

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
Risulta	1.327e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.312	0.762	0.377	0.0	0.0	8.087e+04	60.9	0.82	6.19e-04	0.0	0.0
2	1.455	0.687	0.418	1.013e+05	76.3	0.0	0.0	0.0	0.0	0.0	0.0
3	1.837	0.544	0.528	0.0	0.0	0.65	4.87e-04	5.502e+04	41.5	0.0	0.0
4	2.687	0.372	0.643	1.29	9.69e-04	0.0	0.0	0.0	0.0	0.0	0.0
5	3.058	0.327	0.643	0.0	0.0	46.46	3.50e-02	45.42	3.42e-02	0.0	0.0
6	4.215	0.237	0.643	0.0	0.0	2.910e+04	21.9	0.05	3.94e-05	0.0	0.0
7	5.870	0.170	0.643	59.69	4.50e-02	0.0	0.0	0.0	0.0	0.0	0.0
8	6.400	0.156	0.643	11.91	8.98e-03	0.0	0.0	0.0	0.0	0.0	0.0
9	7.854	0.127	0.586	0.0	0.0	865.30	0.7	0.02	1.20e-05	0.0	0.0
10	9.002	0.111	0.544	0.0	0.0	6510.59	4.9	17.14	1.29e-02	0.0	0.0
11	9.403	0.106	0.531	0.0	0.0	14.72	1.11e-02	68.91	5.19e-02	0.0	0.0
12	9.487	0.105	0.529	3.089e+04	23.3	0.0	0.0	0.0	0.0	0.0	0.0
13	10.331	0.097	0.506	0.0	0.0	11.97	9.02e-03	9872.92	7.4	0.0	0.0
14	11.478	0.087	0.480	0.0	0.0	1.378e+04	10.4	0.07	5.03e-05	0.0	0.0
15	12.121	0.083	0.468	44.05	3.32e-02	0.0	0.0	0.0	0.0	0.0	0.0
16	13.032	0.077	0.453	0.0	0.0	1404.38	1.1	7.48	5.64e-03	0.0	0.0
17	18.865	0.053	0.391	0.0	0.0	1.21e-04	0.0	2.848e+04	21.5	0.0	0.0
18	21.044	0.048	0.376	0.0	0.0	98.19	7.40e-02	96.10	7.24e-02	0.0	0.0
19	23.664	0.042	0.362	0.0	0.0	0.11	7.94e-05	3.894e+04	29.3	0.0	0.0
20	26.700	0.037	0.350	421.23	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				1.327e+05		1.327e+05		1.325e+05			
In percentuale				99.98		99.99		99.87			

CDC	Tipo	Sigla Id	Note
3	Eck	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.430
			ordinata spettro (tratto Tb-Tc) = 0.643 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.687 sec.
			fattore q: 1.000
			fattore per spost. mu d: 1.000
			classe di duttilità CD: B
			numero di modi considerati: 20
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
820.00	1.116e+04	2125.00	125.00	0.0	10.00	2125.00	125.00	1.909	0.0	0.0
620.00	5.849e+04	2125.00	125.00	0.0	10.00	2125.00	125.00	3.000	0.0	0.0
610.00	1670.15	2125.00	125.00	0.0	12.50	2125.00	125.00	2.989	0.0	0.0
571.88	3288.28	2125.00	125.00	0.0	12.50	2125.00	125.00	2.989	0.0	0.0
533.75	2630.63	2125.00	125.00	0.0	12.50	2125.00	125.00	2.989	0.0	0.0
495.63	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
457.50	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
419.38	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
381.25	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
343.13	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
305.00	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
266.88	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
228.75	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
190.63	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
152.50	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
114.38	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
76.25	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
38.13	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	82 di 288

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
0.0	2.978e+04	2125.00	125.00	0.0	12.50	2125.00	125.00	2.721	0.0	0.0
-10.00	47.51	2125.00	125.00	0.0	10.00	0.0	0.0	0.0	0.0	0.0
Risulta	1.327e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.312	0.762	0.377	0.0	0.0	8.087e+04	60.9	0.59	4.45e-04	0.0	0.0
2	1.455	0.687	0.418	1.013e+05	76.3	0.0	0.0	0.0	0.0	0.0	0.0
3	1.837	0.544	0.528	0.0	0.0	0.18	1.32e-04	5.502e+04	41.5	0.0	0.0
4	2.687	0.372	0.643	0.01	1.12e-05	0.0	0.0	0.0	0.0	0.0	0.0
5	3.058	0.327	0.643	0.0	0.0	46.76	3.52e-02	45.01	3.39e-02	0.0	0.0
6	4.215	0.237	0.643	0.0	0.0	2.910e+04	21.9	0.05	3.59e-05	0.0	0.0
7	5.868	0.170	0.643	53.97	4.07e-02	0.0	0.0	0.0	0.0	0.0	0.0
8	6.229	0.161	0.643	10.78	8.12e-03	0.0	0.0	0.0	0.0	0.0	0.0
9	7.852	0.127	0.586	0.0	0.0	855.17	0.6	1.00e-04	0.0	0.0	0.0
10	8.976	0.111	0.544	0.0	0.0	5957.46	4.5	8.11	6.11e-03	0.0	0.0
11	9.415	0.106	0.531	0.0	0.0	683.75	0.5	106.70	8.04e-02	0.0	0.0
12	9.483	0.105	0.529	3.089e+04	23.3	0.0	0.0	0.0	0.0	0.0	0.0
13	10.335	0.097	0.506	0.0	0.0	41.66	3.14e-02	9845.60	7.4	0.0	0.0
14	11.526	0.087	0.480	0.0	0.0	1.419e+04	10.7	1.93	1.46e-03	0.0	0.0
15	12.553	0.080	0.461	47.06	3.55e-02	0.0	0.0	0.0	0.0	0.0	0.0
16	13.500	0.074	0.446	0.0	0.0	866.23	0.7	0.55	4.18e-04	0.0	0.0
17	18.854	0.053	0.391	0.0	0.0	0.30	2.29e-04	2.831e+04	21.3	0.0	0.0
18	21.441	0.047	0.374	0.0	0.0	87.19	6.57e-02	594.02	0.4	0.0	0.0
19	23.676	0.042	0.362	0.0	0.0	0.49	3.71e-04	3.862e+04	29.1	0.0	0.0
20	26.566	0.038	0.350	426.64	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				1.327e+05		1.327e+05		1.325e+05			
In percentuale				99.98		99.99		99.87			

CDC	Tipo	Sigla Id	Note
4	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.430
			ordinata spettro (tratto Tb-Tc) = 0.643 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.764 sec.
			fattore q: 1.000
			fattore per spost. mu d: 1.000
			classe di duttilità CD: B
			numero di modi considerati: 20
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
820.00	1.116e+04	2125.00	125.00	202.50	0.0	2125.00	125.00	1.909	0.0	0.0
620.00	5.849e+04	2125.00	125.00	202.50	0.0	2125.00	125.00	3.000	0.0	0.0
610.00	1670.15	2125.00	125.00	202.50	0.0	2125.00	125.00	2.989	0.0	0.0
571.88	3288.28	2125.00	125.00	202.50	0.0	2125.00	125.00	2.989	0.0	0.0
533.75	2630.63	2125.00	125.00	202.50	0.0	2125.00	125.00	2.989	0.0	0.0
495.63	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
457.50	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
419.38	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
381.25	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
343.13	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
305.00	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
266.88	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
228.75	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
190.63	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
152.50	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
114.38	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	83 di 288

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
76.25	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
38.13	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
0.0	2.978e+04	2125.00	125.00	212.50	0.0	2125.00	125.00	2.721	0.0	0.0
-10.00	47.51	2125.00	125.00	210.00	0.0	0.0	0.0	0.0	0.0	0.0
Risulta	1.327e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.310	0.764	0.377	0.05	3.40e-05	8.108e+04	61.1	0.68	5.12e-04	0.0	0.0
2	1.455	0.687	0.418	1.013e+05	76.3	0.04	2.93e-05	1.68e-06	0.0	0.0	0.0
3	1.837	0.544	0.528	3.83e-06	0.0	0.35	2.65e-04	5.502e+04	41.5	0.0	0.0
4	2.692	0.371	0.643	0.24	1.81e-04	254.94	0.2	1.58	1.19e-03	0.0	0.0
5	3.063	0.326	0.643	3.36e-03	2.54e-06	127.38	9.60e-02	43.80	3.30e-02	0.0	0.0
6	4.249	0.235	0.643	0.01	1.07e-05	2.858e+04	21.5	2.41e-03	1.82e-06	0.0	0.0
7	5.866	0.170	0.643	54.35	4.10e-02	0.86	6.49e-04	6.12e-04	0.0	0.0	0.0
8	6.293	0.159	0.643	0.03	1.92e-05	9.24	6.96e-03	0.03	1.96e-05	0.0	0.0
9	6.702	0.149	0.643	0.94	7.09e-04	3.43	2.59e-03	0.23	1.73e-04	0.0	0.0
10	8.060	0.124	0.578	0.10	7.90e-05	1370.32	1.0	0.22	1.68e-04	0.0	0.0
11	9.178	0.109	0.538	1.83	1.38e-03	7307.98	5.5	16.52	1.24e-02	0.0	0.0
12	9.511	0.105	0.528	3.095e+04	23.3	0.37	2.76e-04	0.09	6.73e-05	0.0	0.0
13	9.564	0.105	0.526	33.82	2.55e-02	1.85	1.39e-03	130.32	9.82e-02	0.0	0.0
14	10.335	0.097	0.506	0.01	9.41e-06	17.83	1.34e-02	9806.89	7.4	0.0	0.0
15	11.641	0.086	0.477	0.06	4.41e-05	1.310e+04	9.9	0.08	5.78e-05	0.0	0.0
16	14.616	0.068	0.431	3.33	2.51e-03	667.09	0.5	37.78	2.85e-02	0.0	0.0
17	16.426	0.061	0.411	7.73	5.82e-03	166.98	0.1	11.86	8.94e-03	0.0	0.0
18	18.826	0.053	0.391	0.12	9.06e-05	0.48	3.59e-04	2.774e+04	20.9	0.0	0.0
19	23.589	0.042	0.363	0.20	1.49e-04	0.10	7.51e-05	3.971e+04	29.9	0.0	0.0
20	28.054	0.036	0.345	390.02	0.3	0.06	4.72e-05	7.07	5.33e-03	0.0	0.0
Risulta				1.327e+05		1.327e+05		1.325e+05			
In percentuale				99.99		99.99		99.86			

CDC	Tipo	Sigla Id	Note
5	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.430
			ordinata spettro (tratto Tb-Tc) = 0.643 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.764 sec.
			fattore q: 1.000
			fattore per spost. mu d: 1.000
			classe di duttilità CD: B
			numero di modi considerati: 20
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
820.00	1.116e+04	2125.00	125.00	-202.50	0.0	2125.00	125.00	1.909	0.0	0.0
620.00	5.849e+04	2125.00	125.00	-202.50	0.0	2125.00	125.00	3.000	0.0	0.0
610.00	1670.15	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.989	0.0	0.0
571.88	3288.28	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.989	0.0	0.0
533.75	2630.63	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.989	0.0	0.0
495.63	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
457.50	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
419.38	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
381.25	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
343.13	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
305.00	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
266.88	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
228.75	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
190.63	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	84 di 288

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
152.50	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
114.38	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
76.25	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
38.13	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
0.0	2.978e+04	2125.00	125.00	-212.50	0.0	2125.00	125.00	2.721	0.0	0.0
-10.00	47.51	2125.00	125.00	-210.00	0.0	0.0	0.0	0.0	0.0	0.0
Risulta	1.327e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.310	0.764	0.377	0.05	3.40e-05	8.108e+04	61.1	0.68	5.12e-04	0.0	0.0
2	1.455	0.687	0.418	1.013e+05	76.3	0.04	2.93e-05	1.68e-06	0.0	0.0	0.0
3	1.837	0.544	0.528	3.83e-06	0.0	0.35	2.65e-04	5.502e+04	41.5	0.0	0.0
4	2.692	0.371	0.643	0.24	1.81e-04	254.94	0.2	1.58	1.19e-03	0.0	0.0
5	3.063	0.326	0.643	3.36e-03	2.54e-06	127.38	9.60e-02	43.80	3.30e-02	0.0	0.0
6	4.249	0.235	0.643	0.01	1.07e-05	2.858e+04	21.5	2.41e-03	1.82e-06	0.0	0.0
7	5.866	0.170	0.643	54.35	4.10e-02	0.86	6.49e-04	6.12e-04	0.0	0.0	0.0
8	6.293	0.159	0.643	0.03	1.92e-05	9.24	6.96e-03	0.03	1.96e-05	0.0	0.0
9	6.702	0.149	0.643	0.94	7.09e-04	3.43	2.59e-03	0.23	1.73e-04	0.0	0.0
10	8.060	0.124	0.578	0.10	7.90e-05	1370.32	1.0	0.22	1.68e-04	0.0	0.0
11	9.178	0.109	0.538	1.83	1.38e-03	7307.98	5.5	16.52	1.24e-02	0.0	0.0
12	9.511	0.105	0.528	3.095e+04	23.3	0.37	2.76e-04	0.09	6.73e-05	0.0	0.0
13	9.564	0.105	0.526	33.82	2.55e-02	1.85	1.39e-03	130.32	9.82e-02	0.0	0.0
14	10.335	0.097	0.506	0.01	9.41e-06	17.83	1.34e-02	9806.89	7.4	0.0	0.0
15	11.641	0.086	0.477	0.06	4.41e-05	1.310e+04	9.9	0.08	5.78e-05	0.0	0.0
16	14.616	0.068	0.431	3.33	2.51e-03	667.09	0.5	37.78	2.85e-02	0.0	0.0
17	16.426	0.061	0.411	7.73	5.82e-03	166.98	0.1	11.86	8.94e-03	0.0	0.0
18	18.826	0.053	0.391	0.12	9.06e-05	0.48	3.59e-04	2.774e+04	20.9	0.0	0.0
19	23.589	0.042	0.363	0.20	1.49e-04	0.10	7.51e-05	3.971e+04	29.9	0.0	0.0
20	28.054	0.036	0.345	390.02	0.3	0.06	4.72e-05	7.07	5.33e-03	0.0	0.0
Risulta				1.327e+05		1.327e+05		1.325e+05			
In percentuale				99.99		99.99		99.86			

CDC	Tipo	Sigla Id	Note
6	Eck	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.243 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.687 sec.
			numero di modi considerati: 20
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
820.00	1.116e+04	2125.00	125.00	0.0	-10.00	2125.00	125.00	1.909	0.0	0.0
620.00	5.849e+04	2125.00	125.00	0.0	-10.00	2125.00	125.00	3.000	0.0	0.0
610.00	1670.15	2125.00	125.00	0.0	-12.50	2125.00	125.00	2.989	0.0	0.0
571.88	3288.28	2125.00	125.00	0.0	-12.50	2125.00	125.00	2.989	0.0	0.0
533.75	2630.63	2125.00	125.00	0.0	-12.50	2125.00	125.00	2.989	0.0	0.0
495.63	1972.97	2125.00	125.00	0.0	-7.50	2125.00	125.00	2.996	0.0	0.0
457.50	1972.97	2125.00	125.00	0.0	-7.50	2125.00	125.00	2.996	0.0	0.0
419.38	1972.97	2125.00	125.00	0.0	-7.50	2125.00	125.00	2.996	0.0	0.0
381.25	1972.97	2125.00	125.00	0.0	-7.50	2125.00	125.00	2.996	0.0	0.0
343.13	1972.97	2125.00	125.00	0.0	-7.50	2125.00	125.00	2.996	0.0	0.0
305.00	1972.97	2125.00	125.00	0.0	-7.50	2125.00	125.00	2.996	0.0	0.0
266.88	1972.97	2125.00	125.00	0.0	-7.50	2125.00	125.00	2.996	0.0	0.0
228.75	1972.97	2125.00	125.00	0.0	-7.50	2125.00	125.00	2.996	0.0	0.0
190.63	1972.97	2125.00	125.00	0.0	-7.50	2125.00	125.00	2.996	0.0	0.0
152.50	1972.97	2125.00	125.00	0.0	-7.50	2125.00	125.00	2.996	0.0	0.0

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
114.38	1972.97	2125.00	125.00	0.0	-7.50	2125.00	125.00	2.996	0.0	0.0
76.25	1972.97	2125.00	125.00	0.0	-7.50	2125.00	125.00	2.996	0.0	0.0
38.13	1972.97	2125.00	125.00	0.0	-7.50	2125.00	125.00	2.996	0.0	0.0
0.0	2.978e+04	2125.00	125.00	0.0	-12.50	2125.00	125.00	2.721	0.0	0.0
-10.00	47.51	2125.00	125.00	0.0	-10.00	0.0	0.0	0.0	0.0	0.0
Risulta	1.327e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.312	0.762	0.143	0.0	0.0	8.087e+04	60.9	0.82	6.19e-04	0.0	0.0
2	1.455	0.687	0.158	1.013e+05	76.3	0.0	0.0	0.0	0.0	0.0	0.0
3	1.837	0.544	0.200	0.0	0.0	0.65	4.87e-04	5.502e+04	41.5	0.0	0.0
4	2.687	0.372	0.243	1.29	9.69e-04	0.0	0.0	0.0	0.0	0.0	0.0
5	3.058	0.327	0.243	0.0	0.0	46.46	3.50e-02	45.42	3.42e-02	0.0	0.0
6	4.215	0.237	0.243	0.0	0.0	2.910e+04	21.9	0.05	3.94e-05	0.0	0.0
7	5.870	0.170	0.243	59.69	4.50e-02	0.0	0.0	0.0	0.0	0.0	0.0
8	6.400	0.156	0.243	11.91	8.98e-03	0.0	0.0	0.0	0.0	0.0	0.0
9	7.854	0.127	0.222	0.0	0.0	865.30	0.7	0.02	1.20e-05	0.0	0.0
10	9.002	0.111	0.206	0.0	0.0	6510.59	4.9	17.14	1.29e-02	0.0	0.0
11	9.403	0.106	0.202	0.0	0.0	14.72	1.11e-02	68.91	5.19e-02	0.0	0.0
12	9.487	0.105	0.201	3.089e+04	23.3	0.0	0.0	0.0	0.0	0.0	0.0
13	10.331	0.097	0.192	0.0	0.0	11.97	9.02e-03	9872.92	7.4	0.0	0.0
14	11.478	0.087	0.183	0.0	0.0	1.378e+04	10.4	0.07	5.03e-05	0.0	0.0
15	12.121	0.083	0.178	44.05	3.32e-02	0.0	0.0	0.0	0.0	0.0	0.0
16	13.032	0.077	0.173	0.0	0.0	1404.38	1.1	7.48	5.64e-03	0.0	0.0
17	18.865	0.053	0.149	0.0	0.0	1.21e-04	0.0	2.848e+04	21.5	0.0	0.0
18	21.044	0.048	0.144	0.0	0.0	98.19	7.40e-02	96.10	7.24e-02	0.0	0.0
19	23.664	0.042	0.139	0.0	0.0	0.11	7.94e-05	3.894e+04	29.3	0.0	0.0
20	26.700	0.037	0.134	421.23	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				1.327e+05		1.327e+05		1.325e+05			
In percentuale				99.98		99.99		99.87			

CDC	Tipo	Sigla Id	Note
7	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.243 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.687 sec.
			numero di modi considerati: 20
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
820.00	1.116e+04	2125.00	125.00	0.0	10.00	2125.00	125.00	1.909	0.0	0.0
620.00	5.849e+04	2125.00	125.00	0.0	10.00	2125.00	125.00	3.000	0.0	0.0
610.00	1670.15	2125.00	125.00	0.0	12.50	2125.00	125.00	2.989	0.0	0.0
571.88	3288.28	2125.00	125.00	0.0	12.50	2125.00	125.00	2.989	0.0	0.0
533.75	2630.63	2125.00	125.00	0.0	12.50	2125.00	125.00	2.989	0.0	0.0
495.63	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
457.50	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
419.38	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
381.25	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
343.13	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
305.00	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
266.88	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
228.75	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
190.63	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
152.50	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
114.38	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	86 di 288

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
76.25	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
38.13	1972.97	2125.00	125.00	0.0	7.50	2125.00	125.00	2.996	0.0	0.0
0.0	2.978e+04	2125.00	125.00	0.0	12.50	2125.00	125.00	2.721	0.0	0.0
-10.00	47.51	2125.00	125.00	0.0	10.00	0.0	0.0	0.0	0.0	0.0
Risulta	1.327e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.312	0.762	0.143	0.0	0.0	8.087e+04	60.9	0.59	4.45e-04	0.0	0.0
2	1.455	0.687	0.158	1.013e+05	76.3	0.0	0.0	0.0	0.0	0.0	0.0
3	1.837	0.544	0.200	0.0	0.0	0.18	1.32e-04	5.502e+04	41.5	0.0	0.0
4	2.687	0.372	0.243	0.01	1.12e-05	0.0	0.0	0.0	0.0	0.0	0.0
5	3.058	0.327	0.243	0.0	0.0	46.76	3.52e-02	45.01	3.39e-02	0.0	0.0
6	4.215	0.237	0.243	0.0	0.0	2.910e+04	21.9	0.05	3.59e-05	0.0	0.0
7	5.868	0.170	0.243	53.97	4.07e-02	0.0	0.0	0.0	0.0	0.0	0.0
8	6.229	0.161	0.243	10.78	8.12e-03	0.0	0.0	0.0	0.0	0.0	0.0
9	7.852	0.127	0.222	0.0	0.0	855.17	0.6	1.00e-04	0.0	0.0	0.0
10	8.976	0.111	0.207	0.0	0.0	5957.46	4.5	8.11	6.11e-03	0.0	0.0
11	9.415	0.106	0.201	0.0	0.0	683.75	0.5	106.70	8.04e-02	0.0	0.0
12	9.483	0.105	0.201	3.089e+04	23.3	0.0	0.0	0.0	0.0	0.0	0.0
13	10.335	0.097	0.192	0.0	0.0	41.66	3.14e-02	9845.60	7.4	0.0	0.0
14	11.526	0.087	0.182	0.0	0.0	1.419e+04	10.7	1.93	1.46e-03	0.0	0.0
15	12.553	0.080	0.175	47.06	3.55e-02	0.0	0.0	0.0	0.0	0.0	0.0
16	13.500	0.074	0.170	0.0	0.0	866.23	0.7	0.55	4.18e-04	0.0	0.0
17	18.854	0.053	0.149	0.0	0.0	0.30	2.29e-04	2.831e+04	21.3	0.0	0.0
18	21.441	0.047	0.143	0.0	0.0	87.19	6.57e-02	594.02	0.4	0.0	0.0
19	23.676	0.042	0.139	0.0	0.0	0.49	3.71e-04	3.862e+04	29.1	0.0	0.0
20	26.566	0.038	0.134	426.64	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				1.327e+05		1.327e+05		1.325e+05			
In percentuale				99.98		99.99		99.87			

CDC	Tipo	Sigla Id	Note
8	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.243 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.764 sec.
			numero di modi considerati: 20
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
820.00	1.116e+04	2125.00	125.00	202.50	0.0	2125.00	125.00	1.909	0.0	0.0
620.00	5.849e+04	2125.00	125.00	202.50	0.0	2125.00	125.00	3.000	0.0	0.0
610.00	1670.15	2125.00	125.00	202.50	0.0	2125.00	125.00	2.989	0.0	0.0
571.88	3288.28	2125.00	125.00	202.50	0.0	2125.00	125.00	2.989	0.0	0.0
533.75	2630.63	2125.00	125.00	202.50	0.0	2125.00	125.00	2.989	0.0	0.0
495.63	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
457.50	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
419.38	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
381.25	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
343.13	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
305.00	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
266.88	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
228.75	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
190.63	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
152.50	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
114.38	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
76.25	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	87 di 288

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
38.13	1972.97	2125.00	125.00	202.50	0.0	2125.00	125.00	2.996	0.0	0.0
0.0	2.978e+04	2125.00	125.00	212.50	0.0	2125.00	125.00	2.721	0.0	0.0
-10.00	47.51	2125.00	125.00	210.00	0.0	0.0	0.0	0.0	0.0	0.0
Risulta	1.327e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.310	0.764	0.142	0.05	3.40e-05	8.108e+04	61.1	0.68	5.12e-04	0.0	0.0
2	1.455	0.687	0.158	1.013e+05	76.3	0.04	2.93e-05	1.68e-06	0.0	0.0	0.0
3	1.837	0.544	0.200	3.83e-06	0.0	0.35	2.65e-04	5.502e+04	41.5	0.0	0.0
4	2.692	0.371	0.243	0.24	1.81e-04	254.94	0.2	1.58	1.19e-03	0.0	0.0
5	3.063	0.326	0.243	3.36e-03	2.54e-06	127.38	9.60e-02	43.80	3.30e-02	0.0	0.0
6	4.249	0.235	0.243	0.01	1.07e-05	2.858e+04	21.5	2.41e-03	1.82e-06	0.0	0.0
7	5.866	0.170	0.243	54.35	4.10e-02	0.86	6.49e-04	6.12e-04	0.0	0.0	0.0
8	6.293	0.159	0.243	0.03	1.92e-05	9.24	6.96e-03	0.03	1.96e-05	0.0	0.0
9	6.702	0.149	0.243	0.94	7.09e-04	3.43	2.59e-03	0.23	1.73e-04	0.0	0.0
10	8.060	0.124	0.219	0.10	7.90e-05	1370.32	1.0	0.22	1.68e-04	0.0	0.0
11	9.178	0.109	0.204	1.83	1.38e-03	7307.98	5.5	16.52	1.24e-02	0.0	0.0
12	9.511	0.105	0.200	3.095e+04	23.3	0.37	2.76e-04	0.09	6.73e-05	0.0	0.0
13	9.564	0.105	0.200	33.82	2.55e-02	1.85	1.39e-03	130.32	9.82e-02	0.0	0.0
14	10.335	0.097	0.192	0.01	9.41e-06	17.83	1.34e-02	9806.89	7.4	0.0	0.0
15	11.641	0.086	0.182	0.06	4.41e-05	1.310e+04	9.9	0.08	5.78e-05	0.0	0.0
16	14.616	0.068	0.164	3.33	2.51e-03	667.09	0.5	37.78	2.85e-02	0.0	0.0
17	16.426	0.061	0.157	7.73	5.82e-03	166.98	0.1	11.86	8.94e-03	0.0	0.0
18	18.826	0.053	0.149	0.12	9.06e-05	0.48	3.59e-04	2.774e+04	20.9	0.0	0.0
19	23.589	0.042	0.139	0.20	1.49e-04	0.10	7.51e-05	3.971e+04	29.9	0.0	0.0
20	28.054	0.036	0.132	390.02	0.3	0.06	4.72e-05	7.07	5.33e-03	0.0	0.0
Risulta				1.327e+05		1.327e+05		1.325e+05			
In percentuale				99.99		99.99		99.86			

CDC	Tipo	Sigla Id	Note
9	Eck	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.243 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.764 sec.
			numero di modi considerati: 20
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
820.00	1.116e+04	2125.00	125.00	-202.50	0.0	2125.00	125.00	1.909	0.0	0.0
620.00	5.849e+04	2125.00	125.00	-202.50	0.0	2125.00	125.00	3.000	0.0	0.0
610.00	1670.15	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.989	0.0	0.0
571.88	3288.28	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.989	0.0	0.0
533.75	2630.63	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.989	0.0	0.0
495.63	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
457.50	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
419.38	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
381.25	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
343.13	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
305.00	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
266.88	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
228.75	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
190.63	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
152.50	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
114.38	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
76.25	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0
38.13	1972.97	2125.00	125.00	-202.50	0.0	2125.00	125.00	2.996	0.0	0.0

