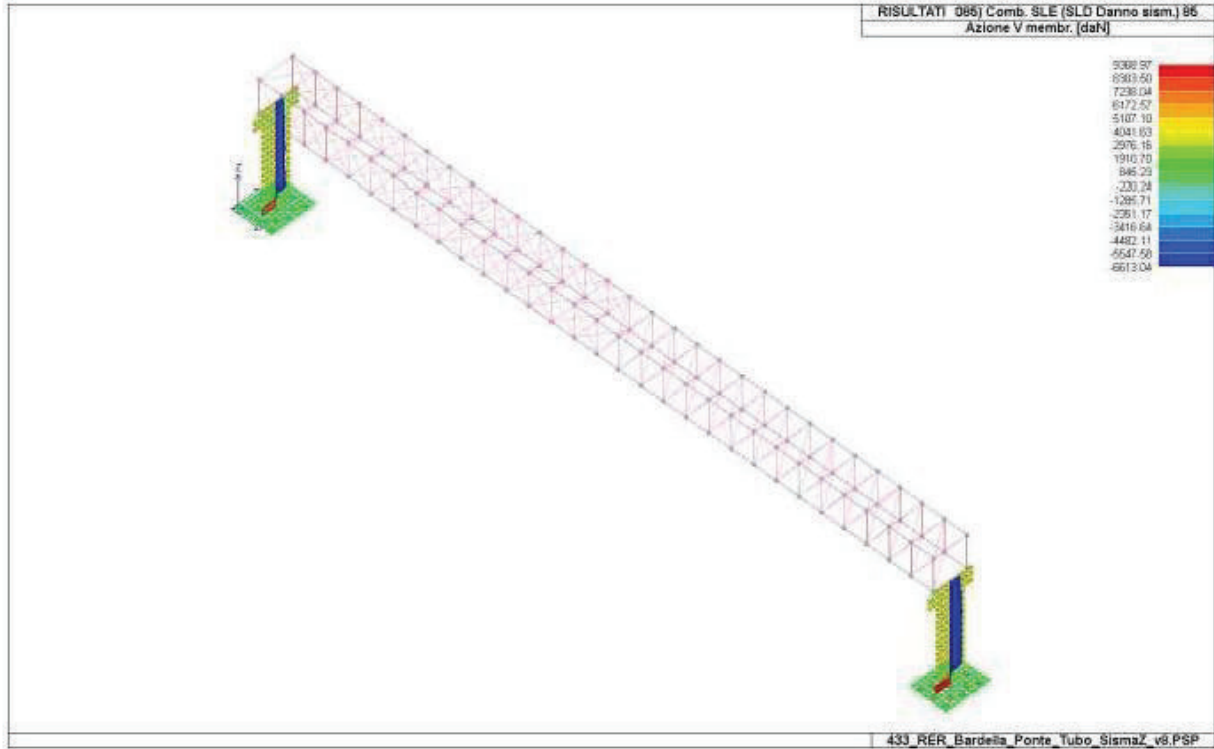


PONTE-TUBO - RELAZIONE DI CALCOLO

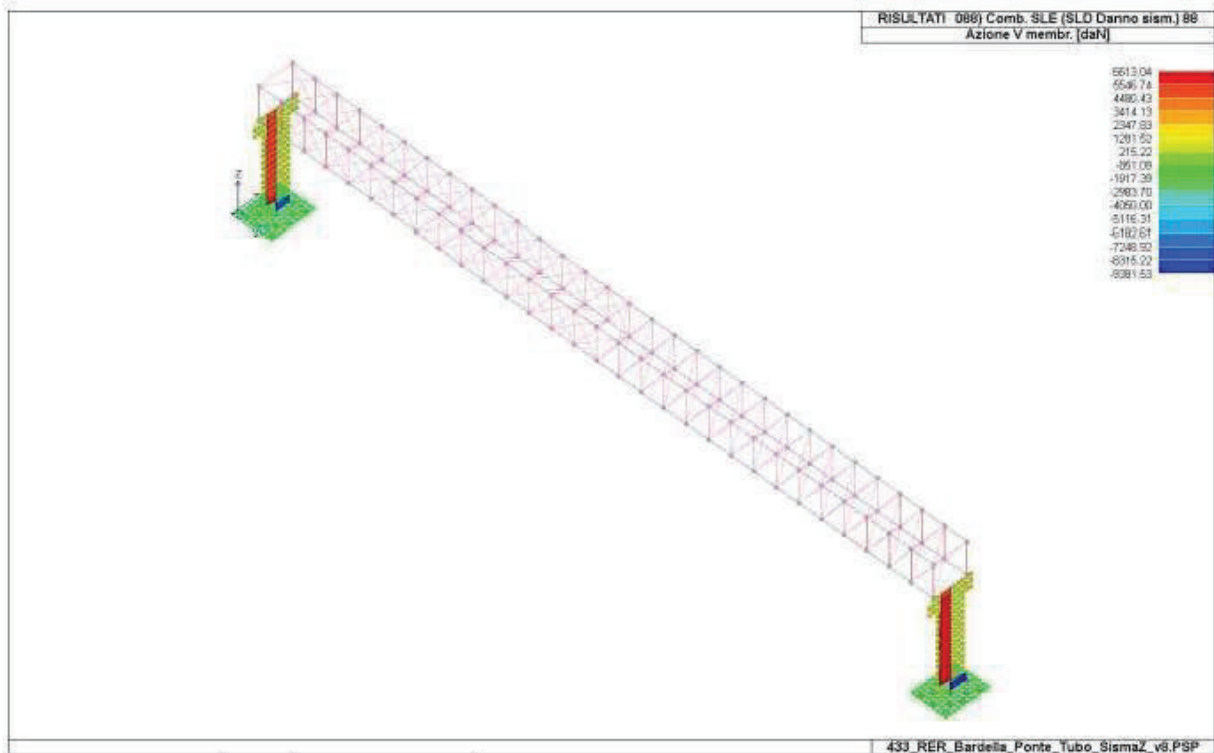
COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	180 di 288



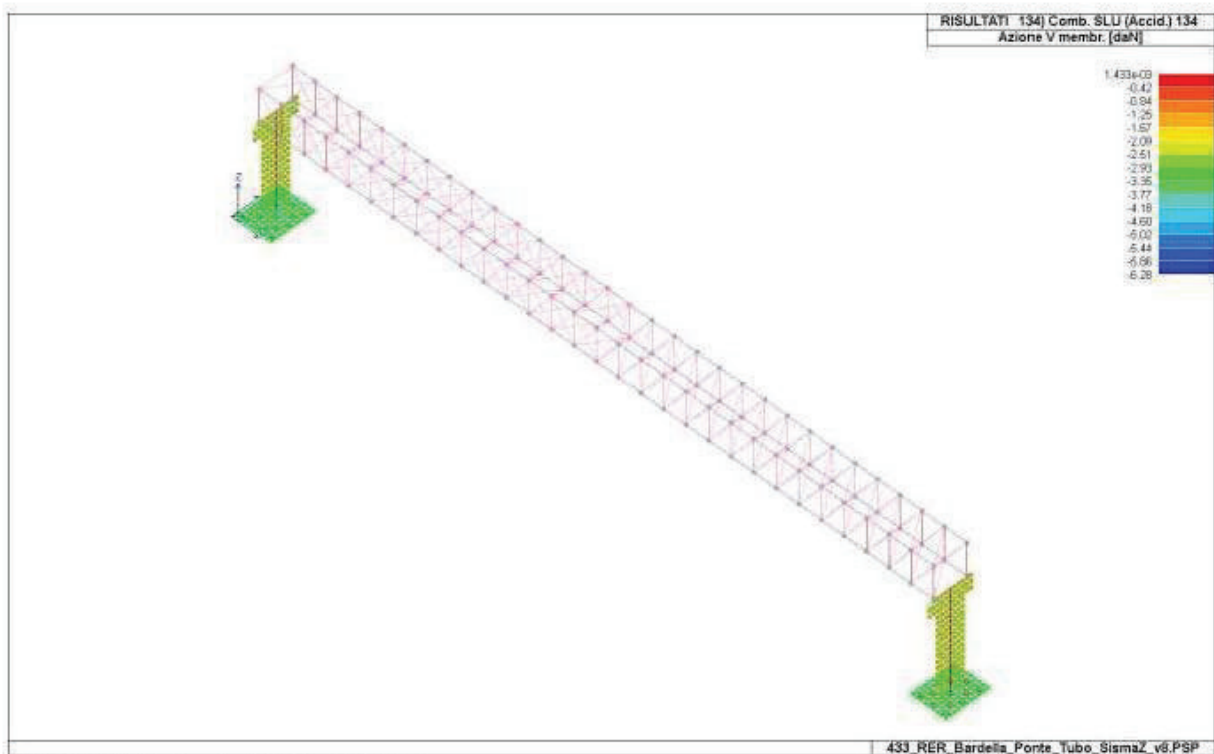
47_RIS_V_085_Comb. SLE (SLD Danno sism.) 85

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	181 di 288



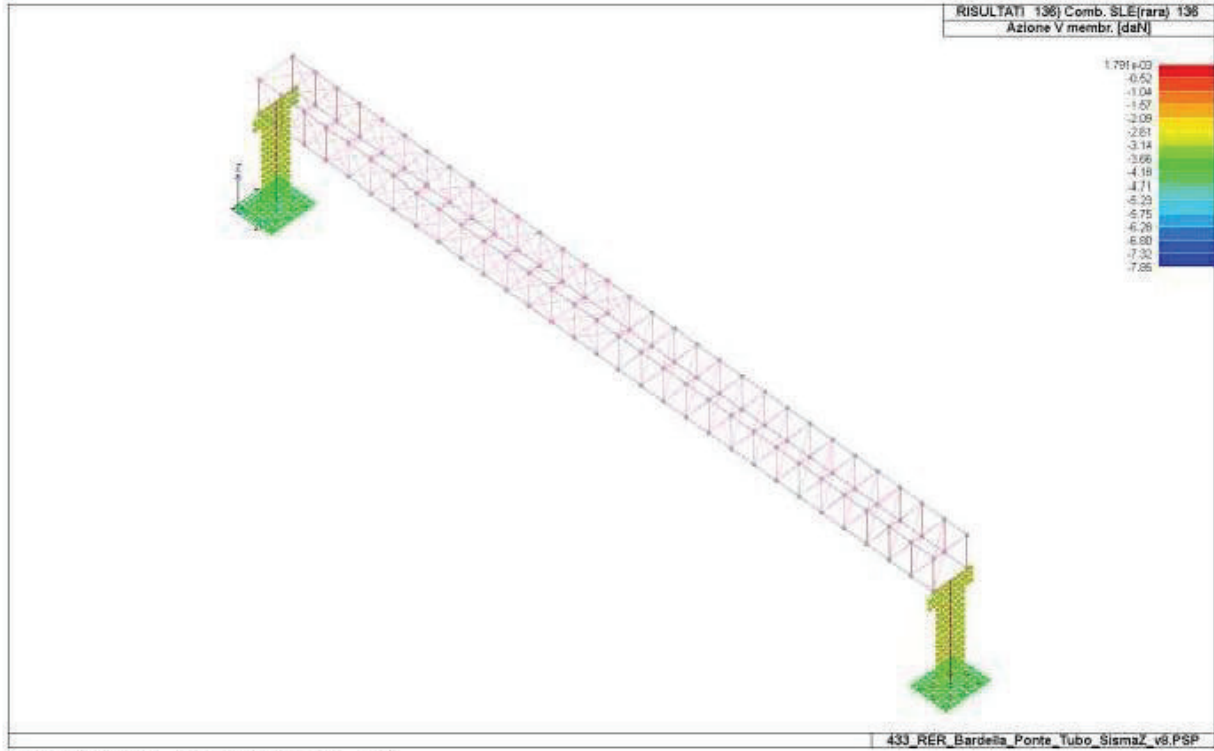
47_RIS_V_088_Comb. SLE (SLD Danno sism.) 88



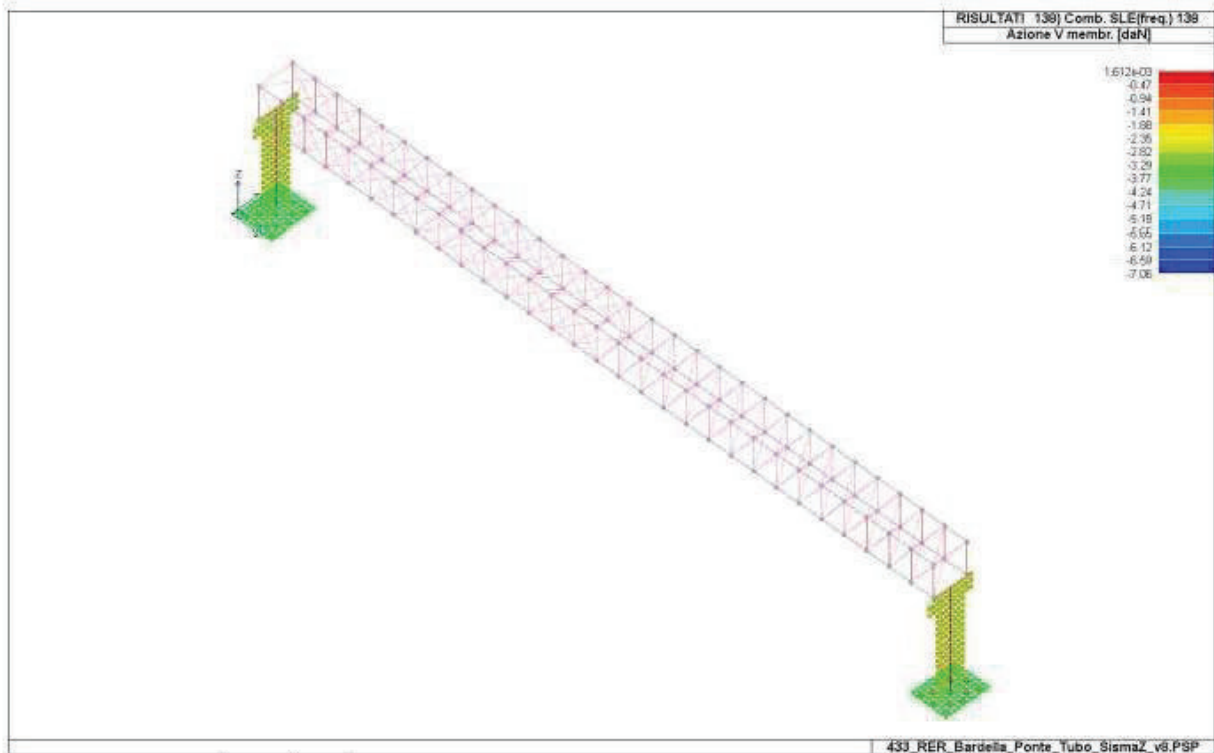
47_RIS_V_134_Comb. SLU (Accid.) 134

PONTE-TUBO - RELAZIONE DI CALCOLO

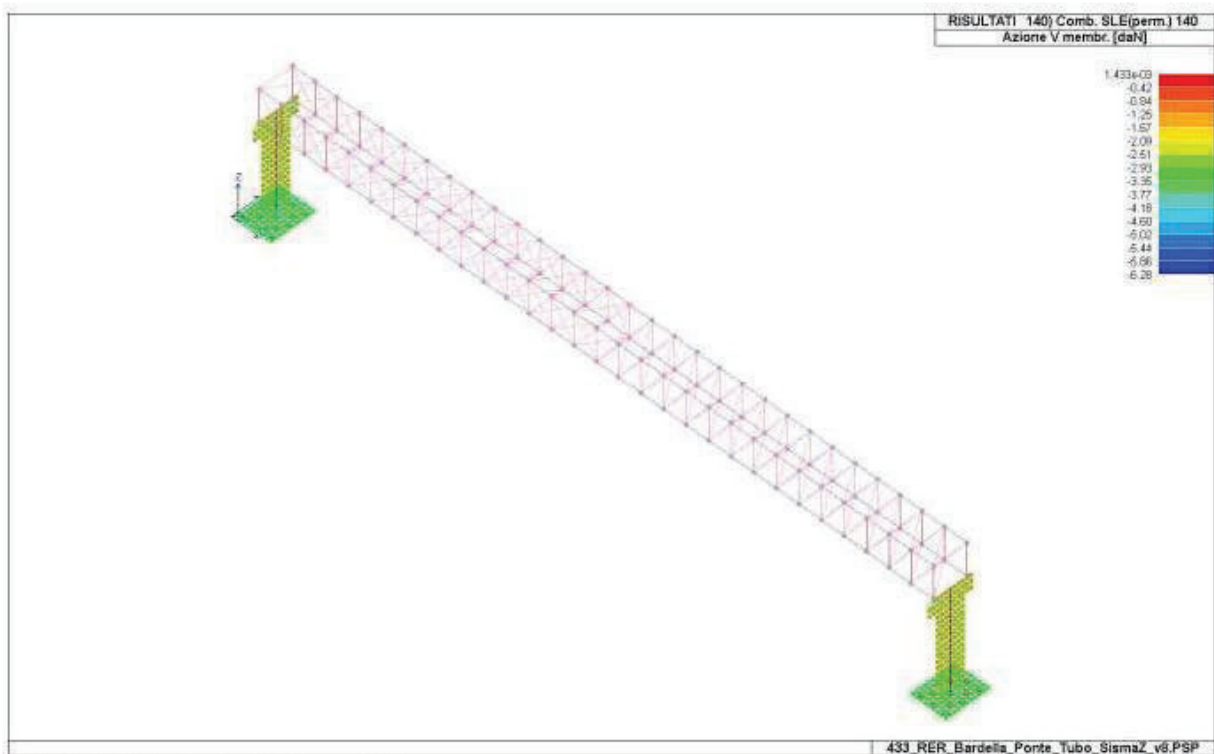
COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	182 di 288



