.40	18.44
-0.25	0.33	ø8/12	2	2	18	SLU	0.40	313.82	2.50	18513.50	29852.20	0.30	1349.49	2.50	25889.50	31309.10	19.18
-0.25	0.33	ø8/12	2	2	8 (TG)	SLD	0.40	2378.83	2.50	21290.60	40922.40	0.30	10229.80	2.50	29772.90	42919.60	2.91
-0.25	0.33	ø8/12	2	2	8 (TG)	SLD	0.40	2691.03	2.50	21290.60	41367.40	0.30	10289.30	2.50	29772.90	43386.30	2.89
-0.25	0.33	ø8/12	2	2	10 (TG)	SLD	0.40	5377.70	2.50	21290.60	41645.20	0.30	7729.30	2.50	29772.90	43677.70	3.85
-0.25	0.33	ø8/12	2	2	7 (TG)	SLV	0.40	1332.03	2.50	18513.50	28588.50	0.30	9349.63	2.50	25889.50	29983.70	2.77
-0.25	0.33	ø8/12	2	2	9 (TG)	SLV	0.40	5064.11	2.50	18513.50	28942.70	0.30	5506.22	2.50	25889.50	30355.20	3.66
0.33	2.63	ø8/20	2	2	20	SLU	0.40	284.92	2.50	11108.10	29797.50	0.30	1403.96	2.50	15533.70	31251.80	11.06
0.33	2.63	ø8/20	2	2	18	SLU	0.40	313.82	2.50	11108.10	29823.00	0.30	1349.49	2.50	15533.70	31278.50	11.51
0.33	2.63	ø8/20	2	2	8 (TG)	SLD	0.40	2378.83	2.50	12774.30	40922.40	0.30	10229.80	2.50	17863.70	42919.60	1.75
0.33	2.63	ø8/20	2	2	8 (TG)	SLD	0.40	2691.03	2.50	12774.30	41367.40	0.30	10289.30	2.50	17863.70	43386.30	1.74
0.33	2.63	ø8/20	2	2	10 (TG)	SLD	0.40	5377.70	2.50	12774.30	41645.20	0.30	7729.30	2.50	17863.70	43677.70	2.31
0.33	2.63	ø8/20	2	2	7 (TG)	SLV	0.40	1332.03	2.50	11108.10	28588.50	0.30	9349.63	2.50	15533.70	29983.70	1.66
0.33	2.63	ø8/20	2	2	9 (TG)	SLV	0.40	5064.11	2.50	11108.10	28942.70	0.30	5506.22	2.50	15533.70	30355.20	2.19
2.63	3.21	ø8/12	2	2	20	SLU	0.40	284.92	2.50	18513.50	29680.80	0.30	1403.96	2.50	25889.50	31129.30	18.44
2.63	3.21	ø8/12	2	2	18	SLU	0.40	313.82	2.50	18513.50	29706.20	0.30	1349.49	2.50	25889.50	31156.00	19.18
2.63	3.21	ø8/12	2	2	8 (TG)	SLD	0.40	2378.83	2.50	21290.60	40922.40	0.30	10229.80	2.50	29772.90	42919.60	2.91
2.63	3.21	ø8/12	2	2	8 (TG)	SLD	0.40	2691.03	2.50	21290.60	41367.40	0.30	10289.30	2.50	29772.90	43386.30	2.89
2.63	3.21	ø8/12	2	2	10 (TG)	SLD	0.40	5377.70	2.50	21290.60	41645.20	0.30	7729.30	2.50	29772.90	43677.70	3.85
2.63	3.21	ø8/12	2	2	7 (TG)	SLV	0.40	1332.03	2.50	18513.50	28588.50	0.30	9349.63	2.50	25889.50	29983.70	2.77
2.63	3.21	ø8/12	2	2	9 (TG)	SLV	0.40	5064.11	2.50	18513.50	28942.70	0.30	5506.22	2.50	25889.50	30355.20	3.66
3.56	4.13	ø8/12	2	2	20	SLU	0.40	516.06	2.50	18513.50	27385.20	0.30	2675.08	2.50	25889.50	28721.70	9.68
3.56	4.13	ø8/12	2	2	18	SLU	0.40	552.20	2.50	18513.50	27393.70	0.30	2608.94	2.50	25889.50	28730.60	9.92
3.56	4.13	ø8/12	2	2	8 (TG)	SLD	0.40	1305.70	2.50	21290.60	39608.70	0.30	9992.86	2.50	29772.90	41541.80	2.98
3.56	4.13	ø8/12	2	2	10 (TG)	SLD	0.40	3777.56	2.50	21290.60	39437.00	0.30	6688.95	2.50	29772.90	41361.80	4.45
3.56	4.13	ø8/12	2	2	10 (TG)	SLD	0.40	3798.64	2.50	21290.60	39701.00	0.30	6871.95	2.50	29772.90	41638.60	4.33
3.56	4.13	ø8/12	2	2	11 (TG)	SLV	0.40	1189.66	2.50	18513.50	26835.40	0.30	8607.85	2.50	25889.50	28145.10	3.01
3.56	4.13	ø8/12	2	2	13 (TG)	SLV	0.40	3907.24	2.50	18513.50	26572.50	0.30	5981.31	2.50	25889.50	27869.30	4.33
3.56	4.13	ø8/12	2	2	13 (TG)	SLV	0.40	3958.01	2.50	18513.50	2						

Relazione di calcolo

4.13	6.43	ø8/20	2	2	13 (TG)	SLV	0.40	3958.01	2.50	11108.10	26931.10	0.30	6106.06	2.50	15533.70	28245.50	2.54
6.43	7.00	ø8/12	2	2	20	SLU	0.40	516.06	2.50	18513.50	27240.10	0.30	2675.08	2.50	25889.50	28569.50	9.68
6.43	7.00	ø8/12	2	2	18	SLU	0.40	552.20	2.50	18513.50	27248.60	0.30	2608.94	2.50	25889.50	28578.40	9.92
6.43	7.00	ø8/12	2	2	8 (TG)	SLD	0.40	1305.70	2.50	21290.60	39608.70	0.30	9992.86	2.50	29772.90	41541.80	2.98
6.43	7.00	ø8/12	2	2	10 (TG)	SLD	0.40	3777.56	2.50	21290.60	39437.00	0.30	6688.95	2.50	29772.90	41361.80	4.45
6.43	7.00	ø8/12	2	2	10 (TG)	SLD	0.40	3798.64	2.50	21290.60	39701.00	0.30	6871.95	2.50	29772.90	41638.60	4.33
6.43	7.00	ø8/12	2	2	11 (TG)	SLV	0.40	1189.66	2.50	18513.50	26835.40	0.30	8607.85	2.50	25889.50	28145.10	3.01
6.43	7.00	ø8/12	2	2	13 (TG)	SLV	0.40	3907.24	2.50	18513.50	26572.50	0.30	5981.31	2.50	25889.50	27869.30	4.33
6.43	7.00	ø8/12	2	2	13 (TG)	SLV	0.40	3958.01	2.50	18513.50	26931.10	0.30	6106.06	2.50	25889.50	28245.50	4.24

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
120	N	ø8/ 9	Z+	I	2	4.10	7.63	0.30	0.30	0.29	4.02	1.19
			Z-	I	2	8.70	6.78	0.30	0.30	0.29	4.02	1.19
220	N	ø8/ 7	Z+	I	2	4.10	7.63	0.36	0.30	0.20	4.02	1.35
			Z-	I	2	7.70	4.10	0.40	0.30	0.20	4.02	1.20

Pilastrata n. 21

Nodi: 21 121 221

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
5	R	30.00	50.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _r	Sic.
-0.25	9	SLV	1	5	0.00	-18042.80	-5435.51			1578.72			-18042.80	-13683.70	4120.37	143.44	5.97	2.525
-0.25	9	SLV	1	5	0.00	-18042.80	-5435.51			1578.72			-18042.80	-13683.70	4120.37	143.44	5.97	2.525
3.21	11 (a)	SLV	1	5	346.00	-17232.80	1211.97	3.10	3757.31	-686.19	1.49	-1024.65	-17232.80	13868.10	-3776.63	326.25	6.21	3.691
3.56	15 (a)	SLV	2	5	0.00	-10154.40	1966.35	4.85	9542.58	1707.25	1.66	2834.29	-10154.40	12933.10	3677.90	33.75	6.81	1.351
6.91	1	SLV	2	5	335.00	-8394.12	-5917.94			-2255.24			-8394.47	-11875.00	-4535.40	222.19	6.42	2.007
-0.25	10	SLD	1	5	0.00	-18290.60	-4242.16			1307.01			-18290.60	-16292.80	4940.26	146.25	7.28	3.835
-0.25	10	SLD	1	5	0.00	-18290.60	-4242.16			1307.01			-18290.60	-16292.80	4940.26	146.25	7.28	3.835
3.21	2	SLD	1	5	346.00	-16750.70	-1743.36			-658.97			-16750.70	-15429.30	-5618.39	219.38	7.00	8.810
3.56	2	SLD	2	5	0.00	-9799.48	4444.19			1866.93			-9799.48	13847.30	6016.99	45.00	7.18	3.132
6.91	2	SLD	2	5	335.00	-8543.23	-4753.88			-2079.31			-8543.26	-13674.30	-5970.22	225.00	7.26	2.876

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	24	SLE R	1	5	0.00	-21363.00	420.23	140.32	0.00	15.27	17.92	243.84
-0.25	30	SLE Q	1	5	0.00	-19248.50	399.83	-120.49	0.00	15.27	16.34	221.60
-0.25	24	SLE R	1	5	0.00	-21363.00	420.23	140.32	0.00	15.27	17.92	243.84
-0.25	30	SLE Q	1	5	0.00	-19248.50	399.83	-120.49	0.00	15.27	16.34	221.60
3.21	21	SLE R	1	5	346.00	-19991.20	-556.16	-279.28	0.00	15.27	19.54	258.43
3.21	29	SLE Q	1	5	346.00	-17834.40	-477.73	-201.05	0.00	15.27	16.91	224.59
3.56	24	SLE R	2	5	0.00	-11067.90	1390.69	604.63	7.63	7.63	32.59	353.32
3.56	32	SLE Q	2	5	0.00	-10347.40	1244.72	493.02	7.63	7.63	28.49	311.52
6.91	24	SLE R	2	5	335.00	-9811.63	-1599.91	-708.27	7.63	7.63	38.73	488.73
6.91	32	SLE Q	2	5	335.00	-9091.14	-1455.94	-622.97	7.63	7.63	34.91	432.32

Verifiche stato limite di formazione delle fessure

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c,eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
3.56	32	SLE Q	2	5	0.00	-10347.40	493.02	1244.72	39.00	202.00	0.13	212.57	18.00	7.63	798.81	243.38	752.74	0.05	0.02
6.91	32	SLE Q	2	5	335.00	-9091.14	-622.97	-1455.94	39.00	202.00	0.13	212.59	18.00	7.63	798.94	432.32	985.97	0.08	0.03

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	V _{sdu,y} <daN>	ctgθ _y	VR _{sd,y} <daN>	VR _{cd,y} <daN>	b _{w,z} <cm>	V _{sdu,z} <daN>	ctgθ _z	VR _{sd,z} <daN>	VR _{cd,z} <daN>	Sic. T
-0.25	0.33	ø8/10	2	2	17	SLU	0.50	350.73	2.50	22216.30	35725.00	0.30	182.17	2.45	39095.80	39095.80	63.34
-0.25	0.33	ø8/10	2	2	18	SLU	0.50	395.88	2.50	22216.30	35740.10	0.30	57.59	2.45	39105.40	39105.40	56.12
-0.25	0.33	ø8/10	2	2	6 (TG)	SLD	0.50	2972.70	2.50	25548.70	50509.60	0.30	10580.00	2.50	45906.20	54453.80	4.34
-0.25	0.33	ø8/10	2	2	16 (TG)	SLD	0.50	5248.25	2.50	25548.70	50475.60	0.30	8095.39	2.50	45906.20	54417.10	4.87
-0.25	0.33	ø8/10	2	2	1 (TG)	SLV	0.50	1739.24	2.50	22216.30	34529.60	0.30	9547.42	2.40	38325.00	38325.00	4.01
-0.25	0.33	ø8/10	2	2	11 (TG)	SLV	0.50	3733.60	2.50	22216.30	34506.40	0.30	7452.60	2.40	38309.90	38309.90	5.14
0.33	2.63	ø8/20	2	2	17	SLU	0.50	350.73	2.50	11108.10	35688.50	0.30	182.17	2.50	19959.20	38475.30	31.67
0.33	2.63	ø8/20	2	2	18	SLU	0.50	395.88	2.50	11108.10	35703.60	0.30	57.59	2.50	19959.20	38491.60	28.06
0.33	2.63	ø8/20	2	2	6 (TG)	SLD	0.50	2972.70	2.50	12774.30	50509.60	0.30	10580.00	2.50	22953.10	54453.80	2.17
0.33	2.63	ø8/20	2	2	16 (TG)	SLD	0.50	5248.25	2.50	12774.30	50475.60	0.30	8095.39	2.50	22953.10	54417.10	2.43
0.33	2.63	ø8/20	2	2	1 (TG)	SLV	0.50	1739.24	2.50	11108.10	34529.60	0.30	9547.42	2.50	19959.20	37225.90	2.09
0.33	2.63	ø8/20	2	2	11 (TG)	SLV	0.50	3733.60	2.50	11108.10	34506.40	0.30	7452.60	2.50	19959.20	37201.00	2.68
2.63	3.21	ø8/10	2	2	17	SLU	0.50	350.73	2.50	22216.30	35542.50	0.30	182.17	2.44	38979.10	38979.10	63.34
2.63	3.21	ø8/10	2	2	18	SLU	0.50	395.88	2.50	22216.30	35557.60	0.30	57.59	2.44	38988.80	38988.80	56.12
2.63	3.21	ø8/10	2	2	6 (TG)	SLD	0.50	2972.70	2.50	25548.70	50509.60	0.30	10580.00	2.50	45906.20	54453.80	4.34
2.63	3.21	ø8/10	2	2	16 (TG)	SLD	0.50	5248.25	2.50	25548.70	50475.60	0.30	8095.39	2.50	45906.20	54417.10	4.87
2.63	3.21	ø8/10	2	2	1 (TG)	SLV	0.50	1739.24	2.50	22216.30	34529.60	0.30	9547.42	2.40	38325.00	38325.00	4.01
2.63	3.21	ø8/10	2	2	11 (TG)	SLV	0.50	3733.60	2.50	22216.30	34506.40	0.30	7452.60	2.40	38309.90	38309.90	5.14
3.56	4.12	ø8/10	2	2	17	SLU	0.50	1149.90	2.50	22216.30	33939.30	0.30	549.36	2.38	37938.60	37938.60	19.32
3.56	4.12	ø8/10	2	2	18	SLU	0.50	1194.86	2.50	22216.30	33946.40	0.30	396.23	2.38	37943.20	37943.20	18.59
3.56	4.12	ø8/10	2	2	2 (TG)	SLD	0.50	3036.64	2.50	25548.70	49323.80	0.30	9873.46	2.50	45906.20	53175.40	4.65
3.56	4.12	ø8/10	2	2	16 (TG)	SLD	0.50	5429.84	2.50	25548.70	49295.80	0.30	7054.24	2.50	45906.20	53145.20	4.71
3.56	4.12	ø8/10	2	2	1 (TG)	SLV	0.50	1655.98	2.50	22216.30	33312.60	0.30	8904.36	2.35	37524.00	37524.00	4.21
3.56	4.12	ø8/10	2	2	7 (TG)	SLV	0.50	3729.71	2.50	22216.30	33265.00	0.30	6631.34	2.35	37492.30	37492.30	5.65
4.12	6.35	ø8/20	2	2	17	SLU	0.50	1149.90	2.50	11108.10	33904.00	0.30	549.36	2.50	19959.20	36551.50	9.66
4.12	6.35	ø8/20	2	2	18	SLU	0.50	1194.86	2.50	11108.10	33911.10	0.30	396.23	2.50	19959.20	36559.10	9.30
4.12	6.35	ø8/20	2	2	2 (TG)	SLD	0.50	3036.64	2.50	12774.30	49323.80	0.30</					

Relazione di calcolo

4.12	6.35	ø8/20	2	2	16 (TG)	SLD	0.50	5429.84	2.50	12774.30	49295.80	0.30	7054.24	2.50	22953.10	53145.20	2.35
4.12	6.35	ø8/20	2	2	1 (TG)	SLV	0.50	1655.98	2.50	11108.10	33312.60	0.30	8904.36	2.50	19959.20	35913.90	2.24
4.12	6.35	ø8/20	2	2	7 (TG)	SLV	0.50	3729.71	2.50	11108.10	33265.00	0.30	6631.34	2.50	19959.20	35862.60	2.98
6.35	6.91	ø8/10	2	2	17	SLU	0.50	1149.90	2.50	22216.30	33762.60	0.30	549.36	2.37	37822.20	37822.20	19.32
6.35	6.91	ø8/10	2	2	18	SLU	0.50	1194.86	2.50	22216.30	33769.70	0.30	396.23	2.37	37826.80	37826.80	18.59
6.35	6.91	ø8/10	2	2	2 (TG)	SLD	0.50	3036.64	2.50	25548.70	49323.80	0.30	9873.46	2.50	45906.20	53175.40	4.65
6.35	6.91	ø8/10	2	2	16 (TG)	SLD	0.50	5429.84	2.50	25548.70	49295.80	0.30	7054.24	2.50	45906.20	53145.20	4.71
6.35	6.91	ø8/10	2	2	1 (TG)	SLV	0.50	1655.98	2.50	22216.30	33312.60	0.30	8904.36	2.35	37524.00	37524.00	4.21
6.35	6.91	ø8/10	2	2	7 (TG)	SLV	0.50	3729.71	2.50	22216.30	33265.00	0.30	6631.34	2.35	37492.30	37492.30	5.65

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
121	N	ø8/ 6	Z+	I	2	4.62	4.62	0.30	0.40	0.29	6.03	1.78
			Y-	E	2	4.11	4.11	0.50	0.20	0.20	4.02	1.07
			Z-	I	2	4.62	4.62	0.30	0.40	0.29	6.03	1.78
221	N	ø8/ 6	Z+	I	2	4.62	4.62	0.30	0.40	0.29	6.03	1.78
			Y-	E	2	4.11	4.11	0.50	0.20	0.20	4.02	1.07
			Z-	I	2	4.62	4.62	0.30	0.40	0.29	6.03	1.78

Pilastrata n. 22

Nodi: 22 122 222

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
8	R	35.00	40.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _r	Sic.
-0.25	1	SLV	1	8	0.00	-19035.90	-1664.79			-1961.64			-19036.00	-6913.07	-7935.88	233.44	4.32	4.091
-0.25	1	SLV	1	8	0.00	-19035.90	-1664.79			-1961.64			-19036.00	-6913.07	-7935.88	233.44	4.32	4.091
3.30	20 (e)	SLU	1	8	355.00	-29386.50	238.97		587.73	409.99		587.73	-29386.50	7984.99	7958.30	49.22	3.81	5.098
3.56	15 (a)	SLV	2	8	0.00	-10162.20	-1998.79	3.34	-6671.71	513.32	1.00	513.32	-10162.20	-10460.00	962.03	174.38	7.90	1.570
6.91	13	SLV	2	8	335.00	-8650.31	3730.61			-1211.18			-8650.32	9538.69	-3249.55	340.31	5.95	2.569
-0.25	2	SLD	1	8	0.00	-19374.50	-1303.05			-1549.38			-19374.50	-8056.10	-9830.77	236.25	5.10	6.278
-0.25	2	SLD	1	8	0.00	-19374.50	-1303.05			-1549.38			-19374.50	-8056.10	-9830.77	236.25	5.10	6.278
3.30	14	SLD	1	8	355.00	-20692.60	619.40			457.80			-20692.60	10688.30	7647.16	39.38	5.04	10.859
3.56	6	SLD	2	8	0.00	-9948.17	-2288.48			-924.56			-9948.18	-11297.20	-4496.53	201.09	6.68	4.926
6.91	14	SLD	2	8	335.00	-8823.30	3173.76			-988.95			-8827.54	11648.80	-3538.57	343.13	7.19	3.662

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _t <daN/cmq>
-0.25	23	SLE R	1	8	0.00	-23188.60	-109.31	-153.84	0.00	15.27	16.81	238.18
-0.25	31	SLE Q	1	8	0.00	-20524.50	-96.38	-115.65	0.00	15.27	14.68	208.87
-0.25	23	SLE R	1	8	0.00	-23188.60	-109.31	-153.84	0.00	15.27	16.81	238.18
-0.25	31	SLE Q	1	8	0.00	-20524.50	-96.38	-115.65	0.00	15.27	14.68	208.87
3.30	23	SLE R	1	8	355.00	-21946.10	315.40	237.95	0.00	15.27	18.97	254.10
3.30	31	SLE Q	1	8	355.00	-19282.00	276.97	158.39	0.00	15.27	16.19	218.54
3.56	23	SLE R	2	8	0.00	-11591.20	-79.46	-934.50	0.00	15.27	16.98	203.18
3.56	31	SLE Q	2	8	0.00	-10579.90	-63.49	-789.39	0.00	15.27	14.66	177.60
6.91	23	SLE R	2	8	335.00	-10418.70	-190.33	1436.04	5.09	10.18	26.48	277.23
6.91	31	SLE Q	2	8	335.00	-9407.37	-176.20	1275.60	5.09	10.18	23.59	247.94

Verifiche stato limite di formazione delle fessure

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
6.91	31	SLE Q	2	8	335.00	-9407.37	1275.60	-176.20	59.00	214.00	0.13	271.89	18.00	5.09	628.19	151.21	642.18	0.03	0.01

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.34	ø8/14	2	2	19	SLU	0.40	157.93	2.50	17765.40	32554.40	0.35	142.20	2.50	20926.50	33553.60	>100
-0.25	0.34	ø8/14	2	2	17	SLU	0.40	183.60	2.50	17765.40	32561.70	0.35	103.26	2.50	20926.50	33561.10	96.76
-0.25	0.34	ø8/14	2	2	14 (TG)	SLD	0.40	4446.51	2.50	20430.20	45323.80	0.35	6661.47	2.50	24065.50	46715.00	3.61
-0.25	0.34	ø8/14	2	2	4 (TG)	SLD	0.40	6206.60	2.50	20430.20	45544.20	0.35	4578.85	2.50	24065.50	46942.10	3.29
-0.25	0.34	ø8/14	2	2	15 (TG)	SLV	0.40	1774.36	2.50	17765.40	31251.60	0.35	6768.25	2.50	20926.50	32210.90	3.09
-0.25	0.34	ø8/14	2	2	11 (TG)	SLV	0.40	5258.03	2.50	17765.40	31040.00	0.35	3873.03	2.50	20926.50	31992.80	3.38
0.34	2.71	ø8/20	2	2	19	SLU	0.40	157.93	2.50	12435.80	32520.80	0.35	142.20	2.50	14648.60	33519.00	78.74
0.34	2.71	ø8/20	2	2	17	SLU	0.40	183.60	2.50	12435.80	32528.20	0.35	103.26	2.50	14648.60	33526.60	67.73
0.34	2.71	ø8/20	2	2	14 (TG)	SLD	0.40	4446.51	2.50	14301.20	45323.80	0.35	6661.47	2.50	16845.80	46715.00	2.53
0.34	2.71	ø8/20	2	2	4 (TG)	SLD	0.40	6206.60	2.50	14301.20	45544.20	0.35	4578.85	2.50	16845.80	46942.10	2.30
0.34	2.71	ø8/20	2	2	15 (TG)	SLV	0.40	1774.36	2.50	12435.80	31251.60	0.35	6768.25	2.50	14648.60	32210.90	2.16
0.34	2.71	ø8/20	2	2	11 (TG)	SLV	0.40	5258.03	2.50	12435.80	31040.00	0.35	3873.03	2.50	14648.60	31992.80	2.37
2.71	3.30	ø8/14	2	2	19	SLU	0.40	157.93	2.50	17765.40	32386.70	0.35	142.20	2.50	20926.50	33380.70	>100
2.71	3.30	ø8/14	2	2	17	SLU	0.40	183.60	2.50	17765.40	32394.00	0.35	103.26	2.50	20926.50	33388.30	96.76
2.71	3.30	ø8/14	2	2	14 (TG)	SLD	0.40	4446.51	2.50	20430.20	45323.80	0.35	6661.47	2.50	24065.50	46715.00	3.61
2.71	3.30	ø8/14	2	2	4 (TG)	SLD	0.40	6206.60	2.50	20430.20	45544.20	0.35	4578.85	2.50	24065.50	46942.10	3.29
2.71	3.30	ø8/14	2	2	15 (TG)	SLV	0.40	1774.36	2.50	17765.40	31251.60	0.35	6768.25	2.50	20926.50	32210.90	3.09
2.71	3.30	ø8/14	2	2	11 (TG)	SLV	0.40	5258.03	2.50	17765.40	31040.00	0.35	3873.03	2.50	20926.50	31992.80	3.38
3.56	4.12	ø8/14	2	2	19	SLU	0.40	44.08	2.50	17765.40	30615.70	0.35	924.41	2.50	20926.50	31555.40	22.64
3.56	4.12	ø8/14	2	2	18	SLU	0.40	74.46	2.50	17765.40	30621.70	0.35	871.38	2.50	20926.50	31561.60	24.02
3.56	4.12	ø8/14	2	2	14 (TG)	SLD	0.40	3272.13	2.50	20430.20	44327.00	0.35	7288.66	2.50	24065.50	45687.60	3.30
3.56	4.12	ø8/14	2	2	4 (TG)	SLD	0.40	5068.84	2.50	20430.20	44277.00	0.35	5368.63	2.50	24065.50	45636.10	4.03
3.56	4.12	ø8/14	2	2	15 (TG)	SLV	0.40	620.60	2.50	17765.40	29952.20	0.35	6896.89	2.50	20926.50	30871.50	3.03
3.56	4.12	ø8/14	2	2	11 (TG)	SLV	0.40	4171.51	2.50	17765.40	29937.80	0.35	4074.07	2.50	20926.50	30856.70	4.26
4.12	6.35	ø8/20	2	2	19	SLU	0.40	44.08	2.50	12435.80	30584.00	0.35	924.41	2.50	14648.60	31522.80	15.85
4.12	6.35	ø8/20	2	2	18	SLU	0.40	74.46	2.50	12435.80	30590.00	0.35	871.38	2.50	14648.60	31528.90	16.81

Relazione di calcolo

4.12	6.35	ø8/20	2	2	14 (TG)	SLD	0.40	3272.13	2.50	14301.20	44327.00	0.35	7288.66	2.50	16845.80	45687.60	2.31
4.12	6.35	ø8/20	2	2	4 (TG)	SLD	0.40	5068.84	2.50	14301.20	44277.00	0.35	5368.63	2.50	16845.80	45636.10	2.82
4.12	6.35	ø8/20	2	2	15 (TG)	SLV	0.40	620.60	2.50	12435.80	29952.20	0.35	6896.89	2.50	14648.60	30871.50	2.12
4.12	6.35	ø8/20	2	2	11 (TG)	SLV	0.40	4171.51	2.50	12435.80	29937.80	0.35	4074.07	2.50	14648.60	30856.70	2.98
6.35	6.91	ø8/14	2	2	19	SLU	0.40	44.08	2.50	17765.40	30457.40	0.35	924.41	2.50	20926.50	31392.30	22.64
6.35	6.91	ø8/14	2	2	18	SLU	0.40	74.46	2.50	17765.40	30463.40	0.35	871.38	2.50	20926.50	31398.50	24.02
6.35	6.91	ø8/14	2	2	14 (TG)	SLD	0.40	3272.13	2.50	20430.20	44327.00	0.35	7288.66	2.50	24065.50	45687.60	3.30
6.35	6.91	ø8/14	2	2	4 (TG)	SLD	0.40	5068.84	2.50	20430.20	44277.00	0.35	5368.63	2.50	24065.50	45636.10	4.03
6.35	6.91	ø8/14	2	2	15 (TG)	SLV	0.40	620.60	2.50	17765.40	29952.20	0.35	6896.89	2.50	20926.50	30871.50	3.03
6.35	6.91	ø8/14	2	2	11 (TG)	SLV	0.40	4171.51	2.50	17765.40	29937.80	0.35	4074.07	2.50	20926.50	30856.70	4.26

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
122	N	ø8/ 7	Z+	I	2	6.16	4.62	0.40	0.26	0.20	4.02	1.20
			Z-	I	2	4.62	4.62	0.40	0.26	0.20	4.02	1.20
222	N	ø8/ 9	Z+	I	2	4.62	4.62	0.35	0.26	0.29	4.02	1.02
			Z-	I	2	4.62	4.62	0.35	0.26	0.29	4.02	1.02

Pilastrata n. 23

Nodi: 23 123 223

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
8	R	35.00	40.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.
3.56	5 (α)	SLV	2	8	0.00	-14086.70	3900.55	1.54	5993.90	-2828.30	2.42	-6850.15	-14086.70	6700.30	-7659.71	306.56	4.57	1.118
7.00	9	SLV	2	8	344.00	-12778.20	-4812.85			3235.46			-12778.20	-8599.54	5676.16	143.44	4.76	1.777
-0.25	10	SLD	1	8	0.00	-30989.60	2742.15			-2084.79			-30989.60	11019.00	-8534.74	317.81	4.54	4.046
-0.25	10	SLD	1	8	0.00	-30989.60	2742.15			-2084.79			-30989.60	11019.00	-8534.74	317.81	4.54	4.046
3.30	10	SLD	1	8	355.00	-29747.10	-1922.41			1615.13			-29747.10	-10480.60	8884.92	135.00	4.58	5.472
3.56	10	SLD	2	8	0.00	-14067.90	4074.91			-2657.89			-14067.90	10523.20	-6667.13	326.25	5.61	2.561
7.00	10	SLD	2	8	344.00	-12863.90	-4223.45			2835.98			-12863.90	-10166.40	6980.25	143.44	5.57	2.424

Dati per verifiche di stabilità

Xg <cm>	El	l ₀ <cm>	λ	λ*
-0.25	1	3.81	37.71	30.56
-0.25	1	3.81	37.71	30.56
3.30	1	3.81	37.71	30.56

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Myu <daNm>	Mzu <daNm>	Mzu <daNm>	α <grad>
-0.25	9	SLV	1	8	0.00	-30840.60	3290.56			-2525.22			-30840.60	8486.11	9103.19	-6636.65	-7100.89	317.81
-0.25	9	SLV	1	8	0.00	-30840.60	3290.56			-2525.22			-30840.60	8486.11	9103.19	-6636.65	-7100.89	317.81
3.30	11 (α)	SLV	1	8	355.00	-29848.80	-1839.45	1.59	-2928.99	1439.76	2.89	4158.53	-29848.80	-5950.47	-6399.06	8607.02	9263.11	120.94

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	22	SLE R	1	8	0.00	-36318.70	-646.60	1113.17	0.00	15.27	39.42	499.13
-0.25	30	SLE Q	1	8	0.00	-31498.30	-520.02	910.49	0.00	15.27	33.25	423.91
-0.25	22	SLE R	1	8	0.00	-36318.70	-646.60	1113.17	0.00	15.27	39.42	499.13
-0.25	30	SLE Q	1	8	0.00	-31498.30	-520.02	910.49	0.00	15.27	33.25	423.91
3.30	24	SLE R	1	8	355.00	-35098.40	1121.17	-1666.46	0.00	15.27	48.95	585.76
3.30	32	SLE Q	1	8	355.00	-30278.00	894.61	-1310.10	0.00	15.27	40.17	485.65
3.56	22	SLE R	2	8	0.00	-15675.20	-1661.42	2641.66	7.63	7.63	75.71	824.86
3.56	30	SLE Q	2	8	0.00	-14356.80	-1399.25	2221.08	7.63	7.63	62.62	627.97
7.00	22	SLE R	2	8	344.00	-14471.20	1586.23	-2494.56	7.63	7.63	72.16	803.97
7.00	30	SLE Q	2	8	344.00	-13152.80	1408.66	-2206.05	7.63	7.63	63.61	692.10

Verifiche stato limite di formazione delle fessure

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
3.56	30	SLE Q	2	8	0.00	-14356.80	2221.08	-1399.25	59.00	132.00	0.13	247.53	18.00	7.63	874.81	627.97	806.37	0.12	0.05
7.00	30	SLE Q	2	8	344.00	-13152.80	-2206.05	1408.66	59.00	132.00	0.13	247.51	18.00	7.63	874.64	692.10	865.99	0.13	0.06

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	bw _{y,z} <cm>	Vsdu _{y,z} <daN>	ctgθ _{y,z}	VRsd _{y,z} <daN>	VRcd _{y,z} <daN>	bw _{y,z} <cm>	Vsdu _{y,z} <daN>	ctgθ _{y,z}	VRsd _{y,z} <daN>	VRcd _{y,z} <daN>	Sic.T
-0.25	0.34	ø8/14	2	2	18	SLU	0.40	658.38	2.50	17765.40	34453.70	0.35	1063.43	2.50	20926.50	35511.20	19.68
-0.25	0.34	ø8/14	2	2	20	SLU	0.40	693.32	2.50	17765.40	34453.70	0.35	1024.36	2.50	20926.50	35511.20	20.43
-0.25	0.34	ø8/14	2	2	12 (TG)	SLD	0.40	4757.29	2.50	20430.20	46872.70	0.35	7349.14	2.50	24065.50	48311.40	3.27
-0.25	0.34	ø8/14	2	2	14 (TG)	SLD	0.40	5962.77	2.50	20430.20	46779.40	0.35	5994.03	2.50	24065.50	48215.20	3.43
-0.25	0.34	ø8/14	2	2	9 (TG)	SLV	0.40	3022.71	2.50	17765.40	32557.30	0.35	6603.70	2.50	20926.50	33556.60	3.17
-0.25	0.34	ø8/14	2	2	13 (TG)	SLV	0.40	5450.81	2.50	17765.40	32549.20	0.35	4434.86	2.50	20926.50	33548.20	3.26
0.34	2.71	ø8/20	2	2	18	SLU	0.40	658.38	2.50	12435.80	34453.70	0.35	1063.43	2.50	14648.60	35511.20	13.77
0.34	2.71	ø8/20	2	2	20	SLU	0.40	693.32	2.50	12435.80	34453.70	0.35	1024.36	2.50	14648.60	35511.20	14.30
0.34	2.71	ø8/20	2	2	12 (TG)	SLD	0.40	4757.29	2.50	14301.20	46872.70	0.35	7349.14	2.50	16845.80	48311.40	2.29
0.34	2.71	ø8/20	2	2	14 (TG)	SLD	0.40	5962.77	2.50	14301.20	46779.40	0.35	5994.03	2.50	16845.80	48215.20	2.40
0.34	2.71	ø8/20	2	2	9 (TG)	SLV	0.40	3022.71	2.50	12435.80	32557.30	0.35	6603.70	2.50	14648.60	33556.60	2.22

Relazione di calcolo

0.34	2.71	ø8/20	2	2	13 (TG)	SLV	0.40	5450.81	2.50	12435.80	32549.20	0.35	4434.86	2.50	14648.60	33548.20	2.28
2.71	3.30	ø8/14	2	2	18	SLU	0.40	658.38	2.50	17765.40	34453.70	0.35	1063.43	2.50	20926.50	35511.20	19.68
2.71	3.30	ø8/14	2	2	20	SLU	0.40	693.32	2.50	17765.40	34453.70	0.35	1024.36	2.50	20926.50	35511.20	20.43
2.71	3.30	ø8/14	2	2	12 (TG)	SLD	0.40	4757.29	2.50	20430.20	46872.70	0.35	7349.14	2.50	24065.50	48311.40	3.27
2.71	3.30	ø8/14	2	2	14 (TG)	SLD	0.40	5962.77	2.50	20430.20	46779.40	0.35	5994.03	2.50	24065.50	48215.20	3.43
2.71	3.30	ø8/14	2	2	9 (TG)	SLV	0.40	3022.71	2.50	17765.40	32557.30	0.35	6603.70	2.50	20926.50	33556.60	3.17
2.71	3.30	ø8/14	2	2	13 (TG)	SLV	0.40	5450.81	2.50	17765.40	32549.20	0.35	4434.86	2.50	20926.50	33548.20	3.26
3.56	4.13	ø8/14	2	2	18	SLU	0.40	1257.86	2.50	17765.40	31283.20	0.35	1974.88	2.50	20926.50	32243.40	10.60
3.56	4.13	ø8/14	2	2	20	SLU	0.40	1292.48	2.50	17765.40	31284.80	0.35	1927.46	2.50	20926.50	32245.00	10.86
3.56	4.13	ø8/14	2	2	14 (TG)	SLD	0.40	3704.28	2.50	20430.20	44673.20	0.35	6983.76	2.50	24065.50	46044.40	3.45
3.56	4.13	ø8/14	2	2	6 (TG)	SLD	0.40	5147.50	2.50	20430.20	44742.10	0.35	6007.66	2.50	24065.50	46115.40	3.97
3.56	4.13	ø8/14	2	2	9 (TG)	SLV	0.40	2569.78	2.50	17765.40	30392.10	0.35	6174.34	2.50	20926.50	31324.90	3.39
3.56	4.13	ø8/14	2	2	5 (TG)	SLV	0.40	5100.49	2.50	17765.40	30316.40	0.35	3909.13	2.50	20926.50	31246.90	3.48
4.13	6.43	ø8/20	2	2	18	SLU	0.40	1257.86	2.50	12435.80	31250.70	0.35	1974.88	2.50	14648.60	32209.90	7.42
4.13	6.43	ø8/20	2	2	20	SLU	0.40	1292.48	2.50	12435.80	31252.30	0.35	1927.46	2.50	14648.60	32211.50	7.60
4.13	6.43	ø8/20	2	2	14 (TG)	SLD	0.40	3704.28	2.50	14301.20	44673.20	0.35	6983.76	2.50	16845.80	46044.40	2.41
4.13	6.43	ø8/20	2	2	6 (TG)	SLD	0.40	5147.50	2.50	14301.20	44742.10	0.35	6007.66	2.50	16845.80	46115.40	2.78
4.13	6.43	ø8/20	2	2	9 (TG)	SLV	0.40	2569.78	2.50	12435.80	30392.10	0.35	6174.34	2.50	14648.60	31324.90	2.37
4.13	6.43	ø8/20	2	2	5 (TG)	SLV	0.40	5100.49	2.50	12435.80	30316.40	0.35	3909.13	2.50	14648.60	31246.90	2.44
6.43	7.00	ø8/14	2	2	18	SLU	0.40	1257.86	2.50	17765.40	31120.70	0.35	1974.88	2.50	20926.50	32075.90	10.60
6.43	7.00	ø8/14	2	2	20	SLU	0.40	1292.48	2.50	17765.40	31122.30	0.35	1927.46	2.50	20926.50	32077.50	10.86
6.43	7.00	ø8/14	2	2	14 (TG)	SLD	0.40	3704.28	2.50	20430.20	44673.20	0.35	6983.76	2.50	24065.50	46044.40	3.45
6.43	7.00	ø8/14	2	2	6 (TG)	SLD	0.40	5147.50	2.50	20430.20	44742.10	0.35	6007.66	2.50	24065.50	46115.40	3.97
6.43	7.00	ø8/14	2	2	9 (TG)	SLV	0.40	2569.78	2.50	17765.40	30392.10	0.35	6174.34	2.50	20926.50	31324.90	3.39
6.43	7.00	ø8/14	2	2	5 (TG)	SLV	0.40	5100.49	2.50	17765.40	30316.40	0.35	3909.13	2.50	20926.50	31246.90	3.48

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <m>	Hjc <m>	Hjw <m>	Ash <cmq>	Rgsn
123	N	ø8/ 7	Y+	I	2	8.62	4.62	0.40	0.21	0.20	4.02	1.20
			Z+	I	2	4.62	8.70	0.40	0.26	0.20	4.02	1.20
			Y-	I	2	6.16	7.56	0.40	0.21	0.20	4.02	1.20
			Z-	I	2	4.62	4.08	0.40	0.26	0.20	4.02	1.20
223	N	ø8/ 7	Y+	I	2	6.10	4.62	0.40	0.21	0.20	4.02	1.20
			Z+	I	2	4.62	4.62	0.40	0.26	0.20	4.02	1.20
			Y-	I	2	4.62	4.57	0.40	0.21	0.20	4.02	1.20
			Z-	I	2	4.62	4.62	0.40	0.26	0.20	4.02	1.20

Pilastrata n. 24

Nodi: 24 124 224

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
9	R	35.00	50.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _r	Sic.
3.56	3 (α)	SLV	2	9	0.00	-17602.90	1207.25	5.36	6473.55	-695.24	15.86	-11024.50	-17602.90	6482.42	-11226.10	282.66	5.41	1.014
7.00	9	SLV	2	9	344.00	-15816.40	-3451.61			-3395.00			-15816.40	-10135.50	-9898.39	247.50	4.82	2.926
-0.25	10	SLD	1	9	0.00	-38375.20	5443.68			2167.92			-38375.20	21338.00	8298.63	39.38	5.07	3.907
-0.25	10	SLD	1	9	0.00	-38375.20	5443.68			2167.92			-38375.20	21338.00	8298.63	39.38	5.07	3.907
3.30	2 (e)	SLD	1	9	355.00	-38439.40	1185.22		1185.22	222.21		768.79	-38439.40	17615.90	11242.90	56.25	4.64	7.307
3.56	10	SLD	2	9	0.00	-17418.60	2145.93			2639.58			-17418.60	10457.60	12558.60	73.13	5.91	4.804
7.00	10	SLD	2	9	344.00	-15913.60	-2760.38			-2854.98			-15913.60	-11556.50	-12032.60	250.31	5.77	4.201

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	37.71	28.07
-0.25	1	3.81	37.71	28.07
3.30	1	3.81	37.71	28.07

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Myu <daNm>	Mzu,s <daNm>	Mzu <daNm>	α <grad>	ε _r
-0.25	9	SLV	1	9	0.00	-38152.40	6893.61			2695.07			-38152.40	17363.60	18127.20	6591.80	6882.72	42.19	4.201
-0.25	9	SLV	1	9	0.00	-38152.40	6893.61			2695.07			-38152.40	17363.60	18127.20	6591.80	6882.72	42.19	4.201
3.30	3 (α)	SLV	1	9	355.00	-37249.30	1002.19	4.87	4882.97	-776.96	4.83	-3755.43	-37249.40	12329.40	13025.70	-9646.75	-10195.70	298.13	3.907

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	24	SLE R	1	9	0.00	-45325.90	364.56	505.39	0.00	20.36	28.04	390.67
-0.25	32	SLE Q	1	9	0.00	-39152.60	306.57	483.11	0.00	20.36	24.41	339.70
-0.25	24	SLE R	1	9	0.00	-45325.90	364.56	505.39	0.00	20.36	28.04	390.67
-0.25	32	SLE Q	1	9	0.00	-39152.60	306.57	483.11	0.00	20.36	24.41	339.70
3.30	22	SLE R	1	9	355.00	-43782.30	-514.03	-199.94	0.00	20.36	26.83	372.19
3.30	24	SLE R	1	9	355.00	-43772.80	-474.29	-257.24	0.00	20.36	26.81	372.56
3.30	30	SLE Q	1	9	355.00	-37609.00	-425.43	-175.37	0.00	20.36	22.93	318.67
3.56	22	SLE R	2	9	0.00	-19473.70	1034.19	366.82	0.00	20.36	20.42	246.11
3.56	30	SLE Q	2	9	0.00	-17760.10	902.20	332.51	0.00	20.36	18.24	220.99
7.00	22	SLE R	2	9	344.00	-17968.70	-1120.44	-336.96	0.00	20.36	20.41	241.36
7.00	30	SLE Q	2	9	344.00	-16255.10	-1005.71	-310.05	0.00	20.36	18.42	217.98

Relazione di calcolo

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.34	ø8/10	2	2	20	SLU	0.50	317.03	2.50	24871.60	43067.10	0.35	255.34	2.50	38148.20	46239.70	78.45
-0.25	0.34	ø8/10	2	2	18	SLU	0.50	356.45	2.50	24871.60	43067.10	0.35	191.68	2.50	38148.20	46239.70	69.77
-0.25	0.34	ø8/10	2	2	14 (TG)	SLD	0.50	5904.46	2.50	28602.30	58582.50	0.35	12244.00	2.50	43870.50	62898.10	3.58
-0.25	0.34	ø8/10	2	2	16 (TG)	SLD	0.50	8201.80	2.50	28602.30	58541.10	0.35	8718.05	2.50	43870.50	62853.60	3.49
-0.25	0.34	ø8/10	2	2	7 (TG)	SLV	0.50	2281.75	2.50	24871.60	40640.60	0.35	12761.90	2.50	38148.20	43634.40	2.99
-0.25	0.34	ø8/10	2	2	15 (TG)	SLV	0.50	6744.75	2.50	24871.60	40601.80	0.35	7386.11	2.50	38148.20	43592.80	3.69
0.34	2.71	ø8/20	2	2	20	SLU	0.50	317.03	2.50	12435.80	43067.10	0.35	255.34	2.50	19074.10	46239.70	39.23
0.34	2.71	ø8/20	2	2	18	SLU	0.50	356.45	2.50	12435.80	43067.10	0.35	191.68	2.50	19074.10	46239.70	34.89
0.34	2.71	ø8/20	2	2	14 (TG)	SLD	0.50	5904.46	2.50	14301.20	58582.50	0.35	12244.00	2.50	21935.20	62898.10	1.79
0.34	2.71	ø8/20	2	2	16 (TG)	SLD	0.50	8201.80	2.50	14301.20	58541.10	0.35	8718.05	2.50	21935.20	62853.60	1.74
0.34	2.71	ø8/20	2	2	7 (TG)	SLV	0.50	2281.75	2.50	12435.80	40640.60	0.35	12761.90	2.50	19074.10	43634.40	1.49
0.34	2.71	ø8/20	2	2	15 (TG)	SLV	0.50	6744.75	2.50	12435.80	40601.80	0.35	7386.11	2.50	19074.10	43592.80	1.84
2.71	3.30	ø8/10	2	2	20	SLU	0.50	317.03	2.50	24871.60	43067.10	0.35	255.34	2.50	38148.20	46239.70	78.45
2.71	3.30	ø8/10	2	2	18	SLU	0.50	356.45	2.50	24871.60	43067.10	0.35	191.68	2.50	38148.20	46239.70	69.77
2.71	3.30	ø8/10	2	2	14 (TG)	SLD	0.50	5904.46	2.50	28602.30	58582.50	0.35	12244.00	2.50	43870.50	62898.10	3.58
2.71	3.30	ø8/10	2	2	16 (TG)	SLD	0.50	8201.80	2.50	28602.30	58541.10	0.35	8718.05	2.50	43870.50	62853.60	3.49
2.71	3.30	ø8/10	2	2	7 (TG)	SLV	0.50	2281.75	2.50	24871.60	40640.60	0.35	12761.90	2.50	38148.20	43634.40	2.99
2.71	3.30	ø8/10	2	2	15 (TG)	SLV	0.50	6744.75	2.50	24871.60	40601.80	0.35	7386.11	2.50	38148.20	43592.80	3.69
3.56	4.13	ø8/10	2	2	20	SLU	0.50	769.66	2.50	24871.60	39085.50	0.35	289.52	2.50	38148.20	41964.70	32.32
3.56	4.13	ø8/10	2	2	18	SLU	0.50	815.96	2.50	24871.60	39086.00	0.35	264.90	2.50	38148.20	41965.30	30.48
3.56	4.13	ø8/10	2	2	14 (TG)	SLD	0.50	6326.84	2.50	28602.30	55886.80	0.35	9341.25	2.50	43870.50	60003.80	4.52
3.56	4.13	ø8/10	2	2	16 (TG)	SLD	0.50	7780.94	2.50	28602.30	55838.30	0.35	7278.04	2.50	43870.50	59951.70	3.68
3.56	4.13	ø8/10	2	2	7 (TG)	SLV	0.50	4700.56	2.50	24871.60	37943.20	0.35	8217.53	2.50	38148.20	40738.30	4.64
3.56	4.13	ø8/10	2	2	13 (TG)	SLV	0.50	7161.35	2.50	24871.60	37949.70	0.35	4141.68	2.50	38148.20	40745.30	3.47
4.13	6.43	ø8/20	2	2	20	SLU	0.50	769.66	2.50	12435.80	39044.90	0.35	289.52	2.50	19074.10	41921.10	16.16
4.13	6.43	ø8/20	2	2	18	SLU	0.50	815.96	2.50	12435.80	39045.40	0.35	264.90	2.50	19074.10	41921.70	15.24
4.13	6.43	ø8/20	2	2	14 (TG)	SLD	0.50	6326.84	2.50	14301.20	55886.80	0.35	9341.25	2.50	21935.20	60003.80	2.26
4.13	6.43	ø8/20	2	2	16 (TG)	SLD	0.50	7780.94	2.50	14301.20	55838.30	0.35	7278.04	2.50	21935.20	59951.70	1.84
4.13	6.43	ø8/20	2	2	7 (TG)	SLV	0.50	4700.56	2.50	12435.80	37943.20	0.35	8217.53	2.50	19074.10	40738.30	2.32
4.13	6.43	ø8/20	2	2	13 (TG)	SLV	0.50	7161.35	2.50	12435.80	37949.70	0.35	4141.68	2.50	19074.10	40745.30	1.74
6.43	7.00	ø8/10	2	2	20	SLU	0.50	769.66	2.50	24871.60	38882.40	0.35	289.52	2.50	38148.20	41746.70	32.32
6.43	7.00	ø8/10	2	2	18	SLU	0.50	815.96	2.50	24871.60	38882.90	0.35	264.90	2.50	38148.20	41747.20	30.48
6.43	7.00	ø8/10	2	2	14 (TG)	SLD	0.50	6326.84	2.50	28602.30	55886.80	0.35	9341.25	2.50	43870.50	60003.80	4.52
6.43	7.00	ø8/10	2	2	16 (TG)	SLD	0.50	7780.94	2.50	28602.30	55838.30	0.35	7278.04	2.50	43870.50	59951.70	3.68
6.43	7.00	ø8/10	2	2	7 (TG)	SLV	0.50	4700.56	2.50	24871.60	37943.20	0.35	8217.53	2.50	38148.20	40738.30	4.64
6.43	7.00	ø8/10	2	2	13 (TG)	SLV	0.50	7161.35	2.50	24871.60	37949.70	0.35	4141.68	2.50	38148.20	40745.30	3.47

Pilastrata n. 25

Nodi: 25 125 225 325

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
5	R	30.00	50.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.	
3.56	1	(α)	SLV	2	5	0.00	-11413.10	-2945.68	3.03	-8921.08	1275.75	1.10	1403.32	-11413.10	-14271.20	2292.01	157.50	7.69	1.601
6.91	3	(α)	SLV	2	5	335.00	-11150.20	2001.62	5.01	10032.80	-785.37	2.28	-1792.60	-11150.20	14225.10	-2296.96	337.50	7.73	1.414
7.26	7	(α)	SLV	3	5	0.00	-3869.46	2107.73	2.91	6137.84	795.90	2.75	2184.89	-3869.46	11551.20	4148.93	39.38	7.00	1.884
8.31	1		SLV	3	5	105.00	-3280.72	-3606.09			-1162.20		-3280.74	-11742.10	-3855.91	216.56	7.24	3.262	
-0.25	2		SLD	1	5	0.00	-24482.20	4631.27			1061.17		-24482.20	17873.90	4209.16	28.13	7.34	3.865	
-0.25	2		SLD	1	5	0.00	-24482.20	4631.27			1061.17		-24482.20	17873.90	4209.16	28.13	7.34	3.865	
3.21	2		SLD	1	5	346.00	-23184.70	-2335.03			-610.68		-23188.30	-17336.90	-4625.71	210.94	7.18	7.434	
3.56	2		SLD	2	5	0.00	-11850.10	3878.33			1093.68		-11850.10	15697.30	4392.83	30.94	8.00	4.045	
6.91	10		SLD	2	5	335.00	-10473.00	3806.85			-968.73		-10473.00	15847.40	-3943.56	331.88	8.40	4.157	
7.26	6		SLD	3	5	0.00	-3691.74	2474.64			1074.27		-3691.74	13002.20	5786.02	45.00	7.65	5.275	
8.31	2		SLD	3	5	105.00	-3449.79	-3131.84			-986.13		-3449.80	-14159.50	-4533.41	213.75	8.45	4.528	

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	36.21
-0.25	1	3.81	43.99	36.21
3.21	1	3.81	43.99	36.21

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Mzu,s <daNm>	α <grad>			
-0.25	1		SLV	1	5	0.00	-23839.30	5825.53			1290.16		-23839.40	14662.70	15294.60	3035.80	3153.32	28.13	
-0.25	1		SLV	1	5	0.00	-23839.30	5825.53			1290.16		-23839.40	14662.70	15294.60	3035.80	3153.32	28.13	
3.21	7	(α)	SLV	1	5	346.00	-23998.50	-2005.44	2.39	-4792.36	-532.97	1.10	-586.27	-23998.50	-15473.00	-16162.80	-1971.47	-2052.91	199.69

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
-0.25	24	SLE R	1	5	0.00	-29349.40	288.44	387.89	0.00	15.27	22.74	318.35
-0.25	21	SLE R	1	5	0.00	-29152.90	220.15	469.63	0.00	15.27	22.42	315.59
-0.25	32	SLE Q	1	5	0.00	-26853.50	269.57	412.89	0.00	15.27	21.25	296.60
-0.25	24	SLE R	1	5	0.00	-29349.40	288.44	387.89	0.00	15.27	22.74	318.35
-0.25	21	SLE R	1	5	0.00	-29152.90	220.15	469.63	0.00	15.27	22.42	315.59
-0.25	32	SLE Q	1	5	0.00	-26853.50	269.57	412.89	0.00	15.27	21.25	296.60
3.21	24	SLE R	1	5	346.00	-28051.90	-387.35	-686.72	0.00	15.27	25.07	342.35
3.21	21	SLE R	1	5	346.00	-27855.40	-368.61	-721.96	0.00	15.27	24.98	341.39
3.21	32	SLE Q	1	5	346.00	-25556.00	-366.25	-730.71	0.00	15.27	23.68	321.89
3.56	2											

Relazione di calcolo

3.56	32	SLE Q	2	5	0.00	-13450.30	464.09	386.72	0.00	15.27	15.46	200.03
6.91	22	SLE R	2	5	335.00	-13045.70	-334.86	531.08	0.00	15.27	14.77	193.69
6.91	30	SLE Q	2	5	335.00	-12230.00	-318.99	444.70	0.00	15.27	13.55	177.85
7.26	24	SLE R	3	5	0.00	-4877.87	472.57	406.54	5.09	10.18	12.94	148.07
7.26	32	SLE Q	3	5	0.00	-4482.16	442.46	387.27	7.63	7.63	12.22	139.35
8.31	24	SLE R	3	5	105.00	-4484.11	-447.77	-1706.03	7.63	7.63	29.66	516.50
8.31	21	SLE R	3	5	105.00	-4428.45	-408.18	-1732.01	10.18	5.09	29.15	517.73
8.31	32	SLE Q	3	5	105.00	-4088.41	-409.04	-1509.30	7.63	7.63	26.46	453.14

Verifiche stato limite di formazione delle fessure

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{cm} <mm>	Ø	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
7.26	32	SLE Q	3	5	0.00	-4482.16	387.27	442.46	39.00	202.00	0.13	221.00	18.00	5.09	580.24	92.90	650.40	0.02	0.01
8.31	29	SLE Q	3	5	105.00	-4032.75	-1535.28	-369.44	39.00	202.00	0.13	212.88	18.00	7.63	801.37	454.25	1290.67	0.09	0.03

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic. T
-0.25	0.33	ø8/10	2	2	17	SLV	0.50	230.52	2.50	22216.30	37069.00	0.30	422.49	2.50	39918.40	39963.60	94.48
-0.25	0.33	ø8/10	2	2	18	SLV	0.50	270.87	2.50	22216.30	37104.90	0.30	298.68	2.50	39918.40	40002.30	82.02
-0.25	0.33	ø8/10	2	2	10 (TG)	SLD	0.50	2785.61	2.50	25548.70	51697.10	0.30	11619.90	2.50	45906.20	55734.00	3.95
-0.25	0.33	ø8/10	2	2	12 (TG)	SLD	0.50	5139.31	2.50	25548.70	51561.00	0.30	8934.17	2.50	45906.20	55587.30	4.97
-0.25	0.33	ø8/10	2	2	9 (TG)	SLV	0.50	1131.01	2.50	22216.30	35751.70	0.30	10633.80	2.45	39112.90	39112.90	3.68
-0.25	0.33	ø8/10	2	2	15 (TG)	SLV	0.50	4260.64	2.50	22216.30	35562.60	0.30	7493.11	2.44	38992.00	38992.00	5.20
0.33	2.63	ø8/20	2	2	17	SLV	0.50	230.52	2.50	11108.10	37032.60	0.30	422.49	2.50	19959.20	39924.30	47.24
0.33	2.63	ø8/20	2	2	18	SLV	0.50	270.87	2.50	11108.10	37068.40	0.30	298.68	2.50	19959.20	39962.90	41.01
0.33	2.63	ø8/20	2	2	10 (TG)	SLD	0.50	2785.61	2.50	12774.30	51697.10	0.30	11619.90	2.50	22953.10	55734.00	1.98
0.33	2.63	ø8/20	2	2	12 (TG)	SLD	0.50	5139.31	2.50	12774.30	51561.00	0.30	8934.17	2.50	22953.10	55587.30	2.49
0.33	2.63	ø8/20	2	2	9 (TG)	SLV	0.50	1131.01	2.50	11108.10	35751.70	0.30	10633.80	2.50	19959.20	38543.50	1.88
0.33	2.63	ø8/20	2	2	15 (TG)	SLV	0.50	4260.64	2.50	11108.10	35562.60	0.30	7493.11	2.50	19959.20	38339.60	2.61
2.63	3.21	ø8/10	2	2	17	SLV	0.50	230.52	2.50	22216.30	36886.50	0.30	422.49	2.49	39830.40	39830.40	94.28
2.63	3.21	ø8/10	2	2	18	SLV	0.50	270.87	2.50	22216.30	36922.40	0.30	298.68	2.50	39852.90	39852.90	82.02
2.63	3.21	ø8/10	2	2	10 (TG)	SLD	0.50	2785.61	2.50	25548.70	51697.10	0.30	11619.90	2.50	45906.20	55734.00	3.95
2.63	3.21	ø8/10	2	2	12 (TG)	SLD	0.50	5139.31	2.50	25548.70	51561.00	0.30	8934.17	2.50	45906.20	55587.30	4.97
2.63	3.21	ø8/10	2	2	9 (TG)	SLV	0.50	1131.01	2.50	22216.30	35751.70	0.30	10633.80	2.45	39112.90	39112.90	3.68
2.63	3.21	ø8/10	2	2	15 (TG)	SLV	0.50	4260.64	2.50	22216.30	35562.60	0.30	7493.11	2.44	38992.00	38992.00	5.20
3.56	4.12	ø8/10	2	2	18	SLV	0.50	328.89	2.50	22216.30	34491.50	0.30	136.08	2.40	38300.10	38300.10	67.55
3.56	4.12	ø8/10	2	2	14 (TG)	SLD	0.50	1897.52	2.50	25548.70	49870.90	0.30	11089.40	2.50	45906.20	53765.20	4.14
3.56	4.12	ø8/10	2	2	16 (TG)	SLD	0.50	4046.67	2.50	25548.70	49775.70	0.30	9440.63	2.50	45906.20	53662.60	4.86
3.56	4.12	ø8/10	2	2	7 (TG)	SLV	0.50	801.29	2.50	22216.30	33798.20	0.30	9887.62	2.37	37845.60	37845.60	3.83
3.56	4.12	ø8/10	2	2	7 (TG)	SLV	0.50	2452.24	2.50	22216.30	33799.00	0.30	8831.21	2.37	37846.10	37846.10	4.29
4.12	6.35	ø8/20	2	2	18	SLV	0.50	328.89	2.50	11108.10	34456.10	0.30	136.08	2.50	19959.20	37146.70	33.77
4.12	6.35	ø8/20	2	2	14 (TG)	SLD	0.50	1897.52	2.50	12774.30	49870.90	0.30	11089.40	2.50	22953.10	53765.20	2.07
4.12	6.35	ø8/20	2	2	16 (TG)	SLD	0.50	4046.67	2.50	12774.30	49775.70	0.30	9440.63	2.50	22953.10	53662.60	2.43
4.12	6.35	ø8/20	2	2	7 (TG)	SLV	0.50	801.29	2.50	11108.10	33798.20	0.30	9887.62	2.50	19959.20	36437.40	2.02
4.12	6.35	ø8/20	2	2	7 (TG)	SLV	0.50	2452.24	2.50	11108.10	33799.00	0.30	8831.21	2.50	19959.20	36438.20	2.26
6.35	6.91	ø8/10	2	2	18	SLV	0.50	328.89	2.50	22216.30	34314.80	0.30	136.08	2.39	38184.80	38184.80	67.55
6.35	6.91	ø8/10	2	2	14 (TG)	SLD	0.50	1897.52	2.50	25548.70	49870.90	0.30	11089.40	2.50	45906.20	53765.20	4.14
6.35	6.91	ø8/10	2	2	16 (TG)	SLD	0.50	4046.67	2.50	25548.70	49775.70	0.30	9440.63	2.50	45906.20	53662.60	4.86
6.35	6.91	ø8/10	2	2	7 (TG)	SLV	0.50	801.29	2.50	22216.30	33798.20	0.30	9887.62	2.37	37845.60	37845.60	3.83
6.35	6.91	ø8/10	2	2	7 (TG)	SLV	0.50	2452.24	2.50	22216.30	33799.00	0.30	8831.21	2.37	37846.10	37846.10	4.29
7.26	8.31	ø8/10	2	2	20	SLV	0.50	1151.51	2.50	22216.30	32890.10	0.30	2635.48	2.33	37241.90	37241.90	14.13
7.26	8.31	ø8/10	2	2	18	SLV	0.50	1207.32	2.50	22216.30	32888.40	0.30	2473.76	2.33	37240.70	37240.80	15.05
7.26	8.31	ø8/10	2	2	8 (TG)	SLD	0.50	8453.39	2.50	25548.70	48554.20	0.30	30623.80	2.50	45906.20	52345.70	1.50
7.26	8.31	ø8/10	2	2	10 (TG)	SLD	0.50	16940.10	2.50	25548.70	48691.30	0.30	18806.60	2.50	45906.20	52493.50	1.51
7.26	8.31	ø8/10	2	2	7 (TG)	SLV	0.50	5840.73	2.50	22216.30	32701.60	0.30	26369.70	2.32	37115.30	37115.30	1.41
7.26	8.31	ø8/10	2	2	11 (TG)	SLV	0.50	12778.40	2.50	22216.30	32724.10	0.30	13859.80	2.33	37130.50	37130.50	1.74

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
125	N	ø8/ 9	Z+	I	2	6.16	4.62	0.30	0.40	0.29	4.02	1.19
			Z-	I	2	6.16	4.62	0.30	0.40	0.29	4.02	1.19
225	N	ø8/ 6	Z+	I	2	4.62	4.62	0.30	0.40	0.29	6.03	1.78
			Y-	E	2	4.17	4.17	0.50	0.20	0.20	4.02	1.07
			Z-	I	2	4.62	4.62	0.30	0.40	0.29	6.03	1.78
325	N	ø8/ 6	Y-	E	2	4.17	4.17	0.50	0.20	0.18	4.02	1.07
			Z-	E	2	4.62	4.62	0.30	0.40	0.29	6.03	1.78

Pilastrata n. 26

Nodi: 26 126 226 326

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
1	R	30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _x	Sic.
7.26	7 (α)	SLV	3	1	0.00	-5132.39	-657.56	6.26	-4116.83	-1780.03	1.52	-2711.87	-5132.38	-7696.71	-5255.61	227.81	5.36	1.891
8.42	20	SLU	3	1	116.00	-7216.84	-332.22			3763.24			-7216.84	-668.27	7559.28	91.41	11.38	2.009
-0.25	2	SLD	1	1	0.00	-25570.00	1873.32			-1638.64			-25570.00	9459.57	-8157.13	305.16	4.95	5.019
-0.25	2	SLD	1	1	0.00	-25570.00	1873.32			-1638.64			-25570.00	9459.57	-8157.13	305.16	4.95	5.019
3.30	2	SLD	1	1	355.00	-24505.00	-1332.28			1800.88			-24505.00	-7072.11	9592.50	113.91	5.25	5.320
3.56	10	SLD	2	1	0.00	-12794.80	2681.78			-1889.32			-12794.80	9591.37	-6976.19	309.38	5.58	3.615
7.00	10	SLD	2	1	344.00	-11762.80	-2460.77			1042.27			-11762.80	-11213.40	4792.43	149.06	6.44	4.563
7.26	10	SLD	3	1	0.00	-5087.07	2272.39			-1736.79			-5087.07	8890.99	-6663.22	309.38	6.10	