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	88 di 288

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
0.0	2.978e+04	2125.00	125.00	-212.50	0.0	2125.00	125.00	2.721	0.0	0.0
-10.00	47.51	2125.00	125.00	-210.00	0.0	0.0	0.0	0.0	0.0	0.0
Risulta	1.327e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.310	0.764	0.142	0.05	3.40e-05	8.108e+04	81.1	0.68	5.12e-04	0.0	0.0
2	1.455	0.687	0.158	1.013e+05	76.3	0.04	2.93e-05	1.68e-06	0.0	0.0	0.0
3	1.837	0.544	0.200	3.83e-06	0.0	0.35	2.65e-04	5.502e+04	41.5	0.0	0.0
4	2.692	0.371	0.243	0.24	1.81e-04	254.94	0.2	1.58	1.19e-03	0.0	0.0
5	3.063	0.326	0.243	3.36e-03	2.54e-06	127.38	9.60e-02	43.80	3.30e-02	0.0	0.0
6	4.249	0.235	0.243	0.01	1.07e-05	2.858e+04	21.5	2.41e-03	1.82e-06	0.0	0.0
7	5.866	0.170	0.243	54.35	4.10e-02	0.86	6.49e-04	6.12e-04	0.0	0.0	0.0
8	6.293	0.159	0.243	0.03	1.92e-05	9.24	8.96e-03	0.03	1.96e-05	0.0	0.0
9	6.702	0.149	0.243	0.94	7.09e-04	3.43	2.59e-03	0.23	1.73e-04	0.0	0.0
10	8.060	0.124	0.219	0.10	7.90e-05	1370.32	1.0	0.22	1.68e-04	0.0	0.0
11	9.178	0.109	0.204	1.83	1.38e-03	7307.98	5.5	16.52	1.24e-02	0.0	0.0
12	9.511	0.105	0.200	3.095e+04	23.3	0.37	2.76e-04	0.09	6.73e-05	0.0	0.0
13	9.564	0.105	0.200	33.82	2.55e-02	1.85	1.39e-03	130.32	9.82e-02	0.0	0.0
14	10.335	0.097	0.192	0.01	9.41e-06	17.83	1.34e-02	9806.89	7.4	0.0	0.0
15	11.641	0.086	0.182	0.06	4.41e-05	1.310e+04	9.9	0.08	5.78e-05	0.0	0.0
16	14.616	0.068	0.164	3.33	2.51e-03	667.09	0.5	37.78	2.85e-02	0.0	0.0
17	16.426	0.061	0.157	7.73	5.82e-03	166.98	0.1	11.86	8.94e-03	0.0	0.0
18	18.826	0.053	0.149	0.12	9.06e-05	0.48	3.59e-04	2.774e+04	20.9	0.0	0.0
19	23.589	0.042	0.139	0.20	1.49e-04	0.10	7.51e-05	3.971e+04	29.9	0.0	0.0
20	28.054	0.036	0.132	390.02	0.3	0.06	4.72e-05	7.07	5.33e-03	0.0	0.0
Risulta				1.327e+05		1.327e+05		1.325e+05			
In percentuale				99.99		99.99		99.86			

CDC	Tipo	Sigla Id	Note
14	Edk	CDC=Ed (dinamico SLU) verticale Z+	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.255 g
			fattore q: 1.000
			classe di duttilità CD: B
			numero di modi considerati: 20
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
820.00	1.116e+04	2125.00	125.00	0.0	0.0	2125.00	125.00	1.909	0.0	0.0
620.00	5.849e+04	2125.00	125.00	0.0	0.0	2125.00	125.00	3.000	0.0	0.0
610.00	1670.15	2125.00	125.00	0.0	0.0	2125.00	125.00	2.989	0.0	0.0
571.88	3288.28	2125.00	125.00	0.0	0.0	2125.00	125.00	2.989	0.0	0.0
533.75	2630.63	2125.00	125.00	0.0	0.0	2125.00	125.00	2.989	0.0	0.0
495.63	1972.97	2125.00	125.00	0.0	0.0	2125.00	125.00	2.996	0.0	0.0
457.50	1972.97	2125.00	125.00	0.0	0.0	2125.00	125.00	2.996	0.0	0.0
419.38	1972.97	2125.00	125.00	0.0	0.0	2125.00	125.00	2.996	0.0	0.0
381.25	1972.97	2125.00	125.00	0.0	0.0	2125.00	125.00	2.996	0.0	0.0
343.13	1972.97	2125.00	125.00	0.0	0.0	2125.00	125.00	2.996	0.0	0.0
305.00	1972.97	2125.00	125.00	0.0	0.0	2125.00	125.00	2.996	0.0	0.0
266.88	1972.97	2125.00	125.00	0.0	0.0	2125.00	125.00	2.996	0.0	0.0
228.75	1972.97	2125.00	125.00	0.0	0.0	2125.00	125.00	2.996	0.0	0.0
190.63	1972.97	2125.00	125.00	0.0	0.0	2125.00	125.00	2.996	0.0	0.0
152.50	1972.97	2125.00	125.00	0.0	0.0	2125.00	125.00	2.996	0.0	0.0
114.38	1972.97	2125.00	125.00	0.0	0.0	2125.00	125.00	2.996	0.0	0.0
76.25	1972.97	2125.00	125.00	0.0	0.0	2125.00	125.00	2.996	0.0	0.0
38.13	1972.97	2125.00	125.00	0.0	0.0	2125.00	125.00	2.996	0.0	0.0
0.0	2.978e+04	2125.00	125.00	0.0	0.0	2125.00	125.00	2.721	0.0	0.0
-10.00	47.51	2125.00	125.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	89 di 288

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
Risulta	1.327e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.312	0.762	0.050	0.0	0.0	8.087e+04	60.9	0.70	5.28e-04	0.0	0.0
2	1.455	0.687	0.056	1.013e+05	76.3	0.0	0.0	0.0	0.0	0.0	0.0
3	1.837	0.544	0.070	0.0	0.0	0.37	2.82e-04	5.502e+04	41.5	0.0	0.0
4	2.687	0.372	0.103	0.26	1.93e-04	0.0	0.0	0.0	0.0	0.0	0.0
5	3.058	0.327	0.117	0.0	0.0	46.62	3.51e-02	45.21	3.41e-02	0.0	0.0
6	4.215	0.237	0.161	0.0	0.0	2.910e+04	21.9	2.73e-05	0.0	0.0	0.0
7	5.866	0.170	0.224	54.41	4.10e-02	0.0	0.0	0.0	0.0	0.0	0.0
8	6.744	0.148	0.255	0.96	7.26e-04	0.0	0.0	0.0	0.0	0.0	0.0
9	7.853	0.127	0.255	0.0	0.0	859.80	0.6	4.59e-03	3.45e-06	0.0	0.0
10	8.996	0.111	0.255	0.0	0.0	6415.14	4.8	12.51	9.43e-03	0.0	0.0
11	9.421	0.106	0.255	0.0	0.0	127.47	9.60e-02	94.66	7.13e-02	0.0	0.0
12	9.511	0.105	0.255	3.099e+04	23.3	0.0	0.0	0.0	0.0	0.0	0.0
13	10.334	0.097	0.255	0.0	0.0	24.23	1.83e-02	9854.03	7.4	0.0	0.0
14	11.498	0.087	0.255	0.0	0.0	1.404e+04	10.6	0.70	5.28e-04	0.0	0.0
15	13.224	0.076	0.255	0.0	0.0	1126.06	0.8	3.37	2.54e-03	0.0	0.0
16	15.176	0.066	0.255	9.75	7.34e-03	0.0	0.0	0.0	0.0	0.0	0.0
17	18.862	0.053	0.255	0.0	0.0	0.07	4.98e-05	2.843e+04	21.4	0.0	0.0
18	21.215	0.047	0.246	0.0	0.0	93.85	7.07e-02	241.40	0.2	0.0	0.0
19	23.668	0.042	0.230	0.0	0.0	0.22	1.64e-04	3.884e+04	29.3	0.0	0.0
20	27.980	0.036	0.210	391.38	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				1.327e+05		1.327e+05		1.325e+05			
In percentuale				99.99		99.99		99.87			

Cmb	Pilas. 1000 etaT/h	etaT	inter. h	Pilas. 1000 etaT/h	etaT	inter. h	Pilas. 1000 etaT/h	etaT	inter. h			
		cm	cm		cm	cm		cm	cm			
69	1	2.54	0.03	10.0	2	2.56	0.03	10.0	3	2.58	0.03	10.0
	4	2.58	0.03	10.0	5	2.55	0.03	10.0	6	2.56	0.03	10.0
	9	6.87	1.37	200.0	10	6.77	1.35	200.0	22	7.18	1.44	200.0
	23	7.09	1.42	200.0	25	6.61	1.32	200.0	36	6.93	1.39	200.0
	37	6.38	1.28	200.0	48	6.70	1.34	200.0	49	6.10	1.22	200.0
	60	6.40	1.28	200.0	61	5.76	1.15	200.0	72	6.05	1.21	200.0
	73	5.38	1.08	200.0	84	5.66	1.13	200.0	85	4.97	0.99	200.0
	96	5.23	1.05	200.0	97	4.53	0.91	200.0	108	4.77	0.95	200.0
	109	4.10	0.82	200.0	120	4.31	0.86	200.0	121	3.69	0.74	200.0
	132	3.87	0.77	200.0	133	3.35	0.67	200.0	144	3.49	0.70	200.0
	145	3.13	0.63	200.0	156	3.23	0.65	200.0	157	3.09	0.62	200.0
	168	3.14	0.63	200.0	169	3.24	0.65	200.0	180	3.28	0.66	200.0
	181	3.51	0.70	200.0	192	3.55	0.71	200.0	193	6.82	1.36	200.0
	194	6.72	1.34	200.0	206	7.13	1.43	200.0	207	7.05	1.41	200.0
	209	6.56	1.31	200.0	220	6.89	1.38	200.0	221	6.34	1.27	200.0
	232	6.67	1.33	200.0	233	6.07	1.21	200.0	244	6.38	1.28	200.0
	245	5.75	1.15	200.0	256	6.05	1.21	200.0	257	5.38	1.08	200.0
	268	5.66	1.13	200.0	269	4.97	0.99	200.0	280	5.23	1.05	200.0
	281	4.54	0.91	200.0	292	4.78	0.96	200.0	293	4.11	0.82	200.0
	304	4.33	0.87	200.0	305	3.71	0.74	200.0	316	3.89	0.78	200.0
	317	3.37	0.67	200.0	328	3.51	0.70	200.0	329	3.15	0.63	200.0
	340	3.24	0.65	200.0	341	3.10	0.62	200.0	352	3.14	0.63	200.0
	353	3.24	0.65	200.0	364	3.28	0.66	200.0	374	2.52	0.03	10.0
	375	2.52	0.03	10.0	376	2.51	0.03	10.0	377	1.40	0.01	10.0
	378	1.37	0.01	10.0	379	1.37	0.01	10.0	380	1.39	0.01	10.0
	381	2.53	0.03	10.0	382	2.56	0.03	10.0	383	2.57	0.03	10.0
	384	2.54	0.03	10.0	385	1.40	0.01	10.0	386	1.41	0.01	10.0
	387	1.41	0.01	10.0	388	1.39	0.01	10.0	389	1.36	0.01	10.0
	390	1.36	0.01	10.0	391	1.35	0.01	10.0	392	1.37	0.01	10.0
	393	1.39	0.01	10.0								
70	1	2.54	0.03	10.0	2	2.53	0.03	10.0	3	2.53	0.03	10.0
	4	2.54	0.03	10.0	5	2.56	0.03	10.0	6	2.56	0.03	10.0
	9	6.92	1.38	200.0	10	6.86	1.37	200.0	22	6.97	1.39	200.0
	23	6.91	1.38	200.0	25	6.71	1.34	200.0	36	6.76	1.35	200.0
	37	6.47	1.29	200.0	48	6.53	1.31	200.0	49	6.16	1.23	200.0
	60	6.23	1.25	200.0	61	5.78	1.16	200.0	72	5.86	1.17	200.0
	73	5.35	1.07	200.0	84	5.44	1.09	200.0	85	4.86	0.97	200.0

Progetto esecutivo

PONTE-TUBO - RELAZIONE DI CALCOLO	COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
	433	I-1	B_1	519_v3	1	90 di 288

96	4.96	0.99	200.0	97	4.35	0.87	200.0	108	4.45	0.89	200.0	
109	3.81	0.76	200.0	120	3.91	0.78	200.0	121	3.27	0.65	200.0	
132	3.36	0.67	200.0	133	2.76	0.55	200.0	144	2.85	0.57	200.0	
145	2.35	0.47	200.0	156	2.42	0.48	200.0	157	2.13	0.43	200.0	
168	2.17	0.43	200.0	169	2.17	0.43	200.0	180	2.21	0.44	200.0	
181	2.41	0.48	200.0	192	2.46	0.49	200.0	193	6.83	1.37	200.0	
194	6.78	1.36	200.0	206	6.85	1.37	200.0	207	6.81	1.36	200.0	
209	6.65	1.33	200.0	220	6.67	1.33	200.0	221	6.42	1.28	200.0	
232	6.46	1.29	200.0	233	6.12	1.22	200.0	244	6.17	1.23	200.0	
245	5.76	1.15	200.0	256	5.82	1.16	200.0	257	5.33	1.07	200.0	
268	5.41	1.08	200.0	269	4.86	0.97	200.0	280	4.95	0.99	200.0	
281	4.35	0.87	200.0	292	4.45	0.89	200.0	293	3.82	0.76	200.0	
304	3.92	0.78	200.0	305	3.29	0.66	200.0	316	3.38	0.68	200.0	
317	2.79	0.56	200.0	328	2.87	0.57	200.0	329	2.38	0.48	200.0	
340	2.44	0.49	200.0	341	2.15	0.43	200.0	352	2.19	0.44	200.0	
353	2.19	0.44	200.0	364	2.21	0.44	200.0	374	2.57	0.03	10.0	
375	2.56	0.03	10.0	376	2.55	0.03	10.0	377	1.37	0.01	10.0	
378	1.39	0.01	10.0	379	1.39	0.01	10.0	380	1.37	0.01	10.0	
381	2.55	0.03	10.0	382	2.54	0.03	10.0	383	2.55	0.03	10.0	
384	2.57	0.03	10.0	385	1.35	0.01	10.0	386	1.36	0.01	10.0	
387	1.36	0.01	10.0	388	1.38	0.01	10.0	389	1.40	0.01	10.0	
390	1.40	0.01	10.0	391	1.39	0.01	10.0	392	1.38	0.01	10.0	
393	1.39	0.01	10.0									
71	1	1.28	0.01	10.0	2	1.25	0.01	10.0	3	1.26	0.01	10.0
	4	1.27	0.01	10.0	5	1.29	0.01	10.0	6	1.29	0.01	10.0
	9	6.78	1.36	200.0	10	6.69	1.34	200.0	22	7.08	1.42	200.0
	23	7.01	1.40	200.0	25	6.54	1.31	200.0	36	6.86	1.37	200.0
	37	6.33	1.27	200.0	48	6.64	1.33	200.0	49	6.06	1.21	200.0
	60	6.36	1.27	200.0	61	5.74	1.15	200.0	72	6.03	1.21	200.0
	73	5.37	1.07	200.0	84	5.64	1.13	200.0	85	4.97	0.99	200.0
	96	5.22	1.04	200.0	97	4.54	0.91	200.0	108	4.77	0.95	200.0
	109	4.11	0.82	200.0	120	4.32	0.86	200.0	121	3.71	0.74	200.0
	132	3.88	0.78	200.0	133	3.37	0.67	200.0	144	3.50	0.70	200.0
	145	3.15	0.63	200.0	156	3.24	0.65	200.0	157	3.10	0.62	200.0
	168	3.15	0.63	200.0	169	3.24	0.65	200.0	180	3.28	0.66	200.0
	181	3.51	0.70	200.0	192	3.55	0.71	200.0	193	6.91	1.38	200.0
	194	6.79	1.36	200.0	206	7.23	1.45	200.0	207	7.14	1.43	200.0
	209	6.62	1.32	200.0	220	6.96	1.39	200.0	221	6.39	1.28	200.0
	232	6.72	1.34	200.0	233	6.11	1.22	200.0	244	6.43	1.29	200.0
	245	5.77	1.15	200.0	256	6.07	1.21	200.0	257	5.39	1.08	200.0
	268	5.67	1.13	200.0	269	4.97	0.99	200.0	280	5.24	1.05	200.0
	281	4.54	0.91	200.0	292	4.78	0.96	200.0	293	4.10	0.82	200.0
	304	4.31	0.86	200.0	305	3.69	0.74	200.0	316	3.87	0.77	200.0
	317	3.35	0.67	200.0	328	3.49	0.70	200.0	329	3.13	0.63	200.0
	340	3.22	0.64	200.0	341	3.09	0.62	200.0	352	3.13	0.63	200.0
	353	3.23	0.65	200.0	364	3.28	0.66	200.0	374	1.32	0.01	10.0
	375	1.31	0.01	10.0	376	1.30	0.01	10.0	377	2.42	0.02	10.0
	378	2.45	0.02	10.0	379	2.44	0.02	10.0	380	2.41	0.02	10.0
	381	1.29	0.01	10.0	382	1.27	0.01	10.0	383	1.28	0.01	10.0
	384	1.30	0.01	10.0	385	2.40	0.02	10.0	386	2.40	0.02	10.0
	387	2.41	0.02	10.0	388	2.44	0.02	10.0	389	2.46	0.02	10.0
	390	2.46	0.02	10.0	391	2.45	0.02	10.0	392	2.43	0.02	10.0
	393	2.44	0.02	10.0								
72	1	1.28	0.01	10.0	2	1.30	0.01	10.0	3	1.30	0.01	10.0
	4	1.30	0.01	10.0	5	1.28	0.01	10.0	6	1.29	0.01	10.0
	9	6.79	1.36	200.0	10	6.75	1.35	200.0	22	6.83	1.37	200.0
	23	6.79	1.36	200.0	25	6.62	1.32	200.0	36	6.66	1.33	200.0
	37	6.40	1.28	200.0	48	6.45	1.29	200.0	49	6.11	1.22	200.0
	60	6.17	1.23	200.0	61	5.74	1.15	200.0	72	5.82	1.16	200.0
	73	5.33	1.07	200.0	84	5.41	1.08	200.0	85	4.86	0.97	200.0
	96	4.95	0.99	200.0	97	4.35	0.87	200.0	108	4.45	0.89	200.0
	109	3.82	0.76	200.0	120	3.92	0.78	200.0	121	3.29	0.66	200.0
	132	3.38	0.68	200.0	133	2.79	0.56	200.0	144	2.87	0.57	200.0
	145	2.38	0.48	200.0	156	2.44	0.49	200.0	157	2.15	0.43	200.0
	168	2.19	0.44	200.0	169	2.18	0.44	200.0	180	2.22	0.44	200.0
	181	2.41	0.48	200.0	192	2.46	0.49	200.0	193	6.97	1.39	200.0
	194	6.90	1.38	200.0	206	7.00	1.40	200.0	207	6.93	1.39	200.0
	209	6.74	1.35	200.0	220	6.77	1.35	200.0	221	6.49	1.30	200.0
	232	6.54	1.31	200.0	233	6.18	1.24	200.0	244	6.23	1.25	200.0
	245	5.79	1.16	200.0	256	5.86	1.17	200.0	257	5.35	1.07	200.0
	268	5.43	1.09	200.0	269	4.87	0.97	200.0	280	4.96	0.99	200.0
	281	4.35	0.87	200.0	292	4.44	0.89	200.0	293	3.81	0.76	200.0
	304	3.90	0.78	200.0	305	3.27	0.65	200.0	316	3.36	0.67	200.0
	317	2.76	0.55	200.0	328	2.85	0.57	200.0	329	2.35	0.47	200.0
	340	2.42	0.48	200.0	341	2.13	0.43	200.0	352	2.17	0.43	200.0
	353	2.18	0.44	200.0	364	2.21	0.44	200.0	374	1.26	0.01	10.0
	375	1.26	0.01	10.0	376	1.26	0.01	10.0	377	2.45	0.02	10.0

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	91 di 288

	378	2.43	0.02	10.0	379	2.42	0.02	10.0	380	2.43	0.02	10.0
	381	1.27	0.01	10.0	382	1.29	0.01	10.0	383	1.29	0.01	10.0
	384	1.27	0.01	10.0	385	2.44	0.02	10.0	386	2.45	0.02	10.0
	387	2.45	0.02	10.0	388	2.44	0.02	10.0	389	2.42	0.02	10.0
	390	2.42	0.02	10.0	391	2.41	0.02	10.0	392	2.43	0.02	10.0
	393	2.44	0.02	10.0								
73	1	2.54	0.03	10.0	2	2.56	0.03	10.0	3	2.57	0.03	10.0
	4	2.57	0.03	10.0	5	2.55	0.03	10.0	6	2.56	0.03	10.0
	9	6.91	1.38	200.0	10	6.79	1.36	200.0	22	7.23	1.45	200.0
	23	7.14	1.43	200.0	25	6.62	1.32	200.0	36	6.96	1.39	200.0
	37	6.39	1.28	200.0	48	6.72	1.34	200.0	49	6.11	1.22	200.0
	60	6.43	1.29	200.0	61	5.77	1.15	200.0	72	6.07	1.21	200.0
	73	5.39	1.08	200.0	84	5.67	1.13	200.0	85	4.97	0.99	200.0
	96	5.24	1.05	200.0	97	4.54	0.91	200.0	108	4.78	0.96	200.0
	109	4.10	0.82	200.0	120	4.31	0.86	200.0	121	3.69	0.74	200.0
	132	3.87	0.77	200.0	133	3.35	0.67	200.0	144	3.49	0.70	200.0
	145	3.13	0.63	200.0	156	3.22	0.64	200.0	157	3.09	0.62	200.0
	168	3.13	0.63	200.0	169	3.23	0.65	200.0	180	3.28	0.66	200.0
	181	3.51	0.70	200.0	192	3.55	0.71	200.0	193	6.78	1.36	200.0
	194	6.69	1.34	200.0	206	7.08	1.42	200.0	207	7.01	1.40	200.0
	209	6.54	1.31	200.0	220	6.86	1.37	200.0	221	6.33	1.27	200.0
	232	6.64	1.33	200.0	233	6.06	1.21	200.0	244	6.36	1.27	200.0
	245	5.74	1.15	200.0	256	6.03	1.21	200.0	257	5.37	1.07	200.0
	268	5.64	1.13	200.0	269	4.97	0.99	200.0	280	5.22	1.04	200.0
	281	4.54	0.91	200.0	292	4.77	0.95	200.0	293	4.11	0.82	200.0
	304	4.32	0.86	200.0	305	3.71	0.74	200.0	316	3.88	0.78	200.0
	317	3.37	0.67	200.0	328	3.50	0.70	200.0	329	3.15	0.63	200.0
	340	3.24	0.65	200.0	341	3.10	0.62	200.0	352	3.15	0.63	200.0
	353	3.24	0.65	200.0	364	3.28	0.66	200.0	374	2.51	0.03	10.0
	375	2.51	0.03	10.0	376	2.50	0.03	10.0	377	1.41	0.01	10.0
	378	1.39	0.01	10.0	379	1.38	0.01	10.0	380	1.40	0.01	10.0
	381	2.53	0.03	10.0	382	2.55	0.03	10.0	383	2.56	0.03	10.0
	384	2.54	0.03	10.0	385	1.41	0.01	10.0	386	1.42	0.01	10.0
	387	1.42	0.01	10.0	388	1.40	0.01	10.0	389	1.37	0.01	10.0
	390	1.37	0.01	10.0	391	1.36	0.01	10.0	392	1.39	0.01	10.0
	393	1.40	0.01	10.0								
74	1	2.54	0.03	10.0	2	2.52	0.03	10.0	3	2.53	0.03	10.0
	4	2.53	0.03	10.0	5	2.55	0.03	10.0	6	2.56	0.03	10.0
	9	6.97	1.39	200.0	10	6.90	1.38	200.0	22	7.00	1.40	200.0
	23	6.93	1.39	200.0	25	6.74	1.35	200.0	36	6.77	1.35	200.0
	37	6.49	1.30	200.0	48	6.54	1.31	200.0	49	6.18	1.24	200.0
	60	6.23	1.25	200.0	61	5.79	1.16	200.0	72	5.86	1.17	200.0
	73	5.35	1.07	200.0	84	5.43	1.09	200.0	85	4.87	0.97	200.0
	96	4.96	0.99	200.0	97	4.35	0.87	200.0	108	4.44	0.89	200.0
	109	3.81	0.76	200.0	120	3.90	0.78	200.0	121	3.27	0.65	200.0
	132	3.36	0.67	200.0	133	2.76	0.55	200.0	144	2.85	0.57	200.0
	145	2.35	0.47	200.0	156	2.42	0.48	200.0	157	2.13	0.43	200.0
	168	2.17	0.43	200.0	169	2.18	0.44	200.0	180	2.21	0.44	200.0
	181	2.41	0.48	200.0	192	2.46	0.49	200.0	193	6.79	1.36	200.0
	194	6.75	1.35	200.0	206	6.83	1.37	200.0	207	6.79	1.36	200.0
	209	6.62	1.32	200.0	220	6.66	1.33	200.0	221	6.40	1.28	200.0
	232	6.45	1.29	200.0	233	6.11	1.22	200.0	244	6.17	1.23	200.0
	245	5.74	1.15	200.0	256	5.82	1.16	200.0	257	5.33	1.07	200.0
	268	5.41	1.08	200.0	269	4.86	0.97	200.0	280	4.95	0.99	200.0
	281	4.35	0.87	200.0	292	4.45	0.89	200.0	293	3.82	0.76	200.0
	304	3.92	0.78	200.0	305	3.29	0.66	200.0	316	3.38	0.68	200.0
	317	2.79	0.56	200.0	328	2.87	0.57	200.0	329	2.38	0.48	200.0
	340	2.44	0.49	200.0	341	2.15	0.43	200.0	352	2.19	0.44	200.0
	353	2.18	0.44	200.0	364	2.22	0.44	200.0	374	2.56	0.03	10.0
	375	2.56	0.03	10.0	376	2.55	0.03	10.0	377	1.38	0.01	10.0
	378	1.40	0.01	10.0	379	1.40	0.01	10.0	380	1.38	0.01	10.0
	381	2.55	0.03	10.0	382	2.53	0.03	10.0	383	2.55	0.03	10.0
	384	2.56	0.03	10.0	385	1.37	0.01	10.0	386	1.37	0.01	10.0
	387	1.37	0.01	10.0	388	1.39	0.01	10.0	389	1.41	0.01	10.0
	390	1.41	0.01	10.0	391	1.40	0.01	10.0	392	1.39	0.01	10.0
	393	1.40	0.01	10.0								
75	1	1.27	0.01	10.0	2	1.24	0.01	10.0	3	1.25	0.01	10.0
	4	1.25	0.01	10.0	5	1.28	0.01	10.0	6	1.28	0.01	10.0
	9	6.82	1.36	200.0	10	6.72	1.34	200.0	22	7.13	1.43	200.0
	23	7.05	1.41	200.0	25	6.56	1.31	200.0	36	6.89	1.38	200.0
	37	6.34	1.27	200.0	48	6.67	1.33	200.0	49	6.07	1.21	200.0
	60	6.38	1.28	200.0	61	5.75	1.15	200.0	72	6.05	1.21	200.0
	73	5.38	1.08	200.0	84	5.66	1.13	200.0	85	4.97	0.99	200.0
	96	5.23	1.05	200.0	97	4.54	0.91	200.0	108	4.78	0.96	200.0
	109	4.11	0.82	200.0	120	4.33	0.87	200.0	121	3.71	0.74	200.0
	132	3.89	0.78	200.0	133	3.37	0.67	200.0	144	3.51	0.70	200.0
	145	3.15	0.63	200.0	156	3.24	0.65	200.0	157	3.10	0.62	200.0

Progetto esecutivo

PONTE-TUBO - RELAZIONE DI CALCOLO	COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
	433	I-1	B_1	519_v3	1	92 di 288