47_RIS_V_136_Comb. SLE(rara) 136



47_RIS_V_138_Comb. SLE(freq.) 138



47_RIS_V_140_Comb. SLE(perm.) 140

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	184 di 288

Macro	Tipo	Angolo 1-X (gradi)
1	Guscio	0.0

M_G	Cmb	Nodo	N max daN/cm	N min daN/cm	N 1 daN/cm	N 2 daN/cm	N 1-2 daN/cm	M max daN	M min daN	M 1 daN	M 2 daN	M 1-2 daN
1	2	490	9.16	-9.48	8.91	-9.23	-2.13	-356.31	-1541.47	-360.28	-1537.50	-68.47
1	2	491	-12.70	-29.08	-14.37	-27.41	-4.95	643.89	-2740.12	636.24	-2732.48	160.69
1	2	492	43.67	-21.05	38.60	-15.98	17.39	-1486.97	-4533.41	-1754.20	-4266.18	-861.79
1	2	493	-15.10	-53.28	-15.10	-53.28	-4.80e-02	461.56	-2659.12	461.44	-2659.00	19.14
1	2	494	44.46	-22.63	39.09	-17.27	-18.20	-1505.62	-4553.53	-1781.70	-4277.45	874.78
1	2	495	-12.55	-31.58	-14.13	-30.00	5.25	629.55	-2691.35	620.36	-2682.16	-174.47
1	2	496	7.16	-12.41	7.09	-12.35	1.13	-260.97	-1417.92	-266.75	-1412.13	81.61
1	2	497	8.65	-8.37	-0.59	0.88	8.48	300.24	-459.38	-120.57	-38.57	-377.60
1	2	498	5.79	-3.40	0.92	1.47	-4.59	244.73	100.45	176.88	168.30	72.01
1	2	507	2.08	-2.31	-1.01	0.78	2.00	449.87	163.27	374.90	238.24	-125.96
1	2	508	0.98	-5.71	-1.86	-2.87	3.31	121.81	-542.38	-491.50	70.94	-176.64
1	2	509	7.53	-3.81	-3.22	6.94	-2.52	1704.38	1079.00	1568.52	1214.86	-257.89
1	2	510	1.68	-7.91	-5.26	-0.97	-4.29	292.79	-522.59	264.33	-494.13	149.64
1	2	511	7.47	2.68	3.99	6.15	-2.13	25.64	-1558.63	18.09	-1551.08	109.11
1	2	512	14.02	-4.03	1.60	8.39	-8.36	-237.50	-2248.02	-288.90	-2196.62	-317.32
1	2	513	19.63	-11.97	-11.46	19.12	3.98	654.66	-3274.16	640.57	-3260.07	-234.88
1	2	514	28.04	0.27	13.76	14.55	-13.88	-1458.46	-3397.59	-1500.06	-3355.98	280.97
1	2	515	62.96	25.23	41.62	46.57	-18.70	-1409.60	-4476.84	-1665.80	-4220.64	848.64
1	2	516	15.12	0.94	8.17	7.89	-7.09	-847.03	-3942.58	-901.61	-3887.99	407.42
1	2	517	10.41	-16.89	-16.89	10.41	-7.82e-02	274.80	-2078.92	274.78	-2078.90	6.57
1	2	518	29.27	-12.88	-12.87	29.25	-0.83	1608.22	-2688.92	1608.20	-2688.89	-9.40
1	2	519	63.22	26.06	41.41	47.87	18.29	-1403.01	-4467.41	-1653.76	-4216.67	-839.95
1	2	520	13.75	2.53	7.65	8.63	5.59	-835.69	-3952.28	-895.91	-3892.06	-429.01
1	2	521	22.04	-12.01	-11.58	21.61	-3.82	663.69	-3304.91	650.82	-3292.04	225.66
1	2	522	27.65	1.58	13.70	15.53	13.00	-1477.07	-3397.61	-1520.69	-3353.99	-286.14
1	2	523	9.52	4.43	5.06	8.89	1.67	-30.02	-1630.44	-37.34	-1623.12	-107.96
1	2	524	14.47	-3.57	1.84	9.06	8.27	-234.49	-2269.20	-286.14	-2217.55	320.05
1	2	525	3.34	-5.54	-1.69	-0.51	-4.40	143.23	-575.01	-483.07	51.30	239.96
1	2	526	8.11	-4.11	-3.40	7.40	2.86	1741.64	1072.91	1626.01	1188.54	252.89
1	2	527	2.41	-2.85	-2.10	1.66	-1.84	478.63	130.90	415.06	194.47	134.40
1	2	528	2.42	-9.54	-6.24	-0.88	5.35	366.71	-568.85	307.47	-509.61	-227.83
1	2	529	27.04	-12.96	0.67	13.40	-18.96	-811.63	-2791.44	-2638.99	-964.07	527.80
1	2	530	-4.95	-16.22	-7.23	-13.94	4.53	796.17	-1647.85	-1643.05	791.37	-108.20
1	2	531	20.10	-22.44	-8.72	6.39	-19.88	-2042.94	-2562.67	-2062.00	-2543.61	97.69
1	2	532	17.59	-31.12	-18.88	5.35	-21.13	-623.76	-2226.41	-785.62	-2064.56	482.91
1	2	533	4.57	-21.24	-19.79	3.12	-5.95	-2811.27	-4788.51	-2850.76	-4749.03	276.62
1	2	534	10.01	-18.40	-18.33	9.94	-1.37	-3804.34	-4850.01	-3804.42	-4849.93	-9.15
1	2	535	3.98	-20.99	-20.47	3.46	3.56	-2813.55	-4783.94	-2854.53	-4742.97	-281.17
1	2	536	16.54	-31.11	-20.51	5.94	19.82	-598.83	-2220.94	-763.17	-2056.59	-489.46
1	2	537	19.96	-23.01	-9.75	6.70	19.85	-2012.06	-2560.78	-2036.60	-2536.24	-113.42
1	2	538	27.27	-13.80	0.72	12.76	19.63	-794.88	-2760.50	-2602.38	-953.00	-534.61
1	2	539	-7.31	-17.24	-8.79	-15.76	-3.53	880.97	-1540.96	-1537.87	877.88	86.43
1	2	540	12.85	-20.96	-18.50	10.39	-8.79	-1331.45	-3646.02	-3621.07	-1356.40	239.01
1	2	541	60.97	9.56	21.58	48.96	-21.76	-1631.33	-4899.47	-4476.95	-2053.84	1096.50
1	2	542	13.87	-31.19	-26.57	9.25	-13.67	-3214.58	-4881.82	-4875.62	-3220.78	101.46
1	2	543	2.51	-45.47	-35.72	-7.25	-19.31	-3988.76	-7303.75	-7298.38	-3994.13	133.32
1	2	544	3.40	-57.47	-52.61	-1.45	-16.49	-5721.74	-7158.87	-7152.65	-5727.97	94.40
1	2	545	-8.59	-61.02	-60.98	-8.64	-1.55	-5953.75	-7258.10	-7257.99	-5953.86	-12.16
1	2	546	1.64	-57.28	-54.20	-1.43	13.10	-5709.91	-7164.40	-7157.38	-5716.92	-100.76
1	2	547	1.41	-46.97	-39.33	-6.24	17.65	-3996.06	-7281.26	-7275.79	-4001.53	-134.00
1	2	548	14.28	-34.03	-29.07	9.32	14.67	-3195.87	-4860.47	-4852.23	-3204.11	-116.83
1	2	549	13.02	-22.24	-19.41	10.19	9.58	-1310.16	-3627.71	-3600.73	-1337.15	-248.63
1	2	550	61.74	9.59	21.68	49.65	22.01	-1667.81	-4877.29	-4456.99	-2088.11	-1082.72
1	2	551	-1.64	-6.43	-6.42	-1.64	-0.12	1095.55	-3296.67	-3273.10	1071.98	-320.90
1	2	552	-5.86	-43.43	-32.42	-16.88	-17.10	677.10	-2809.90	-2593.28	460.48	841.68
1	2	553	12.73	-17.18	-15.55	11.10	-6.79	-2840.74	-8279.73	-6828.04	-4292.43	-2405.89
1	2	554	2.28	-36.45	-24.22	-9.95	-18.00	-5533.90	-8779.89	-8778.96	-5534.82	-54.76
1	2	555	-2.83	-26.13	-20.79	-8.17	-9.80	-6324.94	-9334.74	-9324.09	-6335.60	-178.76
1	2	556	-11.67	-15.19	-12.47	-14.39	-1.48	-9524.81	-9549.99	-9549.98	-5924.82	-5.93
1	2	557	-5.38	-23.42	-20.84	-7.97	6.32	-6330.50	-9338.43	-9328.78	-6340.15	170.09
1	2	558	-0.15	-33.91	-24.34	-9.71	15.21	-5526.63	-8783.70	-8781.78	-5528.54	78.99
1	2	559	14.46	-18.80	-15.78	11.44	9.56	-2851.47	-8259.57	-6831.63	-4279.40	2383.99
1	2	560	-1.47	-6.52	-6.52	-1.47	6.48e-02	1113.15	-3292.65	-3269.30	1089.79	319.93
1	2	561	-5.63	-43.13	-32.01	-16.74	17.12	697.11	-2826.97	-2589.63	459.76	-883.23
1	2	562	19.82	-22.73	-18.95	16.04	-12.10	-339.44	-3768.42	-3330.70	-777.16	-1144.26
1	2	563	44.13	-9.66	0.44	34.02	21.01	-1057.98	-4412.17	-4117.91	-1352.24	-948.90

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	185 di 288

1	2	564	13.63	-14.85	-3.86	2.63	-13.87	82.78	-4965.95	-2374.09	-2509.09	-2523.46
1	2	565	25.69	-12.59	16.10	-3.00	-16.59	-1636.27	-4831.77	-2129.58	-4338.46	-1154.57
1	2	566	31.93	-21.67	28.50	-18.24	-13.13	-2627.04	-4395.17	-2637.36	-4384.84	-134.70
1	2	567	28.90	-18.55	28.84	-18.50	-1.58	-2822.45	-4661.99	-2822.50	-4661.94	-9.72
1	2	568	32.16	-19.90	30.18	-17.92	9.97	-2621.98	-4399.25	-2632.12	-4389.11	133.85
1	2	569	26.78	-10.89	19.56	-3.68	14.82	-1650.49	-4818.03	-2152.28	-4316.25	1156.56
1	2	570	15.70	-14.41	-1.55	2.84	14.89	64.72	-4964.51	-2392.48	-2507.32	2513.96
1	2	571	20.66	-22.34	-18.05	16.38	12.88	-348.72	-3789.48	-3356.21	-781.99	1141.51
1	2	572	43.33	-10.17	-3.64e-02	33.20	-20.96	-1024.70	-4450.27	-4157.15	-1317.82	958.22
1	2	573	13.27	-9.50e-02	7.52	5.66	-6.62	-177.00	-3080.50	-2444.11	-813.38	-1201.15
1	2	574	-9.33	-17.78	-16.83	-10.28	-2.68	507.34	-1622.00	-1620.93	506.27	47.69
1	2	575	22.21	-14.06	11.77	-3.62	-16.42	-422.59	-3197.98	-1509.65	-2110.92	-1354.74
1	2	576	13.91	-11.99	11.25	-9.33	-7.87	849.42	-3110.35	191.04	-2451.96	-1474.31
1	2	577	28.59	-23.62	25.90	-20.93	-11.54	-991.45	-4061.91	-1072.94	-3980.43	-493.51
1	2	578	36.46	-21.66	36.42	-21.62	-1.41	-1803.74	-4081.06	-1803.79	-4081.01	-10.69
1	2	579	27.99	-22.71	26.19	-20.91	9.38	-989.38	-4058.11	-1070.32	-3977.17	491.74
1	2	580	14.56	-11.48	12.81	-9.74	6.52	844.28	-3102.09	180.31	-2438.12	1476.28
1	2	581	23.26	-14.17	13.06	-3.97	16.66	-438.55	-3188.64	-1522.78	-2104.41	1343.94
1	2	582	14.48	-0.53	7.54	6.41	7.48	-191.54	-3104.39	-2483.64	-812.29	1192.82
1	2	583	-6.88	-17.27	-15.55	-8.60	3.86	422.42	-1745.34	-1743.49	420.57	-63.38
1	2	584	4.23	-5.97	0.15	-1.89	-4.99	783.91	-393.80	269.64	120.48	-584.11
1	2	585	8.74	-10.33	-1.08	-0.50	-9.53	191.37	-526.49	-191.85	-143.27	358.11
1	2	586	12.61	-15.16	7.23	-9.78	-10.97	-130.51	-2032.70	-354.15	-1809.06	-612.69
1	2	587	22.08	-16.27	19.75	-13.94	-9.17	-742.71	-3060.83	-1061.45	-2742.09	-798.31
1	2	588	20.64	-30.42	18.22	-28.00	-10.84	-504.98	-3439.71	-574.73	-3369.97	-447.00
1	2	589	3.79	-14.81	3.76	-14.77	-0.83	870.13	-3398.39	870.10	-3398.36	-11.98
1	2	590	20.86	-30.64	19.19	-28.97	9.11	-515.45	-3425.20	-578.00	-3362.65	422.01
1	2	591	21.51	-16.72	19.65	-14.87	8.21	-713.48	-3047.12	-1033.82	-2726.77	803.09
1	2	592	11.69	-15.36	6.38	-10.05	10.75	-121.87	-1989.72	-348.37	-1073.22	609.72
1	2	593	4.65	-6.53	0.24	-2.12	5.46	780.34	-372.27	224.27	183.80	575.95
1	2	594	11.00	-10.34	0.96	-0.31	10.65	262.66	-618.72	-225.86	-130.20	-438.08
1	2	595	11.28	-8.64	-0.52	3.17	-9.79	384.78	-567.37	-100.93	-81.65	475.98
1	2	596	6.01	-3.60	-0.33	2.73	4.56	265.89	77.45	227.24	116.11	-76.09
1	35	490	16.05	-90.72	2.37	-77.04	-35.68	45.95	-1241.08	-82.37	-1112.76	-385.60
1	35	491	3.13	-162.30	-3.71	-155.47	-32.92	1361.68	-1495.80	1344.10	-1478.22	-223.42
1	35	492	26.77	-190.72	26.76	-190.72	1.13	171.15	-4447.39	-171.10	-4105.14	-1209.77
1	35	493	-1.68	-233.55	-2.16	-233.07	10.52	-627.43	-4153.71	-674.57	-4106.57	404.97
1	35	494	2.01	-219.62	0.68	-218.29	17.12	1360.19	-2773.15	900.97	-2313.92	1298.94
1	35	495	6.38	-172.32	-7.51	-158.43	47.86	2000.43	-865.04	1528.08	-392.69	1063.20
1	35	496	44.28	-71.79	20.93	-48.44	46.53	-455.96	-1856.33	-754.46	-1557.83	573.50
1	35	497	21.31	-50.46	-18.50	-10.65	35.67	-878.45	-2065.86	-1899.21	-1045.10	412.44
1	35	498	-2.01	-27.82	-16.55	-13.28	12.80	1226.18	-1525.96	-168.44	-131.35	1375.94
1	35	507	31.48	1.60	16.39	16.69	-14.94	1949.71	-882.35	617.91	449.45	-1413.52
1	35	508	37.40	-12.67	10.54	14.19	-24.97	2067.32	530.68	1408.17	1189.83	-760.52
1	35	509	69.23	-33.28	-4.71	40.66	-45.96	4531.79	2140.16	3932.11	2739.84	-1036.63
1	35	510	56.73	-17.14	13.98	25.62	-36.47	1903.33	782.89	1351.08	1335.13	-560.16
1	35	511	91.33	-23.67	-2.67	70.33	-44.43	521.54	-1372.42	404.91	-1255.78	-455.31
1	35	512	129.41	-31.45	14.51	83.46	-72.67	70.09	-4427.09	-1817.84	-2539.16	-2219.48
1	35	513	178.64	-19.27	-11.68	171.05	-38.02	-238.11	-4771.47	-663.26	-4346.32	-1321.59
1	35	514	143.27	-48.56	-8.03	102.75	-78.30	-2621.19	-5672.57	-3883.06	-4410.70	-1502.71
1	35	515	253.17	45.90	53.36	245.71	-38.63	-3257.71	-3762.92	-3280.79	-3739.84	105.48
1	35	516	135.79	-41.85	-26.34	120.29	-50.14	-3397.33	-4075.00	-3713.37	-3758.96	-338.07
1	35	517	204.00	-20.57	-20.45	203.88	-5.20	1221.84	649.86	1156.94	714.76	-181.40
1	35	518	133.03	-97.43	-97.38	132.98	-3.58	1788.07	-816.63	1773.36	-801.91	-195.20
1	35	519	211.84	28.76	33.34	207.25	28.62	-1843.87	-2405.52	-2306.14	-1943.25	214.34
1	35	520	133.46	-22.89	-12.34	122.91	39.22	-2919.61	-4210.72	-3993.80	-3136.52	-482.71
1	35	521	137.58	-20.38	-14.76	131.96	29.27	-176.89	-2444.12	-328.43	-2292.59	566.21
1	35	522	145.42	-27.77	-3.49	121.14	60.14	-3229.75	-4601.35	-3552.41	-4278.69	581.76
1	35	523	72.20	-22.96	-2.83	52.07	38.87	56.71	-532.01	-20.34	-454.96	198.56
1	35	524	104.44	-28.26	5.26	70.93	57.66	197.11	-3460.39	-1482.50	-1780.78	1822.66
1	35	525	38.80	-3.75	16.37	18.68	21.24	1219.38	-17.23	683.77	518.38	612.75
1	35	526	53.56	-32.40	-9.40	30.56	38.05	3924.73	1869.99	3462.69	2332.04	857.84
1	35	527	21.15	-0.75	9.96	10.44	10.95	1291.69	-492.97	527.41	271.32	883.09
1	35	528	47.20	-11.85	15.02	20.33	29.41	1482.22	537.13	1307.40	711.95	366.96
1	35	529	90.18	-62.00	-3.41	31.59	-74.05	907.45	-4189.78	-1730.79	-1551.54	-2547.04
1	35	530	85.35	-42.33	63.08	-20.06	-48.45	1484.47	-2401.03	-2400.98	1484.43	-13.07
1	35	531	116.43	-127.38	-58.53	47.58	-109.76	208.51	-8206.84	-4479.91	-3518.41	-4180.12
1	35	532	111.41	-197.14	-132.93	47.19	-125.26	-1502.93	-5779.56	-5105.50	-2176.99	-1558.32
1	35	533	83.16	-208.50	-184.21	58.88	-80.58	-4655.45	-7865.78	-7858.80	-4662.43	-149.47
1	35	534	89.02	-210.51	-210.49	89.00	2.11	-4381.67	-7932.00	-6963.10	-5350.58	-1581.51
1	35	535	120.08	-165.54	-149.31	103.85	66.11	-3888.19	-8723.55	-7515.08	-5096.66	-2093.55
1	35	536	102.83	-161.72	-125.40	66.51	91.05	-763.84	-4844.75	-4630.84	-977.75	909.50
1	35	537	101.21	-114.23	-70.21	57.19	86.86	1225.57	-6025.61	-2962.30	-1837.75	3581.72
1	35	538	76.03	-50.75	-6.73	32.01	60.36	1873.40	-3026.29	-595.36	-557.52	2449.77
1	35	539	58.98	-42.46	47.81	-31.28	31.76	2727.39	-428.02	-309.38	2608.76	600.22
1	35	540	119.45	-34.15	55.28	30.01	-75.75	-3285.22	-8537.99	-7621.03	-4202.17	-1993.93
1	35	541	160.63	45.18	119.69	86.11	-55.23	-5321.68	-7778.70	-7608.65	-5491.73	623.61