Relazione di calcolo

Xg <m>	El	l ₀ <m>	λ	λ*	Xg <m>	El	l ₀ <m>	λ	λ*	Xg <m>	El	l ₀ <m>	λ	λ*	Xg <m>	El	l ₀ <m>	λ	λ*	
-0.25	1	3.81	43.99	30.23	-0.25	1	3.81	43.99	30.23	3.30	1	3.81	43.99	30.23	3.56	2	3.70	42.72	42.55	
7.00	2	3.70	42.72	42.55																

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Myu <daNm>	Mzu,s <daNm>	Mzu <daNm>	α <grad>
-0.25	1	SLV	1	1	0.00	-25465.90	2303.96			-1857.90			-25465.90	7560.43	8094.41	-6068.58	-6492.65	307.97
-0.25	1	SLV	1	1	0.00	-25465.90	2303.96			-1857.90			-25465.90	7560.43	8094.41	-6068.58	-6492.65	307.97
3.30	7 (α)	SLV	1	1	355.00	-24581.70	-930.97	3.16	-2939.23	1792.74	1.89	3391.51	-24581.70	-6133.70	-6596.19	6983.31	7510.96	119.53
3.56	3 (α)	SLV	2	1	0.00	-12986.10	-857.85	6.54	-5606.71	-1857.51	1.98	-3679.20	-12986.10	-7958.09	-8291.81	-5297.37	-5494.08	227.81
7.00	3 (α)	SLV	2	1	344.00	-11954.10	-1849.02	2.30	-4259.29	1046.39	1.60	1670.58	-11954.10	-9264.93	-9593.66	3660.38	3782.19	149.06

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	22	SLE R	1	1	0.00	-28678.30	-1037.17	532.63	0.00	15.27	39.19	502.63
-0.25	30	SLE Q	1	1	0.00	-25965.60	-842.67	448.32	0.00	15.27	33.87	438.17
-0.25	22	SLE R	1	1	0.00	-28678.30	-1037.17	532.63	0.00	15.27	39.19	502.63
-0.25	30	SLE Q	1	1	0.00	-25965.60	-842.67	448.32	0.00	15.27	33.87	438.17
3.30	22	SLE R	1	1	355.00	-27613.30	1896.74	-700.01	2.54	12.72	53.43	644.34
3.30	30	SLE Q	1	1	355.00	-24900.60	1544.19	-560.23	2.54	12.72	44.40	542.67
3.56	22	SLE R	2	1	0.00	-14027.00	-1811.20	982.66	7.63	7.63	55.96	602.58
3.56	30	SLE Q	2	1	0.00	-13051.20	-1514.20	827.46	7.63	7.63	46.42	509.65
7.00	22	SLE R	2	1	344.00	-12995.00	776.23	-784.66	2.54	12.72	29.18	349.44
7.00	30	SLE Q	2	1	344.00	-12019.20	702.17	-695.25	2.54	12.72	26.25	315.50
7.26	22	SLE R	3	1	0.00	-5803.61	-1575.38	631.97	7.63	7.63	46.73	749.41
7.26	30	SLE Q	3	1	0.00	-5217.23	-1481.64	588.37	7.63	7.63	43.89	718.07
8.42	22	SLE R	3	1	116.00	-5455.61	2811.63	-327.61	7.63	7.63	66.99	1423.00
8.42	30	SLE Q	3	1	116.00	-4869.23	2371.57	-293.04	7.63	7.63	56.91	1187.94

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{cm} <mm>	Φ	A _s <cmq>	A _{s,eff} <cmq>	σ _s <daN/cmq>	σ _{sz} <daN/cmq>	ε _{sm}	Wk <mm>
3.30	30	SLE Q	1	1	355.00	-24900.60	-560.23	1544.19	39.00	252.00	0.13	221.18	18.00	2.54	262.33	28.20	110.74	0.01	0.00
3.56	30	SLE Q	2	1	0.00	-13051.20	827.46	-1514.20	39.00	152.00	0.13	186.61	18.00	7.63	663.37	381.37	672.38	0.07	0.02
7.00	30	SLE Q	2	1	344.00	-12019.20	-695.25	702.17	39.00	252.00	0.13	221.18	18.00	2.54	262.33	77.34	330.43	0.02	0.01
7.26	30	SLE Q	3	1	0.00	-5217.23	588.37	-1481.64	39.00	152.00	0.13	186.61	18.00	7.63	663.37	718.07	1115.46	0.14	0.04
8.42	30	SLE Q	3	1	116.00	-4869.23	-293.04	2371.57	39.00	152.00	0.13	186.62	18.00	7.63	663.48	1187.94	1310.17	0.23	0.07

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.34	ø8/12	2	2	18	SLV	0.40	1119.36	2.50	18513.50	30578.10	0.30	454.16	2.50	25889.50	32070.40	16.54
-0.25	0.34	ø8/12	2	2	20	SLV	0.40	1136.54	2.50	18513.50	30577.90	0.30	408.74	2.50	25889.50	32070.20	16.29
-0.25	0.34	ø8/12	2	2	210 (TG)	SLD	0.40	4587.70	2.50	21290.60	41747.70	0.30	6259.76	2.50	29772.90	43785.20	4.64
-0.25	0.34	ø8/12	2	2	28 (TG)	SLD	0.40	6381.99	2.50	21290.60	41735.80	0.30	2868.48	2.50	29772.90	43772.70	3.34
-0.25	0.34	ø8/12	2	2	29 (TG)	SLV	0.40	3388.48	2.50	18513.50	28938.20	0.30	5600.45	2.50	25889.50	30350.50	4.62
-0.25	0.34	ø8/12	2	2	27 (TG)	SLV	0.40	5431.24	2.50	18513.50	28922.90	0.30	1976.77	2.50	25889.50	30334.40	3.41
0.34	2.71	ø8/20	2	2	18	SLV	0.40	1119.36	2.50	11108.10	30548.10	0.30	454.16	2.50	15533.70	32039.00	9.92
0.34	2.71	ø8/20	2	2	20	SLV	0.40	1136.54	2.50	11108.10	30547.90	0.30	408.74	2.50	15533.70	32038.80	9.77
0.34	2.71	ø8/20	2	2	210 (TG)	SLD	0.40	4587.70	2.50	12774.30	41747.70	0.30	6259.76	2.50	17863.70	43785.20	2.78
0.34	2.71	ø8/20	2	2	28 (TG)	SLD	0.40	6381.99	2.50	12774.30	41735.80	0.30	2868.48	2.50	17863.70	43772.70	2.00
0.34	2.71	ø8/20	2	2	29 (TG)	SLV	0.40	3388.48	2.50	11108.10	28938.20	0.30	5600.45	2.50	15533.70	30350.50	2.77
0.34	2.71	ø8/20	2	2	27 (TG)	SLV	0.40	5431.24	2.50	11108.10	28922.90	0.30	1976.77	2.50	15533.70	30334.40	2.05
2.71	3.30	ø8/12	2	2	18	SLV	0.40	1119.36	2.50	18513.50	30428.30	0.30	454.16	2.50	25889.50	31913.30	16.54
2.71	3.30	ø8/12	2	2	20	SLV	0.40	1136.54	2.50	18513.50	30428.10	0.30	408.74	2.50	25889.50	31913.10	16.29
2.71	3.30	ø8/12	2	2	210 (TG)	SLD	0.40	4587.70	2.50	21290.60	41747.70	0.30	6259.76	2.50	29772.90	43785.20	4.64
2.71	3.30	ø8/12	2	2	28 (TG)	SLD	0.40	6381.99	2.50	21290.60	41735.80	0.30	2868.48	2.50	29772.90	43772.70	3.34
2.71	3.30	ø8/12	2	2	29 (TG)	SLV	0.40	3388.48	2.50	18513.50	28938.20	0.30	5600.45	2.50	25889.50	30350.50	4.62
2.71	3.30	ø8/12	2	2	27 (TG)	SLV	0.40	5431.24	2.50	18513.50	28922.90	0.30	1976.77	2.50	25889.50	30334.40	3.41
3.56	4.13	ø8/12	2	2	18	SLV	0.40	1012.95	2.50	18513.50	28041.70	0.30	669.48	2.50	25889.50	29410.30	18.28
3.56	4.13	ø8/12	2	2	20	SLV	0.40	1026.27	2.50	18513.50	28043.30	0.30	618.74	2.50	25889.50	29411.90	18.04
3.56	4.13	ø8/12	2	2	210 (TG)	SLD	0.40	3222.27	2.50	21290.60	40053.40	0.30	7024.41	2.50	29772.90	42008.20	4.24
3.56	4.13	ø8/12	2	2	28 (TG)	SLD	0.40	5702.37	2.50	21290.60	40057.10	0.30	3323.24	2.50	29772.90	42012.10	3.73
3.56	4.13	ø8/12	2	2	29 (TG)	SLV	0.40	1893.90	2.50	18513.50	27237.00	0.30	6367.25	2.50	25889.50	28566.30	4.07
3.56	4.13	ø8/12	2	2	27 (TG)	SLV	0.40	4581.75	2.50	18513.50	27183.60	0.30	3759.37	2.50	25889.50	28510.30	4.04
4.13	6.43	ø8/20	2	2	18	SLV	0.40	1012.95	2.50	11108.10	28012.70	0.30	669.48	2.50	15533.70	29379.80	10.97
4.13	6.43	ø8/20	2	2	20	SLV	0.40	1026.27	2.50	11108.10	28014.20	0.30	618.75	2.50	15533.70	29381.50	10.82
4.13	6.43	ø8/20	2	2	210 (TG)	SLD	0.40	3222.27	2.50	12774.30	40053.40	0.30	7024.41	2.50	17863.70	42008.20	2.54
4.13	6.43	ø8/20	2	2	28 (TG)	SLD	0.40	5702.37	2.50	12774.30	40057.10	0.30	3323.24	2.50	17863.70	42012.10	2.24
4.13	6.43	ø8/20	2	2	29 (TG)	SLV	0.40	1893.90	2.50	11108.10	27237.00	0.30	6367.25	2.50	15533.70	28566.30	2.44
4.13	6.43	ø8/20	2	2	27 (TG)	SLV	0.40	4581.75	2.50	11108.10	27183.60	0.30	3759.37	2.50	15533.70	28510.30	2.42
6.43	7.00	ø8/12	2	2	18	SLV	0.40	1012.95	2.50	18513.50	27896.50	0.30	669.48				

Relazione di calcolo

			Z+	I	2	4.61	4.62	0.40	0.30	0.20	4.02	1.20
			Z-	I	2	4.62	4.61	0.40	0.30	0.20	4.02	1.20
226	N	ø8/ 7	Y+	E	2	4.62	4.62	0.40	0.20	0.20	4.02	1.20
			Z+	I	2	4.62	4.62	0.40	0.30	0.20	4.02	1.20
			Z-	I	2	4.62	4.62	0.40	0.30	0.20	4.02	1.20
326	N	ø8/ 6	Y+	E	2	7.63	4.62	0.40	0.20	0.18	4.02	1.30
			Z+	I	2	4.62	4.62	0.40	0.30	0.18	4.02	1.30
			Z-	I	2	4.62	4.62	0.40	0.30	0.18	4.02	1.30

Pilastrata n. 27

Nodi: 27 127 227 327

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
5R		30.00	50.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _s	Sic.
7.26	13 (a)	SLV	3	5	0.00	-4614.75	-2317.18	1.42	-3283.59	1734.00	2.68	4647.61	-4614.75	-5138.44	7206.85	99.14	8.50	1.555
8.42	20	SLU	3	5	116.00	-6806.48	180.51			3983.49			-6806.48	253.74	7604.86	89.47	13.01	1.908
-0.25	6	SLD	1	5	0.00	-38760.20	-2983.85			1975.12			-38760.20	-15729.80	10784.20	120.94	4.67	5.330
-0.25	6	SLD	1	5	0.00	-38760.20	-2983.85			1975.12			-38760.20	-15729.80	10784.20	120.94	4.67	5.330
3.21	14	SLD	1	5	346.00	-37499.80	1590.77			-2536.26			-37499.80	8621.05	-13739.60	283.36	5.58	5.418
3.56	14	SLD	2	5	0.00	-18222.80	-2810.69			3576.76			-18223.00	-8912.20	11359.70	101.95	6.36	3.174
7.00	14	SLD	2	5	344.00	-16932.80	2449.68			-2883.65			-16932.80	9320.39	-11142.00	282.66	6.35	3.839
7.26	14	SLD	3	5	0.00	-4704.30	-1819.43			1533.76			-4704.31	-9248.55	8038.03	106.88	7.73	5.149
8.42	6	SLD	3	5	116.00	-4288.41	2148.81			3025.39			-4301.65	5805.77	8431.19	82.27	10.06	2.759

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*	Xg <m>	El	l ₀ <m>	λ	λ*	Xg <m>	El	l ₀ <m>	λ	λ*	Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	29.88	-0.25	1	3.81	43.99	29.88	3.21	1	3.81	43.99	29.88	3.56	2	3.70	42.72	41.46
7.00	2	3.70	42.72	41.46															

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Mzu,s <daNm>	α <grad>		
-0.25	18 (e)	SLU	1	5	0.00	-58811.90	-123.53		-1470.30	1710.05		1710.05	-58815.40	-8865.06	-9793.97	10540.10	11669.40	111.0
-0.25	18 (e)	SLU	1	5	0.00	-58811.90	-123.53		-1470.30	1710.05		1710.05	-58815.40	-8865.06	-9793.97	10540.10	11669.40	111.0
3.21	3 (a)	SLV	1	5	346.00	-37620.30	1552.40	1.66	2584.23	-2119.65	3.34	-7070.76	-37620.30	3411.16	4412.56	-11367.30	-12488.40	278.4
3.56	15 (a)	SLV	2	5	0.00	-18330.50	1195.61	5.90	7054.53	3449.41	2.84	9781.08	-18330.50	6726.08	7090.14	9197.19	9731.34	78.0
7.00	3 (a)	SLV	2	5	344.00	-17166.20	-1756.90	3.11	-5470.37	-2348.56	3.81	-8948.27	-17166.20	-5662.66	-6003.92	-9349.47	-9922.96	260.1

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
-0.25	21	SLE R	1	5	0.00	-44202.20	1263.17	-446.81	0.00	20.36	40.54	536.68
-0.25	29	SLE Q	1	5	0.00	-39463.90	1086.43	-426.51	0.00	20.36	35.95	476.96
-0.25	21	SLE R	1	5	0.00	-44202.20	1263.17	-446.81	0.00	20.36	40.54	536.68
-0.25	29	SLE Q	1	5	0.00	-39463.90	1086.43	-426.51	0.00	20.36	35.95	476.96
3.21	21	SLE R	1	5	346.00	-42904.70	-2276.75	802.06	0.00	20.36	52.86	663.27
3.21	29	SLE Q	1	5	346.00	-38166.40	-1960.10	733.92	0.00	20.36	46.43	584.27
3.56	21	SLE R	2	5	0.00	-20212.40	3033.88	-711.39	10.18	10.18	64.19	715.57
3.56	23	SLE R	2	5	0.00	-20213.40	3076.68	-582.17	10.18	10.18	63.72	718.68
3.56	29	SLE Q	2	5	0.00	-18684.80	2623.94	-660.99	10.18	10.18	55.74	582.25
7.00	21	SLE R	2	5	344.00	-18922.40	-2466.76	373.64	10.18	10.18	49.71	525.02
7.00	29	SLE Q	2	5	344.00	-17394.80	-2146.76	356.26	7.63	12.72	43.44	465.23
7.26	23	SLE R	3	5	0.00	-5562.00	911.72	-469.93	7.63	7.63	22.90	292.52
7.26	31	SLE Q	3	5	0.00	-5008.79	852.99	-444.58	7.63	7.63	21.57	285.12
8.42	21	SLE R	3	5	116.00	-5131.77	2976.91	255.57	7.63	7.63	59.85	1482.92
8.42	29	SLE Q	3	5	116.00	-4578.57	2521.33	247.07	7.63	7.63	51.18	1247.27

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cm²>	A _{c,eff} <cm²>	σ _s <daN/cm²>	σ _{s,z} <daN/cm²>	ε _{sm}	Wk <mm>
3.56	30	SLE Q	2	5	0.00	-18724.20	-357.83	2630.79	39.00	202.00	0.13	212.58	18.00	7.63	798.82	537.68	880.32	0.10	0.04
7.00	29	SLE Q	2	5	344.00	-17394.80	356.26	-2146.76	39.00	202.00	0.13	212.58	18.00	7.63	798.95	367.08	771.84	0.07	0.03
7.26	31	SLE Q	3	5	0.00	-5008.79	-444.58	852.99	39.00	202.00	0.13	212.58	18.00	7.63	798.82	285.12	1025.98	0.06	0.02
8.42	29	SLE Q	3	5	116.00	-4578.57	247.07	2521.33	39.00	202.00	0.13	212.58	18.00	7.63	798.82	1247.27	1586.71	0.24	0.09

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	V _{sdu,y} <daN>	ctgθ _y	V _{Rsd,y} <daN>	V _{Rcd,y} <daN>	b _{w,z} <cm>	V _{sdu,z} <daN>	ctgθ _z	V _{Rsd,z} <daN>	V _{Rcd,z} <daN>	Sic. T
-0.25	0.33	ø8/10	2	2	17	SLU	0.50	1373.07	2.50	22216.30	38469.20	0.30	451.63	2.50	39918.40	41473.20	16.18
-0.25	0.33	ø8/10	2	2	19	SLU	0.50	1401.83	2.50	22216.30	38469.20	0.30	375.76	2.50	39918.40	41473.20	15.85
-0.25	0.33	ø8/10	2	2	2(TG)	SLD	0.50	6307.47	2.50	25548.70	52944.70	0.30	9918.95	2.50	45906.20	57079.00	4.05
-0.25	0.33	ø8/10	2	2	10(TG)	SLD	0.50	6228.16	2.50	25548.70	53150.70	0.30	9936.20	2.50	45906.20	57301.10	4.10
-0.25	0.33	ø8/10	2	2	16(TG)	SLD	0.50	8796.17	2.50	25548.70	53097.60	0.30	5690.23	2.50	45906.20	57243.90	2.90
-0.25	0.33	ø8/10	2	2	1(TG)	SLV	0.50	4893.63	2.50	22216.30	37144.30	0.30	8783.95	2.50	39918.40	40044.80	4.54
-0.25	0.33	ø8/10	2	2	15(TG)	SLV	0.50	7647.31	2.50	22216.30	37085.30	0.30	2840.95	2.50	39918.40	39981.20	2.91
0.33	2.63	ø8/20	2	2	17	SLU	0.50	1373.07	2.50	11108.10	38469.20	0.30	451.63	2.50	19959.20	41473.20	8.09
0.33	2.63	ø8/20	2	2	19	SLU	0.50	1401.83	2.50	11108.10	38469.20	0.30	375.76	2.50	19959.20	41473.20	7.92
0.33	2.63	ø8/20	2	2	2(TG)	SLD	0.50	6307.47	2.50	12774.30	52944.70	0.30	9918.95	2.50	22953.10	57079.00	2.03

Relazione di calcolo

0.33	2.63	ø8/20	2	2	10 (TG)	SLD	0.50	6228.16	2.50	12774.30	53150.70	0.30	9936.20	2.50	22953.10	57301.10	2.05
0.33	2.63	ø8/20	2	2	16 (TG)	SLD	0.50	8796.17	2.50	12774.30	53097.60	0.30	5690.23	2.50	22953.10	57243.90	1.45
0.33	2.63	ø8/20	2	2	1 (TG)	SLV	0.50	4893.63	2.50	11108.10	37144.30	0.30	8783.95	2.50	19959.20	40044.80	2.27
0.33	2.63	ø8/20	2	2	15 (TG)	SLV	0.50	7647.31	2.50	11108.10	37085.30	0.30	2840.95	2.50	19959.20	39981.20	1.45
2.63	3.21	ø8/10	2	2	17	SLU	0.50	1373.07	2.50	22216.30	38469.20	0.30	451.63	2.50	39918.40	41473.20	16.18
2.63	3.21	ø8/10	2	2	19	SLU	0.50	1401.83	2.50	22216.30	38469.20	0.30	375.76	2.50	39918.40	41473.20	15.85
2.63	3.21	ø8/10	2	2	2 (TG)	SLD	0.50	6307.47	2.50	25548.70	52944.70	0.30	9918.95	2.50	45906.20	57079.00	4.05
2.63	3.21	ø8/10	2	2	10 (TG)	SLD	0.50	6228.16	2.50	25548.70	53150.70	0.30	9936.20	2.50	45906.20	57301.10	4.10
2.63	3.21	ø8/10	2	2	16 (TG)	SLD	0.50	8796.17	2.50	25548.70	53097.60	0.30	5690.23	2.50	45906.20	57243.90	2.90
2.63	3.21	ø8/10	2	2	1 (TG)	SLV	0.50	4893.63	2.50	22216.30	37144.30	0.30	8783.95	2.50	39918.40	40044.80	4.54
2.63	3.21	ø8/10	2	2	15 (TG)	SLV	0.50	7647.31	2.50	22216.30	37085.30	0.30	2840.95	2.50	39918.40	39981.20	2.91
3.56	4.13	ø8/10	2	2	17	SLU	0.50	2132.48	2.50	22216.30	35511.60	0.30	389.11	2.44	38959.30	38959.30	10.42
3.56	4.13	ø8/10	2	2	19	SLU	0.50	2154.76	2.50	22216.30	35511.70	0.30	312.75	2.44	38959.40	38959.40	10.31
3.56	4.13	ø8/10	2	2	2 (TG)	SLD	0.50	6227.78	2.50	25548.70	50404.20	0.30	8635.73	2.50	45906.20	54340.10	4.10
3.56	4.13	ø8/10	2	2	16 (TG)	SLD	0.50	7836.23	2.50	25548.70	50382.90	0.30	3181.96	2.50	45906.20	54317.10	3.26
3.56	4.13	ø8/10	2	2	1 (TG)	SLV	0.50	4715.69	2.50	22216.30	34391.80	0.30	8205.30	2.39	38235.10	38235.10	4.66
3.56	4.13	ø8/10	2	2	7 (TG)	SLV	0.50	6674.26	2.50	22216.30	34367.10	0.30	2553.91	2.39	38219.00	38219.00	3.33
4.13	6.43	ø8/20	2	2	17	SLU	0.50	2132.48	2.50	11108.10	35475.30	0.30	389.11	2.50	19959.20	38245.50	5.21
4.13	6.43	ø8/20	2	2	19	SLU	0.50	2154.76	2.50	11108.10	35475.40	0.30	312.75	2.50	19959.20	38245.60	5.16
4.13	6.43	ø8/20	2	2	2 (TG)	SLD	0.50	6227.78	2.50	12774.30	50404.20	0.30	8635.73	2.50	22953.10	54340.10	2.05
4.13	6.43	ø8/20	2	2	16 (TG)	SLD	0.50	7836.23	2.50	12774.30	50382.90	0.30	3181.96	2.50	22953.10	54317.10	1.63
4.13	6.43	ø8/20	2	2	1 (TG)	SLV	0.50	4715.69	2.50	11108.10	34391.80	0.30	8205.30	2.50	19959.20	37077.30	2.36
4.13	6.43	ø8/20	2	2	7 (TG)	SLV	0.50	6674.26	2.50	11108.10	34367.10	0.30	2553.91	2.50	19959.20	37050.80	1.66
6.43	7.00	ø8/10	2	2	17	SLU	0.50	2132.48	2.50	22216.30	35330.20	0.30	389.11	2.43	38842.90	38842.90	10.42
6.43	7.00	ø8/10	2	2	19	SLU	0.50	2154.76	2.50	22216.30	35330.30	0.30	312.75	2.43	38843.00	38843.00	10.31
6.43	7.00	ø8/10	2	2	2 (TG)	SLD	0.50	6227.78	2.50	25548.70	50404.20	0.30	8635.73	2.50	45906.20	54340.10	4.10
6.43	7.00	ø8/10	2	2	16 (TG)	SLD	0.50	7836.23	2.50	25548.70	50382.90	0.30	3181.96	2.50	45906.20	54317.10	3.26
6.43	7.00	ø8/10	2	2	1 (TG)	SLV	0.50	4715.69	2.50	22216.30	34391.80	0.30	8205.30	2.39	38235.10	38235.10	4.66
6.43	7.00	ø8/10	2	2	7 (TG)	SLV	0.50	6674.26	2.50	22216.30	34367.10	0.30	2553.91	2.39	38219.00	38219.00	3.33
7.26	8.42	ø8/10	2	2	17	SLU	0.50	2423.18	2.50	22216.30	33011.70	0.30	823.06	2.34	37323.30	37323.30	9.17
7.26	8.42	ø8/10	2	2	20	SLU	0.50	2481.36	2.50	22216.30	33014.80	0.30	671.72	2.34	37325.40	37325.40	8.95
7.26	8.42	ø8/10	2	2	16 (TG)	SLD	0.50	9499.70	2.50	25548.70	48723.50	0.30	22802.60	2.50	45906.20	52528.20	2.01
7.26	8.42	ø8/10	2	2	8 (TG)	SLD	0.50	16586.20	2.50	25548.70	48709.10	0.30	4688.18	2.50	45906.20	52512.70	1.54
7.26	8.42	ø8/10	2	2	1 (TG)	SLV	0.50	6950.39	2.50	22216.30	32698.60	0.30	21443.30	2.32	37113.30	37113.30	1.73
7.26	8.42	ø8/10	2	2	7 (TG)	SLV	0.50	14054.10	2.50	22216.30	32687.80	0.30	6318.27	2.32	37106.10	37106.10	1.58

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
127	N	ø8/ 6	Y+	I	2	10.18	7.63	0.50	0.20	0.20	4.02	1.07
			Z+	I	2	4.62	4.62	0.40	0.40	0.20	4.02	1.33
			Y-	I	2	10.18	4.62	0.45	0.20	0.29	6.03	1.19
			Z-	I	2	4.62	4.62	0.40	0.40	0.20	4.02	1.33
327	N	ø8/ 6	Y+	E	2	6.16	4.62	0.50	0.20	0.18	4.02	1.04
			Z+	I	2	4.62	4.62	0.40	0.40	0.18	4.02	1.30
			Z-	I	2	4.62	4.62	0.40	0.40	0.18	4.02	1.30

Pilastrata n. 28

Nodi: 28 128 228 328

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
13	R	35.00	45.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _r	Sic.
-0.25	9	SLV	1	13	0.00	-18079.60	3281.36			-1605.15			-18079.50	13306.60	-6564.88	317.81	4.48	4.062
-0.25	9	SLV	1	13	0.00	-18079.60	3281.36			-1605.15			-18079.50	13306.60	-6564.88	317.81	4.48	4.062
3.30	9 (α)	SLV	1	13	355.00	-16681.70	911.47	2.31	2107.62	872.95	1.85	1613.88	-16681.70	10654.70	8435.29	56.25	4.38	5.119
3.56	11 (α)	SLV	2	13	0.00	-10015.40	2165.16	2.59	5610.33	-676.49	4.10	-2773.95	-10015.30	12423.50	-6310.00	317.81	4.90	2.226
7.00	7 (α)	SLV	2	13	344.00	-9331.85	-1308.87	4.46	-5831.63	-758.98	2.43	-1847.41	-9331.86	-13661.70	-4497.79	208.13	5.66	2.351
7.26	7 (α)	SLV	3	13	0.00	-1873.27	-985.83	3.94	-3886.80	-1763.21	1.57	-2762.11	-1873.26	-10311.30	-7281.39	233.44	5.05	2.647
8.42	5	SLV	3	13	116.00	-495.71	1803.88			1657.30			-495.71	8616.16	8165.09	61.88	5.20	4.846
-0.25	10	SLD	1	13	0.00	-19047.10	2596.63			-1255.87			-19047.10	15937.20	-7811.66	320.63	5.30	6.153
-0.25	10	SLD	1	13	0.00	-19047.10	2596.63			-1255.87			-19047.10	15937.20	-7811.66	320.63	5.30	6.153
3.30	2	SLD	1	13	355.00	-24517.00	737.26			652.35			-24517.00	12624.20	11131.00	59.06	4.78	10.311
3.56	10	SLD	2	13	0.00	-9435.29	2596.41			-1163.26			-9435.29	15389.90	-6681.79	326.25	6.05	5.897
7.00	10	SLD	2	13	344.00	-8080.79	-2633.19			1094.17			-8080.79	-15221.90	6637.79	146.25	6.12	5.824
7.26	6	SLD	3	13	0.00	-1368.75	-1325.95			-2066.66			-1368.75	-7112.91	-11216.40	254.53	6.63	5.409
8.42	6	SLD	3	13	116.00	-912.00	1512.15			1415.90			-911.98	10611.40	9834.64	61.88	5.85	6.984

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	22	SLE R	1	13	0.00	-24982.50	-16.64	327.15	0.00	20.36	15.73	224.63
-0.25	22	SLE Q	1	13	0.00	-22319.80	-9.43	316.99	0.00	20.36	14.17	202.03
-0.25	22	SLE R	1	13	0.00	-24982.50	-16.64	327.15	0.00	20.36	15.73	224.63
-0.25	30	SLE Q	1	13	0.00	-22319.80	-9.43	316.99	0.00	20.36	14.17	202.03
3.30	23	SLE R	1	13	355.00	-23701.90	-106.64	-71.92	0.00	20.36	14.11	203.48
3.30	22	SLE R	1	13	355.00	-23584.70	-49.09	-132.60	0.00	20.36	13.93	202.04
3.30	31	SLE Q	1	13	355.00	-21039.20	-112.39	-80.37	0.00	20.36	12.80	183.35
3.56	22	SLE R	2	13	0.00	-12568.60	-51.22	444.50	0.00	20.36	10.27	137.14
3.56	30	SLE Q	2	13	0.00	-11832.80	-42.15	425.70	0.00	20.36	9.66	129.12
7.00	22	SLE R	2	13	344.00	-11214.10	108.29	-491.38	0.00	20.36	10.41	134.66
7.00	30	SLE Q	2	13	344.00	-10478.30	104.53	-461.52	0.00	20.36	9.77	126.29
7.26	24	SLE R										

Relazione di calcolo

8.42	32	SLE Q	3	13	116.00	-2409.69	591.17	487.50	12.72	7.63	16.70	238.77
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Verifiche stato limite di formazione delle fessure

Xg <mm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <cm>	s <mm>	K3	s _{mm} <mm>	Φ	A _s <cmq>	A _{s,eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
7.26	32	SLE Q	3	13	0.00	-2866.44	-165.92	-632.72	59.00	107.00	0.13	229.39	18.00	10.18	1017.77	173.06	1059.81	0.03	0.01
8.42	32	SLE Q	3	13	116.00	-2409.69	487.50	591.17	59.00	107.00	0.13	229.38	18.00	10.18	1017.62	238.77	1061.16	0.05	0.02

Staffe - Verifiche armatura

X0 <mm>	X1 <mm>	Staff.	Br ₁	Br ₂	CC	TCC	bw _{r,y} <cm>	Vsdu _{r,y} <daN>	ctgθ _{r,y}	VRsd _{r,y} <daN>	VRcd _{r,y} <daN>	bw _{r,z} <cm>	Vsdu _{r,z} <daN>	ctgθ _{r,z}	VRsd _{r,z} <daN>	VRcd _{r,z} <daN>	Sic.T
-0.25	0.34	ø8/12	2	2	18	SLU	0.45	11.07	2.50	20726.30	36440.50	0.35	149.75	2.50	28102.20	38428.90	>100
-0.25	0.34	ø8/12	2	2	19	SLU	0.45	54.44	2.50	20726.30	36455.10	0.35	83.65	2.50	28102.20	38444.30	>100
-0.25	0.34	ø8/12	2	2	12 (TG)	SLD	0.45	5301.48	2.50	23835.30	51273.30	0.35	9409.47	2.50	32317.60	54071.10	3.43
-0.25	0.34	ø8/12	2	2	16 (TG)	SLD	0.45	7458.88	2.50	23835.30	50859.20	0.35	6343.23	2.50	32317.60	53634.40	3.20
-0.25	0.34	ø8/12	2	2	16 (TG)	SLD	0.45	7502.01	2.50	23835.30	51231.10	0.35	6647.24	2.50	32317.60	54026.60	3.18
-0.25	0.34	ø8/12	2	2	3 (TG)	SLV	0.45	4114.47	2.50	20726.30	34674.60	0.35	8248.36	2.50	28102.20	36566.70	3.41
-0.25	0.34	ø8/12	2	2	7 (TG)	SLV	0.45	6131.50	2.50	20726.30	34730.10	0.35	5294.01	2.50	28102.20	36625.20	3.38
-0.25	0.34	ø8/12	2	2	7 (TG)	SLV	0.45	6157.46	2.50	20726.30	35205.20	0.35	5751.75	2.50	28102.20	37126.20	3.37
0.34	2.71	ø8/20	2	2	18	SLU	0.45	11.07	2.50	12435.80	36402.80	0.35	149.75	2.50	16861.30	38389.20	>100
0.34	2.71	ø8/20	2	2	19	SLU	0.45	54.44	2.50	12435.80	36417.40	0.35	83.65	2.50	16861.30	38404.60	>100
0.34	2.71	ø8/20	2	2	12 (TG)	SLD	0.45	5301.48	2.50	14301.20	51273.30	0.35	9409.47	2.50	19390.50	54071.10	2.06
0.34	2.71	ø8/20	2	2	16 (TG)	SLD	0.45	7458.88	2.50	14301.20	50859.20	0.35	6343.23	2.50	19390.50	53634.40	1.92
0.34	2.71	ø8/20	2	2	16 (TG)	SLD	0.45	7502.01	2.50	14301.20	51231.10	0.35	6647.24	2.50	19390.50	54026.60	1.91
0.34	2.71	ø8/20	2	2	3 (TG)	SLV	0.45	4114.47	2.50	12435.80	34674.60	0.35	8248.36	2.50	16861.30	36566.70	2.04
0.34	2.71	ø8/20	2	2	7 (TG)	SLV	0.45	6131.50	2.50	12435.80	34730.10	0.35	5294.01	2.50	16861.30	36625.20	2.03
0.34	2.71	ø8/20	2	2	7 (TG)	SLV	0.45	6157.46	2.50	12435.80	35205.20	0.35	5751.75	2.50	16861.30	37126.20	2.02
2.71	3.30	ø8/12	2	2	18	SLU	0.45	11.07	2.50	20726.30	36251.80	0.35	149.75	2.50	28102.20	38230.00	>100
2.71	3.30	ø8/12	2	2	19	SLU	0.45	54.44	2.50	20726.30	36266.40	0.35	83.65	2.50	28102.20	38245.40	>100
2.71	3.30	ø8/12	2	2	12 (TG)	SLD	0.45	5301.48	2.50	23835.30	51273.30	0.35	9409.47	2.50	32317.60	54071.10	3.43
2.71	3.30	ø8/12	2	2	16 (TG)	SLD	0.45	7458.88	2.50	23835.30	50859.20	0.35	6343.23	2.50	32317.60	53634.40	3.20
2.71	3.30	ø8/12	2	2	16 (TG)	SLD	0.45	7502.01	2.50	23835.30	51231.10	0.35	6647.24	2.50	32317.60	54026.60	3.18
2.71	3.30	ø8/12	2	2	3 (TG)	SLV	0.45	4114.47	2.50	20726.30	34674.60	0.35	8248.36	2.50	28102.20	36566.70	3.41
2.71	3.30	ø8/12	2	2	7 (TG)	SLV	0.45	6131.50	2.50	20726.30	34730.10	0.35	5294.01	2.50	28102.20	36625.20	3.38
2.71	3.30	ø8/12	2	2	7 (TG)	SLV	0.45	6157.46	2.50	20726.30	35205.20	0.35	5751.75	2.50	28102.20	37126.20	3.37
3.56	4.13	ø8/12	2	2	18	SLU	0.45	61.46	2.50	20726.30	34359.30	0.35	335.74	2.50	28102.20	36234.20	83.70
3.56	4.13	ø8/12	2	2	20	SLU	0.45	97.92	2.50	20726.30	34378.00	0.35	272.74	2.50	28102.20	36253.90	>100
3.56	4.13	ø8/12	2	2	4 (TG)	SLD	0.45	3729.93	2.50	23835.30	49952.40	0.35	10508.10	2.50	32317.60	52678.10	3.08
3.56	4.13	ø8/12	2	2	8 (TG)	SLD	0.45	6743.77	2.50	23835.30	49934.30	0.35	7222.18	2.50	32317.60	52659.10	3.53
3.56	4.13	ø8/12	2	2	3 (TG)	SLV	0.45	2910.89	2.50	20726.30	33856.60	0.35	9033.69	2.50	28102.20	35704.00	3.11
3.56	4.13	ø8/12	2	2	7 (TG)	SLV	0.45	4199.55	2.50	20726.30	33830.60	0.35	8063.50	2.50	28102.20	35676.60	3.49
4.13	6.43	ø8/20	2	2	18	SLU	0.45	61.46	2.50	12435.80	34322.80	0.35	335.74	2.50	16861.30	36195.70	50.22
4.13	6.43	ø8/20	2	2	20	SLU	0.45	97.92	2.50	12435.80	34341.40	0.35	272.74	2.50	16861.30	36215.40	61.82
4.13	6.43	ø8/20	2	2	4 (TG)	SLD	0.45	3729.93	2.50	14301.20	49952.40	0.35	10508.10	2.50	19390.50	52678.10	1.85
4.13	6.43	ø8/20	2	2	8 (TG)	SLD	0.45	6743.77	2.50	14301.20	49934.30	0.35	7222.18	2.50	19390.50	52659.10	2.12
4.13	6.43	ø8/20	2	2	3 (TG)	SLV	0.45	2910.89	2.50	12435.80	33856.60	0.35	9033.69	2.50	16861.30	35704.00	1.87
4.13	6.43	ø8/20	2	2	7 (TG)	SLV	0.45	4199.55	2.50	12435.80	33830.60	0.35	8063.50	2.50	16861.30	35676.60	2.09
6.43	7.00	ø8/12	2	2	18	SLU	0.45	61.46	2.50	20726.30	34176.50	0.35	335.74	2.50	28102.20	36041.40	83.70
6.43	7.00	ø8/12	2	2	20	SLU	0.45	97.92	2.50	20726.30	34195.20	0.35	272.74	2.50	28102.20	36061.10	>100
6.43	7.00	ø8/12	2	2	4 (TG)	SLD	0.45	3729.93	2.50	23835.30	49952.40	0.35	10508.10	2.50	32317.60	52678.10	3.08
6.43	7.00	ø8/12	2	2	8 (TG)	SLD	0.45	6743.77	2.50	23835.30	49934.30	0.35	7222.18	2.50	32317.60	52659.10	3.53
6.43	7.00	ø8/12	2	2	3 (TG)	SLV	0.45	2910.89	2.50	20726.30	33856.60	0.35	9033.69	2.50	28102.20	35704.00	3.11
6.43	7.00	ø8/12	2	2	7 (TG)	SLV	0.45	4199.55	2.50	20726.30	33830.60	0.35	8063.50	2.50	28102.20	35676.60	3.49
7.26	8.42	ø8/12	2	2	17	SLU	0.45	1351.01	2.50	20726.30	32791.00	0.35	829.10	2.50	28102.20	34580.30	15.34
7.26	8.42	ø8/12	2	2	20	SLU	0.45	1465.54	2.50	20726.30	32791.00	0.35	762.12	2.50	28102.20	34580.30	14.14
7.26	8.42	ø8/12	2	2	4 (TG)	SLD	0.45	11367.60	2.50	23835.30	48860.10	0.35	27583.60	2.50	32317.60	51526.30	1.17
7.26	8.42	ø8/12	2	2	4 (TG)	SLD	0.45	21713.20	2.50	23835.30	48654.10	0.35	10620.60	2.50	32317.60	51309.00	1.10
7.26	8.42	ø8/12	2	2	4 (TG)	SLD	0.45	21772.30	2.50	23835.30	48860.10	0.35	12950.20	2.50	32317.60	51526.30	1.09
7.26	8.42	ø8/12	2	2	11 (TG)	SLV	0.45	11895.90	2.50	20726.30	32711.50	0.35	21062.00	2.50	28102.20	34496.50	1.33
7.26	8.42	ø8/12	2	2	7 (TG)	SLV	0.45	16449.20	2.50	20726.30	32477.00	0.35	13060.10	2.50	28102.20	34249.10	1.26

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
128	N	ø8/ 7	Y+	E	2	4.62	4.62	0.45	0.21	0.20	4.02	1.06
			Z+	I	2	4.62	4.62	0.40	0.31	0.20	4.02	1.20
			Z-	I	2	4.62	4.62	0.40	0.31	0.20	4.02	1.20
228	N	ø8/ 7	Y+	E	2	4.62	4.62	0.45	0.21	0.20	4.02	1.06
			Z+	I	2	4.62	4.62	0.40	0.31	0.20	4.02	1.20
			Z-	I	2	4.62	4.62	0.40	0.31	0.20	4.02	1.20
328	N	ø8/ 6	Y+	E	2	4.62	4.62	0.45	0.21	0.18	4.02	1.15
			Z+	E	2	4.62	4.62	0.40	0.31	0.18	4.02	1.30

Pilastrata n. 29

Nodi: 29 129 229

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
1	R	30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <mm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.
3.56	1 (α)	SLV	2	1	0.00	-9063.18	7022.95	1.93	13570.90	-1486.86	1.10	-1635.55	-9063.55	13580.30	-1617.39	345.94	6.86	1.001
6.91	9	SLV	2	1	335.00	-7580.29	-9273.64											

Relazione di calcolo

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	28.23
-0.25	1	3.81	43.99	28.23
3.21	1	3.81	43.99	28.23

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	My _s <daNm>	My _u <daNm>	Mz _s <daNm>	Mz _u <daNm>	α <grad>
-0.25	9	SLV	1	1	0.00	-22398.20	7745.90			-1133.96			-22398.20	13909.30	14613.80	-2058.49	-2151.59	343.1
-0.25	9	SLV	1	1	0.00	-22398.20	7745.90			-1133.96			-22398.20	13909.30	14613.80	-2058.49	-2151.59	343.1
3.21	13(a)	SLV	1	1	346.00	-21886.80	-5677.88	1.61	-9126.66	784.20	1.10	862.61	-21886.80	-14263.90	-15041.70	1307.34	1368.05	168.7

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	24	SLE R	1	1	0.00	-29279.50	-370.48	1663.40	0.00	20.36	39.96	519.70
-0.25	32	SLE Q	1	1	0.00	-26441.30	-297.38	1449.26	0.00	20.36	35.10	458.64
-0.25	24	SLE R	1	1	0.00	-29279.50	-370.48	1663.40	0.00	20.36	39.96	519.70
-0.25	32	SLE Q	1	1	0.00	-26441.30	-297.38	1449.26	0.00	20.36	35.10	458.64
3.21	24	SLE R	1	1	346.00	-28241.50	731.74	-2590.03	5.09	15.27	55.21	680.67
3.21	32	SLE Q	1	1	346.00	-25403.30	593.03	-2213.57	5.09	15.27	47.08	585.17
3.56	24	SLE R	2	1	0.00	-10959.50	-1191.51	3661.60	10.18	10.18	82.54	1208.05
3.56	32	SLE Q	2	1	0.00	-10197.30	-1032.34	3228.30	10.18	10.18	72.23	1032.79
6.91	24	SLE R	2	1	335.00	-9954.51	1257.64	-3307.79	10.18	10.18	78.88	1150.45
6.91	32	SLE Q	2	1	335.00	-9192.34	1142.64	-3008.28	10.18	10.18	71.68	1038.94

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
3.21	32	SLE Q	1	1	346.00	-25403.30	-2213.57	593.03	39.00	252.00	0.13	221.18	18.00	2.54	262.33	94.29	273.40	0.02	0.01
3.56	32	SLE Q	2	1	0.00	-10197.30	3228.30	-1032.34	39.00	102.00	0.13	163.92	18.00	10.18	741.02	1032.79	945.65	0.29	0.08
6.91	32	SLE Q	2	1	335.00	-9192.34	-3008.28	1142.64	39.00	102.00	0.13	163.92	18.00	10.18	741.02	1038.94	949.88	0.29	0.08

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic. T
-0.25	0.33	ø8/12	2	2	20	SLV	0.40	431.99	2.50	18513.50	30687.80	0.30	1621.78	2.50	25889.50	32185.50	15.96
-0.25	0.33	ø8/12	2	2	17	SLV	0.40	445.18	2.50	18513.50	30715.10	0.30	1487.11	2.50	25889.50	32214.10	17.41
-0.25	0.33	ø8/12	2	2	2 (TG)	SLD	0.40	1840.42	2.50	21290.60	42199.10	0.30	11264.00	2.50	29772.90	44258.60	2.64
-0.25	0.33	ø8/12	2	2	8 (TG)	SLD	0.40	4835.43	2.50	21290.60	41971.20	0.30	8174.45	2.50	29772.90	44019.60	3.64
-0.25	0.33	ø8/12	2	2	1 (TG)	SLV	0.40	1056.32	2.50	18513.50	29491.80	0.30	9954.38	2.50	25889.50	30931.10	2.60
-0.25	0.33	ø8/12	2	2	13 (TG)	SLV	0.40	4025.99	2.50	18513.50	29255.30	0.30	6023.29	2.50	25889.50	30683.10	4.30
0.33	2.63	ø8/20	2	2	20	SLV	0.40	431.99	2.50	11108.10	30658.60	0.30	1621.78	2.50	15533.70	32154.90	9.58
0.33	2.63	ø8/20	2	2	17	SLV	0.40	445.18	2.50	11108.10	30685.90	0.30	1487.11	2.50	15533.70	32183.50	10.45
0.33	2.63	ø8/20	2	2	2 (TG)	SLD	0.40	1840.42	2.50	12774.30	42199.10	0.30	11264.00	2.50	17863.70	44258.60	1.59
0.33	2.63	ø8/20	2	2	8 (TG)	SLD	0.40	4835.43	2.50	12774.30	41971.20	0.30	8174.45	2.50	17863.70	44019.60	2.19
0.33	2.63	ø8/20	2	2	1 (TG)	SLV	0.40	1056.32	2.50	11108.10	29491.80	0.30	9954.38	2.50	15533.70	30931.10	1.56
0.33	2.63	ø8/20	2	2	13 (TG)	SLV	0.40	4025.99	2.50	11108.10	29255.30	0.30	6023.29	2.50	15533.70	30683.10	2.58
2.63	3.21	ø8/12	2	2	20	SLV	0.40	431.99	2.50	18513.50	30541.80	0.30	1621.78	2.50	25889.50	32032.40	15.96
2.63	3.21	ø8/12	2	2	17	SLV	0.40	445.18	2.50	18513.50	30569.10	0.30	1487.11	2.50	25889.50	32061.00	17.41
2.63	3.21	ø8/12	2	2	2 (TG)	SLD	0.40	1840.42	2.50	21290.60	42199.10	0.30	11264.00	2.50	29772.90	44258.60	2.64
2.63	3.21	ø8/12	2	2	8 (TG)	SLD	0.40	4835.43	2.50	21290.60	41971.20	0.30	8174.45	2.50	29772.90	44019.60	3.64
2.63	3.21	ø8/12	2	2	1 (TG)	SLV	0.40	1056.32	2.50	18513.50	29491.80	0.30	9954.38	2.50	25889.50	30931.10	2.60
2.63	3.21	ø8/12	2	2	13 (TG)	SLV	0.40	4025.99	2.50	18513.50	29255.30	0.30	6023.29	2.50	25889.50	30683.10	4.30
3.56	4.12	ø8/12	2	2	20	SLV	0.40	970.44	2.50	18513.50	27516.40	0.30	2734.06	2.50	25889.50	28859.30	9.47
3.56	4.12	ø8/12	2	2	17	SLV	0.40	980.14	2.50	18513.50	27527.00	0.30	2584.61	2.50	25889.50	28870.40	10.02
3.56	4.12	ø8/12	2	2	16 (TG)	SLD	0.40	2796.39	2.50	21290.60	39700.10	0.30	9599.13	2.50	29772.90	41637.70	3.10
3.56	4.12	ø8/12	2	2	4 (TG)	SLD	0.40	5024.62	2.50	21290.60	39603.30	0.30	5699.11	2.50	29772.90	41536.10	4.24
3.56	4.12	ø8/12	2	2	4 (TG)	SLD	0.40	5039.65	2.50	21290.60	39782.90	0.30	5876.31	2.50	29772.90	41724.50	4.22
3.56	4.12	ø8/12	2	2	1 (TG)	SLV	0.40	959.75	2.50	18513.50	27056.50	0.30	9132.78	2.50	25889.50	28377.00	2.83
3.56	4.12	ø8/12	2	2	13 (TG)	SLV	0.40	3846.01	2.50	18513.50	26657.10	0.30	5159.66	2.50	25889.50	27958.10	4.81
3.56	4.12	ø8/12	2	2	13 (TG)	SLV	0.40	3867.46	2.50	18513.50	26967.70	0.30	5418.71	2.50	25889.50	28283.80	4.78
4.12	6.35	ø8/20	2	2	20	SLV	0.40	970.44	2.50	11108.10	27488.10	0.30	2734.06	2.50	15533.70	28829.70	5.68
4.12	6.35	ø8/20	2	2	17	SLV	0.40	980.14	2.50	11108.10	27498.70	0.30	2584.61	2.50	15533.70	28840.80	6.01
4.12	6.35	ø8/20	2	2	16 (TG)	SLD	0.40	2796.39	2.50	12774.30	39700.10	0.30	9599.13	2.50	17863.70	41637.70	1.86
4.12	6.35	ø8/20	2	2	4 (TG)	SLD	0.40	5024.62	2.50	12774.30	39603.30	0.30	5699.11	2.50	17863.70	41536.10	2.54
4.12	6.35	ø8/20	2	2	4 (TG)	SLD	0.40	5039.65	2.50	12774.30	39782.90	0.30	5876.31	2.50	17863.70	41724.50	2.53
4.12	6.35	ø8/20	2	2	1 (TG)	SLV	0.40	959.75	2.50	11108.10	27056.50	0.30	9132.78	2.50	15533.70	28377.00	1.70
4.12	6.35	ø8/20	2	2	13 (TG)	SLV	0.40	3846.01	2.50	11108.10	26657.10	0.30	5159.66	2.50	15533.70	27958.10	2.89
4.12	6.35	ø8/20	2	2	13 (TG)	SLV	0.40	3867.46	2.50	11108.10	26967.70	0.30	5418.71	2.50	15533.70	28283.80	2.87
6.35	6.91	ø8/12	2	2	20	SLV	0.40	970.44	2.50	18513.50	27375.00	0.30	2734.06	2.50	25889.50	28711.10	9.47
6.35	6.91	ø8/12	2	2	17	SLV	0.40	980.14	2.50	18513.50	27385.60	0.30	2584.61	2.50	25889.50	28722.20	10.02
6.35	6.91	ø8/12	2	2	16 (TG)	SLD	0.40	2796.39	2.50	21290.60	39700.10	0.30	9599.13	2.50	29772.90	41637.70	3.10
6.35	6.91	ø8/12	2	2	4 (TG)	SLD	0.40	5024.62	2.50	21290.60	39603.30	0.30	5699.11	2.50	29772.90	41536.10	4.24
6.35	6.91	ø8/12	2	2	4 (TG)	SLD	0.40	5039.65	2.50	21290.60	39782.90	0.30	5876.31	2.50	29772.90	41724.50	4.22
6.35	6.91	ø8/12	2	2	1 (TG)	SLV	0.40	959.75</									

Relazione di calcolo

Nodi: 30 130 230 330

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
8R		35.00	40.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.
3.56	9 (α)	SLV	2	8	0.00	-10089.90	-1420.81	4.52	-6424.97	1376.92	2.29	3152.62	-10089.90	-8976.32	4579.38	151.88	5.29	1.408
7.00	11 (α)	SLV	2	8	344.00	-9076.29	-946.75	3.38	-3198.14	381.21	8.57	3268.48	-9076.31	-6870.40	7046.87	129.38	4.81	2.152
7.26	3 (α)	SLV	3	8	0.00	-3055.48	-1028.59	5.06	-5201.45	469.27	3.10	1455.16	-3055.48	-9227.14	2647.99	163.13	6.64	1.777
8.42	13	SLV	3	8	116.00	-2593.44	-3018.71			126.02			-2593.52	-9496.25	537.84	177.19	9.92	3.148
-0.25	6	SLD	1	8	0.00	-18794.80	2037.02			1195.31			-18794.80	11259.70	6437.45	30.94	5.45	5.492
-0.25	6	SLD	1	8	0.00	-18794.80	2037.02			1195.31			-18794.80	11259.70	6437.45	30.94	5.45	5.492
3.30	6	SLD	1	8	355.00	-17552.30	-1588.75			-448.82			-17552.30	-12595.30	-3688.10	196.88	6.60	7.950
3.56	14	SLD	2	8	0.00	-10208.30	2167.08			1054.05			-10210.20	10884.00	5296.15	25.31	6.31	5.023
7.00	6	SLD	2	8	344.00	-8864.23	-1610.82			-1031.84			-8864.23	-9990.26	-6472.18	213.75	5.91	6.223
7.26	14	SLD	3	8	0.00	-3062.27	2455.29			511.97			-3062.28	11123.50	2518.89	11.25	8.90	4.547
8.42	14 (e)	SLD	3	8	116.00	-2656.27	-2399.19		-2399.19	-52.61		-53.13	-2656.29	-11193.40	-71.01	180.70	12.67	4.664

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	37.71	32.96
-0.25	1	3.81	37.71	32.96
3.30	1	3.81	37.71	32.96

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu, s <daNm>	Myu <daNm>	Mzu, s <daNm>	Mzu <daNm>	α <grad>	
-0.25	5	SLV	1	8	0.00	-18608.50	2523.83			1497.36			-18608.40	8930.27	9362.63	5249.76	5513.74	33.75	4
-0.25	5	SLV	1	8	0.00	-18608.50	2523.83			1497.36			-18608.40	8930.27	9362.63	5249.76	5513.74	33.75	4
3.30	3 (α)	SLV	1	8	355.00	-17619.60	-1063.75	3.30	-3509.14	-402.83	3.36	-1354.04	-17619.60	-9689.37	-10200.20	-3681.42	-3874.67	202.50	5

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
-0.25	24	SLE R	1	8	0.00	-21429.50	124.67	425.99	0.00	15.27	18.44	248.70
-0.25	32	SLE Q	1	8	0.00	-19501.50	116.72	408.93	0.00	15.27	17.01	228.61
-0.25	24	SLE R	1	8	0.00	-21429.50	124.67	425.99	0.00	15.27	18.44	248.70
-0.25	32	SLE Q	1	8	0.00	-19501.50	116.72	408.93	0.00	15.27	17.01	228.61
3.30	24	SLE R	1	8	355.00	-20187.00	-119.49	-563.33	0.00	15.27	18.91	249.52
3.30	32	SLE Q	1	8	355.00	-18259.00	-119.45	-540.50	0.00	15.27	17.51	229.65
3.56	24	SLE R	2	8	0.00	-11231.80	298.25	611.27	0.00	15.27	15.78	189.06
3.56	32	SLE Q	2	8	0.00	-10491.50	285.16	582.79	0.00	15.27	14.94	178.47
7.00	24	SLE R	2	8	344.00	-10027.80	-289.82	-331.67	0.00	15.27	12.26	150.63
7.00	32	SLE Q	2	8	344.00	-9287.52	-275.55	-315.81	0.00	15.27	11.51	140.99
7.26	24	SLE R	3	8	0.00	-3577.09	198.89	289.73	2.54	12.72	7.68	84.24
7.26	32	SLE Q	3	8	0.00	-3293.87	190.16	275.73	2.54	12.72	7.33	79.80
8.42	24	SLE R	3	8	116.00	-3171.09	37.44	-288.54	2.54	12.72	5.26	61.23
8.42	32	SLE Q	3	8	116.00	-2887.87	36.48	-278.47	5.09	10.18	5.05	58.03

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cm²>	A _{s, eff} <cm²>	σ _s <daN/cm²>	σ _{s,z} <daN/cm²>	s _{sm}	Wk <mm>
7.26	32	SLE Q	3	8	0.00	-3293.87	275.73	190.16	59.00	252.00	0.13	284.98	18.00	2.54	329.61	26.90	361.53	0.01	0.00
8.42	32	SLE Q	3	8	116.00	-2887.87	-278.47	36.48	59.00	252.00	0.13	284.98	18.00	2.54	329.61	8.68	242.88	0.00	0.00

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic. T
-0.25	0.34	ø8/14	2	2	20	SLV	0.40	90.71	2.50	17765.40	32241.80	0.35	349.02	2.50	20926.50	33231.50	59.96
-0.25	0.34	ø8/14	2	2	18	SLV	0.40	119.73	2.50	17765.40	32241.00	0.35	294.73	2.50	20926.50	33230.60	71.00
-0.25	0.34	ø8/14	2	2	8 (TG)	SLD	0.40	3117.32	2.50	20430.20	45361.10	0.35	7483.96	2.50	24065.50	46753.40	3.22
-0.25	0.34	ø8/14	2	2	4 (TG)	SLD	0.40	5256.60	2.50	20430.20	45374.90	0.35	5979.65	2.50	24065.50	46767.60	3.89
-0.25	0.34	ø8/14	2	2	7 (TG)	SLV	0.40	1891.34	2.50	17765.40	31011.80	0.35	6625.03	2.50	20926.50	31963.70	3.16
-0.25	0.34	ø8/14	2	2	3 (TG)	SLV	0.40	4394.55	2.50	17765.40	31029.40	0.35	4915.78	2.50	20926.50	31981.80	4.04
0.34	2.71	ø8/20	2	2	20	SLV	0.40	90.71	2.50	12435.80	32208.30	0.35	349.02	2.50	14648.60	33196.90	41.97
0.34	2.71	ø8/20	2	2	18	SLV	0.40	119.73	2.50	12435.80	32207.50	0.35	294.73	2.50	14648.60	33196.10	49.70
0.34	2.71	ø8/20	2	2	8 (TG)	SLD	0.40	3117.32	2.50	14301.20	45361.10	0.35	7483.96	2.50	16845.80	46753.40	2.25
0.34	2.71	ø8/20	2	2	4 (TG)	SLD	0.40	5256.60	2.50	14301.20	45374.90	0.35	5979.65	2.50	16845.80	46767.60	2.72
0.34	2.71	ø8/20	2	2	7 (TG)	SLV	0.40	1891.34	2.50	12435.80	31011.80	0.35	6625.03	2.50	14648.60	31963.70	2.21
0.34	2.71	ø8/20	2	2	3 (TG)	SLV	0.40	4394.55	2.50	12435.80	31029.40	0.35	4915.78	2.50	14648.60	31981.80	2.83
2.71	3.30	ø8/14	2	2	20	SLV	0.40	90.71	2.50	17765.40	32074.10	0.35	349.02	2.50	20926.50	33058.60	59.96
2.71	3.30	ø8/14	2	2	18	SLV	0.40	119.73	2.50	17765.40	32073.30	0.35	294.73	2.50	20926.50	33057.80	71.00
2.71	3.30	ø8/14	2	2	8 (TG)	SLD	0.40	3117.32	2.50	20430.20	45361.10	0.35	7483.96	2.50	24065.50	46753.40	3.22
2.71	3.30	ø8/14	2	2	4 (TG)	SLD	0.40	5256.60	2.50	20430.20	45374.90	0.35	5979.65	2.50	24065.50	46767.60	3.89
2.71	3.30	ø8/14	2	2	7 (TG)	SLV	0.40	1891.34	2.50	17765.40	31011.80	0.35	6625.03	2.50	20926.50	31963.70	3.16
2.71	3.30	ø8/14	2	2	3 (TG)	SLV	0.40	4394.55	2.50	17765.40	31029.40	0.35	4915.78	2.50	20926.50	31981.80	4.04
3.56	4.13	ø8/14	2	2	20	SLV	0.40	223.26	2.50	17765.40	30548.50	0.35	345.88	2.50	20926.50	31486.20	60.50
3.56	4.13	ø8/14	2	2	18	SLV	0.40	247.30	2.50	17765.40	30546.60	0.35	299.81	2.50	20926.50	31484.20	69.80
3.56	4.13	ø8/14	2	2	8 (TG)	SLD	0.40	2572.57	2.50	20430.20	44194.00	0.35	7355.51	2.50	24065.50	45550.50	3.27
3.56	4.13	ø8/14	2	2	4 (TG)	SLD	0.40	5612.54	2.50	20430.20	44241.50	0.35	5177.07	2.50	24065.50	45599.40	3.64
3.56	4.13	ø8/14	2	2	15 (TG)	SLV	0.40	2027.19	2.50	17765.40	29903.00	0.35	6127.88	2.50	20926.50	30820.90	3.41
3.56	4.13	ø8/14	2	2	11 (TG)	SLV	0.40	4601.72	2.50	17765.40	29913.30	0.35	4366.49	2.50	20926.50	30831.40	3.86
4.13	6.43	ø8/20	2	2	20	SLV	0.40	223.26	2.50	12435.80	30516.00	0.35	345.88	2.50	14648.60	31452.70	42.35
4.13	6.43	ø8/20	2	2	18	SLV	0.40	247.30	2.50	12435.80	30514.10	0.35	299.81	2.50	14648.60	31450.70	48.86
4.13	6.43	ø8/20	2	2	8 (TG)	SLD	0.40	2572.57	2.50	14301.20	44194.00	0.35	7355.51	2.50	16845.80	45550.50	2.29

Relazione di calcolo

4.13	6.43	ø8/20	2	2	4 (TG)	SLD	0.40	5612.54	2.50	14301.20	44241.50	0.35	5177.07	2.50	16845.80	45599.40	2.55
4.13	6.43	ø8/20	2	2	15 (TG)	SLV	0.40	2027.19	2.50	12435.80	29903.00	0.35	6127.88	2.50	14648.60	30820.90	2.39
4.13	6.43	ø8/20	2	2	11 (TG)	SLV	0.40	4601.72	2.50	12435.80	29913.30	0.35	4366.49	2.50	14648.60	30831.40	2.70
6.43	7.00	ø8/14	2	2	20	SLU	0.40	223.26	2.50	17765.40	30386.00	0.35	345.88	2.50	20926.50	31318.70	60.50
6.43	7.00	ø8/14	2	2	18	SLU	0.40	247.30	2.50	17765.40	30384.10	0.35	299.81	2.50	20926.50	31316.70	69.80
6.43	7.00	ø8/14	2	2	8 (TG)	SLD	0.40	2572.57	2.50	20430.20	44194.00	0.35	7355.51	2.50	24065.50	45550.50	3.27
6.43	7.00	ø8/14	2	2	4 (TG)	SLD	0.40	5612.54	2.50	20430.20	44241.50	0.35	5177.07	2.50	24065.50	45599.40	3.64
6.43	7.00	ø8/14	2	2	15 (TG)	SLV	0.40	2027.19	2.50	17765.40	29903.00	0.35	6127.88	2.50	20926.50	30820.90	3.41
6.43	7.00	ø8/14	2	2	11 (TG)	SLV	0.40	4601.72	2.50	17765.40	29913.30	0.35	4366.49	2.50	20926.50	30831.40	3.86
7.26	8.42	ø8/14	2	2	20	SLU	0.40	182.78	2.50	17765.40	29297.60	0.35	588.01	2.50	20926.50	30196.90	35.59
7.26	8.42	ø8/14	2	2	17	SLU	0.40	185.06	2.50	17765.40	29298.10	0.35	385.52	2.50	20926.50	30197.40	54.28
7.26	8.42	ø8/14	2	2	14 (TG)	SLD	0.40	953.46	2.50	20430.20	43462.30	0.35	21614.30	2.50	24065.50	44796.40	1.11
7.26	8.42	ø8/14	2	2	4 (TG)	SLD	0.40	6121.19	2.50	20430.20	43447.60	0.35	20324.90	2.50	24065.50	44781.20	1.18
7.26	8.42	ø8/14	2	2	15 (TG)	SLV	0.40	688.84	2.50	17765.40	29097.40	0.35	18217.50	2.50	20926.50	29990.50	1.15
7.26	8.42	ø8/14	2	2	3 (TG)	SLV	0.40	4141.40	2.50	17765.40	29041.50	0.35	17480.30	2.50	20926.50	29932.90	1.20
7.26	8.42	ø8/14	2	2	3 (TG)	SLV	0.40	4146.54	2.50	17765.40	29090.40	0.35	17567.10	2.50	20926.50	29983.30	1.19