168	3.14	0.63	200.0	169	3.24	0.65	200.0	180	3.28	0.66	200.0	
181	3.51	0.70	200.0	192	3.55	0.71	200.0	193	6.87	1.37	200.0	
194	6.77	1.35	200.0	206	7.18	1.44	200.0	207	7.09	1.42	200.0	
209	6.61	1.32	200.0	220	6.93	1.39	200.0	221	6.38	1.28	200.0	
232	6.70	1.34	200.0	233	6.10	1.22	200.0	244	6.40	1.28	200.0	
245	5.76	1.15	200.0	256	6.05	1.21	200.0	257	5.38	1.08	200.0	
268	5.66	1.13	200.0	269	4.97	0.99	200.0	280	5.23	1.05	200.0	
281	4.53	0.91	200.0	292	4.77	0.95	200.0	293	4.10	0.82	200.0	
304	4.31	0.86	200.0	305	3.69	0.74	200.0	316	3.87	0.77	200.0	
317	3.35	0.67	200.0	328	3.49	0.70	200.0	329	3.13	0.63	200.0	
340	3.23	0.65	200.0	341	3.09	0.62	200.0	352	3.14	0.63	200.0	
353	3.24	0.65	200.0	364	3.28	0.66	200.0	374	1.31	0.01	10.0	
375	1.30	0.01	10.0	376	1.29	0.01	10.0	377	2.43	0.02	10.0	
378	2.46	0.02	10.0	379	2.45	0.02	10.0	380	2.42	0.02	10.0	
381	1.28	0.01	10.0	382	1.26	0.01	10.0	383	1.26	0.01	10.0	
384	1.29	0.01	10.0	385	2.40	0.02	10.0	386	2.41	0.02	10.0	
387	2.41	0.02	10.0	388	2.45	0.02	10.0	389	2.47	0.02	10.0	
390	2.46	0.02	10.0	391	2.46	0.02	10.0	392	2.43	0.02	10.0	
393	2.45	0.02	10.0									
76	1	1.27	0.01	10.0	2	1.28	0.01	10.0	3	1.29	0.01	10.0
	4	1.29	0.01	10.0	5	1.27	0.01	10.0	6	1.28	0.01	10.0
	9	6.83	1.37	200.0	10	6.78	1.36	200.0	22	6.85	1.37	200.0
	23	6.81	1.36	200.0	25	6.65	1.33	200.0	36	6.67	1.33	200.0
	37	6.42	1.28	200.0	48	6.46	1.29	200.0	49	6.12	1.22	200.0
	60	6.17	1.23	200.0	61	5.76	1.15	200.0	72	5.82	1.16	200.0
	73	5.33	1.07	200.0	84	5.41	1.08	200.0	85	4.86	0.97	200.0
	96	4.95	0.99	200.0	97	4.35	0.87	200.0	108	4.45	0.89	200.0
	109	3.82	0.76	200.0	120	3.92	0.78	200.0	121	3.29	0.66	200.0
	132	3.38	0.68	200.0	133	2.79	0.56	200.0	144	2.87	0.57	200.0
	145	2.38	0.48	200.0	156	2.44	0.49	200.0	157	2.15	0.43	200.0
	168	2.19	0.44	200.0	169	2.19	0.44	200.0	180	2.21	0.44	200.0
	181	2.41	0.48	200.0	192	2.46	0.49	200.0	193	6.92	1.38	200.0
	194	6.86	1.37	200.0	206	6.97	1.39	200.0	207	6.91	1.38	200.0
	209	6.71	1.34	200.0	220	6.76	1.35	200.0	221	6.47	1.29	200.0
	232	6.53	1.31	200.0	233	6.16	1.23	200.0	244	6.23	1.25	200.0
	245	5.78	1.16	200.0	256	5.86	1.17	200.0	257	5.35	1.07	200.0
	268	5.44	1.09	200.0	269	4.86	0.97	200.0	280	4.96	0.99	200.0
	281	4.35	0.87	200.0	292	4.45	0.89	200.0	293	3.81	0.76	200.0
	304	3.91	0.78	200.0	305	3.27	0.65	200.0	316	3.36	0.67	200.0
	317	2.76	0.55	200.0	328	2.85	0.57	200.0	329	2.35	0.47	200.0
	340	2.42	0.48	200.0	341	2.13	0.43	200.0	352	2.17	0.43	200.0
	353	2.17	0.43	200.0	364	2.21	0.44	200.0	374	1.25	0.01	10.0
	375	1.25	0.01	10.0	376	1.25	0.01	10.0	377	2.46	0.02	10.0
	378	2.44	0.02	10.0	379	2.43	0.02	10.0	380	2.44	0.02	10.0
	381	1.26	0.01	10.0	382	1.28	0.01	10.0	383	1.28	0.01	10.0
	384	1.26	0.01	10.0	385	2.44	0.02	10.0	386	2.45	0.02	10.0
	387	2.46	0.02	10.0	388	2.45	0.02	10.0	389	2.43	0.02	10.0
	390	2.42	0.02	10.0	391	2.42	0.02	10.0	392	2.43	0.02	10.0
	393	2.45	0.02	10.0								
77	1	2.54	0.03	10.0	2	2.56	0.03	10.0	3	2.57	0.03	10.0
	4	2.57	0.03	10.0	5	2.56	0.03	10.0	6	2.56	0.03	10.0
	9	6.88	1.38	200.0	10	6.78	1.36	200.0	22	7.19	1.44	200.0
	23	7.10	1.42	200.0	25	6.62	1.32	200.0	36	6.93	1.39	200.0
	37	6.39	1.28	200.0	48	6.70	1.34	200.0	49	6.11	1.22	200.0
	60	6.41	1.28	200.0	61	5.77	1.15	200.0	72	6.06	1.21	200.0
	73	5.39	1.08	200.0	84	5.67	1.13	200.0	85	4.98	1.00	200.0
	96	5.24	1.05	200.0	97	4.54	0.91	200.0	108	4.78	0.96	200.0
	109	4.11	0.82	200.0	120	4.32	0.86	200.0	121	3.70	0.74	200.0
	132	3.88	0.78	200.0	133	3.36	0.67	200.0	144	3.50	0.70	200.0
	145	3.14	0.63	200.0	156	3.23	0.65	200.0	157	3.09	0.62	200.0
	168	3.14	0.63	200.0	169	3.24	0.65	200.0	180	3.28	0.66	200.0
	181	3.51	0.70	200.0	192	3.55	0.71	200.0	193	6.80	1.36	200.0
	194	6.71	1.34	200.0	206	7.13	1.43	200.0	207	7.05	1.41	200.0
	209	6.55	1.31	200.0	220	6.89	1.38	200.0	221	6.34	1.27	200.0
	232	6.66	1.33	200.0	233	6.06	1.21	200.0	244	6.38	1.28	200.0
	245	5.74	1.15	200.0	256	6.04	1.21	200.0	257	5.37	1.07	200.0
	268	5.65	1.13	200.0	269	4.96	0.99	200.0	280	5.23	1.05	200.0
	281	4.53	0.91	200.0	292	4.78	0.96	200.0	293	4.10	0.82	200.0
	304	4.32	0.86	200.0	305	3.70	0.74	200.0	316	3.88	0.78	200.0
	317	3.36	0.67	200.0	328	3.50	0.70	200.0	329	3.14	0.63	200.0
	340	3.23	0.65	200.0	341	3.09	0.62	200.0	352	3.14	0.63	200.0
	353	3.24	0.65	200.0	364	3.28	0.66	200.0	374	2.53	0.03	10.0
	375	2.52	0.03	10.0	376	2.51	0.03	10.0	377	1.40	0.01	10.0
	378	1.37	0.01	10.0	379	1.37	0.01	10.0	380	1.40	0.01	10.0
	381	2.53	0.03	10.0	382	2.55	0.03	10.0	383	2.57	0.03	10.0
	384	2.55	0.03	10.0	385	1.41	0.01	10.0	386	1.42	0.01	10.0
	387	1.41	0.01	10.0	388	1.38	0.01	10.0	389	1.35	0.01	10.0

**PROGETTO EUROPEO "INIWAS": ADEGUAMENTO DELL'IDROVIA FERRARESE
AL TRAFFICO DI V CLASSE EUROPEA - I LOTTO/ 1 STRALCIO
DEMOLIZIONE E RICOSTRUZIONE DEL PONTE BARDELLA SUL CANALE BOICELLI**

Progetto esecutivo

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA

433

LOTTO

I-1

ELABORATO

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DOCUMENTO

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REV.

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FOGLIO

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	390	1.36	0.01	10.0	391	1.35	0.01	10.0	392	1.38	0.01	10.0
	393	1.39	0.01	10.0								
78	1	2.55	0.03	10.0	2	2.52	0.03	10.0	3	2.53	0.03	10.0
	4	2.53	0.03	10.0	5	2.56	0.03	10.0	6	2.56	0.03	10.0
	9	6.92	1.38	200.0	10	6.86	1.37	200.0	22	6.96	1.39	200.0
	23	6.90	1.38	200.0	25	6.70	1.34	200.0	36	6.75	1.35	200.0
	37	6.47	1.29	200.0	48	6.52	1.30	200.0	49	6.15	1.23	200.0
	60	6.22	1.24	200.0	61	5.78	1.16	200.0	72	5.86	1.17	200.0
	73	5.34	1.07	200.0	84	5.43	1.09	200.0	85	4.86	0.97	200.0
	96	4.96	0.99	200.0	97	4.35	0.87	200.0	108	4.45	0.89	200.0
	109	3.81	0.76	200.0	120	3.91	0.78	200.0	121	3.27	0.65	200.0
	132	3.37	0.67	200.0	133	2.77	0.55	200.0	144	2.85	0.57	200.0
	145	2.36	0.47	200.0	156	2.42	0.48	200.0	157	2.14	0.43	200.0
	168	2.17	0.43	200.0	169	2.18	0.44	200.0	180	2.21	0.44	200.0
	181	2.41	0.48	200.0	192	2.46	0.49	200.0	193	6.84	1.37	200.0
	194	6.79	1.36	200.0	206	6.86	1.37	200.0	207	6.82	1.36	200.0
	209	6.65	1.33	200.0	220	6.68	1.34	200.0	221	6.43	1.29	200.0
	232	6.47	1.29	200.0	233	6.13	1.23	200.0	244	6.18	1.24	200.0
	245	5.76	1.15	200.0	256	5.83	1.17	200.0	257	5.33	1.07	200.0
	268	5.41	1.08	200.0	269	4.86	0.97	200.0	280	4.95	0.99	200.0
	281	4.35	0.87	200.0	292	4.45	0.89	200.0	293	3.82	0.76	200.0
	304	3.91	0.78	200.0	305	3.28	0.66	200.0	316	3.38	0.68	200.0
	317	2.78	0.56	200.0	328	2.86	0.57	200.0	329	2.37	0.47	200.0
	340	2.43	0.49	200.0	341	2.14	0.43	200.0	352	2.18	0.44	200.0
	353	2.19	0.44	200.0	364	2.21	0.44	200.0	374	2.57	0.03	10.0
	375	2.57	0.03	10.0	376	2.56	0.03	10.0	377	1.37	0.01	10.0
	378	1.39	0.01	10.0	379	1.39	0.01	10.0	380	1.37	0.01	10.0
	381	2.56	0.03	10.0	382	2.54	0.03	10.0	383	2.55	0.03	10.0
	384	2.57	0.03	10.0	385	1.35	0.01	10.0	386	1.36	0.01	10.0
	387	1.36	0.01	10.0	388	1.38	0.01	10.0	389	1.39	0.01	10.0
	390	1.39	0.01	10.0	391	1.38	0.01	10.0	392	1.37	0.01	10.0
	393	1.39	0.01	10.0								
79	1	1.28	0.01	10.0	2	1.25	0.01	10.0	3	1.26	0.01	10.0
	4	1.26	0.01	10.0	5	1.29	0.01	10.0	6	1.30	0.01	10.0
	9	6.77	1.35	200.0	10	6.68	1.34	200.0	22	7.07	1.41	200.0
	23	7.00	1.40	200.0	25	6.53	1.31	200.0	36	6.85	1.37	200.0
	37	6.32	1.26	200.0	48	6.64	1.33	200.0	49	6.06	1.21	200.0
	60	6.36	1.27	200.0	61	5.73	1.15	200.0	72	6.02	1.20	200.0
	73	5.37	1.07	200.0	84	5.64	1.13	200.0	85	4.96	0.99	200.0
	96	5.21	1.04	200.0	97	4.53	0.91	200.0	108	4.77	0.95	200.0
	109	4.10	0.82	200.0	120	4.31	0.86	200.0	121	3.70	0.74	200.0
	132	3.87	0.77	200.0	133	3.36	0.67	200.0	144	3.50	0.70	200.0
	145	3.14	0.63	200.0	156	3.23	0.65	200.0	157	3.09	0.62	200.0
	168	3.14	0.63	200.0	169	3.24	0.65	200.0	180	3.28	0.66	200.0
	181	3.51	0.70	200.0	192	3.55	0.71	200.0	193	6.92	1.38	200.0
	194	6.80	1.36	200.0	206	7.24	1.45	200.0	207	7.14	1.43	200.0
	209	6.63	1.33	200.0	220	6.97	1.39	200.0	221	6.40	1.28	200.0
	232	6.73	1.35	200.0	233	6.11	1.22	200.0	244	6.43	1.29	200.0
	245	5.78	1.16	200.0	256	6.08	1.22	200.0	257	5.39	1.08	200.0
	268	5.68	1.14	200.0	269	4.98	1.00	200.0	280	5.25	1.05	200.0
	281	4.55	0.91	200.0	292	4.79	0.96	200.0	293	4.11	0.82	200.0
	304	4.32	0.86	200.0	305	3.70	0.74	200.0	316	3.88	0.78	200.0
	317	3.36	0.67	200.0	328	3.50	0.70	200.0	329	3.14	0.63	200.0
	340	3.23	0.65	200.0	341	3.09	0.62	200.0	352	3.14	0.63	200.0
	353	3.24	0.65	200.0	364	3.28	0.66	200.0	374	1.32	0.01	10.0
	375	1.32	0.01	10.0	376	1.31	0.01	10.0	377	2.43	0.02	10.0
	378	2.45	0.02	10.0	379	2.44	0.02	10.0	380	2.41	0.02	10.0
	381	1.30	0.01	10.0	382	1.27	0.01	10.0	383	1.27	0.01	10.0
	384	1.30	0.01	10.0	385	2.40	0.02	10.0	386	2.40	0.02	10.0
	387	2.41	0.02	10.0	388	2.44	0.02	10.0	389	2.46	0.02	10.0
	390	2.45	0.02	10.0	391	2.44	0.02	10.0	392	2.43	0.02	10.0
	393	2.44	0.02	10.0								
80	1	1.28	0.01	10.0	2	1.29	0.01	10.0	3	1.29	0.01	10.0
	4	1.30	0.01	10.0	5	1.29	0.01	10.0	6	1.29	0.01	10.0
	9	6.79	1.36	200.0	10	6.75	1.35	200.0	22	6.84	1.37	200.0
	23	6.80	1.36	200.0	25	6.62	1.32	200.0	36	6.67	1.33	200.0
	37	6.40	1.28	200.0	48	6.46	1.29	200.0	49	6.11	1.22	200.0
	60	6.18	1.24	200.0	61	5.75	1.15	200.0	72	5.82	1.16	200.0
	73	5.33	1.07	200.0	84	5.41	1.08	200.0	85	4.86	0.97	200.0
	96	4.95	0.99	200.0	97	4.35	0.87	200.0	108	4.45	0.89	200.0
	109	3.82	0.76	200.0	120	3.92	0.78	200.0	121	3.28	0.66	200.0
	132	3.38	0.68	200.0	133	2.78	0.56	200.0	144	2.86	0.57	200.0
	145	2.37	0.47	200.0	156	2.43	0.49	200.0	157	2.14	0.43	200.0
	168	2.18	0.44	200.0	169	2.18	0.44	200.0	180	2.21	0.44	200.0
	181	2.41	0.48	200.0	192	2.46	0.49	200.0	193	6.96	1.39	200.0
	194	6.89	1.38	200.0	206	6.98	1.40	200.0	207	6.92	1.38	200.0
	209	6.73	1.35	200.0	220	6.76	1.35	200.0	221	6.49	1.30	200.0

PONTE-TUBO - RELAZIONE DI CALCOLO	COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
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	232	6.53	1.31	200.0	233	6.17	1.23	200.0	244	6.23	1.25	200.0
	245	5.79	1.16	200.0	256	5.86	1.17	200.0	257	5.35	1.07	200.0
	268	5.43	1.09	200.0	269	4.87	0.97	200.0	280	4.96	0.99	200.0
	281	4.35	0.87	200.0	292	4.44	0.89	200.0	293	3.81	0.76	200.0
	304	3.91	0.78	200.0	305	3.27	0.65	200.0	316	3.36	0.67	200.0
	317	2.77	0.55	200.0	328	2.85	0.57	200.0	329	2.36	0.47	200.0
	340	2.42	0.48	200.0	341	2.14	0.43	200.0	352	2.18	0.44	200.0
	353	2.18	0.44	200.0	364	2.21	0.44	200.0	374	1.27	0.01	10.0
	375	1.26	0.01	10.0	376	1.26	0.01	10.0	377	2.45	0.02	10.0
	378	2.43	0.02	10.0	379	2.42	0.02	10.0	380	2.44	0.02	10.0
	381	1.27	0.01	10.0	382	1.29	0.01	10.0	383	1.29	0.01	10.0
	384	1.27	0.01	10.0	385	2.44	0.02	10.0	386	2.45	0.02	10.0
	387	2.46	0.02	10.0	388	2.44	0.02	10.0	389	2.42	0.02	10.0
	390	2.41	0.02	10.0	391	2.41	0.02	10.0	392	2.43	0.02	10.0
	393	2.45	0.02	10.0								
81	1	2.53	0.03	10.0	2	2.55	0.03	10.0	3	2.56	0.03	10.0
	4	2.57	0.03	10.0	5	2.55	0.03	10.0	6	2.55	0.03	10.0
	9	6.92	1.38	200.0	10	6.80	1.36	200.0	22	7.24	1.45	200.0
	23	7.14	1.43	200.0	25	6.63	1.33	200.0	36	6.97	1.39	200.0
	37	6.40	1.28	200.0	48	6.73	1.35	200.0	49	6.11	1.22	200.0
	60	6.43	1.29	200.0	61	5.78	1.16	200.0	72	6.08	1.22	200.0
	73	5.39	1.08	200.0	84	5.68	1.14	200.0	85	4.98	1.00	200.0
	96	5.25	1.05	200.0	97	4.55	0.91	200.0	108	4.79	0.96	200.0
	109	4.11	0.82	200.0	120	4.32	0.86	200.0	121	3.70	0.74	200.0
	132	3.88	0.78	200.0	133	3.36	0.67	200.0	144	3.50	0.70	200.0
	145	3.14	0.63	200.0	156	3.23	0.65	200.0	157	3.09	0.62	200.0
	168	3.14	0.63	200.0	169	3.24	0.65	200.0	180	3.28	0.66	200.0
	181	3.51	0.70	200.0	192	3.55	0.71	200.0	193	6.77	1.35	200.0
	194	6.68	1.34	200.0	206	7.07	1.41	200.0	207	7.00	1.40	200.0
	209	6.53	1.31	200.0	220	6.85	1.37	200.0	221	6.32	1.26	200.0
	232	6.64	1.33	200.0	233	6.06	1.21	200.0	244	6.36	1.27	200.0
	245	5.73	1.15	200.0	256	6.02	1.20	200.0	257	5.37	1.07	200.0
	268	5.64	1.13	200.0	269	4.96	0.99	200.0	280	5.21	1.04	200.0
	281	4.53	0.91	200.0	292	4.77	0.95	200.0	293	4.10	0.82	200.0
	304	4.31	0.86	200.0	305	3.70	0.74	200.0	316	3.87	0.77	200.0
	317	3.36	0.67	200.0	328	3.50	0.70	200.0	329	3.14	0.63	200.0
	340	3.23	0.65	200.0	341	3.09	0.62	200.0	352	3.14	0.63	200.0
	353	3.24	0.65	200.0	364	3.28	0.66	200.0	374	2.52	0.03	10.0
	375	2.52	0.03	10.0	376	2.51	0.03	10.0	377	1.41	0.01	10.0
	378	1.38	0.01	10.0	379	1.38	0.01	10.0	380	1.41	0.01	10.0
	381	2.53	0.03	10.0	382	2.55	0.03	10.0	383	2.56	0.03	10.0
	384	2.54	0.03	10.0	385	1.42	0.01	10.0	386	1.43	0.01	10.0
	387	1.43	0.01	10.0	388	1.40	0.01	10.0	389	1.37	0.01	10.0
	390	1.37	0.01	10.0	391	1.36	0.01	10.0	392	1.39	0.01	10.0
	393	1.40	0.01	10.0								
82	1	2.54	0.03	10.0	2	2.52	0.03	10.0	3	2.53	0.03	10.0
	4	2.52	0.03	10.0	5	2.55	0.03	10.0	6	2.56	0.03	10.0
	9	6.96	1.39	200.0	10	6.89	1.38	200.0	22	6.98	1.40	200.0
	23	6.92	1.38	200.0	25	6.73	1.35	200.0	36	6.76	1.35	200.0
	37	6.49	1.30	200.0	48	6.53	1.31	200.0	49	6.17	1.23	200.0
	60	6.23	1.25	200.0	61	5.79	1.16	200.0	72	5.86	1.17	200.0
	73	5.35	1.07	200.0	84	5.43	1.09	200.0	85	4.87	0.97	200.0
	96	4.96	0.99	200.0	97	4.35	0.87	200.0	108	4.44	0.89	200.0
	109	3.81	0.76	200.0	120	3.91	0.78	200.0	121	3.27	0.65	200.0
	132	3.36	0.67	200.0	133	2.77	0.55	200.0	144	2.85	0.57	200.0
	145	2.36	0.47	200.0	156	2.42	0.48	200.0	157	2.14	0.43	200.0
	168	2.18	0.44	200.0	169	2.18	0.44	200.0	180	2.21	0.44	200.0
	181	2.41	0.48	200.0	192	2.46	0.49	200.0	193	6.79	1.36	200.0
	194	6.75	1.35	200.0	206	6.84	1.37	200.0	207	6.80	1.36	200.0
	209	6.62	1.32	200.0	220	6.67	1.33	200.0	221	6.40	1.28	200.0
	232	6.46	1.29	200.0	233	6.11	1.22	200.0	244	6.18	1.24	200.0
	245	5.75	1.15	200.0	256	5.82	1.16	200.0	257	5.33	1.07	200.0
	268	5.41	1.08	200.0	269	4.86	0.97	200.0	280	4.95	0.99	200.0
	281	4.35	0.87	200.0	292	4.45	0.89	200.0	293	3.82	0.76	200.0
	304	3.92	0.78	200.0	305	3.28	0.66	200.0	316	3.38	0.68	200.0
	317	2.78	0.56	200.0	328	2.86	0.57	200.0	329	2.37	0.47	200.0
	340	2.43	0.49	200.0	341	2.14	0.43	200.0	352	2.18	0.44	200.0
	353	2.18	0.44	200.0	364	2.21	0.44	200.0	374	2.56	0.03	10.0
	375	2.56	0.03	10.0	376	2.55	0.03	10.0	377	1.38	0.01	10.0
	378	1.40	0.01	10.0	379	1.40	0.01	10.0	380	1.38	0.01	10.0
	381	2.55	0.03	10.0	382	2.53	0.03	10.0	383	2.54	0.03	10.0
	384	2.56	0.03	10.0	385	1.37	0.01	10.0	386	1.37	0.01	10.0
	387	1.37	0.01	10.0	388	1.39	0.01	10.0	389	1.41	0.01	10.0
	390	1.40	0.01	10.0	391	1.39	0.01	10.0	392	1.38	0.01	10.0
	393	1.40	0.01	10.0								
83	1	1.27	0.01	10.0	2	1.24	0.01	10.0	3	1.25	0.01	10.0
	4	1.25	0.01	10.0	5	1.28	0.01	10.0	6	1.28	0.01	10.0

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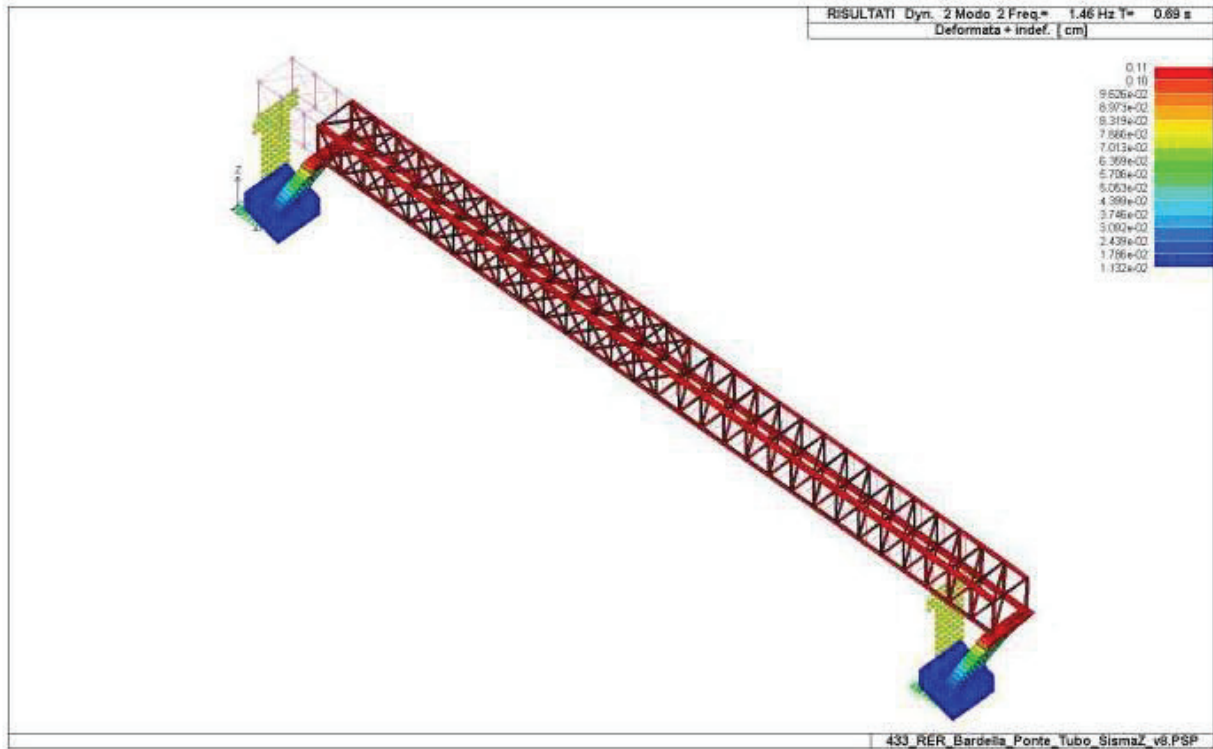
	9	6.80	1.36	200.0	10	6.71	1.34	200.0	22	7.13	1.43	200.0
	23	7.05	1.41	200.0	25	6.55	1.31	200.0	36	6.89	1.38	200.0
	37	6.34	1.27	200.0	48	6.66	1.33	200.0	49	6.06	1.21	200.0
	60	6.38	1.28	200.0	61	5.74	1.15	200.0	72	6.04	1.21	200.0
	73	5.37	1.07	200.0	84	5.65	1.13	200.0	85	4.96	0.99	200.0
	96	5.23	1.05	200.0	97	4.53	0.91	200.0	108	4.78	0.96	200.0
	109	4.10	0.82	200.0	120	4.32	0.86	200.0	121	3.70	0.74	200.0
	132	3.88	0.78	200.0	133	3.36	0.67	200.0	144	3.50	0.70	200.0
	145	3.14	0.63	200.0	156	3.23	0.65	200.0	157	3.09	0.62	200.0
	168	3.14	0.63	200.0	169	3.24	0.65	200.0	180	3.28	0.66	200.0
	181	3.51	0.70	200.0	192	3.55	0.71	200.0	193	6.88	1.38	200.0
	194	6.78	1.36	200.0	206	7.19	1.44	200.0	207	7.10	1.42	200.0
	209	6.62	1.32	200.0	220	6.93	1.39	200.0	221	6.39	1.28	200.0
	232	6.70	1.34	200.0	233	6.11	1.22	200.0	244	6.41	1.28	200.0
	245	5.77	1.15	200.0	256	6.06	1.21	200.0	257	5.39	1.08	200.0
	268	5.67	1.13	200.0	269	4.98	1.00	200.0	280	5.24	1.05	200.0
	281	4.54	0.91	200.0	292	4.78	0.96	200.0	293	4.11	0.82	200.0
	304	4.32	0.86	200.0	305	3.70	0.74	200.0	316	3.88	0.78	200.0
	317	3.36	0.67	200.0	328	3.50	0.70	200.0	329	3.14	0.63	200.0
	340	3.23	0.65	200.0	341	3.09	0.62	200.0	352	3.14	0.63	200.0
	353	3.24	0.65	200.0	364	3.28	0.66	200.0	374	1.31	0.01	10.0
	375	1.31	0.01	10.0	376	1.30	0.01	10.0	377	2.43	0.02	10.0
	378	2.46	0.02	10.0	379	2.44	0.02	10.0	380	2.42	0.02	10.0
	381	1.29	0.01	10.0	382	1.26	0.01	10.0	383	1.26	0.01	10.0
	384	1.29	0.01	10.0	385	2.40	0.02	10.0	386	2.41	0.02	10.0
	387	2.42	0.02	10.0	388	2.45	0.02	10.0	389	2.47	0.02	10.0
	390	2.46	0.02	10.0	391	2.45	0.02	10.0	392	2.43	0.02	10.0
	393	2.45	0.02	10.0								
84	1	1.27	0.01	10.0	2	1.28	0.01	10.0	3	1.28	0.01	10.0
	4	1.29	0.01	10.0	5	1.27	0.01	10.0	6	1.27	0.01	10.0
	9	6.84	1.37	200.0	10	6.79	1.36	200.0	22	6.86	1.37	200.0
	23	6.82	1.36	200.0	25	6.65	1.33	200.0	36	6.68	1.34	200.0
	37	6.43	1.29	200.0	48	6.47	1.29	200.0	49	6.13	1.23	200.0
	60	6.18	1.24	200.0	61	5.76	1.15	200.0	72	5.83	1.17	200.0
	73	5.33	1.07	200.0	84	5.41	1.08	200.0	85	4.86	0.97	200.0
	96	4.95	0.99	200.0	97	4.35	0.87	200.0	108	4.45	0.89	200.0
	109	3.82	0.76	200.0	120	3.91	0.78	200.0	121	3.28	0.66	200.0
	132	3.38	0.68	200.0	133	2.78	0.56	200.0	144	2.86	0.57	200.0
	145	2.37	0.47	200.0	156	2.43	0.49	200.0	157	2.14	0.43	200.0
	168	2.18	0.44	200.0	169	2.19	0.44	200.0	180	2.21	0.44	200.0
	181	2.41	0.48	200.0	192	2.46	0.49	200.0	193	6.92	1.38	200.0
	194	6.86	1.37	200.0	206	6.96	1.39	200.0	207	6.90	1.38	200.0
	209	6.70	1.34	200.0	220	6.75	1.35	200.0	221	6.47	1.29	200.0
	232	6.52	1.30	200.0	233	6.15	1.23	200.0	244	6.22	1.24	200.0
	245	5.78	1.16	200.0	256	5.86	1.17	200.0	257	5.34	1.07	200.0
	268	5.43	1.09	200.0	269	4.86	0.97	200.0	280	4.96	0.99	200.0
	281	4.35	0.87	200.0	292	4.45	0.89	200.0	293	3.81	0.76	200.0
	304	3.91	0.78	200.0	305	3.27	0.65	200.0	316	3.37	0.67	200.0
	317	2.77	0.55	200.0	328	2.85	0.57	200.0	329	2.36	0.47	200.0
	340	2.42	0.48	200.0	341	2.14	0.43	200.0	352	2.17	0.43	200.0
	353	2.18	0.44	200.0	364	2.21	0.44	200.0	374	1.26	0.01	10.0
	375	1.25	0.01	10.0	376	1.25	0.01	10.0	377	2.46	0.02	10.0
	378	2.44	0.02	10.0	379	2.43	0.02	10.0	380	2.44	0.02	10.0
	381	1.26	0.01	10.0	382	1.27	0.01	10.0	383	1.28	0.01	10.0
	384	1.26	0.01	10.0	385	2.45	0.02	10.0	386	2.46	0.02	10.0
	387	2.46	0.02	10.0	388	2.45	0.02	10.0	389	2.42	0.02	10.0
	390	2.42	0.02	10.0	391	2.41	0.02	10.0	392	2.44	0.02	10.0
	393	2.45	0.02	10.0								
85	1	1.56	0.02	10.0	2	1.62	0.02	10.0	3	1.71	0.02	10.0
	4	1.75	0.02	10.0	5	1.70	0.02	10.0	6	1.67	0.02	10.0
	9	8.30	1.66	200.0	10	7.93	1.59	200.0	22	8.12	1.62	200.0
	23	7.80	1.56	200.0	25	7.57	1.51	200.0	36	7.49	1.50	200.0
	37	7.21	1.44	200.0	48	7.25	1.45	200.0	49	6.84	1.37	200.0
	60	7.09	1.42	200.0	61	6.46	1.29	200.0	72	6.94	1.39	200.0
	73	6.07	1.21	200.0	84	6.51	1.30	200.0	85	5.67	1.13	200.0
	96	6.07	1.21	200.0	97	5.28	1.06	200.0	108	5.63	1.13	200.0
	109	4.92	0.98	200.0	120	5.21	1.04	200.0	121	4.60	0.92	200.0
	132	4.84	0.97	200.0	133	4.38	0.88	200.0	144	4.55	0.91	200.0
	145	4.27	0.85	200.0	156	4.38	0.88	200.0	157	4.30	0.86	200.0
	168	4.36	0.87	200.0	169	4.50	0.90	200.0	180	4.54	0.91	200.0
	181	4.78	0.96	200.0	192	4.83	0.97	200.0	193	7.98	1.60	200.0
	194	7.54	1.51	200.0	206	9.15	1.83	200.0	207	8.83	1.77	200.0
	209	7.22	1.44	200.0	220	8.39	1.68	200.0	221	6.99	1.40	200.0
	232	7.95	1.59	200.0	233	6.85	1.37	200.0	244	7.51	1.50	200.0
	245	6.54	1.31	200.0	256	7.06	1.41	200.0	257	6.13	1.23	200.0
	268	6.60	1.32	200.0	269	5.72	1.14	200.0	280	6.14	1.23	200.0
	281	5.32	1.06	200.0	292	5.68	1.14	200.0	293	4.94	0.99	200.0