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	186 di 288

1	35	542	4.89	-261.45	-205.03	-51.53	-108.83	-1017.39	-9894.06	-8033.63	-2877.82	-3612.93
1	35	543	10.01	-283.16	-229.39	-43.76	-113.46	-4293.19	-2.107e+04	-2.016e+04	-5206.04	-3805.51
1	35	544	58.86	-360.43	-335.76	34.20	-98.66	-8044.47	-1.771e+04	-1.713e+04	-8620.82	-2288.44
1	35	545	66.61	-319.53	-317.53	64.61	-27.71	-8976.54	-1.938e+04	-1.883e+04	-9523.75	-2322.08
1	35	546	41.88	-369.05	-360.43	33.26	58.89	-5068.68	-1.442e+04	-1.437e+04	-5119.08	-684.52
1	35	547	61.01	-236.27	-205.72	30.47	90.26	-1250.54	-1.798e+04	-1.769e+04	-1545.66	2202.60
1	35	548	26.93	-231.45	-188.43	-16.09	96.25	2340.38	-6940.38	-5018.59	418.59	3760.64
1	35	549	103.61	-37.10	50.58	15.94	68.19	0.17	-5493.82	-4033.71	-1459.94	2426.91
1	35	550	124.62	30.96	95.78	59.80	43.23	-3637.60	-4295.73	-4263.04	-3670.29	-142.99
1	35	551	74.30	-81.96	-1.10	-6.56	-78.09	1187.06	-5089.00	-4140.75	238.81	-2247.68
1	35	552	16.40	-63.30	-30.69	-16.21	-39.19	902.65	-2940.60	-2754.43	716.48	-825.13
1	35	553	88.26	-114.67	-21.91	-4.51	-101.09	2046.57	-1.502e+04	-6998.45	-5971.36	-8516.00
1	35	554	47.76	-120.11	-14.05	-58.29	-80.97	-2986.03	-1.381e+04	-8981.11	-7811.47	-5378.55
1	35	555	-0.49	-198.28	-15.57	-183.19	-52.50	-7283.91	-8632.59	-8074.57	-7841.93	-664.23
1	35	556	-1.44	-18.65	-9.21	-10.87	8.57	-4178.38	-6771.17	-6760.64	-4188.91	164.91
1	35	557	194.87	-38.89	-14.95	170.93	70.87	-947.69	-5349.94	-5141.78	-1155.85	934.36
1	35	558	105.82	-84.45	-21.82	43.19	89.41	3662.46	-7124.96	-3453.36	-27.14	5117.43
1	35	559	110.87	-93.46	-2.00	19.41	101.61	7227.73	-9977.11	-2648.77	-100.60	8507.54
1	35	560	73.01	-79.50	-10.21	3.72	75.93	2839.62	-1883.16	-404.45	1360.92	2190.21
1	35	561	24.75	-48.48	-16.34	-7.39	36.34	413.73	-1424.79	-900.66	-110.40	830.01
1	35	562	44.54	-118.39	-75.02	1.18	-72.01	3183.92	-3913.42	-772.36	42.86	-3525.19
1	35	563	2.99	-86.26	-82.87	-0.40	-17.06	1601.32	-2519.39	-2068.20	1150.12	-1286.72
1	35	564	221.71	-22.86	174.86	24.00	-96.25	3872.25	-8326.10	19.67	-4473.52	-5670.34
1	35	565	238.72	-60.66	215.23	-37.16	-80.51	1.142e+04	-5049.12	1.079e+04	-4420.30	-3155.87
1	35	566	351.92	-57.44	348.06	-53.58	-39.57	7846.61	-1861.07	7810.99	-1825.45	587.00
1	35	567	299.43	-90.82	293.84	-85.24	46.34	1.228e+04	1523.23	1.178e+04	2025.71	2270.13
1	35	568	345.92	-76.12	312.72	-42.93	113.61	1.064e+04	475.26	9978.89	1136.18	2506.23
1	35	569	254.77	-29.72	190.11	34.94	119.23	1.525e+04	-2033.50	1.385e+04	-635.86	4711.51
1	35	570	238.09	-8.23	172.14	57.71	109.06	6761.53	-4914.48	2928.18	-1081.13	5483.03
1	35	571	34.04	-135.10	-88.37	-12.69	75.63	5727.51	-260.47	2696.17	2770.87	2993.76
1	35	572	-23.09	-112.16	-106.71	-28.54	21.34	3602.40	1539.53	1895.53	3246.41	779.51
1	35	573	55.15	-58.07	13.10	-16.02	-54.70	1818.38	-6108.41	-3465.40	-824.63	-3736.99
1	35	574	35.48	-76.43	-58.09	17.14	-41.43	-1343.00	-2601.51	-2393.67	-1550.84	-467.30
1	35	575	117.68	-98.62	77.08	-58.02	-84.46	4193.59	-5255.44	444.26	-1506.10	-4622.78
1	35	576	154.15	-96.90	128.81	-71.56	-75.63	4967.94	-2840.82	4272.84	-2145.72	-2223.67
1	35	577	169.66	-124.51	158.31	-113.16	-56.64	5282.96	-1542.05	4872.89	-1131.99	1621.89
1	35	578	224.02	-98.00	223.39	-97.37	14.25	3481.20	-1463.77	3006.97	-989.54	1456.08
1	35	579	215.13	-109.54	181.71	-76.13	98.65	5179.98	-1560.82	5089.40	-1470.25	776.11
1	35	580	180.64	-113.68	116.41	-49.44	121.57	6183.81	-2312.66	4853.76	-982.61	3087.35
1	35	581	123.42	-113.40	54.54	-44.52	107.55	6499.14	-4135.80	2054.23	309.11	5245.40
1	35	582	56.26	-72.06	6.52	-22.32	62.52	3444.02	-4235.14	-1321.42	530.31	3726.28
1	35	583	15.23	-115.96	-95.10	-5.63	47.97	784.15	-422.06	783.17	-421.07	-34.49
1	35	584	34.03	-56.24	8.23	-30.44	-40.78	-593.60	-3080.75	-2370.14	-1304.21	-1123.58
1	35	585	13.70	-57.03	-16.66	-26.68	-35.01	-877.63	-1844.86	-1384.17	-1338.32	-483.07
1	35	586	32.07	-105.56	-0.28	-73.21	-58.36	2267.09	-2071.09	1117.10	-921.10	-1914.78
1	35	587	49.54	-137.10	32.88	-120.44	-53.21	2406.58	-690.00	1848.70	-132.12	-1190.07
1	35	588	39.99	-150.99	33.53	-144.54	-34.52	2956.07	-1953.44	2955.97	-1953.34	-22.57
1	35	589	91.06	-123.16	90.36	-122.46	12.20	80.58	-3532.60	52.37	-3504.39	318.00
1	35	590	60.30	-147.59	40.97	-128.25	60.38	3008.09	-1670.81	2770.51	-1433.23	1027.21
1	35	591	64.08	-140.28	26.60	-102.80	79.08	3648.60	-1510.11	1927.11	211.38	2432.51
1	35	592	39.14	-130.47	-8.26	-83.07	76.11	3162.79	-2246.12	1354.79	-438.12	2551.56
1	35	593	32.56	-66.90	-0.82	-33.52	46.96	-731.06	-3259.51	-2206.31	-1784.27	1246.49
1	35	594	15.06	-57.48	-22.18	-20.25	36.26	-1029.68	-1855.80	-1076.91	-1808.56	191.82
1	35	595	14.89	-46.20	-11.33	-19.98	-30.24	-684.01	-1106.48	-1106.22	-684.27	-10.51
1	35	596	0.26	-20.64	-12.51	-7.87	-10.19	759.66	-948.93	-68.80	-120.47	-853.90
1	36	490	16.47	-91.21	2.66	-77.40	-36.01	29.18	-1277.14	-96.04	-1151.93	-384.57
1	36	491	3.42	-162.96	-3.30	-156.25	-32.75	1342.30	-1569.50	1321.27	-1548.47	-246.60
1	36	492	27.62	-190.91	27.61	-190.90	1.44	148.65	-4583.38	-204.27	-4230.47	-1243.16
1	36	493	-2.17	-235.26	-2.64	-234.78	10.50	-581.10	-4205.40	-626.72	-4159.79	404.02
1	36	494	2.82	-220.89	1.55	-219.62	16.78	1342.58	-2860.24	866.24	-2383.90	1332.32
1	36	495	6.61	-172.91	-7.09	-159.21	47.67	1984.64	-945.61	1504.99	-465.96	1084.17
1	36	496	44.69	-72.29	21.23	-48.84	46.84	-477.01	-1889.64	-768.78	-1597.88	571.86
1	36	497	21.31	-50.91	-18.70	-10.89	35.90	-879.13	-2060.38	-1887.67	-1051.84	417.36
1	36	498	-2.04	-28.10	-16.71	-13.43	12.93	1203.19	-1506.66	-170.08	-133.39	1354.80
1	36	507	31.66	1.70	16.52	16.83	-14.98	1972.68	-902.92	618.77	450.98	-1435.35
1	36	508	37.28	-12.82	10.37	14.09	-24.98	2091.10	539.26	1440.87	1189.48	-765.67
1	36	509	69.62	-33.20	-4.52	40.94	-46.12	4526.16	2131.15	3919.88	2737.43	-1041.38
1	36	510	56.74	-17.38	13.89	25.47	-36.61	1904.88	801.84	1343.81	1362.92	-551.44
1	36	511	91.47	-23.38	-2.35	70.44	-44.42	510.01	-1432.71	389.88	-1312.58	-467.93
1	36	512	129.62	-31.44	14.77	83.40	-72.86	56.70	-4484.93	-1848.18	-2580.04	-2241.14
1	36	513	179.68	-19.00	-11.29	171.97	-38.37	-286.05	-4899.72	-695.23	-4490.54	-1311.64
1	36	514	143.55	-48.56	-7.70	102.69	-78.62	-2689.30	-5744.92	-3924.68	-4509.54	-1499.56
1	36	515	254.59	46.66	54.27	246.98	-39.03	-3307.96	-3941.04	-3334.03	-3914.97	125.78
1	36	516	136.69	-40.92	-25.22	120.99	-50.41	-3538.32	-4170.84	-3800.89	-3908.27	-311.67
1	36	517	202.74	-21.06	-20.94	202.62	-5.20	1261.54	614.31	1205.93	669.93	-181.40
1	36	518	133.75	-97.96	-97.90	133.70	-3.59	1796.69	-959.05	1782.79	-945.15	-195.21
1	36	519	213.30	29.59	34.29	208.59	29.02	-2013.67	-2469.61	-2363.28	-2120.00	192.81

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	187 di 288

1	36	520	134.37	-21.96	-11.25	123.67	39.48	-3039.42	-4329.92	-4080.69	-3288.66	-509.43
1	36	521	138.76	-20.09	-14.36	133.03	29.63	-224.87	-2578.61	-361.37	-2442.11	550.14
1	36	522	145.65	-27.73	-3.17	121.09	60.46	-3297.43	-4676.66	-3595.26	-4378.83	567.52
1	36	523	72.41	-22.68	-2.54	52.28	38.85	45.77	-594.84	-33.73	-515.34	211.21
1	36	524	104.68	-28.24	5.52	70.92	57.86	177.27	-3523.95	-1513.11	-1833.57	1843.66
1	36	525	38.68	-3.89	16.19	18.60	21.25	1241.26	-7.91	715.95	517.40	616.64
1	36	526	53.97	-32.34	-9.23	30.86	38.22	3918.80	1860.41	3451.05	2328.16	862.56
1	36	527	21.39	-0.62	10.14	10.63	11.00	1315.51	-513.95	528.53	273.03	905.76
1	36	528	47.31	-12.04	14.97	20.31	29.56	1472.38	561.73	1298.42	735.68	357.99
1	36	529	90.84	-62.28	-3.43	31.99	-74.48	844.30	-4252.37	-1808.71	-1599.36	-2546.18
1	36	530	86.54	-42.02	63.97	-19.45	-48.91	1450.17	-2513.44	-2513.35	1450.08	19.72
1	36	531	116.97	-127.83	-58.71	47.85	-110.20	154.59	-8291.30	-4545.73	-3590.97	-4195.88
1	36	532	111.94	-197.68	-133.29	47.55	-125.66	-1600.09	-5860.72	-5174.32	-2286.49	-1566.32
1	36	533	83.65	-208.75	-184.27	59.16	-80.99	-4808.24	-7974.54	-7967.89	-4814.89	-144.94
1	36	534	88.16	-211.54	-211.53	88.15	2.06	-4494.69	-8019.03	-7042.05	-5471.66	-1577.56
1	36	535	120.12	-165.83	-149.43	103.73	66.48	-4010.61	-8845.80	-7625.72	-5230.69	-2100.17
1	36	536	103.41	-162.30	-125.79	66.90	91.48	-870.86	-4921.64	-4701.67	-1090.82	917.96
1	36	537	101.78	-114.69	-70.39	57.48	87.33	1168.71	-6113.32	-3031.13	-1913.48	3597.87
1	36	538	76.70	-51.06	-6.76	32.40	60.81	1809.92	-3089.75	-674.08	-605.74	2449.59
1	36	539	59.93	-42.16	48.46	-30.70	32.23	2678.08	-515.49	-411.58	2574.17	566.62
1	36	540	120.41	-33.81	55.49	31.11	-76.14	-3372.54	-8674.64	-7760.94	-4286.25	-2002.43
1	36	541	161.51	45.64	120.01	87.14	-55.55	-5378.74	-7914.53	-7739.37	-5553.91	643.03
1	36	542	5.54	-262.59	-206.14	-50.91	-109.31	-1131.05	-1.001e+04	-8151.99	-2988.65	-3611.39
1	36	543	9.64	-284.75	-230.71	-44.40	-113.97	-4397.04	-2.124e+04	-2.033e+04	-5310.28	-3814.23
1	36	544	58.56	-362.56	-337.74	33.75	-99.16	-8206.85	-1.787e+04	-1.730e+04	-8778.77	-2279.93
1	36	545	66.97	-320.97	-318.98	64.98	-27.73	-9193.83	-1.958e+04	-1.904e+04	-9740.63	-2319.99
1	36	546	41.57	-371.07	-362.36	32.85	59.32	-5233.84	-1.459e+04	-1.454e+04	-5283.17	-677.45
1	36	547	60.55	-237.88	-207.13	29.80	90.73	-1360.57	-1.816e+04	-1.787e+04	-1657.31	2213.05
1	36	548	27.58	-232.69	-189.59	-15.51	96.74	2222.00	-7062.34	-5143.56	303.21	3759.38
1	36	549	104.52	-36.72	50.76	17.04	68.58	-95.47	-5629.74	-4177.30	-1547.92	2434.88
1	36	550	125.44	31.47	96.07	60.85	43.56	-3697.34	-4434.85	-4397.18	-3735.01	-162.36
1	36	551	74.66	-82.26	-1.17	-6.43	-78.42	1166.89	-5209.22	-4272.43	230.10	-2257.32
1	36	552	15.82	-64.22	-31.96	-16.44	-39.26	939.82	-3003.17	-2817.33	753.97	-835.61
1	36	553	88.67	-115.10	-22.09	-4.34	-101.50	1926.46	-1.520e+04	-7203.81	-6073.09	-8546.23
1	36	554	48.04	-120.54	-14.13	-58.36	-81.34	-3189.18	-1.407e+04	-9275.33	-7979.89	-5399.72
1	36	555	-0.58	-198.74	-15.87	-183.46	-52.87	-7506.50	-8890.31	-8373.24	-8023.57	-669.45
1	36	556	-1.57	-18.71	-9.40	-10.89	8.54	-4391.88	-7074.26	-7064.11	-4402.03	164.69
1	36	557	194.52	-39.39	-15.27	170.40	71.13	-1141.99	-5649.62	-5442.98	-1348.63	942.74
1	36	558	105.95	-84.86	-21.96	43.05	89.70	3463.57	-7403.56	-3733.19	-206.80	5139.53
1	36	559	111.25	-93.94	-2.24	19.55	102.01	7105.30	-1.017e+04	-2858.29	-211.07	8537.99
1	36	560	73.39	-79.79	-10.27	3.87	76.26	2796.97	-1990.94	-541.98	1348.01	2199.54
1	36	561	24.11	-49.40	-17.68	-7.62	36.41	432.45	-1472.17	-966.72	-73.00	840.96
1	36	562	45.31	-118.62	-75.51	2.20	-72.17	3135.19	-4041.91	-876.98	-29.75	-3563.46
1	36	563	3.75	-86.13	-82.85	0.47	-16.86	1568.47	-2654.13	-2189.89	1104.23	-1320.91
1	36	564	223.02	-22.34	175.87	24.80	-96.66	3743.83	-8511.37	-176.55	-4590.99	-5716.26
1	36	565	239.92	-61.24	216.31	-37.63	-80.95	1.120e+04	-5177.52	1.055e+04	-4531.08	-3188.46
1	36	566	353.42	-58.26	349.53	-54.37	-39.83	7570.54	-1996.14	7537.02	-1962.62	565.27
1	36	567	300.67	-91.11	295.12	-85.56	46.29	1.201e+04	1342.80	1.151e+04	1848.32	2266.89
1	36	568	347.32	-76.81	314.22	-43.71	113.78	1.038e+04	316.55	9705.26	993.48	2521.00
1	36	569	255.77	-30.21	191.16	34.40	119.60	1.504e+04	-2175.08	1.361e+04	-752.15	4739.94
1	36	570	239.40	-7.75	173.17	58.49	109.47	6632.04	-5104.16	2731.16	-1203.29	5528.53
1	36	571	34.82	-135.29	-88.82	-11.65	75.80	5673.15	-393.64	2585.37	2694.13	3032.91
1	36	572	-22.33	-112.03	-106.73	-27.63	21.15	3567.15	1400.91	1769.59	3198.47	814.08
1	36	573	55.25	-58.16	13.06	-15.97	-54.81	1797.58	-6200.13	-3544.90	-857.65	-3766.36
1	36	574	35.97	-75.82	-57.62	17.77	-41.27	-1377.15	-2709.03	-2492.74	-1593.43	-491.21
1	36	575	118.38	-99.08	77.53	-58.22	-84.94	4146.91	-5346.08	359.48	-1558.66	-4648.59
1	36	576	155.28	-97.45	129.70	-71.87	-76.23	4884.85	-2930.60	4182.19	-2227.93	-2235.60
1	36	577	170.95	-124.79	159.57	-113.40	-56.90	5165.22	-1663.07	4766.33	-1264.18	1601.44
1	36	578	224.97	-99.05	224.34	-98.43	14.24	3381.53	-1575.78	2911.90	-1106.15	1451.73
1	36	579	216.31	-109.83	182.93	-76.44	98.86	5078.41	-1695.83	4984.86	-1602.28	790.55
1	36	580	181.76	-113.94	117.30	-49.48	122.10	6100.72	-2418.45	4765.01	-1082.73	3097.59
1	36	581	124.08	-113.86	55.02	-44.80	108.00	6451.68	-4226.61	1968.41	256.66	5270.10
1	36	582	56.37	-72.14	6.49	-22.25	62.63	3418.96	-4326.91	-1402.59	494.64	3754.97
1	36	583	15.74	-115.37	-94.64	-4.99	47.83	681.35	-464.83	681.27	-464.75	-9.87
1	36	584	34.43	-56.34	8.33	-30.25	-41.08	-612.36	-3110.97	-2395.44	-1327.89	-1129.53
1	36	585	13.68	-57.45	-16.90	-26.87	-35.21	-871.27	-1853.37	-1397.62	-1327.03	-489.78
1	36	586	32.47	-106.02	-0.13	-73.42	-58.76	2244.80	-2121.24	1094.59	-971.03	-1923.25
1	36	587	49.89	-137.90	33.23	-121.24	-53.40	2402.29	-762.58	1840.80	-201.09	-1209.03
1	36	588	41.12	-151.24	34.69	-144.81	-34.57	2923.93	-2066.92	2923.47	-2066.46	-47.94
1	36	589	91.38	-123.72	90.69	-123.03	12.18	100.78	-3628.23	73.55	-3601.00	317.51
1	36	590	61.27	-148.12	42.11	-128.96	60.38	2983.02	-1771.55	2738.13	-1526.66	1050.89
1	36	591	64.35	-141.01	26.97	-103.64	79.24	3635.18	-1574.73	1918.59	141.87	2448.80
1	36	592	39.54	-130.90	-8.08	-83.28	76.47	3136.07	-2294.52	1331.41	-489.86	2558.04
1	36	593	32.97	-67.01	-0.70	-33.34	47.25	-750.07	-3289.78	-2231.87	-1807.98	1252.04
1	36	594	15.05	-57.91	-22.41	-20.45	36.46	-1039.11	-1848.68	-1091.17	-1796.63	198.57
1	36	595	14.90	-46.67	-11.55	-20.21	-30.48	-680.03	-1094.69	-1094.10	-680.62	-15.58
1	36	596	0.21	-20.96	-12.70	-8.06	-10.33	735.94	-928.83	-70.40	-122.50	-831.98