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1	As2	Bj	Hjc	Hjw	Ash	Rgsn
						<cmq>	<cmq>	<cm>	<cm>	<cm>	<cmq>	
130	N	ø8/ 7	Z+	I	2	4.62	9.71	0.40	0.26	0.20	4.02	1.20
			Y-	E	2	4.62	4.62	0.40	0.21	0.20	4.02	1.20
			Z-	I	2	4.62	5.09	0.40	0.26	0.20	4.02	1.20
230	N	ø8/ 7	Z+	I	2	4.62	4.62	0.40	0.26	0.20	4.02	1.20
			Y-	E	2	4.62	4.62	0.40	0.21	0.20	4.02	1.20
			Z-	I	2	4.62	4.62	0.40	0.26	0.20	4.02	1.20
330	N	ø8/ 6	Z+	I	2	4.62	4.62	0.40	0.26	0.18	4.02	1.30
			Z-	I	2	4.62	4.62	0.40	0.26	0.18	4.02	1.30

Pilastrata n. 31

Nodi: 31 131 231

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf	Cls	Fck	Fctk	Fcd	Fctd	Acc.	Fyk	Fyd
		<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
8	R	35.00	40.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	Sez.	X	N	My	α _y	My ver.	Mz	α _z	Mz ver.	Nu	Myu	Mzu	α	ε _x	Sic.
<cm>					<cm>	<daN>	<daNm>		<daNm>	<daNm>		<daNm>	<daN>	<daNm>	<daNm>	<grad>		
3.56	15 (a)	SLV	2	8	0.00	-10734.70	-831.33	3.83	-3182.17	1901.07	4.18	7937.81	-10741.60	-3376.62	8655.68	104.06	6.43	1.086
7.00	1	SLV	2	8	344.00	-8955.98	2647.08			-3326.40			-8956.00	6089.83	-7657.28	303.75	4.90	2.301
-0.25	2	SLD	1	8	0.00	-25046.10	1555.62			1999.02			-25046.10	8073.52	10392.60	57.66	4.87	5.195
-0.25	2	SLD	1	8	0.00	-25046.10	1555.62			1999.02			-25046.10	8073.52	10392.60	57.66	4.87	5.195
3.30	2 (e)	SLD	1	8	355.00	-23803.60	326.14		476.07	-1573.19		-1573.19	-23803.60	3685.87	-11727.50	281.25	6.96	7.479
3.56	2	SLD	2	8	0.00	-10357.40	-1561.31			2612.47			-10406.10	-5669.30	9745.34	109.69	6.58	3.705
7.00	2	SLD	2	8	344.00	-9153.40	2110.52			-2884.56			-9153.39	6948.46	-9219.72	298.13	5.95	3.230

Dati per verifiche di stabilità

Xg	El	l ₀	λ	λ*
<cm>		<cm>		
-0.25	1	3.81	37.71	31.79
-0.25	1	3.81	37.71	31.79
3.30	1	3.81	37.71	31.79

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg	CC	TCC	El	Sez.	X	N	My	α _y	My ver.	Mz	α _z	Mz ver.	Nu	Myu,s	Myu	Mzu,s	Mzu	α
<cm>					<cm>	<daN>	<daNm>		<daNm>	<daNm>		<daNm>	<daN>	<daNm>	<daNm>	<daNm>	<daNm>	<grad>
-0.25	1	SLV	1	8	0.00	-24771.50	1976.95			2473.57			-24771.50	6293.56	6704.22	8074.81	8604.72	56.25
-0.25	1	SLV	1	8	0.00	-24771.50	1976.95			2473.57			-24771.50	6293.56	6704.22	8074.81	8604.72	56.25
3.30	3 (a)	SLV	1	8	355.00	-24057.30	-398.86	2.73	-1087.55	-1379.13	3.36	-4639.90	-24057.30	-1871.58	-2390.93	-9549.36	-10265.50	260.16

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	Sez.	X	N	Mz	My	AfT	AfC	σ _c	σ _f
<cm>					<cm>	<daN>	<daNm>	<daNm>	<cmq>	<cmq>	<daN/cmq>	<daN/cmq>
-0.25	23	SLE R	1	8	0.00	-29580.30	530.45	108.61	0.00	15.27	24.67	332.79
-0.25	31	SLE Q	1	8	0.00	-25989.40	393.61	79.47	0.00	15.27	20.77	284.04
-0.25	23	SLE R	1	8	0.00	-29580.30	530.45	108.61	0.00	15.27	24.67	332.79
-0.25	31	SLE Q	1	8	0.00	-25989.40	393.61	79.47	0.00	15.27	20.77	284.04
3.30	23	SLE R	1	8	355.00	-28337.80	-941.61	-51.81	0.00	15.27	27.62	355.10
3.30	31	SLE Q	1	8	355.00	-24746.90	-682.72	-16.99	0.00	15.27	22.41	294.23
3.56	21	SLE R	2	8	0.00	-12012.90	1450.68	-76.54	7.63	7.63	26.72	272.79
3.56	23	SLE R	2	8	0.00	-12026.60	1495.55	-5.86	7.63	7.63	26.52	268.29
3.56	29	SLE Q	2	8	0.00	-11033.50	1160.63	-116.39	7.63	7.63	22.06	235.05
7.00	21	SLE R	2	8	344.00	-10808.90	-1508.14	279.88	7.63	7.63	31.21	302.06
7.00	23	SLE R	2	8	344.00	-10822.60	-1563.96	179.78	7.63	7.63	30.71	293.79
7.00	29	SLE Q	2	8	344.00	-9829.48	-1316.08	293.95	7.63	7.63	27.88	273.37

Verifiche stato limite di formazione delle fessure

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K3	s _{cm}	Φ	A _s	A _{c eff}	σ _s	σ _{st}	ε _{sm}	Wk
<cm>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>		<mm>		<cmq>	<cmq>	<daN/cmq>	<daN/cmq>		<mm>
3.56	31	SLE Q	2	8	0.00	-11047.10	-45.71	1205.50	59.00	132.00	0.13	232.38	18.00	7.63	746.29	75.82	421.46	0.01	0.01
7.00	31	SLE Q	2	8	344.00	-9843.13	193.85	-1371.90	59.00	132.00	0.13	232.44	18.00	7.63	746.80	203.97	695.96	0.04	0.02

Relazione di calcolo

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.34	ø8/14	2	2	18	SLV	0.40	500.43	2.50	17765.40	33631.80	0.35	94.86	2.50	20926.50	34664.10	35.50
-0.25	0.34	ø8/14	2	2	19	SLV	0.40	558.19	2.50	17765.40	33621.20	0.35	62.91	2.50	20926.50	34653.20	31.83
-0.25	0.34	ø8/14	2	2	10 (TG)	SLD	0.40	5998.82	2.50	20430.20	46280.60	0.35	5655.87	2.50	24065.50	47701.20	3.41
-0.25	0.34	ø8/14	2	2	10 (TG)	SLD	0.40	6602.23	2.50	20430.20	46281.00	0.35	4286.07	2.50	24065.50	47701.60	3.09
-0.25	0.34	ø8/14	2	2	15 (TG)	SLV	0.40	3425.98	2.50	17765.40	31889.00	0.35	5785.86	2.50	20926.50	32867.80	3.62
-0.25	0.34	ø8/14	2	2	7 (TG)	SLV	0.40	5861.90	2.50	17765.40	31864.40	0.35	3500.86	2.50	20926.50	32842.40	3.03
0.34	2.71	ø8/20	2	2	18	SLV	0.40	500.43	2.50	12435.80	33598.30	0.35	94.86	2.50	14648.60	34629.60	24.85
0.34	2.71	ø8/20	2	2	19	SLV	0.40	558.19	2.50	12435.80	33587.70	0.35	62.91	2.50	14648.60	34618.60	22.28
0.34	2.71	ø8/20	2	2	10 (TG)	SLD	0.40	5998.82	2.50	14301.20	46280.60	0.35	5655.87	2.50	16845.80	47701.20	2.38
0.34	2.71	ø8/20	2	2	10 (TG)	SLD	0.40	6602.23	2.50	14301.20	46281.00	0.35	4286.07	2.50	16845.80	47701.60	2.17
0.34	2.71	ø8/20	2	2	15 (TG)	SLV	0.40	3425.98	2.50	12435.80	31889.00	0.35	5785.86	2.50	14648.60	32867.80	2.53
0.34	2.71	ø8/20	2	2	7 (TG)	SLV	0.40	5861.90	2.50	12435.80	31864.40	0.35	3500.86	2.50	14648.60	32842.40	2.12
2.71	3.30	ø8/14	2	2	18	SLV	0.40	500.43	2.50	17765.40	33464.10	0.35	94.86	2.50	20926.50	34491.30	35.50
2.71	3.30	ø8/14	2	2	19	SLV	0.40	558.19	2.50	17765.40	33453.50	0.35	62.91	2.50	20926.50	34480.40	31.83
2.71	3.30	ø8/14	2	2	10 (TG)	SLD	0.40	5998.82	2.50	20430.20	46280.60	0.35	5655.87	2.50	24065.50	47701.20	3.41
2.71	3.30	ø8/14	2	2	10 (TG)	SLD	0.40	6602.23	2.50	20430.20	46281.00	0.35	4286.07	2.50	24065.50	47701.60	3.09
2.71	3.30	ø8/14	2	2	15 (TG)	SLV	0.40	3425.98	2.50	17765.40	31889.00	0.35	5785.86	2.50	20926.50	32867.80	3.62
2.71	3.30	ø8/14	2	2	7 (TG)	SLV	0.40	5861.90	2.50	17765.40	31864.40	0.35	3500.86	2.50	20926.50	32842.40	3.03
3.56	4.13	ø8/14	2	2	17	SLV	0.40	1149.11	2.50	17765.40	30682.30	0.35	113.86	2.50	20926.50	31624.10	15.46
3.56	4.13	ø8/14	2	2	19	SLV	0.40	1178.38	2.50	17765.40	30684.10	0.35	64.21	2.50	20926.50	31625.90	15.08
3.56	4.13	ø8/14	2	2	10 (TG)	SLD	0.40	3910.77	2.50	20430.20	44385.20	0.35	6254.15	2.50	24065.50	45747.60	3.85
3.56	4.13	ø8/14	2	2	8 (TG)	SLD	0.40	6068.38	2.50	20430.20	44329.00	0.35	3852.29	2.50	24065.50	45689.70	3.37
3.56	4.13	ø8/14	2	2	11 (TG)	SLV	0.40	2927.44	2.50	17765.40	30009.90	0.35	5350.14	2.50	20926.50	30931.10	3.91
3.56	4.13	ø8/14	2	2	13 (TG)	SLV	0.40	5278.86	2.50	17765.40	30046.00	0.35	3248.91	2.50	20926.50	30968.20	3.37
4.13	6.43	ø8/20	2	2	17	SLV	0.40	1149.11	2.50	12435.80	30649.90	0.35	113.86	2.50	14648.60	31590.60	10.82
4.13	6.43	ø8/20	2	2	19	SLV	0.40	1178.38	2.50	12435.80	30651.60	0.35	64.21	2.50	14648.60	31592.40	10.55
4.13	6.43	ø8/20	2	2	10 (TG)	SLD	0.40	3910.77	2.50	14301.20	44385.20	0.35	6254.15	2.50	16845.80	45747.60	2.69
4.13	6.43	ø8/20	2	2	8 (TG)	SLD	0.40	6068.38	2.50	14301.20	44329.00	0.35	3852.29	2.50	16845.80	45689.70	2.36
4.13	6.43	ø8/20	2	2	11 (TG)	SLV	0.40	2927.44	2.50	12435.80	30009.90	0.35	5350.14	2.50	14648.60	30931.10	2.74
4.13	6.43	ø8/20	2	2	13 (TG)	SLV	0.40	5278.86	2.50	12435.80	30046.00	0.35	3248.91	2.50	14648.60	30968.20	2.36
6.43	7.00	ø8/14	2	2	17	SLV	0.40	1149.11	2.50	17765.40	30519.90	0.35	113.86	2.50	20926.50	31456.60	15.46
6.43	7.00	ø8/14	2	2	19	SLV	0.40	1178.38	2.50	17765.40	30521.60	0.35	64.21	2.50	20926.50	31458.40	15.08
6.43	7.00	ø8/14	2	2	10 (TG)	SLD	0.40	3910.77	2.50	20430.20	44385.20	0.35	6254.15	2.50	24065.50	45747.60	3.85
6.43	7.00	ø8/14	2	2	8 (TG)	SLD	0.40	6068.38	2.50	20430.20	44329.00	0.35	3852.29	2.50	24065.50	45689.70	3.37
6.43	7.00	ø8/14	2	2	11 (TG)	SLV	0.40	2927.44	2.50	17765.40	30009.90	0.35	5350.14	2.50	20926.50	30931.10	3.91
6.43	7.00	ø8/14	2	2	13 (TG)	SLV	0.40	5278.86	2.50	17765.40	30046.00	0.35	3248.91	2.50	20926.50	30968.20	3.37

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
131	N	ø8/ 7	Y+	I	2	8.70	7.63	0.40	0.21	0.20	4.02	1.20
			Z+	E	2	4.62	4.62	0.40	0.26	0.20	4.02	1.20
			Y-	I	2	8.70	7.63	0.40	0.21	0.20	4.02	1.20

Pilastrata n. 32

Nodi: 32 132 232

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
8	R	35.00	40.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _x	Sic.
-0.25	9	SLV	1	8	0.00	-12564.80	3486.97			1901.87			-12564.80	9000.86	5008.87	30.94	4.98	2.593
-0.25	9	SLV	1	8	0.00	-12564.80	3486.97			1901.87			-12564.80	9000.86	5008.87	30.94	4.98	2.593
3.30	9 (α)	SLV	1	8	355.00	-11322.30	-1760.94	1.10	-1937.04	-1298.31	1.10	-1428.14	-11322.30	-8257.57	-5924.72	219.38	4.77	4.223
3.56	9 (α)	SLV	2	8	0.00	-6184.69	2704.29	1.10	2974.72	2958.52	1.10	3254.38	-6184.69	6547.74	7050.50	52.03	4.97	2.182
7.00	9	SLV	2	8	344.00	-4980.69	-3068.98			-3272.93			-4980.69	-6494.02	-6983.28	232.03	5.04	2.125
-0.25	10	SLD	1	8	0.00	-13046.60	2802.09			1590.14			-13046.60	10662.00	6248.08	30.94	5.80	3.836
-0.25	10	SLD	1	8	0.00	-13046.60	2802.09			1590.14			-13046.60	10662.00	6248.08	30.94	5.80	3.836
3.30	10	SLD	1	8	355.00	-11804.10	-1474.97			-1172.26			-11804.10	-9597.28	-7593.10	222.19	5.47	6.495
3.56	10	SLD	2	8	0.00	-6438.37	2287.75			2580.96			-6438.37	7580.36	8680.61	56.25	5.82	3.341
7.00	10	SLD	2	8	344.00	-5234.37	-2580.60			-2807.90			-5234.37	-7886.71	-8424.35	233.44	5.80	3.026

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	24	SLE R	1	8	0.00	-16723.20	602.02	538.37	0.00	15.27	21.55	261.14
-0.25	32	SLE Q	1	8	0.00	-14894.30	488.70	469.07	0.00	15.27	18.60	227.07
-0.25	24	SLE R	1	8	0.00	-16723.20	602.02	538.37	0.00	15.27	21.55	261.14
-0.25	32	SLE Q	1	8	0.00	-14894.30	488.70	469.07	0.00	15.27	18.60	227.07
3.30	24	SLE R	1	8	355.00	-15480.70	-999.17	-676.91	2.54	12.72	27.33	309.23
3.30	22	SLE R	1	8	355.00	-15376.80	-1034.33	-628.70	2.54	12.72	27.21	307.33
3.30	32	SLE Q	1	8	355.00	-13651.80	-804.97	-557.31	2.54	12.72	22.55	258.76
3.56	22	SLE R	2	8	0.00	-7922.77	1542.70	989.46	7.63	7.63	46.49	578.20
3.56	30	SLE Q	2	8	0.00	-7319.42	1319.10	847.94	7.63	7.63	39.34	462.50
7.00	22	SLE R	2	8	344.00	-6718.77	-1374.05	-942.89	7.63	7.63	42.93	555.25
7.00	30	SLE Q	2	8	344.00	-6115.42	-1230.98	-844.67	7.63	7.63	38.37	491.44

Verifiche stato limite di formazione delle fessure

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cmq>	A _{s eff} <cmq>	σ _s <daN/cmq>	σ _{sZ} <daN/cmq>	ε _{sm}	Wk <mm>
3.30	30	SLE Q	1	8	355.00	-13547.90	-509.10	-840.13	59.00	252.00	0.13	285.01	18.00	2.54	329.69	12.57	83.06	0.00	0.00
3.56																			

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.34	ø8/14	2	2	20	SLV	0.40	612.80	2.50	17765.40	31474.80	0.35	445.33	2.50	20926.50	32440.90	28.99
-0.25	0.34	ø8/14	2	2	18	SLV	0.40	645.73	2.50	17765.40	31461.90	0.35	404.36	2.50	20926.50	32427.60	27.51
-0.25	0.34	ø8/14	2	2	2 (TG)	SLD	0.40	3845.03	2.50	20430.20	44972.90	0.35	6795.03	2.50	24065.50	46353.30	3.54
-0.25	0.34	ø8/14	2	2	8 (TG)	SLD	0.40	6099.62	2.50	20430.20	44843.20	0.35	3972.31	2.50	24065.50	46219.70	3.35
-0.25	0.34	ø8/14	2	2	9 (TG)	SLV	0.40	2783.86	2.50	17765.40	30769.30	0.35	6072.92	2.50	20926.50	31713.80	3.45
-0.25	0.34	ø8/14	2	2	7 (TG)	SLV	0.40	5105.36	2.50	17765.40	30511.90	0.35	3436.47	2.50	20926.50	31448.40	3.48
0.34	2.71	ø8/20	2	2	20	SLV	0.40	612.80	2.50	12435.80	31441.30	0.35	445.33	2.50	14648.60	32406.40	20.29
0.34	2.71	ø8/20	2	2	18	SLV	0.40	645.73	2.50	12435.80	31428.40	0.35	404.36	2.50	14648.60	32393.00	19.26
0.34	2.71	ø8/20	2	2	2 (TG)	SLD	0.40	3845.03	2.50	14301.20	44972.90	0.35	6795.03	2.50	16845.80	46353.30	2.48
0.34	2.71	ø8/20	2	2	8 (TG)	SLD	0.40	6099.62	2.50	14301.20	44843.20	0.35	3972.31	2.50	16845.80	46219.70	2.34
0.34	2.71	ø8/20	2	2	9 (TG)	SLV	0.40	2783.86	2.50	12435.80	30769.30	0.35	6072.92	2.50	14648.60	31713.80	2.41
0.34	2.71	ø8/20	2	2	7 (TG)	SLV	0.40	5105.36	2.50	12435.80	30511.90	0.35	3436.47	2.50	14648.60	31448.40	2.44
2.71	3.30	ø8/14	2	2	20	SLV	0.40	612.80	2.50	17765.40	31307.20	0.35	445.33	2.50	20926.50	32268.10	28.99
2.71	3.30	ø8/14	2	2	18	SLV	0.40	645.73	2.50	17765.40	31294.20	0.35	404.36	2.50	20926.50	32254.70	27.51
2.71	3.30	ø8/14	2	2	2 (TG)	SLD	0.40	3845.03	2.50	20430.20	44972.90	0.35	6795.03	2.50	24065.50	46353.30	3.54
2.71	3.30	ø8/14	2	2	8 (TG)	SLD	0.40	6099.62	2.50	20430.20	44843.20	0.35	3972.31	2.50	24065.50	46219.70	3.35
2.71	3.30	ø8/14	2	2	9 (TG)	SLV	0.40	2783.86	2.50	17765.40	30769.30	0.35	6072.92	2.50	20926.50	31713.80	3.45
2.71	3.30	ø8/14	2	2	7 (TG)	SLV	0.40	5105.36	2.50	17765.40	30511.90	0.35	3436.47	2.50	20926.50	31448.40	3.48
3.56	4.13	ø8/14	2	2	20	SLV	0.40	1069.26	2.50	17765.40	30019.00	0.35	772.28	2.50	20926.50	30940.40	16.61
3.56	4.13	ø8/14	2	2	18	SLV	0.40	1115.47	2.50	17765.40	30011.00	0.35	744.37	2.50	20926.50	30932.20	15.93
3.56	4.13	ø8/14	2	2	2 (TG)	SLD	0.40	3842.93	2.50	20430.20	43945.40	0.35	5953.43	2.50	24065.50	45294.30	4.04
3.56	4.13	ø8/14	2	2	8 (TG)	SLD	0.40	6115.21	2.50	20430.20	43883.00	0.35	2884.00	2.50	24065.50	45230.00	3.34
3.56	4.13	ø8/14	2	2	3 (TG)	SLV	0.40	2944.62	2.50	17765.40	29549.90	0.35	5321.24	2.50	20926.50	30456.90	3.93
3.56	4.13	ø8/14	2	2	11 (TG)	SLV	0.40	4912.72	2.50	17765.40	29583.10	0.35	3351.61	2.50	20926.50	30491.10	3.62
4.13	6.43	ø8/20	2	2	20	SLV	0.40	1069.26	2.50	12435.80	29986.50	0.35	772.28	2.50	14648.60	30906.90	11.63
4.13	6.43	ø8/20	2	2	18	SLV	0.40	1115.47	2.50	12435.80	29978.50	0.35	744.37	2.50	14648.60	30898.70	11.15
4.13	6.43	ø8/20	2	2	2 (TG)	SLD	0.40	3842.93	2.50	14301.20	43945.40	0.35	5953.43	2.50	16845.80	45294.30	2.83
4.13	6.43	ø8/20	2	2	8 (TG)	SLD	0.40	6115.21	2.50	14301.20	43883.00	0.35	2884.00	2.50	16845.80	45230.00	2.34
4.13	6.43	ø8/20	2	2	3 (TG)	SLV	0.40	2944.62	2.50	12435.80	29549.90	0.35	5321.24	2.50	14648.60	30456.90	2.75
4.13	6.43	ø8/20	2	2	11 (TG)	SLV	0.40	4912.72	2.50	12435.80	29583.10	0.35	3351.61	2.50	14648.60	30491.10	2.53
6.43	7.00	ø8/14	2	2	20	SLV	0.40	1069.26	2.50	17765.40	29856.50	0.35	772.28	2.50	20926.50	30772.90	16.61
6.43	7.00	ø8/14	2	2	18	SLV	0.40	1115.47	2.50	17765.40	29848.50	0.35	744.37	2.50	20926.50	30764.70	15.93
6.43	7.00	ø8/14	2	2	2 (TG)	SLD	0.40	3842.93	2.50	20430.20	43945.40	0.35	5953.43	2.50	24065.50	45294.30	4.04
6.43	7.00	ø8/14	2	2	8 (TG)	SLD	0.40	6115.21	2.50	20430.20	43883.00	0.35	2884.00	2.50	24065.50	45230.00	3.34
6.43	7.00	ø8/14	2	2	3 (TG)	SLV	0.40	2944.62	2.50	17765.40	29549.90	0.35	5321.24	2.50	20926.50	30456.90	3.93
6.43	7.00	ø8/14	2	2	11 (TG)	SLV	0.40	4912.72	2.50	17765.40	29583.10	0.35	3351.61	2.50	20926.50	30491.10	3.62

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
132	N	ø8/ 7	Y-	E	2	4.62	7.63	0.40	0.21	0.20	4.02	1.20
			Z-	E	2	4.62	4.62	0.40	0.26	0.20	4.02	1.20
232	N	ø8/ 7	Y+	I	2	4.62	4.62	0.40	0.21	0.20	4.02	1.20
			Y-	I	2	4.62	4.62	0.40	0.21	0.20	4.02	1.20
			Z-	E	2	4.62	4.62	0.40	0.26	0.20	4.02	1.20

Pilastrata n. 33

Nodi: 33 133 233

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
8R		35.00	40.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.
-0.25	10	SLD	1	8	0.00	-37912.20	1972.02			-3777.49			-37912.20	7052.37	-14076.20	289.69	4.32	3.695
-0.25	10	SLD	1	8	0.00	-37912.20	1972.02			-3777.49			-37912.20	7052.37	-14076.20	289.69	4.32	3.695
3.30	10	SLD	1	8	355.00	-36669.70	-1312.16			3025.09			-36669.70	-6158.12	14306.60	106.88	4.57	4.724
3.56	10	SLD	2	8	0.00	-17079.70	2926.34			-4810.75			-17079.70	7491.77	-11898.20	292.50	5.03	2.497
7.00	10	SLD	2	8	344.00	-15875.70	-3063.06			5280.91			-15875.70	-7110.54	11944.80	111.09	5.17	2.277

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*	Xg <m>	El	l ₀ <m>	λ	λ*	Xg <m>	El	l ₀ <m>	λ	λ*	Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	37.71	28.57	-0.25	1	3.81	37.71	28.57	3.30	1	3.81	37.71	28.57	3.56	2	3.70	36.62	33.20
7.00	2	3.70	36.62	33.20															

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Myu <daNm>	Mzu <daNm>	Mzu <daNm>	α <grad>
-0.25	9	SLV	1	8	0.00	-39608.60	2383.82			-4504.72			-39608.60	5706.18	6202.98	-10565.40	-11518.20	292.
-0.25	9	SLV	1	8	0.00	-39608.60	2383.82			-4504.72			-39608.60	5706.18	6202.98	-10565.40	-11518.20	292.
3.30	7 (α)	SLV	1	8	355.00	-37669.40	-1211.03	4.45	-5383.35	2268.91	1.63	3707.51	-37669.50	-10373.00	-11066.70	7408.68	7903.56	135.
3.56	9 (α)	SLV	2	8	0.00	-17009.20	3321.49	3.22	10688.30	-5218.21	1.16	-6050.11	-17009.20	10531.80	10919.50	-6183.94	-6398.49	320.
7.00	9	SLV	2	8	344.00	-15805.20	-3460.92			5767.54			-15805.20	-5664.11	-5907.34	9623.10	10013.00	112.

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	22	SLE R	1	8	0.00	-44748.60	-1505.04	733.71	0.00	20.36	48.29	600.53
-0.25	30	SLE Q	1	8	0.00	-38535.90	-1201.54	620.23	0.00	20.36	40.50	507.17
-0.25	22	SLE R	1	8	0.00	-44748.60	-1505.04	733.71	0.00	20.36	48.29	600.53
-0.25	30	SLE Q	1	8	0.00	-38535.90	-1201.54	620.23	0.00	20.36	40.50	507.17

Relazione di calcolo

3.30	24	SLE R	1	8	355.00	-43552.70	2619.29	-1019.95	0.00	20.36	62.47	727.41
3.30	22	SLE R	1	8	355.00	-43506.10	2583.15	-1063.51	0.00	20.36	62.44	727.31
3.30	32	SLE Q	1	8	355.00	-37339.90	2066.68	-828.89	0.00	20.36	50.93	599.74
3.56	22	SLE R	2	8	0.00	-19026.60	-4045.69	1858.87	10.18	10.18	104.23	1293.65
3.56	30	SLE Q	2	8	0.00	-17322.40	-3413.36	1615.25	10.18	10.18	88.07	1039.51
7.00	22	SLE R	2	8	344.00	-17822.60	3980.33	-1894.68	10.18	10.18	104.10	1332.06
7.00	30	SLE Q	2	8	344.00	-16118.50	3553.22	-1713.61	10.18	10.18	93.20	1183.64

Verifiche stato limite di formazione delle fessure

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	S _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
3.56	30	SLE Q	2	8	0.00	-17322.40	1615.25	-3413.36	59.00	107.00	0.13	221.42	18.00	10.18	927.63	1039.51	897.17	0.32	0.12
7.00	30	SLE Q	2	8	344.00	-16118.50	-1713.61	3553.22	59.00	107.00	0.13	221.40	18.00	10.18	927.45	1183.64	948.83	0.39	0.15

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	V _{sdu,y} <daN>	ctgθ _y	VR _{sd,y} <daN>	VR _{cd,y} <daN>	b _{w,z} <cm>	V _{sdu,z} <daN>	ctgθ _z	VR _{sd,z} <daN>	VR _{cd,z} <daN>	Sic.T
-0.25	0.34	ø8/14	2	2	18	SLU	0.40	1564.46	2.50	17765.40	34453.70	0.35	671.82	2.50	20926.50	35511.20	11.36
-0.25	0.34	ø8/14	2	2	20	SLU	0.40	1595.47	2.50	17765.40	34453.70	0.35	629.92	2.50	20926.50	35511.20	11.13
-0.25	0.34	ø8/14	2	2	10 (TG)	SLD	0.40	6736.68	2.50	20430.20	47818.70	0.35	6248.67	2.50	24065.50	49286.50	3.03
-0.25	0.34	ø8/14	2	2	16 (TG)	SLD	0.40	8914.32	2.50	20430.20	47683.00	0.35	3821.92	2.50	24065.50	49146.60	2.29
-0.25	0.34	ø8/14	2	2	13 (TG)	SLV	0.40	4741.64	2.50	17765.40	33262.90	0.35	6988.65	2.50	20926.50	34283.90	2.99
-0.25	0.34	ø8/14	2	2	13 (TG)	SLV	0.40	4757.93	2.50	17765.40	33485.50	0.35	7034.68	2.50	20926.50	34513.30	2.97
-0.25	0.34	ø8/14	2	2	9 (TG)	SLV	0.40	7577.74	2.50	17765.40	33491.10	0.35	2704.53	2.50	20926.50	34519.10	2.34
0.34	2.71	ø8/20	2	2	18	SLU	0.40	1564.46	2.50	12435.80	34453.70	0.35	671.82	2.50	14648.60	35511.20	7.95
0.34	2.71	ø8/20	2	2	20	SLU	0.40	1595.47	2.50	12435.80	34453.70	0.35	629.92	2.50	14648.60	35511.20	7.79
0.34	2.71	ø8/20	2	2	10 (TG)	SLD	0.40	6736.68	2.50	14301.20	47818.70	0.35	6248.67	2.50	16845.80	49286.50	2.12
0.34	2.71	ø8/20	2	2	16 (TG)	SLD	0.40	8914.32	2.50	14301.20	47683.00	0.35	3821.92	2.50	16845.80	49146.60	1.60
0.34	2.71	ø8/20	2	2	13 (TG)	SLV	0.40	4741.64	2.50	12435.80	33262.90	0.35	6988.65	2.50	14648.60	34283.90	2.10
0.34	2.71	ø8/20	2	2	13 (TG)	SLV	0.40	4757.93	2.50	12435.80	33485.50	0.35	7034.68	2.50	14648.60	34513.30	2.08
0.34	2.71	ø8/20	2	2	9 (TG)	SLV	0.40	7577.74	2.50	12435.80	33491.10	0.35	2704.53	2.50	14648.60	34519.10	1.64
2.71	3.30	ø8/14	2	2	18	SLU	0.40	1564.46	2.50	17765.40	34453.70	0.35	671.82	2.50	20926.50	35511.20	11.36
2.71	3.30	ø8/14	2	2	20	SLU	0.40	1595.47	2.50	17765.40	34453.70	0.35	629.92	2.50	20926.50	35511.20	11.13
2.71	3.30	ø8/14	2	2	10 (TG)	SLD	0.40	6736.68	2.50	20430.20	47818.70	0.35	6248.67	2.50	24065.50	49286.50	3.03
2.71	3.30	ø8/14	2	2	16 (TG)	SLD	0.40	8914.32	2.50	20430.20	47683.00	0.35	3821.92	2.50	24065.50	49146.60	2.29
2.71	3.30	ø8/14	2	2	13 (TG)	SLV	0.40	4741.64	2.50	17765.40	33262.90	0.35	6988.65	2.50	20926.50	34283.90	2.99
2.71	3.30	ø8/14	2	2	13 (TG)	SLV	0.40	4757.93	2.50	17765.40	33485.50	0.35	7034.68	2.50	20926.50	34513.30	2.97
2.71	3.30	ø8/14	2	2	9 (TG)	SLV	0.40	7577.74	2.50	17765.40	33491.10	0.35	2704.53	2.50	20926.50	34519.10	2.34
3.56	4.13	ø8/14	2	2	18	SLU	0.40	3104.81	2.50	17765.40	31835.50	0.35	1435.76	2.50	20926.50	32812.70	5.72
3.56	4.13	ø8/14	2	2	20	SLU	0.40	3123.04	2.50	17765.40	31837.60	0.35	1395.37	2.50	20926.50	32814.90	5.69
3.56	4.13	ø8/14	2	2	2 (TG)	SLD	0.40	6947.65	2.50	20430.20	45107.80	0.35	4480.88	2.50	24065.50	46492.40	2.94
3.56	4.13	ø8/14	2	2	14 (TG)	SLD	0.40	8297.37	2.50	20430.20	45114.90	0.35	2760.81	2.50	24065.50	46499.60	2.46
3.56	4.13	ø8/14	2	2	7 (TG)	SLV	0.40	5417.05	2.50	17765.40	30737.00	0.35	5398.60	2.50	20926.50	31680.50	3.28
3.56	4.13	ø8/14	2	2	13 (TG)	SLV	0.40	7012.22	2.50	17765.40	30769.80	0.35	1892.56	2.50	20926.50	31714.30	2.53
4.13	6.43	ø8/20	2	2	18	SLU	0.40	3104.81	2.50	12435.80	31803.00	0.35	1435.76	2.50	14648.60	32779.20	4.01
4.13	6.43	ø8/20	2	2	20	SLU	0.40	3123.04	2.50	12435.80	31805.10	0.35	1395.37	2.50	14648.60	32781.40	3.98
4.13	6.43	ø8/20	2	2	2 (TG)	SLD	0.40	6947.65	2.50	14301.20	45107.80	0.35	4480.88	2.50	16845.80	46492.40	2.06
4.13	6.43	ø8/20	2	2	14 (TG)	SLD	0.40	8297.37	2.50	14301.20	45114.90	0.35	2760.81	2.50	16845.80	46499.60	1.72
4.13	6.43	ø8/20	2	2	7 (TG)	SLV	0.40	5417.05	2.50	12435.80	30737.00	0.35	5398.60	2.50	14648.60	31680.50	2.30
4.13	6.43	ø8/20	2	2	13 (TG)	SLV	0.40	7012.22	2.50	12435.80	30769.80	0.35	1892.56	2.50	14648.60	31714.30	1.77
6.43	7.00	ø8/14	2	2	18	SLU	0.40	3104.81	2.50	17765.40	31673.00	0.35	1435.76	2.50	20926.50	32645.20	5.72
6.43	7.00	ø8/14	2	2	20	SLU	0.40	3123.04	2.50	17765.40	31675.10	0.35	1395.37	2.50	20926.50	32647.40	5.69
6.43	7.00	ø8/14	2	2	2 (TG)	SLD	0.40	6947.65	2.50	20430.20	45107.80	0.35	4480.88	2.50	24065.50	46492.40	2.94
6.43	7.00	ø8/14	2	2	14 (TG)	SLD	0.40	8297.37	2.50	20430.20	45114.90	0.35	2760.81	2.50	24065.50	46499.60	2.46
6.43	7.00	ø8/14	2	2	7 (TG)	SLV	0.40	5417.05	2.50	17765.40	30737.00	0.35	5398.60	2.50	20926.50	31680.50	3.28
6.43	7.00	ø8/14	2	2	13 (TG)	SLV	0.40	7012.22	2.50	17765.40	30769.80	0.35	1892.56	2.50	20926.50	31714.30	2.53

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
133	N	ø8/ 7	Y+	E	2	11.25	7.63	0.40	0.21	0.20	4.02	1.20
			Z+	I	2	12.25	8.17	0.40	0.26	0.20	4.02	1.20
			Z-	I	2	12.25	8.17	0.40	0.26	0.20	4.02	1.20
233	N	ø8/ 7	Y+	E	2	7.16	7.63	0.40	0.21	0.20	4.02	1.20
			Z+	I	2	4.62	5.62	0.40	0.26	0.20	4.02	1.20
			Z-	I	2	7.70	5.62	0.40	0.26	0.20	4.02	1.20

Pilastrata n. 34

Nodi: 34 134 234 334

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
5R		30.00	50.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _r	Sic.
3.56	3 (α)	SLV	2	5	0.00	-15393.50	-1623.23	6.45	-10462.20	726.79	1.10	799.47	-15393.50	-15320.30	1229.37	168.75	9.31	1.465
6.91	3 (α)	SLV	2	5	335.00	-14137.30	1890.38	4.68	8853.85	-504.83	1.10	-555.31	-14146.10	15221.90	-700.32	354.38	11.29	1.718
7.26	7 (α)	SLV	3	5	0.00	-6769.34	2175.78	2.66	5786.19	324.79	1.10	357.27	-6769.34	13855.80	741.41	5.63	13.11	2.393
8.31	13	SLV	3	5	105.00	-6146.22	3964.45			-599.36			-6146.23	13514.40	-1910.69	343.13	9.63	3.404
-0.25	2	SLD	1	5	0.00	-31551.50	4242.37			1376.67			-31551.50	17459.60	5996.59	39.38	6.05	4.139
-0.25	2	SLD	1	5	0.00	-31551.50	4242.37			1376.67			-31551.50	17459.60	5996.59	39.38	6.05	4.139
3.21	6 (e)	SLD	1	5	346.00	-32147.50	928.57		928.57	-222.50		-642.95	-32147.50	13509.80	-9111.27	298.13	5.37	7.489
3.56	10	SLD	2	5	0.00	-14997.90	-3556.20			773.40			-14997.90	-16868.20	3586.17	154.69	8.34	4.739
6.91	10	SLD	2	5	335.00	-13741.70	3633.70			-484.21			-13741.90	1				

Relazione di calcolo

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	27.89
-0.25	1	3.81	43.99	27.89
3.21	1	3.81	43.99	27.89

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	My _{u,s} <daNm>	My _u <daNm>	Mz _{u,s} <daNm>	Mz _u <daNm>	α <grad>	ε _r
-0.25	1	SLV	1	5	0.00	-31338.10	5433.87			1690.20			-31338.10	14345.90	15054.00	4403.80	4615.99	39.38	4.89
-0.25	1	SLV	1	5	0.00	-31338.10	5433.87			1690.20			-31338.10	14345.90	15054.00	4403.80	4615.99	39.38	4.89
3.21	18(e)	SLU	1	5	346.00	-45235.60	14.24		1130.89	-647.54		-904.71	-45235.60	9684.12	10564.00	-7936.18	-8668.88	295.31	3.82

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	22	SLE R	1	5	0.00	-35467.60	345.86	-178.25	0.00	15.27	25.51	360.92
-0.25	30	SLE Q	1	5	0.00	-32357.40	301.39	-186.56	0.00	15.27	23.27	329.62
-0.25	22	SLE R	1	5	0.00	-35467.60	345.86	-178.25	0.00	15.27	25.51	360.92
-0.25	30	SLE Q	1	5	0.00	-32357.40	301.39	-186.56	0.00	15.27	23.27	329.62
3.21	21	SLE R	1	5	346.00	-34093.00	-468.20	-93.71	0.00	15.27	25.49	355.89
3.21	20	SLE Q	1	5	346.00	-31059.90	-419.03	45.10	0.00	15.27	22.88	320.13
3.56	22	SLE R	2	5	0.00	-16738.30	515.56	-200.18	0.00	15.27	16.69	219.25
3.56	30	SLE Q	2	5	0.00	-15696.70	450.77	-209.18	0.00	15.27	15.43	203.68
6.91	22	SLE R	2	5	335.00	-15482.00	-221.19	358.59	0.00	15.27	13.78	188.13
6.91	30	SLE Q	2	5	335.00	-14440.40	-199.62	346.89	0.00	15.27	12.86	175.72
7.26	24	SLE R	3	5	0.00	-7659.01	153.70	317.31	0.00	15.27	8.24	109.35
7.26	32	SLE Q	3	5	0.00	-6919.76	158.89	303.34	0.00	15.27	7.77	102.39
8.31	22	SLE R	3	5	105.00	-7273.61	-291.84	138.46	0.00	15.27	8.34	107.05
8.31	30	SLE Q	3	5	105.00	-6534.36	-269.04	138.90	0.00	15.27	7.67	98.11

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic. T
-0.25	0.33	ø8/10	2	2	17	SLU	0.50	292.67	2.50	22216.30	38139.50	0.30	65.27	2.50	39918.40	41117.70	75.91
-0.25	0.33	ø8/10	2	2	18	SLU	0.50	317.72	2.50	22216.30	38149.50	0.30	57.32	2.50	39918.40	41128.50	69.92
-0.25	0.33	ø8/10	2	2	2 (TG)	SLD	0.50	3750.93	2.50	25548.70	52255.20	0.30	11195.70	2.50	45906.20	56335.70	4.10
-0.25	0.33	ø8/10	2	2	8 (TG)	SLD	0.50	5968.09	2.50	25548.70	52205.50	0.30	8252.40	2.50	45906.20	56282.10	4.28
-0.25	0.33	ø8/10	2	2	9 (TG)	SLV	0.50	1027.96	2.50	22216.30	36212.40	0.30	11024.50	2.47	39405.80	39405.80	3.57
-0.25	0.33	ø8/10	2	2	7 (TG)	SLV	0.50	4693.08	2.50	22216.30	36202.00	0.30	7211.58	2.47	39399.10	39399.10	4.73
0.33	2.63	ø8/20	2	2	17	SLU	0.50	292.67	2.50	11108.10	38103.00	0.30	65.27	2.50	19959.20	41078.40	37.96
0.33	2.63	ø8/20	2	2	18	SLU	0.50	317.72	2.50	11108.10	38113.00	0.30	57.32	2.50	19959.20	41089.20	34.96
0.33	2.63	ø8/20	2	2	2 (TG)	SLD	0.50	3750.93	2.50	12774.30	52255.20	0.30	11195.70	2.50	22953.10	56335.70	2.05
0.33	2.63	ø8/20	2	2	8 (TG)	SLD	0.50	5968.09	2.50	12774.30	52205.50	0.30	8252.40	2.50	22953.10	56282.10	2.14
0.33	2.63	ø8/20	2	2	9 (TG)	SLV	0.50	1027.96	2.50	11108.10	36212.40	0.30	11024.50	2.50	19959.20	39040.20	1.81
0.33	2.63	ø8/20	2	2	7 (TG)	SLV	0.50	4693.08	2.50	11108.10	36202.00	0.30	7211.58	2.50	19959.20	39028.90	2.37
2.63	3.21	ø8/10	2	2	17	SLU	0.50	292.67	2.50	22216.30	37957.00	0.30	65.27	2.50	39918.40	40921.00	75.91
2.63	3.21	ø8/10	2	2	18	SLU	0.50	317.72	2.50	22216.30	37967.00	0.30	57.32	2.50	39918.40	40931.80	69.92
2.63	3.21	ø8/10	2	2	2 (TG)	SLD	0.50	3750.93	2.50	25548.70	52255.20	0.30	11195.70	2.50	45906.20	56335.70	4.10
2.63	3.21	ø8/10	2	2	8 (TG)	SLD	0.50	5968.09	2.50	25548.70	52205.50	0.30	8252.40	2.50	45906.20	56282.10	4.28
2.63	3.21	ø8/10	2	2	9 (TG)	SLV	0.50	1027.96	2.50	22216.30	36212.40	0.30	11024.50	2.47	39405.80	39405.80	3.57
2.63	3.21	ø8/10	2	2	7 (TG)	SLV	0.50	4693.08	2.50	22216.30	36202.00	0.30	7211.58	2.47	39399.10	39399.10	4.73
3.56	4.12	ø8/10	2	2	18	SLU	0.50	290.16	2.50	22216.30	34912.20	0.30	195.43	2.42	38573.40	38573.40	76.57
3.56	4.12	ø8/10	2	2	14 (TG)	SLD	0.50	1643.56	2.50	25548.70	50026.50	0.30	11403.80	2.50	45906.20	53932.90	4.03
3.56	4.12	ø8/10	2	2	8 (TG)	SLD	0.50	3640.65	2.50	25548.70	50013.80	0.30	9834.23	2.50	45906.20	53919.20	4.67
3.56	4.12	ø8/10	2	2	15 (TG)	SLV	0.50	229.01	2.50	22216.30	33976.80	0.30	10167.80	2.38	37963.20	37963.20	3.73
3.56	4.12	ø8/10	2	2	15 (TG)	SLV	0.50	1737.59	2.50	22216.30	33972.30	0.30	9416.67	2.38	37963.20	37960.30	4.03
4.12	6.35	ø8/20	2	2	18	SLU	0.50	290.16	2.50	11108.10	34876.90	0.30	195.43	2.50	19959.20	37600.40	38.28
4.12	6.35	ø8/20	2	2	14 (TG)	SLD	0.50	1643.56	2.50	12774.30	50026.50	0.30	11403.80	2.50	22953.10	53932.90	2.01
4.12	6.35	ø8/20	2	2	8 (TG)	SLD	0.50	3640.65	2.50	12774.30	50013.80	0.30	9834.23	2.50	22953.10	53919.20	2.33
4.12	6.35	ø8/20	2	2	15 (TG)	SLV	0.50	229.01	2.50	11108.10	33976.80	0.30	10167.80	2.50	19959.20	36629.90	1.96
4.12	6.35	ø8/20	2	2	15 (TG)	SLV	0.50	1737.59	2.50	11108.10	33972.30	0.30	9416.67	2.50	19959.20	36625.10	2.12
6.35	6.91	ø8/10	2	2	18	SLU	0.50	290.16	2.50	22216.30	34735.60	0.30	195.43	2.41	38458.90	38458.90	76.57
6.35	6.91	ø8/10	2	2	14 (TG)	SLD	0.50	1643.56	2.50	25548.70	50026.50	0.30	11403.80	2.50	45906.20	53932.90	4.03
6.35	6.91	ø8/10	2	2	8 (TG)	SLD	0.50	3640.65	2.50	25548.70	50013.80	0.30	9834.23	2.50	45906.20	53919.20	4.67
6.35	6.91	ø8/10	2	2	15 (TG)	SLV	0.50	229.01	2.50	22216.30	33976.80	0.30	10167.80	2.38	37963.20	37963.20	3.73
6.35	6.91	ø8/10	2	2	15 (TG)	SLV	0.50	1737.59	2.50	22216.30	33972.30	0.30	9416.67	2.38	37963.20	37960.30	4.03
7.26	8.31	ø8/10	2	2	20	SLU	0.50	542.59	2.50	22216.30	33369.40	0.30	361.32	2.35	37561.70	37561.70	40.94
7.26	8.31	ø8/10	2	2	18	SLU	0.50	551.89	2.50	22216.30	33370.40	0.30	140.78	2.35	37562.50	37562.50	40.25
7.26	8.31	ø8/10	2	2	2 (TG)	SLD	0.50	3313.92	2.50	25548.70	48970.90	0.30	33408.50	2.50	45906.20	52794.90	1.37
7.26	8.31	ø8/10	2	2	4 (TG)	SLD	0.50	10901.30	2.50	25548.70	48954.90	0.30	29456.80	2.50	45906.20	52777.70	1.56
7.26	8.31	ø8/10	2	2	15 (TG)	SLV	0.50	1552.11	2.50	22216.30	32923.50	0.30	29070.00	2.33	37264.30	37264.30	1.28
7.26	8.31	ø8/10	2	2	11 (TG)	SLV	0.50	6701.30	2.50	22216.30	32876.70	0.30	26010.00	2.33	37232.90	37232.90	1.43
7.26	8.31	ø8/10	2	2	11 (TG)	SLV	0.50	6708.69	2.50	22216.30	32922.20	0.30	26123.90	2.33	37263.40	37263.40	1.43

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
134	N	ø8/ 9	Z+	I	2	6.63	6.63	0.30	0.40	0.29	4.02	1.19

Relazione di calcolo

Sez.	Typo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _x	Sic.
3.56	15 (a)	SLV	2	1	0.00	-8487.80	2231.85	2.52	5629.46	1188.18	5.25	6237.90	-8487.80	6081.22	6791.46	60.47	5.16	1.085
6.91	9	SLV	2	1	335.00	-7048.44	-3615.46			-1960.93			-7048.45	-8482.52	-4555.72	219.38	5.50	2.341
-0.25	10	SLD	1	1	0.00	-19961.00	2840.13			1061.50			-19961.00	12365.40	4554.18	28.13	6.08	4.346
-0.25	10	SLD	1	1	0.00	-19961.00	2840.13			1061.50			-19961.00	12365.40	4554.18	28.13	6.08	4.346
3.21	10	SLD	1	1	346.00	-18923.00	-1933.81			-843.59			-18923.00	-11735.20	-5318.90	213.75	5.80	6.107
3.56	10	SLD	2	1	0.00	-8233.65	3001.09			1695.56			-8233.63	10133.90	5657.55	39.38	6.25	3.367
6.91	10	SLD	2	1	335.00	-7228.65	-2888.79			-1667.12			-7228.65	-10028.70	-5624.62	219.38	6.32	3.447

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	30.43
-0.25	1	3.81	43.99	30.43
3.21	1	3.81	43.99	30.43

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Myu <daNm>	Mzu,s <daNm>	Mzu <daNm>	α <grad>
-0.25	9	SLV	1	1	0.00	-19401.00	3558.53			-1375.38			-19401.00	9805.89	10319.20	-3676.69	-3856.81	329.06
-0.25	9	SLV	1	1	0.00	-19401.00	3558.53			-1375.38			-19401.00	9805.89	10319.20	-3676.69	-3856.81	329.06
3.21	13 (a)	SLV	1	1	346.00	-18473.60	-2249.46	1.58	-3544.64	853.61	5.08	4339.07	-18473.60	-5791.73	-6145.70	6967.12	7421.00	118.13

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
-0.25	24	SLE R	1	1	0.00	-24372.10	163.66	376.29	0.00	15.27	23.07	321.76
-0.25	32	SLE Q	1	1	0.00	-21982.20	125.24	383.71	0.00	15.27	20.96	292.38
-0.25	24	SLE R	1	1	0.00	-24372.10	163.66	376.29	0.00	15.27	23.07	321.76
-0.25	32	SLE Q	1	1	0.00	-21982.20	125.24	383.71	0.00	15.27	20.96	292.38
3.21	24	SLE R	1	1	346.00	-23334.10	-240.15	-402.18	0.00	15.27	23.61	324.17
3.21	22	SLE R	1	1	346.00	-23220.70	-289.57	-341.55	0.00	15.27	23.56	322.54
3.21	32	SLE Q	1	1	346.00	-20944.20	-181.38	-422.72	0.00	15.27	21.38	293.58
3.56	22	SLE R	2	1	0.00	-9472.30	678.34	447.84	5.09	10.18	21.68	256.98
3.56	30	SLE Q	2	1	0.00	-8841.32	588.57	470.91	5.09	10.18	20.12	239.45
6.91	22	SLE R	2	1	335.00	-8467.30	-745.34	-291.31	7.63	7.63	20.72	240.09
6.91	30	SLE Q	2	1	335.00	-7836.32	-673.09	-306.82	5.09	10.18	19.36	224.80

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cm²>	A _{c,eff} <cm²>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
3.56	30	SLE Q	2	1	0.00	-8841.32	470.91	588.57	39.00	252.00	0.13	221.18	18.00	2.54	262.33	67.66	360.08	0.01	0.00
6.91	30	SLE Q	2	1	335.00	-7836.32	-306.82	-673.09	39.00	152.00	0.13	199.04	18.00	5.09	512.55	84.43	439.96	0.02	0.01

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.33	ø8/12	2	2	20	SLV	0.40	161.43	2.50	18513.50	29841.40	0.30	271.14	2.50	25889.50	31297.80	95.49
-0.25	0.33	ø8/12	2	2	18	SLV	0.40	195.37	2.50	18513.50	29826.60	0.30	225.87	2.50	25889.50	31282.30	94.76
-0.25	0.33	ø8/12	2	2	2 (TG)	SLD	0.40	3382.29	2.50	21290.60	41454.00	0.30	7775.05	2.50	29772.90	43477.20	3.83
-0.25	0.33	ø8/12	2	2	8 (TG)	SLD	0.40	5146.01	2.50	21290.60	41309.50	0.30	5833.95	2.50	29772.90	43325.60	4.14
-0.25	0.33	ø8/12	2	2	1 (TG)	SLV	0.40	2901.10	2.50	18513.50	28703.60	0.30	6469.17	2.50	25889.50	30104.50	4.00
-0.25	0.33	ø8/12	2	2	15 (TG)	SLV	0.40	4449.18	2.50	18513.50	28570.00	0.30	4560.89	2.50	25889.50	29964.40	4.16
0.33	2.63	ø8/20	2	2	20	SLV	0.40	161.43	2.50	11108.10	29812.20	0.30	271.14	2.50	15533.70	31267.20	57.29
0.33	2.63	ø8/20	2	2	18	SLV	0.40	195.37	2.50	11108.10	29797.40	0.30	225.87	2.50	15533.70	31251.70	56.86
0.33	2.63	ø8/20	2	2	2 (TG)	SLD	0.40	3382.29	2.50	12774.30	41454.00	0.30	7775.05	2.50	17863.70	43477.20	2.30
0.33	2.63	ø8/20	2	2	8 (TG)	SLD	0.40	5146.01	2.50	12774.30	41309.50	0.30	5833.95	2.50	17863.70	43325.60	2.48
0.33	2.63	ø8/20	2	2	1 (TG)	SLV	0.40	2901.10	2.50	11108.10	28703.60	0.30	6469.17	2.50	15533.70	30104.50	2.40
0.33	2.63	ø8/20	2	2	15 (TG)	SLV	0.40	4449.18	2.50	11108.10	28570.00	0.30	4560.89	2.50	15533.70	29964.40	2.50
2.63	3.21	ø8/12	2	2	20	SLV	0.40	161.43	2.50	18513.50	29695.40	0.30	271.14	2.50	25889.50	31144.70	95.49
2.63	3.21	ø8/12	2	2	18	SLV	0.40	195.37	2.50	18513.50	29680.60	0.30	225.87	2.50	25889.50	31129.20	94.76
2.63	3.21	ø8/12	2	2	2 (TG)	SLD	0.40	3382.29	2.50	21290.60	41454.00	0.30	7775.05	2.50	29772.90	43477.20	3.83
2.63	3.21	ø8/12	2	2	8 (TG)	SLD	0.40	5146.01	2.50	21290.60	41309.50	0.30	5833.95	2.50	29772.90	43325.60	4.14
2.63	3.21	ø8/12	2	2	1 (TG)	SLV	0.40	2901.10	2.50	18513.50	28703.60	0.30	6469.17	2.50	25889.50	30104.50	4.00
2.63	3.21	ø8/12	2	2	15 (TG)	SLV	0.40	4449.18	2.50	18513.50	28570.00	0.30	4560.89	2.50	25889.50	29964.40	4.16
3.56	4.12	ø8/12	2	2	20	SLV	0.40	515.99	2.50	18513.50	27265.60	0.30	321.84	2.50	25889.50	28596.30	35.88
3.56	4.12	ø8/12	2	2	18	SLV	0.40	553.22	2.50	18513.50	27262.00	0.30	277.03	2.50	25889.50	28592.60	33.46
3.56	4.12	ø8/12	2	2	12 (TG)	SLD	0.40	2703.88	2.50	21290.60	39446.00	0.30	7294.15	2.50	29772.90	41371.20	4.08
3.56	4.12	ø8/12	2	2	16 (TG)	SLD	0.40	3911.45	2.50	21290.60	39538.60	0.30	6538.42	2.50	29772.90	41468.30	4.55
3.56	4.12	ø8/12	2	2	7 (TG)	SLV	0.40	2500.78	2.50	18513.50	26719.40	0.30	5769.21	2.50	25889.50	28023.40	4.49
3.56	4.12	ø8/12	2	2	11 (TG)	SLV	0.40	4405.46	2.50	18513.50	26736.00	0.30	3966.24	2.50	25889.50	28040.80	4.20
4.12	6.35	ø8/20	2	2	20	SLV	0.40	515.99	2.50	11108.10	27237.40	0.30	321.84	2.50	15533.70	28566.70	21.53
4.12	6.35	ø8/20	2	2	18	SLV	0.40	553.22	2.50	11108.10	27233.80	0.30	277.03	2.50	15533.70	28562.90	20.08
4.12	6.35	ø8/20	2	2	12 (TG)	SLD	0.40	2703.88	2.50	12774.30	39446.00	0.30	7294.15	2.50	17863.70	41371.20	2.45
4.12	6.35	ø8/20	2	2	16 (TG)	SLD	0.40	3911.45	2.50	12774.30	39538.60	0.30	6538.42	2.50	17863.70	41468.30	2.73
4.12	6.35	ø8/20	2	2	7 (TG)	SLV	0.40	2500.78	2.50	11108.10	26719.40	0.30	5769.21	2.50	15533.70	28023.40	2.69
4.12	6.35	ø8/20	2	2	11 (TG)	SLV	0.40	4405.46	2.50	11108.1							

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
135	N	ø8/ 7	Y+	I	2	4.62	4.62	0.40	0.20	0.29	5.03	1.11
			Z+	I	2	4.62	4.62	0.40	0.30	0.20	4.02	1.11
			Y-	I	2	4.62	4.62	0.40	0.20	0.20	4.02	1.11
			Z-	I	2	4.62	4.62	0.30	0.30	0.29	5.03	1.48
235	N	ø8/ 7	Y+	I	2	4.62	4.62	0.40	0.20	0.20	4.02	1.11
			Z+	I	2	4.62	4.62	0.40	0.30	0.20	4.02	1.11
			Y-	I	2	4.62	4.62	0.40	0.20	0.20	4.02	1.11
			Z-	I	2	4.62	4.62	0.30	0.30	0.29	5.03	1.48

Pilastrata n. 36

Nodi: 36 136 236 336

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
9	R	35.00	50.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _r	Sic.
3.56	9 (α)	SLV	2	9	0.00	-21300.50	1537.27	3.95	6070.58	887.55	4.17	3697.86	-21300.50	13657.00	8462.25	56.25	4.51	2.260
7.00	11 (α)	SLV	2	9	344.00	-20776.90	-928.95	4.66	-4324.61	973.32	2.94	2858.50	-20777.00	-13266.20	8652.95	122.34	4.52	3.055
7.26	15 (α)	SLV	3	9	0.00	-9324.52	544.30	5.49	2989.86	-1453.51	2.14	-3106.81	-9324.50	9074.57	-9621.83	289.69	5.29	3.067
8.42	13	SLV	3	9	116.00	-8528.01	1963.61			-1913.27			-8528.02	9466.67	-9403.79	291.09	5.27	4.867
-0.25	6	SLD	1	9	0.00	-41896.70	2952.53			-2406.60			-41896.70	15534.10	-12819.60	296.72	4.54	5.288
-0.25	6	SLD	1	9	0.00	-41896.70	2952.53			-2406.60			-41896.70	15534.10	-12819.60	296.72	4.54	5.288
3.30	6 (e)	SLD	1	9	355.00	-44864.50	1087.27		1121.61	1631.38		1631.38	-44864.40	10371.10	15369.70	74.53	4.89	6.261
3.56	6	SLD	2	9	0.00	-22116.10	-1531.98			-2402.78			-22116.10	-8735.38	-13558.00	256.64	6.05	5.660
7.00	6	SLD	2	9	344.00	-20611.10	-1486.64			1944.47			-20611.10	-9869.06	13079.90	105.47	5.89	6.694
7.26	6	SLD	3	9	0.00	-9524.96	1054.34			-2118.13			-9524.96	6252.54	-12956.40	279.84	7.18	6.080
8.42	14	SLD	3	9	116.00	-8748.51	1593.78			-1484.72			-8748.51	12164.10	-11029.60	292.50	5.96	7.538

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <cm>	λ	λ*
-0.25	1	3.81	37.71	30.75
-0.25	1	3.81	37.71	30.75
3.30	1	3.81	37.71	30.75

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	My _s <daNm>	Myu <daNm>	Mz _s <daNm>	Mzu <daNm>	α <grad>
-0.25	20 (e)	SLU	1	9	0.00	-66571.40	-264.08		-1664.29	-798.92		-1331.43	-66623.20	-12795.10	-13921.30	-10507.90	-11441.80	241.88
-0.25	20 (e)	SLU	1	9	0.00	-66571.40	-264.08		-1664.29	-798.92		-1331.43	-66623.20	-12795.10	-13921.30	-10507.90	-11441.80	241.88
3.30	20 (e)	SLU	1	9	355.00	-64552.30	782.43		1613.81	1326.87		1326.87	-64554.50	12780.60	13900.90	10461.10	11387.20	61.88

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	21	SLE R	1	9	0.00	-49885.20	-565.80	-324.18	0.00	20.36	30.94	428.48
-0.25	29	SLE Q	1	9	0.00	-43691.10	-445.95	-306.17	0.00	20.36	26.80	372.77
-0.25	21	SLE R	1	9	0.00	-49885.20	-565.80	-324.18	0.00	20.36	30.94	428.48
-0.25	29	SLE Q	1	9	0.00	-43691.10	-445.95	-306.17	0.00	20.36	26.80	372.77
3.30	24	SLE R	1	9	355.00	-48413.20	980.68	589.78	0.00	20.36	35.28	466.70
3.30	32	SLE Q	1	9	355.00	-42219.10	768.23	518.22	0.00	20.36	30.04	400.42
3.56	21	SLE R	2	9	0.00	-25510.10	-1098.90	-353.91	0.00	20.36	23.81	294.20
3.56	29	SLE Q	2	9	0.00	-23345.30	-890.49	-318.20	0.00	20.36	20.77	259.86
7.00	21	SLE R	2	9	344.00	-24005.10	674.24	69.42	0.00	20.36	17.83	232.31
7.00	29	SLE Q	2	9	344.00	-21840.30	582.47	72.31	0.00	20.36	16.01	209.50
7.26	24	SLE R	3	9	0.00	-11603.50	-725.44	48.63	0.00	20.36	12.16	144.82
7.26	32	SLE Q	3	9	0.00	-10065.20	-707.49	19.41	0.00	20.36	11.19	130.96
8.42	24	SLE R	3	9	116.00	-11096.00	116.65	269.17	0.00	20.36	7.92	106.80
8.42	21	SLE R	3	9	116.00	-11068.20	68.87	334.99	0.00	20.36	7.87	106.94
8.42	32	SLE Q	3	9	116.00	-9557.70	90.06	260.81	0.00	20.36	6.90	92.97

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic. T
-0.25	0.34	ø8/10	2	2	17	SLU	0.50	582.49	2.50	24871.60	43067.10	0.35	332.38	2.50	38148.20	46239.70	42.70
-0.25	0.34	ø8/10	2	2	20	SLU	0.50	598.82	2.50	24871.60	43067.10	0.35	294.79	2.50	38148.20	46239.70	41.53
-0.25	0.34	ø8/10	2	2	12 (TG)	SLD	0.50	6469.18	2.50	28602.30	58927.20	0.35	11725.60	2.50	43870.50	63268.10	3.74
-0.25	0.34	ø8/10	2	2	8 (TG)	SLD	0.50	8704.22	2.50	28602.30	59322.50	0.35	8231.50	2.50	43870.50	63692.60	3.29
-0.25	0.34	ø8/10	2	2	15 (TG)	SLV	0.50	4118.17	2.50	24871.60	41296.20	0.35	11501.40	2.50	38148.20	44338.30	3.32
-0.25	0.34	ø8/10	2	2	7 (TG)	SLV	0.50	7322.97	2.50	24871.60	41444.10	0.35	6870.49	2.50	38148.20	44497.10	3.40
0.34	2.71	ø8/20	2	2	17	SLU	0.50	582.49	2.50	12435.80	43067.10	0.35	332.38	2.50	19074.10	46239.70	21.35
0.34	2.71	ø8/20	2	2	20	SLU	0.50	598.82	2.50	12435.80	43067.10	0.35	294.79	2.50	19074.10	46239.70	20.77
0.34	2.71	ø8/20	2	2	12 (TG)	SLD	0.50	6469.18	2.50	14301.20	59322.50	0.35	11725.60	2.50	21935.20	63268.10	1.87
0.34	2.71	ø8/20	2	2	8 (TG)	SLD	0.50	8704.22	2.50	14301.20	59322.50	0.35	8231.50	2.50	21935.20	63692.60	1.64
0.34	2.71	ø8/20	2	2	15 (TG)	SLV	0.50	4118.17	2.50	12435.80	41296.20	0.35	11501.40	2.50	19074.10	44338.30	1.66
0.34	2.71	ø8/20	2	2	7 (TG)	SLV	0.50	7322.97	2.50	12435.80	41444.10	0.35	6870.49	2.50	19074.10	44497.10	1.70
2.71	3.30	ø8/10	2	2	17	SLU	0.50	582.49	2.50	24871.60	43067.10	0.35	332.38	2.50	38148.20	46239.70	42.70
2.71	3.30	ø8/10	2	2	20	SLU	0.50	598.82	2.50	24871.60	43067.10	0.35	294.79	2.50	38148.20	46239.70	41.53
2.71	3.30	ø8/10	2	2	12 (TG)	SLD	0.50	6469.18	2.50	28602.30	58927.20	0.35	11725.60	2.50	43870.50	63268.10	3.74