Progetto esecutivo

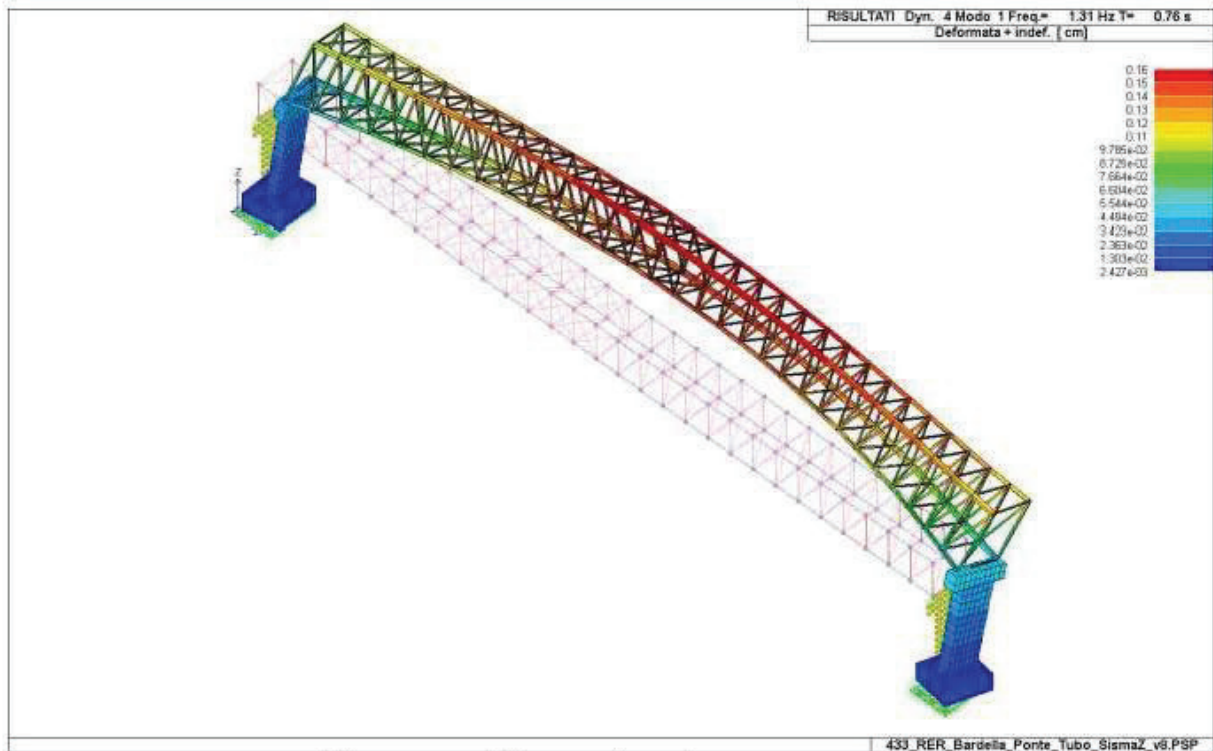
PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	96 di 288

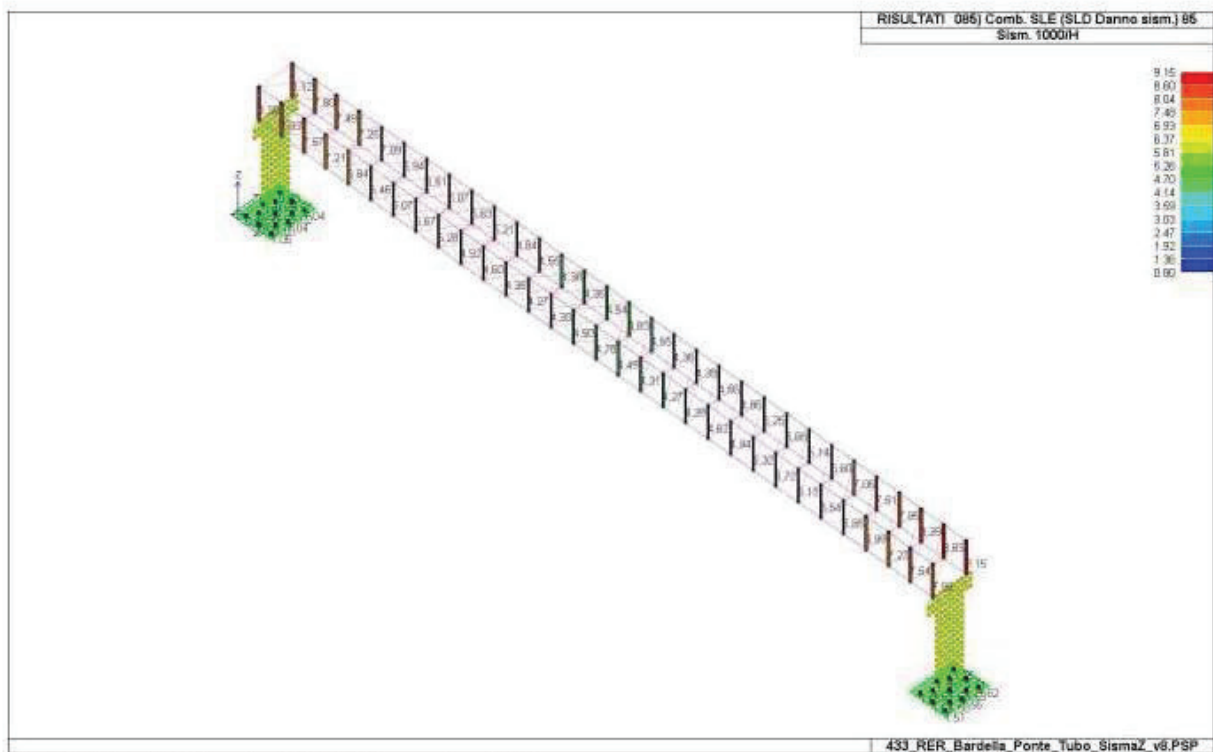
	304	5.25	1.05	200.0	305	4.62	0.92	200.0	316	4.86	0.97	200.0
	317	4.39	0.88	200.0	328	4.56	0.91	200.0	329	4.27	0.85	200.0
	340	4.38	0.88	200.0	341	4.31	0.86	200.0	352	4.36	0.87	200.0
	353	4.49	0.90	200.0	364	4.55	0.91	200.0	374	1.65	0.02	10.0
	375	1.61	0.02	10.0	376	1.51	0.02	10.0	377	1.03	0.01	10.0
	378	1.02	0.01	10.0	379	0.898.85e-03	10.0	380	0.908.97e-03	10.0		
	381	1.58	0.02	10.0	382	1.63	0.02	10.0	383	1.72	0.02	10.0
	384	1.67	0.02	10.0	385	0.828.22e-03	10.0	386	0.999.91e-03	10.0		
	387	1.05	0.01	10.0	388	1.04	0.01	10.0	389	1.04	0.01	10.0
	390	0.979.71e-03	10.0	391	0.808.04e-03	10.0	392	0.818.10e-03	10.0			
	393	0.999.87e-03	10.0									
86	1	1.57	0.02	10.0	2	1.52	0.02	10.0	3	1.62	0.02	10.0
	4	1.66	0.02	10.0	5	1.70	0.02	10.0	6	1.67	0.02	10.0
	9	7.71	1.54	200.0	10	7.45	1.49	200.0	22	8.18	1.64	200.0
	23	7.96	1.59	200.0	25	7.20	1.44	200.0	36	7.63	1.53	200.0
	37	6.98	1.40	200.0	48	7.25	1.45	200.0	49	6.78	1.36	200.0
	60	6.82	1.36	200.0	61	6.49	1.30	200.0	72	6.35	1.27	200.0
	73	5.95	1.19	200.0	84	5.83	1.17	200.0	85	5.36	1.07	200.0
	96	5.26	1.05	200.0	97	4.73	0.95	200.0	108	4.66	0.93	200.0
	109	4.07	0.81	200.0	120	4.02	0.80	200.0	121	3.38	0.68	200.0
	132	3.36	0.67	200.0	133	2.69	0.54	200.0	144	2.67	0.53	200.0
	145	2.01	0.40	200.0	156	2.00	0.40	200.0	157	1.40	0.28	200.0
	168	1.39	0.28	200.0	169	1.04	0.21	200.0	180	1.06	0.21	200.0
	181	1.14	0.23	200.0	192	1.19	0.24	200.0	193	8.74	1.75	200.0
	194	8.41	1.68	200.0	206	7.63	1.53	200.0	207	7.38	1.48	200.0
	209	8.03	1.61	200.0	220	7.09	1.42	200.0	221	7.60	1.52	200.0
	232	6.85	1.37	200.0	233	7.12	1.42	200.0	244	6.65	1.33	200.0
	245	6.58	1.32	200.0	256	6.41	1.28	200.0	257	6.01	1.20	200.0
	268	5.87	1.17	200.0	269	5.40	1.08	200.0	280	5.29	1.06	200.0
	281	4.76	0.95	200.0	292	4.68	0.94	200.0	293	4.09	0.82	200.0
	304	4.03	0.81	200.0	305	3.39	0.68	200.0	316	3.37	0.67	200.0
	317	2.70	0.54	200.0	328	2.69	0.54	200.0	329	2.01	0.40	200.0
	340	2.01	0.40	200.0	341	1.40	0.28	200.0	352	1.41	0.28	200.0
	353	1.07	0.21	200.0	364	1.04	0.21	200.0	374	1.75	0.02	10.0
	375	1.70	0.02	10.0	376	1.61	0.02	10.0	377	1.01	0.01	10.0
	378	1.02	0.01	10.0	379	0.909.00e-03	10.0	380	0.898.90e-03	10.0		
	381	1.63	0.02	10.0	382	1.59	0.02	10.0	383	1.67	0.02	10.0
	384	1.72	0.02	10.0	385	0.818.11e-03	10.0	386	0.979.70e-03	10.0		
	387	1.02	0.01	10.0	388	1.02	0.01	10.0	389	1.03	0.01	10.0
	390	0.999.87e-03	10.0	391	0.838.26e-03	10.0	392	0.828.16e-03	10.0			
	393	0.989.85e-03	10.0									
87	1	1.009.99e-03	10.0	2	1.00	0.01	10.0	3	1.14	0.01	10.0	
	4	1.21	0.01	10.0	5	1.21	0.01	10.0	6	1.15	0.01	10.0
	9	6.81	1.36	200.0	10	6.42	1.28	200.0	22	8.03	1.61	200.0
	23	7.80	1.56	200.0	25	6.13	1.23	200.0	36	7.56	1.51	200.0
	37	5.93	1.19	200.0	48	7.37	1.47	200.0	49	5.80	1.16	200.0
	60	7.23	1.45	200.0	61	5.74	1.15	200.0	72	6.94	1.39	200.0
	73	5.74	1.15	200.0	84	6.51	1.30	200.0	85	5.67	1.13	200.0
	96	6.07	1.21	200.0	97	5.28	1.06	200.0	108	5.63	1.13	200.0
	109	4.92	0.98	200.0	120	5.21	1.04	200.0	121	4.61	0.92	200.0
	132	4.84	0.97	200.0	133	4.38	0.88	200.0	144	4.55	0.91	200.0
	145	4.27	0.85	200.0	156	4.38	0.88	200.0	157	4.31	0.86	200.0
	168	4.36	0.87	200.0	169	4.50	0.90	200.0	180	4.54	0.91	200.0
	181	4.78	0.96	200.0	192	4.83	0.97	200.0	193	8.66	1.73	200.0
	194	8.20	1.64	200.0	206	7.84	1.57	200.0	207	7.42	1.48	200.0
	209	7.77	1.55	200.0	220	7.00	1.40	200.0	221	7.36	1.47	200.0
	232	6.68	1.34	200.0	233	6.95	1.39	200.0	244	6.45	1.29	200.0
	245	6.54	1.31	200.0	256	6.29	1.26	200.0	257	6.13	1.23	200.0
	268	6.20	1.24	200.0	269	5.72	1.14	200.0	280	6.14	1.23	200.0
	281	5.31	1.06	200.0	292	5.68	1.14	200.0	293	4.94	0.99	200.0
	304	5.24	1.05	200.0	305	4.62	0.92	200.0	316	4.86	0.97	200.0
	317	4.38	0.88	200.0	328	4.56	0.91	200.0	329	4.27	0.85	200.0
	340	4.38	0.88	200.0	341	4.30	0.86	200.0	352	4.36	0.87	200.0
	353	4.49	0.90	200.0	364	4.55	0.91	200.0	374	1.21	0.01	10.0
	375	1.14	0.01	10.0	376	1.00	0.01	10.0	377	1.47	0.01	10.0
	378	1.53	0.02	10.0	379	1.44	0.01	10.0	380	1.38	0.01	10.0
	381	1.06	0.01	10.0	382	1.06	0.01	10.0	383	1.19	0.01	10.0
	384	1.19	0.01	10.0	385	1.30	0.01	10.0	386	1.41	0.01	10.0
	387	1.45	0.01	10.0	388	1.51	0.02	10.0	389	1.56	0.02	10.0
	390	1.52	0.02	10.0	391	1.42	0.01	10.0	392	1.36	0.01	10.0
	393	1.48	0.01	10.0								
88	1	1.01	0.01	10.0	2	1.01	0.01	10.0	3	1.14	0.01	10.0
	4	1.19	0.01	10.0	5	1.19	0.01	10.0	6	1.15	0.01	10.0
	9	7.81	1.56	200.0	10	7.63	1.53	200.0	22	6.46	1.29	200.0
	23	6.26	1.25	200.0	25	7.45	1.49	200.0	36	6.01	1.20	200.0
	37	7.27	1.45	200.0	48	5.79	1.16	200.0	49	6.98	1.40	200.0
	60	5.60	1.12	200.0	61	6.48	1.30	200.0	72	5.44	1.09	200.0

Cmb
1000 etaT/h
 9.15


31_RIS_MODALOX_002_CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)



31_RIS_MODALOY_001_CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)



31_RIS_SLE_085_Comb. SLE (SLD Danno sism.) 85

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	104 di 288

RISULTATI NODALI

LEGENDA RISULTATI NODALI

Il controllo dei risultati delle analisi condotte, per quanto concerne i nodi strutturali, è possibile in relazione alle tabelle sottoriportate.

Una prima tabella riporta infatti per ogni nodo e per ogni combinazione (o caso di carico) gli spostamenti nodali.

Una seconda tabella riporta per ogni nodo a cui sia associato un vincolo rigido e/o elastico o una fondazione speciale e per ogni combinazione (o caso di carico) i valori delle azioni esercitate dalla struttura sui vincoli (reazioni vincolari cambiate di segno).

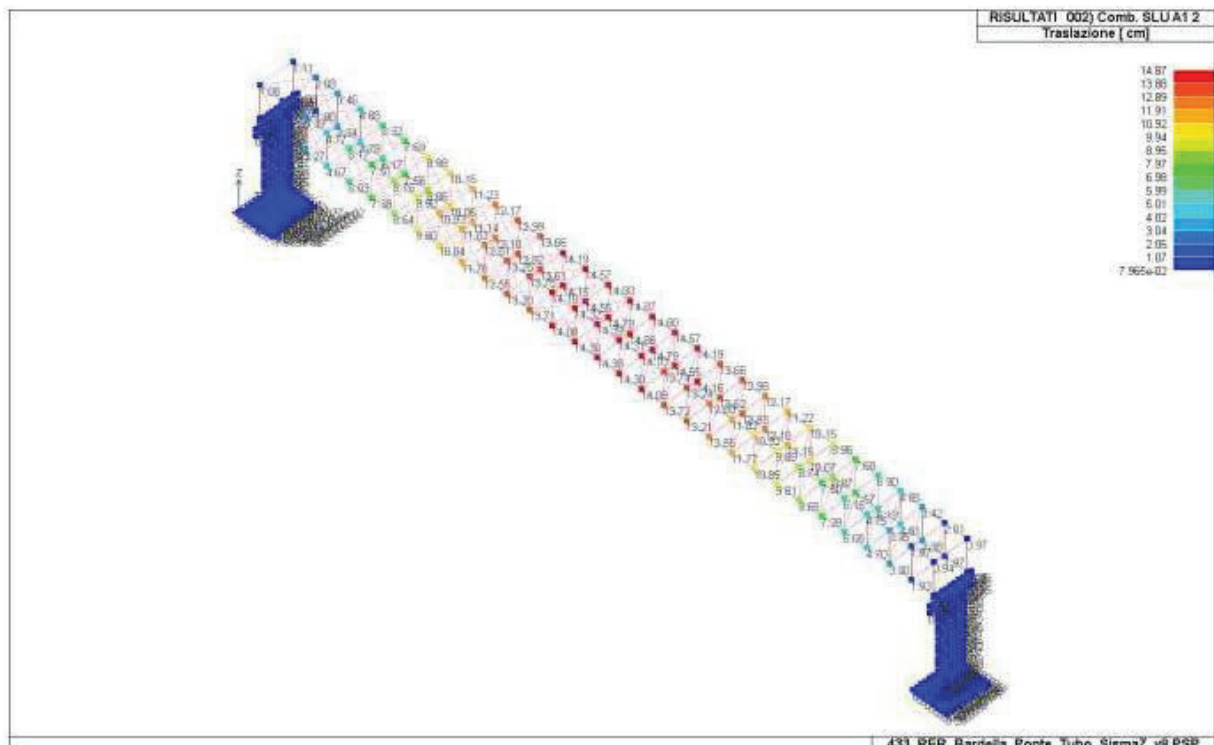
Una terza tabella, infine riassume per ogni nodo le sei combinazioni in cui si attingono i valori minimi e massimi della reazione Fz, della reazione Mx e della reazione My.

Nodo	Cmb	Traslazione X cm	Traslazione Y cm	Traslazione Z cm	Rotazione X	Rotazione Y	Rotazione Z
1	1	-0.03	-5.59e-03	-0.18	2.61e-06	-5.86e-04	6.79e-05
1	2	-0.04	-2.45e-03	-0.20	-6.10e-06	-6.96e-04	7.85e-05
1	12	-0.68	-0.08	-0.59	6.99e-04	-5.64e-03	-6.99e-04
1	36	-0.67	-0.11	-0.61	8.88e-04	-5.63e-03	-5.35e-04
1	56	-0.06	-0.33	-0.33	2.90e-03	6.79e-04	-2.14e-03
1	72	-0.28	-0.03	-0.31	2.62e-04	-2.45e-03	-2.30e-04
1	84	-0.27	-0.04	-0.32	3.34e-04	-2.44e-03	-1.68e-04
1	94	-0.05	-0.13	-0.21	1.09e-03	-6.97e-05	-7.74e-04
1	133	-0.02	-4.14e-03	-0.13	1.93e-06	-4.33e-04	5.02e-05
1	134	-0.03	-2.27e-03	-0.14	-3.23e-06	-4.99e-04	5.65e-05
1	135	-0.02	-4.14e-03	-0.13	1.93e-06	-4.33e-04	5.02e-05
1	136	-0.03	-1.81e-03	-0.14	-4.52e-06	-5.15e-04	5.81e-05
1	137	-0.02	-4.14e-03	-0.13	1.93e-06	-4.33e-04	5.02e-05
1	138	-0.03	-2.04e-03	-0.14	-3.87e-06	-5.07e-04	5.73e-05
1	139	-0.02	-4.14e-03	-0.13	1.93e-06	-4.33e-04	5.02e-05
1	140	-0.03	-2.27e-03	-0.14	-3.23e-06	-4.99e-04	5.65e-05
2	2	-0.04	3.37e-03	-0.14	-1.71e-05	-6.95e-04	7.88e-05
2	4	-0.04	3.52e-03	-0.11	-1.53e-05	-5.43e-04	6.11e-05
2	12	-0.68	-0.11	-0.18	7.60e-04	-5.64e-03	-6.98e-04
2	56	-0.06	-0.44	-0.40	3.11e-03	6.79e-04	-2.14e-03
2	57	0.02	0.44	0.20	-3.14e-03	-1.62e-03	2.25e-03
2	72	-0.28	-0.04	-0.13	2.81e-04	-2.45e-03	-2.30e-04
2	94	-0.05	-0.16	-0.21	1.17e-03	-7.06e-05	-7.74e-04
2	95	-0.01	0.17	0.01	-1.19e-03	-9.25e-04	8.87e-04
2	134	-0.03	1.91e-03	-0.10	-1.12e-05	-4.98e-04	5.67e-05
2	136	-0.03	2.50e-03	-0.10	-1.27e-05	-5.14e-04	5.83e-05
2	138	-0.03	2.21e-03	-0.10	-1.19e-05	-5.06e-04	5.75e-05
2	140	-0.03	1.91e-03	-0.10	-1.12e-05	-4.98e-04	5.67e-05
3	2	-0.04	9.45e-03	-0.08	-2.52e-05	-7.00e-04	7.83e-05
3	12	-0.68	-0.16	0.24	8.26e-04	-5.65e-03	-6.98e-04
3	16	0.49	-0.16	-0.53	1.02e-03	4.42e-03	-5.33e-04
3	54	0.37	0.59	0.12	-3.36e-03	1.38e-03	2.30e-03
3	72	-0.28	-0.05	0.05	3.02e-04	-2.45e-03	-2.30e-04
3	74	0.17	-0.06	-0.24	3.75e-04	1.36e-03	-1.67e-04
3	93	0.12	0.23	9.38e-03	-1.28e-03	2.16e-04	9.02e-04
3	134	-0.03	6.29e-03	-0.06	-1.70e-05	-5.01e-04	5.63e-05
3	136	-0.03	6.99e-03	-0.06	-1.87e-05	-5.17e-04	5.79e-05
3	138	-0.03	6.64e-03	-0.06	-1.78e-05	-5.09e-04	5.71e-05
3	140	-0.03	6.29e-03	-0.06	-1.70e-05	-5.01e-04	5.63e-05
4	2	-0.05	9.90e-03	-0.08	-1.91e-05	-7.15e-04	7.86e-05
4	22	0.54	0.15	-0.44	-9.10e-04	4.52e-03	6.70e-04
4	34	-0.62	0.19	0.31	-9.98e-04	-5.55e-03	7.94e-04
4	54	0.14	0.59	-0.18	-3.36e-03	1.01e-03	2.29e-03
4	77	0.18	0.06	-0.20	-3.51e-04	1.39e-03	2.88e-04
4	80	-0.26	-0.05	0.08	3.26e-04	-2.42e-03	-1.74e-04
4	93	0.03	0.23	-0.10	-1.28e-03	6.63e-05	9.02e-04
4	134	-0.04	6.61e-03	-0.06	-1.25e-05	-5.12e-04	5.66e-05
4	136	-0.04	7.33e-03	-0.06	-1.41e-05	-5.29e-04	5.81e-05
4	138	-0.04	6.97e-03	-0.06	-1.33e-05	-5.21e-04	5.73e-05
4	140	-0.04	6.61e-03	-0.06	-1.25e-05	-5.12e-04	5.66e-05
5	2	-0.06	0.01	-0.08	-1.29e-05	-7.25e-04	7.86e-05
5	26	-0.70	0.17	0.24	-8.60e-04	-5.67e-03	8.13e-04
5	30	0.47	0.17	-0.53	-1.04e-03	4.39e-03	6.52e-04
5	54	-0.09	0.59	-0.47	-3.35e-03	6.20e-04	2.30e-03
5	79	-0.29	0.07	0.05	-3.30e-04	-2.46e-03	3.42e-04
5	81	0.15	0.07	-0.24	-3.97e-04	1.34e-03	2.81e-04