Progetto esecutivo

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	188 di 288

1	75	490	20.76	-30.12	12.43	-21.79	-18.82	-408.23	-1381.24	-473.44	-1316.02	-243.32
1	75	491	-3.37	-77.69	-9.34	-71.72	-20.19	916.10	-1448.98	867.07	-1399.94	-337.00
1	75	492	17.79	-89.45	17.78	-89.44	1.28	-154.57	-3081.01	-451.36	-2784.23	-883.43
1	75	493	-7.62	-112.51	-7.77	-112.35	-4.01	-30.86	-2765.28	-37.53	-2758.61	-134.93
1	75	494	28.86	-80.62	28.12	-79.89	-8.92	-624.00	-3750.36	-885.35	-3489.01	865.33
1	75	495	-4.43	-76.08	-7.66	-72.86	14.85	779.97	-1773.06	779.96	-1773.05	4.83
1	75	496	8.11	-39.80	3.73	-35.41	13.81	-94.35	-1070.07	-129.41	-1035.01	181.60
1	75	497	8.56	-21.20	-4.68	-7.95	14.79	-194.92	-542.71	-474.21	-263.42	-138.32
1	75	498	-1.65	-5.02	-3.95	-2.73	1.57	394.58	-308.21	38.79	47.57	351.36
1	75	507	7.13	0.57	3.71	3.99	-3.28	685.99	-104.69	353.74	227.56	-390.27
1	75	508	12.10	-1.71	5.25	5.13	-6.90	443.43	-168.21	38.43	236.79	-289.29
1	75	509	23.10	-13.23	-4.71	14.58	-15.39	2238.79	1192.88	1993.26	1438.41	-443.30
1	75	510	18.12	-7.16	3.78	7.18	-12.53	615.13	37.48	596.61	55.99	-101.75
1	75	511	29.95	-7.92	0.43	21.60	-15.70	17.61	-860.95	16.71	-860.05	-28.14
1	75	512	45.66	-12.54	2.73	30.38	-25.61	-220.39	-2147.27	-698.71	-1668.95	-832.39
1	75	513	58.99	-11.90	-10.68	57.76	-9.25	196.25	-2392.04	156.69	-2352.48	-317.54
1	75	514	66.10	-9.06	4.90	52.14	-29.22	-2013.04	-3160.17	-2019.57	-3153.64	-86.26
1	75	515	104.14	26.36	31.58	98.92	-19.47	-1550.01	-2754.58	-1636.74	-2667.86	311.36
1	75	516	55.83	-6.47	-0.49	49.85	-18.36	-1817.36	-3081.69	-1935.54	-2963.51	368.04
1	75	517	81.31	-15.45	-15.41	81.27	1.93	575.13	-677.59	570.24	-672.70	78.09
1	75	518	63.40	-42.49	-42.48	63.40	0.60	1391.42	-1536.10	1389.94	-1534.62	65.84
1	75	519	121.15	32.62	39.00	114.77	22.90	-1873.93	-3468.65	-1994.37	-3348.21	-421.37
1	75	520	56.58	-13.47	-6.38	49.50	21.13	-1816.92	-3208.83	-1821.09	-3204.66	-76.01
1	75	521	76.75	-11.52	-9.62	74.86	12.79	149.33	-3269.92	41.21	-3161.80	598.33
1	75	522	65.98	-16.69	3.20	46.09	35.34	-2005.17	-3364.52	-2164.71	-3204.98	437.51
1	75	523	39.05	-6.47	1.59	31.00	17.37	130.68	-1246.01	118.85	-1234.17	127.10
1	75	524	55.64	-13.32	6.58	35.75	31.24	-256.64	-2543.46	-824.37	-1975.73	987.92
1	75	525	11.81	-2.86	3.28	5.66	7.24	817.50	-21.72	324.97	470.80	413.23
1	75	526	29.56	-13.82	-3.06	18.80	18.74	2499.55	1292.84	2224.75	1567.64	506.05
1	75	527	11.15	1.08	5.02	7.21	4.91	945.57	-266.74	428.49	250.34	599.57
1	75	528	22.33	-10.82	2.35	9.17	16.22	676.03	255.38	653.09	278.32	95.52
1	75	529	41.12	-24.57	-1.96	18.51	-31.21	-263.00	-1842.93	-1444.19	-661.74	-686.28
1	75	530	18.43	-19.81	15.84	-17.22	-9.61	1333.95	-957.18	-921.30	1298.07	-284.47
1	75	531	47.16	-52.64	-30.12	24.64	-41.72	-647.30	-3279.04	-2065.84	-1860.50	-1311.86
1	75	532	46.73	-74.48	-55.35	27.60	-44.19	-1304.85	-2141.29	-2121.89	-1324.25	-125.90
1	75	533	47.70	-72.02	-64.93	40.62	-28.24	-3199.28	-5040.74	-4143.73	-4096.28	920.42
1	75	534	38.00	-87.76	-87.73	37.96	-2.04	-3701.11	-4894.04	-4360.07	-4235.08	593.18
1	75	535	32.85	-87.73	-78.78	23.89	31.62	-3916.97	-4289.81	-4277.21	-3929.58	-67.38
1	75	536	49.51	-88.42	-59.68	20.77	56.02	-1580.07	-2475.47	-2281.25	-1774.29	369.03
1	75	537	53.15	-58.48	-26.60	21.26	50.43	-1032.45	-4085.25	-2621.51	-2496.19	1525.12
1	75	538	46.75	-29.61	-0.64	17.77	37.05	-617.01	-2263.65	-1846.42	-1034.24	716.20
1	75	539	27.14	-21.58	20.33	-14.77	16.88	961.77	-1623.79	-1623.14	961.12	41.22
1	75	540	40.67	-18.16	11.31	11.20	-29.41	-896.44	-3488.21	-3197.98	-1186.67	-817.30
1	75	541	71.95	19.25	46.40	44.80	-26.34	-2116.69	-3875.47	-3672.30	-2319.86	562.18
1	75	542	16.45	-100.52	-82.50	-1.57	-42.23	-757.19	-4682.69	-4121.03	-1318.85	-1374.53
1	75	543	24.01	-108.87	-92.95	8.09	-43.15	-2324.13	-1.008e+04	-9999.59	-2401.25	-769.37
1	75	544	17.20	-164.87	-159.63	11.96	-30.43	-4523.81	-8697.08	-8674.71	-4546.18	304.74
1	75	545	21.23	-147.92	-147.42	20.73	9.16	-6146.03	-1.060e+04	-1.042e+04	-6324.44	873.66
1	75	546	22.62	-162.09	-151.72	12.25	42.52	-5700.70	-9896.16	-9728.66	-5868.20	821.39
1	75	547	4.10	-128.45	-105.15	-19.21	50.46	-3547.32	-1.118e+04	-1.092e+04	-3805.65	1380.13
1	75	548	8.18	-114.30	-91.10	-15.02	47.99	-2032.16	-5775.37	-5246.96	-2560.57	1303.35
1	75	549	47.41	-18.79	12.28	16.35	33.04	-2048.04	-4709.06	-4543.46	-2213.64	642.84
1	75	550	86.67	24.52	55.66	55.52	31.07	-2798.18	-5182.72	-4931.60	-3049.30	-731.94
1	75	551	26.16	-31.87	-6.45	0.74	-28.79	1313.39	-1980.73	-1660.25	992.91	-976.22
1	75	552	6.42	-37.83	-20.86	-10.54	-21.52	176.68	-1526.59	-1524.61	174.71	57.99
1	75	553	44.43	-39.42	-7.52	12.53	-40.71	1374.52	-7488.49	-4120.77	-1993.21	-4301.93
1	75	554	41.81	-48.82	-19.08	12.07	-42.55	-1520.63	-6317.46	-5306.89	-2531.20	-1956.09
1	75	555	73.10	-26.62	-14.99	61.48	-32.01	-3255.83	-6260.76	-6196.26	-3320.33	-435.51
1	75	556	-5.14	-14.42	-9.07	-10.49	-4.59	-4294.89	-6924.52	-6922.85	-4296.56	-66.30
1	75	557	-7.94	-80.62	-15.26	-73.30	21.88	-5801.20	-7387.30	-7317.99	-5870.52	324.24
1	75	558	15.79	-58.39	-16.20	-26.40	36.74	-4166.93	-8749.14	-7423.44	-5492.64	2077.78
1	75	559	38.49	-50.06	-15.27	3.70	43.25	-646.80	-9356.53	-5782.25	-4221.08	4284.34
1	75	560	26.48	-32.58	-3.07	-3.03	29.53	834.34	-3332.95	-3079.21	580.59	996.52
1	75	561	3.50	-43.30	-26.01	-13.78	22.59	493.41	-2232.05	-2228.19	489.54	-102.56
1	75	562	20.86	-60.27	-42.00	2.59	-33.89	1823.98	-1643.25	-501.95	682.67	-1629.29
1	75	563	5.00	-39.77	-39.72	4.95	1.49	862.07	-1424.24	-1161.29	599.12	-729.41
1	75	564	94.36	-8.05	63.01	23.29	-47.19	2523.84	-4094.59	-6.81	-1563.94	-3216.33
1	75	565	107.75	-17.14	78.39	12.22	-52.96	4957.38	-2961.22	4216.74	-2220.58	-2305.71
1	75	566	145.12	-39.06	130.60	-24.54	-49.63	2755.26	-1811.03	2516.65	-1572.42	-1016.18
1	75	567	126.27	-42.67	124.09	-40.49	-19.06	3277.67	-1541.73	3113.33	-1377.40	-874.64
1	75	568	147.62	-30.17	145.66	-28.21	18.58	1695.87	-2716.40	1689.82	-2710.35	-163.31
1	75	569	102.39	-27.29	91.06	-15.96	36.62	3444.05	-4056.58	3029.23	-3641.76	1714.45
1	75	570	89.87	-13.08	66.18	10.61	43.33	1393.29	-5382.83	-1134.48	-2855.06	3277.02
1	75	571	26.00	-53.92	-36.12	8.20	33.25	867.65	-3077.47	-1846.95	-362.86	1827.67
1	75	572	15.06	-31.32	-31.11	14.85	-3.10	141.66	-3008.06	-2702.54	-163.86	932.17
1	75	573	27.01	-27.01	5.91	-5.91	-26.36	1188.67	-2979.30	-1614.72	-175.91	-1955.87
1	75	574	1.29	-51.67	-43.47	-6.91	-19.16	78.85	-436.02	-434.09	76.91	31.51

Progetto esecutivo

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	189 di 288

1	75	575	56.46	-49.09	25.70	-18.33	-47.97	2252.27	-3022.43	76.55	-846.70	-2596.64
1	75	576	74.43	-48.23	48.82	-22.63	-49.85	2701.35	-2297.07	1902.30	-1498.03	-1831.80
1	75	577	94.46	-51.98	80.49	-38.01	-43.02	1478.02	-2453.13	1406.67	-2381.78	-524.79
1	75	578	101.13	-46.85	100.82	-46.55	-6.68	414.23	-2361.07	293.68	-2240.53	-565.70
1	75	579	76.69	-57.09	71.80	-52.21	25.10	1367.68	-2291.72	1325.63	-2249.67	-390.01
1	75	580	65.01	-41.53	54.96	-31.49	31.13	2215.59	-2475.26	1668.37	-1928.05	1505.81
1	75	581	55.11	-43.42	35.44	-23.75	39.39	1357.70	-3441.24	-549.69	-1533.84	2348.47
1	75	582	27.59	-22.05	8.40	-2.86	24.17	567.25	-3720.25	-2464.75	-688.24	1951.07
1	75	583	11.32	-36.19	-28.23	3.37	17.74	-422.93	-1772.14	-1756.51	-438.55	144.36
1	75	584	14.09	-27.72	-0.20	-13.43	-19.83	65.12	-1409.31	-709.14	-635.05	-736.29
1	75	585	9.06	-26.43	-9.35	-8.01	-17.73	-479.57	-719.54	-490.20	-708.92	49.37
1	75	586	20.62	-55.93	0.37	-35.69	-33.76	1084.47	-1739.53	344.96	-1000.01	-1241.57
1	75	587	33.93	-59.73	19.09	-44.88	-34.21	994.87	-1933.87	239.48	-1178.48	-1281.30
1	75	588	32.17	-69.33	23.70	-60.86	-28.08	898.93	-2203.42	777.80	-2082.29	-600.92
1	75	589	36.17	-53.23	35.84	-52.90	-5.40	418.34	-2878.55	413.06	-2873.27	-131.77
1	75	590	24.73	-70.82	21.73	-67.82	16.67	858.23	-2288.24	846.20	-2276.21	194.15
1	75	591	28.16	-59.37	21.32	-52.53	23.49	586.94	-1646.27	234.60	-1293.92	814.07
1	75	592	17.20	-46.77	2.64	-32.21	26.83	775.50	-1665.61	256.92	-1147.04	998.49
1	75	593	15.01	-24.14	3.31	-12.43	17.92	106.67	-1319.07	-814.72	-397.68	681.69
1	75	594	10.68	-26.27	-5.37	-10.21	18.31	-511.94	-642.69	-639.58	-515.06	-19.94
1	75	595	13.54	-23.02	-7.24	-2.23	-18.10	-422.23	-776.89	-756.81	-442.31	81.97
1	75	596	-2.12	-8.15	-6.70	-3.57	-2.58	575.19	-533.53	49.82	-8.16	-553.61
1	84	490	9.84	-38.23	4.97	-33.36	-14.51	-163.02	-1150.71	-194.93	-1118.80	-174.65
1	84	491	-4.60	-74.46	-7.83	-71.24	-14.65	792.09	-1802.79	792.00	-1802.70	-16.00
1	84	492	28.42	-79.83	27.77	-79.18	8.36	-611.18	-3753.99	-864.31	-3500.86	-855.26
1	84	493	-7.62	-112.63	-7.77	-112.48	3.95	-28.39	-2771.16	-37.88	-2761.67	161.04
1	84	494	18.15	-90.43	18.12	-90.40	-1.81	-168.80	-3119.87	-470.93	-2817.73	894.62
1	84	495	-3.22	-79.45	-9.16	-73.51	20.43	901.72	-1418.06	854.62	-1370.97	327.17
1	84	496	18.92	-31.64	11.21	-23.93	18.18	-338.46	-1303.72	-408.87	-1303.31	251.00
1	84	497	11.81	-23.01	-7.35	-3.85	17.32	-413.15	-771.08	-770.65	-413.58	-12.48
1	84	498	-2.23	-8.03	-5.81	-4.45	2.82	572.98	-529.63	14.26	29.10	551.25
1	84	507	11.05	1.36	5.83	6.58	-4.83	938.09	-256.10	399.23	282.76	-594.25
1	84	508	11.62	-4.47	3.14	4.01	-8.03	776.04	28.19	317.12	487.11	-364.14
1	84	509	29.17	-13.62	-2.96	18.51	-18.50	2478.10	1294.84	2186.34	1586.59	-510.00
1	84	510	21.92	-9.64	3.11	9.16	-15.49	684.11	230.41	624.58	289.94	-153.18
1	84	511	37.67	-7.71	0.79	29.17	-17.71	172.95	-1193.71	161.00	-1181.76	-127.21
1	84	512	55.34	-13.67	6.34	35.32	-31.32	-255.93	-2530.94	-826.08	-1960.79	-985.91
1	84	513	75.12	-11.43	-9.53	73.23	-12.65	143.08	-3250.84	32.03	-3139.80	-603.78
1	84	514	66.02	-17.37	3.19	45.45	-35.94	-1993.08	-3363.37	-2152.15	-3204.30	-438.95
1	84	515	120.55	32.53	39.14	113.94	-23.19	-1878.69	-3477.31	-2003.30	-3352.71	428.56
1	84	516	56.90	-13.79	-5.97	49.08	-22.17	-1826.18	-3207.52	-1828.92	-3204.79	61.43
1	84	517	81.43	-15.46	-15.42	81.39	-2.00	574.62	-677.76	571.22	-674.35	-65.17
1	84	518	63.51	-42.58	-42.55	63.48	-1.73	1396.98	-1543.18	1394.90	-1541.10	-78.14
1	84	519	105.01	26.45	31.47	100.00	19.20	-1547.34	-2753.68	-1629.43	-2671.58	-303.80
1	84	520	55.74	-6.25	-0.93	50.43	17.36	-1807.28	-3096.85	-1932.39	-2971.74	-381.69
1	84	521	60.83	-11.99	-10.75	59.59	9.42	201.14	-2416.97	163.26	-2379.09	312.63
1	84	522	66.25	-8.51	4.89	52.85	28.68	-2030.18	-3161.02	-2036.86	-3154.34	86.64
1	84	523	31.37	-6.62	1.23	23.52	15.38	-24.74	-914.89	-25.84	-913.79	31.14
1	84	524	46.08	-12.22	2.98	30.87	25.60	-220.84	-2164.30	-698.43	-1686.72	836.71
1	84	525	12.25	-6.97e-02	5.42	6.77	6.12	484.28	-213.68	47.29	223.31	337.70
1	84	526	23.55	-13.47	-4.81	14.89	15.67	2263.41	1189.45	2034.23	1418.63	440.01
1	84	527	7.26	0.28	2.92	4.63	3.38	697.51	-118.61	383.41	195.49	397.10
1	84	528	18.59	-8.33	3.04	7.22	13.30	630.12	43.19	626.65	46.66	45.02
1	84	529	46.58	-29.03	-0.68	18.23	-36.60	-620.02	-2287.04	-1867.96	-1039.10	-723.18
1	84	530	27.76	-19.83	21.38	-13.46	-16.21	899.12	-1694.14	-1692.93	897.91	-56.09
1	84	531	53.25	-58.06	-25.88	21.07	-50.46	-1029.61	-4108.60	-2641.10	-2497.12	-1537.81
1	84	532	50.19	-88.42	-58.65	20.43	-56.92	-1583.38	-2493.18	-2299.51	-1777.05	-372.42
1	84	533	33.64	-88.26	-78.40	23.78	-33.24	-3922.07	-4292.42	-4279.20	-3935.29	68.73
1	84	534	38.02	-87.87	-87.87	38.02	0.18	-3695.30	-4905.01	-4363.48	-4236.84	-601.53
1	84	535	47.17	-71.83	-65.51	40.85	26.69	-3202.63	-5042.18	-4151.16	-4093.66	-919.33
1	84	536	46.31	-74.85	-56.54	28.00	43.40	-1302.34	-2130.04	-2110.87	-1321.52	124.52
1	84	537	47.25	-53.17	-30.77	24.85	41.80	-649.68	-3266.59	-2056.84	-1859.43	1304.73
1	84	538	41.36	-25.19	-1.92	18.10	31.74	-257.67	-1823.23	-1422.15	-658.75	683.41
1	84	539	17.82	-21.47	14.88	-18.52	10.35	1394.02	-884.38	-852.28	1361.92	268.50
1	84	540	47.25	-17.86	12.89	16.50	-32.51	-2053.68	-4724.13	-4554.03	-2223.79	-652.17
1	84	541	86.23	24.33	55.55	55.00	-30.95	-2770.46	-5192.84	-4939.91	-3023.38	740.75
1	84	542	7.95	-112.45	-89.48	-15.02	-47.31	-2029.82	-5799.53	-5262.79	-2566.56	-1317.30
1	84	543	4.91	-127.58	-102.85	-19.81	-51.62	-3536.59	-1.120e+04	-1.094e+04	-3793.90	-1380.35
1	84	544	23.79	-162.31	-150.82	12.31	-44.79	-5706.10	-9899.64	-9731.96	-5873.77	-821.61
1	84	545	21.52	-148.35	-147.61	20.78	-11.18	-6146.78	-1.061e+04	-1.043e+04	-6328.77	-883.14
1	84	546	16.45	-165.35	-160.86	11.96	28.22	-4524.01	-8711.69	-8689.74	-4545.97	-302.42
1	84	547	23.57	-110.40	-95.53	8.69	42.09	-2336.65	-1.008e+04	-9999.35	-2414.89	774.28
1	84	548	16.70	-102.63	-84.32	-1.60	43.00	-757.56	-4670.03	-4113.56	-1314.04	1366.58
1	84	549	40.89	-19.12	10.70	11.08	30.00	-892.40	-3475.73	-3188.73	-1179.41	811.82
1	84	550	72.49	19.45	46.56	45.38	26.51	-2148.71	-3867.04	-3665.41	-2350.34	-553.00
1	84	551	26.51	-32.69	-3.06	-3.12	-29.60	826.11	-3329.74	-3074.95	571.33	-996.96
1	84	552	3.39	-43.48	-26.23	-13.86	-22.60	490.69	-2229.20	-2227.30	488.79	71.88