Relazione di calcolo

2.71	3.30	ø8/10	2	2	8(TG)	SLD	0.50	8704.22	2.50	28602.30	59322.50	0.35	8231.50	2.50	43870.50	63692.60	3.29
2.71	3.30	ø8/10	2	2	15(TG)	SLV	0.50	4118.17	2.50	24871.60	41296.20	0.35	11501.40	2.50	38148.20	44338.30	3.32
2.71	3.30	ø8/10	2	2	7(TG)	SLV	0.50	7322.97	2.50	24871.60	41444.10	0.35	6870.49	2.50	38148.20	44497.10	3.40
3.56	4.13	ø8/10	2	2	17	SLU	0.50	691.68	2.50	24871.60	40081.70	0.35	149.62	2.50	38148.20	43034.40	35.96
3.56	4.13	ø8/10	2	2	20	SLU	0.50	700.90	2.50	24871.60	40089.40	0.35	94.98	2.50	38148.20	43042.60	35.49
3.56	4.13	ø8/10	2	2	10(TG)	SLD	0.50	5937.35	2.50	28602.30	56676.60	0.35	10484.40	2.50	43870.50	60851.70	4.18
3.56	4.13	ø8/10	2	2	4(TG)	SLD	0.50	8392.76	2.50	28602.30	56659.70	0.35	6663.41	2.50	43870.50	60833.60	3.41
3.56	4.13	ø8/10	2	2	3(TG)	SLV	0.50	3147.83	2.50	24871.60	38577.60	0.35	11094.60	2.50	38148.20	41419.50	3.44
3.56	4.13	ø8/10	2	2	3(TG)	SLV	0.50	3234.26	2.50	24871.60	38743.90	0.35	11114.40	2.50	38148.20	41598.00	3.43
3.56	4.13	ø8/10	2	2	15(TG)	SLV	0.50	6827.62	2.50	24871.60	38721.30	0.35	5583.73	2.50	38148.20	41573.70	3.64
4.13	6.43	ø8/20	2	2	17	SLU	0.50	691.68	2.50	12435.80	40041.10	0.35	149.62	2.50	19074.10	42990.80	17.98
4.13	6.43	ø8/20	2	2	20	SLU	0.50	700.90	2.50	12435.80	40048.80	0.35	94.98	2.50	19074.10	42999.00	17.74
4.13	6.43	ø8/20	2	2	10(TG)	SLD	0.50	5937.35	2.50	14301.20	56676.60	0.35	10484.40	2.50	21935.20	60851.70	2.09
4.13	6.43	ø8/20	2	2	4(TG)	SLD	0.50	8392.76	2.50	14301.20	56659.70	0.35	6663.41	2.50	21935.20	60833.60	1.70
4.13	6.43	ø8/20	2	2	3(TG)	SLV	0.50	3147.83	2.50	12435.80	38577.60	0.35	11094.60	2.50	19074.10	41419.50	1.72
4.13	6.43	ø8/20	2	2	3(TG)	SLV	0.50	3234.26	2.50	12435.80	38743.90	0.35	11114.40	2.50	19074.10	41598.00	1.72
4.13	6.43	ø8/20	2	2	15(TG)	SLV	0.50	6827.62	2.50	12435.80	38721.30	0.35	5583.73	2.50	19074.10	41573.70	1.82
6.43	7.00	ø8/10	2	2	17	SLU	0.50	691.68	2.50	24871.60	39878.60	0.35	149.62	2.50	38148.20	42816.30	35.96
6.43	7.00	ø8/10	2	2	20	SLU	0.50	700.90	2.50	24871.60	39886.30	0.35	94.98	2.50	38148.20	42824.60	35.49
6.43	7.00	ø8/10	2	2	10(TG)	SLD	0.50	5937.35	2.50	28602.30	56676.60	0.35	10484.40	2.50	43870.50	60851.70	4.18
6.43	7.00	ø8/10	2	2	4(TG)	SLD	0.50	8392.76	2.50	28602.30	56659.70	0.35	6663.41	2.50	43870.50	60833.60	3.41
6.43	7.00	ø8/10	2	2	3(TG)	SLV	0.50	3147.83	2.50	24871.60	38577.60	0.35	11094.60	2.50	38148.20	41419.50	3.44
6.43	7.00	ø8/10	2	2	3(TG)	SLV	0.50	3234.26	2.50	24871.60	38743.90	0.35	11114.40	2.50	38148.20	41598.00	3.43
6.43	7.00	ø8/10	2	2	15(TG)	SLV	0.50	6827.62	2.50	24871.60	38721.30	0.35	5583.73	2.50	38148.20	41573.70	3.64
7.26	8.42	ø8/10	2	2	17	SLU	0.50	820.33	2.50	24871.60	37802.30	0.35	310.55	2.50	38148.20	40587.00	30.32
7.26	8.42	ø8/10	2	2	20	SLU	0.50	921.91	2.50	24871.60	37805.80	0.35	244.19	2.50	38148.20	40590.80	26.98
7.26	8.42	ø8/10	2	2	12(TG)	SLD	0.50	11549.80	2.50	28602.30	54978.20	0.35	34696.30	2.50	43870.50	59028.20	1.26
7.26	8.42	ø8/10	2	2	16(TG)	SLD	0.50	25047.70	2.50	28602.30	55057.80	0.35	9162.61	2.50	43870.50	59113.70	1.14
7.26	8.42	ø8/10	2	2	11(TG)	SLV	0.50	8928.62	2.50	24871.60	37021.60	0.35	29919.70	2.50	38148.20	39748.90	1.28
7.26	8.42	ø8/10	2	2	15(TG)	SLV	0.50	19909.30	2.50	24871.60	37127.10	0.35	11586.10	2.50	38148.20	39862.00	1.25

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cm>	As2 <cm>	Bj <m>	Hjc <m>	Hjw <m>	Ash <cm>	Rgsn
136	N	ø8/ 5	Y+	E	2	4.62	4.62	0.50	0.21	0.20	5.03	1.20
			Z+	I	2	4.12	4.62	0.36	0.36	0.20	5.03	1.68
			Z-	I	2	7.70	4.12	0.40	0.36	0.20	5.03	1.50
236	N	ø8/ 5	Y+	E	2	4.62	4.62	0.50	0.21	0.20	5.03	1.20
			Z+	I	2	4.12	4.62	0.36	0.36	0.20	5.03	1.68
			Z-	I	2	4.62	4.12	0.40	0.36	0.20	5.03	1.50
336	N	ø8/ 6	Y+	E	2	4.62	4.62	0.50	0.21	0.18	4.02	1.04
			Z+	I	2	4.12	4.62	0.36	0.36	0.18	4.02	1.45
			Z-	I	2	4.62	4.12	0.40	0.36	0.18	4.02	1.30

Pilastrata n. 37

Nodi: 37 137 237

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
1	R	30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.
3.56	7(α)	SLV	2	1	0.00	-5294.59	-827.72	8.15	-6750.08	1569.43	1.70	2663.83	-5294.59	-8926.80	3695.90	149.06	6.09	1.331
7.00	1	SLV	2	1	344.00	-3832.90	-2538.54			-2016.52			-3832.89	-7077.52	-5740.97	233.44	5.37	2.811
-0.25	2	SLD	1	1	0.00	-11746.70	2097.04			1411.11			-11746.70	9787.68	6642.37	47.81	5.72	4.680
-0.25	2	SLD	1	1	0.00	-11746.70	2097.04			1411.11			-11746.70	9787.68	6642.37	47.81	5.72	4.680
3.21	2	SLD	1	1	346.00	-10708.70	-1435.32			-1193.39			-10708.70	-8992.59	-7227.46	233.44	5.71	6.181
3.56	2	SLD	2	1	0.00	-5024.88	2185.40			1785.80			-5024.88	8638.30	6952.42	53.44	6.05	3.929
7.00	2	SLD	2	1	344.00	-3992.88	-1965.63			-1725.77			-3992.87	-8143.46	-7234.95	236.25	6.10	4.164

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	35.16
-0.25	1	3.81	43.99	35.16
3.21	1	3.81	43.99	35.16

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Myu <daNm>	Mzu,s <daNm>	Mzu <daNm>	α <grad>
-0.25	1	SLV	1	1	0.00	-11177.20	2638.58			1710.22			-11177.20	7929.01	8220.09	5241.42	5420.37	47.81
-0.25	1	SLV	1	1	0.00	-11177.20	2638.58			1710.22			-11177.20	7929.01	8220.09	5241.42	5420.37	47.81
3.21	7(α)	SLV	1	1	346.00	-11706.40	-1061.42	3.90	-4136.38	-1036.60	1.70	-1759.45	-11706.30	-9022.05	-9351.69	-3945.66	-4086.94	213.75

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cm>	AfC <cm>	σ _c <daN/cm²>	σ _t <daN/cm²>
-0.25	23	SLE R	1	1	0.00	-14937.40	453.10	198.00	0.00	15.27	18.45	240.81
-0.25	31	SLE Q	1	1	0.00	-13884.20	399.49	185.88	0.00	15.27	16.88	221.14
-0.25	23	SLE R	1	1	0.00	-14937.40	453.10	198.00	0.00	15.27	18.45	240.81
-0.25	31	SLE Q	1	1	0.00	-13884.20	399.49	185.88	0.00	15.27	16.88	221.14
3.21	23	SLE R	1	1	346.00	-13899.40	-776.60	-227.69	0.00	15.27	22.44	278.26
3.21	31	SLE Q	1	1	346.00	-12846.20	-678.02	-222.13	0.00	15.27	20.28	252.71
3.56	22	SLE R	2	1	0.00	-5931.85	958.46	273.20	7.63	7.63	25.73	289.46
3.56	23	SLE R	2	1	0.00	-5933.36	1013.47	196.12	7.63	7.63	25.60	301.64

Relazione di calcolo

3.56	30	SLE Q	2	1	0.00	-5611.79	832.18	244.39	7.63	7.63	22.36	233.77
7.00	21	SLE R	2	1	344.00	-4863.35	-786.98	150.04	7.63	7.63	19.80	220.59
7.00	29	SLE Q	2	1	344.00	-4543.29	-689.25	182.96	7.63	7.63	18.20	190.89

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{s,eff} <cmq>	σ _s <daN/cmq>	σ _{s,z} <daN/cmq>	s _{sm}	Wk <mm>
3.56	31	SLE Q	2	1	0.00	-5613.30	167.31	887.19	39.00	152.00	0.13	186.62	18.00	7.63	663.48	241.69	867.62	0.05	0.01
7.00	29	SLE Q	2	1	344.00	-4543.29	182.96	-689.25	39.00	152.00	0.13	186.61	18.00	7.63	663.37	190.89	835.01	0.04	0.01

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.33	ø8/12	2	2	18	SLU	0.40	433.51	2.50	18513.50	28201.70	0.30	186.25	2.50	25889.50	29578.10	42.71
-0.25	0.33	ø8/12	2	2	19	SLU	0.40	466.32	2.50	18513.50	28200.30	0.30	157.30	2.50	25889.50	29576.60	39.70
-0.25	0.33	ø8/12	2	2	10 (TG)	SLD	0.40	3152.30	2.50	21290.60	40396.40	0.30	7258.11	2.50	29772.90	42367.90	4.10
-0.25	0.33	ø8/12	2	2	8 (TG)	SLD	0.40	5175.89	2.50	21290.60	40315.50	0.30	4796.38	2.50	29772.90	42283.10	4.11
-0.25	0.33	ø8/12	2	2	9 (TG)	SLV	0.40	1795.96	2.50	18513.50	27647.20	0.30	6538.58	2.50	25889.50	28996.50	3.96
-0.25	0.33	ø8/12	2	2	7 (TG)	SLV	0.40	4300.48	2.50	18513.50	27543.40	0.30	4235.68	2.50	25889.50	28887.60	4.30
0.33	2.63	ø8/20	2	2	18	SLU	0.40	433.51	2.50	11108.10	28172.50	0.30	186.25	2.50	15533.70	29547.40	25.62
0.33	2.63	ø8/20	2	2	19	SLU	0.40	466.32	2.50	11108.10	28171.10	0.30	157.30	2.50	15533.70	29546.00	23.82
0.33	2.63	ø8/20	2	2	10 (TG)	SLD	0.40	3152.30	2.50	12774.30	40396.40	0.30	7258.11	2.50	17863.70	42367.90	2.46
0.33	2.63	ø8/20	2	2	8 (TG)	SLD	0.40	5175.89	2.50	12774.30	40315.50	0.30	4796.38	2.50	17863.70	42283.10	2.47
0.33	2.63	ø8/20	2	2	9 (TG)	SLV	0.40	1795.96	2.50	11108.10	27647.20	0.30	6538.58	2.50	15533.70	28996.50	2.38
0.33	2.63	ø8/20	2	2	7 (TG)	SLV	0.40	4300.48	2.50	11108.10	27543.40	0.30	4235.68	2.50	15533.70	28887.60	2.58
2.63	3.21	ø8/12	2	2	18	SLU	0.40	433.51	2.50	18513.50	28055.70	0.30	186.25	2.50	25889.50	29424.90	42.71
2.63	3.21	ø8/12	2	2	19	SLU	0.40	466.32	2.50	18513.50	28054.30	0.30	157.30	2.50	25889.50	29423.50	39.70
2.63	3.21	ø8/12	2	2	10 (TG)	SLD	0.40	3152.30	2.50	21290.60	40396.40	0.30	7258.11	2.50	29772.90	42367.90	4.10
2.63	3.21	ø8/12	2	2	8 (TG)	SLD	0.40	5175.89	2.50	21290.60	40315.50	0.30	4796.38	2.50	29772.90	42283.10	4.11
2.63	3.21	ø8/12	2	2	9 (TG)	SLV	0.40	1795.96	2.50	18513.50	27647.20	0.30	6538.58	2.50	25889.50	28996.50	3.96
2.63	3.21	ø8/12	2	2	7 (TG)	SLV	0.40	4300.48	2.50	18513.50	27543.40	0.30	4235.68	2.50	25889.50	28887.60	4.30
3.56	4.13	ø8/12	2	2	18	SLU	0.40	669.39	2.50	18513.50	26655.60	0.30	104.03	2.50	25889.50	27956.50	27.66
3.56	4.13	ø8/12	2	2	19	SLU	0.40	704.21	2.50	18513.50	26655.80	0.30	60.98	2.50	25889.50	27956.70	26.29
3.56	4.13	ø8/12	2	2	10 (TG)	SLD	0.40	2360.29	2.50	21290.60	39135.30	0.30	6799.22	2.50	29772.90	41045.20	4.38
3.56	4.13	ø8/12	2	2	8 (TG)	SLD	0.40	4689.74	2.50	21290.60	39113.30	0.30	4820.96	2.50	29772.90	41022.20	4.54
3.56	4.13	ø8/12	2	2	3 (TG)	SLV	0.40	1528.96	2.50	18513.50	26313.60	0.30	6167.62	2.50	25889.50	27597.80	4.20
3.56	4.13	ø8/12	2	2	7 (TG)	SLV	0.40	2823.84	2.50	18513.50	26304.50	0.30	4815.94	2.50	25889.50	27588.30	5.38
4.13	6.43	ø8/20	2	2	18	SLU	0.40	669.39	2.50	11108.10	26626.60	0.30	104.03	2.50	15533.70	27926.10	16.59
4.13	6.43	ø8/20	2	2	19	SLU	0.40	704.21	2.50	11108.10	26626.80	0.30	60.98	2.50	15533.70	27926.30	15.77
4.13	6.43	ø8/20	2	2	10 (TG)	SLD	0.40	2360.29	2.50	12774.30	39135.30	0.30	6799.22	2.50	17863.70	41045.20	2.63
4.13	6.43	ø8/20	2	2	8 (TG)	SLD	0.40	4689.74	2.50	12774.30	39113.30	0.30	4820.96	2.50	17863.70	41022.20	2.72
4.13	6.43	ø8/20	2	2	3 (TG)	SLV	0.40	1528.96	2.50	11108.10	26313.60	0.30	6167.62	2.50	15533.70	27597.80	2.52
4.13	6.43	ø8/20	2	2	7 (TG)	SLV	0.40	2823.84	2.50	11108.10	26304.50	0.30	4815.94	2.50	15533.70	27588.30	3.23
6.43	7.00	ø8/12	2	2	18	SLU	0.40	669.39	2.50	18513.50	26510.40	0.30	104.03	2.50	25889.50	27804.30	27.66
6.43	7.00	ø8/12	2	2	19	SLU	0.40	704.21	2.50	18513.50	26510.60	0.30	60.98	2.50	25889.50	27804.50	26.29
6.43	7.00	ø8/12	2	2	10 (TG)	SLD	0.40	2360.29	2.50	21290.60	39135.30	0.30	6799.22	2.50	29772.90	41045.20	4.38
6.43	7.00	ø8/12	2	2	8 (TG)	SLD	0.40	4689.74	2.50	21290.60	39113.30	0.30	4820.96	2.50	29772.90	41022.20	4.54
6.43	7.00	ø8/12	2	2	3 (TG)	SLV	0.40	1528.96	2.50	18513.50	26313.60	0.30	6167.62	2.50	25889.50	27597.80	4.20
6.43	7.00	ø8/12	2	2	7 (TG)	SLV	0.40	2823.84	2.50	18513.50	26304.50	0.30	4815.94	2.50	25889.50	27588.30	5.38

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
137	N	ø8/7	Z+	I	2	4.62	4.62	0.40	0.30	0.20	4.02	1.11
			Y-	E	2	4.62	7.63	0.40	0.20	0.20	4.02	1.11
			Z-	I	2	4.62	4.62	0.30	0.30	0.29	5.03	1.48
237	N	ø8/7	Z+	I	2	4.62	4.62	0.40	0.30	0.20	4.02	1.20
			Y-	E	2	4.62	4.62	0.40	0.20	0.20	4.02	1.20
			Z-	I	2	4.62	4.62	0.40	0.30	0.20	4.02	1.20

Pilastrata n. 38

Nodi: 38 138 238

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
1	R	30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _x	Sic.
3.56	1 (α)	SLV	2	1	0.00	-12527.30	-4769.20	2.17	-10366.20	-3620.92	1.24	-4486.84	-12527.20	-11505.50	-5033.91	222.19	4.58	1.112
6.91	1	SLV	2	1	335.00	-11522.30	4215.21			3025.53			-11522.30	9086.99	6725.33	56.25	4.47	2.179
-0.25	2	SLD	1	1	0.00	-31157.70	-5247.42			-2010.04			-31157.70	-15893.40	-6030.22	216.56	4.63	3.025
-0.25	2	SLD	1	1	0.00	-31157.70	-5247.42			-2010.04			-31157.70	-15893.40	-6030.22	216.56	4.63	3.025
3.21	2	SLD	1	1	346.00	-30119.70	3628.72			2622.98			-30119.70	12273.60	8771.21	54.84	4.36	3.369
3.56	2	SLD	2	1	0.00	-12715.60	-4073.69			-3388.77			-12715.50	-10402.80	-8613.67	239.06	5.11	2.549
6.91	2	SLD	2	1	335.00	-11710.60	3411.49			2784.99			-11710.60	10347.40	8565.86	59.06	5.15	3.050

Dati per verifiche di stabilità

Xg <cm>	El	l ₀ <cm>	λ	λ*
-0.25	1	3.81	43.99	27.70
-0.25	1	3.81	43.99	27.70
3.21	1	3.81	43.99	27.70

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Mzu,s <daNm>	α <grad>
-0.25	1	SLV	1	1	0.00	-30745.70	-6431.57			-2241.81			-30745.70	-12776.00	-13496.90	-4362.64

Relazione di calcolo

-0.25	1	SLV	1	1	0.00	-30745.70	-6431.57			-2241.81			-30745.70	-12776.00	-13496.90	-4362.64	-4607.15	216.5
3.21	15 (a)	SLV	1	1	346.00	-30452.40	2283.38	4.40	10054.20	2658.02	1.32	3514.98	-30452.40	12756.60	13484.30	4361.89	4605.78	36.5

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σc <daN/cm²>	σf <daN/cm²>
-0.25	23	SLE R	1	1	0.00	-36114.80	-1301.62	-1282.30	0.00	20.36	53.29	673.15
-0.25	31	SLE Q	1	1	0.00	-32716.20	-1173.83	-1142.14	0.00	20.36	48.01	606.88
-0.25	23	SLE R	1	1	0.00	-36114.80	-1301.62	-1282.30	0.00	20.36	53.29	673.15
-0.25	31	SLE Q	1	1	0.00	-32716.20	-1173.83	-1142.14	0.00	20.36	48.01	606.88
3.21	21	SLE R	1	1	346.00	-35104.60	2144.35	2210.81	5.09	15.27	83.04	976.70
3.21	29	SLE Q	1	1	346.00	-31706.10	2178.58	1952.27	5.09	15.27	74.36	875.27
3.56	21	SLE R	2	1	0.00	-14368.50	-2871.15	-1970.92	10.18	10.18	94.01	1247.66
3.56	29	SLE Q	2	1	0.00	-13433.80	-2615.44	-1679.80	10.18	10.18	83.68	1091.67
6.91	21	SLE R	2	1	335.00	-13363.50	2134.57	750.77	10.18	10.18	57.97	641.10
6.91	29	SLE Q	2	1	335.00	-12428.80	1968.24	559.52	10.18	10.18	51.40	559.62

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	S _{rm} <mm>	Φ	A _s <cm²>	A _{c eff} <cm²>	σ _s <daN/cm²>	σ _{sr} <daN/cm²>	ε _{sm}	Wk <mm>
3.21	29	SLE Q	1	1	346.00	-31706.10	1952.27	2178.58	39.00	152.00	0.13	199.04	18.00	5.09	512.56	310.08	405.95	0.06	0.02
3.56	29	SLE Q	2	1	0.00	-13433.80	-1679.80	-2615.44	39.00	102.00	0.13	170.77	18.00	10.18	818.53	1091.67	898.77	0.35	0.10
6.91	29	SLE Q	2	1	335.00	-12428.80	559.52	1968.24	39.00	102.00	0.13	170.78	18.00	10.18	818.67	559.62	830.04	0.11	0.03

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.33	ø8/12	2	2	19	SLU	0.40	1417.31	2.50	18513.50	30775.40	0.30	1345.11	2.50	25889.50	32277.40	13.06
-0.25	0.33	ø8/12	2	2	17	SLU	0.40	1444.37	2.50	18513.50	30775.40	0.30	1305.96	2.50	25889.50	32277.40	12.82
-0.25	0.33	ø8/12	2	2	2 (TG)	SLD	0.40	4577.10	2.50	21290.60	42379.60	0.30	9052.74	2.50	29772.90	44447.90	3.29
-0.25	0.33	ø8/12	2	2	2 (TG)	SLD	0.40	4763.69	2.50	21290.60	42828.10	0.30	9116.64	2.50	29772.90	44918.30	3.27
-0.25	0.33	ø8/12	2	2	16 (TG)	SLD	0.40	7237.86	2.50	21290.60	42632.00	0.30	5107.60	2.50	29772.90	44712.70	2.94
-0.25	0.33	ø8/12	2	2	9 (TG)	SLV	0.40	2304.74	2.50	18513.50	29426.40	0.30	8983.40	2.50	25889.50	30862.50	2.88
-0.25	0.33	ø8/12	2	2	9 (TG)	SLV	0.40	2293.66	2.50	18513.50	29998.40	0.30	9142.33	2.50	25889.50	31462.40	2.83
-0.25	0.33	ø8/12	2	2	15 (TG)	SLV	0.40	6195.07	2.50	18513.50	29825.00	0.30	3761.39	2.50	25889.50	31280.60	2.99
0.33	2.63	ø8/20	2	2	19	SLU	0.40	1417.31	2.50	11108.10	30775.40	0.30	1345.11	2.50	15533.70	32277.40	7.84
0.33	2.63	ø8/20	2	2	17	SLU	0.40	1444.37	2.50	11108.10	30775.40	0.30	1305.96	2.50	15533.70	32277.40	7.69
0.33	2.63	ø8/20	2	2	2 (TG)	SLD	0.40	4577.10	2.50	12774.30	42379.60	0.30	9052.74	2.50	17863.70	44447.90	1.97
0.33	2.63	ø8/20	2	2	2 (TG)	SLD	0.40	4763.69	2.50	12774.30	42828.10	0.30	9116.64	2.50	17863.70	44918.30	1.96
0.33	2.63	ø8/20	2	2	16 (TG)	SLD	0.40	7237.86	2.50	12774.30	42632.00	0.30	5107.60	2.50	17863.70	44712.70	1.76
0.33	2.63	ø8/20	2	2	9 (TG)	SLV	0.40	2304.74	2.50	11108.10	29426.40	0.30	8983.40	2.50	15533.70	30862.50	1.73
0.33	2.63	ø8/20	2	2	9 (TG)	SLV	0.40	2293.66	2.50	11108.10	29998.40	0.30	9142.33	2.50	15533.70	31462.40	1.70
0.33	2.63	ø8/20	2	2	15 (TG)	SLV	0.40	6195.07	2.50	11108.10	29825.00	0.30	3761.39	2.50	15533.70	31280.60	1.79
2.63	3.21	ø8/12	2	2	19	SLU	0.40	1417.31	2.50	18513.50	30775.40	0.30	1345.11	2.50	25889.50	32277.40	13.06
2.63	3.21	ø8/12	2	2	17	SLU	0.40	1444.37	2.50	18513.50	30775.40	0.30	1305.96	2.50	25889.50	32277.40	12.82
2.63	3.21	ø8/12	2	2	2 (TG)	SLD	0.40	4577.10	2.50	21290.60	42379.60	0.30	9052.74	2.50	29772.90	44447.90	3.29
2.63	3.21	ø8/12	2	2	2 (TG)	SLD	0.40	4763.69	2.50	21290.60	42828.10	0.30	9116.64	2.50	29772.90	44918.30	3.27
2.63	3.21	ø8/12	2	2	16 (TG)	SLD	0.40	7237.86	2.50	21290.60	42632.00	0.30	5107.60	2.50	29772.90	44712.70	2.94
2.63	3.21	ø8/12	2	2	9 (TG)	SLV	0.40	2304.74	2.50	18513.50	29426.40	0.30	8983.40	2.50	25889.50	30862.50	2.88
2.63	3.21	ø8/12	2	2	9 (TG)	SLV	0.40	2293.66	2.50	18513.50	29998.40	0.30	9142.33	2.50	25889.50	31462.40	2.83
2.63	3.21	ø8/12	2	2	15 (TG)	SLV	0.40	6195.07	2.50	18513.50	29825.00	0.30	3761.39	2.50	25889.50	31280.60	2.99
3.56	4.12	ø8/12	2	2	19	SLU	0.40	1938.18	2.50	18513.50	28092.20	0.30	1102.49	2.50	25889.50	29463.30	9.55
3.56	4.12	ø8/12	2	2	17	SLU	0.40	1966.36	2.50	18513.50	28093.90	0.30	1083.75	2.50	25889.50	29465.00	9.42
3.56	4.12	ø8/12	2	2	2 (TG)	SLD	0.40	5232.68	2.50	21290.60	40193.00	0.30	7543.62	2.50	29772.90	42154.60	3.95
3.56	4.12	ø8/12	2	2	16 (TG)	SLD	0.40	7491.49	2.50	21290.60	40104.40	0.30	2066.75	2.50	29772.90	42061.70	2.84
3.56	4.12	ø8/12	2	2	1 (TG)	SLV	0.40	2705.74	2.50	18513.50	27401.90	0.30	8120.77	2.50	25889.50	28739.20	3.19
3.56	4.12	ø8/12	2	2	15 (TG)	SLV	0.40	6401.89	2.50	18513.50	27288.90	0.30	1611.75	2.50	25889.50	28620.70	2.89
4.12	6.35	ø8/20	2	2	19	SLU	0.40	1938.18	2.50	11108.10	28064.00	0.30	1102.49	2.50	15533.70	29433.60	5.73
4.12	6.35	ø8/20	2	2	17	SLU	0.40	1966.36	2.50	11108.10	28065.60	0.30	1083.75	2.50	15533.70	29435.30	5.65
4.12	6.35	ø8/20	2	2	2 (TG)	SLD	0.40	5232.68	2.50	12774.30	40193.00	0.30	7543.62	2.50	17863.70	42154.60	2.37
4.12	6.35	ø8/20	2	2	16 (TG)	SLD	0.40	7491.49	2.50	12774.30	40104.40	0.30	2066.75	2.50	17863.70	42061.70	1.71
4.12	6.35	ø8/20	2	2	1 (TG)	SLV	0.40	2705.74	2.50	11108.10	27401.90	0.30	8120.77	2.50	15533.70	28739.20	1.91
4.12	6.35	ø8/20	2	2	15 (TG)	SLV	0.40	6401.89	2.50	11108.10	27288.90	0.30	1611.75	2.50	15533.70	28620.70	1.74
6.35	6.91	ø8/12	2	2	19	SLU	0.40	1938.18	2.50	18513.50	27950.90	0.30	1102.49	2.50	25889.50	29315.00	9.55
6.35	6.91	ø8/12	2	2	17	SLU	0.40	1966.36	2.50	18513.50	27952.50	0.30	1083.75	2.50	25889.50	29316.70	9.42
6.35	6.91	ø8/12	2	2	2 (TG)	SLD	0.40	5232.68	2.50	21290.60	40193.00	0.30	7543.62	2.50	29772.90	42154.60	3.95
6.35	6.91	ø8/12	2	2	16 (TG)	SLD	0.40	7491.49	2.50	21290.60	40104.40	0.30	2066.75	2.50	29772.90	42061.70	2.84
6.35	6.91	ø8/12	2	2	1 (TG)	SLV	0.40	2705.74	2.50	18513.50	27401.90	0.30	8120.77	2.50	25889.50	28739.20	3.19
6.35	6.91	ø8/12	2	2	15 (TG)	SLV	0.40	6401.89	2.50	18513.50	27288.90	0.30	1611.75	2.50	25889.50	28620.70	2.89

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
138	N	ø8/ 7	Y+	E	2	6.16	4.62	0.40	0.20	0.29	5.03	1.11
			Z+	I	2	10.18	6.63	0.30	0.30	0.29	5.03	1.48
			Z-	I	2	10.18	6.63	0.30	0.30	0.29	5.03	1.48
238	N	ø8/ 7	Y+	E	2	4.62	4.62	0.40	0.20	0.29	5.03	1.11
			Z+	I	2	7.70	4.62	0.30	0.30	0.29	5.03	1.48
			Z-	I	2	7.70	4.62	0.30	0.30	0.29	5.03	1.48

Pilastrata n. 39

Nodi: 39 139 239

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
1	R	30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El
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Relazione di calcolo

<m>	<cm>	<daN>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<grad>			
-0.25	2	SLD	1	1	0.00	-29072.30	3029.67			2885.67		-29072.30	11875.70	11230.60	59.06	4.13	3.907
-0.25	2	SLD	1	1	0.00	-29072.30	3029.67			2885.67		-29072.30	11875.70	11230.60	59.06	4.13	3.907
3.21	2	SLD	1	1	346.00	-28034.30	-2879.80			-2815.01		-28034.30	-11833.50	-11199.90	239.06	4.17	4.046
3.56	2	SLD	2	1	0.00	-11413.90	4018.82			4426.78		-11413.90	9998.42	11109.00	63.28	4.84	2.500
6.91	2	SLD	2	1	335.00	-10408.90	-3280.68			-4277.60		-10408.90	-8745.70	-11733.10	247.50	5.02	2.715

Dati per verifiche di stabilità

Xg	El	l ₀	λ	λ*	Xg	El	l ₀	λ	λ*	Xg	El	l ₀	λ	λ*	Xg	El	l ₀	λ	λ*	
<m>	<cm>	<cm>	<cm>	<cm>	<m>	<cm>	<cm>	<cm>	<cm>	<m>	<cm>	<cm>	<cm>	<cm>	<m>	<cm>	<cm>	<cm>	<cm>	<cm>
-0.25	1	3.81	43.99	23.85	-0.25	1	3.81	43.99	23.85	3.21	1	3.81	43.99	23.85	3.56	2	3.70	42.72	39.28	
6.91	2	3.70	42.72	39.28																

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg	CC	TCC	El	Sez.	X	N	My	α _y	My ver.	Mz	α _z	Mz ver.	Nu	Myu,s	Myu	Mzu,s	Mzu	α	
<m>	<cm>	<cm>	<cm>	<cm>	<cm>	<daN>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<grad>
-0.25	20 (e)	SLU	1	1	0.00	-52261.20	1912.70		1912.70	918.03		1045.22	-52261.20	12401.00	13421.60	6643.78	7187.76	45.0	
-0.25	20 (e)	SLU	1	1	0.00	-52261.20	1912.70		1912.70	918.03		1045.22	-52261.20	12401.00	13421.60	6643.78	7187.76	45.0	
3.21	1 (α)	SLV	1	1	346.00	-26553.90	-3078.97	1.10	-3386.87	-3292.80	1.91	-6279.70	-26553.80	-5607.71	-5981.73	-10769.50	-11497.60	251.7	
3.56	15 (α)	SLV	2	1	0.00	-12936.40	3469.41	1.34	4646.30	2494.97	4.03	10054.70	-12936.40	4682.52	4859.92	10587.50	10993.50	75.9	
6.91	1	SLV	2	1	335.00	-9844.79	-3611.50			-4966.37			-9844.80	-7150.68	-7312.45	-9488.59	-9757.53	246.0	

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	Sez.	X	N	Mz	My	AfT	AfC	σ _c	σ _f
<m>	<cm>	<cm>	<cm>	<cm>	<cm>	<daN>	<daNm>	<daNm>	<cmq>	<cmq>	<daN/cmq>	<daN/cmq>
-0.25	23	SLE R	1	1	0.00	-38887.50	845.55	1480.53	0.00	25.45	48.66	630.71
-0.25	31	SLE Q	1	1	0.00	-34236.10	678.90	1334.38	0.00	25.45	42.32	550.29
-0.25	23	SLE R	1	1	0.00	-38887.50	845.55	1480.53	0.00	25.45	48.66	630.71
-0.25	31	SLE Q	1	1	0.00	-34236.10	678.90	1334.38	0.00	25.45	42.32	550.29
3.21	23	SLE R	1	1	346.00	-37849.50	-1468.28	-2511.04	2.54	22.90	67.15	826.43
3.21	31	SLE Q	1	1	346.00	-33198.10	-1170.47	-2266.87	2.54	22.90	57.86	715.09
3.56	23	SLE R	2	1	0.00	-14588.40	2318.11	3260.05	12.72	12.72	93.88	1160.21
3.56	31	SLE Q	2	1	0.00	-13374.30	1938.32	2959.51	12.72	12.72	81.79	991.54
6.91	23	SLE R	2	1	335.00	-13583.40	-2152.33	-2288.99	12.72	12.72	75.88	874.09
6.91	31	SLE Q	2	1	335.00	-12369.30	-1883.25	-2100.86	12.72	12.72	67.78	771.61

Verifiche stato limite di formazione delle fessure

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K3	S _{zm}	Φ	A _s	A _{c eff}	σ _s	σ _{sz}	ε _{sm}	Wk
<m>	<cm>	<cm>	<cm>	<cm>	<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>		<mm>		<cmq>	<cmq>	<daN/cmq>	<daN/cmq>		<mm>
3.21	31	SLE Q	1	1	346.00	-33198.10	-2266.87	-1170.47	39.00	252.00	0.13	221.16	18.00	2.54	262.28	98.67	234.12	0.02	0.01
3.56	31	SLE Q	2	1	0.00	-13374.30	2959.51	1938.32	39.00	101.33	0.13	156.67	18.00	12.72	825.64	991.54	789.63	0.33	0.09
6.91	31	SLE Q	2	1	335.00	-12369.30	-2100.86	-1883.25	39.00	101.33	0.13	164.76	18.00	10.18	752.04	771.61	755.26	0.20	0.05

Staffe - Verifiche armatura

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _y	Vsdu _y	ctgθ _y	VRsd _y	VRcd _y	bw _z	Vsdu _z	ctgθ _z	VRsd _z	VRcd _z	Sic.T
<m>	<m>	<cm>	<cm>	<cm>	<cm>	<cm>	<cm>	<daN>	<daN>	<daN>	<daN>	<cm>	<daN>	<daN>	<daN>	<daN>	
-0.25	0.33	ø8/12	2	2	18	SLU	0.40	822.98	2.50	18513.50	30775.40	0.30	1543.98	2.50	25889.50	32277.40	16.77
-0.25	0.33	ø8/12	2	2	19	SLU	0.40	892.97	2.50	18513.50	30775.40	0.30	1530.23	2.50	25889.50	32277.40	16.92
-0.25	0.33	ø8/12	2	2	216 (TG)	SLD	0.40	4616.26	2.50	21290.60	42673.00	0.30	10609.20	2.50	29772.90	44755.60	2.81
-0.25	0.33	ø8/12	2	2	210 (TG)	SLD	0.40	8026.56	2.50	21290.60	42326.20	0.30	5661.63	2.50	29772.90	44391.90	2.65
-0.25	0.33	ø8/12	2	2	210 (TG)	SLD	0.40	8145.64	2.50	21290.60	43504.90	0.30	6272.63	2.50	29772.90	45628.10	2.61
-0.25	0.33	ø8/12	2	2	215 (TG)	SLV	0.40	2501.60	2.50	18513.50	29812.90	0.30	9603.47	2.50	25889.50	31267.90	2.70
-0.25	0.33	ø8/12	2	2	215 (TG)	SLV	0.40	2592.50	2.50	18513.50	30431.80	0.30	9692.65	2.50	25889.50	31917.00	2.67
-0.25	0.33	ø8/12	2	2	21 (TG)	SLV	0.40	7472.34	2.50	18513.50	29093.60	0.30	3435.47	2.50	25889.50	30513.50	2.48
-0.25	0.33	ø8/12	2	2	29 (TG)	SLV	0.40	7823.71	2.50	18513.50	30775.40	0.30	3427.85	2.50	25889.50	32277.40	2.37
0.33	2.63	ø8/20	2	2	18	SLU	0.40	822.98	2.50	11108.10	30775.40	0.30	1543.98	2.50	15533.70	32277.40	10.06
0.33	2.63	ø8/20	2	2	19	SLU	0.40	892.97	2.50	11108.10	30775.40	0.30	1530.23	2.50	15533.70	32277.40	10.15
0.33	2.63	ø8/20	2	2	216 (TG)	SLD	0.40	4616.26	2.50	12774.30	42673.00	0.30	10609.20	2.50	17863.70	44755.60	1.68
0.33	2.63	ø8/20	2	2	210 (TG)	SLD	0.40	8026.56	2.50	12774.30	42326.20	0.30	5661.63	2.50	17863.70	44391.90	1.59
0.33	2.63	ø8/20	2	2	210 (TG)	SLD	0.40	8145.64	2.50	12774.30	43504.90	0.30	6272.63	2.50	17863.70	45628.10	1.57
0.33	2.63	ø8/20	2	2	215 (TG)	SLV	0.40	2501.60	2.50	11108.10	29812.90	0.30	9603.47	2.50	15533.70	31267.90	1.62
0.33	2.63	ø8/20	2	2	215 (TG)	SLV	0.40	2592.50	2.50	11108.10	30431.80	0.30	9692.65	2.50	15533.70	31917.00	1.60
0.33	2.63	ø8/20	2	2	21 (TG)	SLV	0.40	7472.34	2.50	11108.10	29093.60	0.30	3435.47	2.50	15533.70	30513.50	1.49
0.33	2.63	ø8/20	2	2	29 (TG)	SLV	0.40	7823.71	2.50	11108.10	30775.40	0.30	3427.85	2.50	15533.70	32277.40	1.42
2.63	3.21	ø8/12	2	2	18	SLU	0.40	822.98	2.50	18513.50	30775.40	0.30	1543.98	2.50	25889.50	32277.40	16.77
2.63	3.21	ø8/12	2	2	19	SLU	0.40	892.97	2.50	18513.50	30775.40	0.30	1530.23	2.50	25889.50	32277.40	16.92
2.63	3.21	ø8/12	2	2	216 (TG)	SLD	0.40	4616.26	2.50	21290.60	42673.00	0.30	10609.20	2.50	29772.90	44755.60	2.81
2.63	3.21	ø8/12	2	2	210 (TG)	SLD	0.40	8026.56	2.50	21290.60	42326.20	0.30	5661.63	2.50	29772.90	44391.90	2.65
2.63	3.21	ø8/12	2	2	210 (TG)	SLD	0.40	8145.64	2.50	21290.60	43504.90	0.30	6272.63	2.50	29772.90	45628.10	2.61
2.63	3.21	ø8/12	2	2	215 (TG)	SLV	0.40	2501.60	2.50	18513.50	29812.90	0.30	9603.47	2.50	25889.50	31267.90	2.70
2.63	3.21	ø8/12	2	2	215 (TG)	SLV	0.40	2592.50	2.50	18513.50	30431.80	0.30	9692.65	2.50	25889.50	31917.00	2.67
2.63	3.21	ø8/12	2	2	21 (TG)	SLV	0.40	7472.34	2.50	18513.50	29093.60	0.30	3435.47	2.50	25889.50	30513.50	2.48
2.63	3.21	ø8/12	2	2	29 (TG)	SLV	0.40	7823.71	2.50	18513.50	30775.40	0.30	3427.85				

Relazione di calcolo

6.35	6.91	ø8/12	2	2	9(TG)	SLV	0.40	7333.07	2.50	18513.50	27599.50	0.30	2915.75	2.50	25889.50	28946.50	2.52
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Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <m>	Hjc <m>	Hjw <m>	Ash <cmq>	Rgsn
139	N	ø8/ 7	Y+	I	2	6.16	7.63	0.40	0.20	0.29	5.03	1.11
			Y-	I	2	11.78	7.63	0.40	0.20	0.20	4.02	1.11
			Z-	E	2	6.16	4.62	0.30	0.30	0.29	5.03	1.48
239	N	ø8/ 7	Y+	I	2	4.62	7.63	0.40	0.20	0.29	5.03	1.11
			Y-	I	2	7.16	4.62	0.40	0.20	0.20	4.02	1.11
			Z-	E	2	4.62	4.62	0.30	0.30	0.29	5.03	1.48

Pilastrata n. 40

Nodi: 40 140 240 340

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
5	R	30.00	50.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _r	Sic.	
3.56	9	(α)	SLV	2	5	0.00	-9997.88	-5526.13	1.10	-6078.74	2795.17	1.46	4086.46	-9997.87	-9831.78	6600.54	118.13	5.61	1.617
6.91	9	(α)	SLV	2	5	335.00	-8741.63	4898.54	1.10	5388.39	-1833.96	1.60	-2940.32	-8741.62	10494.10	-5920.20	303.75	5.81	1.963
7.26	13	(α)	SLV	3	5	0.00	-4320.72	-2871.32	1.10	-3158.45	1996.94	1.58	3160.78	-4320.72	-6765.81	6982.15	104.06	7.34	2.176
8.31	5		SLV	3	5	105.00	-3776.17	3056.59			-2804.16			-3776.18	7463.33	-6822.19	286.88	6.96	2.438
-0.25	10		SLD	1	5	0.00	-22321.70	-5111.74			2232.63			-22321.70	-15220.20	6795.06	132.19	6.19	2.988
-0.25	10		SLD	1	5	0.00	-22321.70	-5111.74			2232.63			-22321.70	-15220.20	6795.06	132.19	6.19	2.988
3.21	2		SLD	1	5	346.00	-20655.70	2777.15			-2870.51			-20679.30	9557.06	-9598.68	286.88	6.55	3.391
3.56	10		SLD	2	5	0.00	-10545.80	-4881.42			2608.72			-10545.80	-13004.50	6968.21	126.56	6.74	2.666
6.91	10		SLD	2	5	335.00	-9289.52	4163.38			-1653.70			-9289.55	14081.20	-5695.92	317.81	7.38	3.391
7.26	6		SLD	3	5	0.00	-4442.50	-2048.19			2244.19			-4442.49	-7469.61	8268.17	101.25	8.84	3.667
8.31	6		SLD	3	5	105.00	-4048.74	2720.84			-2496.40			-4048.74	8850.05	-8031.49	285.47	8.01	3.237

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	33.32
-0.25	1	3.81	43.99	33.32
3.21	1	3.81	43.99	33.32

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu, s <daNm>	Myu <daNm>	Mzu, s <daNm>	Mzu <daNm>	α <grad>	
-0.25	9		SLV	1	5	0.00	-21525.10	-6148.77			2544.76			-21525.10	-12442.20	-12932.60	5184.42	5423.18	132.19
-0.25	9		SLV	1	5	0.00	-21525.10	-6148.77			2544.76			-21525.10	-12442.20	-12932.60	5184.42	5423.18	132.19
3.21	3	(α)	SLV	1	5	346.00	-21446.30	2594.82	1.27	3302.12	-2737.73	1.44	-3954.10	-21446.30	6502.98	7012.05	-7972.74	-8577.45	285.47

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>		
-0.25	22		SLE	R	1	5	0.00	-27061.30	1260.95	-1742.43	2.54	12.72	42.23	528.04
-0.25	30		SLE	Q	1	5	0.00	-25301.50	1153.36	-1527.73	2.54	12.72	38.29	480.29
-0.25	22		SLE	R	1	5	0.00	-27061.30	1260.95	-1742.43	2.54	12.72	42.23	528.04
-0.25	30		SLE	Q	1	5	0.00	-25301.50	1153.36	-1527.73	2.54	12.72	38.29	480.29
3.21	22		SLE	R	1	5	346.00	-25763.80	-2149.28	2868.90	5.09	10.18	69.40	807.03
3.21	23		SLE	R	1	5	346.00	-25686.90	-2150.00	2859.08	5.09	10.18	69.33	805.84
3.21	30		SLE	Q	1	5	346.00	-24004.00	-1970.78	2480.53	5.09	10.18	61.77	721.08
3.56	22		SLE	R	2	5	0.00	-13164.80	2179.88	-3011.94	10.18	5.09	79.40	1155.17
3.56	30		SLE	Q	2	5	0.00	-12521.60	2018.06	-2669.35	10.18	5.09	71.65	1015.09
6.91	22		SLE	R	2	5	335.00	-11908.60	-1089.53	1771.35	5.09	10.18	39.62	451.84
6.91	30		SLE	Q	2	5	335.00	-11265.40	-1036.97	1647.42	5.09	10.18	37.25	424.76
7.26	23		SLE	R	3	5	0.00	-5846.35	1335.18	-1141.64	7.63	7.63	40.58	660.01
7.26	22		SLE	R	3	5	0.00	-5860.72	1368.64	-1065.18	7.63	7.63	40.24	660.05
7.26	31		SLE	Q	3	5	0.00	-5410.56	1303.17	-1139.92	7.63	7.63	40.12	669.12
8.31	22		SLE	R	3	5	105.00	-5466.97	-1544.77	1833.85	10.18	5.09	54.81	984.04
8.31	30		SLE	Q	3	5	105.00	-5031.18	-1419.75	1595.03	10.18	5.09	49.10	878.14

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>		
-0.25	30		SLE	Q	1	5	0.00	-25301.50	-1527.73	1153.36	39.00	252.00	0.13	221.18	18.00	2.54	262.33	47.80	197.18	0.01	0.00
-0.25	30		SLE	Q	1	5	0.00	-25301.50	-1527.73	1153.36	39.00	252.00	0.13	221.18	18.00	2.54	262.33	47.80	197.18	0.01	0.00
3.21	31		SLE	Q	1	5	346.00	-23927.10	2470.71	-1971.49	39.00	202.00	0.13	221.03	18.00	5.09	580.33	427.23	597.29	0.08	0.03
3.56	30		SLE	Q	2	5	0.00	-12521.60	-2669.35	2018.06	39.00	202.00	0.13	212.57	18.00	7.63	798.82	1015.09	1053.88	0.23	0.08
6.91	30		SLE	Q	2	5	335.00	-11265.40	1647.42	-1036.97	39.00	202.00	0.13	221.03	18.00	5.09	580.33	349.83	749.30	0.07	0.03
7.26	31		SLE	Q	3	5	0.00	-5410.56	-1139.92	1303.17	39.00	202.00	0.13	212.57	18.00	7.63	798.82	669.12	1209.99	0.13	0.05
8.31	30		SLE	Q	3	5	105.00	-5031.18	1595.03	-1419.75	39.00	202.00	0.13	208.59	18.00	10.18	1019.98	878.14	1279.36	0.17	0.06

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic. T
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Relazione di calcolo

-0.25	0.33	ø8/10	2	2	18	SLU	0.50	1301.85	2.50	22216.30	36679.90	0.30	1768.84	2.49	39700.70	39700.70	17.07
-0.25	0.33	ø8/10	2	2	10 (TG)	SLD	0.50	4545.57	2.50	25548.70	51600.60	0.30	10005.70	2.50	45906.20	55630.00	4.59
-0.25	0.33	ø8/10	2	2	8 (TG)	SLD	0.50	6317.90	2.50	25548.70	51354.50	0.30	5384.34	2.50	45906.20	55364.60	4.04
-0.25	0.33	ø8/10	2	2	9 (TG)	SLV	0.50	3548.42	2.50	22216.30	35688.40	0.30	8746.45	2.45	39072.40	39072.40	4.47
-0.25	0.33	ø8/10	2	2	3 (TG)	SLV	0.50	5596.90	2.50	22216.30	35408.20	0.30	4633.11	2.44	38893.00	38893.00	3.97
0.33	2.63	ø8/20	2	2	18	SLU	0.50	1301.85	2.50	11108.10	36643.40	0.30	1768.84	2.50	19959.20	39504.80	8.53
0.33	2.63	ø8/20	2	2	10 (TG)	SLD	0.50	4545.57	2.50	12774.30	51600.60	0.30	10005.70	2.50	22953.10	55630.00	2.29
0.33	2.63	ø8/20	2	2	8 (TG)	SLD	0.50	6317.90	2.50	12774.30	51354.50	0.30	5384.34	2.50	22953.10	55364.60	2.02
0.33	2.63	ø8/20	2	2	9 (TG)	SLV	0.50	3548.42	2.50	11108.10	35688.40	0.30	8746.45	2.50	19959.20	38475.20	2.28
0.33	2.63	ø8/20	2	2	3 (TG)	SLV	0.50	5596.90	2.50	11108.10	35408.20	0.30	4633.11	2.50	19959.20	38173.10	1.98
2.63	3.21	ø8/10	2	2	18	SLU	0.50	1301.85	2.50	22216.30	36497.40	0.30	1768.84	2.48	39585.80	39585.80	17.07
2.63	3.21	ø8/10	2	2	10 (TG)	SLD	0.50	4545.57	2.50	25548.70	51600.60	0.30	10005.70	2.50	45906.20	55630.00	4.59
2.63	3.21	ø8/10	2	2	8 (TG)	SLD	0.50	6317.90	2.50	25548.70	51354.50	0.30	5384.34	2.50	45906.20	55364.60	4.04
2.63	3.21	ø8/10	2	2	9 (TG)	SLV	0.50	3548.42	2.50	22216.30	35688.40	0.30	8746.45	2.45	39072.40	39072.40	4.47
2.63	3.21	ø8/10	2	2	3 (TG)	SLV	0.50	5596.90	2.50	22216.30	35408.20	0.30	4633.11	2.44	38893.00	38893.00	3.97
3.56	4.12	ø8/10	2	2	18	SLU	0.50	1285.53	2.50	22216.30	34295.30	0.30	1881.74	2.39	38172.10	38172.10	17.28
3.56	4.12	ø8/10	2	2	10 (TG)	SLD	0.50	4158.38	2.50	25548.70	49292.60	0.30	8893.84	2.50	45906.20	53141.70	5.16
3.56	4.12	ø8/10	2	2	8 (TG)	SLD	0.50	5920.00	2.50	25548.70	49651.70	0.30	4730.01	2.50	45906.20	53528.90	4.32
3.56	4.12	ø8/10	2	2	1 (TG)	SLV	0.50	3136.00	2.50	22216.30	33825.50	0.30	7840.40	2.37	37863.60	37863.60	4.83
3.56	4.12	ø8/10	2	2	7 (TG)	SLV	0.50	5141.06	2.50	22216.30	33654.70	0.30	3717.89	2.36	37750.90	37750.90	4.32
4.12	6.35	ø8/20	2	2	18	SLU	0.50	1285.53	2.50	11108.10	34259.90	0.30	1881.74	2.50	19959.20	36935.20	8.64
4.12	6.35	ø8/20	2	2	10 (TG)	SLD	0.50	4158.38	2.50	12774.30	49292.60	0.30	8893.84	2.50	22953.10	53141.70	2.58
4.12	6.35	ø8/20	2	2	8 (TG)	SLD	0.50	5920.00	2.50	12774.30	49651.70	0.30	4730.01	2.50	22953.10	53528.90	2.16
4.12	6.35	ø8/20	2	2	1 (TG)	SLV	0.50	3136.00	2.50	11108.10	33825.50	0.30	7840.40	2.50	19959.20	36466.80	2.55
4.12	6.35	ø8/20	2	2	7 (TG)	SLV	0.50	5141.06	2.50	11108.10	33654.70	0.30	3717.89	2.50	19959.20	36282.70	2.16
6.35	6.91	ø8/10	2	2	18	SLU	0.50	1285.53	2.50	22216.30	34118.60	0.30	1881.74	2.38	38056.30	38056.30	17.28
6.35	6.91	ø8/10	2	2	10 (TG)	SLD	0.50	4158.38	2.50	25548.70	49292.60	0.30	8893.84	2.50	45906.20	53141.70	5.16
6.35	6.91	ø8/10	2	2	8 (TG)	SLD	0.50	5920.00	2.50	25548.70	49651.70	0.30	4730.01	2.50	45906.20	53528.90	4.32
6.35	6.91	ø8/10	2	2	1 (TG)	SLV	0.50	3136.00	2.50	22216.30	33825.50	0.30	7840.40	2.37	37863.60	37863.60	4.83
6.35	6.91	ø8/10	2	2	7 (TG)	SLV	0.50	5141.06	2.50	22216.30	33654.70	0.30	3717.89	2.36	37750.90	37750.90	4.32
7.26	8.31	ø8/10	2	2	19	SLU	0.50	3566.31	2.50	22216.30	33055.00	0.30	3691.80	2.34	37352.20	37352.20	6.23
7.26	8.31	ø8/10	2	2	18	SLU	0.50	3624.76	2.50	22216.30	33056.80	0.30	3629.22	2.34	37353.50	37353.50	6.13
7.26	8.31	ø8/10	2	2	12 (TG)	SLD	0.50	16260.40	2.50	25548.70	48809.10	0.30	23021.60	2.50	45906.20	52620.50	1.57
7.26	8.31	ø8/10	2	2	8 (TG)	SLD	0.50	18107.30	2.50	25548.70	48786.80	0.30	10154.30	2.50	45906.20	52596.40	1.41
7.26	8.31	ø8/10	2	2	13 (TG)	SLV	0.50	11952.50	2.50	22216.30	32864.30	0.30	21733.10	2.33	37224.60	37224.60	1.71
7.26	8.31	ø8/10	2	2	7 (TG)	SLV	0.50	15578.20	2.50	22216.30	32773.90	0.30	6723.12	2.33	37164.00	37164.00	1.43

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <m>	Hjc <m>	Hjw <m>	Ash <cmq>	Rgsn
140	N	ø8/ 6	Z+	E	2	6.16	4.62	0.30	0.40	0.29	6.03	1.78
			Y-	E	2	6.16	9.17	0.45	0.20	0.29	6.03	1.19
240	N	ø8/ 6	Z+	E	2	4.62	4.62	0.30	0.40	0.29	6.03	1.78
			Y-	E	2	4.62	7.63	0.45	0.20	0.29	6.03	1.19
340	N	ø8/ 6	Z+	E	2	4.62	4.62	0.30	0.40	0.29	6.03	1.78
			Y-	E	2	4.62	4.62	0.45	0.20	0.29	6.03	1.19

Pilastrata n. 41

Nodi: 41 141 241

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
1	R	30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.
3.56	13 (α)	SLV	2	1	0.00	-2814.89	1978.86	1.79	3543.62	2261.16	1.59	3587.52	-2814.89	6177.27	6294.88	59.06	5.54	1.749
6.91	1	SLV	2	1	335.00	-2290.87	-2302.58			-2645.47			-2290.86	-5598.08	-6444.73	244.69	5.99	2.434
-0.25	2	SLD	1	1	0.00	-10567.90	2524.24			1852.06			-10567.90	9419.58	6879.60	50.63	5.72	3.726
-0.25	2	SLD	1	1	0.00	-10567.90	2524.24			1852.06			-10567.90	9419.58	6879.60	50.63	5.72	3.726
3.21	2	SLD	1	1	346.00	-9529.94	-1620.82			-1641.87			-9529.94	-7877.20	-7894.19	239.06	5.82	4.834
3.56	2	SLD	2	1	0.00	-3606.00	2055.16			2345.26			-3606.01	6739.25	7679.40	66.09	6.71	3.276
6.91	2	SLD	2	1	335.00	-2601.00	-1868.97			-2266.93			-2601.01	-6520.07	-7637.33	247.50	6.92	3.418

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	39.42
-0.25	1	3.81	43.99	39.42
3.21	1	3.81	43.99	39.42

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu,s <daNm>	Myu <daNm>	Mzu,s <daNm>	Mzu <daNm>	α <grad>
-0.25	1	SLV	1	1	0.00	-9826.18	3118.69			2250.12			-9826.20	7465.02	7731.80	5501.43	5680.20	50.63
-0.25	1	SLV	1	1	0.00	-9826.18	3118.69			2250.12			-9826.20	7465.02	7731.80	5501.43	5680.20	50.63
3.21	3 (α)	SLV	1	1	346.00	-10517.90	-1478.19	1.86	-2755.67	-1491.89	1.68	-2513.36	-10517.90	-6611.37	-6867.92	-6123.83	-6364.20	236.25

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	23	SLE R	1	1	0.00	-14197.40	550.54	435.37	0.00	15.27	21.68	274.13
-0.25	31	SLE Q	1	1	0.00	-13385.50	492.83	442.17	0.00	15.27	20.41	258.62
-0.25	23	SLE R	1	1	0.00	-14197.40	550.54	435.37	0.00	15.27	21.68	274.13
-0.25	31	SLE Q	1	1	0.00	-13385.50	492.83	442.17	0.00	15.27	20.41	258.62
3.21	23	SLE R	1	1	346.00	-13159.40	-954.79	-654.58	5.09	10.18	30.85	364.52
3.21	31	SLE Q	1	1	346.00	-12347.50	-848.27	-682.91	5.09	10.18	28.99	343.51

Relazione di calcolo

3.56	23	SLE R	2	1	0.00	-4998.79	1245.00	689.89	7.63	7.63	40.60	623.17
3.56	31	SLE Q	2	1	0.00	-4761.26	1118.22	701.45	7.63	7.63	37.98	568.31
6.91	23	SLE R	2	1	335.00	-3993.79	-1057.18	-327.07	7.63	7.63	29.40	469.70
6.91	31	SLE Q	2	1	335.00	-3756.26	-964.00	-325.65	7.63	7.63	27.33	428.86

Verifiche stato limite di formazione delle fessure

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{sm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
3.21	31	SLE Q	1	1	346.00	-12347.50	-682.91	-848.27	39.00	152.00	0.13	199.04	18.00	5.09	512.55	107.11	382.29	0.02	0.01
3.56	31	SLE Q	2	1	0.00	-4761.26	701.45	1118.22	39.00	152.00	0.13	186.62	18.00	7.63	663.48	568.31	1040.11	0.11	0.04
6.91	31	SLE Q	2	1	335.00	-3756.26	-325.65	-964.00	39.00	152.00	0.13	186.61	18.00	7.63	663.37	428.86	1087.96	0.08	0.03

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.33	ø8/12	2	2	18	SLU	0.40	524.18	2.50	18513.50	28052.10	0.30	410.18	2.50	25889.50	29421.20	35.32
-0.25	0.33	ø8/12	2	2	19	SLU	0.40	568.90	2.50	18513.50	28065.00	0.30	401.49	2.50	25889.50	29434.70	32.54
-0.25	0.33	ø8/12	2	2	10 (TG)	SLD	0.40	3430.66	2.50	21290.60	40404.50	0.30	6878.21	2.50	29772.90	42376.40	4.33
-0.25	0.33	ø8/12	2	2	16 (TG)	SLD	0.40	5190.32	2.50	21290.60	39786.30	0.30	4286.16	2.50	29772.90	41728.00	4.10
-0.25	0.33	ø8/12	2	2	16 (TG)	SLD	0.40	5233.62	2.50	21290.60	40170.10	0.30	4789.18	2.50	29772.90	42130.60	4.07
-0.25	0.33	ø8/12	2	2	11 (TG)	SLV	0.40	2272.53	2.50	18513.50	27874.90	0.30	6347.97	2.50	25889.50	29235.40	4.08
-0.25	0.33	ø8/12	2	2	15 (TG)	SLV	0.40	4563.24	2.50	18513.50	27378.70	0.30	2842.37	2.50	25889.50	28714.90	4.06
0.33	2.63	ø8/20	2	2	18	SLU	0.40	524.18	2.50	11108.10	28022.90	0.30	410.18	2.50	15533.70	29390.50	21.19
0.33	2.63	ø8/20	2	2	19	SLU	0.40	568.90	2.50	11108.10	28035.80	0.30	401.49	2.50	15533.70	29404.10	19.53
0.33	2.63	ø8/20	2	2	10 (TG)	SLD	0.40	3430.66	2.50	12774.30	40404.50	0.30	6878.21	2.50	17863.70	42376.40	2.60
0.33	2.63	ø8/20	2	2	16 (TG)	SLD	0.40	5190.32	2.50	12774.30	39786.30	0.30	4286.16	2.50	17863.70	41728.00	2.46
0.33	2.63	ø8/20	2	2	16 (TG)	SLD	0.40	5233.62	2.50	12774.30	40170.10	0.30	4789.18	2.50	17863.70	42130.60	2.44
0.33	2.63	ø8/20	2	2	11 (TG)	SLV	0.40	2272.53	2.50	11108.10	27874.90	0.30	6347.97	2.50	15533.70	29235.40	2.45
0.33	2.63	ø8/20	2	2	15 (TG)	SLV	0.40	4563.24	2.50	11108.10	27378.70	0.30	2842.37	2.50	15533.70	28714.90	2.43
2.63	3.21	ø8/12	2	2	18	SLU	0.40	524.18	2.50	18513.50	27906.10	0.30	410.18	2.50	25889.50	29268.00	35.32
2.63	3.21	ø8/12	2	2	19	SLU	0.40	568.90	2.50	18513.50	27919.00	0.30	401.49	2.50	25889.50	29281.60	32.54
2.63	3.21	ø8/12	2	2	10 (TG)	SLD	0.40	3430.66	2.50	21290.60	40404.50	0.30	6878.21	2.50	29772.90	42376.40	4.33
2.63	3.21	ø8/12	2	2	16 (TG)	SLD	0.40	5190.32	2.50	21290.60	39786.30	0.30	4286.16	2.50	29772.90	41728.00	4.10
2.63	3.21	ø8/12	2	2	16 (TG)	SLD	0.40	5233.62	2.50	21290.60	40170.10	0.30	4789.18	2.50	29772.90	42130.60	4.07
2.63	3.21	ø8/12	2	2	11 (TG)	SLV	0.40	2272.53	2.50	18513.50	27874.90	0.30	6347.97	2.50	25889.50	29235.40	4.08
2.63	3.21	ø8/12	2	2	15 (TG)	SLV	0.40	4563.24	2.50	18513.50	27378.70	0.30	2842.37	2.50	25889.50	28714.90	4.06
3.56	4.12	ø8/12	2	2	18	SLU	0.40	850.56	2.50	18513.50	26490.00	0.30	420.36	2.50	25889.50	27782.80	21.77
3.56	4.12	ø8/12	2	2	19	SLU	0.40	899.18	2.50	18513.50	26494.50	0.30	393.45	2.50	25889.50	27787.60	20.59
3.56	4.12	ø8/12	2	2	2 (TG)	SLD	0.40	3188.76	2.50	21290.60	39155.50	0.30	6203.55	2.50	29772.90	41066.40	4.80
3.56	4.12	ø8/12	2	2	16 (TG)	SLD	0.40	5466.05	2.50	21290.60	38999.10	0.30	2353.51	2.50	29772.90	40902.40	3.90
3.56	4.12	ø8/12	2	2	15 (TG)	SLV	0.40	2477.17	2.50	18513.50	26189.60	0.30	5368.39	2.50	25889.50	27467.80	4.82
3.56	4.12	ø8/12	2	2	3 (TG)	SLV	0.40	4667.73	2.50	18513.50	26297.00	0.30	2093.56	2.50	25889.50	27580.40	3.97
4.12	6.35	ø8/20	2	2	18	SLU	0.40	850.56	2.50	11108.10	26461.70	0.30	420.36	2.50	15533.70	27753.20	13.06
4.12	6.35	ø8/20	2	2	19	SLU	0.40	899.18	2.50	11108.10	26466.30	0.30	393.45	2.50	15533.70	27758.00	12.35
4.12	6.35	ø8/20	2	2	2 (TG)	SLD	0.40	3188.76	2.50	12774.30	39155.50	0.30	6203.55	2.50	17863.70	41066.40	2.88
4.12	6.35	ø8/20	2	2	16 (TG)	SLD	0.40	5466.05	2.50	12774.30	38999.10	0.30	2353.51	2.50	17863.70	40902.40	2.34
4.12	6.35	ø8/20	2	2	15 (TG)	SLV	0.40	2477.17	2.50	11108.10	26189.60	0.30	5368.39	2.50	15533.70	27467.80	2.89
4.12	6.35	ø8/20	2	2	3 (TG)	SLV	0.40	4667.73	2.50	11108.10	26297.00	0.30	2093.56	2.50	15533.70	27580.40	2.38
6.35	6.91	ø8/12	2	2	18	SLU	0.40	850.56	2.50	18513.50	26348.60	0.30	420.36	2.50	25889.50	27634.60	21.77
6.35	6.91	ø8/12	2	2	19	SLU	0.40	899.18	2.50	18513.50	26353.20	0.30	393.45	2.50	25889.50	27639.40	20.59
6.35	6.91	ø8/12	2	2	2 (TG)	SLD	0.40	3188.76	2.50	21290.60	39155.50	0.30	6203.55	2.50	29772.90	41066.40	4.80
6.35	6.91	ø8/12	2	2	16 (TG)	SLD	0.40	5466.05	2.50	21290.60	38999.10	0.30	2353.51	2.50	29772.90	40902.40	3.90
6.35	6.91	ø8/12	2	2	15 (TG)	SLV	0.40	2477.17	2.50	18513.50	26189.60	0.30	5368.39	2.50	25889.50	27467.80	4.82
6.35	6.91	ø8/12	2	2	3 (TG)	SLV	0.40	4667.73	2.50	18513.50	26297.00	0.30	2093.56	2.50	25889.50	27580.40	3.97