PONTE-TUBO - RELAZIONE DI CALCOLO

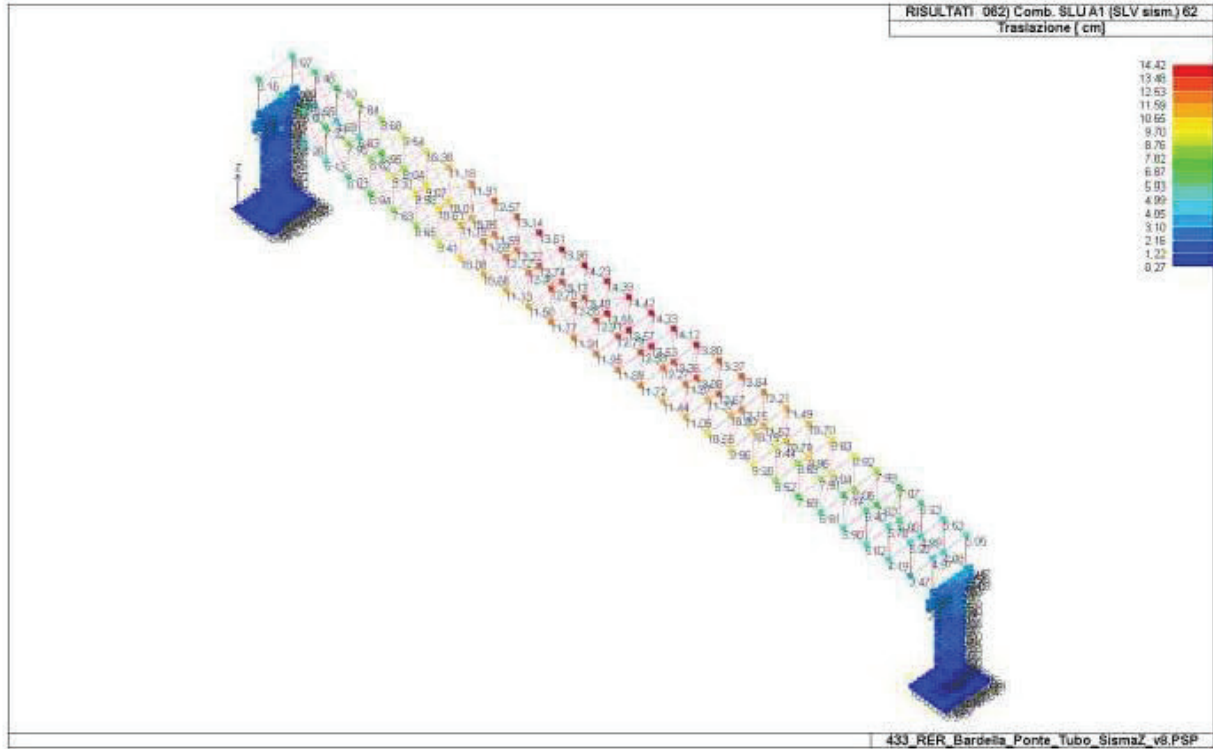
COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	106 di 288

594	140	-0.05	6.95e-03	-0.06	3.76e-06	-5.59e-04	0.0
595	1	-0.04	6.49e-03	-0.06	-8.10e-06	-6.63e-04	0.0
595	2	-0.05	0.01	-0.06	-1.27e-05	-7.79e-04	0.0
595	12	-0.74	-0.18	0.38	7.32e-04	-5.64e-03	0.0
595	16	0.54	-0.18	-0.65	9.21e-04	4.50e-03	0.0
595	54	0.38	0.67	0.10	-3.00e-03	9.81e-04	0.0
595	72	-0.30	-0.06	0.12	2.72e-04	-2.48e-03	0.0
595	74	0.18	-0.06	-0.27	3.44e-04	1.36e-03	0.0
595	93	0.12	0.26	8.76e-03	-1.14e-03	2.77e-05	0.0
595	133	-0.03	4.80e-03	-0.05	-5.99e-06	-4.91e-04	0.0
595	134	-0.04	7.83e-03	-0.05	-8.72e-06	-5.59e-04	0.0
595	135	-0.03	4.80e-03	-0.05	-5.99e-06	-4.91e-04	0.0
595	136	-0.04	8.59e-03	-0.05	-9.40e-06	-5.76e-04	0.0
595	137	-0.03	4.80e-03	-0.05	-5.99e-06	-4.91e-04	0.0
595	138	-0.04	8.21e-03	-0.05	-9.06e-06	-5.68e-04	0.0
595	139	-0.03	4.80e-03	-0.05	-5.99e-06	-4.91e-04	0.0
595	140	-0.04	7.83e-03	-0.05	-8.72e-06	-5.59e-04	0.0
596	1	-0.04	6.50e-03	-0.06	-7.86e-06	-6.63e-04	0.0
596	2	-0.05	0.01	-0.06	-1.24e-05	-7.78e-04	0.0
596	12	-0.75	-0.18	0.36	7.33e-04	-5.64e-03	0.0
596	16	0.52	-0.18	-0.67	9.22e-04	4.50e-03	0.0
596	54	0.44	0.67	0.17	-3.00e-03	9.82e-04	0.0
596	72	-0.31	-0.06	0.11	2.72e-04	-2.48e-03	0.0
596	74	0.17	-0.06	-0.28	3.44e-04	1.35e-03	0.0
596	93	0.14	0.26	0.04	-1.14e-03	2.85e-05	0.0
596	133	-0.03	4.81e-03	-0.05	-5.81e-06	-4.90e-04	0.0
596	134	-0.03	7.85e-03	-0.05	-8.52e-06	-5.59e-04	0.0
596	135	-0.03	4.81e-03	-0.05	-5.81e-06	-4.90e-04	0.0
596	136	-0.04	8.60e-03	-0.05	-9.20e-06	-5.76e-04	0.0
596	137	-0.03	4.81e-03	-0.05	-5.81e-06	-4.90e-04	0.0
596	138	-0.04	8.22e-03	-0.05	-8.86e-06	-5.67e-04	0.0
596	139	-0.03	4.81e-03	-0.05	-5.81e-06	-4.90e-04	0.0
596	140	-0.03	7.85e-03	-0.05	-8.52e-06	-5.59e-04	0.0
Nodo		Traslazione X	Traslazione Y	Traslazione Z	Rotazione X	Rotazione Y	Rotazione Z
		-6.17	-7.70	-14.86	-0.01	-0.01	-4.43e-03
		6.30	8.32	0.47	0.01	0.01	4.43e-03



PONTE-TUBO - RELAZIONE DI CALCOLO

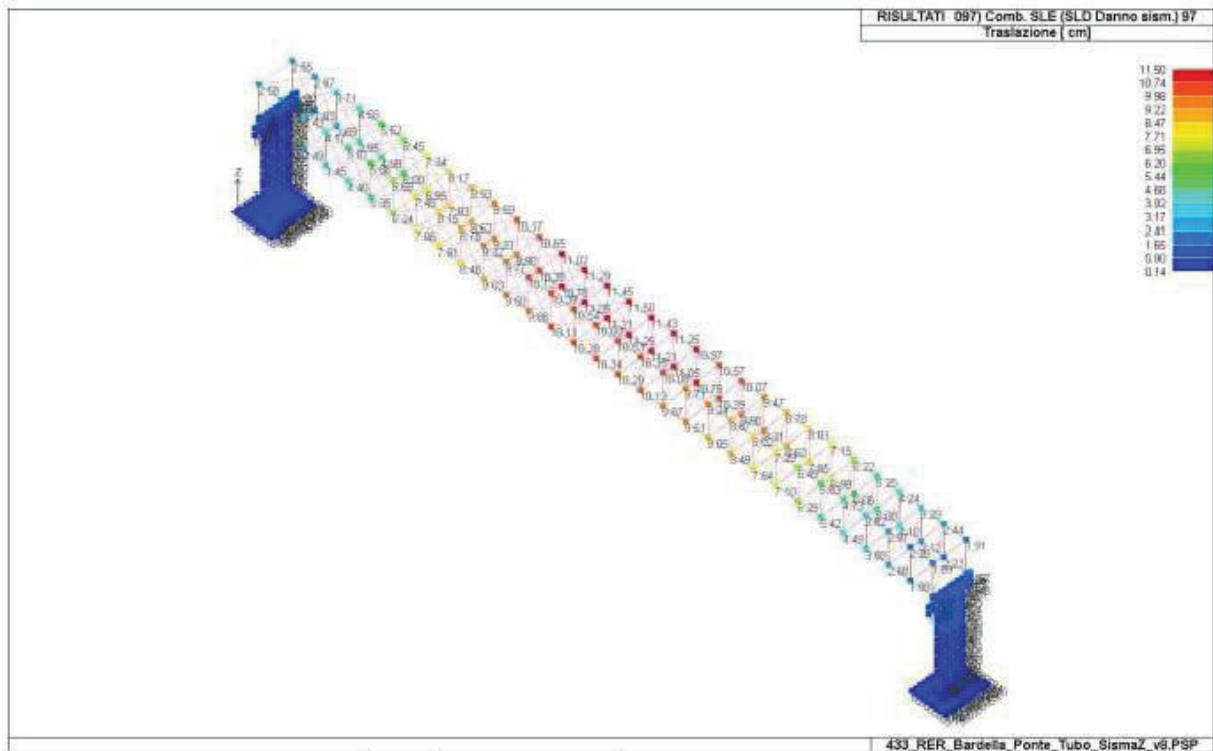
COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	107 di 288



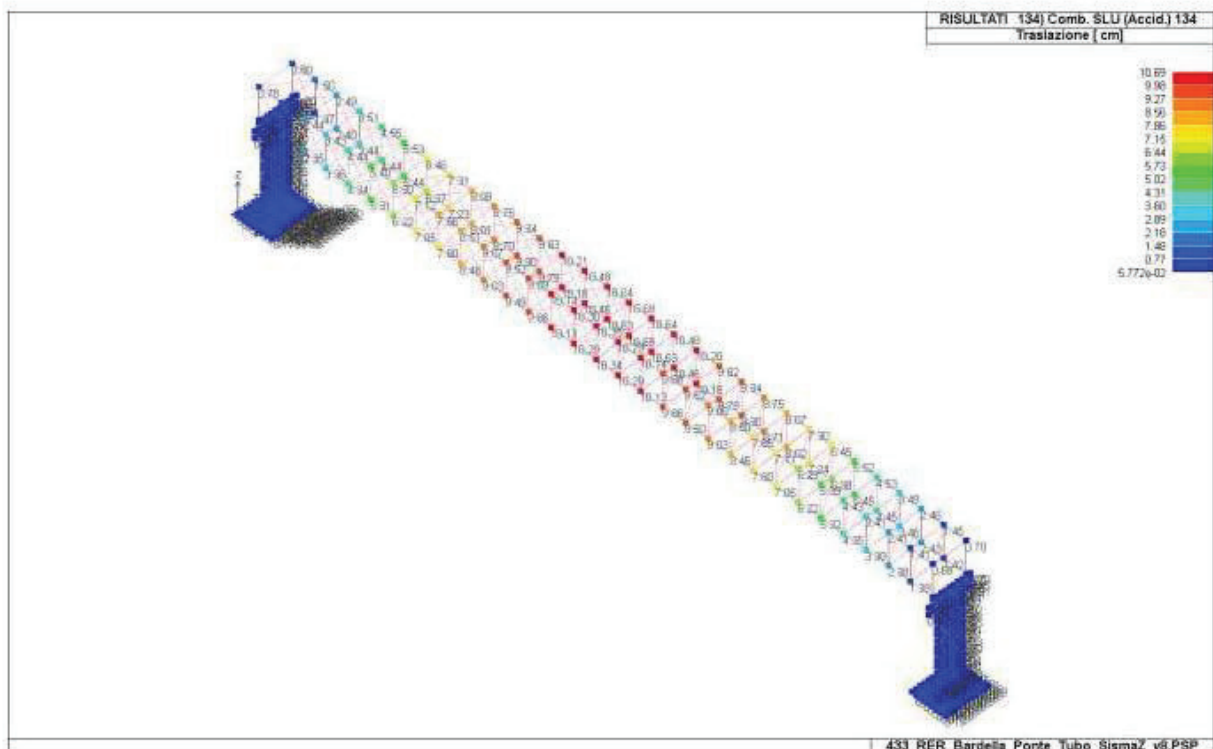
41_RIS_SPOSTAMENTI_062_Comb. SLU A1 (SLV sism.) 62

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	108 di 288



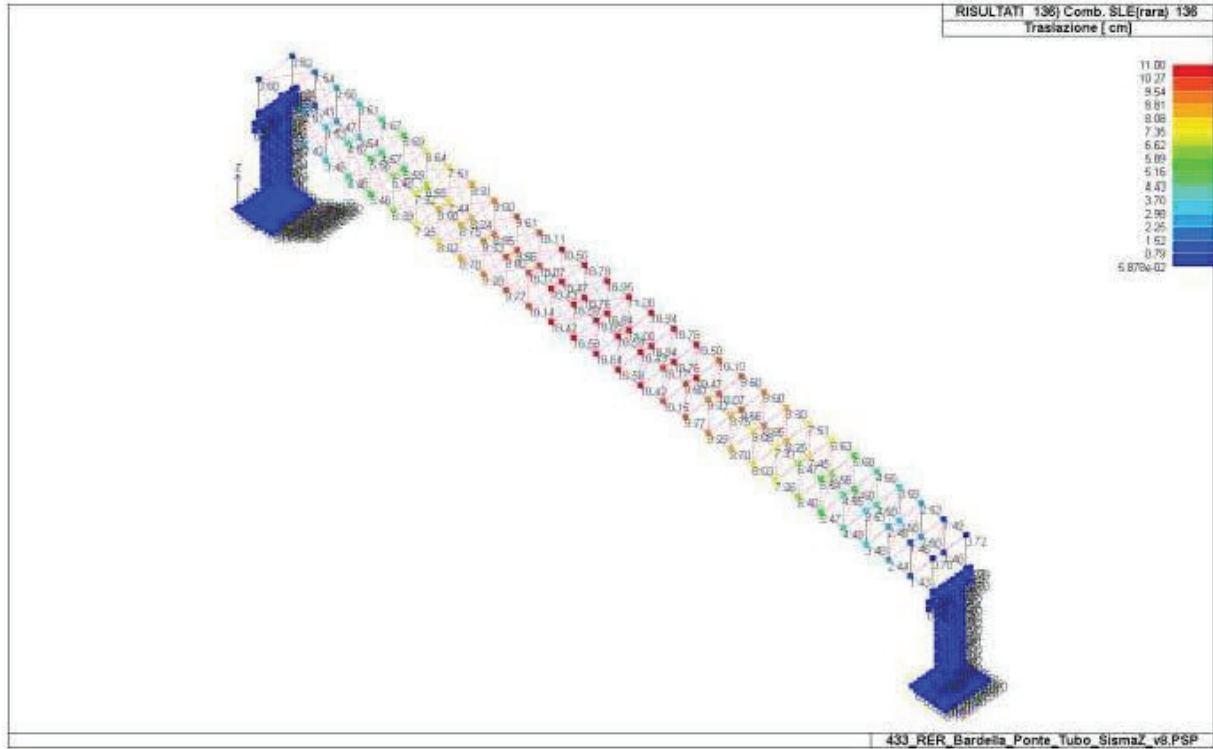
41_RIS_SPOSTAMENTI_097_Comb. SLE (SLD Danno sism.) 97



41_RIS_SPOSTAMENTI_134_Comb. SLU (Accid.) 134

PONTE-TUBO - RELAZIONE DI CALCOLO

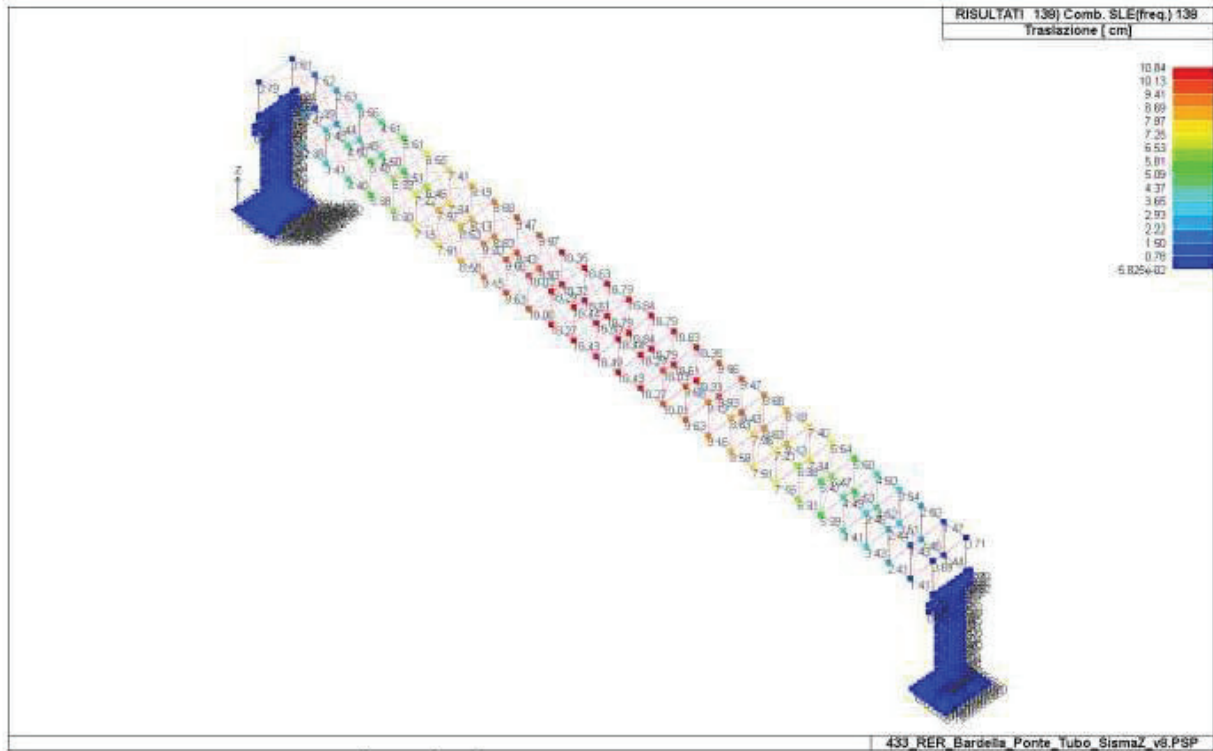
COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	109 di 288



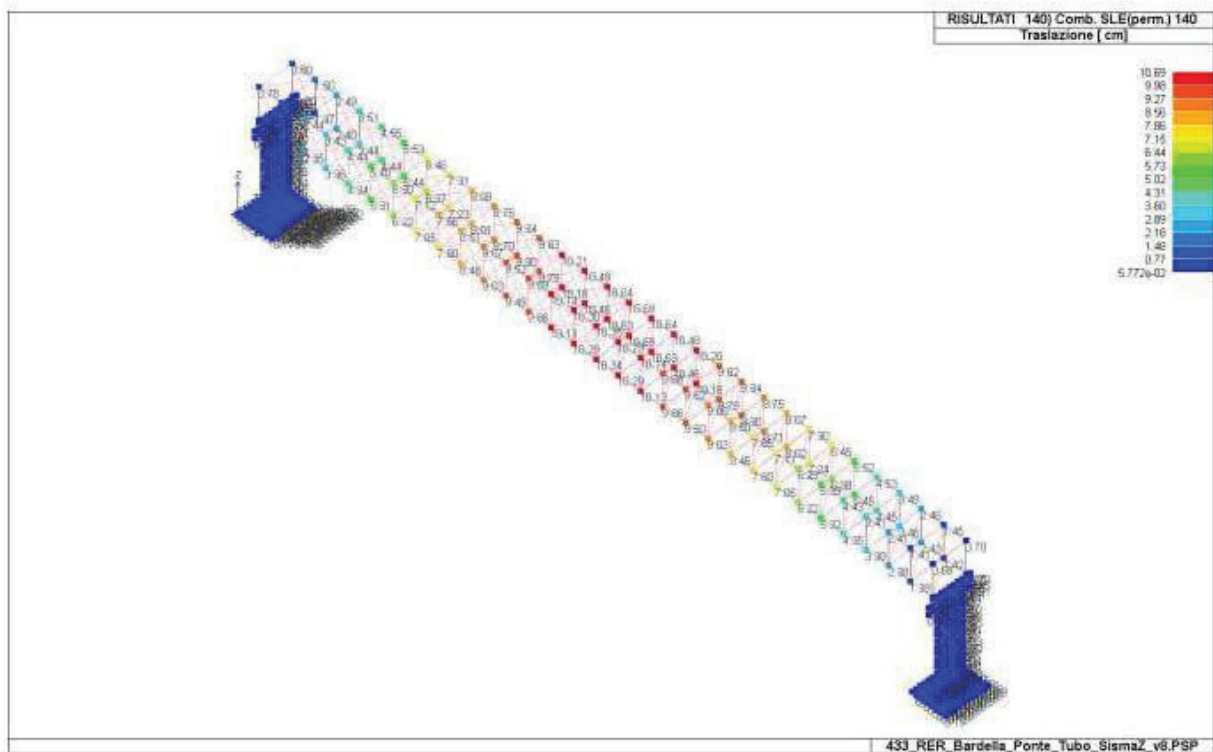
41_RIS_SPOSTAMENTI_136_Comb. SLE(rara) 136

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	110 di 288



41_RIS_SPOSTAMENTI_138_Comb. SLE(freq.) 138



41_RIS_SPOSTAMENTI_140_Comb. SLE(perm.) 140

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	111 di 288

Nodo	Cmb	Azione X daN	Azione Y daN	Azione Z daN	Azione RX daN cm	Azione RY daN cm	Azione RZ daN cm
1	1	6.25	-31.77	-9503.46	-1770.46	-1.331e+04	80.97
1	2	-22.07	-16.34	-1.053e+04	-1075.14	-1.412e+04	93.72
1	3	4.83	-23.49	-7020.54	-1309.01	-9850.53	59.88
1	29	2038.63	288.13	1.770e+04	-3198.25	-1.457e+04	773.63
1	36	-2030.93	-316.81	-3.292e+04	1405.51	-7547.28	-638.61
1	49	703.53	772.42	222.34	-9806.80	-7.596e+04	2811.49
1	66	657.23	892.11	2137.77	-1.238e+04	-7.408e+04	2744.21
1	81	760.96	99.54	1888.12	-1788.09	-1.188e+04	335.27
1	84	-784.86	-128.24	-1.714e+04	-5.84	-8785.57	-200.39
1	91	255.80	282.85	-4722.18	-4279.39	-3.508e+04	1106.09
1	99	243.83	329.27	-3870.80	-5199.49	-3.450e+04	1078.88
1	133	4.83	-23.49	-7020.54	-1309.01	-9850.53	59.88
1	134	-11.95	-14.35	-7627.21	-896.97	-1.033e+04	67.44
1	135	4.83	-23.49	-7020.54	-1309.01	-9850.53	59.88
1	136	-16.15	-12.06	-7778.88	-793.96	-1.045e+04	69.33
1	137	4.83	-23.49	-7020.54	-1309.01	-9850.53	59.88
1	138	-14.05	-13.21	-7703.05	-845.46	-1.039e+04	68.38
1	139	4.83	-23.49	-7020.54	-1309.01	-9850.53	59.88
1	140	-11.95	-14.35	-7627.21	-896.97	-1.033e+04	67.44
2	2	-20.38	13.91	-7478.30	421.62	-1.420e+04	94.03
2	3	5.75	-4.21	-5102.02	-356.19	-9880.16	60.01
2	4	-22.12	15.40	-5671.17	547.60	-1.073e+04	72.89
2	49	702.18	1298.88	8444.53	1.547e+04	-7.580e+04	2811.07
2	56	-574.91	-1502.81	-2.167e+04	-1.765e+04	4.808e+04	-2551.38
2	57	657.13	1517.75	1.079e+04	1.802e+04	-7.353e+04	2686.61
2	91	256.02	495.23	-246.53	5918.82	-3.505e+04	1106.06
2	94	-260.52	-563.18	-1.152e+04	-6524.41	1.343e+04	-923.64
2	95	238.98	578.00	641.92	6883.18	-3.420e+04	1058.93
2	133	5.75	-4.21	-5102.02	-356.19	-9880.16	60.01
2	134	-10.77	7.41	-5439.30	179.39	-1.038e+04	67.64
2	135	5.75	-4.21	-5102.02	-356.19	-9880.16	60.01
2	136	-14.90	10.32	-5523.62	313.28	-1.051e+04	69.55
2	137	5.75	-4.21	-5102.02	-356.19	-9880.16	60.01
2	138	-12.83	8.87	-5481.46	246.34	-1.045e+04	68.60
2	139	5.75	-4.21	-5102.02	-356.19	-9880.16	60.01
2	140	-10.77	7.41	-5439.30	179.39	-1.038e+04	67.64
3	2	-17.13	46.68	-4365.77	2128.12	-1.448e+04	93.43
3	3	7.91	16.73	-3141.15	735.24	-1.007e+04	59.63
3	16	1393.37	-583.68	-2.852e+04	-1.109e+04	1.754e+04	-635.65
3	17	-1379.12	645.67	2.208e+04	1.391e+04	-4.011e+04	770.03
3	49	699.14	2065.14	1.663e+04	5.430e+04	-7.555e+04	2807.28
3	54	1676.65	2285.99	6454.40	5.718e+04	-6.587e+04	2739.53
3	74	512.95	-201.90	-1.271e+04	-3334.72	503.03	-199.36
3	75	-529.78	263.88	6298.61	6149.59	-2.167e+04	333.79
3	91	256.35	800.81	4238.79	2.143e+04	-3.509e+04	1104.36
3	93	631.66	883.39	504.63	2.249e+04	-3.156e+04	1076.97
3	133	7.91	16.73	-3141.15	735.24	-1.007e+04	59.63
3	134	-8.41	30.99	-3205.31	1407.44	-1.059e+04	67.22
3	135	7.91	16.73	-3141.15	735.24	-1.007e+04	59.63
3	136	-12.50	34.55	-3221.36	1575.49	-1.072e+04	69.11
3	137	7.91	16.73	-3141.15	735.24	-1.007e+04	59.63
3	138	-10.46	32.77	-3213.34	1491.46	-1.065e+04	68.16
3	139	7.91	16.73	-3141.15	735.24	-1.007e+04	59.63
3	140	-8.41	30.99	-3205.31	1407.44	-1.059e+04	67.22
4	2	-56.69	51.40	-4420.45	2536.45	-1.255e+04	93.80
4	3	-17.31	19.88	-3164.68	1007.64	-8839.93	59.88
4	22	1660.41	590.30	-2.366e+04	1.386e+04	4295.18	799.07
4	27	-1703.06	-521.48	1.714e+04	-1.046e+04	-2.410e+04	-664.10
4	35	-1702.82	-586.49	1.713e+04	-1.125e+04	-2.412e+04	-641.89
4	54	477.97	2287.96	-9530.60	5.735e+04	-5258.54	2738.00
4	77	607.98	244.12	-1.091e+04	6281.23	-4172.39	343.15
4	79	-678.82	282.89	4403.00	8884.17	-1.430e+04	408.03
4	80	-681.73	-175.29	4421.33	-2874.64	-1.423e+04	-208.18
4	93	160.66	886.27	-5563.61	2.274e+04	-7778.08	1076.56
4	133	-17.31	19.88	-3164.68	1007.64	-8839.93	59.88
4	134	-36.87	34.41	-3242.37	1703.29	-9201.30	67.48
4	135	-17.31	19.88	-3164.68	1007.64	-8839.93	59.88
4	136	-41.76	38.04	-3261.80	1877.21	-9291.65	69.39
4	137	-17.31	19.88	-3164.68	1007.64	-8839.93	59.88
4	138	-39.32	36.23	-3252.09	1790.25	-9246.47	68.44
4	139	-17.31	19.88	-3164.68	1007.64	-8839.93	59.88
4	140	-36.87	34.41	-3242.37	1703.29	-9201.30	67.48
5	2	-100.13	56.05	-4404.83	2938.58	-1.027e+04	93.81