Progetto esecutivo

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	190 di 288

1	84	553	36.52	-48.16	-15.18	3.53	-41.29	-620.47	-9369.63	-5770.90	-4219.20	-4305.23
1	84	554	17.79	-60.32	-16.14	-26.40	-38.72	-4172.17	-8728.20	-7415.90	-5484.47	-2063.19
1	84	555	-6.37	-81.75	-15.24	-72.88	-24.29	-5786.58	-7390.27	-7318.42	-5858.43	-331.76
1	84	556	-7.11	-12.45	-9.07	-10.49	2.57	-4295.88	-6925.05	-6923.69	-4297.23	59.67
1	84	557	71.26	-25.22	-15.03	61.06	29.66	-3270.57	-6274.58	-6211.48	-3333.68	430.80
1	84	558	39.99	-47.07	-19.13	12.05	40.64	-1514.94	-6345.78	-5320.32	-2540.40	1975.42
1	84	559	46.41	-41.45	-7.74	12.70	42.72	1360.76	-7484.60	-4128.07	-1995.77	4292.25
1	84	560	26.15	-31.85	-6.53	0.84	28.76	1320.13	-1980.31	-1661.68	1001.50	974.73
1	84	561	6.56	-37.70	-20.66	-10.47	21.53	180.27	-1530.12	-1525.53	175.68	-88.51
1	84	562	25.21	-54.07	-36.79	7.93	-32.73	904.79	-3080.11	-1822.05	-353.27	-1852.17
1	84	563	15.59	-31.08	-30.87	15.38	3.10	122.09	-2977.21	-2670.79	-184.33	-925.09
1	84	564	88.11	-12.90	64.65	10.56	-42.65	1418.25	-5381.19	-1112.35	-2850.58	-3286.75
1	84	565	101.13	-27.69	88.78	-15.34	-37.93	3472.68	-4065.22	3058.22	-3650.75	-1718.26
1	84	566	147.13	-30.96	144.65	-28.48	-20.88	1704.74	-2703.86	1699.15	-2698.26	156.96
1	84	567	125.97	-42.23	124.28	-40.54	16.81	3274.79	-1531.20	3118.14	-1374.54	853.43
1	84	568	145.30	-37.59	132.03	-24.32	47.44	2756.98	-1817.06	2521.42	-1581.51	1010.91
1	84	569	108.49	-16.06	80.83	11.60	51.77	4949.28	-2954.23	4206.28	-2211.23	2306.56
1	84	570	96.23	-8.18	64.67	23.38	47.95	2508.53	-4098.02	-20.97	-1568.52	3211.37
1	84	571	21.65	-60.24	-41.43	2.84	34.45	1831.24	-1679.05	-522.75	674.94	1649.82
1	84	572	4.43	-40.14	-40.10	4.38	-1.46	885.71	-1451.68	-1189.46	623.49	737.67
1	84	573	26.86	-21.83	8.39	-3.36	-23.63	582.99	-3708.24	-2436.79	-688.46	-1959.46
1	84	574	9.58	-36.61	-29.18	2.16	-16.97	-357.21	-1687.33	-1668.80	-375.74	-155.88
1	84	575	54.42	-43.35	34.59	-23.51	-39.32	1376.14	-3448.87	-537.00	-1535.73	-2360.25
1	84	576	64.76	-42.00	53.97	-31.21	-32.18	2222.55	-2480.21	1676.56	-1934.22	-1506.51
1	84	577	77.21	-57.65	71.72	-52.16	-26.66	1370.27	-2292.82	1329.23	-2251.77	385.58
1	84	578	101.12	-46.76	100.96	-46.61	4.76	408.33	-2351.84	296.12	-2239.63	545.09
1	84	579	93.80	-51.26	80.71	-38.17	41.56	1482.54	-2448.36	1412.71	-2378.53	519.24
1	84	580	74.54	-47.54	49.98	-22.98	48.94	2694.25	-2295.22	1891.40	-1492.38	1833.36
1	84	581	57.21	-49.16	26.63	-18.58	48.14	2239.54	-3021.10	65.37	-846.93	2590.47
1	84	582	27.80	-27.30	5.92	-5.41	26.96	1174.72	-2995.24	-1643.95	-176.57	1951.63
1	84	583	3.05	-51.34	-42.60	-5.69	19.97	15.94	-525.08	-521.95	12.81	-41.04
1	84	584	14.80	-23.86	3.24	-12.30	-17.70	97.29	-1321.30	-784.15	-439.86	-688.08
1	84	585	9.20	-26.34	-6.76	-10.38	-17.68	-563.49	-619.92	-616.11	-567.30	-14.16
1	84	586	17.83	-46.70	3.19	-32.06	-27.03	771.31	-1690.19	255.60	-1174.48	-1001.73
1	84	587	28.70	-59.18	21.42	-51.90	-24.21	570.81	-1656.26	217.80	-1303.25	-813.36
1	84	588	24.61	-70.72	21.12	-67.23	-17.90	863.60	-2295.78	849.11	-2281.29	-213.42
1	84	589	36.10	-53.17	35.90	-52.96	4.24	416.60	-2878.83	412.58	-2874.82	114.91
1	84	590	32.08	-69.32	24.35	-61.59	26.90	891.50	-2191.66	777.41	-2077.58	582.01
1	84	591	33.29	-59.93	19.01	-45.66	33.56	1015.33	-1923.13	259.43	-1167.23	1284.45
1	84	592	20.04	-56.15	-0.18	-35.92	33.64	1093.11	-1718.27	347.54	-972.69	1241.05
1	84	593	14.46	-28.18	-0.13	-13.59	20.24	65.87	-1403.59	-743.09	-594.63	730.97
1	84	594	10.72	-26.58	-7.98	-7.88	18.65	-454.58	-800.14	-515.54	-739.19	-131.71
1	84	595	10.39	-21.35	-4.61	-6.35	-15.85	-154.30	-601.52	-462.27	-293.54	207.09
1	84	596	-0.98	-5.72	-4.84	-1.85	-1.84	398.57	-314.33	74.05	10.19	-355.01
1	134	490	6.58	-6.84	6.41	-6.67	-1.52	-255.13	-1115.88	-258.15	-1112.87	-50.87
1	134	491	-9.17	-20.96	-10.39	-19.75	-3.59	466.29	-1987.83	460.73	-1982.27	116.68
1	134	492	31.66	-15.13	27.97	-11.44	12.61	-1077.18	-3284.20	-1270.23	-3091.15	-623.55
1	134	493	-10.93	-38.40	-10.93	-38.40	-3.64e-02	332.70	-1923.26	332.62	-1923.19	12.97
1	134	494	32.20	-16.26	28.30	-12.36	-13.17	-1089.82	-3298.00	-1289.03	-3098.79	632.62
1	134	495	-9.08	-22.75	-10.23	-21.60	3.80	456.30	-1953.88	449.66	-1947.24	-126.30
1	134	496	5.20	-8.93	5.15	-8.89	0.83	-189.04	-1030.30	-193.28	-1026.06	59.57
1	134	497	6.29	-6.03	-0.42	0.68	6.14	218.05	-334.16	-89.02	-27.09	-274.36
1	134	498	4.17	-2.45	0.63	1.09	-3.30	177.39	74.61	130.41	121.59	51.20
1	134	507	1.52	-1.67	-0.74	0.59	1.45	326.50	117.78	272.57	171.71	-91.36
1	134	508	0.75	-4.16	-1.35	-2.06	2.43	88.56	-393.40	-356.13	51.30	-128.73
1	134	509	5.44	-2.83	-2.41	5.02	-1.81	1234.59	784.49	1138.26	880.82	-184.60
1	134	510	1.27	-5.77	-3.83	-0.67	-3.15	213.80	-379.71	192.69	-358.61	109.91
1	134	511	5.44	1.93	2.90	4.47	-1.57	18.37	-1128.48	12.76	-1122.87	80.03
1	134	512	10.06	-2.89	1.13	6.04	-5.99	-170.86	-1625.95	-207.55	-1589.26	-228.15
1	134	513	14.14	-8.68	-8.31	13.77	2.89	474.45	-2370.81	464.24	-2360.60	-170.13
1	134	514	20.20	0.24	10.01	10.43	-9.98	-1055.07	-2458.56	-1085.65	-2427.97	204.92
1	134	515	45.54	18.24	30.16	33.61	-13.54	-1022.02	-3243.38	-1207.42	-3057.99	614.37
1	134	516	10.88	0.68	5.95	5.61	-5.10	-611.21	-2855.01	-650.84	-2815.39	295.54
1	134	517	7.38	-12.24	-12.24	7.38	-5.44e-02	198.80	-1507.29	198.78	-1507.28	5.52
1	134	518	21.10	-9.34	-9.33	21.09	-0.60	1167.52	-1947.70	1167.50	-1947.69	-6.93
1	134	519	45.68	18.85	29.99	34.55	13.22	-1016.50	-3235.94	-1197.78	-3054.66	-607.85
1	134	520	9.87	1.83	5.54	6.17	4.01	-603.15	-2862.26	-646.89	-2818.52	-311.28
1	134	521	15.88	-8.71	-8.40	15.57	-2.77	481.26	-2394.05	471.97	-2384.76	163.21
1	134	522	19.91	1.19	9.97	11.13	9.34	-1069.09	-2459.48	-1100.94	-2427.63	-208.01
1	134	523	6.92	3.27	3.72	6.46	1.21	-24.20	-1183.41	-29.53	-1178.08	-78.44
1	134	524	10.37	-2.54	1.34	6.49	5.92	-169.37	-1642.64	-206.11	-1605.89	229.75
1	134	525	2.46	-4.06	-1.23	-0.36	-3.23	104.35	-418.02	-349.36	35.68	176.51
1	134	526	5.85	-3.04	-2.53	5.34	2.06	1260.40	777.98	1178.85	859.54	180.81
1	134	527	1.79	-2.08	-1.54	1.25	-1.35	347.13	94.66	302.11	139.69	96.64
1	134	528	1.78	-7.00	-4.60	-0.62	3.91	266.61	-413.05	223.15	-369.59	-166.27
1	134	529	19.44	-9.39	0.41	9.64	-13.66	-583.37	-2020.89	-1909.94	-694.32	383.65
1	134	530	-3.84	-11.83	-5.48	-10.19	3.23	580.48	-1187.74	-1184.55	577.29	-74.97

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	191 di 288

1	134	531	14.42	-16.19	-6.31	4.54	-14.31	-1474.98	-1854.66	-1489.84	-1839.80	73.64
1	134	532	12.63	-22.48	-13.65	3.80	-15.23	-442.40	-1611.18	-561.16	-1492.42	353.12
1	134	533	3.20	-15.29	-14.26	2.17	-4.25	-2029.76	-3467.23	-2058.74	-3438.25	202.03
1	134	534	7.13	-13.21	-13.16	7.08	-0.99	-2750.83	-3510.35	-2750.89	-3510.29	-6.68
1	134	535	2.76	-15.09	-14.72	2.39	2.54	-2031.39	-3464.47	-2061.38	-3434.48	-205.13
1	134	536	11.87	-22.47	-14.81	4.21	14.29	-425.60	-1608.23	-545.75	-1488.07	-357.30
1	134	537	14.33	-16.63	-7.06	4.77	14.30	-1453.58	-1854.15	-1472.35	-1835.38	-84.64
1	134	538	19.62	-10.01	0.44	9.17	14.16	-571.95	-1998.59	-1883.41	-687.12	-388.64
1	134	539	-5.53	-12.54	-6.59	-11.49	-2.51	641.52	-1109.82	-1107.78	639.48	59.69
1	134	540	9.24	-15.27	-13.49	7.47	-6.35	-958.48	-2639.04	-2620.04	-977.48	177.68
1	134	541	43.98	6.75	15.38	35.35	-15.71	-1177.99	-3541.51	-3237.45	-1482.06	791.34
1	134	542	9.95	-22.58	-19.26	6.63	-9.85	-2323.24	-3528.69	-3523.17	-2328.77	81.44
1	134	543	1.76	-32.82	-25.79	-5.27	-13.91	-2888.45	-5277.48	-5273.30	-2892.63	99.78
1	134	544	2.35	-41.42	-37.92	-1.14	-11.86	-4140.53	-5173.14	-5168.61	-4145.06	68.26
1	134	545	-6.32	-43.99	-43.95	-6.36	-1.12	-4309.14	-5244.66	-5244.58	-4309.22	-8.59
1	134	546	1.07	-41.29	-39.08	-1.14	9.43	-4132.49	-5177.10	-5172.05	-4137.54	-72.49
1	134	547	0.95	-33.89	-28.38	-4.56	12.71	-2894.64	-5261.29	-5257.05	-2898.89	-100.10
1	134	548	10.23	-24.61	-21.04	6.66	10.57	-2310.85	-3513.76	-3506.66	-2317.95	-92.12
1	134	549	9.35	-16.19	-14.15	7.31	6.93	-944.13	-2625.50	-2605.08	-964.55	-184.16
1	134	550	44.54	6.81	15.48	35.86	15.87	-1203.91	-3524.68	-3221.86	-1506.73	-781.71
1	134	551	-1.19	-4.75	-4.74	-1.20	-0.10	798.74	-2381.71	-2364.98	782.00	-230.10
1	134	552	-4.37	-31.36	-23.53	-12.20	-12.25	484.85	-2029.24	-1876.09	331.71	601.31
1	134	553	9.19	-12.50	-11.33	8.01	-4.91	-2068.83	-5983.95	-4944.77	-3108.01	-1728.76
1	134	554	1.54	-26.36	-17.59	-7.23	-12.96	-4008.38	-6359.53	-6358.88	-4009.03	-39.13
1	134	555	-2.12	-18.92	-15.08	-5.96	-7.05	-4581.50	-6760.82	-6753.19	-4589.12	-128.71
1	134	556	-8.48	-11.05	-9.05	-10.48	-1.06	-4291.19	-6916.09	-6916.08	-4291.19	-4.27
1	134	557	-3.98	-16.97	-15.11	-5.84	4.55	-4584.91	-6762.88	-6755.97	-4591.82	122.47
1	134	558	-0.22	-24.53	-17.66	-7.10	10.95	-4003.95	-6361.90	-6360.54	-4005.31	56.56
1	134	559	10.39	-13.64	-11.46	8.21	6.90	-2077.61	-5969.59	-4946.90	-3100.29	1713.00
1	134	560	-1.09	-4.80	-4.80	-1.10	6.59e-02	809.15	-2379.32	-2362.73	792.56	229.40
1	134	561	-4.23	-31.18	-23.29	-12.12	12.26	499.17	-2041.82	-1873.93	331.28	-631.20
1	134	562	14.30	-16.49	-13.79	11.60	-8.71	-246.78	-2729.37	-2413.56	-662.59	-827.22
1	134	563	32.01	-7.00	0.31	24.70	15.23	-769.01	-3196.73	-2983.93	-981.82	-686.54
1	134	564	9.77	-10.77	-2.89	1.90	-9.99	51.49	-3594.29	-1724.74	-1818.06	-1822.29
1	134	565	18.42	-9.12	11.52	-2.23	-11.93	-1198.00	-3498.34	-1555.66	-3140.68	-833.56
1	134	566	22.90	-15.67	20.43	-13.20	-9.44	-1914.31	-3187.09	-1921.74	-3179.65	-96.98
1	134	567	20.68	-13.45	20.64	-13.41	-1.14	-2056.34	-3380.71	-2056.38	-3380.67	-7.15
1	134	568	23.05	-14.41	21.63	-12.99	7.16	-1910.75	-3190.40	-1918.00	-3183.15	96.02
1	134	569	19.21	-7.92	14.02	-2.74	10.66	-1208.46	-3489.17	-1571.98	-3125.65	834.83
1	134	570	11.25	-10.44	-1.22	2.03	10.72	37.40	-3593.64	-1738.29	-1817.95	1815.08
1	134	571	14.90	-16.20	-13.14	11.84	9.26	-254.49	-2744.07	-2431.59	-566.97	824.81
1	134	572	31.44	-7.34	-8.10e-03	24.11	-15.18	-744.82	-3223.19	-3010.94	-957.06	693.53
1	134	573	9.54	-2.25e-02	5.43	4.09	-4.74	-129.16	-2229.30	-1770.20	-588.26	-867.98
1	134	574	-6.83	-12.91	-12.23	-7.51	-1.92	371.34	-1172.86	-1172.13	370.61	33.54
1	134	575	15.99	-10.14	8.47	-2.62	-11.83	-308.72	-2313.15	-1091.96	-1529.91	-978.00
1	134	576	9.95	-8.64	8.05	-6.74	-5.63	617.79	-2245.88	142.56	-1770.64	-1065.39
1	134	577	20.57	-17.05	18.63	-15.11	-8.31	-720.63	-2944.75	-779.48	-2885.90	-356.95
1	134	578	26.29	-15.64	26.26	-15.62	-1.01	-1311.07	-2958.74	-1311.10	-2958.70	-7.59
1	134	579	20.15	-16.41	18.86	-15.12	6.74	-719.14	-2942.53	-777.52	-2884.15	355.50
1	134	580	10.42	-8.29	9.18	-7.05	4.66	612.83	-2240.80	134.10	-1762.07	1066.27
1	134	581	16.71	-10.20	9.38	-2.87	11.98	-321.34	-2306.95	-1102.18	-1526.11	969.91
1	134	582	10.39	-0.33	5.44	4.63	5.35	-140.09	-2246.60	-1798.45	-588.24	862.08
1	134	583	-5.07	-12.52	-11.29	-6.29	2.76	310.20	-1260.50	-1259.20	308.90	-45.22
1	134	584	3.06	-4.31	9.27e-02	-1.34	-3.61	573.87	-272.97	205.57	95.33	-419.82
1	134	585	6.28	-7.40	-0.77	-0.35	-6.84	135.05	-376.22	-134.82	-106.34	255.24
1	134	586	9.08	-10.91	5.20	-7.04	-7.90	-95.42	-1470.61	-254.28	-1311.76	-439.57
1	134	587	15.95	-11.70	14.28	-10.03	-6.58	-540.12	-2217.73	-770.19	-1987.67	-577.09
1	134	588	14.93	-21.95	13.19	-20.22	-7.81	-364.53	-2494.53	-415.28	-2443.78	-324.82
1	134	589	2.71	-10.63	2.69	-10.60	-0.60	638.48	-2456.54	638.46	-2456.52	-8.46
1	134	590	15.06	-22.11	13.86	-20.91	6.58	-372.16	-2484.35	-417.79	-2438.72	307.06
1	134	591	15.55	-12.03	14.22	-10.70	5.90	-520.06	-2208.44	-750.75	-1977.75	579.89
1	134	592	8.45	-11.07	4.63	-7.25	7.75	-89.69	-1441.33	-250.66	-1280.35	437.80
1	134	593	3.35	-4.71	0.16	-1.52	3.94	569.83	-259.14	172.16	138.54	414.14
1	134	594	7.85	-7.45	0.63	-0.22	7.64	185.92	-442.57	-159.87	-96.79	-312.66
1	134	595	8.18	-6.21	-0.36	2.33	-7.07	276.95	-409.15	-75.61	-56.60	342.92
1	134	596	4.33	-2.62	-0.26	1.97	3.29	192.39	58.19	165.99	84.58	-53.35
1	136	490	6.77	-7.01	6.59	-6.83	-1.58	-263.50	-1139.13	-266.44	-1136.19	-50.63
1	136	491	-9.39	-21.50	-10.62	-20.27	-3.66	475.73	-2024.58	470.08	-2018.93	118.71
1	136	492	32.27	-15.58	28.52	-11.84	12.85	-1098.82	-3349.88	-1296.25	-3152.45	-636.75
1	136	493	-11.16	-39.39	-11.16	-39.39	-3.55e-02	341.22	-1965.33	341.13	-1965.24	14.17
1	136	494	32.85	-16.75	28.89	-12.79	-13.45	-1112.62	-3364.77	-1316.60	-3160.79	646.37
1	136	495	-9.27	-23.35	-10.44	-22.18	3.88	465.13	-1988.50	458.34	-1981.71	-128.90
1	136	496	5.29	-9.18	5.24	-9.13	0.84	-192.95	-1047.71	-197.24	-1043.43	60.36
1	136	497	6.40	-6.18	-0.44	0.66	6.27	221.97	-339.55	-88.86	-28.71	-279.14
1	136	498	4.28	-2.51	0.68	1.09	-3.39	180.70	74.07	130.61	124.16	53.21
1	136	507	1.54	-1.71	-0.75	0.58	1.48	332.55	120.43	277.11	175.87	-93.20
1	136	508	0.72	-4.22	-1.38	-2.12	2.44	89.83	-400.86	-363.24	52.21	-130.55