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
141	N	ø8/ 7	Y-	E	2	4.62	4.62	0.40	0.20	0.29	5.03	1.11
			Z-	E	2	4.62	4.62	0.30	0.30	0.29	5.03	1.48
241	N	ø8/ 7	Y-	E	2	4.62	4.62	0.40	0.20	0.29	5.03	1.11
			Z-	E	2	4.62	4.62	0.30	0.30	0.29	5.03	1.48

Pilastrata n. 42

Nodi: 42 142 242

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
1R		30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	α _y	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.	
-0.25	1	SLV	1	1	0.00	-9841.31	3264.60		2772.90			-9841.31	8459.59	7028.61	59.06	4.57	2.568	
-0.25	1	SLV	1	1	0.00	-9841.31	3264.60		2772.90			-9841.31	8459.59	7028.61	59.06	4.57	2.568	
3.21	9 (α)	SLV	1	1	346.00	-6445.13	1277.69	3.90	4981.73	1898.55	1.53	2903.01	-6445.15	9857.12	5824.83	50.63	4.76	1.986
3.56	15 (α)	SLV	2	1	0.00	-5154.56	2269.16	3.79	8590.27	-1433.66	3.01	-4322.04	-5154.56	10553.60	-5158.26	315.00	4.95	1.222
6.91	1	SLV	2	1	335.00	-3457.79	-4856.79		-2684.69			-3457.79	-10158.50	-5387.61	227.81	4.96	2.072	
-0.25	2	SLD	1	1	0.00	-11092.90	2613.58		2167.75			-11092.90	10313.30	8536.41	59.06	5.18	3.943	
-0.25	2	SLD	1	1	0.00	-11092.90	2613.58		2167.75			-11092.90	10313.30	8536.41	59.06	5.18	3.943	
3.21	2	SLD	1	1	346.00	-10054.90	-1790.37		-1561.61			-10054.80	-9933.64	-8702.86	240.47	5.24	5.559	
3.56	2	SLD	2	1	0.00	-4963.69	3481.56		2116.87			-4963.70	11705.50	7064.04	50.63	5.49	3.355	
6.91	2	SLD	2	1	335.00	-3958.69	-4278.25		-2081.10			-3958.68	-12522.70	-6093.25	222.19	5.83	2.927	

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	22	S										

Relazione di calcolo

-0.25	31	SLE Q	1	1	0.00	-15900.70	76.97	329.43	0.00	20.36	14.67	204.06
3.21	23	SLE R	1	1	346.00	-15859.60	-80.14	-733.58	0.00	20.36	18.48	247.36
3.21	31	SLE Q	1	1	346.00	-14862.70	-110.32	-480.87	0.00	20.36	15.84	214.42
3.56	22	SLE R	2	1	0.00	-7029.34	-75.77	1964.51	12.72	7.63	31.01	431.80
3.56	30	SLE Q	2	1	0.00	-6700.31	-69.10	1660.02	12.72	7.63	26.41	333.34
6.91	22	SLE R	2	1	335.00	-6024.34	105.39	-2474.22	12.72	7.63	38.89	675.39
6.91	30	SLE Q	2	1	335.00	-5695.31	131.54	-2263.77	12.72	7.63	36.48	618.61

Verifiche stato limite di formazione delle fessure

Xg <mm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
3.56	30	SLE Q	2	1	0.00	-6700.31	1660.02	-69.10	39.00	102.00	0.13	163.92	18.00	10.18	741.02	333.34	940.86	0.06	0.02
6.91	30	SLE Q	2	1	335.00	-5695.31	-2263.77	131.54	39.00	102.00	0.13	164.84	18.00	12.72	939.32	618.61	1095.26	0.12	0.03

Staffe - Verifiche armatura

X0 <cm>	X1 <cm>	Staff	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.33	ø8/12	2	2	18	SLU	0.40	30.54	2.50	18513.50	28465.30	0.30	489.50	2.50	25889.50	29854.50	52.89
-0.25	0.33	ø8/12	2	2	20	SLU	0.40	60.51	2.50	18513.50	28453.00	0.30	443.27	2.50	25889.50	29841.70	58.41
-0.25	0.33	ø8/12	2	2	16 (TG)	SLD	0.40	4797.27	2.50	21290.60	40540.60	0.30	7590.81	2.50	29772.90	42519.20	3.92
-0.25	0.33	ø8/12	2	2	12 (TG)	SLD	0.40	6670.18	2.50	21290.60	40674.10	0.30	4777.68	2.50	29772.90	42659.20	3.19
-0.25	0.33	ø8/12	2	2	15 (TG)	SLV	0.40	3875.25	2.50	18513.50	27766.20	0.30	6552.75	2.50	25889.50	29121.30	3.95
-0.25	0.33	ø8/12	2	2	3 (TG)	SLV	0.40	5736.35	2.50	18513.50	28242.40	0.30	3219.08	2.50	25889.50	29620.80	3.23
0.33	2.63	ø8/20	2	2	18	SLU	0.40	30.54	2.50	11108.10	28436.10	0.30	489.50	2.50	15533.70	29823.90	31.73
0.33	2.63	ø8/20	2	2	20	SLU	0.40	60.51	2.50	11108.10	28423.80	0.30	443.27	2.50	15533.70	29811.00	35.04
0.33	2.63	ø8/20	2	2	16 (TG)	SLD	0.40	4797.27	2.50	12774.30	40540.60	0.30	7590.81	2.50	17863.70	42519.20	2.35
0.33	2.63	ø8/20	2	2	12 (TG)	SLD	0.40	6670.18	2.50	12774.30	40674.10	0.30	4777.68	2.50	17863.70	42659.20	1.92
0.33	2.63	ø8/20	2	2	15 (TG)	SLV	0.40	3875.25	2.50	11108.10	27766.20	0.30	6552.75	2.50	15533.70	29121.30	2.37
0.33	2.63	ø8/20	2	2	3 (TG)	SLV	0.40	5736.35	2.50	11108.10	28242.40	0.30	3219.08	2.50	15533.70	29620.80	1.94
2.63	3.21	ø8/12	2	2	18	SLU	0.40	30.54	2.50	18513.50	28319.30	0.30	489.50	2.50	25889.50	29701.40	52.89
2.63	3.21	ø8/12	2	2	20	SLU	0.40	60.51	2.50	18513.50	28307.00	0.30	443.27	2.50	25889.50	29688.60	58.41
2.63	3.21	ø8/12	2	2	16 (TG)	SLD	0.40	4797.27	2.50	21290.60	40540.60	0.30	7590.81	2.50	29772.90	42519.20	3.92
2.63	3.21	ø8/12	2	2	12 (TG)	SLD	0.40	6670.18	2.50	21290.60	40674.10	0.30	4777.68	2.50	29772.90	42659.20	3.19
2.63	3.21	ø8/12	2	2	15 (TG)	SLV	0.40	3875.25	2.50	18513.50	27766.20	0.30	6552.75	2.50	25889.50	29121.30	3.95
2.63	3.21	ø8/12	2	2	3 (TG)	SLV	0.40	5736.35	2.50	18513.50	28242.40	0.30	3219.08	2.50	25889.50	29620.80	3.23
3.56	4.12	ø8/12	2	2	18	SLU	0.40	62.38	2.50	18513.50	26845.00	0.30	1750.76	2.50	25889.50	28155.20	14.79
3.56	4.12	ø8/12	2	2	20	SLU	0.40	88.60	2.50	18513.50	26841.20	0.30	1706.99	2.50	25889.50	28151.20	15.17
3.56	4.12	ø8/12	2	2	8 (TG)	SLD	0.40	3178.38	2.50	21290.60	39382.50	0.30	9148.46	2.50	29772.90	41304.60	3.25
3.56	4.12	ø8/12	2	2	10 (TG)	SLD	0.40	6300.16	2.50	21290.60	39451.90	0.30	3960.17	2.50	29772.90	41377.40	3.38
3.56	4.12	ø8/12	2	2	7 (TG)	SLV	0.40	3046.13	2.50	18513.50	26302.00	0.30	7260.30	2.50	25889.50	27585.60	3.57
3.56	4.12	ø8/12	2	2	7 (TG)	SLV	0.40	3161.76	2.50	18513.50	26604.10	0.30	7336.80	2.50	25889.50	27902.50	3.53
3.56	4.12	ø8/12	2	2	11 (TG)	SLV	0.40	5038.70	2.50	18513.50	26120.20	0.30	3354.49	2.50	25889.50	27395.00	3.67
3.56	4.12	ø8/12	2	2	11 (TG)	SLV	0.40	5130.31	2.50	18513.50	26811.30	0.30	3733.98	2.50	25889.50	28119.90	3.61
4.12	6.35	ø8/20	2	2	18	SLU	0.40	62.38	2.50	11108.10	26816.80	0.30	1750.76	2.50	15533.70	28125.50	8.87
4.12	6.35	ø8/20	2	2	20	SLU	0.40	88.60	2.50	11108.10	26812.90	0.30	1706.99	2.50	15533.70	28121.50	9.10
4.12	6.35	ø8/20	2	2	8 (TG)	SLD	0.40	3178.38	2.50	12774.30	39382.50	0.30	9148.46	2.50	17863.70	41304.60	1.95
4.12	6.35	ø8/20	2	2	10 (TG)	SLD	0.40	6300.16	2.50	12774.30	39451.90	0.30	3960.17	2.50	17863.70	41377.40	2.03
4.12	6.35	ø8/20	2	2	7 (TG)	SLV	0.40	3046.13	2.50	11108.10	26302.00	0.30	7260.30	2.50	15533.70	27585.60	2.14
4.12	6.35	ø8/20	2	2	7 (TG)	SLV	0.40	3161.76	2.50	11108.10	26604.10	0.30	7336.80	2.50	15533.70	27902.50	2.12
4.12	6.35	ø8/20	2	2	11 (TG)	SLV	0.40	5038.70	2.50	11108.10	26120.20	0.30	3354.49	2.50	15533.70	27395.00	2.20
4.12	6.35	ø8/20	2	2	11 (TG)	SLV	0.40	5130.31	2.50	11108.10	26811.30	0.30	3733.98	2.50	15533.70	28119.90	2.17
6.35	6.91	ø8/12	2	2	18	SLU	0.40	62.38	2.50	18513.50	26703.70	0.30	1750.76	2.50	25889.50	28007.00	14.79
6.35	6.91	ø8/12	2	2	20	SLU	0.40	88.60	2.50	18513.50	26699.80	0.30	1706.99	2.50	25889.50	28002.90	15.17
6.35	6.91	ø8/12	2	2	8 (TG)	SLD	0.40	3178.38	2.50	21290.60	39382.50	0.30	9148.46	2.50	29772.90	41304.60	3.25
6.35	6.91	ø8/12	2	2	10 (TG)	SLD	0.40	6300.16	2.50	21290.60	39451.90	0.30	3960.17	2.50	29772.90	41377.40	3.38
6.35	6.91	ø8/12	2	2	7 (TG)	SLV	0.40	3046.13	2.50	18513.50	26302.00	0.30	7260.30	2.50	25889.50	27585.60	3.57
6.35	6.91	ø8/12	2	2	7 (TG)	SLV	0.40	3161.76	2.50	18513.50	26604.10	0.30	7336.80	2.50	25889.50	27902.50	3.53
6.35	6.91	ø8/12	2	2	11 (TG)	SLV	0.40	5038.70	2.50	18513.50	26120.20	0.30	3354.49	2.50	25889.50	27395.00	3.67
6.35	6.91	ø8/12	2	2	11 (TG)	SLV	0.40	5130.31	2.50	18513.50	26811.30	0.30	3733.98	2.50	25889.50	28119.90	3.61

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
142	N	ø8 / 7	Z+	I	2	5.09	5.09	0.30	0.30	0.29	5.03	1.48
			Y-	E	2	4.62	7.63	0.40	0.20	0.29	5.03	1.11
			Z-	I	2	5.09	5.09	0.30	0.30	0.29	5.03	1.48
242	N	ø8 / 7	Z+	I	2	4.62	5.09	0.30	0.30	0.29	5.03	1.48
			Y-	E	2	4.62	4.62	0.40	0.20	0.29	5.03	1.11
			Z-	I	2	6.16	5.09	0.30	0.30	0.29	5.03	1.48

Pilastrata n. 43

Nodi: 43 143 243 343

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
1	R	30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
8	R	35.00	40.00	6.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <mm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _z	Sic.
3.56	13 (a)	SLV	2	8	0.00	-10478.90	2489.60	1.29	3211.40	-891.25	6.81	-6066.15	-10478.90	4347.39	-8400.43	289.69	5.72	1.378
7.00	3 (a)	SLV	2	8	344.00	-9956.50	-1595.67	1.58	-2528.69	-733.99	6.60	-4841.64	-9956.50	-4347.32	-8343.81	250.31	5.76	1.722
7.26	13 (a)	SLV	3	1	0.00	-4203.18	1201.22	1.48	1773.82	-1190.27	3.69	-4397.62	-4203.18	2894.42	-7112.74	279.14	8.38	1.619
8.42	13	SLV	3	1	116.00	-3855.18	-1617.66			-2087.47			-3855.18	-5257.54	-6681.06	247.50	6.08	3.219
-0.25	2	SLD	1	1	0.00	-22260.30	2722.64			839.28			-22260.30	12889.50	4170.46	25.31	6.14	4.755
-0.25	2																	

Relazione di calcolo

8.42	14	SLD	3	1	116.00	-3960.14	-1380.19			-1676.45		-3960.14	-6536.96	-7770.62	247.50	6.80	4.676
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Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
-0.25	1	3.81	43.99	32.28
-0.25	1	3.81	43.99	32.28
3.30	1	3.81	43.99	32.28

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu, s <daNm>	Myu <daNm>	Mzu, s <daNm>	Mzu <daNm>	α <grad>
-0.25	1	SLV	1	1	0.00	-22018.20	3314.64			-1087.21			-22018.20	10202.10	10789.90	-3355.54	-3545.51	331.88
-0.25	1	SLV	1	1	0.00	-22018.20	3314.64			-1087.21			-22018.20	10202.10	10789.90	-3355.54	-3545.51	331.88
3.30	3(α)	SLV	1	1	355.00	-21607.20	-1930.74	1.33	-2565.89	-538.07	4.85	-2611.76	-21607.20	-6573.19	-7013.77	-6573.39	-7021.16	237.66

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	22	SLE R	1	1	0.00	-25857.30	274.63	732.19	0.00	15.27	29.21	393.82
-0.25	23	SLE R	1	1	0.00	-25822.00	292.89	709.80	0.00	15.27	29.20	393.29
-0.25	30	SLE Q	1	1	0.00	-23173.80	220.62	673.28	0.00	15.27	26.02	351.51
-0.25	22	SLE R	1	1	0.00	-25857.30	274.63	732.19	0.00	15.27	29.21	393.82
-0.25	23	SLE R	1	1	0.00	-25822.00	292.89	709.80	0.00	15.27	29.20	393.29
-0.25	30	SLE Q	1	1	0.00	-23173.80	220.62	673.28	0.00	15.27	26.02	351.51
3.30	23	SLE R	1	1	355.00	-24757.00	-514.74	-1186.95	0.00	15.27	36.27	467.72
3.30	31	SLE Q	1	1	355.00	-22073.60	-411.45	-1094.24	0.00	15.27	32.08	414.81
3.56	22	SLE R	2	8	0.00	-12377.30	763.10	1453.10	7.63	7.63	35.83	370.11
3.56	30	SLE Q	2	8	0.00	-11452.60	617.92	1345.24	7.63	7.63	31.58	329.33
7.00	22	SLE R	2	8	344.00	-11173.30	-399.98	-701.69	2.54	12.72	17.98	209.24
7.00	30	SLE Q	2	8	344.00	-10248.60	-343.05	-663.59	2.54	12.72	16.43	191.46
7.26	23	SLE R	3	1	0.00	-5319.40	148.18	385.85	2.54	12.72	9.86	123.05
7.26	31	SLE Q	3	1	0.00	-4673.87	122.60	371.68	2.54	12.72	8.98	111.65
8.42	23	SLE R	3	1	116.00	-4971.40	-369.03	-619.45	7.63	7.63	18.18	205.49
8.42	31	SLE Q	3	1	116.00	-4325.87	-278.67	-547.69	7.63	7.63	15.04	171.41

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{cm} <mm>	Φ	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
3.56	31	SLE Q	2	8	0.00	-11430.30	1310.47	634.91	59.00	252.00	0.13	284.98	18.00	2.54	329.61	184.44	529.88	0.04	0.02
7.00	30	SLE Q	2	8	344.00	-10248.60	-663.59	-343.05	59.00	252.00	0.13	285.01	18.00	2.54	329.69	5.63	55.03	0.00	0.00
7.26	31	SLE Q	3	1	0.00	-4673.87	371.68	122.60	39.00	252.00	0.13	221.18	18.00	2.54	262.33	16.15	255.31	0.00	0.00
8.42	31	SLE Q	3	1	116.00	-4325.87	-547.69	-278.67	39.00	152.00	0.13	199.04	18.00	5.09	512.55	118.37	643.82	0.02	0.01

Staffe - Verifiche armatura

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic. T
-0.25	0.34	ø8/12	2	2	18	SLU	0.40	295.48	2.50	18513.50	30101.10	0.30	706.53	2.50	25889.50	31570.20	36.64
-0.25	0.34	ø8/12	2	2	19	SLU	0.40	303.36	2.50	18513.50	30096.60	0.30	701.34	2.50	25889.50	31565.40	36.91
-0.25	0.34	ø8/12	2	2	4 (TG)	SLD	0.40	2983.56	2.50	21290.60	41287.50	0.30	7671.60	2.50	29772.90	43302.50	3.88
-0.25	0.34	ø8/12	2	2	16 (TG)	SLD	0.40	5033.01	2.50	21290.60	41380.00	0.30	5702.65	2.50	29772.90	43399.60	4.23
-0.25	0.34	ø8/12	2	2	3 (TG)	SLV	0.40	1320.60	2.50	18513.50	28451.40	0.30	7238.83	2.50	25889.50	29839.90	3.58
-0.25	0.34	ø8/12	2	2	3 (TG)	SLV	0.40	1443.02	2.50	18513.50	28653.50	0.30	7257.63	2.50	25889.50	30052.00	3.57
-0.25	0.34	ø8/12	2	2	7 (TG)	SLV	0.40	4766.04	2.50	18513.50	28454.00	0.30	3758.58	2.50	25889.50	29842.70	3.88
0.34	2.71	ø8/20	2	2	18	SLU	0.40	295.48	2.50	11108.10	30071.20	0.30	706.53	2.50	15533.70	31538.80	21.99
0.34	2.71	ø8/20	2	2	19	SLU	0.40	303.36	2.50	11108.10	30066.60	0.30	701.34	2.50	15533.70	31534.00	22.15
0.34	2.71	ø8/20	2	2	4 (TG)	SLD	0.40	2983.56	2.50	12774.30	41287.50	0.30	7671.60	2.50	17863.70	43302.50	2.33
0.34	2.71	ø8/20	2	2	16 (TG)	SLD	0.40	5033.01	2.50	12774.30	41380.00	0.30	5702.65	2.50	17863.70	43399.60	2.54
0.34	2.71	ø8/20	2	2	3 (TG)	SLV	0.40	1320.60	2.50	11108.10	28451.40	0.30	7238.83	2.50	15533.70	29839.90	2.15
0.34	2.71	ø8/20	2	2	3 (TG)	SLV	0.40	1443.02	2.50	11108.10	28653.50	0.30	7257.63	2.50	15533.70	30052.00	2.14
0.34	2.71	ø8/20	2	2	7 (TG)	SLV	0.40	4766.04	2.50	11108.10	28454.00	0.30	3758.58	2.50	15533.70	29842.70	2.33
2.71	3.30	ø8/12	2	2	18	SLU	0.40	295.48	2.50	18513.50	29951.30	0.30	706.53	2.50	25889.50	31413.10	36.64
2.71	3.30	ø8/12	2	2	19	SLU	0.40	303.36	2.50	18513.50	29946.80	0.30	701.34	2.50	25889.50	31408.30	36.91
2.71	3.30	ø8/12	2	2	4 (TG)	SLD	0.40	2983.56	2.50	21290.60	41287.50	0.30	7671.60	2.50	29772.90	43302.50	3.88
2.71	3.30	ø8/12	2	2	16 (TG)	SLD	0.40	5033.01	2.50	21290.60	41380.00	0.30	5702.65	2.50	29772.90	43399.60	4.23
2.71	3.30	ø8/12	2	2	3 (TG)	SLV	0.40	1320.60	2.50	18513.50	28451.40	0.30	7238.83	2.50	25889.50	29839.90	3.58
2.71	3.30	ø8/12	2	2	3 (TG)	SLV	0.40	1443.02	2.50	18513.50	28653.50	0.30	7257.63	2.50	25889.50	30052.00	3.57
2.71	3.30	ø8/12	2	2	7 (TG)	SLV	0.40	4766.04	2.50	18513.50	28454.00	0.30	3758.58	2.50	25889.50	29842.70	3.88
3.56	4.13	ø8/12	2	2	18	SLU	0.40	451.45	2.50	20726.30	30741.20	0.35	819.48	2.50	24414.30	31684.70	29.79
3.56	4.13	ø8/12	2	2	19	SLU	0.40	458.21	2.50	20726.30	30738.40	0.35	801.30	2.50	24414.30	31681.90	30.47
3.56	4.13	ø8/12	2	2	4 (TG)	SLD	0.40	2654.93	2.50	23835.30	44316.50	0.35	7378.08	2.50	28076.40	45676.80	3.81
3.56	4.13	ø8/12	2	2	14 (TG)	SLD	0.40	6112.96	2.50	23835.30	44402.20	0.35	4022.36	2.50	28076.40	45765.10	3.90
3.56	4.13	ø8/12	2	2	11 (TG)	SLV	0.40	4200.73	2.50	20726.30	29911.60	0.35	4432.06	2.50	24414.30	30829.70	4.93
3.56	4.13	ø8/12	2	2	15 (TG)	SLV	0.40	4225.98	2.50	20726.30	30017.90	0.35	4437.79	2.50	24414.30	30939.20	4.90
3.56	4.13	ø8/12	2	2	3 (TG)	SLV	0.40	5616.55	2.50	20726.30	30059.20	0.35	1560.43	2.50	24414.30	30981.80	3.69
4.13	6.43	ø8/20	2	2	18	SLU	0.40	451.45	2.50	12435.80	30708.70	0.35	819.48	2.50	14648.60	31651.20	17.88
4.13	6.43	ø8/20	2	2	19	SLU	0.40	458.21	2.50	12435.80	30705.90	0.35	801.30	2.50	14648.60	31648.40	18.28
4.13	6.43	ø8/20	2	2	4 (TG)	SLD	0.40	2654.93	2.50	14301.20	44316.50	0.35	7378.08	2.50	16845.80	45676.80	2.28
4.13	6.43	ø8/20	2	2	14 (TG)	SLD	0.40	6112.96	2.50	14301.20	44402.20	0.35	4022.36	2.50	16845.80	45765.10	2.34
4.13	6.43	ø8/20	2	2	11 (TG)	SLV	0.40	4200.73	2.50	12435.80	29911.60	0.35	4432.06	2.50	14648.60	30829.70	2.96
4.13	6.43	ø8/20															

Relazione di calcolo

7.26	8.42	ø8/12	2	2	12 (TG)	SLD	0.40	10537.50	2.50	21290.60	39007.10	0.30	18072.70	2.50	29772.90	40910.80	1.65
7.26	8.42	ø8/12	2	2	16 (TG)	SLD	0.40	15589.40	2.50	21290.60	39047.50	0.30	8131.41	2.50	29772.90	40953.20	1.37
7.26	8.42	ø8/12	2	2	11 (TG)	SLV	0.40	8025.57	2.50	18513.50	26216.60	0.30	13070.90	2.50	25889.50	27496.10	1.98
7.26	8.42	ø8/12	2	2	7 (TG)	SLV	0.40	13742.50	2.50	18513.50	26251.60	0.30	3378.28	2.50	25889.50	27532.80	1.35

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
143	N	ø8/ 7	Y+	I	2	4.62	4.62	0.40	0.20	0.20	4.02	1.20
			Y-	I	2	4.62	4.62	0.40	0.20	0.20	4.02	1.20
			Z-	E	2	6.16	4.62	0.40	0.30	0.20	4.02	1.20
243	N	ø8/ 7	Y+	I	2	4.62	4.62	0.40	0.21	0.20	4.02	1.20
			Y-	I	2	4.62	4.62	0.40	0.21	0.20	4.02	1.20
			Z-	E	2	4.62	4.62	0.40	0.26	0.20	4.02	1.20
343	N	ø8/ 6	Y+	I	2	4.62	4.62	0.40	0.20	0.18	4.02	1.30
			Y-	I	2	4.62	4.62	0.40	0.20	0.18	4.02	1.30
			Z-	E	2	4.62	4.62	0.40	0.30	0.18	4.02	1.30

Pilastrata n. 44

Nodi: 44 144 244 344

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
1	R	30.00	40.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	ε _y	Sic.
3.56	5 (α)	SLV	2	1	0.00	-10309.90	-3800.88	2.02	-7691.75	1982.42	1.10	2180.66	-10309.90	-10104.80	2753.83	157.50	6.24	1.310
6.91	1 (α)	SLV	2	1	335.00	-9532.69	2465.01	2.24	5527.97	-1202.28	1.10	-1322.51	-9543.82	10272.00	-2377.23	340.31	6.56	1.855
7.26	5 (α)	SLV	3	1	0.00	-4466.08	-2487.48	2.27	-5638.56	1551.86	1.10	1707.05	-4487.44	-9410.98	2869.67	156.09	6.68	1.670
8.31	9	SLV	3	1	105.00	-4424.68	4042.41			-1849.47			-4424.68	8630.08	-3972.15	326.25	6.00	2.137
-0.25	10	SLD	1	1	0.00	-23889.00	-4257.55			1509.76			-23889.00	-12788.30	4617.25	151.88	5.83	3.010
-0.25	10	SLD	1	1	0.00	-23889.00	-4257.55			1509.76			-23889.00	-12788.30	4617.25	151.88	5.83	3.010
3.21	10	SLD	1	1	346.00	-22851.00	4165.96			-1578.17			-22851.10	12677.70	-4602.36	331.88	5.89	3.028
3.56	10	SLD	2	1	0.00	-11624.40	-4062.29			1830.61			-11624.40	-10955.90	5138.04	146.25	6.28	2.716
6.91	10	SLD	2	1	335.00	-10619.40	2693.19			-1126.44			-10619.40	11089.00	-4763.48	329.06	6.53	4.134
7.26	10	SLD	3	1	0.00	-5020.63	-2772.30			1387.18			-5058.60	-10247.30	4951.45	146.25	6.78	3.671
8.31	10	SLD	3	1	105.00	-4705.63	3475.99			-1647.96			-4748.28	10213.60	-4942.41	326.25	6.80	2.950

Dati per verifiche di stabilità

Xg <cm>	El	l ₀ <cm>	λ	λ*
-0.25	1	3.81	43.99	28.66
-0.25	1	3.81	43.99	28.66
3.21	1	3.81	43.99	28.66

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	Myu, s <daNm>	Myu <daNm>	Mzu, s <daNm>	Mzu <daNm>	α <grad>
-0.25	9	SLV	1	1	0.00	-23114.30	-5058.75			1741.94			-23114.30	-10275.00	-10890.90	3379.28	3552.87	151.88
-0.25	9	SLV	1	1	0.00	-23114.30	-5058.75			1741.94			-23114.30	-10275.00	-10890.90	3379.28	3552.87	151.88
3.21	9 (α)	SLV	1	1	346.00	-22076.30	4629.77	1.67	7714.42	-1686.91	1.10	-1855.60	-22076.30	10588.90	11233.10	-2698.38	-2857.73	337.50

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
-0.25	23	SLE R	1	1	0.00	-29000.50	858.97	-1574.40	2.54	12.72	48.07	606.89
-0.25	21	SLE R	1	1	0.00	-28773.80	789.17	-1638.21	2.54	12.72	47.64	602.57
-0.25	31	SLE Q	1	1	0.00	-26801.70	717.75	-1364.64	0.00	15.27	42.31	538.36
-0.25	23	SLE R	1	1	0.00	-29000.50	858.97	-1574.40	2.54	12.72	48.07	606.89
-0.25	21	SLE R	1	1	0.00	-28773.80	789.17	-1638.21	2.54	12.72	47.64	602.57
-0.25	31	SLE Q	1	1	0.00	-26801.70	717.75	-1364.64	0.00	15.27	42.31	538.36
3.21	21	SLE R	1	1	346.00	-27735.80	-1437.03	2968.85	5.09	10.18	78.79	923.61
3.21	24	SLE R	1	1	346.00	-27689.30	-1434.16	2966.97	5.09	10.18	78.70	922.54
3.21	29	SLE Q	1	1	346.00	-25537.00	-1186.84	2575.16	2.54	12.72	66.99	794.45
3.56	23	SLE R	2	1	0.00	-14328.90	1452.83	-2823.78	7.63	7.63	82.12	1019.22
3.56	21	SLE R	2	1	0.00	-14187.90	1412.97	-2854.57	7.63	7.63	81.86	1026.74
3.56	31	SLE Q	2	1	0.00	-13528.70	1238.33	-2498.51	7.63	7.63	71.02	834.10
6.91	23	SLE R	2	1	335.00	-13323.90	-742.43	1437.20	5.09	10.18	39.14	456.33
6.91	24	SLE R	2	1	335.00	-13142.60	-721.90	1446.36	5.09	10.18	38.90	453.32
6.91	31	SLE Q	2	1	335.00	-12523.70	-674.06	1338.20	5.09	10.18	36.06	421.72
7.26	21	SLE R	3	1	0.00	-6511.29	890.87	-1477.90	7.63	7.63	46.77	647.36
7.26	29	SLE Q	3	1	0.00	-5965.98	858.11	-1467.16	7.63	7.63	46.11	663.90
8.31	23	SLE R	3	1	105.00	-6268.63	-1128.35	1658.69	10.18	5.09	56.34	851.58
8.31	21	SLE R	3	1	105.00	-6196.29	-1078.48	1713.58	10.18	5.09	56.23	859.72
8.31	31	SLE Q	3	1	105.00	-5723.32	-957.73	1434.45	10.18	5.09	48.08	707.94

Verifiche stato limite di formazione delle fessure

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _{c, eff} <cmq>	σ _s <daN/cmq>	σ _{sr} <daN/cmq>	ε _{sm}	Wk <mm>
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Relazione di calcolo

3.21	29	SLE Q	1	1	346.00	-25537.00	2575.16	-1186.84	39.00	252.00	0.13	221.16	18.00	2.54	262.28	340.18	479.33	0.07	0.02
3.56	29	SLE Q	2	1	0.00	-13387.70	-2529.29	1198.47	39.00	152.00	0.13	194.88	18.00	7.63	733.55	841.53	885.52	0.18	0.06
6.91	32	SLE Q	2	1	335.00	-12342.40	1347.36	-653.53	39.00	252.00	0.13	221.16	18.00	2.54	262.28	218.40	539.40	0.04	0.02
7.26	29	SLE Q	3	1	0.00	-5965.98	-1467.16	858.11	39.00	152.00	0.13	194.88	18.00	7.63	733.55	663.90	1019.23	0.13	0.04
8.31	29	SLE Q	3	1	105.00	-5650.98	1489.34	-907.85	39.00	152.00	0.13	194.88	18.00	7.63	733.59	716.45	1047.74	0.14	0.05

Staffe - Verifiche armatura

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _y	Vsdu _y	ctgθ _y	VRsd _y	VRcd _y	bw _z	Vsdu _z	ctgθ _z	VRsd _z	VRcd _z	Sic. T
<cm>	<cm>						<cm>	<daN>		<daN>	<daN>	<cm>	<daN>		<daN>	<daN>	
-0.25	0.33	ø8/12	2	2	17	SLU	0.40	872.76	2.50	18513.50	30581.40	0.30	1774.58	2.50	25889.50	32073.90	14.59
-0.25	0.33	ø8/12	2	2	19	SLU	0.40	903.23	2.50	18513.50	30610.80	0.30	1740.77	2.50	25889.50	32104.80	14.87
-0.25	0.33	ø8/12	2	2	12 (TG)	SLD	0.40	3235.59	2.50	21290.60	42034.20	0.30	8236.62	2.50	29772.90	44085.70	3.61
-0.25	0.33	ø8/12	2	2	14 (TG)	SLD	0.40	3375.99	2.50	21290.60	42274.60	0.30	8271.98	2.50	29772.90	44337.80	3.60
-0.25	0.33	ø8/12	2	2	8 (TG)	SLD	0.40	4798.63	2.50	21290.60	42010.00	0.30	6620.01	2.50	29772.90	44060.30	4.44
-0.25	0.33	ø8/12	2	2	15 (TG)	SLV	0.40	1735.15	2.50	18513.50	29354.60	0.30	7610.95	2.50	25889.50	30787.20	3.40
-0.25	0.33	ø8/12	2	2	1 (TG)	SLV	0.40	4056.11	2.50	18513.50	28403.80	0.30	4852.50	2.50	25889.50	29790.00	4.56
-0.25	0.33	ø8/12	2	2	5 (TG)	SLV	0.40	4112.58	2.50	18513.50	29475.70	0.30	5341.84	2.50	25889.50	30914.30	4.50
0.33	2.63	ø8/20	2	2	17	SLU	0.40	872.76	2.50	11108.10	30552.20	0.30	1774.58	2.50	15533.70	32043.30	8.75
0.33	2.63	ø8/20	2	2	19	SLU	0.40	903.23	2.50	11108.10	30581.60	0.30	1740.77	2.50	15533.70	32074.10	8.92
0.33	2.63	ø8/20	2	2	12 (TG)	SLD	0.40	3235.59	2.50	12774.30	42034.20	0.30	8236.62	2.50	17863.70	44085.70	2.17
0.33	2.63	ø8/20	2	2	14 (TG)	SLD	0.40	3375.99	2.50	12774.30	42274.60	0.30	8271.98	2.50	17863.70	44337.80	2.16
0.33	2.63	ø8/20	2	2	8 (TG)	SLD	0.40	4798.63	2.50	12774.30	42010.00	0.30	6620.01	2.50	17863.70	44060.30	2.66
0.33	2.63	ø8/20	2	2	15 (TG)	SLV	0.40	1735.15	2.50	11108.10	29354.60	0.30	7610.95	2.50	15533.70	30787.20	2.04
0.33	2.63	ø8/20	2	2	1 (TG)	SLV	0.40	4056.11	2.50	11108.10	28403.80	0.30	4852.50	2.50	15533.70	29790.00	2.74
0.33	2.63	ø8/20	2	2	5 (TG)	SLV	0.40	4112.58	2.50	11108.10	29475.70	0.30	5341.84	2.50	15533.70	30914.30	2.70
2.63	3.21	ø8/12	2	2	17	SLU	0.40	872.76	2.50	18513.50	30435.40	0.30	1774.58	2.50	25889.50	31920.80	14.59
2.63	3.21	ø8/12	2	2	19	SLU	0.40	903.23	2.50	18513.50	30464.80	0.30	1740.77	2.50	25889.50	31951.70	14.87
2.63	3.21	ø8/12	2	2	12 (TG)	SLD	0.40	3235.59	2.50	21290.60	42034.20	0.30	8236.62	2.50	29772.90	44085.70	3.61
2.63	3.21	ø8/12	2	2	14 (TG)	SLD	0.40	3375.99	2.50	21290.60	42274.60	0.30	8271.98	2.50	29772.90	44337.80	3.60
2.63	3.21	ø8/12	2	2	8 (TG)	SLD	0.40	4798.63	2.50	21290.60	42010.00	0.30	6620.01	2.50	29772.90	44060.30	4.44
2.63	3.21	ø8/12	2	2	15 (TG)	SLV	0.40	1735.15	2.50	18513.50	29354.60	0.30	7610.95	2.50	25889.50	30787.20	3.40
2.63	3.21	ø8/12	2	2	1 (TG)	SLV	0.40	4056.11	2.50	18513.50	28403.80	0.30	4852.50	2.50	25889.50	29790.00	4.56
2.63	3.21	ø8/12	2	2	5 (TG)	SLV	0.40	4112.58	2.50	18513.50	29475.70	0.30	5341.84	2.50	25889.50	30914.30	4.50
3.56	4.12	ø8/12	2	2	17	SLU	0.40	853.30	2.50	18513.50	28066.20	0.30	1707.36	2.50	25889.50	29436.00	15.16
3.56	4.12	ø8/12	2	2	18	SLU	0.40	879.48	2.50	18513.50	28079.30	0.30	1677.52	2.50	25889.50	29449.70	15.43
3.56	4.12	ø8/12	2	2	14 (TG)	SLD	0.40	3197.51	2.50	21290.60	40400.30	0.30	7622.41	2.50	29772.90	42372.00	3.91
3.56	4.12	ø8/12	2	2	6 (TG)	SLD	0.40	4610.06	2.50	21290.60	40342.50	0.30	6236.57	2.50	29772.90	42311.40	4.62
3.56	4.12	ø8/12	2	2	5 (TG)	SLV	0.40	1210.59	2.50	18513.50	27600.30	0.30	7288.29	2.50	25889.50	28947.30	3.55
3.56	4.12	ø8/12	2	2	13 (TG)	SLV	0.40	3259.03	2.50	18513.50	27666.40	0.30	5681.79	2.50	25889.50	29016.70	4.56
4.12	6.35	ø8/20	2	2	17	SLU	0.40	853.30	2.50	11108.10	28037.90	0.30	1707.36	2.50	15533.70	29406.30	9.10
4.12	6.35	ø8/20	2	2	18	SLU	0.40	879.48	2.50	11108.10	28051.00	0.30	1677.52	2.50	15533.70	29420.00	9.26
4.12	6.35	ø8/20	2	2	14 (TG)	SLD	0.40	3197.51	2.50	12774.30	40400.30	0.30	7622.41	2.50	17863.70	42372.00	2.34
4.12	6.35	ø8/20	2	2	6 (TG)	SLD	0.40	4610.06	2.50	12774.30	40342.50	0.30	6236.57	2.50	17863.70	42311.40	2.77
4.12	6.35	ø8/20	2	2	5 (TG)	SLV	0.40	1210.59	2.50	11108.10	27600.30	0.30	7288.29	2.50	15533.70	28947.30	2.13
4.12	6.35	ø8/20	2	2	13 (TG)	SLV	0.40	3259.03	2.50	11108.10	27666.40	0.30	5681.79	2.50	15533.70	29016.70	2.73
6.35	6.91	ø8/12	2	2	17	SLU	0.40	853.30	2.50	18513.50	27924.90	0.30	1707.36	2.50	25889.50	29287.70	15.16
6.35	6.91	ø8/12	2	2	18	SLU	0.40	879.48	2.50	18513.50	27937.90	0.30	1677.52	2.50	25889.50	29301.40	15.43
6.35	6.91	ø8/12	2	2	14 (TG)	SLD	0.40	3197.51	2.50	21290.60	40400.30	0.30	7622.41	2.50	29772.90	42372.00	3.91
6.35	6.91	ø8/12	2	2	6 (TG)	SLD	0.40	4610.06	2.50	21290.60	40342.50	0.30	6236.57	2.50	29772.90	42311.40	4.62
6.35	6.91	ø8/12	2	2	5 (TG)	SLV	0.40	1210.59	2.50	18513.50	27600.30	0.30	7288.29	2.50	25889.50	28947.30	3.55
6.35	6.91	ø8/12	2	2	13 (TG)	SLV	0.40	3259.03	2.50	18513.50	27666.40	0.30	5681.79	2.50	25889.50	29016.70	4.56
7.26	8.31	ø8/12	2	2	17	SLU	0.40	2485.94	2.50	18513.50	26760.30	0.30	3965.59	2.50	25889.50	28066.30	6.53
7.26	8.31	ø8/12	2	2	19	SLU	0.40	2561.23	2.50	18513.50	26769.60	0.30	3868.93	2.50	25889.50	28076.10	6.69
7.26	8.31	ø8/12	2	2	2 (TG)	SLD	0.40	10555.10	2.50	21290.60	39332.30	0.30	21701.70	2.50	29772.90	41251.90	1.37
7.26	8.31	ø8/12	2	2	4 (TG)	SLD	0.40	15472.10	2.50	21290.60	39264.00	0.30	12550.80	2.50	29772.90	41180.20	1.38
7.26	8.31	ø8/12	2	2	5 (TG)	SLV	0.40	4662.42	2.50	18513.50	26556.00	0.30	21010.50	2.50	25889.50	27852.10	1.23
7.26	8.31	ø8/12	2	2	7 (TG)	SLV	0.40	10197.70	2.50	18513.50	26477.20	0.30	12904.10	2.50	25889.50	27769.40	1.82

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1	As2	Bj	Hjc	Hjw	Ash	Rgsn
						<cmq>	<cmq>	<cm>	<cm>	<cm>	<cmq>	
144	N	ø8/ 9	Z+	I	2	8.70	4.18	0.30	0.30	0.29	4.02	1.19
			Z-	I	2	4.18	9.17	0.30	0.30	0.29	4.02	1.19
244	N	ø8/ 9	Z+	I	2	6.16	4.21	0.30	0.30	0.29	4.02	1.19
			Z-	I	2	4.21	7.63	0.30	0.30	0.20	3.02	1.19
344	N	ø8/ 9	Z+	I	2	4.62	4.14	0.30	0.30	0.29	4.02	1.19
			Z-	I	2	4.14	4.62	0.30	0.30	0.29	4.02	1.19

Pilastrata n. 45

Nodi: 45 145 245 345

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	R	Cf	Cls	Fck	Fctk	Fcd	Fctd	Acc.	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
1	R	30.00	40.00		4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
10	Cir.			15.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
11	R	30.00	30.00		4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg	CC	TCC	El	Sez.	X	N	My	α _y	My ver.	Mz	α _z	Mz ver.	Nu	Myu	Mzu	α	ε _y	Sic.
<cm>					<cm>	<daN>	<daNm>		<daNm>	<daNm>		<daNm>	<daN>	<daNm>	<daNm>	<grad>		
-0.25	13	SLV	1	1	0.00	5395.60	-3382.02			-16								

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σc <daN/cmq>	σt <daN/cmq>
-0.25	24	SLE R	1	1	0.00	-5678.27	-161.87	-222.56	0.00	15.27	8.39	107.37
-0.25	32	SLE Q	1	1	0.00	-5433.12	-153.01	-198.39	0.00	15.27	7.85	100.77
-0.25	24	SLE R	1	1	0.00	-5678.27	-161.87	-222.56	0.00	15.27	8.39	107.37
-0.25	32	SLE Q	1	1	0.00	-5433.12	-153.01	-198.39	0.00	15.27	7.85	100.77
3.21	24	SLE R	1	1	346.00	-4640.27	181.25	421.84	2.54	12.72	10.74	129.76
3.21	32	SLE Q	1	1	346.00	-4395.12	169.67	362.38	2.54	12.72	9.57	116.41
3.56	24	SLE R	2	10	0.00	-3341.54	-92.88	-124.01	0.00	15.27	8.29	97.80
3.56	32	SLE Q	2	10	0.00	-3296.62	-86.03	-112.52	0.00	15.27	7.81	93.29
7.00	21	SLE R	2	10	344.00	-3153.21	28.40	134.49	0.00	15.27	7.51	92.13
7.00	24	SLE R	2	10	344.00	-2733.64	58.59	130.24	0.00	15.27	7.32	84.75
7.00	29	SLE Q	2	10	344.00	-3108.29	23.72	128.79	0.00	15.27	7.25	89.59
7.26	24	SLE R	3	11	0.00	-1384.59	-313.09	-532.65	7.63	2.54	27.60	494.43
7.26	32	SLE Q	3	11	0.00	-1344.22	-290.13	-521.26	7.63	2.54	26.42	475.57
8.31	24	SLE R	3	11	105.00	-1148.34	370.73	382.57	7.63	2.54	24.92	435.91
8.31	32	SLE Q	3	11	105.00	-1107.97	346.77	362.98	7.63	2.54	23.46	408.07

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{zm} <mm>	Φ	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cmq>	σ _{s,r} <daN/cmq>	ε _{sm}	Wk <mm>
3.21	32	SLE Q	1	1	346.00	-4395.12	362.38	169.67	39.00	252.00	0.13	221.18	18.00	2.54	262.33	29.50	349.51	0.01	0.00
7.26	32	SLE Q	3	11	0.00	-1344.22	-521.26	-290.13	39.00	204.00	0.13	204.27	18.00	5.09	483.32	475.57	1214.73	0.09	0.03
8.31	32	SLE Q	3	11	105.00	-1107.97	362.98	346.77	39.00	204.00	0.13	201.84	18.00	7.63	704.33	408.07	1185.00	0.08	0.03

Staffe - Verifiche armatura (zone a sezione non circolare)

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.T
-0.25	0.33	ø8/12	2	2	17	SLU	0.40	61.04	2.50	18513.50	26719.20	0.30	243.62	2.50	25889.50	28023.20	>100
-0.25	0.33	ø8/12	2	2	20	SLU	0.40	116.35	2.50	18513.50	26631.80	0.30	241.90	2.50	25889.50	27931.50	>100
-0.25	0.33	ø8/12	2	2	4 (TG)	SLD	0.40	2482.52	2.50	21290.60	39348.00	0.30	7148.63	2.50	29772.90	41268.30	4.16
-0.25	0.33	ø8/12	2	2	8 (TG)	SLD	0.40	5418.70	2.50	21290.60	39821.60	0.30	3990.02	2.50	29772.90	41765.10	3.93
-0.25	0.33	ø8/12	2	2	3 (TG)	SLV	0.40	2221.60	2.50	18513.50	26592.70	0.30	5940.75	2.50	25889.50	27890.50	4.36
-0.25	0.33	ø8/12	2	2	7 (TG)	SLV	0.40	4616.38	2.50	18513.50	27193.40	0.30	3656.11	2.50	25889.50	28520.50	4.01
-0.25	0.33	ø8/12	2	2	15 (TG)	SLV	0.40	4637.32	2.50	18513.50	27583.30	0.30	3617.32	2.50	25889.50	28929.50	3.99
0.33	2.63	ø8/20	2	2	17	SLU	0.40	61.04	2.50	11108.10	26690.00	0.30	243.62	2.50	15533.70	27992.60	63.76
0.33	2.63	ø8/20	2	2	20	SLU	0.40	116.35	2.50	11108.10	26602.60	0.30	241.90	2.50	15533.70	27900.90	64.22
0.33	2.63	ø8/20	2	2	4 (TG)	SLD	0.40	2482.52	2.50	12774.30	39348.00	0.30	7148.63	2.50	17863.70	41268.30	2.50
0.33	2.63	ø8/20	2	2	8 (TG)	SLD	0.40	5418.70	2.50	12774.30	39821.60	0.30	3990.02	2.50	17863.70	41765.10	2.36
0.33	2.63	ø8/20	2	2	3 (TG)	SLV	0.40	2221.60	2.50	11108.10	26592.70	0.30	5940.75	2.50	15533.70	27890.50	2.61
0.33	2.63	ø8/20	2	2	7 (TG)	SLV	0.40	4616.38	2.50	11108.10	27193.40	0.30	3656.11	2.50	15533.70	28520.50	2.41
0.33	2.63	ø8/20	2	2	15 (TG)	SLV	0.40	4637.32	2.50	11108.10	27583.30	0.30	3617.32	2.50	15533.70	28929.50	2.40
2.63	3.21	ø8/12	2	2	17	SLU	0.40	61.04	2.50	18513.50	26573.20	0.30	243.62	2.50	25889.50	27870.10	>100
2.63	3.21	ø8/12	2	2	20	SLU	0.40	116.35	2.50	18513.50	26485.80	0.30	241.90	2.50	25889.50	27778.40	>100
2.63	3.21	ø8/12	2	2	4 (TG)	SLD	0.40	2482.52	2.50	21290.60	39348.00	0.30	7148.63	2.50	29772.90	41268.30	4.16
2.63	3.21	ø8/12	2	2	8 (TG)	SLD	0.40	5418.70	2.50	21290.60	39821.60	0.30	3990.02	2.50	29772.90	41765.10	3.93
2.63	3.21	ø8/12	2	2	3 (TG)	SLV	0.40	2221.60	2.50	18513.50	26592.70	0.30	5940.75	2.50	25889.50	27890.50	4.36
2.63	3.21	ø8/12	2	2	7 (TG)	SLV	0.40	4616.38	2.50	18513.50	27193.40	0.30	3656.11	2.50	25889.50	28520.50	4.01
2.63	3.21	ø8/12	2	2	15 (TG)	SLV	0.40	4637.32	2.50	18513.50	27583.30	0.30	3617.32	2.50	25889.50	28929.50	3.99
7.26	8.31	ø8/14	2	2	17	SLU	0.30	579.81	2.50	15868.80	19507.50	0.30	1139.21	2.50	15868.80	19507.50	13.93
7.26	8.31	ø8/14	2	2	20	SLU	0.30	801.04	2.50	15868.80	19475.90	0.30	1127.83	2.50	15868.80	19475.90	14.07
7.26	8.31	ø8/14	2	2	4 (TG)	SLD	0.30	9248.46	2.50	18249.10	29117.50	0.30	10025.20	2.50	18249.10	29117.50	1.82
7.26	8.31	ø8/14	2	2	6 (TG)	SLD	0.30	12123.10	2.50	18249.10	29458.00	0.30	4272.66	2.50	18249.10	29458.00	1.51
7.26	8.31	ø8/14	2	2	3 (TG)	SLV	0.30	7884.73	2.50	15868.80	19527.60	0.30	8563.38	2.50	15868.80	19527.60	1.85
7.26	8.31	ø8/14	2	2	7 (TG)	SLV	0.30	10123.10	2.50	15868.80	19754.60	0.30	4583.74	2.50	15868.80	19754.60	1.57
7.26	8.31	ø8/14	2	2	13 (TG)	SLV	0.30	10253.90	2.50	15868.80	20092.50	0.30	6279.13	2.50	15868.80	20092.50	1.55

Staffe - Verifiche armatura (zone a sezione circolare)

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.T
3.56	4.13	ø8/14	20		0.21	110.48	2.33	9631.95	9631.95	87.18
3.56	4.13	ø8/14	6 (TG)		0.21	4379.13	2.50	11860.60	13927.40	2.71
3.56	4.13	ø8/14	14 (TG)		0.21	4406.35	2.50	11860.60	14028.50	2.69
3.56	4.13	ø8/14	13 (TG)		0.21	3817.62	2.42	9986.84	9986.84	2.62
4.13	6.43	ø8/20	20		0.21	110.48	2.50	7219.49	9167.20	65.34
4.13	6.43	ø8/20	6 (TG)		0.21	4379.13	2.50	8302.41	13927.40	1.90
4.13	6.43	ø8/20	14 (TG)		0.21	4406.35	2.50	8302.41	14028.50	1.88
4.13	6.43	ø8/20	3 (TG)		0.21	3597.33	2.50	7219.49	9193.98	2.01
4.13	6.43	ø8/20	13 (TG)		0.21	3817.62	2.50	7219.49	9759.18	1.89
6.43	7.00	ø8/14	20		0.21	110.48	2.33	9600.83	9600.82	86.90
6.43	7.00	ø8/14	6 (TG)		0.21	4379.13	2.50	11860.60	13927.40	2.71
6.43	7.00	ø8/14	14 (TG)		0.21	4406.35	2.50	11860.60	14028.50	2.69
6.43	7.00	ø8/14	13 (TG)		0.21	3817.62	2.42	9986.84	9986.84	2.62

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <cm>	Hjc <cm>	Hjw <cm>	Ash <cmq>	Rgsn
145	N	ø8/ 7	Z+	E	2	4.62	4.62	0.30	0.30	0.29	5.03	1.48
			Y-	E	2	4.62	7.63	0.40	0.20	0.29	5.03	1.11
345	N	ø8/ 9	Z+	E	2	4.62	4.62	0.30	0.20	0.29	4.02	1.19
			Y-	E	2	4.62	7.63	0.30	0.20	0.29	4.02	1.19

Pilastrata n. 46

Relazione di calcolo

Nodi: 46 146 246 346

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	R <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
1	R	30.00	40.00		4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
10	Cir.			15.00	4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04
11	R	30.00	30.00		4.70	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	αy	My ver. <daNm>	Mz <daNm>	αz	Mz ver. <daNm>	Nu <daN>	Myu <daNm>	Mzu <daNm>	α <grad>	εy	Sic.
-0.25	9	SLV	1	1	0.00	-9955.87	-4123.10			817.48			-9978.54	-10558.90	1995.65	163.13	6.79	2.557
-0.25	9	SLV	1	1	0.00	-9955.87	-4123.10			817.48			-9978.54	-10558.90	1995.65	163.13	6.79	2.557
3.21	1 (α)	SLV	1	1	346.00	-9105.29	-3127.19	2.78	-8701.30	-209.69	1.10	-230.66	-9106.84	-10864.60	-372.36	182.81	10.03	1.249
7.26	7 (α)	SLV	3	11	0.00	-3078.64	-760.05	7.99	-6070.40	-120.48	1.10	-132.53	-3078.96	-6862.70	-59.55	180.70	7.85	1.130
8.31	9	SLV	3	11	105.00	-2527.97	2766.53			-246.61			-2559.88	6835.82	-611.75	355.78	7.15	2.471
-0.25	10	SLD	1	1	0.00	-10363.70	-3230.20			641.50			-10363.70	-12447.70	2547.85	163.13	7.87	3.858
-0.25	10	SLD	1	1	0.00	-10363.70	-3230.20			641.50			-10363.70	-12447.70	2547.85	163.13	7.87	3.858
3.21	10	SLD	1	1	346.00	-9325.67	2585.92			-207.31			-9325.68	12586.00	-972.11	354.38	10.96	4.866
3.56	10	SLD	2	10	0.00	-6530.14	-680.68			148.17			-6530.14	-6569.45	1445.89	167.34	5.76	9.656
7.00	10 (e)	SLD	2	10	344.00	-5922.24	567.53		567.53	76.08		118.44	-5922.24	6555.35	1293.88	11.25	5.89	11.525
7.26	10	SLD	3	11	0.00	-2914.69	-1909.59			-152.45			-2914.70	-8078.04	-507.85	182.81	8.85	4.225
8.31	10	SLD	3	11	105.00	-2678.44	2201.86			175.58			-2678.44	8054.84	508.68	2.81	8.89	3.654

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
3.56	2	3.70	49.33	48.58
7.00	2	3.70	49.33	48.58

Stato limite ultimo - Ferri longitudinali - Verifiche armatura - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	αy	My ver. <daNm>	Mz <daNm>	αz	Mz ver. <daNm>	Nu <daN>	Myu, s <daNm>	Myu <daNm>	Mzu, s <daNm>	Mzu <daNm>	α <grad>	εy	Sic.
3.56	5 (α)	SLV	2	10	0.00	-6288.56	789.27	2.90	2292.58	-201.38	1.10	-221.52	-6288.55	5289.15	5591.98	-498.72	-527.31	354.38	5.18	2.4
7.00	3 (α)	SLV	2	10	344.00	-6262.21	-375.78	5.18	-1947.91	-43.79	1.10	-48.17	-6262.23	-5290.17	-5590.89	-122.41	-131.98	181.41	5.16	2.8

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
-0.25	23	SLE R	1	1	0.00	-12845.50	51.03	50.39	0.00	15.27	10.18	147.58
-0.25	31	SLE Q	1	1	0.00	-11909.40	47.92	39.35	0.00	15.27	9.37	136.04
-0.25	23	SLE R	1	1	0.00	-12845.50	51.03	50.39	0.00	15.27	10.18	147.58
-0.25	31	SLE Q	1	1	0.00	-11909.40	47.92	39.35	0.00	15.27	9.37	136.04
3.21	21	SLE R	1	1	346.00	-11705.60	-56.12	128.11	0.00	15.27	10.24	145.37
3.21	29	SLE Q	1	1	346.00	-10769.50	-46.46	131.75	0.00	15.27	9.50	134.67
3.56	21	SLE R	2	10	0.00	-7731.28	10.02	-40.70	0.00	15.27	9.61	137.80
3.56	29	SLE Q	2	10	0.00	-7390.27	7.50	-42.82	0.00	15.27	9.28	132.91
7.00	21	SLE R	2	10	344.00	-7123.38	-1.48	61.04	0.00	15.27	9.53	134.10
7.00	29	SLE Q	2	10	344.00	-6782.37	-0.61	60.10	0.00	15.27	9.13	128.29
7.26	21	SLE R	3	11	0.00	-3676.21	-74.33	-286.50	5.09	10.18	10.40	120.14
7.26	29	SLE Q	3	11	0.00	-3443.06	-70.98	-281.82	5.09	10.18	10.16	116.34
8.31	21	SLE R	3	11	105.00	-3439.96	10.04	223.63	2.54	12.72	7.39	89.60
8.31	29	SLE Q	3	11	105.00	-3206.81	13.55	226.47	5.09	10.18	7.40	88.43

Verifiche stato limite di formazione delle fessure

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K3	s _{rm} <mm>	Φ	A _s <cm²>	A _{s, eff} <cm²>	σ _s <daN/cm²>	σ _{s,z} <daN/cm²>	ε _{sm}	Wk <mm>
7.26	29	SLE Q	3	11	0.00	-3443.06	-281.82	-70.98	39.00	204.00	0.13	204.27	18.00	5.09	483.32	37.00	395.10	0.01	0.00
8.31	29	SLE Q	3	11	105.00	-3206.81	226.47	13.55	39.00	204.00	0.13	204.27	18.00	5.09	483.32	7.27	169.72	0.00	0.00

Staffe - Verifiche armatura (zone a sezione non circolare)

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic. T
-0.25	0.33	ø8/12	2	2	17	SLV	0.40	25.95	2.50	18513.50	27830.50	0.30	63.02	2.50	25889.50	29188.70	>100
-0.25	0.33	ø8/12	2	2	19	SLV	0.40	41.74	2.50	18513.50	27843.70	0.30	0.92	2.50	25889.50	29202.60	>100
-0.25	0.33	ø8/12	2	2 (TG)	SLD	0.40	1129.61	2.50	21290.60	40064.10	0.30	8240.57	2.50	29772.90	42019.40	3.61	
-0.25	0.33	ø8/12	2	2 (TG)	SLD	0.40	2906.39	2.50	21290.60	39983.20	0.30	7090.79	2.50	29772.90	41934.60	4.20	
-0.25	0.33	ø8/12	2	2 (TG)	SLV	0.40	406.94	2.50	18513.50	27185.90	0.30	7163.77	2.50	25889.50	28512.70	3.61	
-0.25	0.33	ø8/12	2	2 (TG)	SLV	0.40	2362.25	2.50	18513.50	27190.90	0.30	5987.13	2.50	25889.50	28517.90	4.32	
0.33	2.63	ø8/20	2	2	17	SLV	0.40	25.95	2.50	11108.10	27801.30	0.30	63.02	2.50	15533.70	29158.10	>100
0.33	2.63	ø8/20	2	2	19	SLV	0.40	41.74	2.50	11108.10	27814.50	0.30	0.92	2.50	15533.70	29172.00	>100
0.33	2.63	ø8/20	2	2 (TG)	SLD	0.40	1129.61	2.50	12774.30	40064.10	0.30	8240.57	2.50	17863.70	42019.40	2.17	
0.33	2.63	ø8/20	2	2 (TG)	SLD	0.40	2906.39	2.50	12774.30	39983.20	0.30	7090.79	2.50	17863.70	41934.60	2.52	
0.33	2.63	ø8/20	2	2 (TG)	SLV	0.40	406.94	2.50	11108.10	27185.90	0.30	7163.77	2.50	15533.70	28512.70	2.17	
0.33	2.63	ø8/20	2	2 (TG)	SLV	0.40	2362.25	2.50	11108.10	27190.90	0.30	5987.13	2.50	15533.70	28517.90	2.59	
2.63	3.21	ø8/12	2	2	17	SLV	0.40	25.95	2.50	18513.50	27684.50	0.30	63.02	2.50	25889.50	29035.60	>100
2.63	3.21	ø8/12	2	2	19	SLV	0.40	41.74	2.50	18513.50	27697.70	0.30	0.92	2.50	25889.50	29049.50	>100
2.63	3.21	ø8/12	2	2 (TG)	SLD	0.40	1129.61	2.50	21290.60	40064.10	0.30	8240.57	2.50	29772.90	42019.40	3.61	
2.63	3.21	ø8/12	2	2 (TG)	SLD	0.40	2906.39	2.50	21290.60	39983.20	0.30	7090.79	2.50	29772.90	41934.60	4.20	
2.63	3.21	ø8/12	2	2 (TG)	SLV	0.40	406.94	2.50	18513.50	27185.90	0.30	7163.77	2.50	25889.50	28512.70	3.61	
2.63	3.21	ø8/12	2	2 (TG)	SLV	0.40	2362.25	2.50	18513.50	27190.90	0.30	5987.13	2.50	25889.50	28517.90	4.32	
7.26	8.31	ø8/14	2	2	17	SLV	0.30	104.20	2.50	15868.80	19861.50	0.30	603.32	2.50	15868.80	19861.50	26.30
7.26	8.31	ø8/14	2	2	20	SLV	0.30	117.06	2.50	15868.80	19859.60	0.30	538.81	2.50	15868.80	19859.60	29.45
7.26	8.31	ø8/14	2	2 (TG)	SLD	0.30	1662.62	2.50	18249.10	29339.60	0.30	17143.00	2.50	18249.10	29339.60	1.06	
7.26	8.31	ø8/14	2	2 (TG)	SLD	0.30	5786.85	2.50	18249.10	29227.80	0.30	15526.00	2.50	18249.10	29227.80	1.18	
7.26	8.31	ø8/14	2	2 (TG)	SLD	0.30											

Relazione di calcolo

7.26	8.31	ø8/14	2	2	15 (TG)	SLV	0.30	2880.22	2.50	15868.80	19599.00	0.30	13744.20	2.50	15868.80	19599.00	1.15
7.26	8.31	ø8/14	2	2	15 (TG)	SLV	0.30	2891.36	2.50	15868.80	19701.00	0.30	13880.90	2.50	15868.80	19701.00	1.14

Staffe - Verifiche armatura (zone a sezione circolare)