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
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5	3	-45.08	23.00	-3140.98	1276.95	-7382.47	59.91
5	30	1296.75	658.62	-2.850e+04	1.496e+04	2.245e+04	777.98
5	35	-1401.93	-583.07	2.201e+04	-1.097e+04	-3.897e+04	-642.94
5	43	734.76	-2000.11	1.660e+04	-5.110e+04	-7.751e+04	-2677.85
5	54	-734.71	2292.63	-2.543e+04	5.776e+04	5.598e+04	2740.04
5	81	451.09	272.05	-1.273e+04	6876.45	3709.52	335.18
5	84	-587.35	-196.49	6273.74	-2886.73	-1.883e+04	-200.19
5	88	193.45	-732.50	4258.40	-1.807e+04	-3.218e+04	-969.94
5	93	-317.35	890.12	-1.157e+04	2.307e+04	1.640e+04	1077.33
5	133	-45.08	23.00	-3140.98	1276.95	-7382.47	59.91
5	134	-68.13	37.78	-3228.43	1994.86	-7561.44	67.49
5	135	-45.08	23.00	-3140.98	1276.95	-7382.47	59.91
5	136	-73.90	41.47	-3250.29	2174.34	-7606.19	69.39
5	137	-45.08	23.00	-3140.98	1276.95	-7382.47	59.91
5	138	-71.01	39.63	-3239.36	2084.60	-7583.81	68.44
5	139	-45.08	23.00	-3140.98	1276.95	-7382.47	59.91
5	140	-68.13	37.78	-3228.43	1994.86	-7561.44	67.49
6	2	-103.46	26.59	-7517.65	1493.56	-9986.58	93.40
6	3	-47.28	4.21	-5102.02	356.19	-7193.12	59.63
6	43	737.88	-1273.63	8403.15	-1.433e+04	-7.777e+04	-2681.89
6	55	1712.40	-1493.86	1.078e+04	-1.689e+04	-6.741e+04	-2555.89
6	58	-1749.72	1526.91	-2.170e+04	1.879e+04	4.802e+04	2690.33
6	88	193.07	-470.72	-277.29	-4779.22	-3.214e+04	-971.61
6	94	561.74	-554.01	620.39	-5748.51	-2.823e+04	-923.90
6	95	-702.81	587.18	-1.155e+04	7659.58	1.352e+04	1058.29
6	133	-47.28	4.21	-5102.02	356.19	-7193.12	59.63
6	134	-70.54	16.59	-5462.62	955.53	-7355.15	67.19
6	135	-47.28	4.21	-5102.02	356.19	-7193.12	59.63
6	136	-76.35	19.68	-5552.76	1105.37	-7395.66	69.08
6	137	-47.28	4.21	-5102.02	356.19	-7193.12	59.63
6	138	-73.45	18.13	-5507.69	1030.45	-7375.41	68.14
6	139	-47.28	4.21	-5102.02	356.19	-7193.12	59.63
6	140	-70.54	16.59	-5462.62	955.53	-7355.15	67.19
7	1	-65.40	-21.95	-9503.69	-950.43	-9677.16	80.66
7	2	-105.08	-5.40	-1.057e+04	-162.88	-9913.58	93.58
7	3	-48.16	-16.23	-7020.71	-703.18	-7167.08	59.65
7	15	1998.42	-312.96	1.772e+04	2040.15	-1.259e+04	-641.10
7	18	-2110.17	300.09	-3.298e+04	-2514.31	-3484.49	775.56
7	43	740.82	-787.98	173.29	8855.42	-7.810e+04	-2682.68
7	54	-747.91	897.86	-1.762e+04	-1.177e+04	5.704e+04	2744.86
7	74	696.62	-123.02	1865.06	594.36	-8696.03	-199.55
7	75	-839.96	110.16	-1.717e+04	-1067.33	-5918.32	334.16
7	88	192.88	-302.81	-4800.64	3164.35	-3.218e+04	-971.64
7	93	-324.53	336.38	-1.136e+04	-4557.37	1.696e+04	1079.04
7	133	-48.16	-16.23	-7020.71	-703.18	-7167.08	59.65
7	134	-71.67	-6.43	-7650.71	-236.48	-7307.18	67.30
7	135	-48.16	-16.23	-7020.71	-703.18	-7167.08	59.65
7	136	-77.55	-3.98	-7808.21	-119.81	-7342.20	69.22
7	137	-48.16	-16.23	-7020.71	-703.18	-7167.08	59.65
7	138	-74.61	-5.20	-7729.46	-178.15	-7324.69	68.26
7	139	-48.16	-16.23	-7020.71	-703.18	-7167.08	59.65
7	140	-71.67	-6.43	-7650.71	-236.48	-7307.18	67.30
8	1	-30.07	-26.89	-9544.01	-1362.53	-1.146e+04	80.97
8	2	-64.06	-10.90	-1.059e+04	-620.74	-1.199e+04	93.80
8	3	-22.03	-19.88	-7050.49	-1007.64	-8489.13	59.88
8	21	1669.76	253.34	1.280e+04	-2265.30	4350.77	798.48
8	28	-1722.55	-274.16	-2.811e+04	1129.18	-2.341e+04	-663.51
8	35	-1707.64	-307.76	-2.777e+04	2006.50	-2.377e+04	-646.86
8	54	472.68	892.19	-1657.36	-1.226e+04	-4858.67	2754.36
8	77	602.69	88.84	7.88	-1231.13	-3773.22	344.70
8	79	-684.13	70.05	-1.532e+04	-1904.30	-1.390e+04	409.54
8	80	-687.03	-109.65	-1.535e+04	95.01	-1.383e+04	-209.73
8	93	155.39	331.76	-5332.54	-4950.45	-7379.96	1082.74
8	133	-22.03	-19.88	-7050.49	-1007.64	-8489.13	59.88
8	134	-42.17	-10.41	-7671.57	-568.06	-8801.52	67.48
8	135	-22.03	-19.88	-7050.49	-1007.64	-8489.13	59.88
8	136	-47.20	-8.04	-7826.84	-458.16	-8879.61	69.39
8	137	-22.03	-19.88	-7050.49	-1007.64	-8489.13	59.88
8	138	-44.69	-9.22	-7749.21	-513.11	-8840.56	68.44
8	139	-22.03	-19.88	-7050.49	-1007.64	-8489.13	59.88
8	140	-42.17	-10.41	-7671.57	-568.06	-8801.52	67.48
9	2	-59.86	20.26	-7593.34	958.34	-1.230e+04	93.79
9	3	-19.46	0.0	-5165.76	4.75e-06	-8668.17	59.87
9	35	-1695.37	-448.80	-5411.32	-4664.20	-2.486e+04	-644.33
9	57	-527.18	1507.94	-5329.27	1.699e+04	-1.375e+04	2688.16
9	79	-677.46	151.73	-5526.15	2022.26	-1.447e+04	408.71
9	89	157.57	498.89	-5494.68	5971.06	-7510.67	1087.17

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COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
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9	92	-235.92	-474.88	-5545.48	-4835.25	-1.053e+04	-952.22
9	95	-226.54	577.42	-5506.61	6770.22	-1.074e+04	1059.41
9	117	496.27	405.32	-4975.18	5083.83	-5372.00	850.67
9	124	-543.50	-381.31	-6064.87	-3948.02	-1.407e+04	-715.72
9	133	-19.46	0.0	-5165.76	4.75e-06	-8668.17	59.87
9	134	-39.18	12.00	-5520.08	567.90	-9017.92	67.47
9	135	-19.46	0.0	-5165.76	4.75e-06	-8668.17	59.87
9	136	-44.11	15.01	-5608.66	709.88	-9105.36	69.38
9	137	-19.46	0.0	-5165.76	4.75e-06	-8668.17	59.87
9	138	-41.64	13.50	-5564.37	638.89	-9061.64	68.42
9	139	-19.46	0.0	-5165.76	4.75e-06	-8668.17	59.87
9	140	-39.18	12.00	-5520.08	567.90	-9017.92	67.47
232	1	349.36	22.65	-3855.39	997.00	-2805.36	-80.14
232	2	376.91	46.71	-3963.67	2131.33	-1928.19	-92.94
232	3	258.60	16.75	-2843.30	737.62	-2084.79	-59.26
232	5	1645.63	645.69	2.237e+04	1.391e+04	2.796e+04	-769.66
232	12	-1064.19	-583.65	-2.815e+04	-1.109e+04	-3.255e+04	636.10
232	42	-1410.15	2286.02	6752.25	5.719e+04	5.372e+04	-2739.17
232	68	1087.80	-2003.10	-2.262e+04	-5.147e+04	-7.138e+04	2673.68
232	69	796.28	263.90	6596.46	6151.97	9523.75	-333.43
232	72	-246.44	-201.87	-1.241e+04	-3332.33	-1.265e+04	199.72
232	87	-365.16	883.42	802.48	2.249e+04	1.941e+04	-1076.60
232	100	539.69	-738.81	-1.035e+04	-1.861e+04	-2.606e+04	970.29
232	133	258.60	16.75	-2843.30	737.62	-2084.79	-59.26
232	134	274.92	31.01	-2907.46	1409.82	-1564.99	-66.85
232	135	258.60	16.75	-2843.30	737.62	-2084.79	-59.26
232	136	279.00	34.58	-2923.51	1577.87	-1435.04	-68.75
232	137	258.60	16.75	-2843.30	737.62	-2084.79	-59.26
232	138	276.96	32.80	-2915.49	1493.85	-1500.01	-67.80
232	139	258.60	16.75	-2843.30	737.62	-2084.79	-59.26
232	140	274.92	31.01	-2907.46	1409.82	-1564.99	-66.85
233	1	349.84	-5.70	-6909.15	-482.18	-2784.68	-81.35
233	2	377.72	13.91	-7478.30	421.62	-1935.08	-94.24
233	3	258.95	-4.21	-5102.02	-356.19	-2068.91	-60.16
233	4	286.82	15.40	-5671.17	547.60	-1219.32	-73.05
233	37	-392.43	1517.75	1.079e+04	1.802e+04	6.159e+04	-2686.76
233	44	1047.11	-1502.81	-2.167e+04	-1.765e+04	-6.940e+04	2551.10
233	68	1092.16	-1283.93	-1.932e+04	-1.510e+04	-7.166e+04	2675.57
233	85	25.72	578.00	641.92	6883.18	2.225e+04	-1059.09
233	88	525.21	-563.18	-1.152e+04	-6524.41	-2.538e+04	923.49
233	100	542.26	-480.40	-1.063e+04	-5560.05	-2.623e+04	970.62
233	133	258.95	-4.21	-5102.02	-356.19	-2068.91	-60.16
233	134	275.46	7.41	-5439.30	179.39	-1565.45	-67.80
233	135	258.95	-4.21	-5102.02	-356.19	-2068.91	-60.16
233	136	279.59	10.32	-5523.62	313.28	-1439.58	-69.71
233	137	258.95	-4.21	-5102.02	-356.19	-2068.91	-60.16
233	138	277.53	8.87	-5481.46	246.34	-1502.52	-68.75
233	139	258.95	-4.21	-5102.02	-356.19	-2068.91	-60.16
233	140	275.46	7.41	-5439.30	179.39	-1565.45	-67.80
234	1	353.54	-31.81	-9905.56	-1773.68	-3097.73	-80.48
234	2	381.86	-16.38	-1.093e+04	-1078.36	-2285.66	-93.23
234	3	261.68	-23.52	-7318.39	-1311.39	-2300.18	-59.52
234	24	2360.12	-316.84	-3.329e+04	1402.57	-7461.05	639.06
234	25	-1772.12	288.10	1.740e+04	-3200.64	2421.54	-773.26
234	46	-390.73	892.08	1839.92	-1.238e+04	6.193e+04	-2743.84
234	68	1097.55	-801.12	-1.589e+04	8012.59	-7.212e+04	2676.79
234	78	1051.37	-128.27	-1.744e+04	-8.23	-3365.13	200.76
234	79	-494.45	99.52	1590.27	-1790.48	-272.77	-334.90
234	89	22.68	329.25	-4168.65	-5201.88	2.235e+04	-1078.52
234	100	546.20	-311.57	-1.083e+04	2483.07	-2.657e+04	971.58
234	133	261.68	-23.52	-7318.39	-1311.39	-2300.18	-59.52
234	134	278.46	-14.37	-7925.06	-899.35	-1818.95	-67.07
234	135	261.68	-23.52	-7318.39	-1311.39	-2300.18	-59.52
234	136	282.65	-12.09	-8076.73	-796.34	-1698.65	-68.96
234	137	261.68	-23.52	-7318.39	-1311.39	-2300.18	-59.52
234	138	280.55	-13.23	-8000.90	-847.85	-1758.80	-68.02
234	139	261.68	-23.52	-7318.39	-1311.39	-2300.18	-59.52
234	140	278.46	-14.37	-7925.06	-899.35	-1818.95	-67.07
235	1	389.69	-26.89	-9946.53	-1362.53	-4925.84	-80.97
235	2	423.68	-10.90	-1.099e+04	-620.74	-4398.69	-93.80
235	3	288.41	-19.88	-7348.65	-1007.64	-3652.08	-59.88
235	32	2051.58	-274.16	-2.848e+04	1129.18	8409.88	663.51
235	33	-1403.38	253.34	1.251e+04	-2265.30	-1.649e+04	-798.48
235	36	-1349.95	-224.55	1.206e+04	2904.61	-1.843e+04	834.35
235	42	-206.30	892.19	-1955.52	-1.226e+04	-7282.54	-2754.36
235	82	953.41	-109.65	-1.565e+04	95.01	1688.61	209.73
235	83	-336.31	88.84	-290.28	-1231.13	-8367.99	-344.70

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COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
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235	84	-333.41	-90.86	-316.41	768.18	-8438.87	274.57
235	87	110.99	331.76	-5630.71	-4950.45	-4761.24	-1082.74
235	133	288.41	-19.88	-7348.65	-1007.64	-3652.08	-59.88
235	134	308.55	-10.41	-7969.74	-568.06	-3339.69	-67.48
235	135	288.41	-19.88	-7348.65	-1007.64	-3652.08	-59.88
235	136	313.59	-8.04	-8125.01	-458.16	-3261.60	-69.39
235	137	288.41	-19.88	-7348.65	-1007.64	-3652.08	-59.88
235	138	311.07	-9.22	-8047.37	-513.11	-3300.64	-68.44
235	139	288.41	-19.88	-7348.65	-1007.64	-3652.08	-59.88
235	140	308.55	-10.41	-7969.74	-568.06	-3339.69	-67.48
236	1	425.19	-21.91	-9905.79	-947.22	-6726.29	-81.16
236	2	464.87	-5.37	-1.097e+04	-159.66	-6489.88	-94.07
236	3	314.66	-16.21	-7318.56	-700.80	-4983.63	-60.02
236	6	2376.67	300.11	-3.328e+04	-2511.93	-8666.21	-775.93
236	11	-1669.23	-312.93	1.735e+04	2043.10	-2422.44	640.65
236	42	1014.42	897.89	-1.792e+04	-1.176e+04	-6.919e+04	-2745.23
236	58	1045.35	775.10	-1.566e+04	-9329.98	-7.079e+04	-2817.19
236	69	1106.47	110.18	-1.746e+04	-1064.94	-6232.38	-334.53
236	72	-430.11	-122.99	1567.20	596.74	-3454.67	199.19
236	87	591.03	336.41	-1.166e+04	-4554.99	-2.911e+04	-1079.40
236	95	602.73	289.98	-1.080e+04	-3634.94	-2.971e+04	-1106.61
236	133	314.66	-16.21	-7318.56	-700.80	-4983.63	-60.02
236	134	338.18	-6.41	-7948.56	-234.10	-4843.53	-67.67
236	135	314.66	-16.21	-7318.56	-700.80	-4983.63	-60.02
236	136	344.06	-3.95	-8106.06	-117.42	-4808.50	-69.58
236	137	314.66	-16.21	-7318.56	-700.80	-4983.63	-60.02
236	138	341.12	-5.18	-8027.31	-175.76	-4826.01	-68.63
236	139	314.66	-16.21	-7318.56	-700.80	-4983.63	-60.02
236	140	338.18	-6.41	-7948.56	-234.10	-4843.53	-67.67
237	1	421.55	5.70	-6909.15	482.18	-6418.09	-80.42
237	2	460.80	26.59	-7517.65	1493.56	-6144.66	-93.19
237	3	311.98	4.21	-5102.02	356.19	-4755.95	-59.47
237	38	2014.42	1526.91	-2.170e+04	1.879e+04	-5.997e+04	-2690.18
237	43	-1240.20	-1493.86	1.078e+04	-1.689e+04	4.610e+04	2556.16
237	58	1039.90	1306.69	-1.933e+04	1.623e+04	-7.032e+04	-2816.19
237	85	967.51	587.18	-1.155e+04	7659.58	-2.547e+04	-1058.14
237	88	-297.04	-554.01	620.39	-5748.51	1.628e+04	924.06
237	95	598.85	503.89	-1.065e+04	6690.29	-2.938e+04	-1105.84
237	133	311.98	4.21	-5102.02	356.19	-4755.95	-59.47
237	134	335.23	16.59	-5462.62	955.53	-4593.92	-67.04
237	135	311.98	4.21	-5102.02	356.19	-4755.95	-59.47
237	136	341.05	19.68	-5552.76	1105.37	-4553.41	-68.93
237	137	311.98	4.21	-5102.02	356.19	-4755.95	-59.47
237	138	338.14	18.13	-5507.69	1030.45	-4573.66	-67.99
237	139	311.98	4.21	-5102.02	356.19	-4755.95	-59.47
237	140	335.23	16.59	-5462.62	955.53	-4593.92	-67.04
238	1	421.01	31.07	-3855.16	1723.89	-6433.93	-81.50
238	2	459.92	56.01	-4002.73	2935.36	-6131.90	-94.30
238	3	311.58	22.97	-2843.13	1274.57	-4768.24	-60.27
238	23	1731.12	-583.10	2.238e+04	-1.097e+04	2.396e+04	642.49
238	26	-1030.24	658.59	-2.821e+04	1.495e+04	-3.460e+04	-778.34
238	42	1001.21	2292.61	-2.513e+04	5.776e+04	-6.813e+04	-2740.40
238	58	1033.92	2075.62	-2.288e+04	5.509e+04	-6.987e+04	-2813.39
238	78	853.86	-196.52	6571.59	-2889.11	6681.70	199.83
238	79	-184.58	272.02	-1.243e+04	6874.07	-1.586e+04	-335.54
238	87	583.86	890.10	-1.127e+04	2.307e+04	-2.855e+04	-1077.69
238	95	596.22	808.04	-1.042e+04	2.206e+04	-2.921e+04	-1105.29
238	133	311.58	22.97	-2843.13	1274.57	-4768.24	-60.27
238	134	334.64	37.75	-2930.58	1992.48	-4589.26	-67.86
238	135	311.58	22.97	-2843.13	1274.57	-4768.24	-60.27
238	136	340.40	41.45	-2952.44	2171.95	-4544.52	-69.75
238	137	311.58	22.97	-2843.13	1274.57	-4768.24	-60.27
238	138	337.52	39.60	-2941.51	2082.22	-4566.89	-68.81
238	139	311.58	22.97	-2843.13	1274.57	-4768.24	-60.27
238	140	334.64	37.75	-2930.58	1992.48	-4589.26	-67.86
239	1	383.30	26.89	-3886.82	1362.53	-4450.26	-80.97
239	2	416.31	51.40	-4017.93	2536.45	-3840.44	-93.80
239	3	283.69	19.88	-2866.51	1007.64	-3301.28	-59.88
239	31	2032.10	-521.48	1.751e+04	-1.046e+04	9103.91	664.10
239	34	-1394.03	590.30	-2.336e+04	1.386e+04	-1.644e+04	-799.07
239	36	-1354.82	-621.17	-2.328e+04	-1.723e+04	-1.808e+04	830.37
239	42	-211.59	2287.96	-9232.43	5.735e+04	-6882.66	-2738.00
239	82	948.11	-175.29	4719.50	-2874.64	2089.00	208.18
239	83	-341.60	244.12	-1.061e+04	6281.23	-7968.81	-343.15
239	84	-338.69	-214.07	-1.059e+04	-5477.58	-8039.88	273.06
239	87	105.72	886.27	-5265.45	2.274e+04	-4363.12	-1076.56
239	133	283.69	19.88	-2866.51	1007.64	-3301.28	-59.88

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COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
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239	134	303.26	34.41	-2944.21	1703.29	-2939.90	-67.48
239	135	283.69	19.88	-2866.51	1007.64	-3301.28	-59.88
239	136	308.15	38.04	-2963.63	1877.21	-2849.56	-69.39
239	137	283.69	19.88	-2866.51	1007.64	-3301.28	-59.88
239	138	305.70	36.23	-2953.92	1790.25	-2894.73	-68.44
239	139	283.69	19.88	-2866.51	1007.64	-3301.28	-59.88
239	140	303.26	34.41	-2944.21	1703.29	-2939.90	-67.48
240	1	383.94	0.0	-6995.43	5.62e-06	-4425.17	-80.95
240	2	417.21	20.26	-7593.34	958.34	-3834.97	-93.79
240	3	284.16	0.0	-5165.76	4.14e-06	-3282.11	-59.87
240	36	-1344.90	-356.20	-5659.25	-3228.63	-1.895e+04	832.19
240	38	806.48	1507.94	-5639.99	1.699e+04	1456.66	-2692.85
240	84	-334.40	-127.72	-5514.01	-886.45	-8381.72	273.76
240	85	491.24	577.42	-5506.61	6770.22	-1211.04	-1059.41
240	98	500.63	-474.88	-5545.48	-4835.25	-1425.11	952.22
240	99	107.13	498.89	-5494.68	5971.06	-4439.61	-1087.17
240	128	870.46	-373.38	-6064.87	-3646.47	-691.68	715.72
240	129	-231.57	397.39	-4975.18	4782.28	-6578.28	-850.67
240	133	284.16	0.0	-5165.76	4.14e-06	-3282.11	-59.87
240	134	303.88	12.00	-5520.08	567.90	-2932.36	-67.47
240	135	284.16	0.0	-5165.76	4.14e-06	-3282.11	-59.87
240	136	308.81	15.01	-5608.66	709.88	-2844.92	-69.38
240	137	284.16	0.0	-5165.76	4.14e-06	-3282.11	-59.87
240	138	306.35	13.50	-5564.37	638.89	-2888.64	-68.42
240	139	284.16	0.0	-5165.76	4.14e-06	-3282.11	-59.87
240	140	303.88	12.00	-5520.08	567.90	-2932.36	-67.47
499	2	-37.18	37.69	-5447.06	1721.91	-1.350e+04	93.03
499	3	-4.89	11.03	-3817.45	479.25	-9440.87	59.36
499	16	1537.17	-520.24	-2.010e+04	-7867.45	1.048e+04	-637.12
499	17	-1551.75	569.30	1.211e+04	1.010e+04	-3.165e+04	770.96
499	49	82.77	1798.42	7035.70	4.071e+04	-4.446e+04	2811.49
499	54	1072.59	2020.47	-220.12	4.369e+04	-3.528e+04	2744.43
499	74	558.34	-181.92	-1.001e+04	-2296.46	-1726.06	-200.11
499	75	-604.02	230.97	2049.14	4528.03	-1.804e+04	333.96
499	91	14.28	695.92	128.96	1.611e+04	-2.289e+04	1105.77
499	93	394.24	779.00	-2501.56	1.721e+04	-1.955e+04	1078.64
499	133	-4.89	11.03	-3817.45	479.25	-9440.87	59.36
499	134	-22.84	24.53	-3980.40	1115.79	-9881.28	66.93
499	135	-4.89	11.03	-3817.45	479.25	-9440.87	59.36
499	136	-27.33	27.90	-4021.14	1274.92	-9991.38	68.82
499	137	-4.89	11.03	-3817.45	479.25	-9440.87	59.36
499	138	-25.09	26.21	-4000.77	1195.35	-9936.33	67.87
499	139	-4.89	11.03	-3817.45	479.25	-9440.87	59.36
499	140	-22.84	24.53	-3980.40	1115.79	-9881.28	66.93
500	2	-78.72	44.34	-5466.56	2297.93	-1.139e+04	94.46
500	3	-31.40	15.47	-3817.37	863.91	-8097.74	60.31
500	30	1474.87	652.85	-2.009e+04	1.518e+04	1.366e+04	779.63
500	35	-1549.21	-594.16	1.208e+04	-1.211e+04	-3.180e+04	-643.70
500	43	146.90	-1748.64	7022.11	-3.830e+04	-4.787e+04	-2682.05
500	54	-132.26	2025.12	-1.621e+04	4.410e+04	2.555e+04	2745.49
500	81	527.98	264.76	-1.002e+04	6680.51	-114.04	336.09
500	84	-633.43	-206.07	2038.62	-3614.07	-1.662e+04	-200.17
500	88	-19.28	-642.68	146.04	-1.352e+04	-2.147e+04	-971.19
500	93	-79.97	783.75	-8556.23	1.762e+04	4392.26	1079.68
500	133	-31.40	15.47	-3817.37	863.91	-8097.74	60.31
500	134	-52.73	29.35	-3991.95	1533.22	-8367.48	67.96
500	135	-31.40	15.47	-3817.37	863.91	-8097.74	60.31
500	136	-58.06	32.82	-4035.59	1700.55	-8434.92	69.87
500	137	-31.40	15.47	-3817.37	863.91	-8097.74	60.31
500	138	-55.39	31.08	-4013.77	1616.88	-8401.20	68.92
500	139	-31.40	15.47	-3817.37	863.91	-8097.74	60.31
500	140	-52.73	29.35	-3991.95	1533.22	-8367.48	67.96
501	1	-48.93	-14.50	-8673.15	-621.04	-1.040e+04	80.59
501	2	-85.61	3.29	-9578.71	224.97	-1.080e+04	93.41
501	3	-35.98	-10.73	-6406.49	-459.50	-7704.06	59.60
501	15	1843.77	-349.88	9218.66	319.36	-4435.50	-641.26
501	18	-1928.04	349.50	-2.308e+04	-236.59	-1.285e+04	775.63
501	43	147.43	-907.93	-3939.06	3545.53	-4.790e+04	-2682.37
501	59	132.21	-1073.24	-2801.65	3620.11	-4.709e+04	-2609.81
501	74	647.02	-133.02	-902.00	121.27	-6026.08	-199.73
501	75	-762.45	132.65	-1.298e+04	-37.58	-9850.12	334.12
501	88	-22.26	-344.19	-5898.71	1334.85	-2.121e+04	-971.73
501	96	-28.02	-406.70	-5468.66	1362.76	-2.090e+04	-944.30
501	133	-35.98	-10.73	-6406.49	-459.50	-7704.06	59.60
501	134	-57.71	-0.18	-6943.12	41.84	-7938.10	67.20
501	135	-35.98	-10.73	-6406.49	-459.50	-7704.06	59.60
501	136	-63.15	2.45	-7077.28	167.18	-7996.61	69.10