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	192 di 288

1	136	509	5.57	-2.83	-2.39	5.13	-1.87	1259.78	797.15	1159.29	897.63	-190.77
1	136	510	1.25	-5.86	-3.90	-0.72	-3.18	216.69	-386.44	195.50	-365.25	111.06
1	136	511	5.53	1.98	2.95	4.56	-1.58	18.99	-1151.84	13.40	-1146.25	80.69
1	136	512	10.37	-2.98	1.17	6.21	-6.18	-175.41	-1661.23	-213.46	-1623.18	-234.73
1	136	513	14.53	-8.84	-8.47	14.15	2.94	483.73	-2419.59	473.31	-2409.17	-173.59
1	136	514	20.73	0.20	10.17	10.76	-10.26	-1077.92	-2510.62	-1108.60	-2479.94	207.40
1	136	515	46.54	18.66	30.76	34.44	-13.82	-1041.60	-3308.03	-1230.89	-3118.74	627.04
1	136	516	11.18	0.69	6.03	5.85	-5.25	-626.09	-2913.39	-666.41	-2873.07	300.98
1	136	517	7.72	-12.48	-12.48	7.72	-5.79e-02	203.08	-1536.19	203.07	-1536.17	4.85
1	136	518	21.65	-9.53	-9.52	21.64	-0.61	1188.31	-1987.13	1188.29	-1987.12	-6.95
1	136	519	46.73	19.27	30.60	35.40	13.52	-1036.74	-3301.06	-1221.99	-3115.81	-620.61
1	136	520	10.17	1.87	5.65	6.40	4.14	-617.71	-2920.56	-662.19	-2876.08	-316.95
1	136	521	16.31	-8.87	-8.55	15.99	-2.82	490.40	-2442.33	480.88	-2432.81	166.78
1	136	522	20.44	1.17	10.12	11.49	9.61	-1091.69	-2510.62	-1123.86	-2478.45	-211.23
1	136	523	7.05	3.28	3.74	6.58	1.24	-22.17	-1204.93	-27.58	-1199.52	-79.84
1	136	524	10.70	-2.64	1.36	6.70	6.12	-173.17	-1676.89	-211.42	-1638.64	236.75
1	136	525	2.47	-4.10	-1.25	-0.38	-3.26	105.69	-425.01	-357.01	37.69	177.37
1	136	526	6.00	-3.05	-2.52	5.47	2.12	1287.36	792.65	1201.82	878.18	187.07
1	136	527	1.78	-2.11	-1.56	1.23	-1.37	353.84	96.47	306.82	143.49	99.45
1	136	528	1.80	-7.07	-4.62	-0.65	3.96	271.43	-420.71	227.42	-376.70	-168.89
1	136	529	19.98	-9.60	0.49	9.90	-14.02	-599.72	-2062.28	-1949.76	-712.25	389.77
1	136	530	-3.68	-12.00	-5.36	-10.31	3.34	588.79	-1216.95	-1213.43	585.26	-79.75
1	136	531	14.87	-16.60	-6.46	4.72	-14.71	-1509.87	-1893.45	-1523.81	-1879.51	71.79
1	136	532	13.00	-23.02	-13.97	3.96	-15.62	-461.78	-1645.19	-581.23	-1525.73	356.50
1	136	533	3.39	-15.72	-14.64	2.31	-4.41	-2078.06	-3538.56	-2107.21	-3509.41	204.28
1	136	534	7.41	-13.62	-13.57	7.36	-1.01	-2811.82	-3584.07	-2811.88	-3584.01	-6.77
1	136	535	2.95	-15.53	-15.15	2.56	2.63	-2079.75	-3535.18	-2110.00	-3504.93	-207.64
1	136	536	12.23	-23.01	-15.17	4.39	14.66	-443.33	-1641.13	-564.63	-1519.83	-361.36
1	136	537	14.76	-17.03	-7.22	4.95	14.68	-1487.03	-1892.03	-1505.02	-1874.05	-83.43
1	136	538	20.16	-10.21	0.52	9.42	14.52	-587.33	-2039.40	-1922.67	-704.06	-394.80
1	136	539	-5.42	-12.75	-6.51	-11.66	-2.61	651.52	-1137.90	-1135.63	649.25	63.64
1	136	540	9.49	-15.50	-13.68	7.67	-6.50	-983.95	-2693.80	-2675.39	-1020.36	176.44
1	136	541	45.05	7.06	15.94	36.18	-16.07	-1205.58	-3620.02	-3307.81	-1517.78	810.14
1	136	542	10.25	-23.07	-19.65	6.83	-10.11	-2375.64	-3608.02	-3603.56	-2380.10	73.99
1	136	543	1.86	-33.64	-26.42	-5.36	-14.29	-2947.33	-5398.89	-5394.95	-2951.27	98.17
1	136	544	2.52	-42.50	-38.91	-1.07	-12.20	-4228.52	-5291.66	-5287.06	-4233.13	69.81
1	136	545	-6.35	-45.13	-45.10	-6.38	-1.15	-4399.92	-5364.89	-5364.80	-4400.00	-8.99
1	136	546	1.22	-42.36	-40.09	-1.05	9.69	-4219.77	-5295.75	-5290.56	-4224.95	-74.52
1	136	547	1.04	-34.75	-29.09	-4.61	13.06	-2952.72	-5382.26	-5378.24	-2956.73	-98.68
1	136	548	10.56	-25.17	-21.50	6.88	10.85	-2361.81	-3592.21	-3586.26	-2367.76	-85.37
1	136	549	9.62	-16.45	-14.35	7.52	7.10	-968.20	-2680.26	-2660.35	-988.11	-183.56
1	136	550	45.62	7.09	16.02	36.69	16.26	-1232.56	-3603.62	-3293.05	-1543.13	-799.95
1	136	551	-1.21	-4.76	-4.76	-1.21	-8.79e-02	809.24	-2436.24	-2418.79	791.78	-237.35
1	136	552	-4.32	-32.11	-23.96	-12.47	-12.65	500.59	-2076.60	-1916.29	340.28	622.45
1	136	553	9.40	-12.70	-11.49	8.20	-5.03	-2097.28	-6119.78	-5045.46	-3171.61	-1779.69
1	136	554	1.69	-26.95	-17.90	-7.35	-13.32	-4089.17	-6487.79	-6487.10	-4089.85	-40.50
1	136	555	-2.08	-19.32	-15.36	-6.04	-7.25	-4673.87	-6897.98	-6890.09	-4681.76	-132.25
1	136	556	-8.63	-11.23	-9.22	-10.64	-1.09	-4378.23	-7057.09	-7057.08	-4378.23	-4.39
1	136	557	-3.98	-17.31	-15.40	-5.89	4.68	-4677.99	-6900.71	-6893.56	-4685.13	125.83
1	136	558	-0.10	-25.07	-17.99	-7.18	11.25	-4083.78	-6490.61	-6489.19	-4085.20	58.42
1	136	559	10.69	-13.90	-11.66	8.45	7.08	-2105.21	-6104.86	-5048.12	-3161.96	1763.49
1	136	560	-1.09	-4.83	-4.83	-1.09	4.88e-02	822.27	-2433.27	-2415.97	804.98	236.63
1	136	561	-4.15	-31.88	-23.66	-12.37	12.66	515.39	-2089.24	-1913.59	339.75	-653.18
1	136	562	14.65	-16.80	-14.01	11.85	-8.95	-250.15	-2784.50	-2460.70	-573.95	-846.04
1	136	563	32.60	-7.15	0.31	25.14	15.52	-781.60	-3259.79	-3042.42	-998.97	-701.02
1	136	564	10.08	-10.99	-2.85	1.94	-10.26	62.92	-3669.68	-1753.08	-1853.68	-1865.63
1	136	565	19.01	-9.32	11.92	-2.22	-12.27	-1206.84	-3570.48	-1571.31	-3206.00	-853.61
1	136	566	23.63	-16.03	21.09	-13.49	-9.71	-1939.26	-3247.21	-1946.89	-3239.58	-99.61
1	136	567	21.39	-13.72	21.35	-13.68	-1.17	-2083.69	-3444.36	-2083.72	-3444.32	-7.19
1	136	568	23.80	-14.72	22.33	-13.25	7.38	-1935.51	-3250.22	-1943.01	-3242.73	98.99
1	136	569	19.81	-8.06	14.48	-2.72	10.97	-1217.36	-3560.31	-1588.10	-3189.57	855.09
1	136	570	11.61	-10.66	-1.14	2.09	11.02	49.57	-3668.61	-1766.68	-1852.36	1858.60
1	136	571	15.27	-16.52	-13.35	12.10	9.52	-257.00	-2800.08	-2479.57	-577.51	844.01
1	136	572	32.01	-7.53	-4.47e-02	24.52	-15.49	-756.98	-3287.98	-3071.46	-973.51	707.91
1	136	573	9.82	-8.59e-02	5.56	4.17	-4.90	-130.32	-2276.18	-1805.61	-600.89	-887.88
1	136	574	-6.90	-13.15	-12.45	-7.60	-1.97	375.06	-1198.01	-1197.23	374.28	35.08
1	136	575	16.43	-10.41	8.70	-2.68	-12.15	-311.29	-2363.38	-1115.18	-1559.48	-1001.71
1	136	576	10.30	-8.88	8.32	-6.90	-5.83	628.04	-2299.03	141.31	-1812.30	-1089.86
1	136	577	21.14	-17.47	19.15	-15.48	-8.53	-731.83	-3001.06	-792.03	-2940.86	-364.67
1	136	578	26.96	-16.02	26.93	-15.99	-1.04	-1331.83	-3015.31	-1331.86	-3015.27	-7.91
1	136	579	20.70	-16.79	19.37	-15.46	6.94	-730.30	-2998.24	-790.09	-2938.45	363.37
1	136	580	10.77	-8.50	9.47	-7.20	4.83	624.24	-2292.92	133.38	-1802.05	1091.33
1	136	581	17.20	-10.49	9.66	-2.94	12.33	-323.08	-2356.46	-1124.89	-1554.66	993.72
1	136	582	10.71	-0.41	5.57	4.73	5.54	-141.08	-2293.84	-1834.85	-600.07	881.72
1	136	583	-5.09	-12.77	-11.50	-6.36	2.85	312.24	-1289.25	-1287.89	310.88	-46.69
1	136	584	3.12	-4.41	0.11	-1.40	-3.69	578.88	-292.24	198.50	88.14	-432.05
1	136	585	6.46	-7.63	-0.80	-0.37	-7.04	141.36	-388.99	-141.94	-105.70	264.55

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	193 di 288

1	136	586	9.32	-11.22	5.35	-7.24	-8.12	-96.14	-1502.12	-261.72	-1336.53	-453.20
1	136	587	16.32	-12.04	14.59	-10.31	-6.79	-548.44	-2261.56	-784.14	-2025.86	-590.11
1	136	588	15.26	-22.49	13.47	-20.70	-8.02	-373.04	-2541.44	-424.57	-2489.91	-330.29
1	136	589	2.81	-10.96	2.78	-10.94	-0.62	642.39	-2511.91	642.36	-2511.88	-8.87
1	136	590	15.42	-22.66	14.18	-21.43	6.74	-380.78	-2530.70	-426.99	-2484.49	311.80
1	136	591	15.90	-12.37	14.52	-11.00	6.07	-526.81	-2251.41	-763.70	-2014.52	593.64
1	136	592	8.65	-11.36	4.71	-7.43	7.95	-89.75	-1470.31	-257.45	-1302.61	451.00
1	136	593	3.43	-4.83	0.18	-1.57	4.04	576.25	-276.30	164.95	135.00	426.01
1	136	594	8.13	-7.64	0.71	-0.22	7.87	194.10	-457.22	-167.09	-96.03	-323.71
1	136	595	8.35	-6.39	-0.39	2.35	-7.24	284.55	-419.46	-74.33	-60.59	351.94
1	136	596	4.44	-2.66	-0.24	2.02	3.37	196.40	57.02	167.86	85.55	-56.24
1	138	490	6.68	-6.92	6.50	-6.75	-1.55	-259.32	-1127.50	-262.30	-1124.53	-50.75
1	138	491	-9.28	-21.23	-10.50	-20.01	-3.62	471.01	-2006.21	465.41	-2000.60	117.70
1	138	492	31.96	-15.36	28.24	-11.64	12.73	-1088.00	-3317.04	-1283.24	-3121.80	-630.15
1	138	493	-11.04	-38.89	-11.04	-38.89	-3.60e-02	336.96	-1944.30	336.88	-1944.22	13.57
1	138	494	32.52	-16.50	28.59	-12.57	-13.31	-1101.22	-3331.39	-1302.82	-3129.79	639.49
1	138	495	-9.18	-23.05	-10.34	-21.89	3.84	460.71	-1971.19	454.00	-1964.47	-127.60
1	138	496	5.24	-9.06	5.20	-9.01	0.83	-191.00	-1039.00	-195.26	-1034.74	59.96
1	138	497	6.35	-6.11	-0.43	0.67	6.20	220.01	-336.85	-88.94	-27.90	-276.75
1	138	498	4.22	-2.48	0.65	1.09	-3.35	179.04	74.35	130.51	122.88	52.21
1	138	507	1.53	-1.69	-0.75	0.59	1.46	329.52	119.11	274.84	173.79	-92.28
1	138	508	0.74	-4.19	-1.36	-2.09	2.44	89.19	-397.13	-359.69	51.75	-129.64
1	138	509	5.50	-2.83	-2.40	5.08	-1.84	1247.18	790.82	1148.78	889.23	-187.68
1	138	510	1.26	-5.82	-3.86	-0.69	-3.17	215.25	-383.07	194.10	-361.93	110.48
1	138	511	5.48	1.96	2.93	4.51	-1.58	18.68	-1140.16	13.08	-1134.56	80.36
1	138	512	10.21	-2.94	1.15	6.12	-6.09	-173.13	-1643.59	-210.51	-1606.22	-231.44
1	138	513	14.33	-8.76	-8.39	13.96	2.91	479.09	-2395.20	468.77	-2384.89	-171.86
1	138	514	20.46	0.22	10.09	10.60	-10.12	-1066.49	-2484.59	-1097.13	-2453.95	206.16
1	138	515	46.04	18.45	30.46	34.03	-13.68	-1031.81	-3275.71	-1219.15	-3088.37	620.70
1	138	516	11.03	0.68	5.99	5.73	-5.17	-618.65	-2884.20	-658.62	-2844.23	298.26
1	138	517	7.55	-12.36	-12.36	7.55	-5.61e-02	200.94	-1521.74	200.92	-1521.72	5.19
1	138	518	21.38	-9.44	-9.42	21.36	-0.60	1177.91	-1967.42	1177.90	-1967.40	-6.94
1	138	519	46.21	19.06	30.29	34.97	13.37	-1026.62	-3268.50	-1209.88	-3085.23	-614.23
1	138	520	10.02	1.85	5.59	6.28	4.07	-610.43	-2891.41	-654.54	-2847.30	-314.11
1	138	521	16.10	-8.79	-8.48	15.78	-2.79	485.83	-2418.19	476.43	-2408.79	164.99
1	138	522	20.18	1.18	10.05	11.31	9.48	-1080.39	-2485.05	-1112.40	-2453.04	-209.62
1	138	523	6.98	3.27	3.73	6.52	1.22	-23.18	-1194.17	-28.56	-1188.80	-79.14
1	138	524	10.54	-2.59	1.35	6.59	6.02	-171.27	-1659.76	-208.77	-1622.27	233.25
1	138	525	2.47	-4.08	-1.24	-0.37	-3.24	105.02	-421.51	-353.18	36.69	176.94
1	138	526	5.92	-3.04	-2.52	5.40	2.09	1273.88	785.32	1190.34	868.86	183.94
1	138	527	1.79	-2.10	-1.55	1.24	-1.36	350.48	95.57	304.47	141.59	98.05
1	138	528	1.79	-7.03	-4.61	-0.64	3.94	269.02	-416.88	225.28	-373.14	-167.58
1	138	529	19.71	-9.49	0.45	9.77	-13.84	-591.54	-2041.59	-1929.85	-703.28	386.71
1	138	530	-3.76	-11.92	-5.42	-10.25	3.29	584.63	-1202.35	-1198.99	-581.28	-77.36
1	138	531	14.64	-16.39	-6.38	4.63	-14.51	-1492.43	-1874.05	-1506.82	-1859.65	72.71
1	138	532	12.82	-22.75	-13.81	3.88	-15.43	-452.09	-1628.18	-571.20	-1509.08	354.81
1	138	533	3.29	-15.51	-14.45	2.24	-4.33	-2053.91	-3502.90	-2082.97	-3473.83	203.15
1	138	534	7.27	-13.42	-13.37	7.22	-1.00	-2781.32	-3547.21	-2781.38	-3547.15	-6.72
1	138	535	2.85	-15.31	-14.94	2.48	2.59	-2055.57	-3499.82	-2085.69	-3469.70	-206.39
1	138	536	12.05	-22.74	-14.99	4.30	14.47	-434.46	-1624.68	-555.19	-1503.95	-359.33
1	138	537	14.54	-16.83	-7.14	4.86	14.49	-1470.31	-1873.09	-1488.68	-1854.72	-84.04
1	138	538	19.89	-10.11	0.48	9.30	14.34	-579.64	-2018.99	-1903.04	-695.59	-391.72
1	138	539	-5.48	-12.65	-6.55	-11.57	-2.56	646.52	-1123.86	-1121.71	644.37	61.67
1	138	540	9.37	-15.38	-13.58	7.57	-6.43	-971.22	-2666.41	-2647.71	-989.92	177.06
1	138	541	44.52	6.91	15.66	35.77	-15.89	-1191.79	-3580.76	-3272.63	-1499.92	800.74
1	138	542	10.10	-22.82	-19.45	6.73	-9.98	-2349.46	-3568.34	-3563.36	-2354.44	77.72
1	138	543	1.81	-33.23	-26.11	-5.31	-14.10	-2917.89	-5338.18	-5334.13	-2921.95	98.98
1	138	544	2.44	-41.96	-38.42	-1.11	-12.03	-4184.53	-5232.40	-5227.83	-4189.09	69.04
1	138	545	-6.34	-44.56	-44.53	-6.37	-1.13	-4354.53	-5304.77	-5304.69	-4354.61	-8.79
1	138	546	1.14	-41.83	-39.58	-1.10	9.56	-4176.13	-5236.43	-5231.31	-4181.25	-73.51
1	138	547	1.00	-34.32	-28.74	-4.59	12.88	-2923.68	-5321.77	-5317.64	-2927.81	-99.39
1	138	548	10.40	-24.89	-21.27	6.77	10.71	-2336.35	-3552.97	-3546.46	-2342.85	-88.74
1	138	549	9.49	-16.32	-14.25	7.42	7.01	-956.16	-2652.88	-2632.71	-976.33	-183.86
1	138	550	45.08	6.95	15.75	36.28	16.07	-1218.24	-3564.15	-3257.46	-1524.93	-790.83
1	138	551	-1.20	-4.75	-4.75	-1.21	-9.59e-02	803.99	-2408.98	-2391.88	786.89	-233.73
1	138	552	-4.35	-31.73	-23.75	-12.33	-12.45	492.71	-2052.92	-1896.19	335.99	611.88
1	138	553	9.30	-12.60	-11.41	8.10	-4.97	-2083.06	-6051.86	-4995.12	-3139.81	-1754.23
1	138	554	1.62	-26.66	-17.75	-7.29	-13.14	-4048.77	-6423.66	-6422.99	-4049.44	-39.81
1	138	555	-2.10	-19.12	-15.22	-6.00	-7.15	-4627.68	-6829.40	-6821.64	-4635.44	-130.48
1	138	556	-8.55	-11.14	-9.14	-10.56	-1.08	-4334.71	-6986.59	-6986.58	-4334.71	-4.33
1	138	557	-3.98	-17.14	-15.25	-5.86	4.61	-4631.45	-6831.79	-6824.76	-4638.48	124.15
1	138	558	-0.16	-24.80	-17.82	-7.14	11.10	-4043.87	-6426.25	-6424.87	-4045.25	57.49
1	138	559	10.54	-13.77	-11.56	8.33	6.99	-2091.41	-6037.22	-4997.51	-3131.13	1738.25
1	138	560	-1.09	-4.81	-4.81	-1.09	5.74e-02	815.71	-2406.29	-2389.35	798.77	233.02
1	138	561	-4.19	-31.53	-23.47	-12.24	12.46	507.28	-2065.52	-1893.76	335.51	-642.19
1	138	562	14.47	-16.65	-13.90	11.72	-8.83	-248.46	-2756.93	-2437.13	-568.27	-836.63
1	138	563	32.31	-7.08	0.31	24.92	15.37	-775.31	-3228.26	-3013.17	-990.39	-693.78