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.T
3.56	4.13	ø8/14		17	0.21	36.14	2.40	9896.75	9896.75	>100
3.56	4.13	ø8/14	4 (TG)		0.21	4419.36	2.50	11860.60	13810.90	2.68
3.56	4.13	ø8/14	5 (TG)		0.21	3713.90	2.37	9796.87	9796.87	2.64
4.13	6.43	ø8/20		17	0.21	36.14	2.50	7219.49	9599.45	>100
4.13	6.43	ø8/20	4 (TG)		0.21	4419.36	2.50	8302.41	13810.90	1.88
4.13	6.43	ø8/20	7 (TG)		0.21	3661.68	2.50	7219.49	9309.06	1.97
4.13	6.43	ø8/20	5 (TG)		0.21	3713.90	2.50	7219.49	9445.03	1.94
6.43	7.00	ø8/14		17	0.21	36.14	2.39	9866.47	9866.47	>100
6.43	7.00	ø8/14	4 (TG)		0.21	4419.36	2.50	11860.60	13810.90	2.68
6.43	7.00	ø8/14	5 (TG)		0.21	3713.90	2.37	9796.87	9796.87	2.64

Caratteristiche nodi trave-pilastro

Nodo	Conf.	Staff.	F.	Mod.	Br.	As1 <cmq>	As2 <cmq>	Bj <m>	Hjc <m>	Hjw <m>	Ash <cmq>	Rgsn
146	N	ø8/ 9	Z+	I	2	4.62	4.62	0.30	0.30	0.29	4.02	1.19
			Z-	I	2	4.62	4.62	0.30	0.30	0.29	4.02	1.19
346	N	ø8/ 9	Z+	I	2	4.62	4.62	0.30	0.20	0.29	4.02	1.19
			Z-	I	2	4.62	4.62	0.30	0.20	0.29	4.02	1.19

Verifiche e armature solette/platee

Simbologia

- Nodo = Numero del nodo
- X = Coordinata X del nodo
- Y = Coordinata Y del nodo
- DV = Direzione di verifica
 - XX = Verifica per momento Mxx
 - YY = Verifica per momento Myy
- CC = Numero della combinazione delle condizioni di carico elementari
- TCC = Tipo di combinazione di carico
 - SLU = Stato limite ultimo
 - SLU S = Stato limite ultimo (azione sismica)
 - SLE R = Stato limite d'esercizio, combinazione rara
 - SLE F = Stato limite d'esercizio, combinazione frequente
 - SLE Q = Stato limite d'esercizio, combinazione quasi permanente
 - SLD = Stato limite di danno
 - SLV = Stato limite di salvaguardia della vita
 - SLC = Stato limite di prevenzione del collasso
 - SLO = Stato limite di operatività
 - SLU I = Stato limite di resistenza al fuoco
- c = Ricoprimento dell'armatura
- s = Distanza minima tra le barre
- K3 = Coefficiente di forma del diagramma delle tensioni prima della fessurazione
- s_{sm} = Distanza media tra le fessure
- Φ = Diametro della barra
- A_s = Area complessiva dei ferri nell'area di calcestruzzo efficace
- A_{c eff} = Area di calcestruzzo efficace
- σ_s = Tensione nell'acciaio nella sezione fessurata
- σ_{sr} = Tensione nell'acciaio corrispondente al raggiungimento della resistenza a trazione nel calcestruzzo
- ε_{sm} = Deformazione unitaria media dell'armatura (*1000)
- Wk = Apertura delle fessure
- AfE S = Area di ferro effettiva totale presente nel punto di verifica, superiore
- AfE I = Area di ferro effettiva totale presente nel punto di verifica, inferiore
- Mom = Momento flettente
- Mu = Momento ultimo
- Sic. = Sicurezza a rottura
- Vsdu = Taglio agente nella direzione del momento ultimo
- Vrdu = Taglio ultimo assorbibile dal solo calcestruzzo
- σ_c = Tensione nel calcestruzzo
- σ_f = Tensione nel ferro
- Spess. = Spessore
- Cf sup = Copriferro superiore
- Cf inf = Copriferro inferiore
- Cls = Tipo di calcestruzzo
- Fck = Resistenza caratteristica cilindrica a compressione del calcestruzzo
- Fctk = Resistenza caratteristica a trazione del calcestruzzo
- Fcd = Resistenza di calcolo a compressione del calcestruzzo
- Fctd = Resistenza di calcolo a trazione del calcestruzzo
- Acc. = Tipo di acciaio
- Fyk = Tensione caratteristica di snervamento dell'acciaio
- Fyd = Resistenza di calcolo dell'acciaio

Armatura soletta a quota 8.66

Caratteristiche delle sezioni e dei materiali utilizzati

Spess. <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Acc.	Fyk <daN/cmq>	Fyd <daN/cmq>
20.00	3.00	3.00	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Ferri longitudinali - Verifiche armatura

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	Mom <daNm>	Mu <daNm>	Sic.
350	12.22	22.66	XX	1	SLV	3.93	3.93	-706.57	-2674.98	3.786
349	10.20	22.66	XX	9	SLV	3.93	3.93	-900.55	-2674.98	2.970
350	12.22	22.66	XX	2	SLD	3.93	3.93	-545.50	-3200.72	5.868
349	10.20	22.66	XX	10	SLD	3.93	3.93	-762.05	-3200.72	4.200
350	12.22	22.66	YY	5	SLV	3.93	3.93	-1071.47	-2674.98	2.497
350	12.22	22.66	YY	6	SLD	3.93	3.93	-886.43	-3200.72	3.611
349	10.20	22.66	YY	14	SLD	3.93	3.93	-959.66	-3200.72	3.335

Stato limite ultimo - Verifica a taglio del calcestruzzo

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	Vsdu <daN>	Vrdv <daN>
351	10.20	26.00	XX	9	SLV	3.93	3.93	3540.48	8397.72
351	10.20	26.00	XX	10	SLD	3.93	3.93	3025.45	10965.30
349	10.20	22.66	YY	19	SLU	3.93	3.93	7295.08	8397.72
349	10.20	22.66	YY	14	SLD	3.93	3.93	6315.77	10965.30

Stato limite d'esercizio - Ferri longitudinali - Verifiche armatura

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	Mom <daNm>	σ_c <daN/cmq>	σ_f <daN/cmq>
349	10.20	22.66	XX	22	SLE R	3.93	3.93	-333.11	10.48	543.04
349	10.20	22.66	XX	30	SLE Q	3.93	3.93	-286.28	9.01	466.69
-266	11.21	25.17	XX	30	SLE Q	3.93	3.93	49.90	1.57	81.34
-259	10.20	24.33	XX	21	SLE R	3.93	3.93	54.61	1.72	89.03
-259	10.20	24.33	YY	21	SLE R	3.93	3.93	106.44	3.35	173.52
-259	10.20	24.33	YY	29	SLE Q	3.93	3.93	91.44	2.88	149.07
349	10.20	22.66	YY	23	SLE R	3.93	3.93	-799.12	25.14	1302.72
349	10.20	22.66	YY	31	SLE Q	3.93	3.93	-681.31	21.44	1110.67

Verifiche stato limite di formazione delle fessure

Nodo	X <m>	Y <m>	DV	CC	TCC	c <mm>	s <mm>	K3	S_{rm} <mm>	Φ	A_s <cmq>	$A_c\text{ eff}$ <cmq>	σ_s <daN/cmq>	σ_{sr} <daN/cmq>	ϵ_{sm}	Wk <mm>
349	10.20	22.66	XX	30	SLE Q	25.00	140.00	0.13	151.93	10.00	0.79	115.85	466.69	4019.78	0.09	0.02
349	10.20	22.66	XX	26	SLE F	25.00	140.00	0.13	151.93	10.00	0.79	115.85	481.77	4019.78	0.09	0.02
-266	11.21	25.17	XX	30	SLE Q	25.00	140.00	0.13	151.93	10.00	0.79	115.85	81.34	4127.63	0.02	0.00
-266	11.21	25.17	XX	26	SLE F	25.00	140.00	0.13	151.93	10.00	0.79	115.85	81.07	3965.85	0.02	0.00
-259	10.20	24.33	YY	29	SLE Q	25.00	140.00	0.13	151.93	10.00	0.79	115.85	149.07	3965.85	0.03	0.01
-259	10.20	24.33	YY	25	SLE F	25.00	140.00	0.13	151.93	10.00	0.79	115.85	153.96	4127.63	0.03	0.01
349	10.20	22.66	YY	31	SLE Q	25.00	140.00	0.13	151.93	10.00	0.79	115.85	1110.67	4019.78	0.22	0.06
349	10.20	22.66	YY	27	SLE F	25.00	140.00	0.13	151.93	10.00	0.79	115.85	1148.97	4019.78	0.22	0.06

Verifiche e armature solai

Solai a quota 3.56

Schema 1

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 3.80m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-617.03	2.26	2.26	2451.32	3.97	3.5	62.3
Filo all. sx	0.22	644.40	7.24	5.27	5869.34	9.11	3.5	39.8
Max. campata	1.90	2995.08	4.98	3.01	4592.80	1.53	3.5	65.9
Filo all. dx	3.53	776.86	7.24	5.27	5869.34	7.56	3.5	39.8

Relazione di calcolo

Descrizione	Taglio filo	Vrd filo	Taglio banc.	Vrd banc.	Largh.	Nerva.	Vrsd	Area	Dist.
	Kg	Kg	Kg	Kg	cm	cm	Kg	cmq	cm
Asse app. dx	3.80	-617.03	2.26	2.26	2451.32	3.97	3.5	62.3	
Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd									
Appoggio sx	2914.31	13330.75	2797.56	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2833.52	13330.75	-2716.77	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

$Vrd = 0,18 * k * (100 * \rho_l * f_{ck})^{1/3} / \gamma_c \geq (v_{min}) * b_w * d$
 $Vrcd = 0,9 * d * b_w * f'_{cd} * (ctg \alpha + 1) / (1 + 1)$
 $Vrsd = 0,9 * d * (A_{sw} / s) * f_{yd} * (ctg \alpha + 1) \sin \alpha$
 Freccia solaio = 0.182cm - Momento di inerzia = 39438cm⁴
 Rapporto snellezza L/h = 14.6 < 47.3 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
VERIFICA TRALICCIO
 Lunghezza traliccio = 3.51m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 2450.34kgm - Asse neutro = 4.71cm
 Compressione calc. = 35.20kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 2180.91kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
 Momento soll. = 2126.09kgm - Asse neutro = 4.71cm
 Compressione calc. = 30.54kg/cm²
 Trazione acciaio = 1892.32kg/cm²
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 1996.39kgm - Asse neutro = 4.71cm
 Compressione calc. = 28.68kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 1776.88kg/cm²
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²
 Area efficace Ac,eff = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto As/Aeff Ro = 0.009
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 2

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.04m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza	Momento F.	Area inf.	Area sup.	Momento R.	Mr/Mf	Epsilon calc	Epsilon acc
	m	Kgm/int	cm ²	cm ²	Kgm/int		%	%
Asse app. sx	0.00	-178.99	2.26	2.26	2451.32	13.70	3.5	62.3
Filo all. sx	0.29	414.50	7.24	5.27	5869.34	14.16	3.5	39.8

Relazione di calcolo

Max. campata	1.02	859.11	4.98	3.01	4592.80	5.35	3.5	65.9
Filo all. dx	1.77	386.07	7.24	5.27	5869.34	15.20	3.5	39.8
Asse app. dx	2.04	-178.99	2.26	2.26	2451.32	13.70	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo	Vrd filo	Taglio banc.	Vrd banc.	Largh.	Nerva.	Vrzd	Area	Dist.
	Kg	Vrcd	Kg	Kg					
Appoggio sx	1333.61	13330.75	1216.86	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1370.13	13330.75	-1253.37	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrzd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.017cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 7.9 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 1.68m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²

Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²

Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 701.09kgm - Asse neutro = 4.71cm

Compressione calc. = 10.07kg/cm² - Compressione limite calc. = 174.30kg/cm²

Trazione acciaio = 624.00kg/cm² - Trazione limite acciaio = 3600.00kg/cm²

COMBINAZIONI FREQUENTI

Momento soll. = 607.03kgm - Asse neutro = 4.71cm

Compressione calc. = 8.72kg/cm²

Trazione acciaio = 540.29kg/cm²

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 569.41kgm - Asse neutro = 4.71cm

Compressione calc. = 8.18kg/cm² - Compressione limite calc. = 130.73kg/cm²

Trazione acciaio = 506.80kg/cm²

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm

Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm

Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²

Area efficace Ac,eff = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto As/Aeff Ro = 0.009

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 3

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 1.67m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza	Momento	F. Area	inf. Area	sup. Momento	R. Mr/Mf	Epsilon	Epsilon
	m	Kgm/int	cm ²	cm ²	Kgm/int		calc %	acc %

Relazione di calcolo

Asse app. sx	0.00	-119.24	2.26	2.26	2451.32	20.56	3.5	62.3
Filo all. sx	0.27	303.81	7.24	5.27	5869.34	19.32	3.5	39.8
Max. campata	0.83	571.96	7.24	3.01	6581.00	11.51	3.5	44.9
Filo all. dx	1.45	257.69	7.24	5.27	5869.34	22.78	3.5	39.8
Asse app. dx	1.67	-119.24	2.26	2.26	2451.32	20.56	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo		Vrd filo		Taglio banc.		Vrd banc.		Largh.	Nerva.	Vrsd	Area	Dist.
	Kg	Kg	Kg	Kg	Kg	Kg	cm	cm					

Appoggio sx	1061.04	13330.75	944.29	4443.58	0.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		186679.60		62226.54									
Appoggio dx	-1138.51	13330.75	-1021.76	4443.58	0.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		186679.60		62226.54									

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.006cm - Momento di inerzia = 54576cm⁴

Rapporto snellezza L/h = 6.4 < 70.1 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 1.38m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²

Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²

Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 466.69kgm - Asse neutro = 5.58cm

Compressione calc. = 5.80kg/cm² - Compressione limite calc. = 174.30kg/cm²

Trazione acciaio = 289.41kg/cm² - Trazione limite acciaio = 3600.00kg/cm²

COMBINAZIONI FREQUENTI

Momento soll. = 404.04kgm - Asse neutro = 5.58cm

Compressione calc. = 5.02kg/cm²

Trazione acciaio = 250.56kg/cm²

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 378.97kgm - Asse neutro = 5.58cm

Compressione calc. = 4.71kg/cm² - Compressione limite calc. = 130.73kg/cm²

Trazione acciaio = 235.01kg/cm²

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11988.44cm³ - Momento di fessurazione = W*fcfm = 3464.53kgm

Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 14.20mm

Distanza fra le barre s = 133.33mm - Tensione acciaio = 2148.47kg/cm²

Area efficace Ac,eff = 565.81cm² - Area acciaio teso = 7.24cm² - Rapporto As/Aeff Ro = 0.013

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 4

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.04m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza	Momento F.	Area inf.	Area sup.	Momento R.	Mr/Mf	Epsilon	Epsilon
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Relazione di calcolo

	m	Kgm/int	cmq	cmq	Kgm/int	calc %	acc %
Asse app. sx	0.00	-698.57	2.26	2.26	2451.32	3.51	62.3
Filo all. sx	0.24	741.96	8.78	5.27	7015.25	9.45	32.4
Max. campata	2.02	3391.62	6.52	3.01	5950.93	1.75	50.1
Filo all. dx	3.77	830.01	8.78	5.27	7015.25	8.45	32.4
Asse app. dx	4.04	-698.57	2.26	2.26	2451.32	3.51	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo	Vrd filo	Taglio banc.	Vrd banc.	Largh.	Nerva.	Vrsd	Area	Dist.
	Kg	Kg	Kg	Kg	cm	cm	Kg	cmq	cm
Appoggio sx	3086.47	13330.75	2969.72	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-3035.74	13330.75	-2918.98	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^(1/3) / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.184cm - Momento di inerzia = 49895cm⁴

Rapporto snellezza L/h = 15.5 < 51.2 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.73m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 2774.89kgm - Asse neutro = 5.31cm

Compressione calc. = 35.87kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 1904.84kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 2407.79kgm - Asse neutro = 5.31cm

Compressione calc. = 31.12kg/cmq

Trazione acciaio = 1652.85kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 2260.95kgm - Asse neutro = 5.31cm

Compressione calc. = 29.22kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1552.05kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*fcfm = 3448.45kgm

Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cmq

Area efficace Ac,eff = 562.02cmq - Area acciaio teso = 6.52cmq - Rapporto As/Aeff Ro = 0.012

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 5

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 5.20m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Relazione di calcolo

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %	
Asse app. sx	0.00	-1155.96	2.26	2.26	2451.32	2.12	3.5	62.3	
Filo all. sx	0.27	1093.16	10.54	5.27	8300.30	7.59	3.5	26.6	
Max. campata	2.60	5617.98	8.28	3.01	7476.74	1.33	3.5	39.0	
Filo all. dx	4.93	1093.16	10.54	5.27	8300.30	7.59	3.5	26.6	
Asse app. dx	5.20	-1155.96	2.26	2.26	2451.32	2.12	3.5	62.3	
Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd									
Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	3999.58	13330.75	3882.82	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-3999.58	13330.75	-3882.82	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
<p>Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1) Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa Freccia solaio = 0.405cm - Momento di inerzia = 61046cm⁴ Rapporto snellezza L/h = 20.0 < 38.1 (C4.1.13) Limite snellezza verificata (C4.1.13) Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00 VERIFICA TRALICCIO Lunghezza traliccio = 4.86m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq Asse neutro = 2.57cm - Momento inerzia = 239.93 W inferiore = 93.23cm³ - W superiore = 40.485cm³ Corrente superiore Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg Lunghezza rompitratta corrente superiore = 1.27m Lunghezza rompitratta mensola = 1.05m Staffe Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80 Lunghezza rompitratta staffa = 2.1m Numero tralicci = 3 Freccia massima = 0.28m STATI LIMITE DI ESERCIZIO Condizioni ambiente: Ordinarie - Classe di esposizione: X0 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00 COMBINAZIONI RARE Momento soll. = 4597.44kgm - Asse neutro = 5.93cm Compressione calc. = 54.55kg/cmq - Compressione limite calc. = 174.30kg/cmq Trazione acciaio = 2504.64kg/cmq - Trazione limite acciaio = 3600.00kg/cmq COMBINAZIONI FREQUENTI Momento soll. = 3989.98kgm - Asse neutro = 5.93cm Compressione calc. = 47.34kg/cmq Trazione acciaio = 2173.70kg/cmq COMBINAZIONI QUASI PERMANENTI Momento soll. = 3746.99kgm - Asse neutro = 5.93cm Compressione calc. = 44.46kg/cmq - Compressione limite calc. = 130.73kg/cmq Trazione acciaio = 2041.32kg/cmq APERTURA DELLE FESSURE Modulo W sezione interamente reagente = 12068.22cm³ - Momento di fessurazione = W*fcfm = 3487.59kgm Diametro medio tondini = 11.71mm - Ricoprimento armatura c = 13.15mm Distanza fra le barre s = 120.00mm - Tensione acciaio = 1900.00kg/cmq Area efficace Ac,eff = 570.09cmq - Area acciaio teso = 8.28cmq - Rapporto As/Aeff Ro = 0.015 COMBINAZIONI FREQUENTI Distanza media tra le fessure in mm = 201.70mm Epsilon_sm = 0.00064 - Epsilon_sm,n = 0.00041 Tensione acciaio = 2173.70kg/cmq Apertura limite delle fessure mm = 0.40mm Ampiezza fessura in mm Wm = 0.13mm Ampiezza fessura in mm Wk = 0.22mm Combinazione fessurata COMBINAZIONI QUASI PERMANENTI Distanza media tra le fessure in mm = 201.70mm Epsilon_sm = 0.00055 - Epsilon_sm,n = 0.00039 Tensione acciaio = 2041.32kg/cmq Apertura limite delle fessure mm = 0.30mm Ampiezza fessura in mm Wm = 0.11mm Ampiezza fessura in mm Wk = 0.19mm Combinazione fessurata</p>									

Relazione di calcolo

Schema 6

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 3.90m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-650.71	2.26	2.26	2451.32	3.77	3.5	62.3
Filo all. sx	0.27	792.72	8.78	5.27	7015.25	8.85	3.5	32.4
Max. campata	1.95	3111.32	6.52	3.01	5950.93	1.91	3.5	50.1
Filo all. dx	3.73	429.71	8.78	5.27	7015.25	16.33	3.5	32.4
Asse app. dx	3.90	-650.71	2.26	2.26	2451.32	3.77	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	2894.68	13330.75	2777.93	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-3107.09	13330.75	-2990.34	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^(1/3) / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.151cm - Momento di inerzia = 49895cm⁴

Rapporto snellezza L/h = 15.0 < 56.2 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.66m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 2536.84kgm - Asse neutro = 5.31cm

Compressione calc. = 32.79kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 1741.43kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 2194.89kgm - Asse neutro = 5.31cm

Compressione calc. = 28.37kg/cmq

Trazione acciaio = 1506.70kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 2058.11kgm - Asse neutro = 5.31cm

Compressione calc. = 26.60kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1412.80kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*fcfm = 3448.45kgm

Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cmq

Area efficace Ac,eff = 562.02cmq - Area acciaio teso = 6.52cmq - Rapporto As/Aeff Ro = 0.012

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Relazione di calcolo

Combinazione non fessurata

Schema 7

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 5.20m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento F. Kg/m/int	Area inf. cmq	Area sup. cmq	Momento R. Kg/m/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-1156.16	2.26	2.26	2451.32	2.12	3.5	62.3
Filo all. sx	0.27	1093.26	10.54	5.27	8300.30	7.59	3.5	26.6
Max. campata	2.60	5618.92	8.28	3.01	7476.74	1.33	3.5	39.0
Filo all. dx	4.93	1093.26	10.54	5.27	8300.30	7.59	3.5	26.6
Asse app. dx	5.20	-1156.16	2.26	2.26	2451.32	2.12	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrds Kg	Area cmq	Dist. cm
Appoggio sx	3999.93	13330.75	3883.18	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-3999.94	13330.75	-3883.19	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * ro1 * fck)^(1/3) / gammaC >= (v min) * bw * d

Vrds = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrds = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.405cm - Momento di inerzia = 61046cm4

Rapporto snellezza L/h = 20.0 < 38.1 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 4.86m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm3 - W superiore = 40.485cm3

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe
Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 4598.21kgm - Asse neutro = 5.93cm

Compressione calc. = 54.56kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 2505.05kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 3990.64kgm - Asse neutro = 5.93cm

Compressione calc. = 47.35kg/cmq

Trazione acciaio = 2174.06kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 3747.61kgm - Asse neutro = 5.93cm

Compressione calc. = 44.47kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 2041.66kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 12068.22cm3 - Momento di fessurazione = W*fcfm = 3487.59kgm

Diametro medio tondini = 11.71mm - Ricoprimento armatura c = 13.15mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 1900.00kg/cmq

Area efficace Ac,eff = 570.09cmq - Area acciaio teso = 8.28cmq - Rapporto As/Aeff Ro = 0.015

COMBINAZIONI FREQUENTI

Relazione di calcolo

Distanza media tra le fessure in mm = 201.70mm
 Epsilon_sm = 0.00064 - Epsilon_sm,n = 0.00041
 Tensione acciaio = 2174.06kg/cmq
 Apertura limite delle fessure mm = 0.40mm
 Ampiezza fessura in mm Wm = 0.13mm
 Ampiezza fessura in mm Wk = 0.22mm
 Combinazione fessurata

COMBINAZIONI QUASI PERMANENTI

Distanza media tra le fessure in mm = 201.70mm
 Epsilon_sm = 0.00055 - Epsilon_sm,n = 0.00039
 Tensione acciaio = 2041.66kg/cmq
 Apertura limite delle fessure mm = 0.30mm
 Ampiezza fessura in mm Wm = 0.11mm
 Ampiezza fessura in mm Wk = 0.19mm
 Combinazione fessurata

Schema 8

CAMPATA 1

SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.81m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-988.61	2.26	2.26	2451.32	2.48	3.5	62.3
Filo all. sx	0.24	896.07	9.60	5.27	7615.13	8.50	3.5	29.5
Max. campata	2.40	4806.64	7.34	3.01	6662.83	1.39	3.5	44.3
Filo all. dx	4.59	831.50	9.60	5.27	7615.13	9.16	3.5	29.5
Asse app. dx	4.81	-988.61	2.26	2.26	2451.32	2.48	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrds Kg	Area cmq	Dist. cm
Appoggio sx	3727.32	13330.75	3610.57	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-3756.72	13330.75	-3639.97	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * ro1 * fck)^(1/3) / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrds = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.322cm - Momento di inerzia = 55176cm⁴

Rapporto snellezza L/h = 18.5 < 41.4 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 4.55m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 3933.84kgm - Asse neutro = 5.61cm

Compressione calc. = 48.69kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 2409.18kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

Relazione di calcolo

COMBINAZIONI FREQUENTI

Momento soll. = 3414.32kgm - Asse neutro = 5.61cm

Compressione calc. = 42.26kg/cmq

Trazione acciaio = 2091.01kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 3206.51kgm - Asse neutro = 5.61cm

Compressione calc. = 39.69kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1963.75kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11995.70cm³ - Momento di fessurazione = W*f_{cfm} = 3466.63kgm

Diametro medio tondini = 10.86mm - Ricoprimento armatura c = 13.44mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2123.05kg/cmq

Area efficace A_{c,eff} = 566.25cm² - Area acciaio teso = 7.34cm² - Rapporto A_s/A_{eff} R_o = 0.013

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 9

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²

Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cm² - F_{cd} = 164.62 Kg/cm²

Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cm²

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.99m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-382.58	2.26	2.26	2451.32	6.41	3.5	62.3
Filo all. sx	0.22	440.09	7.24	5.27	5869.34	13.34	3.5	39.8
Max. campata	1.35	1488.87	4.98	3.01	4592.80	3.08	3.5	65.9
Filo all. dx	2.72	-970.15	4.98	5.27	4927.75	5.08	3.5	54.4
Asse app. dx	2.99	-1725.77	0.00	2.26	2089.82	1.21	2.2	67.5

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	1983.02	13330.75	1866.27	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2738.23	14512.01	-2621.48	4837.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					

Vrd = 0,18 * k * (100 * ro1 * f_{ck})^{1/3} / gamma_C >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'_{cd} * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (A_{sw} / s) * f_{yd} * (ctg alfa + 1) sin alfa

Freccia solaio = 0.031cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 11.5 < 70.0 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 2.70m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe
Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo R_{ck} = 350 - Resistenza cilindrica f_{ck} = 290.50kg/cm²

Resistenza a trazione f_{ctm} = 28.90kg/cm² - Resistenza a trazione-flessione f_{cfm} = 34.68kg/cm²

Coefficiente beta₁ = 1 - Coefficiente beta₂ = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 1063.91kgm - Asse neutro = 4.71cm

Relazione di calcolo

Compressione calc. = 15.28kg/cmq - Compressione limite calc. = 174.30kg/cmq
 Trazione acciaio = 946.93kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 906.68kgm - Asse neutro = 4.71cm
 Compressione calc. = 13.02kg/cmq

Trazione acciaio = 806.99kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 843.97kgm - Asse neutro = 4.71cm

Compressione calc. = 12.12kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 751.18kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm

Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm

Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq

Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

CAMPATA 2

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 3.61m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-1725.77	0.00	2.26	2089.82	1.21	2.2	67.5
Filo all. sx	0.27	-860.72	4.98	5.27	4927.75	5.73	3.5	54.4
Max. campata	1.99	2147.02	4.98	3.01	4592.80	2.14	3.5	65.9
Filo all. dx	3.34	647.47	7.24	5.27	5869.34	9.07	3.5	39.8
Asse app. dx	3.61	-558.34	2.26	2.26	2451.32	4.39	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrds Kg	Area cmq	Dist. cm
Appoggio sx	3155.81	14512.01	3039.06	4837.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					
Appoggio dx	-2349.96	13330.75	-2233.20	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck) / 3 / gammaC >= (v min) * bw * d

Vrds = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrds = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.084cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 13.9 < 70.0 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.27m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 1687.51kgm - Asse neutro = 4.71cm

Compressione calc. = 24.24kg/cmq - Compressione limite calc. = 174.30kg/cmq

Relazione di calcolo

Trazione acciaio = 1501.96kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 1469.27kgm - Asse neutro = 4.71cm

Compressione calc. = 21.11kg/cmq

Trazione acciaio = 1307.72kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 1381.98kgm - Asse neutro = 4.71cm

Compressione calc. = 19.85kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1230.02kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 12454.30cm³ - Momento di fessurazione = W*fcfm = 3599.16kgm

Diametro medio toncini = 9.32mm - Ricoprimento armatura c = 13.68mm

Distanza fra le barre s = 133.33mm - Tensione acciaio = 3203.42kg/cmq

Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 10

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.03m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-695.91	2.26	2.26	2451.32	3.52	3.5	62.3
Filo all. sx	0.27	828.06	8.78	5.27	7015.25	8.47	3.5	32.4
Max. campata	2.02	3377.82	6.52	3.01	5950.93	1.76	3.5	50.1
Filo all. dx	3.76	828.06	8.78	5.27	7015.25	8.47	3.5	32.4
Asse app. dx	4.03	-695.91	2.26	2.26	2451.32	3.52	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	3028.50	13330.75	2911.75	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-3028.50	13330.75	-2911.75	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.185cm - Momento di inerzia = 49895cm⁴

Rapporto snellezza L/h = 15.5 < 51.1 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.69m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Relazione di calcolo

Momento soll. = 2763.44kgm - Asse neutro = 5.31cm
 Compressione calc. = 35.72kg/cmq - Compressione limite calc. = 174.30kg/cmq
 Trazione acciaio = 1896.98kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 2397.74kgm - Asse neutro = 5.31cm
 Compressione calc. = 30.99kg/cmq
 Trazione acciaio = 1645.94kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 2251.46kgm - Asse neutro = 5.31cm
 Compressione calc. = 29.10kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 1545.53kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*f_{cfm} = 3448.45kgm
 Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cmq
 Area efficace A_{c,eff} = 562.02cm² - Area acciaio teso = 6.52cm² - Rapporto A_s/A_{eff} R_o = 0.012

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 11

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²

Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cm² - F_{cd} = 164.62 Kg/cm²

Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cm²

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.02m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kg _m /int	F. Area inf. cm ²	Area sup. cm ²	Momento R. Kg _m /int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-690.59	2.26	2.26	2451.32	3.55	3.5	62.3
Filo all. sx	0.27	731.20	8.78	5.27	7015.25	9.59	3.5	32.4
Max. campata	1.81	2691.99	6.52	3.01	5950.93	2.21	3.5	50.1
Filo all. dx	3.75	-891.22	8.78	5.27	5011.37	5.62	3.5	49.1
Asse app. dx	4.02	-1839.52	2.26	2.26	2451.32	1.33	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vrd filo Vr _{cd} Kg	Taglio banc. Kg	Vrd banc. Vr _{cd} Kg	Largh. cm	Nerva. cm	Vr _{sd} Kg	Area cm ²	Dist. cm
Appoggio sx	2669.58	13330.75	2552.83	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-3473.67	14512.01	-3356.92	4837.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					

Vrd = 0,18 * k * (100 * r_{o1} * f_{ck})^{1/3} / gamma_C >= (v_{min}) * b_w * d

Vr_{cd} = 0,9 * d * b_w * f'_{cd} * (ctg alfa + 1) / (1 + 1)

Vr_{sd} = 0,9 * d * (A_{sw} / s) * f_{yd} * (ctg alfa + 1) sin alfa

Freccia solaio = 0.114cm - Momento di inerzia = 49895cm⁴

Rapporto snellezza L/h = 15.4 < 84.6 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.68m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo R_{ck} = 350 - Resistenza cilindrica f_{ck} = 290.50kg/cm²

Resistenza a trazione f_{ctm} = 28.90kg/cm² - Resistenza a trazione-flessione f_{cfm} = 34.68kg/cm²

Relazione di calcolo

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 2204.94kgm - Asse neutro = 5.31cm

Compressione calc. = 28.50kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 1513.60kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 1935.32kgm - Asse neutro = 5.31cm

Compressione calc. = 25.02kg/cmq

Trazione acciaio = 1328.51kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 1827.47kgm - Asse neutro = 5.31cm

Compressione calc. = 23.62kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1254.48kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*f_{cfm} = 3448.45kgm

Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cmq

Area efficace A_{c,eff} = 562.02cmq - Area acciaio teso = 6.52cmq - Rapporto A_s/A_{eff} R_o = 0.012

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

CAMPATA 2

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cmq - F_{cd} = 164.62 Kg/cmq

Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.22m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-1839.52	2.26	2.26	2451.32	1.33	3.5	62.3
Filo all. sx	0.27	-1289.47	7.24	5.27	4979.14	3.86	3.5	51.1
Max. campata	1.11	612.38	4.98	3.01	4592.80	7.50	3.5	65.9
Filo all. dx	1.95	-1266.06	7.24	5.27	4979.14	3.93	3.5	51.1
Asse app. dx	2.22	-1812.90	2.26	2.26	2451.32	1.35	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrds Kg	Area cmq	Dist. cm
Appoggio sx	2280.08	14512.01	2163.33	4837.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					
Appoggio dx	-2264.89	14512.01	-2148.14	4837.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					

Vrd = 0,18 * k * (100 * r_{o1} * f_{ck})^{1/3} / gamma_C >= (v min) * b_w * d

Vrcd = 0,9 * d * b_w * f'_{cd} * (ctg alfa + 1) / (1 + 1)

Vrds = 0,9 * d * (A_{sw} / s) * f_{yd} * (ctg alfa + 1) sin alfa

Freccia solaio = -0.032cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 8.5 < 80.7 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 1.88m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo R_{ck} = 350 - Resistenza cilindrica f_{ck} = 290.50kg/cmq

Resistenza a trazione f_{ctm} = 28.90kg/cmq - Resistenza a trazione-flessione f_{cfm} = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

Relazione di calcolo

COMBINAZIONI RARE

Momento soll. = 36.92kgm - Asse neutro = 4.71cm
 Compressione calc. = 0.53kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 32.86kg/cm² - Trazione limite acciaio = 3600.00kg/cm²

COMBINAZIONI FREQUENTI

Momento soll. = 0.00kgm - Asse neutro = 4.71cm
 Compressione calc. = 0.00kg/cm²
 Trazione acciaio = 0.00kg/cm²

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 0.00kgm - Asse neutro = 4.71cm
 Compressione calc. = 0.00kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 0.00kg/cm²

MOMENTO NEGATIVO IN CAMPATA COMBINAZIONI FREQUENTI

MOMENTO NEGATIVO IN CAMPATA COMBINAZIONI QUASI PERMANENTI

FESSURAZIONE NON CALCOLATA

CAMPATA 3

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 3.99m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kg ² /int	Area inf. cm ²	Area sup. cm ²	Momento R. Kg ² /int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-1812.90	2.26	2.26	2451.32	1.35	3.5	62.3
Filo all. sx	0.27	-872.13	8.78	5.27	5011.37	5.75	3.5	49.1
Max. campata	2.19	2657.32	6.52	3.01	5950.93	2.24	3.5	50.1
Filo all. dx	3.72	726.10	8.78	5.27	7015.25	9.66	3.5	32.4
Asse app. dx	3.99	-680.27	2.26	2.26	2451.32	3.60	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cm ²	Dist. cm
Appoggio sx	3445.33	14512.01	3328.57	4837.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					
Appoggio dx	-2650.26	13330.75	-2533.50	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck) / 3 / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.111cm - Momento di inerzia = 49895cm⁴

Rapporto snellezza L/h = 15.3 < 84.6 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.65m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²

Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fctm = 34.68kg/cm²

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 2175.15kgm - Asse neutro = 5.31cm

Compressione calc. = 28.12kg/cm² - Compressione limite calc. = 174.30kg/cm²

Trazione acciaio = 1493.14kg/cm² - Trazione limite acciaio = 3600.00kg/cm²

COMBINAZIONI FREQUENTI

Momento soll. = 1908.55kgm - Asse neutro = 5.31cm

Compressione calc. = 24.67kg/cm²

Relazione di calcolo

Trazione acciaio = 1310.14kg/cmq
 COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 1801.91kgm - Asse neutro = 5.31cm
 Compressione calc. = 23.29kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 1236.94kg/cmq
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 12763.95cm³ - Momento di fessurazione = W*f_{cfm} = 3688.65kgm
 Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 2532.10kg/cmq
 Area efficace A_{c,eff} = 562.02cmq - Area acciaio teso = 6.52cmq - Rapporto A_s/A_{eff} R_o = 0.012
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 12

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cmq - F_{cd} = 164.62 Kg/cmq
 Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.04m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-697.26	2.26	2.26	2451.32	3.52	3.5	62.3
Filo all. sx	0.22	689.37	8.78	5.27	7015.25	10.18	3.5	32.4
Max. campata	2.02	3389.31	6.52	3.01	5950.93	1.76	3.5	50.1
Filo all. dx	3.82	689.37	8.78	5.27	7015.25	10.18	3.5	32.4
Asse app. dx	4.04	-697.26	2.26	2.26	2451.32	3.52	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vrd filo Vr _{cd} Kg	Taglio banc. Kg	Vrd banc. Vr _{cd} Kg	Largh. cm	Nerva. cm	Vr _{sd} Kg	Area cmq	Dist. cm
Appoggio sx	3115.15	13330.75 186679.60	2998.40	4584.16 62226.54	0.00	40.00	0.00	0.00	0.00
Appoggio dx	-3115.15	13330.75 186679.60	-2998.40	4584.16 62226.54	0.00	40.00	0.00	0.00	0.00

V_{rd} = 0,18 * k * (100 * r_{ol} * f_{ck})^{1/3} / gamma_C >= (v_{min}) * b_w * d

V_{rd} = 0,9 * d * b_w * f'_{cd} * (ctg alfa + 1) / (1 + 1)

V_{rd} = 0,9 * d * (A_{sw} / s) * f_{yd} * (ctg alfa + 1) sin alfa

Freccia solaio = 0.179cm - Momento di inerzia = 49895cm⁴

Rapporto snellezza L/h = 15.5 < 52.1 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.80m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo R_{ck} = 350 - Resistenza cilindrica f_{ck} = 290.50kg/cmq

Resistenza a trazione f_{ctm} = 28.90kg/cmq - Resistenza a trazione-flessione f_{cfm} = 34.68kg/cmq

Coefficiente beta_l = 1 - Coefficiente beta_l = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 2773.74kgm - Asse neutro = 5.31cm

Compressione calc. = 35.85kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 1904.05kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Relazione di calcolo

Momento soll. = 2407.33kgm - Asse neutro = 5.31cm
 Compressione calc. = 31.12kg/cmq
 Trazione acciaio = 1652.53kg/cmq
 COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 2260.77kgm - Asse neutro = 5.31cm
 Compressione calc. = 29.22kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 1551.92kg/cmq
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*fcfm = 3448.45kgm
 Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cmq
 Area efficace Ac,eff = 562.02cmq - Area acciaio teso = 6.52cmq - Rapporto As/Aeff Ro = 0.012
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 13

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm
 Luce cal = 1.81m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-140.91	2.26	2.26	2451.32	17.40	3.5	62.3
Filo all. sx	0.22	284.60	7.24	5.27	5869.34	20.62	3.5	39.8
Max. campata	0.91	680.28	4.98	3.01	4592.80	6.75	3.5	65.9
Filo all. dx	1.59	284.60	7.24	5.27	5869.34	20.62	3.5	39.8
Asse app. dx	1.81	-140.91	2.26	2.26	2451.32	17.40	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrds Kg	Area cmq	Dist. cm
Appoggio sx	1262.68	13330.75	1145.93	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1262.69	13330.75	-1145.93	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^(1/3) / gammaC >= (v min) * bw * d
 Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)
 Vrds = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa
 Freccia solaio = 0.010cm - Momento di inerzia = 39438cm⁴
 Rapporto snellezza L/h = 7.0 < 53.8 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
 VERIFICA TRALICCIO
 Lunghezza traliccio = 1.57m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
 STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq
 Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
 COMBINAZIONI RARE
 Momento soll. = 555.87kgm - Asse neutro = 4.71cm
 Compressione calc. = 7.98kg/cmq - Compressione limite calc. = 174.30kg/cmq

Relazione di calcolo

Trazione acciaio = 494.75kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
 COMBINAZIONI FREQUENTI
 Momento soll. = 481.83kgm - Asse neutro = 4.71cm
 Compressione calc. = 6.92kg/cm²
 Trazione acciaio = 428.85kg/cm²
 COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 452.21kgm - Asse neutro = 4.71cm
 Compressione calc. = 6.50kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 402.49kg/cm²
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm
 Diametro medio toncini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²
 Area efficace Ac,eff = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto As/Aeff Ro = 0.009
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 14

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 5.56m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-1325.81	3.39	2.26	2613.83	1.97	3.5	51.1
Filo all. sx	0.27	1177.51	13.65	5.27	10508.70	8.92	3.5	19.9
Max. campata	2.78	6445.72	10.26	3.01	9159.83	1.42	3.5	31.0
Filo all. dx	5.34	968.53	12.52	5.27	9714.95	10.03	3.5	22.0
Asse app. dx	5.56	-1325.81	2.26	2.26	2451.32	1.85	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cm ²	Dist. cm
Appoggio sx	4307.89	13330.75	4191.14	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-4389.52	13330.75	-4272.77	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.439cm - Momento di inerzia = 72624cm⁴

Rapporto snellezza L/h = 21.4 < 39.5 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 5.27m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²

Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Relazione di calcolo

Momento soll. = 5275.23kgm - Asse neutro = 6.57cm
 Compressione calc. = 58.35kg/cmq - Compressione limite calc. = 174.30kg/cmq
 Trazione acciaio = 2334.56kg/cmq - Trazione limite acciaio = 3600.00kg/cmq
COMBINAZIONI FREQUENTI
 Momento soll. = 4578.51kgm - Asse neutro = 6.57cm
 Compressione calc. = 50.64kg/cmq
 Trazione acciaio = 2026.22kg/cmq
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 4299.82kgm - Asse neutro = 6.57cm
 Compressione calc. = 47.56kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 1902.89kg/cmq
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 12220.32cm³ - Momento di fessurazione = W*f_{cfm} = 3531.54kgm
 Diametro medio tondini = 11.66mm - Ricoprimento armatura c = 13.37mm
 Distanza fra le barre s = 100.00mm - Tensione acciaio = 1562.89kg/cmq
 Area efficace A_{c,eff} = 575.86cm² - Area acciaio teso = 10.26cm² - Rapporto A_s/A_{eff} R_o = 0.018
COMBINAZIONI FREQUENTI
 Distanza media tra le fessure in mm = 176.55mm
 Epsilon_{sm} = 0.00068 - Epsilon_{sm,n} = 0.00039
 Tensione acciaio = 2026.22kg/cmq
 Apertura limite delle fessure mm = 0.40mm
 Ampiezza fessura in mm W_m = 0.12mm
 Ampiezza fessura in mm W_k = 0.20mm
 Combinazione fessurata
COMBINAZIONI QUASI PERMANENTI
 Distanza media tra le fessure in mm = 176.55mm
 Epsilon_{sm} = 0.00060 - Epsilon_{sm,n} = 0.00036
 Tensione acciaio = 1902.89kg/cmq
 Apertura limite delle fessure mm = 0.30mm
 Ampiezza fessura in mm W_m = 0.11mm
 Ampiezza fessura in mm W_k = 0.18mm
 Combinazione fessurata

Schema 15

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cmq - F_{cd} = 164.62 Kg/cmq
 Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.14m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-732.57	2.26	2.26	2451.32	3.35	3.5	62.3
Filo all. sx	0.27	851.48	8.78	5.27	7015.25	8.24	3.5	32.4
Max. campata	2.07	3556.36	6.52	3.01	5950.93	1.67	3.5	50.1
Filo all. dx	3.87	851.49	8.78	5.27	7015.25	8.24	3.5	32.4
Asse app. dx	4.14	-732.57	2.26	2.26	2451.32	3.35	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vrd filo Vr _{cd} Kg	Taglio banc. Kg	Vrd banc. Vr _{cd} Kg	Largh. cm	Nerva. cm	Vr _{sd} Kg	Area cmq	Dist. cm
Appoggio sx	3115.93	13330.75	2999.18	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-3115.93	13330.75	-2999.18	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * r_{ol} * f_{ck})^{1/3} / gamma_C >= (v min) * b_w * d

Vr_{cd} = 0,9 * d * b_w * f'_{cd} * (ctg alfa + 1) / (1 + 1)

Vr_{sd} = 0,9 * d * (A_{sw} / s) * f_{yd} * (ctg alfa + 1) sin alfa

Freccia solaio = 0.204cm - Momento di inerzia = 49895cm⁴

Rapporto snellezza L/h = 15.9 < 48.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.80m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Relazione di calcolo

Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
 STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00
 COMBINAZIONI RARE
 Momento soll. = 2909.60kgm - Asse neutro = 5.31cm
 Compressione calc. = 37.61kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 1997.32kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
 COMBINAZIONI FREQUENTI
 Momento soll. = 2524.63kgm - Asse neutro = 5.31cm
 Compressione calc. = 32.63kg/cm²
 Trazione acciaio = 1733.05kg/cm²
 COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 2370.65kgm - Asse neutro = 5.31cm
 Compressione calc. = 30.64kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 1627.35kg/cm²
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*fcfm = 3448.45kgm
 Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cm²
 Area efficace Ac,eff = 562.02cm² - Area acciaio teso = 6.52cm² - Rapporto As/Aeff Ro = 0.012
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 16

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.50m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-267.60	2.26	2.26	2451.32	9.16	3.5	62.3
Filo all. sx	0.27	489.39	7.24	5.27	5869.34	11.99	3.5	39.8
Max. campata	1.25	1294.09	4.98	3.01	4592.80	3.55	3.5	65.9
Filo all. dx	2.28	410.23	7.24	5.27	5869.34	14.31	3.5	39.8
Asse app. dx	2.50	-267.60	2.26	2.26	2451.32	9.16	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cm ²	Dist. cm
Appoggio sx	1753.25	13330.75	1636.49	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1832.70	13330.75	-1715.95	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d

Vrd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.036cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 9.6 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 2.21m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Relazione di calcolo

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
 STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq
 Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
 COMBINAZIONI RARE
 Momento soll. = 1057.84kgm - Asse neutro = 4.71cm
 Compressione calc. = 15.20kg/cmq - Compressione limite calc. = 174.30kg/cmq
 Trazione acciaio = 941.53kg/cmq - Trazione limite acciaio = 3600.00kg/cmq
 COMBINAZIONI FREQUENTI
 Momento soll. = 917.21kgm - Asse neutro = 4.71cm
 Compressione calc. = 13.18kg/cmq
 Trazione acciaio = 816.36kg/cmq
 COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 860.96kgm - Asse neutro = 4.71cm
 Compressione calc. = 12.37kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 766.30kg/cmq
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq
 Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 17

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.23m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-765.82	2.26	2.26	2451.32	3.20	3.5	62.3
Filo all. sx	0.27	872.29	8.78	5.27	7015.25	8.04	3.5	32.4
Max. campata	2.11	3718.25	6.52	3.01	5950.93	1.60	3.5	50.1
Filo all. dx	3.96	872.29	8.78	5.27	7015.25	8.04	3.5	32.4
Asse app. dx	4.23	-765.82	2.26	2.26	2451.32	3.20	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrkd Kg	Taglio banc. Kg	Vrd banc. Vrkd Kg	Largh. cm	Nerva. cm	Vrds Kg	Area cmq	Dist. cm
Appoggio sx	3193.34	13330.75	3076.59	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-3193.34	13330.75	-3076.59	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck) / 3 / gammaC >= (v min) * bw * d

Vrkd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrds = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.222cm - Momento di inerzia = 49895cm⁴

Rapporto snellezza L/h = 16.3 < 47.0 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.89m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

Relazione di calcolo

W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 3042.14kgm - Asse neutro = 5.31cm
 Compressione calc. = 39.32kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 2088.30kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
 Momento soll. = 2639.70kgm - Asse neutro = 5.31cm
 Compressione calc. = 34.12kg/cm²
 Trazione acciaio = 1812.04kg/cm²
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 2478.72kgm - Asse neutro = 5.31cm
 Compressione calc. = 32.04kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 1701.54kg/cm²
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*fcfm = 3448.45kgm
 Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cm²
 Area efficace Ac,eff = 562.02cm² - Area acciaio teso = 6.52cm² - Rapporto As/Aeff Ro = 0.012
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 18

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 3.38m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-489.37	2.26	2.26	2451.32	5.01	3.5	62.3
Filo all. sx	0.27	685.64	7.24	5.27	5869.34	8.56	3.5	39.8
Max. campata	1.69	2372.13	4.98	3.01	4592.80	1.94	3.5	65.9
Filo all. dx	3.11	685.64	7.24	5.27	5869.34	8.56	3.5	39.8
Asse app. dx	3.38	-489.37	2.26	2.26	2451.32	5.01	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cm ²	Dist. cm
Appoggio sx	2485.79	13330.75	2369.04	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2485.79	13330.75	-2369.04	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.118cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 13.0 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.04m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Relazione di calcolo

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm3 - W superiore = 40.485cm3
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq
 Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 1940.09kgm - Asse neutro = 4.71cm
 Compressione calc. = 27.87kg/cmq - Compressione limite calc. = 174.30kg/cmq
 Trazione acciaio = 1726.77kg/cmq - Trazione limite acciaio = 3600.00kg/cmq
COMBINAZIONI FREQUENTI
 Momento soll. = 1682.92kgm - Asse neutro = 4.71cm
 Compressione calc. = 24.17kg/cmq
 Trazione acciaio = 1497.88kg/cmq
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 1580.06kgm - Asse neutro = 4.71cm
 Compressione calc. = 22.70kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 1406.32kg/cmq
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm3 - Momento di fessurazione = W*fcfm = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq
 Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 19

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.20m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-756.01	2.26	2.26	2451.32	3.24	3.5	62.3
Filo all. sx	0.27	866.19	8.78	5.27	7015.25	8.10	3.5	32.4
Max. campata	2.10	3670.46	6.52	3.01	5950.93	1.62	3.5	50.1
Filo all. dx	3.93	866.19	8.78	5.27	7015.25	8.10	3.5	32.4
Asse app. dx	4.20	-756.01	2.26	2.26	2451.32	3.24	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrds Kg	Area cmq	Dist. cm
Appoggio sx	3170.67	13330.75	3053.92	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-3170.67	13330.75	-3053.92	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)1/3 / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrds = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.217cm - Momento di inerzia = 49895cm4

Rapporto snellezza L/h = 16.2 < 47.5 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Relazione di calcolo

Lunghezza traliccio = 3.86m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 3003.02kgm - Asse neutro = 5.31cm
 Compressione calc. = 38.82kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 2061.45kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
 Momento soll. = 2605.74kgm - Asse neutro = 5.31cm
 Compressione calc. = 33.68kg/cm²
 Trazione acciaio = 1788.73kg/cm²
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 2446.82kgm - Asse neutro = 5.31cm
 Compressione calc. = 31.63kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 1679.64kg/cm²
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*fcfm = 3448.45kgm
 Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cm²
 Area efficace Ac,eff = 562.02cm² - Area acciaio teso = 6.52cm² - Rapporto As/Aeff Ro = 0.012
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 20

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 5.04m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-1087.60	2.26	2.26	2451.32	2.25	3.5	62.3
Filo all. sx	0.27	918.88	9.60	5.27	7615.13	8.29	3.5	29.5
Max. campata	2.27	4070.65	7.34	3.01	6662.83	1.64	3.5	44.3
Filo all. dx	4.77	-1645.62	7.34	7.54	6915.81	4.20	3.5	37.8
Asse app. dx	5.04	-2855.61	0.00	4.52	4132.13	1.45	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cm ²	Dist. cm
Appoggio sx	3357.91	13330.75	3241.16	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-4436.07	14512.01	-4319.32	5339.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d
 Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)
 Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa
 Freccia solaio = 0.224cm - Momento di inerzia = 55176cm⁴
 Rapporto snellezza L/h = 19.4 < 69.1 (C4.1.13)
 Limite snellezza verificata (C4.1.13)

Relazione di calcolo

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 4.70m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 3361.33kgm - Asse neutro = 5.61cm

Compressione calc. = 41.61kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 2058.56kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 2967.42kgm - Asse neutro = 5.61cm

Compressione calc. = 36.73kg/cmq

Trazione acciaio = 1817.32kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 2809.86kgm - Asse neutro = 5.61cm

Compressione calc. = 34.78kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1720.83kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11995.70cm³ - Momento di fessurazione = W*fcfm = 3466.63kgm

Diametro medio tondini = 10.86mm - Ricoprimento armatura c = 13.44mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2123.05kg/cmq

Area efficace Ac,eff = 566.25cmq - Area acciaio teso = 7.34cmq - Rapporto As/Aeff Ro = 0.013

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

CAMPATA 2

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.50m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-2855.61	0.00	4.52	4132.13	1.45	3.5	62.3
Filo all. sx	0.27	-2131.61	4.98	7.54	6883.83	3.23	3.5	39.2
Max. campata	1.38	1018.97	4.98	3.01	4592.80	4.51	3.5	65.9
Filo all. dx	2.28	-84.00	7.24	5.27	4979.14	59.28	3.5	51.1
Asse app. dx	2.50	-267.60	2.26	2.26	2451.32	9.16	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	2895.49	14512.01	2778.74	5339.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					
Appoggio dx	-1599.19	13330.75	-1482.43	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * ro1 * fck)^(1/3) / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.001cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 9.6 < 70.0 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

Relazione di calcolo

VERIFICA TRALICCIO

Lunghezza traliccio = 2.21m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 482.59kgm - Asse neutro = 4.71cm
 Compressione calc. = 6.93kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 429.53kg/cm² - Trazione limite acciaio = 3600.00kg/cm²

COMBINAZIONI FREQUENTI

Momento soll. = 372.91kgm - Asse neutro = 4.71cm
 Compressione calc. = 5.36kg/cm²
 Trazione acciaio = 331.90kg/cm²

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 330.73kgm - Asse neutro = 4.71cm
 Compressione calc. = 4.75kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 294.36kg/cm²

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 12454.30cm³ - Momento di fessurazione = W*fcfm = 3599.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3203.42kg/cm²
 Area efficace Ac,eff = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto As/Aeff Ro = 0.009

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 21

CAMPATA 1

SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.31m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-228.47	2.26	2.26	2451.32	10.73	3.5	62.3
Filo all. sx	0.27	445.50	7.24	5.27	5869.34	13.17	3.5	39.8
Max. campata	1.16	1101.71	4.98	3.01	4592.80	4.17	3.5	65.9
Filo all. dx	2.04	445.50	7.24	5.27	5869.34	13.17	3.5	39.8
Asse app. dx	2.31	-228.47	2.26	2.26	2451.32	10.73	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrkd Kg	Taglio banc. Kg	Vrd banc. Vrkd Kg	Largh. cm	Nerva. cm	Vrkd Kg	Area cmq	Dist. cm
Appoggio sx	1592.83	13330.75	1476.07	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1592.83	13330.75	-1476.07	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * ro1 * fck)^(1/3) / gammaC >= (v min) * bw * d

Vrkd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrkd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.027cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 8.9 < 53.8 (C4.1.13)

Relazione di calcolo

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 1.97m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²

Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²

Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 900.01kgm - Asse neutro = 4.71cm

Compressione calc. = 12.93kg/cm² - Compressione limite calc. = 174.30kg/cm²

Trazione acciaio = 801.05kg/cm² - Trazione limite acciaio = 3600.00kg/cm²

COMBINAZIONI FREQUENTI

Momento soll. = 779.95kgm - Asse neutro = 4.71cm

Compressione calc. = 11.20kg/cm²

Trazione acciaio = 694.19kg/cm²

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 731.92kgm - Asse neutro = 4.71cm

Compressione calc. = 10.51kg/cm² - Compressione limite calc. = 130.73kg/cm²

Trazione acciaio = 651.44kg/cm²

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm

Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm

Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²

Area efficace Ac,eff = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto As/Aeff Ro = 0.009

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 22

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.31m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-228.47	2.26	2.26	2451.32	10.73	3.5	62.3
Filo all. sx	0.27	445.50	7.24	5.27	5869.34	13.17	3.5	39.8
Max. campata	1.16	1101.71	4.98	3.01	4592.80	4.17	3.5	65.9
Filo all. dx	2.04	445.50	7.24	5.27	5869.34	13.17	3.5	39.8
Asse app. dx	2.31	-228.47	2.26	2.26	2451.32	10.73	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cm ²	Dist. cm
Appoggio sx	1592.83	13330.75	1476.07	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1592.83	13330.75	-1476.07	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * ro1 * fck)^(1/3) / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Relazione di calcolo

Freccia solaio = 0.027cm - Momento di inerzia = 39438cm⁴
 Rapporto snellezza L/h = 8.9 < 53.8 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
VERIFICA TRALICCIO
 Lunghezza traliccio = 1.97m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fctm = 34.68kg/cm²
 Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 900.01kgm - Asse neutro = 4.71cm
 Compressione calc. = 12.93kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 801.05kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
 Momento soll. = 779.95kgm - Asse neutro = 4.71cm
 Compressione calc. = 11.20kg/cm²
 Trazione acciaio = 694.19kg/cm²
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 731.92kgm - Asse neutro = 4.71cm
 Compressione calc. = 10.51kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 651.44kg/cm²
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fctm = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²
 Area efficace Ac,eff = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto As/Aeff Ro = 0.009
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 23

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.70m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-945.49	2.26	2.26	2451.32	2.59	3.5	62.3
Filo all. sx	0.27	875.71	9.19	5.27	7315.89	8.35	3.5	30.9
Max. campata	2.11	3739.16	6.93	3.01	6307.63	1.69	3.5	47.0
Filo all. dx	4.43	-2255.58	6.93	7.54	6910.58	3.06	3.5	38.0
Asse app. dx	4.70	-3431.47	0.00	4.52	4132.13	1.20	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrds Kg	Area cm ²	Dist. cm
Appoggio sx	3203.76	13330.75	3087.01	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-4315.51	14512.01	-4198.76	5339.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					

Vrd = 0,18 * k * (100 * ro1 * fck)^{1/3} / gammaC >= (v min) * bw * d

Relazione di calcolo

Vr_{cd} = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)
Vr_{sd} = 0,9 * d * (Asw / s) * f_{yd} * (ctg alfa + 1) sin alfa
Freccia solaio = 0.162cm - Momento di inerzia = 52558cm⁴
Rapporto snellezza L/h = 18.1 < 69.5 (C4.1.13)
Limite snellezza verificata (C4.1.13)
Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
VERIFICA TRALICCIO
Lunghezza traliccio = 4.36m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
Asse neutro = 2.57cm - Momento inerzia = 239.93
W inferiore = 93.23cm³ - W superiore = 40.485cm³
Corrente superiore
Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
Lunghezza rompitratta corrente superiore = 1.27m
Lunghezza rompitratta mensola = 1.05m
Staffe
Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
Lunghezza rompitratta staffa = 2.1m
Numero tralicci = 3
Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
Condizioni ambiente: Ordinarie - Classe di esposizione: X0
Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
Tipo calcestruzzo R_{ck} = 350 - Resistenza cilindrica f_{ck} = 290.50kg/cm²
Resistenza a trazione f_{ctm} = 28.90kg/cm² - Resistenza a trazione-flessione f_{cfm} = 34.68kg/cm²
Coefficiente beta₁ = 1 - Coefficiente beta₁ = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
Momento soll. = 2816.31kgm - Asse neutro = 5.46cm
Compressione calc. = 35.59kg/cm² - Compressione limite calc. = 174.30kg/cm²
Trazione acciaio = 1823.02kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
Momento soll. = 2433.67kgm - Asse neutro = 5.46cm
Compressione calc. = 30.76kg/cm²
Trazione acciaio = 1575.34kg/cm²
COMBINAZIONI QUASI PERMANENTI
Momento soll. = 2280.62kgm - Asse neutro = 5.46cm
Compressione calc. = 28.82kg/cm² - Compressione limite calc. = 130.73kg/cm²
Trazione acciaio = 1476.27kg/cm²
APERTURA DELLE FESSURE
Modulo W sezione interamente reagente = 11964.25cm³ - Momento di fessurazione = W*f_{cfm} = 3457.54kgm
Diametro medio tondini = 10.50mm - Ricoprimento armatura c = 13.56mm
Distanza fra le barre s = 120.00mm - Tensione acciaio = 2238.10kg/cm²
Area efficace A_{c,eff} = 564.26cm² - Area acciaio teso = 6.93cm² - Rapporto A_s/A_{eff} R_o = 0.012
COMBINAZIONI FREQUENTI
Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
Combinazione non fessurata
CAMPATA 2
SOLAIO LASTRA H = 5+16+5
3 NERVATURE AUTOPORTANTE
Alleggerimento in polistirolo
Metodo di Calcolo: Stati limite D.M.14/01/2008
Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cm² - F_{cd} = 164.62 Kg/cm²
Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cm²
Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.90m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm
Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-3431.47	0.00	4.52	4132.13	1.20	3.5	62.3
Filo all. sx	0.27	-2217.71	7.34	7.54	6915.81	3.12	3.5	37.8
Max. campata	2.69	4050.72	7.34	3.01	6662.83	1.64	3.5	44.3
Filo all. dx	4.68	759.08	9.60	5.27	7615.13	10.03	3.5	29.5
Asse app. dx	4.90	-1027.36	2.26	2.26	2451.32	2.39	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vr _d filo Kg	Taglio banc. Kg	Vr _d banc. Kg	Largh. cm	Nerva. cm	Vr _{sd} Kg	Area cm ²	Dist. cm
Appoggio sx	4452.96	14512.01	4336.21	5339.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					
Appoggio dx	-3428.63	13330.75	-3311.88	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vr_d = 0,18 * k * (100 * rho₁ * f_{ck})^{1/3} / gamma_c >= (v min) * bw * d
Vr_{cd} = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Relazione di calcolo

Vr_{sd} = 0,9 * d * (Asw / s) * f_{yd} * (ctg alfa + 1) sin alfa
 Freccia solaio = 0.185cm - Momento di inerzia = 55176cm⁴
 Rapporto snellezza L/h = 18.8 < 68.8 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
VERIFICA TRALICCIO
 Lunghezza traliccio = 4.61m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo R_{ck} = 350 - Resistenza cilindrica f_{ck} = 290.50kg/cm²
 Resistenza a trazione f_{ctm} = 28.90kg/cm² - Resistenza a trazione-flessione f_{cfm} = 34.68kg/cm²
 Coefficiente beta₁ = 1 - Coefficiente beta₂ = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 3113.08kgm - Asse neutro = 5.61cm
 Compressione calc. = 38.53kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 1906.52kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
 Momento soll. = 2702.48kgm - Asse neutro = 5.61cm
 Compressione calc. = 33.45kg/cm²
 Trazione acciaio = 1655.06kg/cm²
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 2538.28kgm - Asse neutro = 5.61cm
 Compressione calc. = 31.42kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 1554.50kg/cm²
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 12927.82cm³ - Momento di fessurazione = W*f_{cfm} = 3736.00kgm
 Diametro medio tondini = 10.86mm - Ricoprimento armatura c = 13.44mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 2288.02kg/cm²
 Area efficace A_{c,eff} = 566.25cm² - Area acciaio teso = 7.34cm² - Rapporto A_s/A_{eff} R_o = 0.013
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 24

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cm² - F_{cd} = 164.62 Kg/cm²
 Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 3.45m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-509.07	2.26	2.26	2451.32	4.82	3.5	62.3
Filo all. sx	0.22	580.00	7.24	5.27	5869.34	10.12	3.5	39.8
Max. campata	1.72	2467.55	4.98	3.01	4592.80	1.86	3.5	65.9
Filo all. dx	3.15	762.64	7.24	5.27	5869.34	7.70	3.5	39.8
Asse app. dx	3.45	-509.07	2.26	2.26	2451.32	4.82	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vr _d filo Vr _{cd} Kg	Taglio banc. Kg	Vr _d banc. Vr _{cd} Kg	Largh. cm	Nerva. cm	Vr _{sd} Kg	Area cm ²	Dist. cm
Appoggio sx	2622.93	13330.75	2506.17	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2500.10	13330.75	-2383.35	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Relazione di calcolo