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	116 di 288

501	137	-35.98	-10.73	-6406.49	-459.50	-7704.06	59.60
501	138	-60.43	1.14	-7010.20	104.51	-7967.35	68.15
501	139	-35.98	-10.73	-6406.49	-459.50	-7704.06	59.60
501	140	-57.71	-0.18	-6943.12	41.84	-7938.10	67.20
502	1	-13.08	-21.33	-8673.05	-1195.18	-1.222e+04	81.24
502	2	-44.07	-4.31	-9558.95	-413.58	-1.290e+04	94.08
502	3	-9.46	-15.78	-6406.41	-883.66	-9047.18	60.08
502	29	1850.14	339.72	9211.70	-745.28	-4732.41	774.11
502	36	-1874.64	-351.08	-2.305e+04	-94.79	-1.558e+04	-638.70
502	49	83.18	906.94	-3910.05	-3759.81	-4.447e+04	2811.68
502	54	1074.08	1067.98	4992.92	-3961.08	-3.539e+04	2744.58
502	81	679.82	124.48	-887.93	-561.73	-7611.58	335.61
502	84	-735.48	-135.85	-1.297e+04	-279.24	-1.129e+04	-200.23
502	91	11.32	339.13	-5850.44	-1694.66	-2.263e+04	1106.32
502	93	391.72	401.07	-2360.15	-1726.39	-1.933e+04	1079.17
502	133	-9.46	-15.78	-6406.41	-883.66	-9047.18	60.08
502	134	-27.83	-5.69	-6931.40	-420.49	-9451.88	67.69
502	135	-9.46	-15.78	-6406.41	-883.66	-9047.18	60.08
502	136	-32.42	-3.16	-7062.64	-304.70	-9553.06	69.59
502	137	-9.46	-15.78	-6406.41	-883.66	-9047.18	60.08
502	138	-30.13	-4.43	-6997.02	-362.59	-9502.47	68.64
502	139	-9.46	-15.78	-6406.41	-883.66	-9047.18	60.08
502	140	-27.83	-5.69	-6931.40	-420.49	-9451.88	67.69
503	1	370.46	-21.35	-8941.16	-1196.57	-3915.05	-81.15
503	2	401.45	-4.33	-9827.07	-414.97	-3232.11	-93.99
503	3	274.19	-15.79	-6605.02	-884.69	-2904.64	-60.02
503	24	2201.63	-351.09	-2.330e+04	-96.07	816.14	638.78
503	25	-1585.41	339.70	9013.10	-746.31	-7219.42	-774.04
503	42	-809.35	1067.96	4794.32	-3962.11	2.343e+04	-2744.52
503	68	507.25	-918.30	-1.023e+04	2920.03	-4.220e+04	2676.33
503	78	1000.21	-135.86	-1.317e+04	-280.28	-659.64	200.30
503	79	-415.09	124.46	-1086.53	-562.77	-4340.24	-335.54
503	87	-126.99	401.06	-2558.76	-1727.43	7376.72	-1079.11
503	100	331.71	-350.51	-8210.96	852.65	-1.568e+04	971.01
503	133	274.19	-15.79	-6605.02	-884.69	-2904.64	-60.02
503	134	292.56	-5.70	-7130.00	-421.52	-2499.94	-67.62
503	135	274.19	-15.79	-6605.02	-884.69	-2904.64	-60.02
503	136	297.15	-3.18	-7261.24	-305.73	-2398.76	-69.52
503	137	274.19	-15.79	-6605.02	-884.69	-2904.64	-60.02
503	138	294.85	-4.44	-7195.62	-363.63	-2449.35	-68.57
503	139	274.19	-15.79	-6605.02	-884.69	-2904.64	-60.02
503	140	292.56	-5.70	-7130.00	-421.52	-2499.94	-67.62
504	1	406.31	-14.49	-8941.27	-619.65	-5731.23	-80.67
504	2	442.99	3.31	-9846.82	226.36	-5336.28	-93.50
504	3	300.71	-10.72	-6605.10	-458.46	-4247.77	-59.66
504	6	2192.77	349.51	-2.328e+04	-235.56	896.32	-775.69
504	11	-1516.78	-349.86	8973.35	320.64	-1.033e+04	641.18
504	39	340.05	-1073.22	-3155.94	3621.96	2.577e+04	2609.70
504	58	423.74	907.54	-1.007e+04	-3463.85	-3.928e+04	-2816.74
504	69	1027.17	132.66	-1.318e+04	-36.55	-2101.71	-334.19
504	72	-382.29	-133.00	-1100.60	122.30	-5925.75	199.66
504	86	292.74	-406.69	-5667.26	1363.80	8948.96	944.23
504	95	357.90	343.84	-8186.13	-1250.13	-1.728e+04	-1106.19
504	133	300.71	-10.72	-6605.10	-458.46	-4247.77	-59.66
504	134	322.44	-0.17	-7141.72	42.88	-4013.73	-67.26
504	135	300.71	-10.72	-6605.10	-458.46	-4247.77	-59.66
504	136	327.88	2.46	-7275.88	168.21	-3955.22	-69.16
504	137	300.71	-10.72	-6605.10	-458.46	-4247.77	-59.66
504	138	325.16	1.15	-7208.80	105.54	-3984.47	-68.21
504	139	300.71	-10.72	-6605.10	-458.46	-4247.77	-59.66
504	140	322.44	-0.17	-7141.72	42.88	-4013.73	-67.26
505	1	400.12	20.91	-4903.85	1167.07	-5198.28	-81.64
505	2	436.10	44.32	-5198.45	2296.54	-4743.10	-94.55
505	3	296.13	15.46	-3618.77	862.87	-3854.08	-60.38
505	23	1876.20	-594.18	1.233e+04	-1.211e+04	1.703e+04	643.62
505	26	-1210.14	652.84	-1.989e+04	1.518e+04	-2.561e+04	-779.69
505	42	396.99	2025.10	-1.601e+04	4.410e+04	-3.750e+04	-2745.56
505	58	413.40	1807.29	-1.489e+04	4.136e+04	-3.841e+04	-2818.08
505	78	898.16	-206.08	2237.22	-3615.10	4669.10	200.11
505	79	-263.26	264.75	-9823.91	6679.47	-1.184e+04	-336.16
505	87	344.69	783.74	-8357.62	1.762e+04	-1.634e+04	-1079.75
505	95	350.90	701.37	-7931.34	1.658e+04	-1.669e+04	-1107.17
505	133	296.13	15.46	-3618.77	862.87	-3854.08	-60.38
505	134	317.45	29.34	-3793.35	1532.18	-3584.34	-68.02
505	135	296.13	15.46	-3618.77	862.87	-3854.08	-60.38
505	136	322.78	32.80	-3836.99	1699.51	-3516.91	-69.94
505	137	296.13	15.46	-3618.77	862.87	-3854.08	-60.38

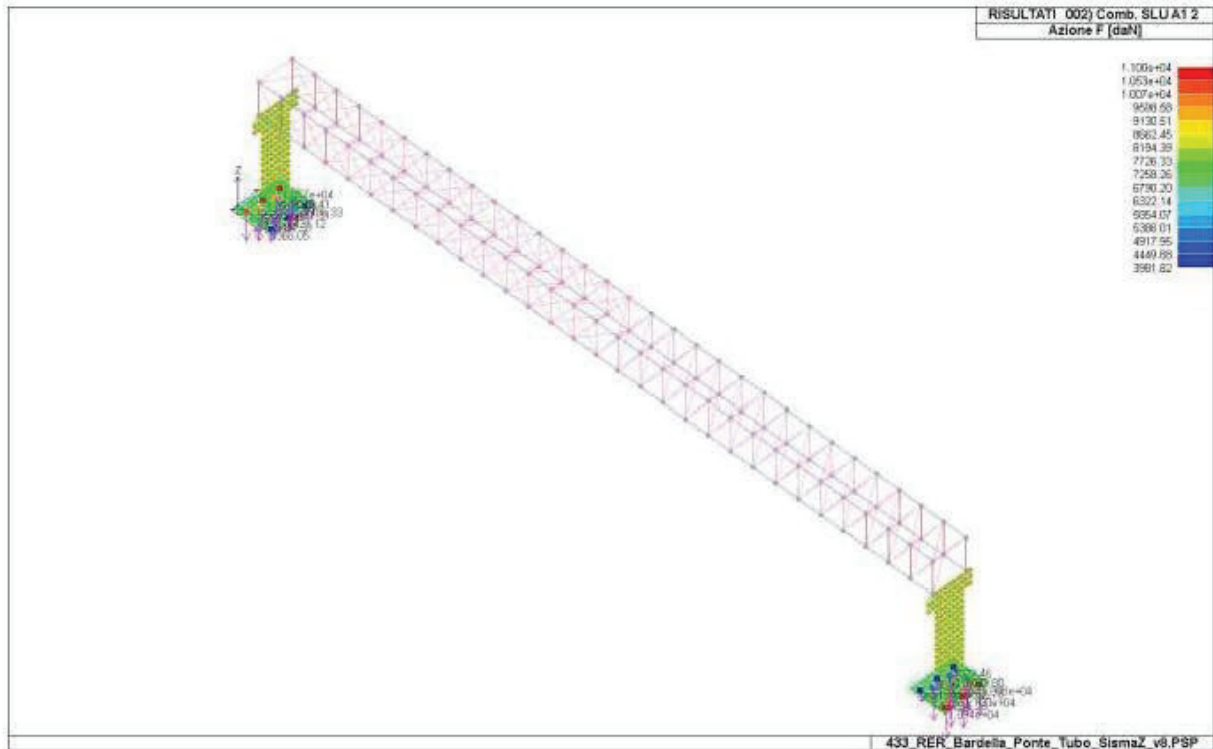
PONTE-TUBO - RELAZIONE DI CALCOLO	COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
	433	I-1	B_1	519_v3	1	117 di 288

505	138	320.12	31.07	-3815.17	1615.85	-3550.63	-68.98
505	139	296.13	15.46	-3618.77	862.87	-3854.08	-60.38
505	140	317.45	29.34	-3793.35	1532.18	-3584.34	-68.02
506	1	364.27	14.93	-4903.96	649.14	-3382.11	-80.18
506	2	394.56	37.70	-5178.94	1723.30	-2638.92	-92.94
506	3	269.62	11.04	-3618.85	480.28	-2510.96	-59.30
506	5	1816.48	569.31	1.231e+04	1.010e+04	1.970e+04	-770.90
506	12	-1210.19	-520.23	-1.985e+04	-7866.17	-2.524e+04	637.20
506	42	-807.86	2020.49	-21.51	4.369e+04	2.333e+04	-2744.37
506	68	497.03	-1749.32	-1.472e+04	-3.847e+04	-4.134e+04	2677.80
506	69	868.75	230.99	2247.75	4529.07	6084.67	-333.90
506	72	-293.61	-181.91	-9811.35	-2295.43	-1.023e+04	200.18
506	87	-129.51	779.01	-2302.95	1.721e+04	7602.60	-1078.58
506	100	324.69	-646.85	-7891.16	-1.388e+04	-1.508e+04	971.99
506	133	269.62	11.04	-3618.85	480.28	-2510.96	-59.30
506	134	287.57	24.54	-3781.80	1116.82	-2070.55	-66.86
506	135	269.62	11.04	-3618.85	480.28	-2510.96	-59.30
506	136	292.06	27.91	-3822.54	1275.95	-1960.44	-68.75
506	137	269.62	11.04	-3618.85	480.28	-2510.96	-59.30
506	138	289.81	26.23	-3802.17	1196.39	-2015.50	-67.81
506	139	269.62	11.04	-3618.85	480.28	-2510.96	-59.30
506	140	287.57	24.54	-3781.80	1116.82	-2070.55	-66.86
Nodo		Azione X	Azione Y	Azione Z	Azione RX	Azione RY	Azione RZ
		-2110.17	-2003.10	-3.329e+04	-5.147e+04	-7.810e+04	-2818.08
		2376.67	2292.63	2.238e+04	5.776e+04	6.193e+04	2811.68
Nodo	Cmb	Azione X	Azione Y	Azione Z	Azione RX	Azione RY	Azione RZ
		daN	daN	daN	daN cm	daN cm	daN cm
1	36	-2030.93	-316.81	-3.292e+04	1405.51	-7547.28	-638.61
	29	2038.63	288.13	1.770e+04	-3198.25	-1.457e+04	773.63
	66	657.23	892.11	2137.77	-1.238e+04	-7.408e+04	2744.21
	63	-575.82	-920.76	-1.728e+04	1.059e+04	4.856e+04	-2608.86
	49	703.53	772.42	222.34	-9806.80	-7.596e+04	2811.49
	48	-622.12	-801.07	-1.536e+04	8016.84	5.045e+04	-2676.14
2	56	-574.91	-1502.81	-2.167e+04	-1.765e+04	4.808e+04	-2551.38
	57	657.13	1517.75	1.079e+04	1.802e+04	-7.353e+04	2686.61
	56	-574.91	-1502.81	-2.167e+04	-1.765e+04	4.808e+04	-2551.38
	57	657.13	1517.75	1.079e+04	1.802e+04	-7.353e+04	2686.61
	49	702.18	1298.88	8444.53	1.547e+04	-7.580e+04	2811.07
	48	-619.96	-1283.93	-1.932e+04	-1.510e+04	5.035e+04	-2675.84
3	16	1393.37	-583.68	-2.852e+04	-1.109e+04	1.754e+04	-635.65
	17	-1379.12	645.67	2.208e+04	1.391e+04	-4.011e+04	770.03
	59	-1589.87	-2223.99	-1.298e+04	-5.437e+04	4.002e+04	-2605.29
	54	1676.65	2285.99	6454.40	5.718e+04	-6.587e+04	2739.53
	49	699.14	2065.14	1.663e+04	5.430e+04	-7.555e+04	2807.28
	48	-612.36	-2003.14	-2.316e+04	-5.148e+04	4.971e+04	-2673.03
4	22	1660.41	590.30	-2.366e+04	1.386e+04	4295.18	799.07
	27	-1703.06	-521.48	1.714e+04	-1.046e+04	-2.410e+04	-664.10
	59	-448.06	-2219.14	2928.97	-5.395e+04	-1.782e+04	-2603.03
	54	477.97	2287.96	-9530.60	5.735e+04	-5258.54	2738.00
	35	-1702.82	-586.49	1.713e+04	-1.125e+04	-2.412e+04	-641.89
	30	1660.16	655.31	-2.365e+04	1.466e+04	4312.74	776.86
5	30	1296.75	658.62	-2.850e+04	1.496e+04	2.245e+04	777.98
	35	-1401.93	-583.07	2.201e+04	-1.097e+04	-3.897e+04	-642.94
	59	702.05	-2217.10	1.885e+04	-5.377e+04	-7.577e+04	-2604.87
	54	-734.71	2292.63	-2.543e+04	5.776e+04	5.598e+04	2740.04
	43	734.76	-2000.11	1.660e+04	-5.110e+04	-7.751e+04	-2677.85
	38	-767.41	2075.65	-2.317e+04	5.509e+04	5.772e+04	2813.02
6	58	-1749.72	1526.91	-2.170e+04	1.879e+04	4.802e+04	2690.33
	55	1712.40	-1493.86	1.078e+04	-1.689e+04	-6.741e+04	-2555.89
	55	1712.40	-1493.86	1.078e+04	-1.689e+04	-6.741e+04	-2555.89
	58	-1749.72	1526.91	-2.170e+04	1.879e+04	4.802e+04	2690.33
	43	737.88	-1273.63	8403.15	-1.433e+04	-7.777e+04	-2681.89
	38	-775.21	1306.69	-1.933e+04	1.623e+04	5.837e+04	2816.34
7	18	-2110.17	300.09	-3.298e+04	-2514.31	-3484.49	775.56
	15	1998.42	-312.96	1.772e+04	2040.15	-1.259e+04	-641.10
	54	-747.91	897.86	-1.762e+04	-1.177e+04	5.704e+04	2744.86
	59	709.88	-910.77	2438.99	1.129e+04	-7.651e+04	-2610.72
	43	740.82	-787.98	173.29	8855.42	-7.810e+04	-2682.68
	38	-778.84	775.07	-1.536e+04	-9332.37	5.864e+04	2816.82
8	28	-1722.55	-274.16	-2.811e+04	1129.18	-2.341e+04	-663.51
	21	1669.76	253.34	1.280e+04	-2265.30	4350.77	798.48
	54	472.68	892.19	-1657.36	-1.226e+04	-4858.67	2754.36
	59	-451.85	-913.00	-1.357e+04	1.112e+04	-1.759e+04	-2619.39
	35	-1707.64	-307.76	-2.777e+04	2006.50	-2.377e+04	-646.86

PONTE-TUBO - RELAZIONE DI CALCOLO			COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
			433	I-1	B_1	519_v3	1	118 di 288
	30	1654.85	286.94	1.246e+04	-3142.62	4713.98	781.83	
9	2	-59.86	20.26	-7593.34	958.34	-1.230e+04	93.79	
	117	496.27	405.32	-4975.18	5083.83	-5372.00	850.67	
	56	552.58	-1483.93	-5710.49	-1.586e+04	-8973.64	-2553.21	
	57	-527.18	1507.94	-5329.27	1.699e+04	-1.375e+04	2688.16	
	35	-1695.37	-448.80	-5411.32	-4664.20	-2.486e+04	-644.33	
	30	1648.15	472.81	-5628.72	5800.01	5420.97	779.28	
232	12	-1064.19	-583.65	-2.815e+04	-1.109e+04	-3.255e+04	636.10	
	5	1645.63	645.69	2.237e+04	1.391e+04	2.796e+04	-769.66	
	39	2065.31	-2223.94	-1.245e+04	-5.436e+04	-6.170e+04	2605.94	
	42	-1410.15	2286.02	6752.25	5.719e+04	5.372e+04	-2739.17	
	68	1087.80	-2003.10	-2.262e+04	-5.147e+04	-7.138e+04	2673.68	
	61	-432.64	2065.17	1.693e+04	5.430e+04	6.340e+04	-2806.91	
233	44	1047.11	-1502.81	-2.167e+04	-1.765e+04	-6.940e+04	2551.10	
	37	-392.43	1517.75	1.079e+04	1.802e+04	6.159e+04	-2686.76	
	44	1047.11	-1502.81	-2.167e+04	-1.765e+04	-6.940e+04	2551.10	
	37	-392.43	1517.75	1.079e+04	1.802e+04	6.159e+04	-2686.76	
	68	1092.16	-1283.93	-1.932e+04	-1.510e+04	-7.166e+04	2675.57	
	61	-437.48	1298.88	8444.53	1.547e+04	6.385e+04	-2811.22	
234	24	2360.12	-316.84	-3.329e+04	1402.57	-7461.05	639.06	
	25	-1772.12	288.10	1.740e+04	-3200.64	2421.54	-773.26	
	46	-390.73	892.08	1839.92	-1.238e+04	6.193e+04	-2743.84	
	51	1051.25	-920.80	-1.781e+04	1.058e+04	-7.024e+04	2609.51	
	68	1097.55	-801.12	-1.589e+04	8012.59	-7.212e+04	2676.79	
	61	-437.03	772.39	-75.51	-9809.18	6.381e+04	-2811.12	
235	32	2051.58	-274.16	-2.848e+04	1129.18	8409.88	663.51	
	33	-1403.38	253.34	1.251e+04	-2265.30	-1.649e+04	-798.48	
	42	-206.30	892.19	-1955.52	-1.226e+04	-7282.54	-2754.36	
	39	927.06	-913.00	-1.410e+04	1.112e+04	-4072.56	2619.39	
	36	-1349.95	-224.55	1.206e+04	2904.61	-1.843e+04	834.35	
	29	1998.15	203.74	-2.804e+04	-4040.73	1.035e+04	-969.32	
236	6	2376.67	300.11	-3.328e+04	-2511.93	-8666.21	-775.93	
	11	-1669.23	-312.93	1.735e+04	2043.10	-2422.44	640.65	
	42	1014.42	897.89	-1.792e+04	-1.176e+04	-6.919e+04	-2745.23	
	39	-234.45	-910.72	1907.64	1.129e+04	5.483e+04	2610.07	
	58	1045.35	775.10	-1.566e+04	-9329.98	-7.079e+04	-2817.19	
	55	-265.38	-787.93	-358.06	8859.67	5.643e+04	2682.03	
237	38	2014.42	1526.91	-2.170e+04	1.879e+04	-5.997e+04	-2690.18	
	43	-1240.20	-1493.86	1.078e+04	-1.689e+04	4.610e+04	2556.16	
	43	-1240.20	-1493.86	1.078e+04	-1.689e+04	4.610e+04	2556.16	
	38	2014.42	1526.91	-2.170e+04	1.879e+04	-5.997e+04	-2690.18	
	58	1039.90	1306.69	-1.933e+04	1.623e+04	-7.032e+04	-2816.19	
	55	-265.68	-1273.63	8403.15	-1.433e+04	5.645e+04	2682.17	
238	26	-1030.24	658.59	-2.821e+04	1.495e+04	-3.460e+04	-778.34	
	23	1731.12	-583.10	2.238e+04	-1.097e+04	2.396e+04	642.49	
	39	-226.62	-2217.15	1.938e+04	-5.378e+04	5.410e+04	2604.21	
	42	1001.21	2292.61	-2.513e+04	5.776e+04	-6.813e+04	-2740.40	
	58	1033.92	2075.62	-2.288e+04	5.509e+04	-6.987e+04	-2813.39	
	55	-259.32	-2000.16	1.713e+04	-5.111e+04	5.584e+04	2677.20	
239	34	-1394.03	590.30	-2.336e+04	1.386e+04	-1.644e+04	-799.07	
	31	2032.10	-521.48	1.751e+04	-1.046e+04	9103.91	664.10	
	39	923.27	-2219.14	3460.88	-5.395e+04	-3839.40	2603.03	
	42	-211.59	2287.96	-9232.43	5.735e+04	-6882.66	-2738.00	
	36	-1354.82	-621.17	-2.328e+04	-1.723e+04	-1.808e+04	830.37	
	29	1992.88	689.99	1.742e+04	2.063e+04	1.074e+04	-965.34	
240	2	417.21	20.26	-7593.34	958.34	-3834.97	-93.79	
	129	-231.57	397.39	-4975.18	4782.28	-6578.28	-850.67	
	43	-94.96	-1483.93	-5399.77	-1.586e+04	-1.201e+04	2557.90	
	38	806.48	1507.94	-5639.99	1.699e+04	1456.66	-2692.85	
	36	-1344.90	-356.20	-5659.25	-3228.63	-1.895e+04	832.19	
	29	1983.79	380.21	-5380.80	4364.44	1.168e+04	-967.13	
499	16	1537.17	-520.24	-2.010e+04	-7867.45	1.048e+04	-637.12	
	17	-1551.75	569.30	1.211e+04	1.010e+04	-3.165e+04	770.96	
	59	-1014.59	-1971.39	-7818.40	-4.146e+04	1.084e+04	-2610.62	
	54	1072.59	2020.47	-220.12	4.369e+04	-3.528e+04	2744.43	
	49	82.77	1798.42	7035.70	4.071e+04	-4.446e+04	2811.49	
	48	-24.77	-1749.34	-1.507e+04	-3.847e+04	2.002e+04	-2677.68	
500	30	1474.87	652.85	-2.009e+04	1.518e+04	1.366e+04	779.63	
	35	-1549.21	-594.16	1.208e+04	-1.211e+04	-3.180e+04	-643.70	
	59	130.49	-1966.45	8149.56	-4.104e+04	-4.696e+04	-2609.53	
	54	-132.26	2025.12	-1.621e+04	4.410e+04	2.555e+04	2745.49	
	43	146.90	-1748.64	7022.11	-3.830e+04	-4.787e+04	-2682.05	
	38	-148.67	1807.30	-1.508e+04	4.136e+04	2.646e+04	2818.01	
501	18	-1928.04	349.50	-2.308e+04	-236.59	-1.285e+04	775.63	
	15	1843.77	-349.88	9218.66	319.36	-4435.50	-641.26	
	54	-143.79	1072.83	-1.101e+04	-3539.47	2.652e+04	2744.12	
	59	132.21	-1073.24	-2801.65	3620.11	-4.709e+04	-2609.81	

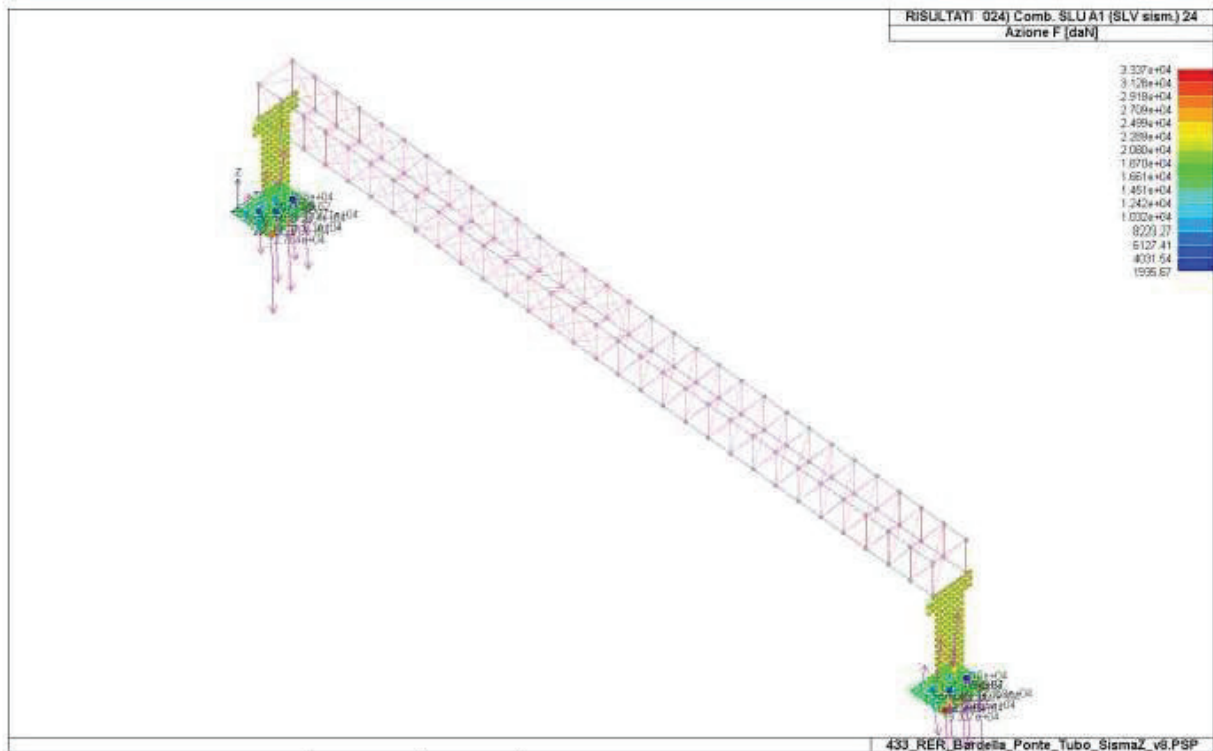
PONTE-TUBO - RELAZIONE DI CALCOLO	COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
	433	I-1	B_1	519_v3	1	119 di 288

	43	147.43	-907.93	-3939.06	3545.53	-4.790e+04	-2682.37
	38	-159.01	907.52	-9869.19	-3464.89	2.733e+04	2816.68
502	36	-1874.64	-351.08	-2.305e+04	-94.79	-1.558e+04	-638.70
	29	1850.14	339.72	9211.70	-745.28	-4732.41	774.11
	54	1074.08	1067.98	4992.92	-3961.08	-3.539e+04	2744.58
	59	-1025.89	-1079.31	-1.878e+04	3123.14	1.179e+04	-2609.12
	49	83.18	906.94	-3910.05	-3759.81	-4.447e+04	2811.68
	48	-34.99	-918.28	-9874.75	2921.87	2.088e+04	-2676.21
503	24	2201.63	-351.09	-2.330e+04	-96.07	816.14	638.78
	25	-1585.41	339.70	9013.10	-746.31	-7219.42	-774.04
	42	-809.35	1067.96	4794.32	-3962.11	2.343e+04	-2744.52
	39	1498.15	-1079.33	-1.913e+04	3121.30	-3.311e+04	2609.23
	68	507.25	-918.30	-1.023e+04	2920.03	-4.220e+04	2676.33
	61	181.55	906.93	-4108.65	-3760.85	3.252e+04	-2811.61
504	6	2192.77	349.51	-2.328e+04	-235.56	896.32	-775.69
	11	-1516.78	-349.86	8973.35	320.64	-1.033e+04	641.18
	42	408.52	1072.84	-1.121e+04	-3538.43	-3.847e+04	-2744.18
	39	340.05	-1073.22	-3155.94	3621.96	2.577e+04	2609.70
	58	423.74	907.54	-1.007e+04	-3463.85	-3.928e+04	-2816.74
	55	324.82	-907.91	-4293.35	3547.38	2.658e+04	2682.26
505	26	-1210.14	652.84	-1.989e+04	1.518e+04	-2.561e+04	-779.69
	23	1876.20	-594.18	1.233e+04	-1.211e+04	1.703e+04	643.62
	39	341.76	-1966.47	8503.85	-4.104e+04	2.564e+04	2609.42
	42	396.99	2025.10	-1.601e+04	4.410e+04	-3.750e+04	-2745.56
	58	413.40	1807.29	-1.489e+04	4.136e+04	-3.841e+04	-2818.08
	55	325.35	-1748.66	7376.41	-3.830e+04	2.655e+04	2681.94
506	12	-1210.19	-520.23	-1.985e+04	-7866.17	-2.524e+04	637.20
	5	1816.48	569.31	1.231e+04	1.010e+04	1.970e+04	-770.90
	39	1486.84	-1971.37	-7464.10	-4.145e+04	-3.216e+04	2610.73
	42	-807.86	2020.49	-21.51	4.369e+04	2.333e+04	-2744.37
	68	497.03	-1749.32	-1.472e+04	-3.847e+04	-4.134e+04	2677.80
	61	181.96	1798.43	7234.30	4.071e+04	3.251e+04	-2811.43