Progetto esecutivo

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	194 di 288

1	138	564	9.93	-10.88	-2.87	1.92	-10.12	57.20	-3631.99	-1738.91	-1835.87	-1843.96
1	138	565	18.71	-9.22	11.72	-2.22	-12.10	-1202.42	-3534.41	-1563.49	-3173.34	-843.59
1	138	566	23.27	-15.85	20.76	-13.34	-9.58	-1926.78	-3217.15	-1934.31	-3209.61	-98.30
1	138	567	21.03	-13.58	20.99	-13.54	-1.15	-2070.01	-3412.54	-2070.05	-3412.50	-7.17
1	138	568	23.43	-14.57	21.98	-13.12	7.27	-1923.13	-3220.31	-1930.50	-3212.94	97.50
1	138	569	19.51	-7.99	14.25	-2.73	10.82	-1212.91	-3524.73	-1580.04	-3157.61	844.96
1	138	570	11.43	-10.55	-1.18	2.06	10.87	43.48	-3631.12	-1752.48	-1835.16	1836.84
1	138	571	15.08	-16.36	-13.24	11.97	9.39	-255.75	-2772.08	-2455.58	-572.24	834.41
1	138	572	31.72	-7.43	-2.64e-02	24.32	-15.33	-750.90	-3255.59	-3041.20	-965.28	700.72
1	138	573	9.68	-5.42e-02	5.49	4.13	-4.82	-129.74	-2252.74	-1787.91	-594.57	-877.93
1	138	574	-6.87	-13.03	-12.34	-7.56	-1.95	373.20	-1185.44	-1184.68	372.44	34.31
1	138	575	16.21	-10.27	8.59	-2.65	-11.99	-310.00	-2338.26	-1103.57	-1544.70	-989.85
1	138	576	10.12	-8.76	8.19	-6.82	-5.73	622.92	-2272.45	141.94	-1791.47	-1077.63
1	138	577	20.85	-17.26	18.89	-15.30	-8.42	-726.23	-2972.90	-785.76	-2913.38	-360.81
1	138	578	26.62	-15.83	26.60	-15.81	-1.03	-1321.45	-2987.03	-1321.48	-2986.99	-7.75
1	138	579	20.43	-16.60	19.12	-15.29	6.84	-724.72	-2970.39	-783.81	-2911.30	359.43
1	138	580	10.60	-8.39	9.33	-7.12	4.74	618.54	-2266.86	133.74	-1782.06	1078.80
1	138	581	16.96	-10.35	9.52	-2.91	12.16	-322.21	-2331.71	-1113.54	-1540.38	981.82
1	138	582	10.55	-0.37	5.51	4.68	5.44	-140.59	-2270.22	-1816.65	-594.16	871.90
1	138	583	-5.08	-12.64	-11.40	-6.32	2.80	311.22	-1274.88	-1273.55	309.89	-45.96
1	138	584	3.09	-4.36	0.10	-1.37	-3.65	576.38	-282.60	202.04	91.73	-425.93
1	138	585	6.37	-7.52	-0.79	-0.36	-6.94	138.20	-382.60	-138.38	-106.02	259.90
1	138	586	9.20	-11.06	5.27	-7.14	-8.01	-95.78	-1486.36	-258.00	-1324.14	-446.38
1	138	587	16.13	-11.87	14.44	-10.17	-6.68	-544.28	-2239.64	-777.16	-2006.76	-583.60
1	138	588	15.09	-22.22	13.33	-20.46	-7.91	-368.78	-2517.98	-419.92	-2466.85	-327.56
1	138	589	2.76	-10.80	2.73	-10.77	-0.61	640.43	-2484.22	640.41	-2484.20	-8.66
1	138	590	15.24	-22.38	14.02	-21.17	6.66	-376.47	-2507.52	-422.39	-2461.61	309.43
1	138	591	15.72	-12.20	14.37	-10.85	5.99	-523.44	-2229.92	-757.22	-1996.14	586.77
1	138	592	8.55	-11.22	4.67	-7.34	7.85	-89.72	-1455.81	-254.05	-1291.48	444.40
1	138	593	3.39	-4.77	0.17	-1.55	3.99	573.04	-267.72	168.56	136.77	420.08
1	138	594	7.99	-7.55	0.67	-0.22	7.76	190.01	-449.89	-163.48	-96.41	-318.19
1	138	595	8.26	-6.30	-0.37	2.34	-7.15	280.74	-414.31	-74.97	-58.59	347.43
1	138	596	4.39	-2.64	-0.25	2.00	3.33	194.39	57.60	166.93	85.07	-54.79
1	140	490	6.58	-6.84	6.41	-6.67	-1.52	-255.13	-1115.88	-258.15	-1112.87	-50.87
1	140	491	-9.17	-20.96	-10.39	-19.75	-3.59	466.29	-1987.83	460.73	-1982.27	116.68
1	140	492	31.66	-15.13	27.97	-11.44	12.61	-1077.18	-3284.20	-1270.23	-3091.15	-623.55
1	140	493	-10.93	-38.40	-10.93	-38.40	-3.64e-02	332.70	-1923.26	332.62	-1923.19	12.97
1	140	494	32.20	-16.26	28.30	-12.36	-13.17	-1089.82	-3298.00	-1289.03	-3098.79	632.62
1	140	495	-9.08	-22.75	-10.23	-21.60	3.80	456.30	-1953.88	449.66	-1947.24	-126.30
1	140	496	5.20	-8.93	5.15	-8.89	0.83	-189.04	-1030.30	-193.28	-1026.06	59.57
1	140	497	6.29	-6.03	-0.42	0.68	6.14	218.05	-334.16	-89.02	-27.09	-274.36
1	140	498	4.17	-2.45	0.63	1.09	-3.30	177.39	74.61	130.41	121.59	51.20
1	140	507	1.52	-1.67	-0.74	0.59	1.45	326.50	117.78	272.57	171.71	-91.36
1	140	508	0.75	-4.16	-1.35	-2.06	2.43	88.56	-393.40	-356.13	51.30	-128.73
1	140	509	5.44	-2.83	-2.41	5.02	-1.81	1234.59	784.49	1138.26	880.82	-184.60
1	140	510	1.27	-5.77	-3.83	-0.67	-3.15	213.80	-379.71	192.69	-358.61	109.91
1	140	511	5.44	1.93	2.90	4.47	-1.57	18.37	-1128.48	12.76	-1122.87	80.03
1	140	512	10.06	-2.89	1.13	6.04	-5.99	-170.86	-1625.95	-207.55	-1589.26	-228.15
1	140	513	14.14	-8.68	-8.31	13.77	2.89	474.45	-2370.81	464.24	-2360.60	-170.13
1	140	514	20.20	0.24	10.01	10.43	-9.98	-1055.07	-2458.56	-1085.65	-2427.97	204.92
1	140	515	45.54	18.24	30.16	33.61	-13.54	-1022.02	-3243.38	-1207.42	-3057.99	614.37
1	140	516	10.88	0.68	5.95	5.61	-5.10	-611.21	-2855.01	-650.84	-2815.39	295.54
1	140	517	7.38	-12.24	-12.24	7.38	-5.44e-02	198.80	-1507.29	198.78	-1507.28	5.52
1	140	518	21.10	-9.34	-9.33	21.09	-0.60	1167.52	-1947.70	1167.50	-1947.69	-6.93
1	140	519	45.68	18.85	29.99	34.55	13.22	-1016.50	-3235.94	-1197.78	-3054.66	-607.85
1	140	520	9.87	1.83	5.54	6.17	4.01	-603.15	-2862.26	-646.89	-2818.52	-311.28
1	140	521	15.88	-8.71	-8.40	15.57	-2.77	481.26	-2394.05	471.97	-2384.76	163.21
1	140	522	19.91	1.19	9.97	11.13	9.34	-1069.09	-2459.48	-1100.94	-2427.63	-208.01
1	140	523	6.92	3.27	3.72	6.46	1.21	-24.20	-1183.41	-29.53	-1178.08	-78.44
1	140	524	10.37	-2.54	1.34	6.49	5.92	-169.37	-1642.64	-206.11	-1605.89	229.75
1	140	525	2.46	-4.06	-1.23	-0.36	-3.23	104.35	-418.02	-349.36	35.68	176.51
1	140	526	5.85	-3.04	-2.53	5.34	2.06	1260.40	777.98	1178.85	859.54	180.81
1	140	527	1.79	-2.08	-1.54	1.25	-1.35	347.13	94.66	302.11	139.69	96.64
1	140	528	1.78	-7.00	-4.60	-0.62	3.91	266.61	-413.05	223.15	-369.59	-166.27
1	140	529	19.44	-9.39	0.41	9.64	-13.66	-583.37	-2020.89	-1909.94	-694.32	383.65
1	140	530	-3.84	-11.83	-5.48	-10.19	3.23	580.48	-1187.74	-1184.55	577.29	-74.97
1	140	531	14.42	-16.19	-6.31	4.54	-14.31	-1474.98	-1854.66	-1489.84	-1839.80	73.64
1	140	532	12.63	-22.48	-13.65	3.80	-15.23	-442.40	-1611.18	-561.16	-1492.42	353.12
1	140	533	3.20	-15.29	-14.26	2.17	-4.25	-2029.76	-3467.23	-2058.74	-3438.25	202.03
1	140	534	7.13	-13.21	-13.16	7.08	-0.99	-2750.83	-3510.35	-2750.89	-3510.29	-6.68
1	140	535	2.76	-15.09	-14.72	2.39	2.54	-2031.39	-3464.47	-2061.38	-3434.48	-205.13
1	140	536	11.87	-22.47	-14.81	4.21	14.29	-425.60	-1608.23	-545.75	-1488.07	-357.30
1	140	537	14.33	-16.63	-7.06	4.77	14.30	-1453.58	-1854.15	-1472.35	-1835.38	-84.64
1	140	538	19.62	-10.01	0.44	9.17	14.16	-571.95	-1998.59	-1883.41	-687.12	-388.64
1	140	539	-5.53	-12.54	-6.59	-11.49	-2.51	641.52	-1109.82	-1107.78	639.48	59.69
1	140	540	9.24	-15.27	-13.49	7.47	-6.35	-958.48	-2639.04	-2620.04	-977.48	177.68
1	140	541	43.98	6.75	15.38	35.35	-15.71	-1177.99	-3541.51	-3237.45	-1482.06	791.34

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	195 di 288

1	140	542	9.95	-22.58	-19.26	6.63	-9.85	-2323.24	-3528.69	-3523.17	-2328.77	81.44
1	140	543	1.76	-32.82	-25.79	-5.27	-13.91	-2888.45	-5277.48	-5273.30	-2892.63	99.78
1	140	544	2.35	-41.42	-37.92	-1.14	-11.86	-4140.53	-5173.14	-5168.61	-4145.06	68.26
1	140	545	-6.32	-43.99	-43.95	-6.36	-1.12	-4309.14	-5244.66	-5244.58	-4309.22	-8.59
1	140	546	1.07	-41.29	-39.08	-1.14	9.43	-4132.49	-5177.10	-5172.05	-4137.54	-72.49
1	140	547	0.95	-33.89	-28.38	-4.56	12.71	-2894.64	-5261.29	-5257.05	-2898.89	-100.10
1	140	548	10.23	-24.61	-21.04	6.66	10.57	-2310.85	-3513.76	-3506.66	-2317.95	-92.12
1	140	549	9.35	-16.19	-14.15	7.31	6.93	-944.13	-2625.50	-2605.08	-964.55	-184.16
1	140	550	44.54	6.81	15.48	35.86	15.87	-1203.91	-3524.68	-3221.86	-1506.73	-781.71
1	140	551	-1.19	-4.75	-4.74	-1.20	-0.10	798.74	-2381.71	-2364.98	782.00	-230.10
1	140	552	-4.37	-31.36	-23.53	-12.20	-12.25	484.85	-2029.24	-1876.09	331.71	601.31
1	140	553	9.19	-12.50	-11.33	8.01	-4.91	-2068.83	-5983.95	-4944.77	-3108.01	-1728.76
1	140	554	1.54	-26.36	-17.59	-7.23	-12.96	-4008.38	-6359.53	-6358.88	-4009.03	-39.13
1	140	555	-2.12	-18.92	-15.08	-5.96	-7.05	-4581.50	-6760.82	-6753.19	-4589.12	-128.71
1	140	556	-8.48	-11.05	-9.05	-10.48	-1.06	-4291.19	-6916.09	-6916.08	-4291.19	-4.27
1	140	557	-3.98	-16.97	-15.11	-5.84	4.55	-4584.91	-6762.88	-6755.97	-4591.82	122.47
1	140	558	-0.22	-24.53	-17.66	-7.10	10.95	-4003.95	-6361.90	-6360.54	-4005.31	56.56
1	140	559	10.39	-13.64	-11.46	8.21	6.90	-2077.61	-5969.59	-4946.90	-3100.29	1713.00
1	140	560	-1.09	-4.80	-4.80	-1.10	6.59e-02	809.15	-2379.32	-2362.73	792.56	229.40
1	140	561	-4.23	-31.18	-23.29	-12.12	12.26	499.17	-2041.82	-1873.93	331.28	631.20
1	140	562	14.30	-16.49	-13.79	11.60	-8.71	-246.78	-2729.37	-2413.56	-562.59	-827.22
1	140	563	32.01	-7.00	0.31	24.70	15.23	-769.01	-3196.73	-2983.93	-981.82	-686.54
1	140	564	9.77	-10.77	-2.89	1.90	-9.99	51.49	-3594.29	-1724.74	-1818.06	-1822.29
1	140	565	18.42	-9.12	11.52	-2.23	-11.93	-1198.00	-3498.34	-1555.66	-3140.68	-833.56
1	140	566	22.90	-15.67	20.43	-13.20	-9.44	-1914.31	-3187.09	-1921.74	-3179.65	-96.98
1	140	567	20.68	-13.45	20.64	-13.41	-1.14	-2056.34	-3380.71	-2056.38	-3380.67	-7.15
1	140	568	23.05	-14.41	21.63	-12.99	7.16	-1910.75	-3190.40	-1918.00	-3183.15	96.02
1	140	569	19.21	-7.92	14.02	-2.74	10.66	-1208.46	-3489.17	-1571.98	-3125.65	834.83
1	140	570	11.25	-10.44	-1.22	2.03	10.72	37.40	-3593.64	-1738.29	-1817.95	1815.08
1	140	571	14.90	-16.20	-13.14	11.84	9.26	-254.49	-2744.07	-2431.59	-566.97	824.81
1	140	572	31.44	-7.34	-8.10e-03	24.11	-15.18	-744.82	-3223.19	-3010.94	-957.06	693.53
1	140	573	9.54	-2.25e-02	5.43	4.09	-4.74	-129.16	-2229.30	-1770.20	-588.26	-867.98
1	140	574	-6.83	-12.91	-12.23	-7.51	-1.92	371.34	-1172.86	-1172.13	370.61	33.54
1	140	575	15.99	-10.14	8.47	-2.62	-11.83	-308.72	-2313.15	-1091.96	-1529.91	-978.00
1	140	576	9.95	-8.64	8.05	-6.74	-5.63	617.79	-2245.88	142.56	-1770.64	-1065.39
1	140	577	20.57	-17.05	18.63	-15.11	-8.31	-720.63	-2944.75	-779.48	-2885.90	-356.95
1	140	578	26.29	-15.64	26.26	-15.62	-1.01	-1311.07	-2958.74	-1311.10	-2958.70	-7.59
1	140	579	20.15	-16.41	18.86	-15.12	6.74	-719.14	-2942.53	-777.52	-2884.15	355.50
1	140	580	10.42	-8.29	9.18	-7.05	4.66	612.83	-2240.80	134.10	-1762.07	1066.27
1	140	581	16.71	-10.20	9.38	-2.87	11.98	-321.34	-2306.95	-1102.18	-1526.11	969.91
1	140	582	10.39	-0.33	5.44	4.63	5.35	-140.09	-2246.60	-1798.45	-588.24	862.08
1	140	583	-5.07	-12.52	-11.29	-6.29	2.76	310.20	-1260.50	-1259.20	308.90	-45.22
1	140	584	3.06	-4.31	9.27e-02	-1.34	-3.61	573.87	-272.97	205.57	95.33	-419.82
1	140	585	6.28	-7.40	-0.77	-0.35	-6.84	135.05	-376.22	-134.82	-106.34	255.24
1	140	586	9.08	-10.91	5.20	-7.04	-7.90	-95.42	-1470.61	-254.28	-1311.76	-439.57
1	140	587	15.95	-11.70	14.28	-10.03	-6.58	-540.12	-2217.73	-770.19	-1987.67	-577.09
1	140	588	14.93	-21.95	13.19	-20.22	-7.81	-364.53	-2494.53	-415.28	-2443.78	-324.82
1	140	589	2.71	-10.63	2.69	-10.60	-0.60	638.48	-2456.54	638.46	-2456.52	-8.46
1	140	590	15.06	-22.11	13.86	-20.91	6.58	-372.16	-2484.35	-417.79	-2438.72	307.06
1	140	591	15.55	-12.03	14.22	-10.70	5.90	-520.06	-2208.44	-750.75	-1977.75	579.89
1	140	592	8.45	-11.07	4.63	-7.25	7.75	-89.69	-1441.33	-250.66	-1280.35	437.80
1	140	593	3.35	-4.71	0.16	-1.52	3.94	569.83	-259.14	172.16	138.54	414.14
1	140	594	7.85	-7.45	0.63	-0.22	7.64	185.92	-442.57	-159.87	-96.79	-312.66
1	140	595	8.18	-6.21	-0.36	2.33	-7.07	276.95	-409.15	-75.61	-56.60	342.92
1	140	596	4.33	-2.62	-0.26	1.97	3.29	192.39	58.19	165.99	84.58	-53.35