Vrd = 0,18 * k * (100 * ro1 * fck)1/3 / gammaC >= (v min) * bw * d
Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)
Vrzd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa
Freccia solaio = 0.126cm - Momento di inerzia = 39438cm4
Rapporto snellezza L/h = 13.3 < 53.8 (C4.1.13)
Limite snellezza verificata (C4.1.13)
Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
VERIFICA TRALICCIO
Lunghezza traliccio = 3.13m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq
Asse neutro = 2.57cm - Momento inerzia = 239.93
W inferiore = 93.23cm3 - W superiore = 40.485cm3
Corrente superiore
Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
Lunghezza rompitratta corrente superiore = 1.27m
Lunghezza rompitratta mensola = 1.05m
Staffe
Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
Lunghezza rompitratta staffa = 2.1m
Numero tralicci = 3
Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
Condizioni ambiente: Ordinarie - Classe di esposizione: X0
Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili
Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq
Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq
Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
Momento soll. = 2018.12kgm - Asse neutro = 4.71cm
Compressione calc. = 28.99kg/cmq - Compressione limite calc. = 174.30kg/cmq
Trazione acciaio = 1796.22kg/cmq - Trazione limite acciaio = 3600.00kg/cmq
COMBINAZIONI FREQUENTI
Momento soll. = 1750.61kgm - Asse neutro = 4.71cm
Compressione calc. = 25.15kg/cmq
Trazione acciaio = 1558.12kg/cmq
COMBINAZIONI QUASI PERMANENTI
Momento soll. = 1643.60kgm - Asse neutro = 4.71cm
Compressione calc. = 23.61kg/cmq - Compressione limite calc. = 130.73kg/cmq
Trazione acciaio = 1462.88kg/cmq
APERTURA DELLE FESSURE
Modulo W sezione interamente reagente = 11814.14cm3 - Momento di fessurazione = W*fcfm = 3414.16kgm
Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq
Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009
COMBINAZIONI FREQUENTI
Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
Combinazione non fessurata

Schema 25

CAMPATA 1
SOLAIO LASTRA H = 5+16+5
3 NERVATURE AUTOPORTANTE
Alleggerimento in polistirolo
Metodo di Calcolo: Stati limite D.M.14/01/2008
Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq
Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
Coprifermo sup. = 2.00cm - Coprifermo inf. = 2.00cm - Coprifermo confezione = 1.30cm

Luce cal = 2.37m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-240.26	2.26	2.26	2451.32	10.20	3.5	62.3
Filo all. sx	0.22	386.83	7.24	5.27	5869.34	15.17	3.5	39.8
Max. campata	1.18	1160.99	4.98	3.01	4592.80	3.96	3.5	65.9
Filo all. dx	2.10	459.36	7.24	5.27	5869.34	12.78	3.5	39.8
Asse app. dx	2.37	-240.26	2.26	2.26	2451.32	10.20	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrzd Kg	Area cmq	Dist. cm
Appoggio sx	1723.20	13330.75	1606.45	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Relazione di calcolo

Appoggio dx -1643.97 13330.75 -1527.22 4443.58 0.00 40.00 0.00 0.00 0.00
 186679.60 62226.54
 $Vrd = 0,18 * k * (100 * ro1 * fck) / 3 / \gamma_c \geq (v_{min}) * bw * d$
 $Vrcd = 0,9 * d * bw * f'cd * (ctg \alpha + 1) / (1 + 1)$
 $Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg \alpha + 1) \sin \alpha$
 Freccia solaio = 0.029cm - Momento di inerzia = 39438cm⁴
 Rapporto snellezza L/h = 9.1 < 53.8 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
VERIFICA TRALICCIO
 Lunghezza traliccio = 2.08m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fctm = 34.68kg/cm²
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 948.88kgm - Asse neutro = 4.71cm
 Compressione calc. = 13.63kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 844.55kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
 Momento soll. = 822.62kgm - Asse neutro = 4.71cm
 Compressione calc. = 11.82kg/cm²
 Trazione acciaio = 732.17kg/cm²
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 772.12kgm - Asse neutro = 4.71cm
 Compressione calc. = 11.09kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 687.22kg/cm²
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fctm = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²
 Area efficace Ac,eff = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto As/Aeff Ro = 0.009
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 26

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.15m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kg/m ²	F. Area inf. cm ²	Area sup. cm ²	Momento R. Kg/m ²	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-197.76	2.26	2.26	2451.32	12.40	3.5	62.3
Filo all. sx	0.22	-157.61	7.24	5.27	4979.14	31.59	3.5	51.1
Max. campata	0.95	724.04	4.98	3.01	4592.80	6.34	3.5	65.9
Filo all. dx	1.88	-2230.77	4.98	7.54	6883.83	3.09	3.5	39.2
Asse app. dx	2.15	-2895.81	0.00	4.52	4132.13	1.43	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cm ²	Dist. cm

Relazione di calcolo

Appoggio sx	1311.05	13330.75	1194.30	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2808.36	14512.01	-2691.60	5339.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					
Vrd = 0,18 * k * (100 * ro1 * fck) ^{1/3} / gammaC >= (v min) * bw * d									
Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)									
Vrzd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa									
Freccia solaio = -0.010cm - Momento di inerzia = 39438cm ⁴									
Rapporto snellezza L/h = 8.3 < 70.0 (C4.1.13)									
Limite snellezza verificata (C4.1.13)									
Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00									
VERIFICA TRALICCIO									
Lunghezza traliccio = 1.86m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm									
Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm									
Area sup. = 0.39cm ² - Area inf. = 0.39cm ² - Area sta. = 0.20cm ²									
Asse neutro = 2.57cm - Momento inerzia = 239.93									
W inferiore = 93.23cm ³ - W superiore = 40.485cm ³									
Corrente superiore									
Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg									
Lunghezza rompitratta corrente superiore = 1.27m									
Lunghezza rompitratta mensola = 1.05m									
Staffe									
Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80									
Lunghezza rompitratta staffa = 2.1m									
Numero tralicci = 3									
Freccia massima = 0.28m									
STATI LIMITE DI ESERCIZIO									
Condizioni ambiente: Ordinarie - Classe di esposizione: X0									
Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm ² - Tipo di armatura: Armature Poco Sensibili									
Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm ²									
Resistenza a trazione fctm = 28.90kg/cm ² - Resistenza a trazione-flessione fcfm = 34.68kg/cm ²									
Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00									
COMBINAZIONI RARE									
Momento soll. = 247.65kgm - Asse neutro = 4.71cm									
Compressione calc. = 3.56kg/cm ² - Compressione limite calc. = 174.30kg/cm ²									
Trazione acciaio = 220.42kg/cm ² - Trazione limite acciaio = 3600.00kg/cm ²									
COMBINAZIONI FREQUENTI									
Momento soll. = 174.44kgm - Asse neutro = 4.71cm									
Compressione calc. = 2.51kg/cm ²									
Trazione acciaio = 155.26kg/cm ²									
COMBINAZIONI QUASI PERMANENTI									
Momento soll. = 146.36kgm - Asse neutro = 4.71cm									
Compressione calc. = 2.10kg/cm ² - Compressione limite calc. = 130.73kg/cm ²									
Trazione acciaio = 130.27kg/cm ²									
APERTURA DELLE FESSURE									
Modulo W sezione interamente reagente = 11814.14cm ³ - Momento di fessurazione = W*fcfm = 3414.16kgm									
Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm									
Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm ²									
Area efficace Ac,eff = 550.29cm ² - Area acciaio teso = 4.98cm ² - Rapporto As/Aeff Ro = 0.009									
COMBINAZIONI FREQUENTI									
Combinazione non fessurata									
COMBINAZIONI QUASI PERMANENTI									
Combinazione non fessurata									
CAMPATA 2									
SOLAIO LASTRA H = 5+16+5									
3 NERVATURE AUTOPORTANTE									
Alleggerimento in polistirolo									
Metodo di Calcolo: Stati limite D.M.14/01/2008									
Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm ²									
Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm ² - Fcd = 164.62 Kg/cm ²									
Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm ²									
Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente									
Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm									
Luce cal = 5.06m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm									

Descrizione	distanza	Momento	F. Area inf.	Area sup.	Momento R.	Mr/Mf	Epsilon	Epsilon	
	m	Kgm/int	cm ²	cm ²	Kgm/int		calc %	acc %	

Asse app. sx	0.00	-2895.81	0.00	4.52	4132.13	1.43	3.5	62.3	
Filo all. sx	0.27	-1679.58	7.34	7.54	6915.81	4.12	3.5	37.8	
Max. campata	2.82	4052.47	7.34	3.01	6662.83	1.64	3.5	44.3	
Filo all. dx	4.79	916.99	9.60	5.27	7615.13	8.30	3.5	29.5	
Asse app. dx	5.06	-1096.15	2.26	2.26	2451.32	2.24	3.5	62.3	
Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd									

Descrizione	Taglio filo	Vrd filo	Taglio banc.	Vrd banc.	Largh.	Nerva.	Vrzd	Area	Dist.
	Kg	Kg	Kg	Kg	cm	cm	Kg	cm ²	cm

Appoggio sx	4458.25	14512.01	4341.50	5339.34	0.00	40.00	0.00	0.00	0.00

Relazione di calcolo

213348.20 71116.05
 Appoggio dx -3350.02 13330.75 -3233.26 4443.58 0.00 40.00 0.00 0.00 0.00
 186679.60 62226.54
 $Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / \gamma_c \geq (v_{min}) * bw * d$
 $Vrcd = 0,9 * d * bw * f'cd * (ctg\ \alpha + 1) / (1 + 1)$
 $Vrzd = 0,9 * d * (Asw / s) * f_{yd} * (ctg\ \alpha + 1) \sin\ \alpha$
 Freccia solaio = 0.223cm - Momento di inerzia = 55176cm⁴
 Rapporto snellezza L/h = 19.5 < 69.8 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
 VERIFICA TRALICCIO
 Lunghezza traliccio = 4.72m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
 STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
 COMBINAZIONI RARE
 Momento soll. = 3367.92kgm - Asse neutro = 5.61cm
 Compressione calc. = 41.69kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 2062.60kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
 COMBINAZIONI FREQUENTI
 Momento soll. = 2979.59kgm - Asse neutro = 5.61cm
 Compressione calc. = 36.88kg/cm²
 Trazione acciaio = 1824.77kg/cm²
 COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 2824.25kgm - Asse neutro = 5.61cm
 Compressione calc. = 34.96kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 1729.64kg/cm²
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 12927.82cm³ - Momento di fessurazione = W*fcfm = 3736.00kgm
 Diametro medio tondini = 10.86mm - Ricoprimento armatura c = 13.44mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 2288.02kg/cm²
 Area efficace Ac,eff = 566.25cm² - Area acciaio teso = 7.34cm² - Rapporto As/Aeff Ro = 0.013
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 27

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 3.00m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %	
Asse app. sx	0.00	-384.96	2.26	2.26	2451.32	6.37	3.5	62.3	
Filo all. sx	0.32	695.05	7.24	5.27	5869.34	8.44	3.5	39.8	
Max. campata	1.50	1859.72	4.98	3.01	4592.80	2.47	3.5	65.9	
Filo all. dx	2.73	600.96	7.24	5.27	5869.34	9.77	3.5	39.8	
Asse app. dx	3.00	-384.96	2.26	2.26	2451.32	6.37	3.5	62.3	
Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd									
Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrzd Kg	Area cm ²	Dist. cm

Relazione di calcolo

Appoggio sx	2085.73	13330.75	1968.98	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2164.78	13330.75	-2048.02	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d
Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)
Vrzd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa
Freccia solaio = 0.076cm - Momento di inerzia = 39438cm⁴
Rapporto snellezza L/h = 11.5 < 53.8 (C4.1.13)
Limite snellezza verificata (C4.1.13)
Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 2.61m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
Asse neutro = 2.57cm - Momento inerzia = 239.93
W inferiore = 93.23cm³ - W superiore = 40.485cm³
Corrente superiore
Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
Lunghezza rompitratta corrente superiore = 1.27m
Lunghezza rompitratta mensola = 1.05m
Staffe
Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
Lunghezza rompitratta staffa = 2.1m
Numero tralicci = 3
Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0
Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 1519.86kgm - Asse neutro = 4.71cm
Compressione calc. = 21.83kg/cm² - Compressione limite calc. = 174.30kg/cm²
Trazione acciaio = 1352.75kg/cm² - Trazione limite acciaio = 3600.00kg/cm²

COMBINAZIONI FREQUENTI

Momento soll. = 1317.56kgm - Asse neutro = 4.71cm
Compressione calc. = 18.93kg/cm²
Trazione acciaio = 1172.69kg/cm²

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 1236.64kgm - Asse neutro = 4.71cm
Compressione calc. = 17.76kg/cm² - Compressione limite calc. = 130.73kg/cm²
Trazione acciaio = 1100.67kg/cm²

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm
Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²
Area efficace Ac,eff = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto As/Aeff Ro = 0.009

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 28

CAMPATA 1
SOLAIO LASTRA H = 5+16+5
3 NERVATURE AUTOPORTANTE
Alleggerimento in polistirolo
Metodo di Calcolo: Stati limite D.M.14/01/2008
Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
Coprifermo sup. = 2.00cm - Coprifermo inf. = 2.00cm - Coprifermo confezione = 1.30cm

Luce cal = 2.15m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-198.44	2.26	2.26	2451.32	12.35	3.5	62.3
Filo all. sx	0.22	347.57	7.24	5.27	5869.34	16.89	3.5	39.8
Max. campata	1.08	957.45	4.98	3.01	4592.80	4.80	3.5	65.9
Filo all. dx	1.88	410.94	7.24	5.27	5869.34	14.28	3.5	39.8
Asse app. dx	2.15	-198.44	2.26	2.26	2451.32	12.35	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo	Vrd filo	Taglio banc.	Vrd banc.	Largh.	Nerva.	Vrzd	Area	Dist.
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Relazione di calcolo

	Kg	Vrcd Kg	Kg	Vrcd Kg	cm	cm	Kg	cmq	cm
Appoggio sx	1542.83	13330.75	1426.08	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1464.00	13330.75	-1347.25	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

$Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / \gamma_c \geq (v_{min}) * bw * d$
 $Vrcd = 0,9 * d * bw * f'cd * (ctg \alpha + 1) / (1 + 1)$
 $Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg \alpha + 1) \sin \alpha$
 Freccia solaio = 0.020cm - Momento di inerzia = 39438cm⁴
 Rapporto snellezza L/h = 8.3 < 53.8 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
VERIFICA TRALICCIO
 Lunghezza traliccio = 1.86m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq
 Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq
 Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 782.26kgm - Asse neutro = 4.71cm
 Compressione calc. = 11.24kg/cmq - Compressione limite calc. = 174.30kg/cmq
 Trazione acciaio = 696.25kg/cmq - Trazione limite acciaio = 3600.00kg/cmq
COMBINAZIONI FREQUENTI
 Momento soll. = 677.98kgm - Asse neutro = 4.71cm
 Compressione calc. = 9.74kg/cmq
 Trazione acciaio = 603.43kg/cmq
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 636.27kgm - Asse neutro = 4.71cm
 Compressione calc. = 9.14kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 566.31kg/cmq
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq
 Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 29

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm
 Luce cal = 2.31m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-228.47	2.26	2.26	2451.32	10.73	3.5	62.3
Filo all. sx	0.27	445.50	7.24	5.27	5869.34	13.17	3.5	39.8
Max. campata	1.16	1101.71	4.98	3.01	4592.80	4.17	3.5	65.9
Filo all. dx	2.04	445.50	7.24	5.27	5869.34	13.17	3.5	39.8
Asse app. dx	2.31	-228.47	2.26	2.26	2451.32	10.73	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Relazione di calcolo

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrzd Kg	Area cmq	Dist. cm
Appoggio sx	1592.83	13330.75 186679.60	1476.07	4443.58 62226.54	0.00	40.00	0.00	0.00	0.00
Appoggio dx	-1592.83	13330.75 186679.60	-1476.07	4443.58 62226.54	0.00	40.00	0.00	0.00	0.00

$Vrd = 0,18 * k * (100 * rol * fck) / 3 / \gamma_c \geq (v_{min}) * bw * d$
 $Vrcd = 0,9 * d * bw * f'cd * (ctg \alpha + 1) / (1 + 1)$
 $Vrzd = 0,9 * d * (Asw / s) * f_yd * (ctg \alpha + 1) \sin \alpha$
 Freccia solaio = 0.027cm - Momento di inerzia = 39438cm⁴
 Rapporto snellezza L/h = 8.9 < 53.8 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
VERIFICA TRALICCIO
 Lunghezza traliccio = 1.97m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 900.01kgm - Asse neutro = 4.71cm
 Compressione calc. = 12.93kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 801.05kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
 Momento soll. = 779.95kgm - Asse neutro = 4.71cm
 Compressione calc. = 11.20kg/cm²
 Trazione acciaio = 694.19kg/cm²
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 731.92kgm - Asse neutro = 4.71cm
 Compressione calc. = 10.51kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 651.44kg/cm²
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²
 Area efficace Ac,eff = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto As/Aeff Ro = 0.009
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 30

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.10m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-720.62	2.26	2.26	2451.32	3.40	3.5	62.3
Filo all. sx	0.22	701.66	8.78	5.27	7015.25	10.00	3.5	32.4
Max. campata	2.05	3497.28	6.52	3.01	5950.93	1.70	3.5	50.1
Filo all. dx	3.81	920.94	8.78	5.27	7015.25	7.62	3.5	32.4

Relazione di calcolo

Descrizione	Taglio filo	Vrd filo	Taglio banc.	Vrd banc.	Largh.	Nerva.	Vrsd	Area	Dist.
	Kg	Kg	Kg	Kg	cm	cm	Kg	cmq	cm
Asse app. dx	4.10	-720.62	2.26	2.26	2451.32	3.40	3.5	62.3	
Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd									
Appoggio sx	3169.04	13330.75	3052.29	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-3045.43	13330.75	-2928.68	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

$Vrd = 0,18 * k * (100 * \rho_l * f_{ck})^{1/3} / \gamma_c \geq (v_{min}) * b_w * d$
 $Vrcd = 0,9 * d * b_w * f'_{cd} * (ctg \alpha + 1) / (1 + 1)$
 $Vrsd = 0,9 * d * (A_{sw} / s) * f_{yd} * (ctg \alpha + 1) \sin \alpha$
 Freccia solaio = 0.196cm - Momento di inerzia = 49895cm⁴
 Rapporto snellezza L/h = 15.8 < 49.7 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
VERIFICA TRALICCIO
 Lunghezza traliccio = 3.79m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 2861.08kgm - Asse neutro = 5.31cm
 Compressione calc. = 36.98kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 1964.01kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
 Momento soll. = 2482.40kgm - Asse neutro = 5.31cm
 Compressione calc. = 32.09kg/cm²
 Trazione acciaio = 1704.06kg/cm²
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 2330.92kgm - Asse neutro = 5.31cm
 Compressione calc. = 30.13kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 1600.08kg/cm²
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*fcfm = 3448.45kgm
 Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cm²
 Area efficace Ac,eff = 562.02cm² - Area acciaio teso = 6.52cm² - Rapporto As/Aeff Ro = 0.012
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 31

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.69m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza	Momento F.	Area inf.	Area sup.	Momento R.	Mr/Mf	Epsilon calc	Epsilon acc
	m	Kgm/int	cmq	cmq	Kgm/int		%	%
Asse app. sx	0.00	-310.34	2.26	2.26	2451.32	7.90	3.5	62.3
Filo all. sx	0.22	444.62	7.24	5.27	5869.34	13.20	3.5	39.8

Relazione di calcolo

Max. campata	1.35	1504.07	4.98	3.01	4592.80	3.05	3.5	65.9
Filo all. dx	2.45	481.19	7.24	5.27	5869.34	12.20	3.5	39.8
Asse app. dx	2.69	-310.34	2.26	2.26	2451.32	7.90	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo	Vrd filo	Taglio banc.	Vrd banc.	Largh.	Nerva.	Vrzd	Area	Dist.
	Kg	Vrcd	Kg	Kg					
Appoggio sx	1994.24	13330.75	1877.49	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1962.49	13330.75	-1845.74	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)1/3 / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrzd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.047cm - Momento di inerzia = 39438cm4

Rapporto snellezza L/h = 10.4 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 2.43m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm3 - W superiore = 40.485cm3

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 1230.09kgm - Asse neutro = 4.71cm

Compressione calc. = 17.67kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 1094.84kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 1067.00kgm - Asse neutro = 4.71cm

Compressione calc. = 15.33kg/cmq

Trazione acciaio = 949.68kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 1001.77kgm - Asse neutro = 4.71cm

Compressione calc. = 14.39kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 891.62kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11814.14cm3 - Momento di fessurazione = W*fcfm = 3414.16kgm

Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm

Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq

Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 32

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.73m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza	Momento	F. Area	inf. Area	sup. Momento	R. Mr/Mf	Epsilon	Epsilon
	m	Kgm/int	cmq	cmq	Kgm/int		calc %	acc %

Relazione di calcolo

Asse app. sx	0.00	-956.61	2.26	2.26	2451.32	2.56	3.5	62.3
Filo all. sx	0.27	982.53	9.19	5.27	7315.89	7.45	3.5	30.9
Max. campata	2.36	4621.46	6.93	3.01	6307.63	1.36	3.5	47.0
Filo all. dx	4.21	1746.26	10.32	5.27	8141.10	4.66	3.5	27.2
Asse app. dx	4.73	-956.61	3.39	2.26	2613.83	2.73	3.5	51.1

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo		Vrd filo		Taglio banc.	Vrd banc.		Largh.	Nerva.	Vrsd	Area	Dist.
	Kg	Kg	Kg	Kg		cm	cm					

Appoggio sx	3598.63	13330.75	3481.88	4443.58	0.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00
		186679.60		62226.54								
Appoggio dx	-3210.80	13330.75	-3094.05	4584.16	0.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00
		186679.60		62226.54								

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.347cm - Momento di inerzia = 52558cm⁴

Rapporto snellezza L/h = 18.2 < 38.4 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 4.14m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 3776.93kgm - Asse neutro = 5.46cm

Compressione calc. = 47.73kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 2444.84kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 3274.22kgm - Asse neutro = 5.46cm

Compressione calc. = 41.38kg/cmq

Trazione acciaio = 2119.44kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 3073.14kgm - Asse neutro = 5.46cm

Compressione calc. = 38.84kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1989.28kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11964.25cm³ - Momento di fessurazione = W*fcfm = 3457.54kgm

Diametro medio tondini = 10.50mm - Ricoprimento armatura c = 13.56mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2238.10kg/cmq

Area efficace Ac,eff = 564.26cmq - Area acciaio teso = 6.93cmq - Rapporto As/Aeff Ro = 0.012

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Solai a quota 7.26

Schema 1

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Relazione di calcolo

Luce cal = 3.80m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-105.90	2.26	2.26	2451.32	23.15	3.5	62.3
Filo all. sx	0.22	297.82	7.24	5.27	5869.34	19.71	3.5	39.8
Max. campata	1.90	1398.44	4.98	3.01	4592.80	3.28	3.5	65.9
Filo all. dx	3.53	358.29	7.24	5.27	5869.34	16.38	3.5	39.8
Asse app. dx	3.80	-105.90	2.26	2.26	2451.32	23.15	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	1364.51	13330.75	1309.84	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1328.04	13330.75	-1273.37	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * ro1 * fck)^{1/3} / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.051cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 14.6 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.51m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe
Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 1305.43kgm - Asse neutro = 4.71cm

Compressione calc. = 18.75kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 1161.89kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 1251.36kgm - Asse neutro = 4.71cm

Compressione calc. = 17.97kg/cmq

Trazione acciaio = 1113.76kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 1229.73kgm - Asse neutro = 4.71cm

Compressione calc. = 17.66kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1094.51kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm

Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm

Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq

Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 2

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Relazione di calcolo

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.33m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-39.75	2.26	2.26	2451.32	61.66	3.5	62.3
Filo all. sx	0.29	218.05	7.24	5.27	5869.34	26.92	3.5	39.8
Max. campata	1.16	515.99	4.98	3.01	4592.80	8.90	3.5	65.9
Filo all. dx	2.06	204.04	7.24	5.27	5869.34	28.77	3.5	39.8
Asse app. dx	2.33	-39.75	2.26	2.26	2451.32	61.66	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	735.23	13330.75 186679.60	680.55	4443.58 62226.54	0.00	40.00	0.00	0.00	0.00
Appoggio dx	-751.19	13330.75 186679.60	-696.51	4443.58 62226.54	0.00	40.00	0.00	0.00	0.00

Vrd = 0,18 * k * (100 * ro1 * fck)^(1/3) / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.010cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 8.9 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 1.96m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fctm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 481.08kgm - Asse neutro = 4.71cm

Compressione calc. = 6.91kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 428.18kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 460.78kgm - Asse neutro = 4.71cm

Compressione calc. = 6.62kg/cmq

Trazione acciaio = 410.12kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 452.66kgm - Asse neutro = 4.71cm

Compressione calc. = 6.50kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 402.89kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fctm = 3414.16kgm

Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm

Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq

Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 3

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Relazione di calcolo

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 1.69m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-20.87	2.26	2.26	2451.32	117.48	3.5	62.3
Filo all. sx	0.27	138.72	7.24	5.27	5869.34	42.31	3.5	39.8
Max. campata	0.84	268.77	4.98	3.01	4592.80	17.09	3.5	65.9
Filo all. dx	1.47	118.50	7.24	5.27	5869.34	49.53	3.5	39.8
Asse app. dx	1.69	-20.87	2.26	2.26	2451.32	117.48	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	505.00	13330.75 186679.60	450.33	4443.58 62226.54	0.00	40.00	0.00	0.00	0.00
Appoggio dx	-538.21	13330.75 186679.60	-483.53	4443.58 62226.54	0.00	40.00	0.00	0.00	0.00

Vrd = 0,18 * k * (100 * ro1 * fck)^{1/3} / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.003cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 6.5 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 1.40m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 250.44kgm - Asse neutro = 4.71cm

Compressione calc. = 3.60kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 222.90kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 239.79kgm - Asse neutro = 4.71cm

Compressione calc. = 3.44kg/cmq

Trazione acciaio = 213.42kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 235.52kgm - Asse neutro = 4.71cm

Compressione calc. = 3.38kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 209.63kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm

Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm

Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq

Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 4

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Relazione di calcolo

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 3.90m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-111.61	2.26	2.26	2451.32	21.96	3.5	62.3
Filo all. sx	0.27	362.05	8.78	5.27	7015.25	19.38	3.5	32.4
Max. campata	1.95	1426.64	6.52	3.01	5950.93	4.17	3.5	50.1
Filo all. dx	3.73	149.44	8.78	5.27	7015.25	46.94	3.5	32.4
Asse app. dx	3.90	-111.61	2.26	2.26	2451.32	21.96	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80 * Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrkd Kg	Taglio banc. Kg	Vrd banc. Vrkd Kg	Largh. cm	Nerva. cm	Vrds Kg	Area cmq	Dist. cm
Appoggio sx	1343.47	13330.75 186679.60	1288.80	4584.16 62226.54	0.00	40.00	0.00	0.00	0.00
Appoggio dx	-1467.20	13330.75 186679.60	-1412.52	4584.16 62226.54	0.00	40.00	0.00	0.00	0.00

Vrd = 0,18 * k * (100 * rol * fck) / 1/3 / gammaC >= (v min) * bw * d

Vrkd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrds = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.036cm - Momento di inerzia = 49895cm⁴

Rapporto snellezza L/h = 15.0 < 65.1 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.66m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 1328.61kgm - Asse neutro = 5.31cm

Compressione calc. = 17.17kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 912.04kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 1271.62kgm - Asse neutro = 5.31cm

Compressione calc. = 16.44kg/cmq

Trazione acciaio = 872.91kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 1248.82kgm - Asse neutro = 5.31cm

Compressione calc. = 16.14kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 857.26kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*fcfm = 3448.45kgm

Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cmq

Area efficace Ac,eff = 562.02cmq - Area acciaio teso = 6.52cmq - Rapporto As/Aeff Ro = 0.012

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 5

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Relazione di calcolo

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.03m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-119.00	2.26	2.26	2451.32	20.60	3.5	62.3
Filo all. sx	0.22	317.41	8.78	5.27	7015.25	22.10	3.5	32.4
Max. campata	2.01	1570.50	6.52	3.01	5950.93	3.79	3.5	50.1
Filo all. dx	3.73	415.45	8.78	5.27	7015.25	16.89	3.5	32.4
Asse app. dx	4.03	-119.00	2.26	2.26	2451.32	20.60	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	1452.89	13330.75 186679.60	1398.22	4584.16 62226.54	0.00	40.00	0.00	0.00	0.00
Appoggio dx	-1397.19	13330.75 186679.60	-1342.51	4584.16 62226.54	0.00	40.00	0.00	0.00	0.00

Vrd = 0,18 * k * (100 * rol * fck)/3 / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.051cm - Momento di inerzia = 49895cm4

Rapporto snellezza L/h = 15.5 < 65.1 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.71m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm3 - W superiore = 40.485cm3

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 1465.98kgm - Asse neutro = 5.31cm

Compressione calc. = 18.95kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 1006.33kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 1405.21kgm - Asse neutro = 5.31cm

Compressione calc. = 18.16kg/cmq

Trazione acciaio = 964.62kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 1380.91kgm - Asse neutro = 5.31cm

Compressione calc. = 17.85kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 947.93kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11932.80cm3 - Momento di fessurazione = W*fcfm = 3448.45kgm

Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cmq

Area efficace Ac,eff = 562.02cmq - Area acciaio teso = 6.52cmq - Rapporto As/Aeff Ro = 0.012

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 6

CAMPATA 1

Relazione di calcolo

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 5.20m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-198.28	2.26	2.26	2451.32	12.36	3.5	62.3
Filo all. sx	0.27	504.55	9.60	5.27	7615.13	15.09	3.5	29.5
Max. campata	2.60	2625.21	7.34	3.01	6662.83	2.54	3.5	44.3
Filo all. dx	4.93	504.55	9.60	5.27	7615.13	15.09	3.5	29.5
Asse app. dx	5.20	-198.28	2.26	2.26	2451.32	12.36	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	1873.03	13330.75 186679.60	1818.35	4443.58 62226.54	0.00	40.00	0.00	0.00	0.00
Appoggio dx	-1873.03	13330.75 186679.60	-1818.35	4443.58 62226.54	0.00	40.00	0.00	0.00	0.00

Vrd = 0,18 * k * (100 * rol * fck) / 3 / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.119cm - Momento di inerzia = 55176cm⁴

Rapporto snellezza L/h = 20.0 < 70.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 4.86m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe
Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 2451.07kgm - Asse neutro = 5.61cm

Compressione calc. = 30.34kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 1501.09kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 2349.82kgm - Asse neutro = 5.61cm

Compressione calc. = 29.09kg/cmq

Trazione acciaio = 1439.09kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 2309.32kgm - Asse neutro = 5.61cm

Compressione calc. = 28.58kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1414.29kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11995.70cm³ - Momento di fessurazione = W*fcfm = 3466.63kgm

Diametro medio tondini = 10.86mm - Ricoprimento armatura c = 13.44mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2123.05kg/cmq

Area efficace Ac,eff = 566.25cmq - Area acciaio teso = 7.34cmq - Rapporto As/Aeff Ro = 0.013

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Relazione di calcolo

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 5.20m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-198.31	2.26	2.26	2451.32	12.36	3.5	62.3
Filo all. sx	0.27	504.60	9.60	5.27	7615.13	15.09	3.5	29.5
Max. campata	2.60	2625.66	7.34	3.01	6662.83	2.54	3.5	44.3
Filo all. dx	4.93	504.60	9.60	5.27	7615.13	15.09	3.5	29.5
Asse app. dx	5.20	-198.31	2.26	2.26	2451.32	12.36	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrkd Kg	Taglio banc. Kg	Vrd banc. Vrkd Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	1873.21	13330.75 186679.60	1818.53	4443.58 62226.54	0.00	40.00	0.00	0.00	0.00
Appoggio dx	-1873.21	13330.75 186679.60	-1818.53	4443.58 62226.54	0.00	40.00	0.00	0.00	0.00

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d

Vrkd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.119cm - Momento di inerzia = 55176cm⁴

Rapporto snellezza L/h = 20.0 < 70.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 4.86m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe
Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 2451.49kgm - Asse neutro = 5.61cm

Compressione calc. = 30.34kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 1501.35kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 2350.23kgm - Asse neutro = 5.61cm

Compressione calc. = 29.09kg/cmq

Trazione acciaio = 1439.34kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 2309.73kgm - Asse neutro = 5.61cm

Compressione calc. = 28.59kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1414.53kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11995.70cm³ - Momento di fessurazione = W*fcfm = 3466.63kgm

Diametro medio tondini = 10.86mm - Ricoprimento armatura c = 13.44mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2123.05kg/cmq

Area efficace Ac,eff = 566.25cmq - Area acciaio teso = 7.34cmq - Rapporto As/Aeff Ro = 0.013

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 8

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.42m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-417.02	2.26	2.26	2451.32	5.88	3.5	62.3
Filo all. sx	0.22	513.78	8.78	5.27	7015.25	13.65	3.5	32.4
Max. campata	2.21	2749.49	6.52	3.01	5950.93	2.16	3.5	50.1
Filo all. dx	4.12	671.87	8.78	5.27	7015.25	10.44	3.5	32.4
Asse app. dx	4.42	-417.02	2.26	2.26	2451.32	5.88	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	2328.14	13330.75	2248.94	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2245.29	13330.75	-2166.09	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck) / 3 / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.150cm - Momento di inerzia = 49895cm⁴

Rapporto snellezza L/h = 17.0 < 65.1 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 4.10m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 2412.71kgm - Asse neutro = 5.31cm

Compressione calc. = 31.19kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 1656.22kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 2225.28kgm - Asse neutro = 5.31cm

Compressione calc. = 28.76kg/cmq

Trazione acciaio = 1527.56kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 2178.43kgm - Asse neutro = 5.31cm

Compressione calc. = 28.16kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1495.40kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*fcfm = 3448.45kgm

Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cmq

Area efficace Ac,eff = 562.02cmq - Area acciaio teso = 6.52cmq - Rapporto As/Aeff Ro = 0.012

COMBINAZIONI FREQUENTI

Combinazione non fessurata

Relazione di calcolo

COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 9

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.66m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-151.29	2.26	2.26	2451.32	16.20	3.5	62.3
Filo all. sx	0.22	295.37	7.24	5.27	5869.34	19.87	3.5	39.8
Max. campata	1.33	990.98	4.98	3.01	4592.80	4.63	3.5	65.9
Filo all. dx	2.36	381.03	7.24	5.27	5869.34	15.40	3.5	39.8
Asse app. dx	2.66	-151.29	2.26	2.26	2451.32	16.20	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	1332.82	13330.75	1253.61	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1252.42	13330.75	-1173.22	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^(1/3) / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.028cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 10.2 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 2.34m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 868.80kgm - Asse neutro = 4.71cm

Compressione calc. = 12.48kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 773.27kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 800.80kgm - Asse neutro = 4.71cm

Compressione calc. = 11.50kg/cmq

Trazione acciaio = 712.75kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 783.80kgm - Asse neutro = 4.71cm

Compressione calc. = 11.26kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 697.62kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm

Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm

Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq

Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009

Relazione di calcolo

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 10

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.94m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-184.53	2.26	2.26	2451.32	13.28	3.5	62.3
Filo all. sx	0.27	395.89	7.24	5.27	5869.34	14.83	3.5	39.8
Max. campata	1.47	1212.75	4.98	3.01	4592.80	3.79	3.5	65.9
Filo all. dx	2.72	328.93	7.24	5.27	5869.34	17.84	3.5	39.8
Asse app. dx	2.94	-184.53	2.26	2.26	2451.32	13.28	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	1438.22	13330.75	1359.01	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1491.44	13330.75	-1412.23	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck) / 3 / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.040cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 11.3 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 2.65m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 1063.73kgm - Asse neutro = 4.71cm

Compressione calc. = 15.28kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 946.77kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 980.79kgm - Asse neutro = 4.71cm

Compressione calc. = 14.09kg/cmq

Trazione acciaio = 872.95kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 960.06kgm - Asse neutro = 4.71cm

Compressione calc. = 13.79kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 854.50kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm

Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm

Relazione di calcolo

Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq
 Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 11

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 3.43m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-251.41	2.26	2.26	2451.32	9.75	3.5	62.3
Filo all. sx	0.22	389.07	7.24	5.27	5869.34	15.09	3.5	39.8
Max. campata	1.72	1655.43	4.98	3.01	4592.80	2.77	3.5	65.9
Filo all. dx	3.16	469.48	7.24	5.27	5869.34	12.50	3.5	39.8
Asse app. dx	3.43	-251.41	2.26	2.26	2451.32	9.75	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	1769.77	13330.75 186679.60	1690.57	4443.58 62226.54	0.00	40.00	0.00	0.00	0.00
Appoggio dx	-1716.07	13330.75 186679.60	-1636.87	4443.58 62226.54	0.00	40.00	0.00	0.00	0.00

Vrd = 0,18 * k * (100 * rol * fck)^(1/3) / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.072cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 13.2 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.14m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 1452.40kgm - Asse neutro = 4.71cm

Compressione calc. = 20.86kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 1292.70kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 1339.40kgm - Asse neutro = 4.71cm

Compressione calc. = 19.24kg/cmq

Trazione acciaio = 1192.13kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 1311.16kgm - Asse neutro = 4.71cm

Compressione calc. = 18.83kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1166.99kg/cmq

APERTURA DELLE FESSURE

Relazione di calcolo

Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*f_{cfm} = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²
 Area efficace A_{c,eff} = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto A_s/A_{eff} R_o = 0.009
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 12

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cm² - F_{cd} = 164.62 Kg/cm²
 Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 3.66m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-286.32	2.26	2.26	2451.32	8.56	3.5	62.3
Filo all. sx	0.22	417.74	7.24	5.27	5869.34	14.05	3.5	39.8
Max. campata	1.83	1886.50	4.98	3.01	4592.80	2.43	3.5	65.9
Filo all. dx	3.39	503.59	7.24	5.27	5869.34	11.65	3.5	39.8
Asse app. dx	3.66	-286.32	2.26	2.26	2451.32	8.56	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vrd filo Vr _{cd} Kg	Taglio banc. Kg	Vrd banc. Vr _{cd} Kg	Largh. cm	Nerva. cm	Vr _{sd} Kg	Area cm ²	Dist. cm
Appoggio sx	1900.24	13330.75	1821.03	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1846.35	13330.75	-1767.15	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * r_{ol} * f_{ck})^{1/3} / gamma_C >= (v_{min}) * b_w * d

Vr_{cd} = 0,9 * d * b_w * f'_{cd} * (ctg alfa + 1) / (1 + 1)

Vr_{sd} = 0,9 * d * (A_{sw} / s) * f_{yd} * (ctg alfa + 1) sin alfa

Freccia solaio = 0.092cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 14.1 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.37m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo R_{ck} = 350 - Resistenza cilindrica f_{ck} = 290.50kg/cm²

Resistenza a trazione f_{ctm} = 28.90kg/cm² - Resistenza a trazione-flessione f_{cfm} = 34.68kg/cm²

Coefficiente beta_l = 1 - Coefficiente beta_l = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 1655.28kgm - Asse neutro = 4.71cm

Compressione calc. = 23.78kg/cm² - Compressione limite calc. = 174.30kg/cm²

Trazione acciaio = 1473.27kg/cm² - Trazione limite acciaio = 3600.00kg/cm²

COMBINAZIONI FREQUENTI

Momento soll. = 1526.59kgm - Asse neutro = 4.71cm

Compressione calc. = 21.93kg/cm²

Trazione acciaio = 1358.74kg/cm²

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 1494.42kgm - Asse neutro = 4.71cm

Compressione calc. = 21.47kg/cm² - Compressione limite calc. = 130.73kg/cm²

Relazione di calcolo

Trazione acciaio = 1330.10kg/cm²
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*f_{cfm} = 3414.16kgm
 Diametro medio toncini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²
 Area efficace A_{c,eff} = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto A_s/A_{eff} R_o = 0.009
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 13

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cm² - F_{cd} = 164.62 Kg/cm²
 Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.03m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-347.17	2.26	2.26	2451.32	7.06	3.5	62.3
Filo all. sx	0.27	558.11	8.78	5.27	7015.25	12.57	3.5	32.4
Max. campata	2.02	2288.03	6.52	3.01	5950.93	2.60	3.5	50.1
Filo all. dx	3.76	558.12	8.78	5.27	7015.25	12.57	3.5	32.4
Asse app. dx	4.03	-347.17	2.26	2.26	2451.32	7.06	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vrd filo Vr _{cd} Kg	Taglio banc. Kg	Vrd banc. Vr _{cd} Kg	Largh. cm	Nerva. cm	Vr _{sd} Kg	Area cm ²	Dist. cm
Appoggio sx	2054.52	13330.75	1975.32	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2054.52	13330.75	-1975.31	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * r_{ol} * f_{ck})^{1/3} / gamma_C >= (v min) * b_w * d

Vr_{cd} = 0,9 * d * b_w * f'_{cd} * (ctg alfa + 1) / (1 + 1)

Vr_{sd} = 0,9 * d * (A_{sw} / s) * f_{yd} * (ctg alfa + 1) sin alfa

Freccia solaio = 0.108cm - Momento di inerzia = 49895cm⁴

Rapporto snellezza L/h = 15.5 < 65.1 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.69m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo R_{ck} = 350 - Resistenza cilindrica f_{ck} = 290.50kg/cm²

Resistenza a trazione f_{ctm} = 28.90kg/cm² - Resistenza a trazione-flessione f_{cfm} = 34.68kg/cm²

Coefficiente beta_l = 1 - Coefficiente beta₁ = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 2007.65kgm - Asse neutro = 5.31cm

Compressione calc. = 25.95kg/cm² - Compressione limite calc. = 174.30kg/cm²

Trazione acciaio = 1378.17kg/cm² - Trazione limite acciaio = 3600.00kg/cm²

COMBINAZIONI FREQUENTI

Momento soll. = 1851.62kgm - Asse neutro = 5.31cm

Compressione calc. = 23.93kg/cm²

Trazione acciaio = 1271.06kg/cm²

COMBINAZIONI QUASI PERMANENTI

Relazione di calcolo

Momento soll. = 1812.61kgm - Asse neutro = 5.31cm
 Compressione calc. = 23.43kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 1244.28kg/cm²
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*f_{cfm} = 3448.45kgm
 Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cm²
 Area efficace A_{c,eff} = 562.02cm² - Area acciaio teso = 6.52cm² - Rapporto A_s/A_{eff} R_o = 0.012
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 14

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cm² - F_{cd} = 164.62 Kg/cm²
 Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm
 Luce cal = 4.02m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-345.12	2.26	2.26	2451.32	7.10	3.5	62.3
Filo all. sx	0.27	502.74	8.78	5.27	7015.25	13.95	3.5	32.4
Max. campata	1.81	1891.65	6.52	3.01	5950.93	3.15	3.5	50.1
Filo all. dx	3.75	-397.06	6.52	5.27	4963.96	12.50	3.5	52.0
Asse app. dx	4.02	-1022.03	0.00	2.26	2089.82	2.04	2.2	67.5

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cm ²	Dist. cm
Appoggio sx	1849.29	13330.75	1770.08	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2302.03	14512.01	-2222.82	4837.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					

Vrd = 0,18 * k * (100 * r_{o1} * f_{ck})^{1/3} / gamma_C >= (v min) * b_w * d
 Vrcd = 0,9 * d * b_w * f'_{cd} * (ctg alfa + 1) / (1 + 1)
 Vrsd = 0,9 * d * (A_{sw} / s) * f_{yd} * (ctg alfa + 1) sin alfa
 Freccia solaio = 0.064cm - Momento di inerzia = 49895cm⁴
 Rapporto snellezza L/h = 15.5 < 84.6 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.68m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo R_{ck} = 350 - Resistenza cilindrica f_{ck} = 290.50kg/cm²
 Resistenza a trazione f_{ctm} = 28.90kg/cm² - Resistenza a trazione-flessione f_{cfm} = 34.68kg/cm²
 Coefficiente beta_l = 1 - Coefficiente beta_f = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 1659.59kgm - Asse neutro = 5.31cm
 Compressione calc. = 21.45kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 1139.24kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
 Momento soll. = 1544.38kgm - Asse neutro = 5.31cm
 Compressione calc. = 19.96kg/cm²

Relazione di calcolo

Trazione acciaio = 1060.15kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 1515.58kgm - Asse neutro = 5.31cm

Compressione calc. = 19.59kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1040.38kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*f_{cfm} = 3448.45kgm

Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cmq

Area efficace A_{c,eff} = 562.02cmq - Area acciaio teso = 6.52cmq - Rapporto A_s/A_{eff} R_o = 0.012

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

CAMPATA 2

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cmq - F_{cd} = 164.62 Kg/cmq

Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.22m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-1022.03	0.00	2.26	2089.82	2.04	2.2	67.5
Filo all. sx	0.27	-674.62	4.98	5.27	4927.75	7.30	3.5	54.4
Max. campata	1.11	382.18	4.98	3.01	4592.80	12.02	3.5	65.9
Filo all. dx	1.95	-660.51	4.98	5.27	4927.75	7.46	3.5	54.4
Asse app. dx	2.22	-1005.79	0.00	2.26	2089.82	2.08	2.2	67.5

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrds Kg	Area cmq	Dist. cm
Appoggio sx	1411.18	14512.01	1331.98	4837.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					
Appoggio dx	-1401.44	14512.01	-1322.24	4837.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					

Vrd = 0,18 * k * (100 * r_{o1} * f_{ck})^{1/3} / gamma_C >= (v_{min}) * b_w * d

Vrcd = 0,9 * d * b_w * f'_{cd} * (ctg alfa + 1) / (1 + 1)

Vrds = 0,9 * d * (A_{sw} / s) * f_{yd} * (ctg alfa + 1) sin alfa

Freccia solaio = -0.028cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 8.5 < 80.7 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 1.88m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo R_{ck} = 350 - Resistenza cilindrica f_{ck} = 290.50kg/cmq

Resistenza a trazione f_{ctm} = 28.90kg/cmq - Resistenza a trazione-flessione f_{cfm} = 34.68kg/cmq

Coefficiente beta₁ = 1 - Coefficiente beta₁ = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 0.00kgm - Asse neutro = 4.71cm

Compressione calc. = 0.00kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 0.00kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 0.00kgm - Asse neutro = 4.71cm

Compressione calc. = 0.00kg/cmq

Trazione acciaio = 0.00kg/cmq

Relazione di calcolo

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 0.00kgm - Asse neutro = 4.71cm
 Compressione calc. = 0.00kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 0.00kg/cmq
 MOMENTO NEGATIVO IN CAMPATA COMBINAZIONI FREQUENTI
 MOMENTO NEGATIVO IN CAMPATA COMBINAZIONI QUASI PERMANENTI
 FESSURAZIONE NON CALCOLATA
 CAMPATA 3
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 3.99m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-1005.79	0.00	2.26	2089.82	2.08	2.2	67.5
Filo all. sx	0.27	-386.37	6.52	5.27	4963.96	12.85	3.5	52.0
Max. campata	2.19	1863.01	6.52	3.01	5950.93	3.19	3.5	50.1
Filo all. dx	3.72	498.61	8.78	5.27	7015.25	14.07	3.5	32.4
Asse app. dx	3.99	-339.37	2.26	2.26	2451.32	7.22	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	2281.07	14512.01	2201.87	4837.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					
Appoggio dx	-1833.64	13330.75	-1754.43	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck) / 1/3 / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.063cm - Momento di inerzia = 49895cm⁴

Rapporto snellezza L/h = 15.3 < 84.6 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.65m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 1633.37kgm - Asse neutro = 5.31cm

Compressione calc. = 21.11kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 1121.24kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 1519.61kgm - Asse neutro = 5.31cm

Compressione calc. = 19.64kg/cmq

Trazione acciaio = 1043.15kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 1491.17kgm - Asse neutro = 5.31cm

Compressione calc. = 19.27kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1023.62kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 12763.95cm³ - Momento di fessurazione = W*fcfm = 3688.65kgm

Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm

Relazione di calcolo

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2532.10kg/cmq
 Area efficace Ac,eff = 562.02cmq - Area acciaio teso = 6.52cmq - Rapporto As/Aeff Ro = 0.012
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 15

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 3.99m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-339.28	2.26	2.26	2451.32	7.23	3.5	62.3
Filo all. sx	0.22	458.80	8.78	5.27	7015.25	15.29	3.5	32.4
Max. campata	1.99	2240.70	6.52	3.01	5950.93	2.66	3.5	50.1
Filo all. dx	3.77	458.80	8.78	5.27	7015.25	15.29	3.5	32.4
Asse app. dx	3.99	-339.28	2.26	2.26	2451.32	7.23	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	2085.02	13330.75 186679.60	2005.81	4584.16 62226.54	0.00	40.00	0.00	0.00	0.00
Appoggio dx	-2085.02	13330.75 186679.60	-2005.82	4584.16 62226.54	0.00	40.00	0.00	0.00	0.00

Vrd = 0,18 * k * (100 * rol * fck)1/3 / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.097cm - Momento di inerzia = 49895cm4

Rapporto snellezza L/h = 15.3 < 65.1 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.75m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm3 - W superiore = 40.485cm3

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 1966.70kgm - Asse neutro = 5.31cm

Compressione calc. = 25.42kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 1350.05kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 1814.21kgm - Asse neutro = 5.31cm

Compressione calc. = 23.45kg/cmq

Trazione acciaio = 1245.38kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 1776.09kgm - Asse neutro = 5.31cm

Compressione calc. = 22.96kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1219.21kg/cmq

APERTURA DELLE FESSURE

Relazione di calcolo

Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*f_{cfm} = 3448.45kgm
 Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cm²
 Area efficace A_{c,eff} = 562.02cm² - Area acciaio teso = 6.52cm² - Rapporto A_s/A_{eff} R_o = 0.012
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 16

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cm² - F_{cd} = 164.62 Kg/cm²
 Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 1.81m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-70.29	2.26	2.26	2451.32	34.88	3.5	62.3
Filo all. sx	0.22	191.06	7.24	5.27	5869.34	30.72	3.5	39.8
Max. campata	0.91	459.55	4.98	3.01	4592.80	9.99	3.5	65.9
Filo all. dx	1.59	191.06	7.24	5.27	5869.34	30.72	3.5	39.8
Asse app. dx	1.81	-70.29	2.26	2.26	2451.32	34.88	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vrd filo Vr _{cd} Kg	Taglio banc. Kg	Vrd banc. Vr _{cd} Kg	Largh. cm	Nerva. cm	Vr _{sd} Kg	Area cm ²	Dist. cm
Appoggio sx	856.53	13330.75	777.33	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-856.53	13330.75	-777.33	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * r_{ol} * f_{ck})^{1/3} / gamma_C >= (v_{min}) * b_w * d

Vr_{cd} = 0,9 * d * b_w * f'_{cd} * (ctg alfa + 1) / (1 + 1)

Vr_{sd} = 0,9 * d * (A_{sw} / s) * f_{yd} * (ctg alfa + 1) sin alfa

Freccia solaio = 0.006cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 7.0 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 1.57m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo R_{ck} = 350 - Resistenza cilindrica f_{ck} = 290.50kg/cm²

Resistenza a trazione f_{ctm} = 28.90kg/cm² - Resistenza a trazione-flessione f_{cfm} = 34.68kg/cm²

Coefficiente beta_l = 1 - Coefficiente beta₁ = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 402.79kgm - Asse neutro = 4.71cm

Compressione calc. = 5.79kg/cm² - Compressione limite calc. = 174.30kg/cm²

Trazione acciaio = 358.50kg/cm² - Trazione limite acciaio = 3600.00kg/cm²

COMBINAZIONI FREQUENTI

Momento soll. = 371.20kgm - Asse neutro = 4.71cm

Compressione calc. = 5.33kg/cm²

Trazione acciaio = 330.38kg/cm²

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 363.30kgm - Asse neutro = 4.71cm

Compressione calc. = 5.22kg/cm² - Compressione limite calc. = 130.73kg/cm²

Relazione di calcolo

Trazione acciaio = 323.35kg/cmq
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*f_{cfm} = 3414.16kgm
 Diametro medio toncini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq
 Area efficace A_{c,eff} = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto A_s/A_{eff} R_o = 0.009
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 17

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cm² - F_{cd} = 164.62 Kg/cm²
 Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 5.56m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-661.42	2.26	2.26	2451.32	3.71	3.5	62.3
Filo all. sx	0.27	794.26	10.54	5.27	8300.30	10.45	3.5	26.6
Max. campata	2.78	4369.50	8.28	3.01	7476.74	1.71	3.5	39.0
Filo all. dx	5.34	654.27	10.54	5.27	8300.30	12.69	3.5	26.6
Asse app. dx	5.56	-661.42	2.26	2.26	2451.32	3.71	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vrd filo Vr _{cd} Kg	Taglio banc. Kg	Vrd banc. Vr _{cd} Kg	Largh. cm	Nerva. cm	Vr _{sd} Kg	Area cmq	Dist. cm
Appoggio sx	2922.73	13330.75	2843.53	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2977.54	13330.75	-2898.33	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vr_d = 0,18 * k * (100 * r_{ol} * f_{ck})^{1/3} / gamma_C >= (v min) * b_w * d

Vr_{cd} = 0,9 * d * b_w * f'_{cd} * (ctg alfa + 1) / (1 + 1)

Vr_{sd} = 0,9 * d * (A_{sw} / s) * f_{yd} * (ctg alfa + 1) sin alfa

Freccia solaio = 0.293cm - Momento di inerzia = 61046cm⁴

Rapporto snellezza L/h = 21.4 < 63.5 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 5.27m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo R_{ck} = 350 - Resistenza cilindrica f_{ck} = 290.50kg/cm²

Resistenza a trazione f_{ctm} = 28.90kg/cm² - Resistenza a trazione-flessione f_{cfm} = 34.68kg/cm²

Coefficiente beta_l = 1 - Coefficiente beta_{l1} = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 3835.34kgm - Asse neutro = 5.93cm

Compressione calc. = 45.51kg/cm² - Compressione limite calc. = 174.30kg/cm²

Trazione acciaio = 2089.45kg/cm² - Trazione limite acciaio = 3600.00kg/cm²

COMBINAZIONI FREQUENTI

Momento soll. = 3538.08kgm - Asse neutro = 5.93cm

Compressione calc. = 41.98kg/cm²

Trazione acciaio = 1927.51kg/cm²

COMBINAZIONI QUASI PERMANENTI

Relazione di calcolo

Momento soll. = 3463.76kgm - Asse neutro = 5.93cm
 Compressione calc. = 41.10kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 1887.02kg/cmq
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 12068.22cm³ - Momento di fessurazione = W*f_{cfm} = 3487.59kgm
 Diametro medio tondini = 11.71mm - Ricoprimento armatura c = 13.15mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 1900.00kg/cmq
 Area efficace Ac,eff = 570.09cmq - Area acciaio teso = 8.28cmq - Rapporto As/Aeff Ro = 0.015
 COMBINAZIONI FREQUENTI
 Distanza media tra le fessure in mm = 201.70mm
 Epsilon_{sm} = 0.00047 - Epsilon_{sm,n} = 0.00037
 Tensione acciaio = 1927.51kg/cmq
 Apertura limite delle fessure mm = 0.40mm
 Ampiezza fessura in mm Wm = 0.10mm
 Ampiezza fessura in mm Wk = 0.16mm
 Combinazione fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 18

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cmq - F_{cd} = 164.62 Kg/cmq
 Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.23m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-382.05	2.26	2.26	2451.32	6.42	3.5	62.3
Filo all. sx	0.27	587.99	8.78	5.27	7015.25	11.93	3.5	32.4
Max. campata	2.11	2518.97	6.52	3.01	5950.93	2.36	3.5	50.1
Filo all. dx	3.96	587.99	8.78	5.27	7015.25	11.93	3.5	32.4
Asse app. dx	4.23	-382.05	2.26	2.26	2451.32	6.42	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	2166.34	13330.75	2087.14	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2166.34	13330.75	-2087.14	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * f_{ck})^{1/3} / gamma_C >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'_{cd} * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * f_{yd} * (ctg alfa + 1) sin alfa

Freccia solaio = 0.129cm - Momento di inerzia = 49895cm⁴

Rapporto snellezza L/h = 16.3 < 65.1 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.89m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo R_{ck} = 350 - Resistenza cilindrica f_{ck} = 290.50kg/cmq

Resistenza a trazione f_{ctm} = 28.90kg/cmq - Resistenza a trazione-flessione f_{cfm} = 34.68kg/cmq

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Relazione di calcolo

Momento soll. = 2210.43kgm - Asse neutro = 5.31cm
 Compressione calc. = 28.57kg/cmq - Compressione limite calc. = 174.30kg/cmq
 Trazione acciaio = 1517.36kg/cmq - Trazione limite acciaio = 3600.00kg/cmq
COMBINAZIONI FREQUENTI
 Momento soll. = 2038.72kgm - Asse neutro = 5.31cm
 Compressione calc. = 26.35kg/cmq
 Trazione acciaio = 1399.49kg/cmq
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 1995.79kgm - Asse neutro = 5.31cm
 Compressione calc. = 25.80kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 1370.03kg/cmq
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*f_{cfm} = 3448.45kgm
 Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cmq
 Area efficace A_{c,eff} = 562.02cm² - Area acciaio teso = 6.52cm² - Rapporto A_s/A_{eff} R_o = 0.012
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 19

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cmq - F_{cd} = 164.62 Kg/cmq
 Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm
 Luce cal = 4.14m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-365.47	2.26	2.26	2451.32	6.71	3.5	62.3
Filo all. sx	0.27	573.93	8.78	5.27	7015.25	12.22	3.5	32.4
Max. campata	2.07	2409.14	6.52	3.01	5950.93	2.47	3.5	50.1
Filo all. dx	3.87	573.94	8.78	5.27	7015.25	12.22	3.5	32.4
Asse app. dx	4.14	-365.47	2.26	2.26	2451.32	6.71	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vrd filo Vr _{cd} Kg	Taglio banc. Kg	Vrd banc. Vr _{cd} Kg	Largh. cm	Nerva. cm	Vr _{sd} Kg	Area cmq	Dist. cm
Appoggio sx	2113.83	13330.75	2034.63	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2113.83	13330.75	-2034.63	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * r_{o1} * f_{ck})^{1/3} / gamma_C >= (v_{min}) * b_w * d
 Vr_{cd} = 0,9 * d * b_w * f'_{cd} * (ctg alfa + 1) / (1 + 1)
 Vr_{sd} = 0,9 * d * (A_{sw} / s) * f_{yd} * (ctg alfa + 1) sin alfa
 Freccia solaio = 0.119cm - Momento di inerzia = 49895cm⁴
 Rapporto snellezza L/h = 15.9 < 65.1 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
VERIFICA TRALICCIO
 Lunghezza traliccio = 3.80m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo R_{ck} = 350 - Resistenza cilindrica f_{ck} = 290.50kg/cmq
 Resistenza a trazione f_{ctm} = 28.90kg/cmq - Resistenza a trazione-flessione f_{cfm} = 34.68kg/cmq

Relazione di calcolo

Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 2114.00kgm - Asse neutro = 5.31cm

Compressione calc. = 27.32kg/cm² - Compressione limite calc. = 174.30kg/cm²

Trazione acciaio = 1451.17kg/cm² - Trazione limite acciaio = 3600.00kg/cm²

COMBINAZIONI FREQUENTI

Momento soll. = 1949.74kgm - Asse neutro = 5.31cm

Compressione calc. = 25.20kg/cm²

Trazione acciaio = 1338.42kg/cm²

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 1908.68kgm - Asse neutro = 5.31cm

Compressione calc. = 24.67kg/cm² - Compressione limite calc. = 130.73kg/cm²

Trazione acciaio = 1310.23kg/cm²

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*fcfm = 3448.45kgm

Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cm²

Area efficace Ac,eff = 562.02cm² - Area acciaio teso = 6.52cm² - Rapporto As/Aeff Ro = 0.012

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 20

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cm²

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.50m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-133.50	2.26	2.26	2451.32	18.36	3.5	62.3
Filo all. sx	0.27	328.47	7.24	5.27	5869.34	17.87	3.5	39.8
Max. campata	1.25	875.03	4.98	3.01	4592.80	5.25	3.5	65.9
Filo all. dx	2.28	276.26	7.24	5.27	5869.34	21.25	3.5	39.8
Asse app. dx	2.50	-133.50	2.26	2.26	2451.32	18.36	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cm ²	Dist. cm
Appoggio sx	1190.03	13330.75	1110.82	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1242.66	13330.75	-1163.45	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.022cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 9.6 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 2.21m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili

Relazione di calcolo

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq
 Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 767.21kgm - Asse neutro = 4.71cm
 Compressione calc. = 11.02kg/cmq - Compressione limite calc. = 174.30kg/cmq
 Trazione acciaio = 682.86kg/cmq - Trazione limite acciaio = 3600.00kg/cmq
COMBINAZIONI FREQUENTI
 Momento soll. = 707.21kgm - Asse neutro = 4.71cm
 Compressione calc. = 10.16kg/cmq
 Trazione acciaio = 629.45kg/cmq
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 692.21kgm - Asse neutro = 4.71cm
 Compressione calc. = 9.94kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 616.10kg/cmq
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm3 - Momento di fessurazione = W*fcfm = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq
 Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 21

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.20m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-377.16	2.26	2.26	2451.32	6.50	3.5	62.3
Filo all. sx	0.27	583.87	8.78	5.27	7015.25	12.02	3.5	32.4
Max. campata	2.10	2486.55	6.52	3.01	5950.93	2.39	3.5	50.1
Filo all. dx	3.93	583.87	8.78	5.27	7015.25	12.02	3.5	32.4
Asse app. dx	4.20	-377.16	2.26	2.26	2451.32	6.50	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	2150.97	13330.75	2071.76	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2150.97	13330.75	-2071.76	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck) / 3 / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.126cm - Momento di inerzia = 49895cm4

Rapporto snellezza L/h = 16.2 < 65.1 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 3.86m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm3 - W superiore = 40.485cm3

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Relazione di calcolo

Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00
 COMBINAZIONI RARE
 Momento soll. = 2181.97kgm - Asse neutro = 5.31cm
 Compressione calc. = 28.20kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 1497.83kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
 COMBINAZIONI FREQUENTI
 Momento soll. = 2012.46kgm - Asse neutro = 5.31cm
 Compressione calc. = 26.01kg/cm²
 Trazione acciaio = 1381.47kg/cm²
 COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 1970.08kgm - Asse neutro = 5.31cm
 Compressione calc. = 25.46kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 1352.38kg/cm²
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*fcfm = 3448.45kgm
 Diametro medio toncini = 10.12mm - Ricoprimento armatura c = 13.67mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cm²
 Area efficace Ac,eff = 562.02cm² - Area acciaio teso = 6.52cm² - Rapporto As/Aeff Ro = 0.012
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 22

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 5.04m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-542.58	2.26	2.26	2451.32	4.52	3.5	62.3
Filo all. sx	0.27	635.59	9.19	5.27	7315.89	11.51	3.5	30.9
Max. campata	2.27	2896.81	6.93	3.01	6307.63	2.18	3.5	47.0
Filo all. dx	4.77	-780.93	6.93	5.27	4972.55	6.37	3.5	51.5
Asse app. dx	5.04	-1578.20	0.00	2.26	2089.82	1.32	2.2	67.5

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cm ²	Dist. cm
Appoggio sx	2339.34	13330.75	2260.14	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2938.17	14512.01	-2858.97	4837.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d
 Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)
 Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa
 Freccia solaio = 0.129cm - Momento di inerzia = 52558cm⁴
 Rapporto snellezza L/h = 19.4 < 88.3 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 4.70m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3

Relazione di calcolo

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq

Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq

Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 2559.84kgm - Asse neutro = 5.46cm

Compressione calc. = 32.35kg/cmq - Compressione limite calc. = 174.30kg/cmq

Trazione acciaio = 1657.01kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 2391.78kgm - Asse neutro = 5.46cm

Compressione calc. = 30.23kg/cmq

Trazione acciaio = 1548.22kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 2349.76kgm - Asse neutro = 5.46cm

Compressione calc. = 29.70kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 1521.03kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11964.25cm3 - Momento di fessurazione = W*fcfm = 3457.54kgm

Diametro medio tondini = 10.50mm - Ricoprimento armatura c = 13.56mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2238.10kg/cmq

Area efficace Ac,eff = 564.26cmq - Area acciaio teso = 6.93cmq - Rapporto As/Aeff Ro = 0.012

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

CAMPATA 2

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.50m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-1578.20	0.00	2.26	2089.82	1.32	2.2	67.5
Filo all. sx	0.27	-1116.10	4.98	5.27	4927.75	4.42	3.5	54.4
Max. campata	1.38	666.63	4.98	3.01	4592.80	6.89	3.5	65.9
Filo all. dx	2.28	237.12	7.24	5.27	5869.34	24.75	3.5	39.8
Asse app. dx	2.50	-133.50	2.26	2.26	2451.32	18.36	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	1821.31	14512.01	1742.10	4837.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					
Appoggio dx	-1064.72	13330.75	-985.52	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * ro1 * fck)^(1/3) / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = -0.040cm - Momento di inerzia = 39438cm4

Rapporto snellezza L/h = 9.6 < 70.0 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 2.21m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm3 - W superiore = 40.485cm3

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

Relazione di calcolo

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq
 Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 332.17kgm - Asse neutro = 4.71cm
 Compressione calc. = 4.77kg/cmq - Compressione limite calc. = 174.30kg/cmq
 Trazione acciaio = 295.64kg/cmq - Trazione limite acciaio = 3600.00kg/cmq