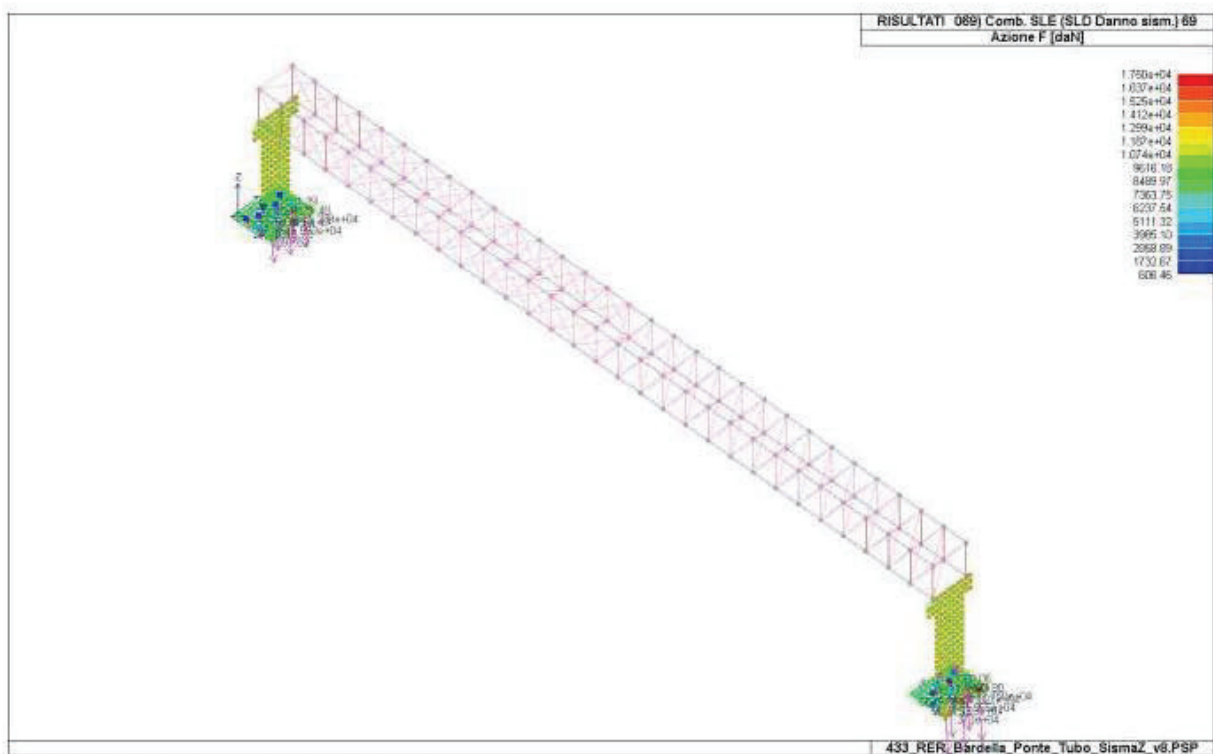


PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
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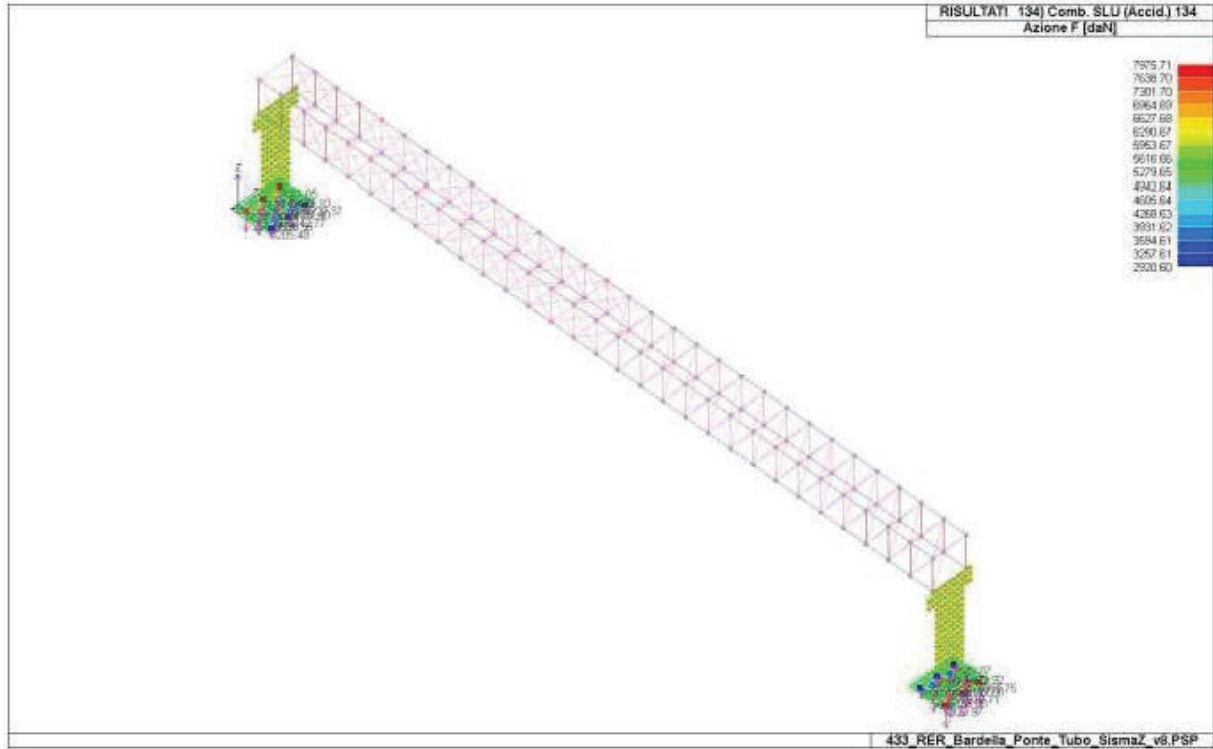
42_RIS_REAZIONI_024_Comb. SLU A1 (SLV sism.) 24



42_RIS_REAZIONI_069_Comb. SLE (SLD Danno sism.) 69

PONTE-TUBO - RELAZIONE DI CALCOLO

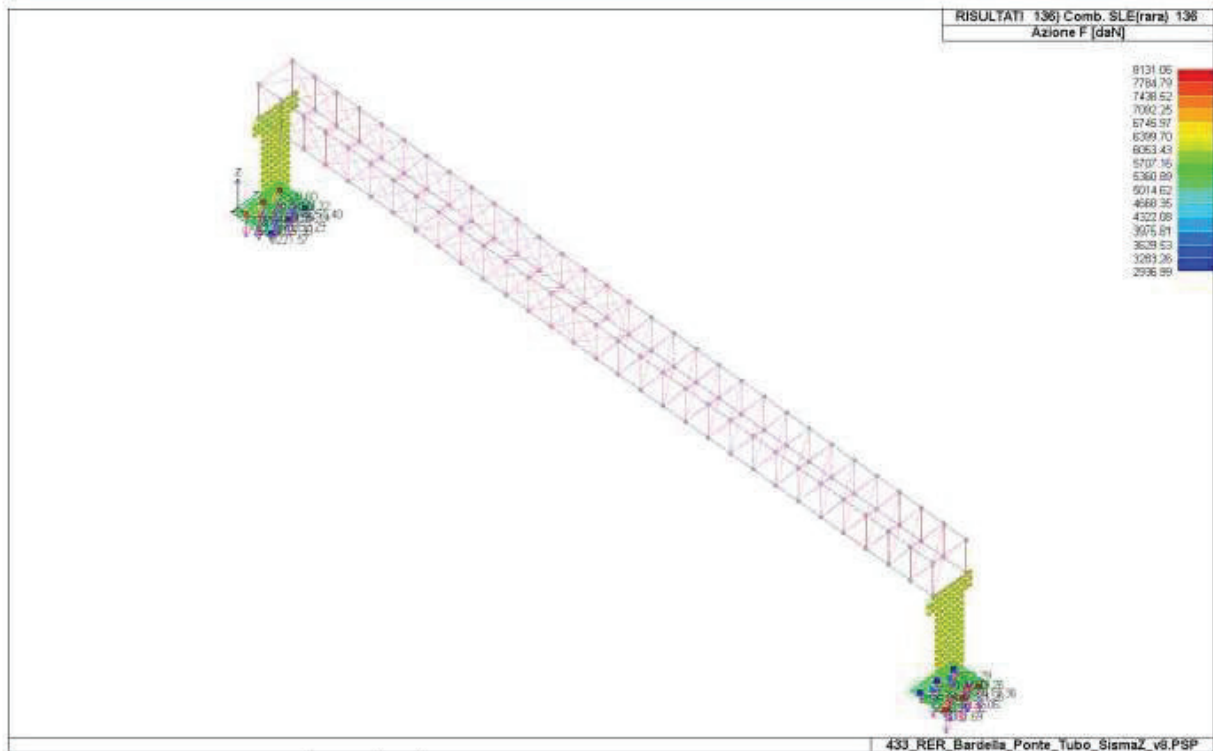
COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	121 di 288



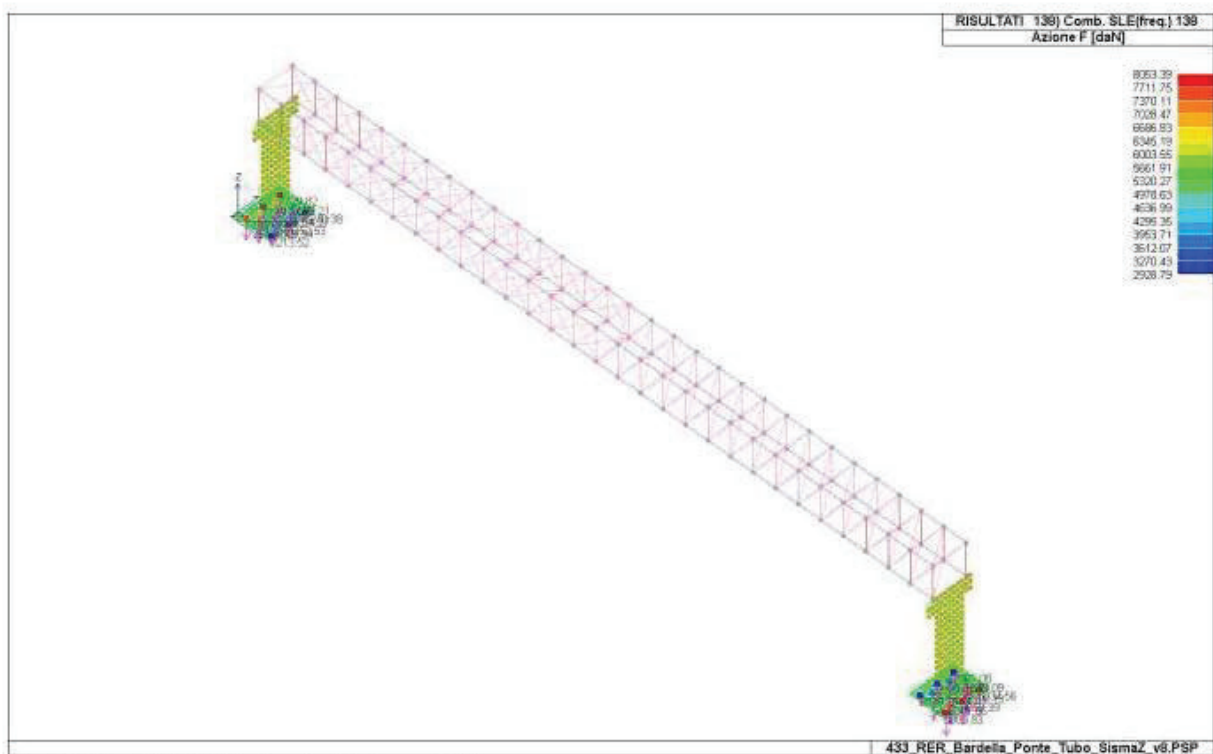
42_RIS_REAZIONI_134_Comb. SLU (Accid.) 134

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	122 di 288



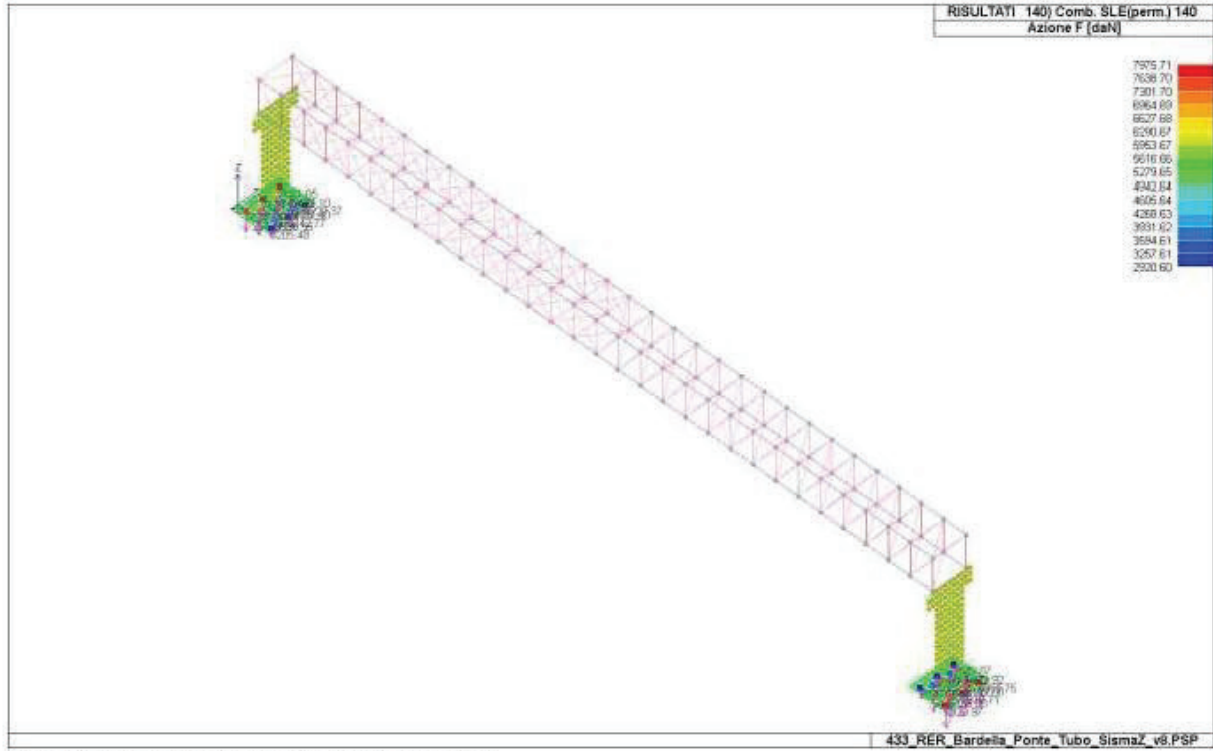
42_RIS_REAZIONI_136_Comb. SLE(rara) 136



42_RIS_REAZIONI_138_Comb. SLE(freq.) 138

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	123 di 288



42_RIS_REAZIONI_140_Comb. SLE(perm.) 140

RISULTATI OPERE DI FONDAZIONE

LEGENDA RISULTATI OPERE DI FONDAZIONE

Il controllo dei risultati delle analisi condotte, per quanto concerne le opere di fondazione, è possibile in relazione alle tabelle sotto riportate.

La prima tabella è riferita alle fondazioni tipo palo e plinto su pali.

Per questo tipo di fondazione vengono riportate le sei componenti di sollecitazione (espresse nel riferimento globale della struttura) per ogni palo componente l'opera.

In particolare viene riportato:

Nodo	numero del nodo a cui è applicato il plinto
Tipo	codice corrispondente al nome assegnato al tipo di plinto di fondazione: 3) palo singolo (<i>PALO</i>) 4) plinto su palo 5) plinto su due pali (<i>PL.2P</i>) 6) plinto su tre pali (<i>PL.3P</i>) 7) plinto su quattro pali (<i>PL.4P</i>) 8) plinto rettangolare su cinque pali (<i>PL.5P.R</i>) 9) plinto pentagonale su cinque pali (<i>PL.5P</i>) 10) plinto su sei pali (<i>PL.6P</i>)
Palo	numero del palo
Comb.	combinazione di carico in cui si verificano le sei componenti di sollecitazione.
Quota	quota assoluta della sezione del palo per cui si riportano le sei componenti di sollecitazione.

L'azione F_z (corrispondente allo sforzo normale nel palo) è costante poiché il peso del palo stesso non è considerato nella modellazione.

La seconda tabella è riferita alle fondazioni tipo plinto su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni nei quattro vertici dell'impronta sul terreno.

In particolare viene riportato:

Nodo	numero del nodo a cui è applicato il plinto
Tipo	Codice identificativo del nome assegnato al plinto
area	area dell'impronta del plinto
Wink O Wink V	coefficienti di Winkler (orizzontale e verticale) adottati
Comb	Combinazione di carico in cui si verificano i valori riportati
Pt (P1 P2 P3 P4)	valori di pressione nei vertici

La terza tabella è riferita alle fondazioni tipo platea su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni in ogni vertice (nodo) degli elementi costituenti la platea.

La quarta tabella è riferita alle fondazioni tipo trave su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni alle estremità dell'elemento e la massima (in valore assoluto) pressione lungo lo sviluppo dell'elemento.

Vengono inoltre riportati, con funzione statistica, i valori massimo e minimo delle pressioni che compaiono nella tabella.

Con riferimento al Documento di Affidabilità "Test di validazione del software di calcolo PRO_SAP e dei moduli aggiuntivi PRO_SAP Modulo Geotecnico, PRO_CAD nodi acciaio e PRO_MST" - versione Settembre 2014, disponibile per il download sul sito www.2si.it, si segnalano i seguenti esempi applicativi:

Test N°	Titolo
105	PLINTO SUPERFICIALE
106	PLINTO SUPERFICIALE
107	PLINTO SUPERFICIALE
108	PLINTO SUPERFICIALE
109	PLINTO SUPERFICIALE
110	PLINTO SUPERFICIALE
111	PLINTO SUPERFICIALE
112	PLINTO SUPERFICIALE
113	PLINTO SUPERFICIALE
114	PLINTO SUPERFICIALE
115	PLINTO SUPERFICIALE
116	PLINTO SUPERFICIALE
117	PLINTO SUPERFICIALE
118	PLINTO SUPERFICIALE
119	PLINTO SUPERFICIALE
120	PLINTO SUPERFICIALE
121	PLINTO SUPERFICIALE
122	PLINTO SUPERFICIALE
123	PLINTO SUPERFICIALE
124	FONDAZIONE NASTRIFORME
125	CALCOLO DEI K DI WINKLER

Nodo	Tipo	Palo	Cmb	Quota	Fx	Fy	Fz	Mx	My	Mz
				cm	daN	daN	daN	daN cm	daN cm	daN cm
1	P21-PALO D 21.00	1	1	-10.00	6.25	-31.77	-9503.46	1770.46	-1.331e+04	80.97
		1	2	-10.00	-22.07	-16.34	-1.053e+04	1075.14	-1.412e+04	93.72
		1	3	-10.00	4.83	-23.49	-7020.54	1309.01	-9850.53	59.88
		1	29	-10.00	2038.63	288.13	1.770e+04	3198.25	-1.457e+04	773.63
		1	36	-10.00	-2030.93	-316.81	-3.292e+04	-1405.51	-7547.28	-638.61
		1	49	-10.00	703.53	772.42	222.34	9806.80	-7.596e+04	2811.49
		1	66	-10.00	657.23	892.11	2137.77	1.238e+04	-7.408e+04	2744.21
		1	81	-10.00	760.96	99.54	1888.12	1788.09	-1.188e+04	335.27
		1	84	-10.00	-784.86	-128.24	-1.714e+04	5.84	-8785.57	-200.39
		1	91	-10.00	255.80	282.85	-4722.18	4279.39	-3.508e+04	1106.09
		1	99	-10.00	243.83	329.27	-3870.80	5199.49	-3.450e+04	1078.88
		1	133	-10.00	4.83	-23.49	-7020.54	1309.01	-9850.53	59.88
		1	134	-10.00	-11.95	-14.35	-7627.21	896.97	-1.033e+04	67.44
		1	135	-10.00	4.83	-23.49	-7020.54	1309.01	-9850.53	59.88
		1	136	-10.00	-16.15	-12.06	-7778.88	793.96	-1.045e+04	69.33
		1	137	-10.00	4.83	-23.49	-7020.54	1309.01	-9850.53	59.88
1	138	-10.00	-14.05	-13.21	-7703.05	845.46	-1.039e+04	68.38		
1	139	-10.00	4.83	-23.49	-7020.54	1309.01	-9850.53	59.88		
1	140	-10.00	-11.95	-14.35	-7627.21	896.97	-1.033e+04	67.44		
2	P21-PALO D 21.00	1	2	-10.00	-20.38	13.91	-7478.30	-421.62	-1.420e+04	94.03
		1	3	-10.00	5.75	-4.21	-5102.02	356.19	-9880.16	60.01
		1	4	-10.00	-22.12	15.40	-5671.17	-547.60	-1.073e+04	72.89
		1	49	-10.00	702.18	1298.88	8444.53	-1.547e+04	-7.580e+04	2811.07
		1	56	-10.00	-574.91	-1502.81	-2.167e+04	1.765e+04	4.808e+04	-2551.38
		1	57	-10.00	657.13	1517.75	1.079e+04	-1.802e+04	-7.353e+04	2686.61
		1	91	-10.00	256.02	495.23	-246.53	-5918.82	-3.505e+04	1106.06
		1	94	-10.00	-260.52	-563.18	-1.152e+04	6524.41	1.343e+04	-923.64
		1	95	-10.00	238.98	578.00	641.92	-6883.18	-3.420e+04	1058.93
		1	133	-10.00	5.75	-4.21	-5102.02	356.19	-9880.16	60.01
1	134	-10.00	-10.77	7.41	-5439.30	-179.39	-1.038e+04	67.64		
1	135	-10.00	5.75	-4.21	-5102.02	356.19	-9880.16	60.01		
1	136	-10.00	-14.90	10.32	-5523.62	-313.28	-1.051e+04	69.55		

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA LOTTO ELABORATO DOCUMENTO REV. FOGLIO
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Nodo	Tipo	Palo	Cmb	Quota	Fx	Fy	Fz	Mx	My	Mz
		1	137	-10.00	5.75	-4.21	-5102.02	356.19	-9880.16	60.01
		1	138	-10.00	-12.83	8.87	-5481.46	-246.34	-1.045e+04	68.60
		1	139	-10.00	5.75	-4.21	-5102.02	356.19	-9880.16	60.01
		1	140	-10.00	-10.77	7.41	-5439.30	-179.39	-1.038e+04	67.64
3	P21-PALO D 21.00	1	2	-10.00	-17.13	46.68	-4365.77	-2128.12	-1.448e+04	93.43
		1	3	-10.00	7.91	16.73	-3141.15	-735.24	-1.007e+04	59.63
		1	16	-10.00	1393.37	-583.68	-2.852e+04	1.109e+04	1.754e+04	-635.65
		1	17	-10.00	-1379.12	645.67	2.208e+04	-1.391e+04	-4.011e+04	770.03
		1	49	-10.00	699.14	2065.14	1.663e+04	-5.430e+04	-7.555e+04	2807.28
		1	54	-10.00	1676.65	2285.99	6454.40	-5.718e+04	-6.587e+04	2739.53
		1	74	-10.00	512.95	-201.90	-1.271e+04	3334.72	503.03	-199.36
		1	75	-10.00	-529.78	263.88	6298.61	-6149.59	-2.167e+04	333.79
		1	91	-10.00	256.35	800.81	4238.79	-2.143e+04	-3.509e+04	1104.36
		1	93	-10.00	631.66	883.39	504.63	-2.249e+04	-3.156e+04	1076.97
		1	133	-10.00	7.91	16.73	-3141.15	-735.24	-1.007e+04	59.63
		1	134	-10.00	-8.41	30.99	-3205.31	-1407.44	-1.059e+04	67.22
		1	135	-10.00	7.91	16.73	-3141.15	-735.24	-1.007e+04	59.63
		1	136	-10.00	-12.50	34.55	-3221.36	-1575.49	-1.072e+04	69.11
		1	137	-10.00	7.91	16.73	-3141.15	-735.24	-1.007e+04	59.63
		1	138	-10.00	-10.46	32.77	-3213.34	-1491.46	-1.065e+04	68.16
		1	139	-10.00	7.91	16.73	-3141.15	-735.24	-1.007e+04	59.63
		1	140	-10.00	-8.41	30.99	-3205.31	-1407.44	-1.059e+04	67.22
4	P21-PALO D 21.00	1	2	-10.00	-56.69	51.40	-4420.45	-2536.45	-1.255e+04	93.80
		1	3	-10.00	-17.31	19.88	-3164.68	-1007.64	-8839.93	59.88
		1	22	-10.00	1660.41	590.30	-2.366e+04	-1.386e+04	4295.18	799.07
		1	27	-10.00	-1703.06	-521.48	1.714e+04	1.046e+04	-2.410e+04	-664.10
		1	35	-10.00	-1702.82	-586.49	1.713e+04	1.125e+04	-2.412e+04	-641.89
		1	54	-10.00	477.97	2287.96	-9530.60	-5.735e+04	-5258.54	2738.00
		1	77	-10.00	607.98	244.12	-1.091e+04	-6281.23	-4172.39	343.15
		1	79	-10.00	-678.82	282.89	4403.00	-8884.17	-1.430e+04	408.03
		1	80	-10.00	-681.73	-175.29	4421.33	2874.64	-1.423e+04	-208.18
		1	93	-10.00	160.66	886.27	-5563.61	-2.274e+04	-7778.08	1076.56
		1	133	-10.00	-17.31	19.88	-3164.68	-1007.64	-8839.93	59.88
		1	134	-10.00	-36.87	34.41	-3242.37	-1703.29	-9201.30	67.48
		1	135	-10.00	-17.31	19.88	-3164.68	-1007.64	-8839.93	59.88
		1	136	-10.00	-41.76	38.04	-3261.80	-1877.21	-9291.65	69.39
		1	137	-10.00	-17.31	19.88	-3164.68	-1007.64	-8839.93	59.88
		1	138	-10.00	-39.32	36.23	-3252.09	-1790.25	-9246.47	68.44
		1	139	-10.00	-17.31	19.88	-3164.68	-1007.64	-8839.93	59.88
		1	140	-10.00	-36.87	34.41	-3242.37	-1703.29	-9201.30	67.48
5	P21-PALO D 21.00	1	2	-10.00	-100.13	56.05	-4404.83	-2938.58	-1.027e+04	93.81
		1	3	-10.00	-45.08	23.00	-3140.98	-1276.95	-7382.47	59.91
		1	30	-10.00	1296.75	658.62	-2.850e+04	-1.496e+04	2.245e+04	777.98
		1	35	-10.00	-1401.93	-583.07	2.201e+04	1.097e+04	-3.897e+04	-642.94
		1	43	-10.00	734.76	-2000.11	1.660e+04	5.110e+04	-7.751e+04	2677.85
		1	54	-10.00	-734.71	2292.63	-2.543e+04	-5.776e+04	5.598e+04	2740.04
		1	81	-10.00	451.09	272.05	-1.273e+04	-6876.45	3709.52	335.18
		1	84	-10.00	-587.35	-196.49	6273.74	2886.73	-1.883e+04	-200.19
		1	88	-10.00	193.45	-732.50	4258.40	1.807e+04	-3.218e+04	-969.94
		1	93	-10.00	-317.35	890.12	-1.157e+04	-2.307e+04	1.640e+04	1077.33
		1	133	-10.00	-45.08	23.00	-3140.98	-1276.95	-7382.47	59.91
		1	134	-10.00	-68.13	37.78	-3228.43	-1994.86	-7561.44	67.49
		1	135	-10.00	-45.08	23.00	-3140.98	-1276.95	-7382.47	59.91
		1	136	-10.00	-73.90	41.47	-3250.29	-2174.34	-7606.19	69.39
		1	137	-10.00	-45.08	23.00	-3140.98	-1276.95	-7382.47	59.91
		1	138	-10.00	-71.01	39.63	-3239.36	-2084.60	-7583.81	68.44
		1	139	-10.00	-45.08	23.00	-3140.98	-1276.95	-7382.47	59.91
		1	140	-10.00	-68.13	37.78	-3228.43	-1994.86	-7561.44	67.49
6	P21-PALO D 21.00	1	2	-10.00	-103.46	26.59	-7517.65	-1493.56	-9986.58	93.40
		1	3	-10.00	-47.28	4.21	-5102.02	-356.19	-7193.12	59.63
		1	43	-10.00	737.88	-1273.63	8403.15	1.433e+04	-7.777e+04	-2681.89
		1	55	-10.00	1712.40	-1493.86	1.078e+04	1.689e+04	-6.741e+04	-2555.89
		1	58	-10.00	-1749.72	1526.91	-2.170e+04	-1.879e+04	4.802e+04	2690.33
		1	88	-10.00	193.07	-470.72	-277.29	4779.22	-3.214e+04	-971.61
		1	94	-10.00	561.74	-554.01	620.39	5748.51	-2.823e+04	-923.90
		1	95	-10.00	-702.81	587.18	-1.155e+04	-7659.58	1.352e+04	1058.29
		1	133	-10.00	-47.28	4.21	-5102.02	-356.19	-7193.12	59.63
		1	134	-10.00	-70.54	16.59	-5462.62	-955.53	-7355.15	67.19
		1	135	-10.00	-47.28	4.21	-5102.02	-356.19	-7193.12	59.63
		1	136	-10.00	-76.35	19.68	-5552.76	-1105.37	-7395.66	69.08
		1	137	-10.00	-47.28	4.21	-5102.02	-356.19	-7193.12	59.63
		1	138	-10.00	-73.45	18.13	-5507.69	-1030.45	-7375.41	68.14
		1	139	-10.00	-47.28	4.21	-5102.02	-356.19	-7193.12	59.63
		1	140	-10.00	-70.54	16.59	-5462.62	-955.53	-7355.15	67.19