COMBINAZIONI FREQUENTI

Momento soll. = 285.80kgm - Asse neutro = 4.71cm
 Compressione calc. = 4.11kg/cmq

Trazione acciaio = 254.38kg/cmq

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 274.53kgm - Asse neutro = 4.71cm
 Compressione calc. = 3.94kg/cmq - Compressione limite calc. = 130.73kg/cmq

Trazione acciaio = 244.34kg/cmq

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 12454.30cm³ - Momento di fessurazione = W*fcfm = 3599.16kgm

Diametro medio toncini = 9.32mm - Ricoprimento armatura c = 13.68mm

Distanza fra le barre s = 133.33mm - Tensione acciaio = 3203.42kg/cmq

Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

Schema 23

CAMPATA 1

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.31m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-113.98	2.26	2.26	2451.32	21.51	3.5	62.3
Filo all. sx	0.27	298.58	7.24	5.27	5869.34	19.66	3.5	39.8
Max. campata	1.16	743.93	4.98	3.01	4592.80	6.17	3.5	65.9
Filo all. dx	2.04	298.58	7.24	5.27	5869.34	19.66	3.5	39.8
Asse app. dx	2.31	-113.98	2.26	2.26	2451.32	21.51	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrzd Kg	Area cmq	Dist. cm
Appoggio sx	1080.56	13330.75	1001.36	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1080.56	13330.75	-1001.36	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * ro1 * fck)^(1/3) / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrzd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.017cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 8.9 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 1.97m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Staffe

Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Relazione di calcolo

Numero tralicci = 3
 Freccia massima = 0.28m
 STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq
 Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
 COMBINAZIONI RARE
 Momento soll. = 651.88kgm - Asse neutro = 4.71cm
 Compressione calc. = 9.36kg/cmq - Compressione limite calc. = 174.30kg/cmq
 Trazione acciaio = 580.20kg/cmq - Trazione limite acciaio = 3600.00kg/cmq
 COMBINAZIONI FREQUENTI
 Momento soll. = 600.65kgm - Asse neutro = 4.71cm
 Compressione calc. = 8.63kg/cmq
 Trazione acciaio = 534.61kg/cmq
 COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 587.85kgm - Asse neutro = 4.71cm
 Compressione calc. = 8.44kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 523.21kg/cmq
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm3 - Momento di fessurazione = W*fcfm = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq
 Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 24

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.31m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-113.98	2.26	2.26	2451.32	21.51	3.5	62.3
Filo all. sx	0.27	298.58	7.24	5.27	5869.34	19.66	3.5	39.8
Max. campata	1.16	743.93	4.98	3.01	4592.80	6.17	3.5	65.9
Filo all. dx	2.04	298.58	7.24	5.27	5869.34	19.66	3.5	39.8
Asse app. dx	2.31	-113.98	2.26	2.26	2451.32	21.51	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	1080.56	13330.75	1001.36	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1080.56	13330.75	-1001.36	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * ro1 * fck)^{1/3} / gammaC >= (v min) * bw * d
 Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)
 Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa
 Freccia solaio = 0.017cm - Momento di inerzia = 39438cm4
 Rapporto snellezza L/h = 8.9 < 53.8 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 1.97m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm3 - W superiore = 40.485cm3
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa =

Relazione di calcolo

0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
 STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
 COMBINAZIONI RARE
 Momento soll. = 651.88kgm - Asse neutro = 4.71cm
 Compressione calc. = 9.36kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 580.20kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
 COMBINAZIONI FREQUENTI
 Momento soll. = 600.65kgm - Asse neutro = 4.71cm
 Compressione calc. = 8.63kg/cm²
 Trazione acciaio = 534.61kg/cm²
 COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 587.85kgm - Asse neutro = 4.71cm
 Compressione calc. = 8.44kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 523.21kg/cm²
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm
 Diametro medio tendini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²
 Area efficace Ac,eff = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto As/Aeff Ro = 0.009
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 25

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.31m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-113.98	2.26	2.26	2451.32	21.51	3.5	62.3
Filo all. sx	0.27	289.44	7.24	5.27	5869.34	20.28	3.5	39.8
Max. campata	1.16	704.43	4.98	3.01	4592.80	6.52	3.5	65.9
Filo all. dx	2.09	178.28	7.24	5.27	5869.34	32.92	3.5	39.8
Asse app. dx	2.31	-113.98	2.26	2.26	2451.32	21.51	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrds Kg	Area cm ²	Dist. cm
Appoggio sx	1046.85	13330.75	967.64	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1170.85	13330.75	-1091.65	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

$$Vrd = 0,18 * k * (100 * ro1 * fck)^{1/3} / \gamma_{cC} \geq (v_{min}) * bw * d$$

$$Vrcd = 0,9 * d * bw * f'cd * (ctg \alpha + 1) / (1 + 1)$$

$$Vrds = 0,9 * d * (Asw / s) * fyd * (ctg \alpha + 1) \sin \alpha$$

Freccia solaio = 0.014cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 8.9 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 2.02m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Lunghezza rompitratta mensola = 1.05m

Relazione di calcolo

Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
 STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq
 Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
 COMBINAZIONI RARE
 Momento soll. = 612.39kgm - Asse neutro = 4.71cm
 Compressione calc. = 8.80kg/cmq - Compressione limite calc. = 174.30kg/cmq
 Trazione acciaio = 545.05kg/cmq - Trazione limite acciaio = 3600.00kg/cmq
 COMBINAZIONI FREQUENTI
 Momento soll. = 561.16kgm - Asse neutro = 4.71cm
 Compressione calc. = 8.06kg/cmq
 Trazione acciaio = 499.46kg/cmq
 COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 548.35kgm - Asse neutro = 4.71cm
 Compressione calc. = 7.88kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 488.06kg/cmq
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm3 - Momento di fessurazione = W*fcfm = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq
 Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 26

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.70m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento F. Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-471.69	2.26	2.26	2451.32	5.20	3.5	62.3
Filo all. sx	0.27	598.50	8.78	5.27	7015.25	11.72	3.5	32.4
Max. campata	2.11	2599.55	6.52	3.01	5950.93	2.29	3.5	50.1
Filo all. dx	4.43	-1117.20	6.52	5.27	4963.96	4.44	3.5	52.0
Asse app. dx	4.70	-1885.39	0.00	2.26	2089.82	1.11	2.2	67.5

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	2204.98	13330.75	2125.78	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2833.46	14512.01	-2754.25	4837.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					

Vrd = 0,18 * k * (100 * ro1 * fck)^{1/3} / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.084cm - Momento di inerzia = 49895cm⁴

Rapporto snellezza L/h = 18.1 < 84.6 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 4.36m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Relazione di calcolo

Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80

Lunghezza rompitratta staffa = 2.1m

Numero tralicci = 3

Freccia massima = 0.28m

STATI LIMITE DI ESERCIZIO

Condizioni ambiente: Ordinarie - Classe di esposizione: X0

Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili

Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²

Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fctm = 34.68kg/cm²

Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00

COMBINAZIONI RARE

Momento soll. = 2099.71kgm - Asse neutro = 5.31cm

Compressione calc. = 27.14kg/cm² - Compressione limite calc. = 174.30kg/cm²

Trazione acciaio = 1441.36kg/cm² - Trazione limite acciaio = 3600.00kg/cm²

COMBINAZIONI FREQUENTI

Momento soll. = 1936.54kgm - Asse neutro = 5.31cm

Compressione calc. = 25.03kg/cm²

Trazione acciaio = 1329.35kg/cm²

COMBINAZIONI QUASI PERMANENTI

Momento soll. = 1895.75kgm - Asse neutro = 5.31cm

Compressione calc. = 24.50kg/cm² - Compressione limite calc. = 130.73kg/cm²

Trazione acciaio = 1301.35kg/cm²

APERTURA DELLE FESSURE

Modulo W sezione interamente reagente = 11932.80cm³ - Momento di fessurazione = W*fctm = 3448.45kgm

Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm

Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cm²

Area efficace Ac,eff = 562.02cm² - Area acciaio teso = 6.52cm² - Rapporto As/Aeff Ro = 0.012

COMBINAZIONI FREQUENTI

Combinazione non fessurata

COMBINAZIONI QUASI PERMANENTI

Combinazione non fessurata

CAMPATA 2

SOLAIO LASTRA H = 5+16+5

3 NERVATURE AUTOPORTANTE

Alleggerimento in polistirolo

Metodo di Calcolo: Stati limite D.M.14/01/2008

Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²

Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²

Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²

Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente

Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.90m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
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Asse app. sx	0.00	-1885.39	0.00	2.26	2089.82	1.11	2.2	67.5
Filo all. sx	0.27	-1090.54	6.93	5.27	4972.55	4.56	3.5	51.5
Max. campata	2.69	2827.47	6.93	3.01	6307.63	2.23	3.5	47.0
Filo all. dx	4.68	520.38	9.19	5.27	7315.89	14.06	3.5	30.9
Asse app. dx	4.90	-512.53	2.26	2.26	2451.32	4.78	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrkd Kg	Taglio banc. Kg	Vrd banc. Vrkd Kg	Largh. cm	Nerva. cm	Vrkd Kg	Area cm ²	Dist. cm
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Appoggio sx	2930.85	14512.01	2851.65	4837.34	0.00	40.00	0.00	0.00	0.00
		213348.20		71116.05					
Appoggio dx	-2362.95	13330.75	-2283.75	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck) / 3 / gammaC >= (v min) * bw * d

Vrkd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrkd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.095cm - Momento di inerzia = 52558cm⁴

Rapporto snellezza L/h = 18.8 < 88.3 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 4.61m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg

Lunghezza rompitratta corrente superiore = 1.27m

Relazione di calcolo

Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
 STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00
 COMBINAZIONI RARE
 Momento soll. = 2330.31kgm - Asse neutro = 5.46cm
 Compressione calc. = 29.45kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 1508.43kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
 COMBINAZIONI FREQUENTI
 Momento soll. = 2155.16kgm - Asse neutro = 5.46cm
 Compressione calc. = 27.24kg/cm²
 Trazione acciaio = 1395.06kg/cm²
 COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 2111.38kgm - Asse neutro = 5.46cm
 Compressione calc. = 26.68kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 1366.72kg/cm²
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 12845.92cm³ - Momento di fessurazione = W*fcfm = 3712.34kgm
 Diametro medio tondini = 10.50mm - Ricoprimento armatura c = 13.56mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 2403.03kg/cm²
 Area efficace Ac,eff = 564.26cm² - Area acciaio teso = 6.93cm² - Rapporto As/Aeff Ro = 0.012
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 27

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.92m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-182.24	2.26	2.26	2451.32	13.45	3.5	62.3
Filo all. sx	0.29	422.43	7.24	5.27	5869.34	13.89	3.5	39.8
Max. campata	1.46	1194.08	4.98	3.01	4592.80	3.85	3.5	65.9
Filo all. dx	2.65	392.51	7.24	5.27	5869.34	14.95	3.5	39.8
Asse app. dx	2.92	-182.24	2.26	2.26	2451.32	13.45	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cm ²	Dist. cm
Appoggio sx	1400.04	13330.75	1320.83	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1425.21	13330.75	-1346.01	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d

Vrd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.041cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 11.2 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 2.56m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²

Asse neutro = 2.57cm - Momento inerzia = 239.93

W inferiore = 93.23cm³ - W superiore = 40.485cm³

Corrente superiore

Relazione di calcolo

Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
 STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq
 Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
 COMBINAZIONI RARE
 Momento soll. = 1046.90kgm - Asse neutro = 4.71cm
 Compressione calc. = 15.04kg/cmq - Compressione limite calc. = 174.30kg/cmq
 Trazione acciaio = 931.79kg/cmq - Trazione limite acciaio = 3600.00kg/cmq
 COMBINAZIONI FREQUENTI
 Momento soll. = 965.00kgm - Asse neutro = 4.71cm
 Compressione calc. = 13.86kg/cmq
 Trazione acciaio = 858.89kg/cmq
 COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 944.52kgm - Asse neutro = 4.71cm
 Compressione calc. = 13.57kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 840.67kg/cmq
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm3 - Momento di fessurazione = W*fcfm = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq
 Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 28

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm
 Luce cal = 3.78m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-304.52	2.26	2.26	2451.32	8.05	3.5	62.3
Filo all. sx	0.22	431.95	7.24	5.27	5869.34	13.59	3.5	39.8
Max. campata	1.89	2004.90	4.98	3.01	4592.80	2.29	3.5	65.9
Filo all. dx	3.48	566.86	7.24	5.27	5869.34	10.35	3.5	39.8
Asse app. dx	3.78	-304.52	2.26	2.26	2451.32	8.05	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrkd Kg	Taglio banc. Kg	Vrd banc. Vrkd Kg	Largh. cm	Nerva. cm	Vrds Kg	Area cmq	Dist. cm
Appoggio sx	1964.20	13330.75	1885.00	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1881.96	13330.75	-1802.76	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^(1/3) / gammaC >= (v min) * bw * d
 Vrkd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)
 Vrds = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa
 Freccia solaio = 0.105cm - Momento di inerzia = 39438cm4
 Rapporto snellezza L/h = 14.5 < 53.8 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
 VERIFICA TRALICCIO
 Lunghezza traliccio = 3.46m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq
 Asse neutro = 2.57cm - Momento inerzia = 239.93

Relazione di calcolo

W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 1758.98kgm - Asse neutro = 4.71cm
 Compressione calc. = 25.27kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 1565.58kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
 Momento soll. = 1622.12kgm - Asse neutro = 4.71cm
 Compressione calc. = 23.30kg/cm²
 Trazione acciaio = 1443.76kg/cm²
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 1587.91kgm - Asse neutro = 4.71cm
 Compressione calc. = 22.81kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 1413.31kg/cm²
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²
 Area efficace Ac,eff = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto As/Aeff Ro = 0.009
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 29

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.15m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cmSuola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-98.98	2.26	2.26	2451.32	24.77	3.5	62.3
Filo all. sx	0.22	233.63	7.24	5.27	5869.34	25.12	3.5	39.8
Max. campata	1.08	646.60	4.98	3.01	4592.80	7.10	3.5	65.9
Filo all. dx	1.88	275.34	7.24	5.27	5869.34	21.32	3.5	39.8
Asse app. dx	2.15	-98.98	2.26	2.26	2451.32	24.77	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cm ²	Dist. cm
Appoggio sx	1045.82	13330.75	966.62	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-993.82	13330.75	-914.61	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.012cm - Momento di inerzia = 39438cm⁴

Rapporto snellezza L/h = 8.3 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Lunghezza traliccio = 1.86m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm

Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm

Relazione di calcolo

Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm3 - W superiore = 40.485cm3
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
 STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq
 Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
 COMBINAZIONI RARE
 Momento soll. = 566.66kgm - Asse neutro = 4.71cm
 Compressione calc. = 8.14kg/cmq - Compressione limite calc. = 174.30kg/cmq
 Trazione acciaio = 504.35kg/cmq - Trazione limite acciaio = 3600.00kg/cmq
 COMBINAZIONI FREQUENTI
 Momento soll. = 522.17kgm - Asse neutro = 4.71cm
 Compressione calc. = 7.50kg/cmq
 Trazione acciaio = 464.76kg/cmq
 COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 511.05kgm - Asse neutro = 4.71cm
 Compressione calc. = 7.34kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 454.86kg/cmq
 APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm3 - Momento di fessurazione = W*fcfm = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cmq
 Area efficace Ac,eff = 550.29cmq - Area acciaio teso = 4.98cmq - Rapporto As/Aeff Ro = 0.009
 COMBINAZIONI FREQUENTI
 Combinazione non fessurata
 COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 30

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.15m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-98.46	2.26	2.26	2451.32	24.90	3.5	62.3
Filo all. sx	0.22	232.90	7.24	5.27	5869.34	25.20	3.5	39.8
Max. campata	1.07	643.17	4.98	3.01	4592.80	7.14	3.5	65.9
Filo all. dx	1.88	274.49	7.24	5.27	5869.34	21.38	3.5	39.8
Asse app. dx	2.15	-98.46	2.26	2.26	2451.32	24.90	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Vrcd Kg	Taglio banc. Kg	Vrd banc. Vrcd Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	1042.63	13330.75	963.42	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-990.63	13330.75	-911.43	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^(1/3) / gammaC >= (v min) * bw * d

Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa

Freccia solaio = 0.012cm - Momento di inerzia = 39438cm4

Rapporto snellezza L/h = 8.3 < 53.8 (C4.1.13)

Limite snellezza verificata (C4.1.13)

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00

VERIFICA TRALICCIO

Relazione di calcolo

Lunghezza traliccio = 1.86m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 563.65kgm - Asse neutro = 4.71cm
 Compressione calc. = 8.10kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 501.68kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
 Momento soll. = 519.40kgm - Asse neutro = 4.71cm
 Compressione calc. = 7.46kg/cm²
 Trazione acciaio = 462.29kg/cm²
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 508.33kgm - Asse neutro = 4.71cm
 Compressione calc. = 7.30kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 452.44kg/cm²
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²
 Area efficace Ac,eff = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto As/Aeff Ro = 0.009
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 31

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.99m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc	Epsilon acc %
Asse app. sx	0.00	-191.18	2.26	2.26	2451.32	12.82	3.5	62.3
Filo all. sx	0.27	403.36	7.24	5.27	5869.34	14.55	3.5	39.8
Max. campata	1.50	1255.12	4.98	3.01	4592.80	3.66	3.5	65.9
Filo all. dx	2.72	403.42	7.24	5.27	5869.34	14.55	3.5	39.8
Asse app. dx	2.99	-191.18	2.26	2.26	2451.32	12.82	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cm ²	Dist. cm
Appoggio sx	1466.24	13330.75	1387.04	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1466.19	13330.75	-1386.99	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d
 Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)
 Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa
 Freccia solaio = 0.044cm - Momento di inerzia = 39438cm⁴
 Rapporto snellezza L/h = 11.5 < 53.8 (C4.1.13)
 Limite snellezza verificata (C4.1.13)

Relazione di calcolo

Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
VERIFICA TRALICCIO
 Lunghezza traliccio = 2.65m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 1100.72kgm - Asse neutro = 4.71cm
 Compressione calc. = 15.81kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 979.70kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
 Momento soll. = 1014.80kgm - Asse neutro = 4.71cm
 Compressione calc. = 14.58kg/cm²
 Trazione acciaio = 903.22kg/cm²
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 993.32kgm - Asse neutro = 4.71cm
 Compressione calc. = 14.27kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 884.10kg/cm²
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²
 Area efficace Ac,eff = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto As/Aeff Ro = 0.009
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 32

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.18m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kg ^m /int	F. Area inf. cm ²	Area sup. cm ²	Momento R. Kg ^m /int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-372.66	2.26	2.26	2451.32	6.58	3.5	62.3
Filo all. sx	0.22	483.00	8.78	5.27	7015.25	14.52	3.5	32.4
Max. campata	2.09	2458.02	6.52	3.01	5950.93	2.42	3.5	50.1
Filo all. dx	3.91	580.40	8.78	5.27	7015.25	12.09	3.5	32.4
Asse app. dx	4.18	-372.66	2.26	2.26	2451.32	6.58	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrds Kg	Area cm ²	Dist. cm
Appoggio sx	2192.12	13330.75	2112.92	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2137.94	13330.75	-2058.74	4584.16	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck) / 3 / gammaC >= (v min) * bw * d
 Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)
 Vrds = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa
 Freccia solaio = 0.120cm - Momento di inerzia = 49895cm⁴

Relazione di calcolo

Rapporto snellezza L/h = 16.1 < 65.1 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
VERIFICA TRALICCIO
 Lunghezza traliccio = 3.89m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm3 - W superiore = 40.485cm3
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq
 Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 2157.06kgm - Asse neutro = 5.31cm
 Compressione calc. = 27.88kg/cmq - Compressione limite calc. = 174.30kg/cmq
 Trazione acciaio = 1480.73kg/cmq - Trazione limite acciaio = 3600.00kg/cmq
COMBINAZIONI FREQUENTI
 Momento soll. = 1989.57kgm - Asse neutro = 5.31cm
 Compressione calc. = 25.72kg/cmq
 Trazione acciaio = 1365.76kg/cmq
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 1947.70kgm - Asse neutro = 5.31cm
 Compressione calc. = 25.18kg/cmq - Compressione limite calc. = 130.73kg/cmq
 Trazione acciaio = 1337.01kg/cmq
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11932.80cm3 - Momento di fessurazione = W*fcfm = 3448.45kgm
 Diametro medio tondini = 10.12mm - Ricoprimento armatura c = 13.67mm
 Distanza fra le barre s = 120.00mm - Tensione acciaio = 2367.21kg/cmq
 Area efficace Ac,eff = 562.02cmq - Area acciaio teso = 6.52cmq - Rapporto As/Aeff Ro = 0.012
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 33

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 3.94m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cmq	Area sup. cmq	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-332.37	2.26	2.26	2451.32	7.38	3.5	62.3
Filo all. sx	0.29	590.06	7.24	5.27	5869.34	9.95	3.5	39.8
Max. campata	1.97	2187.92	4.98	3.01	4592.80	2.10	3.5	65.9
Filo all. dx	3.67	544.95	7.24	5.27	5869.34	10.77	3.5	39.8
Asse app. dx	3.94	-332.37	2.26	2.26	2451.32	7.38	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm
Appoggio sx	1978.70	13330.75	1899.50	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-2004.61	13330.75	-1925.40	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Vrd = 0,18 * k * (100 * rol * fck)^{1/3} / gammaC >= (v min) * bw * d
 Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)

Relazione di calcolo

Vr_{sd} = 0,9 * d * (Asw / s) * f_{yd} * (ctg alfa + 1) sin alfa
 Freccia solaio = 0.127cm - Momento di inerzia = 39438cm⁴
 Rapporto snellezza L/h = 15.2 < 53.8 (C4.1.13)
 Limite snellezza verificata (C4.1.13)
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
VERIFICA TRALICCIO
 Lunghezza traliccio = 3.58m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
 Asse neutro = 2.57cm - Momento inerzia = 239.93
 W inferiore = 93.23cm³ - W superiore = 40.485cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.27m
 Lunghezza rompitratta mensola = 1.05m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.1m
 Numero tralicci = 3
 Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo R_{ck} = 350 - Resistenza cilindrica f_{ck} = 290.50kg/cm²
 Resistenza a trazione f_{ctm} = 28.90kg/cm² - Resistenza a trazione-flessione f_{cfm} = 34.68kg/cm²
 Coefficiente beta₁ = 1 - Coefficiente beta₂ = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 1919.50kgm - Asse neutro = 4.71cm
 Compressione calc. = 27.57kg/cm² - Compressione limite calc. = 174.30kg/cm²
 Trazione acciaio = 1708.45kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
 Momento soll. = 1770.13kgm - Asse neutro = 4.71cm
 Compressione calc. = 25.43kg/cm²
 Trazione acciaio = 1575.49kg/cm²
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 1732.78kgm - Asse neutro = 4.71cm
 Compressione calc. = 24.89kg/cm² - Compressione limite calc. = 130.73kg/cm²
 Trazione acciaio = 1542.26kg/cm²
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*f_{cfm} = 3414.16kgm
 Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
 Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²
 Area efficace A_{c,eff} = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto A_s/A_{eff} R_o = 0.009
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 34

CAMPATA 1
 SOLAIO LASTRA H = 5+16+5
 3 NERVATURE AUTOPORTANTE
 Alleggerimento in polistirolo
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_{calc.} = 1.50 - F_{ck} = 290.50 Kg/cm² - F_{cd} = 164.62 Kg/cm²
 Gamma_{acciaio} = 1.15 - F_{yd} = 3913.04 Kg/cm²
 Tralicci n° 3 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.37m - Interasse = 120.0cm - Altezza = 26.0cm - Nervat = 40.0cm - Cappa = 5.0cm Suola = 5.0cm

Descrizione	distanza m	Momento Kgm/int	F. Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-119.86	2.26	2.26	2451.32	20.45	3.5	62.3
Filo all. sx	0.22	260.36	7.24	5.27	5869.34	22.54	3.5	39.8
Max. campata	1.18	784.75	4.98	3.01	4592.80	5.85	3.5	65.9
Filo all. dx	2.10	308.13	7.24	5.27	5869.34	19.05	3.5	39.8
Asse app. dx	2.37	-119.86	2.26	2.26	2451.32	20.45	3.5	62.3

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*F_{cd}

Descrizione	Taglio filo Kg	Vr _d filo Vr _{cd} Kg	Taglio banc. Kg	Vr _d banc. Vr _{cd} Kg	Largh. cm	Nerva. cm	Vr _{sd} Kg	Area cm ²	Dist. cm
Appoggio sx	1168.34	13330.75	1089.14	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					
Appoggio dx	-1115.93	13330.75	-1036.72	4443.58	0.00	40.00	0.00	0.00	0.00
		186679.60		62226.54					

Relazione di calcolo

Vrd = 0,18 * k * (100 * ro1 * fck)^{1/3} / gammaC >= (v min) * bw * d
Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)
Vrzd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa
Freccia solaio = 0.018cm - Momento di inerzia = 39438cm⁴
Rapporto snellezza L/h = 9.1 < 53.8 (C4.1.13)
Limite snellezza verificata (C4.1.13)
Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 0.00
VERIFICA TRALICCIO
Lunghezza traliccio = 2.08m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
Asse neutro = 2.57cm - Momento inerzia = 239.93
W inferiore = 93.23cm³ - W superiore = 40.485cm³
Corrente superiore
Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
Lunghezza rompitratta corrente superiore = 1.27m
Lunghezza rompitratta mensola = 1.05m
Staffe
Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
Lunghezza rompitratta staffa = 2.1m
Numero tralicci = 3
Freccia massima = 0.28m
STATI LIMITE DI ESERCIZIO
Condizioni ambiente: Ordinarie - Classe di esposizione: X0
Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
Momento soll. = 687.95kgm - Asse neutro = 4.71cm
Compressione calc. = 9.88kg/cm² - Compressione limite calc. = 174.30kg/cm²
Trazione acciaio = 612.31kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
Momento soll. = 634.08kgm - Asse neutro = 4.71cm
Compressione calc. = 9.11kg/cm²
Trazione acciaio = 564.36kg/cm²
COMBINAZIONI QUASI PERMANENTI
Momento soll. = 620.62kgm - Asse neutro = 4.71cm
Compressione calc. = 8.91kg/cm² - Compressione limite calc. = 130.73kg/cm²
Trazione acciaio = 552.38kg/cm²
APERTURA DELLE FESSURE
Modulo W sezione interamente reagente = 11814.14cm³ - Momento di fessurazione = W*fcfm = 3414.16kgm
Diametro medio tondini = 9.32mm - Ricoprimento armatura c = 13.68mm
Distanza fra le barre s = 133.33mm - Tensione acciaio = 3038.76kg/cm²
Area efficace Ac,eff = 550.29cm² - Area acciaio teso = 4.98cm² - Rapporto As/Aeff Ro = 0.009
COMBINAZIONI FREQUENTI
Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
Combinazione non fessurata

Solai a quota 8.66

Schema 1

CAMPATA 1
SOLAIO TRAVETTO H = 20+4
tipo BAUSTA
Metodo di Calcolo: Stati limite D.M.14/01/2008
Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cm²
Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
Tralicci n° 1 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 3.80m - Interasse = 50.0cm - Altezza = 24.0cm - Nervat = 12.0cm - Cappa = 4.0cm

Descrizione	distanza m	Momento Kgm/int	Area inf. cm ²	Area sup. cm ²	Momento R. Kgm/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-207.29	0.79	0.50	532.41	2.57	3.0	67.5
Filo all. sx	0.25	126.38	1.68	1.76	1319.11	10.44	3.5	53.6
Max. campata	1.90	518.22	0.90	1.26	802.69	1.55	3.5	47.2
Filo all. dx	3.50	149.71	1.68	1.76	1319.11	8.81	3.5	53.6
Asse app. dx	3.80	-207.29	0.79	0.50	532.41	2.57	3.0	67.5

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrzd Kg	Area cm ²	Dist. cm

Relazione di calcolo

Appoggio sx 502.73 5387.06 473.98 1457.47 0.00 12.00 0.00 0.00 0.00
 74079.22 17779.01
 Appoggio dx -488.35 5387.06 -459.60 1457.47 0.00 12.00 0.00 0.00 0.00
 74079.22 17779.01
 Vrd = 0,18 * k * (100 * ro1 * fck)1/3 / gammaC >= (v min) * bw * d
 Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)
 Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa
 Freccia solaio = 0.299cm - Momento di inerzia = 5865cm4
 Deformazione massima viscosa = 0.759cm - Freccia solaio tempo infinito = 0.681cm
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 1.80
VERIFICA TRALICCIO
 Lunghezza traliccio = 3.55m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq
 Asse neutro = 4.29cm - Momento inerzia = 14.05
 W inferiore = 3.27cm3 - W superiore = 3.341cm3
Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.24m
 Lunghezza rompitratta mensola = 1.02m
Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.0m
 Numero tralicci = 1
 Freccia massima = 1.68m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq
 Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 387.54kgm - Asse neutro = 3.08cm
 Compressione calc. = 21.83kg/cmq - Compressione limite calc. = 139.44kg/cmq
 Trazione acciaio = 2040.76kg/cmq - Trazione limite acciaio = 3600.00kg/cmq
COMBINAZIONI FREQUENTI
 Momento soll. = 329.86kgm - Asse neutro = 3.08cm
 Compressione calc. = 18.58kg/cmq
 Trazione acciaio = 1737.02kg/cmq
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 315.44kgm - Asse neutro = 3.08cm
 Compressione calc. = 17.77kg/cmq - Compressione limite calc. = 104.58kg/cmq
 Trazione acciaio = 1661.08kg/cmq
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 1624.66cm3 - Momento di fessurazione = W*fcfm = 469.51kgm
 Diametro medio tondini = 6.33mm - Ricoprimento armatura c = 13.76mm
 Distanza fra le barre s = 40.00mm - Tensione acciaio = 2472.42kg/cmq
 Area efficace Ac,eff = 50.79cmq - Area acciaio teso = 0.90cmq - Rapporto As/Aeff Ro = 0.018
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 2

CAMPATA 1
 SOLAIO TRAVETTO H = 20+4
 tipo BAUSTA
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cmq
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq
 Tralicci n° 1 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 2.16m - Interasse = 50.0cm - Altezza = 24.0cm - Nervat = 12.0cm - Cappa = 4.0cm

Descrizione	distanza m	Momento Kg/int	F. Area inf. cmq	Area sup. cmq	Momento R. Kg/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-66.98	0.79	0.50	532.41	7.95	3.0	67.5
Filo all. sx	0.32	85.34	1.68	1.76	1319.11	15.46	3.5	53.6
Max. campata	1.08	167.44	0.90	1.26	802.69	4.79	3.5	47.2
Filo all. dx	1.86	79.86	1.68	1.76	1319.11	16.52	3.5	53.6
Asse app. dx	2.16	-66.98	0.79	0.50	532.41	7.95	3.0	67.5

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cmq	Dist. cm

Relazione di calcolo

Appoggio sx 189.49 5387.06 160.74 1457.47 0.00 12.00 0.00 0.00 0.00
 74079.22 17779.01
 Appoggio dx -203.87 5387.06 -175.12 1457.47 0.00 12.00 0.00 0.00 0.00
 74079.22 17779.01
 Vrd = 0,18 * k * (100 * ro1 * fck)^{1/3} / gammaC >= (v min) * bw * d
 Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)
 Vrsd = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa
 Freccia solaio = 0.013cm - Momento di inerzia = 5865cm⁴
 Deformazione massima viscosa = 0.344cm - Freccia solaio tempo infinito = 0.029cm
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 1.80
VERIFICA TRALICCIO
 Lunghezza traliccio = 1.47m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
 Asse neutro = 4.29cm - Momento inerzia = 14.05
 W inferiore = 3.27cm³ - W superiore = 3.341cm³
 Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.24m
 Lunghezza rompitratta mensola = 1.02m
 Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.0m
 Numero tralicci = 1
 Freccia massima = 1.68m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 79.34kgm - Asse neutro = 3.08cm
 Compressione calc. = 4.47kg/cm² - Compressione limite calc. = 139.44kg/cm²
 Trazione acciaio = 417.81kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
 Momento soll. = 67.53kgm - Asse neutro = 3.08cm
 Compressione calc. = 3.80kg/cm²
 Trazione acciaio = 355.63kg/cm²
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 64.58kgm - Asse neutro = 3.08cm
 Compressione calc. = 3.64kg/cm² - Compressione limite calc. = 104.58kg/cm²
 Trazione acciaio = 340.08kg/cm²
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 1624.66cm³ - Momento di fessurazione = W*fcfm = 469.51kgm
 Diametro medio tondini = 6.33mm - Ricoprimento armatura c = 13.76mm
 Distanza fra le barre s = 40.00mm - Tensione acciaio = 2472.42kg/cm²
 Area efficace Ac,eff = 50.79cm² - Area acciaio teso = 0.90cm² - Rapporto As/Aeff Ro = 0.018
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 4

CAMPATA 1
 SOLAIO TRAVETTO H = 20+4
 tipo BAUSTA
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 1 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 3.90m - Interasse = 50.0cm - Altezza = 24.0cm - Nervat = 12.0cm - Cappa = 4.0cm

Descrizione	distanza m	Momento Kg/int	F. Area inf. cm ²	Area sup. cm ²	Momento R. Kg/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-218.47	0.79	0.50	532.41	2.44	3.0	67.5
Filo all. sx	0.30	153.89	1.68	1.76	1319.11	8.57	3.5	53.6
Max. campata	1.95	546.17	0.90	1.26	802.69	1.47	3.5	47.2
Filo all. dx	3.70	106.19	1.68	1.76	1319.11	12.42	3.5	53.6
Asse app. dx	3.90	-218.47	0.79	0.50	532.41	2.44	3.0	67.5

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrsd Kg	Area cm ²	Dist. cm

Relazione di calcolo

Appoggio sx 502.90 5387.06 474.15 1457.47 0.00 12.00 0.00 0.00 0.00
 74079.22 17779.01
 Appoggio dx -531.65 5387.06 -502.90 1457.47 0.00 12.00 0.00 0.00 0.00
 74079.22 17779.01
 $V_{rd} = 0,18 * k * (100 * \rho_{1} * f_{ck})^{1/3} / \gamma_{C} \geq (v_{min}) * b_w * d$
 $V_{rzd} = 0,9 * d * b_w * f'_{cd} * (ctg \alpha + 1) / (1 + 1)$
 $V_{rzd} = 0,9 * d * (A_{sw} / s) * f_{yd} * (ctg \alpha + 1) \sin \alpha$
 Freccia solaio = 0.332cm - Momento di inerzia = 5865cm⁴
 Deformazione massima viscosa = 0.780cm - Freccia solaio tempo infinito = 0.756cm
 Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 1.80
VERIFICA TRALICCIO
 Lunghezza traliccio = 3.70m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
 Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
 Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
 Asse neutro = 4.29cm - Momento inerzia = 14.05
 W inferiore = 3.27cm³ - W superiore = 3.341cm³
Corrente superiore
 Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
 Lunghezza rompitratta corrente superiore = 1.24m
 Lunghezza rompitratta mensola = 1.02m
Staffe
 Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
 Lunghezza rompitratta staffa = 2.0m
 Numero tralicci = 1
 Freccia massima = 1.68m
STATI LIMITE DI ESERCIZIO
 Condizioni ambiente: Ordinarie - Classe di esposizione: X0
 Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
 Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
 Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
 Coefficiente beta1 = 1 - Coefficiente beta1 = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
 Momento soll. = 408.44kgm - Asse neutro = 3.08cm
 Compressione calc. = 23.01kg/cm² - Compressione limite calc. = 139.44kg/cm²
 Trazione acciaio = 2150.84kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
 Momento soll. = 347.65kgm - Asse neutro = 3.08cm
 Compressione calc. = 19.58kg/cm²
 Trazione acciaio = 1830.72kg/cm²
COMBINAZIONI QUASI PERMANENTI
 Momento soll. = 332.45kgm - Asse neutro = 3.08cm
 Compressione calc. = 18.73kg/cm² - Compressione limite calc. = 104.58kg/cm²
 Trazione acciaio = 1750.69kg/cm²
APERTURA DELLE FESSURE
 Modulo W sezione interamente reagente = 1624.66cm³ - Momento di fessurazione = W*fcfm = 469.51kgm
 Diametro medio tondini = 6.33mm - Ricoprimento armatura c = 13.76mm
 Distanza fra le barre s = 40.00mm - Tensione acciaio = 2472.42kg/cm²
 Area efficace Ac,eff = 50.79cm² - Area acciaio teso = 0.90cm² - Rapporto As/Aeff Ro = 0.018
COMBINAZIONI FREQUENTI
 Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
 Combinazione non fessurata

Schema 5

CAMPATA 1
 SOLAIO TRAVETTO H = 20+4
 tipo BAUSTA
 Metodo di Calcolo: Stati limite D.M.14/01/2008
 Calcestruzzo: C28/35 - Tipo acciaio: B450C - Tensione caratteristica = 4500 Kg/cm²
 Gamma_calc. = 1.50 - Fck = 290.50 Kg/cm² - Fcd = 164.62 Kg/cm²
 Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cm²
 Tralicci n° 1 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente
 Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm

Luce cal = 4.11m - Interasse = 50.0cm - Altezza = 24.0cm - Nervat = 12.0cm - Cappa = 4.0cm

Descrizione	distanza m	Momento Kg/m/int	F. Area inf. cm ²	Area sup. cm ²	Momento R. Kg/m/int	Mr/Mf	Epsilon calc %	Epsilon acc %
Asse app. sx	0.00	-243.13	0.79	0.50	532.41	2.19	3.0	67.5
Filo all. sx	0.25	137.79	1.68	1.76	1319.11	9.57	3.5	53.6
Max. campata	2.06	607.83	0.90	1.26	802.69	1.32	3.5	47.2
Filo all. dx	3.79	176.49	1.68	1.76	1319.11	7.47	3.5	53.6
Asse app. dx	4.11	-243.13	0.79	0.50	532.41	2.19	3.0	67.5

Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd

Descrizione	Taglio filo Kg	Vrd filo Kg	Taglio banc. Kg	Vrd banc. Kg	Largh. cm	Nerva. cm	Vrzd Kg	Area cm ²	Dist. cm

Relazione di calcolo

Appoggio sx	258.46	5387.06	229.71	1457.47	0.00	12.00	0.00	0.00	0.00
		74079.22		17779.01					
Appoggio dx	-424.77	5720.14	-396.02	1372.84	0.00	12.00	0.00	0.00	0.00
		81487.14		19556.91					
Vrd = 0,18 * k * (100 * ro1 * fck)1/3 / gammaC >= (v min) * bw * d									
Vrcd = 0,9 * d * bw * f'cd * (ctg alfa + 1) / (1 + 1)									
Vrds = 0,9 * d * (Asw / s) * fyd * (ctg alfa + 1) sin alfa									
Freccia solaio = 0.038cm - Momento di inerzia = 5865cm4									
Deformazione massima viscosa = 0.542cm - Freccia solaio tempo infinito = 0.078cm									
Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 1.80									
VERIFICA TRALICCIO									
Lunghezza traliccio = 2.41m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm									
Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm									
Area sup. = 0.39cmq - Area inf. = 0.39cmq - Area sta. = 0.20cmq									
Asse neutro = 4.29cm - Momento inerzia = 14.05									
W inferiore = 3.27cm3 - W superiore = 3.341cm3									
Corrente superiore									
Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg									
Lunghezza rompitratta corrente superiore = 1.24m									
Lunghezza rompitratta mensola = 1.02m									
Staffe									
Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80									
Lunghezza rompitratta staffa = 2.0m									
Numero tralicci = 1									
Freccia massima = 1.68m									
STATI LIMITE DI ESERCIZIO									
Condizioni ambiente: Ordinarie - Classe di esposizione: X0									
Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cmq - Tipo di armatura: Armature Poco Sensibili									
Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cmq									
Resistenza a trazione fctm = 28.90kg/cmq - Resistenza a trazione-flessione fcfm = 34.68kg/cmq									
Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00									
COMBINAZIONI RARE									
Momento soll. = 120.98kgm - Asse neutro = 3.08cm									
Compressione calc. = 6.82kg/cmq - Compressione limite calc. = 139.44kg/cmq									
Trazione acciaio = 637.10kg/cmq - Trazione limite acciaio = 3600.00kg/cmq									
COMBINAZIONI FREQUENTI									
Momento soll. = 98.92kgm - Asse neutro = 3.08cm									
Compressione calc. = 5.57kg/cmq									
Trazione acciaio = 520.93kg/cmq									
COMBINAZIONI QUASI PERMANENTI									
Momento soll. = 93.42kgm - Asse neutro = 3.08cm									
Compressione calc. = 5.26kg/cmq - Compressione limite calc. = 104.58kg/cmq									
Trazione acciaio = 491.96kg/cmq									
APERTURA DELLE FESSURE									
Modulo W sezione interamente reagente = 1624.66cm3 - Momento di fessurazione = W*fcfm = 469.51kgm									
Diametro medio tondini = 6.33mm - Ricoprimento armatura c = 13.76mm									
Distanza fra le barre s = 40.00mm - Tensione acciaio = 2472.42kg/cmq									
Area efficace Ac,eff = 50.79cmq - Area acciaio teso = 0.90cmq - Rapporto As/Aeff Ro = 0.018									
COMBINAZIONI FREQUENTI									
Combinazione non fessurata									
COMBINAZIONI QUASI PERMANENTI									
Combinazione non fessurata									
CAMPATA 2									
SOLAIO TRAVETTO H = 20+4									
tipo BAUSTA									
Metodo di Calcolo: Stati limite D.M.14/01/2008									
Calcestruzzo: C28/35 - Tipo acciaio:B450C - Tensione caratteristica = 4500 Kg/cmq									
Gamma_calc. = 1.50 - Fck = 290.50 Kg/cmq - Fcd = 164.62 Kg/cmq									
Gamma_acciaio = 1.15 - Fyd = 3913.04 Kg/cmq									
Tralicci n° 1 2ø5+1ø7 H=9.5cm - Rete sup. ø8 20x20 - Rete inf. non presente									
Copriferro sup. = 2.00cm - Copriferro inf. = 2.00cm - Copriferro confezione = 1.30cm									
Luce cal = 2.57m - Interasse = 50.0cm - Altezza = 24.0cm - Nervat = 12.0cm - Cappa = 4.0cm									

Descrizione	distanza	Momento F.	Area inf.	Area sup.	Momento R.	Mr/Mf	Epsilon	Epsilon	
	m	Kgm/int	cmq	cmq	Kgm/int		calc %	acc %	

Asse app. sx	0.00	-251.01	0.00	0.50	427.76	1.70	1.5	67.5	
Filo all. sx	0.30	-127.77	0.90	1.76	1364.36	10.68	3.5	15.0	
Max. campata	1.54	151.38	0.90	1.26	802.69	5.30	3.5	47.2	
Filo all. dx	2.27	75.04	1.68	1.76	1319.11	17.58	3.5	53.6	
Asse app. dx	2.57	-94.89	0.79	0.50	532.41	5.61	3.0	67.5	
Per solette con spessore minore di 50 mm resistenza a compressione = 0.80*Fcd									

Descrizione	Taglio filo	Vrd filo	Taglio banc.	Vrd banc.	Largh.	Nerva.	Vrds	Area	Dist.
	Kg	Kg	Kg	Kg	cm	cm	Kg	cmq	cm

Appoggio sx	409.52	5720.14	380.77	1372.84	0.00	12.00	0.00	0.00	0.00
		81487.14		19556.91					
Appoggio dx	-237.53	5387.06	-208.78	1457.47	0.00	12.00	0.00	0.00	0.00

Relazione di calcolo

74079.22 17779.01
Vrd = $0,18 * k * (100 * \rho_{ol} * f_{ck})^{1/3} / \gamma_C \geq (v_{min}) * b_w * d$
Vrcd = $0,9 * d * b_w * f'_{cd} * (\text{ctg } \alpha + 1) / (1 + 1)$
Vrzd = $0,9 * d * (A_{sw} / s) * f_{yd} * (\text{ctg } \alpha + 1) \sin \alpha$
Freccia solaio = 0.028cm - Momento di inerzia = 5865cm⁴
Deformazione massima viscosa = 0.514cm - Freccia solaio tempo infinito = 0.055cm
Umidità relativa = 75% - Tempo di applicazione del carico = 30 gg - Coeff. Viscosità = 1.80
VERIFICA TRALICCIO
Lunghezza traliccio = 2.27m - Altezza traliccio = 9.5cm - Passo staffe = 20.0cm
Diametro sup. = 7mm - Diametro inf. = 5mm - Diametro sta. = 5mm
Area sup. = 0.39cm² - Area inf. = 0.39cm² - Area sta. = 0.20cm²
Asse neutro = 4.29cm - Momento inerzia = 14.05
W inferiore = 3.27cm³ - W superiore = 3.341cm³
Corrente superiore
Lunghezza libera = 16.00cm - Lambda = 1.35 - alfa = 0.49 - Fi = 1.69 - Chi = 0.37 - Nb,Rd = 545.90kg
Lunghezza rompitratta corrente superiore = 1.24m
Lunghezza rompitratta mensola = 1.02m
Staffe
Lunghezza libera = 14.04cm - Lambda = 1.66 - alfa = 0.49 - Fi = 2.23 - Chi = 0.27 - Nb,Rd = 202.80kg - Seno alfa = 0.80
Lunghezza rompitratta staffa = 2.0m
Numero tralicci = 1
Freccia massima = 1.68m
STATI LIMITE DI ESERCIZIO
Condizioni ambiente: Ordinarie - Classe di esposizione: X0
Tipo acciaio: B450C - Tensione caratteristica = 4500.0kg/cm² - Tipo di armatura: Armature Poco Sensibili
Tipo calcestruzzo Rck = 350 - Resistenza cilindrica fck = 290.50kg/cm²
Resistenza a trazione fctm = 28.90kg/cm² - Resistenza a trazione-flessione fcfm = 34.68kg/cm²
Coefficiente betal = 1 - Coefficiente betal = 0.50 - Coefficiente omogen. = 15.00
COMBINAZIONI RARE
Momento soll. = 103.01kgm - Asse neutro = 3.08cm
Compressione calc. = 5.80kg/cm² - Compressione limite calc. = 139.44kg/cm²
Trazione acciaio = 542.47kg/cm² - Trazione limite acciaio = 3600.00kg/cm²
COMBINAZIONI FREQUENTI
Momento soll. = 83.07kgm - Asse neutro = 3.08cm
Compressione calc. = 4.68kg/cm²
Trazione acciaio = 437.43kg/cm²
COMBINAZIONI QUASI PERMANENTI
Momento soll. = 78.10kgm - Asse neutro = 3.08cm
Compressione calc. = 4.40kg/cm² - Compressione limite calc. = 104.58kg/cm²
Trazione acciaio = 411.26kg/cm²
APERTURA DELLE FESSURE
Modulo W sezione interamente reagente = 1743.80cm³ - Momento di fessurazione = W*fcfm = 503.94kgm
Diametro medio tondini = 6.33mm - Ricoprimento armatura c = 13.76mm
Distanza fra le barre s = 40.00mm - Tensione acciaio = 2653.73kg/cm²
Area efficace Ac,eff = 50.79cm² - Area acciaio teso = 0.90cm² - Rapporto As/Aeff Ro = 0.018
COMBINAZIONI FREQUENTI
Combinazione non fessurata
COMBINAZIONI QUASI PERMANENTI
Combinazione non fessurata

Verifiche e armature pareti

Simbologia

CC = Numero della combinazione delle condizioni di carico elementari
Zona = Zona di verifica
Zv = Coordinata Z di verifica
Xi = Coordinata X iniziale
Xf = Coordinata X finale
Xv = Coordinata X di verifica
TCC = Tipo di combinazione di carico
SLU = Stato limite ultimo
SLU S = Stato limite ultimo (azione sismica)
SLE R = Stato limite d'esercizio, combinazione rara
SLE F = Stato limite d'esercizio, combinazione frequente
SLE Q = Stato limite d'esercizio, combinazione quasi permanente
SLD = Stato limite di danno
SLV = Stato limite di salvaguardia della vita
SLC = Stato limite di prevenzione del collasso
SLO = Stato limite di operatività
SLU I = Stato limite di resistenza al fuoco
N = Sforzo normale
My = Momento flettente intorno all'asse Y
Nu = Sforzo normale ultimo
Myu = Momento ultimo intorno all'asse Y
Sic. = Sicurezza a rottura
 σ_c = Tensione nel calcestruzzo
 σ_f = Tensione nel ferro
c = Ricoprimento dell'armatura
s = Distanza minima tra le barre

Relazione di calcolo

K3	= Coefficiente di forma del diagramma delle tensioni prima della fessurazione
s_{rm}	= Distanza media tra le fessure
ϕ	= Diametro della barra
A_s	= Area complessiva dei ferri nell'area di calcestruzzo efficace
$A_{c\ eff}$	= Area di calcestruzzo efficace
σ_s	= Tensione nell'acciaio nella sezione fessurata
σ_{sr}	= Tensione nell'acciaio corrispondente al raggiungimento della resistenza a trazione nel calcestruzzo
ϵ_{sm}	= Deformazione unitaria media dell'armatura (*1000)
Wk	= Apertura delle fessure
Ty	= Taglio in dir. Y
Tz	= Taglio in dir. Z
Vsdu	= Taglio agente nella direzione del momento ultimo
VRsd	= Taglio ultimo lato armatura
VRcd	= Taglio ultimo lato calcestruzzo
Vrdu	= Taglio ultimo assorbibile dal solo calcestruzzo
Sic.T	= Sicurezza a rottura per taglio
Sez.	= Sezione di verifica
Spess.	= Spessore
Cf	= Copriferro
Cls	= Tipo di calcestruzzo
Fck	= Resistenza caratteristica cilindrica a compressione del calcestruzzo
Fctk	= Resistenza caratteristica a trazione del calcestruzzo
Fcd	= Resistenza di calcolo a compressione del calcestruzzo
Fctd	= Resistenza di calcolo a trazione del calcestruzzo
Acc.	= Tipo di acciaio
Fyk	= Tensione caratteristica di snervamento dell'acciaio
Fyd	= Resistenza di calcolo dell'acciaio

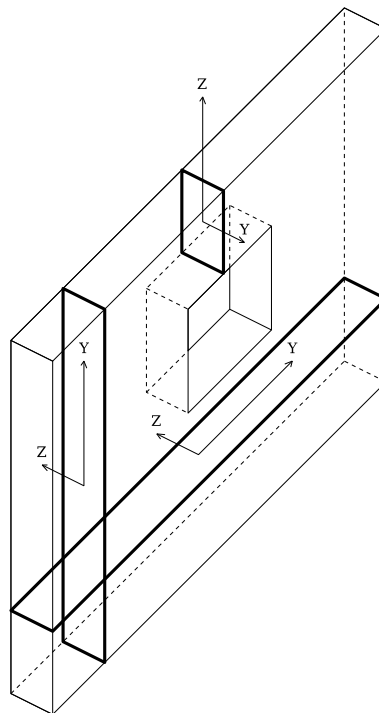


Figura numero 3: Riferimenti sezione

Parete n. 104

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Spess. <cm>	Cf	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Acc.	Fyk <daN/cm²>	Fyd <daN/cm²>
Oriz.	30.00	4.60	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Verifiche su sezioni orizzontali

Stato limite ultimo - Armatura a flessione

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	Nu <daN>	Myu <daNm>	Sic.
1	SLV	Diff.	0.00	0.00	2.65	-54471.20	14163.00	-54474.60	23602.70	1.667
2	SLD	Diff.	0.00	0.00	2.65	-54756.50	11099.30	-54759.50	27248.00	2.455
1	SLV	Diff.	1.27	0.00	2.65	-54471.20	14163.00	-54474.60	23602.70	1.667
2	SLD	Diff.	1.27	0.00	2.65	-54756.50	11099.30	-54759.50	27248.00	2.455

Relazione di calcolo

9	SLV	Diff.	2.54	0.00	2.65	-52349.70	-5611.51	-52349.90	-23367.70	4.164
10	SLD	Diff.	2.54	0.00	2.65	-52539.00	-4498.55	-52541.60	-26995.50	6.001
1	SLV	Diff.	3.81	0.00	2.65	-49465.30	-4505.75	-49466.40	-23048.70	5.115
2	SLD	Diff.	3.81	0.00	2.65	-49750.60	-3654.36	-49754.00	-26678.40	7.300

Stato limite d'esercizio - Armatura a flessione

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	σ_c <daN/cm ² >	σ_f <daN/cm ² >
23	SLE R	Diff.	0.00	0.00	2.65	-61938.20	523.25	8.53	122.37
31	SLE Q	Diff.	0.00	0.00	2.65	-55755.80	460.82	7.65	109.91
23	SLE R	Diff.	1.27	0.00	2.65	-61938.20	523.25	8.53	122.37
31	SLE Q	Diff.	1.27	0.00	2.65	-55755.80	460.82	7.65	109.91
24	SLE R	Diff.	2.54	0.00	2.65	-59445.90	-670.08	8.57	121.46
32	SLE Q	Diff.	2.54	0.00	2.65	-53263.50	-592.52	7.66	108.64
23	SLE R	Diff.	3.81	0.00	2.65	-56932.20	-1256.17	9.62	131.04
31	SLE Q	Diff.	3.81	0.00	2.65	-50749.80	-1045.52	8.41	115.04

Stato limite ultimo - Armatura a taglio

CC	Zona	Zv <m>	Xi <m>	Xf <m>	TCC	Ty <daN>	Tz <daN>	Vsdu <daN>	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
1	Diff.	0.00	0.00	2.65	SLV	0.00	-7359.12	7359.12			39840.80	5.41
1	Diff.	1.27	0.00	2.65	SLV	0.00	-7359.12	7359.12			39840.80	5.41
1	Diff.	2.54	0.00	2.65	SLV	0.00	-7359.12	7359.12			39514.90	5.37
1	Diff.	3.81	0.00	2.65	SLV	0.00	-7359.13	7359.13			39205.30	5.33

Parete n. 105

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Spess. <cm>	Cf <cm>	Cls	Fck <daN/cm ² >	Fctk <daN/cm ² >	Fcd <daN/cm ² >	Fctd <daN/cm ² >	Acc.	Fyk <daN/cm ² >	Fyd <daN/cm ² >
Oriz.	30.00	4.60	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Verifiche su sezioni orizzontali

Stato limite ultimo - Armatura a flessione

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	Nu <daN>	Myu <daNm>	Sic.
9	SLV	Diff.	0.00	0.00	2.65	-40960.80	-15064.70	-40962.20	-22106.20	1.467
10	SLD	Diff.	0.00	0.00	2.65	-41837.50	-12032.40	-41842.10	-25779.30	2.142
9	SLV	Diff.	1.27	0.00	2.65	-40960.80	-15064.70	-40962.20	-22106.20	1.467
10	SLD	Diff.	1.27	0.00	2.65	-41837.50	-12032.40	-41842.10	-25779.30	2.142
1	SLV	Diff.	2.54	0.00	2.65	-39515.40	5907.71	-39517.00	21946.30	3.715
2	SLD	Diff.	2.54	0.00	2.65	-40150.30	4763.38	-40151.00	25589.30	5.372
9	SLV	Diff.	3.81	0.00	2.65	-35954.60	5517.70	-35957.20	21551.70	3.906
10	SLD	Diff.	3.81	0.00	2.65	-36831.40	4722.24	-36832.90	25215.10	5.340

Stato limite d'esercizio - Armatura a flessione

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	σ_c <daN/cm ² >	σ_f <daN/cm ² >
24	SLE R	Diff.	0.00	0.00	2.65	-49451.60	-1697.36	9.76	128.35
32	SLE Q	Diff.	0.00	0.00	2.65	-44900.10	-1506.85	8.78	115.71
24	SLE R	Diff.	1.27	0.00	2.65	-49451.60	-1697.36	9.76	128.35
32	SLE Q	Diff.	1.27	0.00	2.65	-44900.10	-1506.85	8.78	115.71
23	SLE R	Diff.	2.54	0.00	2.65	-47125.10	904.81	7.65	105.24
31	SLE Q	Diff.	2.54	0.00	2.65	-42573.60	744.90	6.75	93.34
24	SLE R	Diff.	3.81	0.00	2.65	-44445.60	2823.55	11.90	147.56
32	SLE Q	Diff.	3.81	0.00	2.65	-39894.10	2330.54	10.13	126.90

Stato limite ultimo - Armatura a taglio

CC	Zona	Zv <m>	Xi <m>	Xf <m>	TCC	Ty <daN>	Tz <daN>	Vsdu <daN>	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
9	Diff.	0.00	0.00	2.65	SLV	0.00	8081.02	8081.02			38125.30	4.72
9	Diff.	1.27	0.00	2.65	SLV	0.00	8081.02	8081.02			38125.30	4.72
9	Diff.	2.54	0.00	2.65	SLV	0.00	8081.02	8081.02			37799.40	4.68
9	Diff.	3.81	0.00	2.65	SLV	0.00	8081.03	8081.03			37489.10	4.64

Parete n. 204

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Spess. <cm>	Cf <cm>	Cls	Fck <daN/cm ² >	Fctk <daN/cm ² >	Fcd <daN/cm ² >	Fctd <daN/cm ² >	Acc.	Fyk <daN/cm ² >	Fyd <daN/cm ² >
Oriz.	30.00	4.60	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Verifiche su sezioni orizzontali

Stato limite ultimo - Armatura a flessione

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	Nu <daN>	Myu <daNm>	Sic.
1	SLV	Diff.	0.00	0.00	2.65	-23637.30	6243.03	-23641.60	20185.50	3.233

Relazione di calcolo

2	SLD	Diff.	0.00	0.00	2.65	-23745.50	5057.45	-23750.50	23735.10	4.693
1	SLV	Diff.	1.23	0.00	2.65	-21798.90	1784.68	-21803.30	19980.90	11.196
2	SLD	Diff.	1.23	0.00	2.65	-21907.00	1407.53	-21910.70	23526.40	16.715
1	SLV	Diff.	2.47	0.00	2.65	-19960.50	-3181.09	-19964.30	-19775.20	6.216
2	SLD	Diff.	2.47	0.00	2.65	-20068.60	-2537.52	-20070.80	-23316.10	9.189
1	SLV	Diff.	3.70	0.00	2.65	-18122.10	-7752.11	-18126.90	-19570.50	2.525
2	SLD	Diff.	3.70	0.00	2.65	-18230.20	-6259.03	-18231.50	-23107.20	3.692

Stato limite d'esercizio - Armatura a flessione

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	σ_c <daN/cm ² >	σ_f <daN/cm ² >
21	SLE R	Diff.	0.00	0.00	2.65	-25842.60	1439.69	6.38	80.39
29	SLE Q	Diff.	0.00	0.00	2.65	-24130.60	1202.29	5.62	71.59
21	SLE R	Diff.	1.23	0.00	2.65	-24004.20	594.63	4.21	56.81
29	SLE Q	Diff.	1.23	0.00	2.65	-22292.10	475.49	3.73	50.92
23	SLE R	Diff.	2.47	0.00	2.65	-22157.60	-286.95	3.28	46.16
31	SLE Q	Diff.	2.47	0.00	2.65	-20445.60	-287.84	3.08	43.15
23	SLE R	Diff.	3.70	0.00	2.65	-20319.20	-1145.01	5.05	63.54
31	SLE Q	Diff.	3.70	0.00	2.65	-18607.20	-1027.64	4.57	57.66

Stato limite ultimo - Armatura a taglio

CC	Zona	Zv <m>	Xi <m>	Xf <m>	TCC	Ty <daN>	Tz <daN>	Vsdu <daN>	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
1	Diff.	0.00	0.00	2.65	SLV	0.00	-5006.57	5006.57			35924.70	7.18
1	Diff.	1.23	0.00	2.65	SLV	0.00	-5006.56	5006.56			35691.20	7.13
1	Diff.	2.47	0.00	2.65	SLV	0.00	-5006.56	5006.56			35458.40	7.08
1	Diff.	3.70	0.00	2.65	SLV	0.00	-5006.57	5006.57			35225.00	7.04

Parete n. 205

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Spess. <cm>	Cf <cm>	Cls	Fck <daN/cm ² >	Fctk <daN/cm ² >	Fcd <daN/cm ² >	Fctd <daN/cm ² >	Acc.	Fyk <daN/cm ² >	Fyd <daN/cm ² >
Oriz.	30.00	4.60	C28/35	290.50	19.84	164.62	13.23	B450C	4500.00	3913.04

Verifiche su sezioni orizzontali

Stato limite ultimo - Armatura a flessione

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	Nu <daN>	Myu <daNm>	Sic.
9	SLV	Diff.	0.00	0.00	2.65	-18031.90	-7515.84	-18034.00	-19560.40	2.603
10	SLD	Diff.	0.00	0.00	2.65	-18335.60	-6520.40	-18338.90	-23119.80	3.546
9	SLV	Diff.	1.23	0.00	2.65	-16193.50	-2309.34	-16194.20	-19355.20	8.381
10	SLD	Diff.	1.23	0.00	2.65	-16497.20	-1955.63	-16500.70	-22910.80	11.715
9	SLV	Diff.	2.47	0.00	2.65	-14355.10	3493.51	-14359.60	19151.10	5.482
10	SLD	Diff.	2.47	0.00	2.65	-14658.70	2954.37	-14663.30	22702.60	7.684
9	SLV	Diff.	3.70	0.00	2.65	-12516.60	8831.16	-12516.80	18945.40	2.145
10	SLD	Diff.	3.70	0.00	2.65	-12820.30	7605.08	-12821.20	22493.00	2.958

Stato limite d'esercizio - Armatura a flessione

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	σ_c <daN/cm ² >	σ_f <daN/cm ² >
24	SLE R	Diff.	0.00	0.00	2.65	-20654.60	-3978.37	18.93	430.15
32	SLE Q	Diff.	0.00	0.00	2.65	-19388.80	-3407.44	15.95	328.15
22	SLE R	Diff.	1.23	0.00	2.65	-18875.40	-1446.09	5.85	70.17
30	SLE Q	Diff.	1.23	0.00	2.65	-17609.70	-1174.01	4.88	60.05
24	SLE R	Diff.	2.47	0.00	2.65	-16977.70	1109.05	4.63	57.23
32	SLE Q	Diff.	2.47	0.00	2.65	-15711.90	1082.28	4.46	54.61
24	SLE R	Diff.	3.70	0.00	2.65	-15139.30	3652.77	17.90	491.90
32	SLE Q	Diff.	3.70	0.00	2.65	-13873.50	3327.14	16.29	445.85

Verifiche stato limite di formazione delle fessure

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	c <mm>	s <mm>	K3	s_{rm} <mm>	Φ	A_s <cm ² >	$A_{c\ eff}$ <cm ² >	σ_s <daN/cm ² >	σ_{sr} <daN/cm ² >	s_{sm}	Wk <mm>
32	SLE Q	Diff.	0.00	0.00	2.65	-19388.80	-3407.44	40.00	168.00	0.13	209.79	12.00	1.13	181.31	328.15	2009.42	0.06	0.02
28	SLE F	Diff.	0.00	0.00	2.65	-19646.10	-3564.93	40.00	168.00	0.13	209.79	12.00	1.13	181.31	358.22	2069.78	0.07	0.02
26	SLE F	Diff.	1.23	0.00	2.65	-17867.00	-1258.02	40.00	168.00	0.13	209.79	12.00	1.13	181.31	2.38	103.20	0.00	0.00
32	SLE Q	Diff.	2.47	0.00	2.65	-15711.90	1082.28	40.00	168.00	0.13	209.78	12.00	1.13	181.30	0.93	50.06	0.00	0.00
32	SLE Q	Diff.	3.70	0.00	2.65	-13873.50	3327.14	40.00	168.00	0.13	209.78	12.00	1.13	181.30	445.85	2518.44	0.09	0.03
28	SLE F	Diff.	3.70	0.00	2.65	-14130.80	3390.09	40.00	168.00	0.13	209.78	12.00	1.13	181.30	454.42	2518.95	0.09	0.03

Stato limite ultimo - Armatura a taglio

CC	Zona	Zv <m>	Xi <m>	Xf <m>	TCC	Ty <daN>	Tz <daN>	Vsdu <daN>	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.T
9	Diff.	0.00	0.00	2.65	SLV	0.00	5846.55	5846.55			35213.00	6.02
9	Diff.	1.23	0.00	2.65	SLV	0.00	5846.54	5846.54			34979.50	5.98
9	Diff.	2.47	0.00	2.65	SLV	0.00	5846.54	5846.54			34746.00	5.94
9	Diff.	3.70	0.00	2.65	SLV	0.00	5846.55	5846.55			34512.50	5.90

Seravezza, 28 ottobre 2016

Dott. Ing. Riccardo Feliciani