M_G	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
	353.42	-371.07	-362.36	-234.78	-125.66	1.525e+04	-2.124e+04	-2.033e+04	-9740.63	-8546.23
			349.53	246.98	122.10		1.385e+04		3246.41	8537.99

Macro	Tipo	Angolo 1-X (gradi)
3	Guscio	0.0

M_G	Cmb	Nodo	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
			daN/cm	daN/cm	daN/cm	daN/cm	daN/cm	daN	daN	daN	daN	daN
3	2	133	5.79	-2.02	3.19e-02	3.74	-3.44	296.32	33.27	246.47	83.12	103.10
3	2	134	10.59	-11.26	-1.67	0.99	10.84	401.78	-653.91	-85.59	-166.54	-526.29
3	2	135	1.86	-6.38	-3.33	-1.19	3.98	768.59	-506.46	209.80	52.32	632.65
3	2	136	5.94	-9.35	-3.50	9.52e-02	7.43	178.76	-535.74	-215.23	-141.75	-355.36
3	2	137	10.54	-5.88	10.45	-5.78	1.27	-411.77	-1553.70	-415.52	-1549.94	65.35
3	2	138	12.33	-15.60	6.11	-9.37	11.62	-99.60	-2018.58	-363.40	-1754.78	660.78
3	2	139	-12.49	-26.88	-14.60	-24.76	5.09	662.82	-2692.24	654.66	-2684.08	-165.25

Progetto esecutivo

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	196 di 288

3	2	140	23.47	-17.58	21.14	-15.24	9.51	-743.61	-3011.14	-1065.21	-2689.53	791.09
3	2	141	44.52	-17.52	39.67	-12.67	-16.66	-1509.22	-4526.40	-1788.78	-4246.84	874.84
3	2	142	19.62	-29.01	17.36	-26.74	10.25	-537.84	-3388.72	-597.89	-3328.67	409.38
3	2	143	-16.40	-54.40	-16.40	-54.40	4.80e-02	479.16	-2715.72	479.05	-2715.61	-19.14
3	2	144	0.95	-13.13	0.90	-13.08	0.83	790.98	-3460.07	790.94	-3460.03	11.98
3	2	145	45.31	-19.10	40.17	-13.95	17.47	-1527.60	-4546.79	-1816.28	-4258.11	-887.83
3	2	146	19.85	-29.24	18.32	-27.72	-8.52	-547.90	-3374.62	-601.17	-3321.34	-384.39
3	2	147	-12.42	-29.30	-14.37	-27.35	-5.40	648.55	-2643.53	638.79	-2633.77	179.03
3	2	148	22.91	-18.04	21.04	-16.17	-8.55	-714.39	-2997.41	-1037.58	-2674.22	-795.87
3	2	149	8.63	-8.90	8.63	-8.90	-0.27	-316.43	-1430.14	-321.99	-1424.58	-78.49
3	2	150	11.43	-15.81	5.25	-9.64	-11.40	-90.29	-1976.27	-357.62	-1708.94	-657.81
3	2	151	8.02	-11.05	-1.74	-1.29	-9.53	313.66	-542.34	-105.23	-123.46	427.90
3	2	152	2.21	-6.87	-3.25	-1.42	-4.45	765.00	-484.92	164.44	115.64	-624.48
3	2	153	5.40	-1.64	1.28	2.47	3.47	269.28	62.14	196.11	135.31	-99.01
3	2	154	8.02	-9.18	-1.46	0.29	-8.55	250.53	-628.44	-249.24	-128.68	435.33
3	2	155	10.39	-2.67	3.22	4.50	6.49	-94.55	-3037.88	-2425.29	-707.14	1194.90
3	2	156	-11.95	-24.07	-23.79	-12.22	1.80	586.33	-1459.38	-1458.21	585.16	48.84
3	2	157	18.98	-14.29	9.89	-5.20	14.82	-438.25	-3156.56	-1541.58	-2053.23	1334.87
3	2	158	12.19	-12.36	9.84	-10.02	7.21	814.19	-3156.79	125.64	-2468.25	1503.36
3	2	159	27.37	-24.49	24.20	-21.32	12.41	-1013.13	-4064.09	-1112.55	-3964.67	541.71
3	2	160	34.23	-21.47	34.19	-21.44	1.41	-1857.28	-4019.88	-1857.34	-4019.83	10.69
3	2	161	26.69	-23.49	24.49	-21.30	-10.26	-1011.11	-4060.24	-1109.92	-3961.42	-539.94
3	2	162	12.88	-11.90	11.40	-10.43	-5.86	809.24	-3148.74	114.91	-2454.41	-1505.34
3	2	163	20.04	-14.42	11.18	-5.56	-15.06	-453.99	-3147.44	-1554.71	-2046.72	-1324.06
3	2	164	11.67	-3.18	3.24	5.25	-7.36	-108.52	-3062.34	-2464.81	-706.04	-1186.57
3	2	165	-9.83	-23.21	-22.51	-10.54	-2.98	499.99	-1581.29	-1580.77	499.46	-33.14
3	2	166	15.78	-23.19	-20.20	12.80	10.36	-215.59	-3709.39	-3222.97	-702.00	1209.48
3	2	167	37.95	-13.18	-5.45	30.23	-18.31	-894.31	-4163.58	-3902.13	-1155.76	886.79
3	2	168	10.64	-14.92	-5.63	1.35	12.30	151.29	-4967.86	-2356.10	-2460.47	2559.04
3	2	169	23.14	-11.83	13.42	-2.11	15.66	-1645.80	-4840.09	-2168.40	-4317.48	1181.63
3	2	170	30.60	-22.11	27.17	-18.68	13.00	-2625.21	-4378.16	-2637.59	-4365.78	146.80
3	2	171	28.69	-20.49	28.64	-20.44	1.58	-2763.13	-4641.04	-2763.18	-4640.99	9.72
3	2	172	30.82	-20.33	28.85	-18.36	-9.84	-2620.17	-4382.22	-2632.35	-4370.04	-145.95
3	2	173	24.07	-9.98	16.88	-2.79	-13.90	-1659.56	-4826.80	-2191.10	-4295.27	-1183.62
3	2	174	12.66	-14.43	-3.32	1.56	-13.32	133.29	-4966.48	-2374.49	-2458.70	-2549.54
3	2	175	16.59	-22.76	-19.31	13.14	-11.14	-225.18	-3730.14	-3248.49	-706.83	-1206.73
3	2	176	37.14	-13.67	-5.93	29.40	18.26	-860.68	-4202.04	-3941.38	-1121.34	-896.11
3	2	177	-1.12	-6.95	-6.42	-1.64	-1.67	1105.12	-3306.23	-3273.10	1071.98	380.91
3	2	178	-1.62	-47.68	-32.42	-16.88	21.68	878.08	-3010.88	-2593.28	460.48	-1204.01
3	2	179	11.86	-16.31	-15.55	11.10	4.58	-2735.65	-8384.82	-6828.04	-4292.43	2524.08
3	2	180	1.40	-35.57	-24.22	-9.95	17.05	-5532.98	-8780.81	-8778.96	-5534.82	77.40
3	2	181	-3.42	-25.53	-20.79	-8.17	9.08	-6326.67	-9333.01	-9324.09	-6335.60	163.55
3	2	182	-11.67	-15.19	-12.47	-14.39	1.48	-5924.81	-9549.99	-9549.98	-5924.82	5.93
3	2	183	-5.87	-22.93	-20.84	-7.97	-5.60	-6332.15	-9336.79	-9328.78	-6340.15	-154.88
3	2	184	-1.00	-33.06	-24.34	-9.71	-14.26	-5525.37	-8784.95	-8781.78	-5528.54	-101.63
3	2	185	13.29	-17.63	-15.78	11.44	-7.35	-2746.72	-8364.32	-6831.63	-4279.40	-2502.17
3	2	186	-0.94	-7.05	-6.52	-1.47	1.72	1122.66	-3302.16	-3269.30	1089.79	-379.93
3	2	187	-1.37	-47.39	-32.01	-16.74	-21.70	903.85	-3033.71	-2589.63	459.76	1245.55
3	2	188	15.16	-18.77	-17.24	13.63	7.05	-1418.48	-3741.87	-3728.79	-1431.56	-173.79
3	2	189	67.65	12.58	27.47	52.76	24.46	-1788.16	-5154.89	-4692.73	-2250.32	-1158.61
3	2	190	14.27	-28.54	-24.79	10.52	12.10	-3266.73	-4896.27	-4893.61	-3269.40	-65.88
3	2	191	1.61	-42.79	-33.04	-8.14	18.39	-4011.64	-7263.03	-7259.56	-4015.11	-106.25
3	2	192	3.84	-56.14	-51.28	-1.02	16.37	-5742.23	-7157.22	-7152.41	-5747.03	-82.30
3	2	193	-6.65	-60.81	-60.77	-6.70	1.55	-5974.70	-7317.43	-7317.32	-5974.81	12.16
3	2	194	2.07	-55.94	-52.88	-0.99	-12.97	-5730.48	-7162.66	-7157.15	-5735.99	88.66
3	2	195	0.41	-44.20	-36.65	-7.13	-16.72	-4018.95	-7240.52	-7236.97	-4022.51	106.94
3	2	196	14.68	-31.38	-27.29	10.60	-13.09	-3248.66	-4874.29	-4870.22	-3252.73	81.25
3	2	197	15.27	-19.99	-18.15	13.43	-7.84	-1397.74	-3723.01	-3708.45	-1412.30	183.42
3	2	198	68.40	12.63	27.58	53.45	-24.71	-1824.45	-5132.91	-4672.77	-2284.59	1144.83
3	2	199	29.20	-9.67	4.98	14.56	18.84	-907.38	-2820.76	-2657.82	-1070.32	-534.06
3	2	200	1.84	-14.12	-0.27	-12.00	-5.41	729.01	-1822.31	-1805.78	712.48	204.72
3	2	201	20.29	-19.16	-6.84	7.97	18.28	-2006.82	-2624.55	-2030.07	-2601.30	-117.56
3	2	202	17.89	-29.33	-17.48	6.04	20.47	-579.94	-2188.55	-720.23	-2048.27	-453.85
3	2	203	5.49	-20.07	-18.09	3.51	6.83	-2784.80	-4791.13	-2811.15	-4764.78	-228.43
3	2	204	9.83	-16.18	-16.10	9.76	1.37	-3750.80	-4911.19	-3750.88	-4911.11	9.15
3	2	205	4.69	-19.61	-18.78	3.85	-4.43	-2787.39	-4786.25	-2814.92	-4758.72	232.98
3	2	206	16.85	-29.32	-19.10	6.63	-19.17	-555.06	-2183.02	-697.78	-2040.30	460.41
3	2	207	20.16	-19.75	-7.87	8.28	-18.25	-1975.92	-2622.68	-2004.67	-2593.93	133.30
3	2	208	29.48	-10.54	5.02	13.91	-19.51	-890.24	-2790.20	-2621.20	-1059.25	540.87
3	2	209	-0.38	-15.27	-1.83	-13.83	4.41	812.31	-1713.92	-1700.60	798.99	-182.95
3	2	210	6.59	-9.76e-02	0.26	6.23	1.51	1807.41	1103.96	1628.35	1283.02	306.42
3	2	211	7.57e-02	-4.49	-2.85	-1.57	2.19	314.35	-522.29	287.71	-495.65	-146.89
3	2	212	14.74	-4.04	2.72	7.98	9.01	-214.09	-2316.45	-279.65	-2250.90	365.41
3	2	213	28.44	-0.21	12.37	15.85	14.22	-1453.81	-3451.02	-1496.30	-3408.54	-288.19
3	2	214	14.44	1.22	9.04	6.63	6.50	-814.85	-3992.89	-878.44	-3929.29	-445.04
3	2	215	27.58	-10.03	-10.01	27.56	0.83	1687.38	-2627.24	1687.36	-2627.22	9.40
3	2	216	12.98	2.91	8.51	7.38	-5.00	-803.18	-4002.93	-872.75	-3933.36	466.63

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	197 di 288

3	2	217	28.10	1.04	12.31	16.83	-13.34	-1472.44	-3451.04	-1516.93	-3406.54	293.36
3	2	218	15.17	-3.55	2.97	8.65	-8.92	-211.13	-2337.59	-276.89	-2271.83	-368.14
3	2	219	7.17	-0.40	8.55e-02	6.69	-1.85	1841.27	1101.27	1685.84	1256.70	-301.43
3	2	220	0.80	-6.10	-3.82	-1.48	-3.25	387.24	-567.52	330.85	-511.13	225.08
3	2	221	1.55	-2.96	-0.72	-0.70	-2.25	179.09	-530.11	-506.85	155.82	126.33
3	2	222	0.26	-1.85	-1.37	-0.23	-0.88	472.13	154.77	355.67	271.23	152.96
3	2	223	3.85	1.31	2.46	2.70	1.27	81.10	-1546.41	73.33	-1538.63	-112.24
3	2	224	16.99	-11.75	-11.23	16.47	-3.83	635.60	-3321.91	622.15	-3308.46	230.31
3	2	225	61.39	22.42	40.55	43.26	19.44	-1386.52	-4484.68	-1631.22	-4239.99	-835.59
3	2	226	11.53	-15.60	-15.59	11.53	7.82e-02	257.19	-2022.32	257.17	-2022.30	-6.57
3	2	227	61.59	23.30	40.34	44.56	-19.03	-1379.78	-4475.40	-1619.18	-4236.01	826.90
3	2	228	19.40	-11.78	-11.34	18.96	3.67	644.66	-3352.70	632.39	-3340.43	-221.10
3	2	229	5.74	3.23	3.53	5.44	-0.81	25.44	-1618.22	17.89	-1610.68	111.08
3	2	230	4.09	-2.97	-0.54	1.66	3.35	188.54	-550.77	-498.41	136.18	-189.65
3	2	231	0.81	-2.62	-2.46	0.65	0.73	493.69	129.61	395.83	227.46	-161.40
3	6	133	-1.19	-27.94	-17.11	-12.03	13.13	1228.51	-1542.43	-127.78	-186.13	1385.16
3	6	134	21.88	-52.85	-19.51	-11.46	37.15	-1021.30	-1975.73	-1859.33	-1137.71	312.33
3	6	135	30.26	-66.15	-3.22	-32.67	45.90	-774.89	-3392.21	-2268.97	-1898.13	1295.46
3	6	136	11.47	-57.11	-25.36	-20.28	34.20	-977.66	-1814.14	-1098.90	-1692.90	294.47
3	6	137	47.49	-68.15	23.62	-44.28	46.80	-590.54	-1963.91	-875.49	-1678.95	556.91
3	6	138	39.99	-130.92	-8.32	-82.60	76.96	3168.94	-2328.79	1312.29	-472.14	2600.04
3	6	139	6.36	-169.54	-7.57	-155.60	47.51	2020.87	-925.16	1537.39	-441.68	1091.14
3	6	140	65.93	-141.29	28.19	-103.55	79.98	3617.62	-1568.46	1892.84	156.32	2443.35
3	6	141	3.68	-216.76	2.24	-215.32	17.75	1339.77	-2815.38	852.34	-2327.96	1337.06
3	6	142	60.74	-146.71	40.91	-126.88	61.00	2947.78	-1756.33	2705.56	-1514.10	1039.60
3	6	143	-3.31	-236.12	-3.79	-235.64	10.55	-568.89	-4240.18	-608.35	-4200.71	378.61
3	6	144	89.24	-122.31	88.40	-121.47	13.31	24.25	-3682.94	-6.23	-3652.46	334.77
3	6	145	29.07	-189.14	29.06	-189.12	1.56	115.28	-4531.87	-265.29	-4151.29	-1274.27
3	6	146	40.43	-150.20	34.60	-144.37	-32.83	2890.54	-2024.97	2890.53	-2024.96	7.62
3	6	147	3.47	-162.42	-3.39	-155.56	-33.03	1343.33	-1505.71	1325.05	-1487.42	-227.49
3	6	148	50.30	-138.78	34.21	-122.70	-52.75	2408.84	-726.54	1847.69	-165.39	-1201.88
3	6	149	15.69	-89.69	2.67	-76.67	-34.67	54.11	-1205.93	-72.72	-1079.10	-379.11
3	6	150	31.70	-106.12	-1.38	-73.04	-58.86	2276.32	-2116.85	1073.05	-913.59	-1959.16
3	6	151	12.17	-48.69	-12.64	-23.88	-29.90	-711.53	-1097.11	-1090.36	-718.27	-50.55
3	6	152	32.18	-55.97	5.96	-29.75	-40.30	-622.31	-3212.95	-2493.53	-1341.74	-1160.26
3	6	153	0.77	-20.38	-11.27	-8.33	-10.47	755.31	-953.31	-98.41	-99.58	-854.31
3	6	154	13.00	-56.44	-17.14	-26.29	-34.42	-840.41	-1808.43	-1452.84	-1196.00	-466.66
3	6	155	53.44	-73.14	3.48	-23.18	61.87	3469.27	-4288.68	-1383.79	564.38	3754.68
3	6	156	12.44	-119.24	-99.74	-7.06	46.78	852.21	-369.84	849.68	-367.31	55.51
3	6	157	120.94	-113.53	52.85	-45.44	106.44	6431.94	-4207.36	1931.51	293.07	5256.19
3	6	158	180.41	-114.58	115.25	-49.42	122.38	6060.02	-2461.39	4701.57	-1102.94	3119.38
3	6	159	216.36	-110.85	181.57	-76.06	100.86	5026.41	-1715.50	4918.35	-1607.43	846.69
3	6	160	223.04	-98.59	222.24	-97.79	16.01	3344.29	-1572.45	2844.61	-1072.77	1485.63
3	6	161	169.29	-124.72	158.20	-113.62	-56.02	5091.33	-1650.27	4701.83	-1260.78	1572.93
3	6	162	154.13	-96.68	129.65	-72.20	-74.43	4816.35	-2981.31	4098.00	-2262.97	-2255.08
3	6	163	116.70	-98.96	77.12	-59.39	-83.48	4082.71	-5320.92	292.04	-1530.25	-4612.69
3	6	164	53.65	-59.57	10.07	-15.99	-55.09	1814.14	-6192.00	-3586.07	-791.79	-3751.34
3	6	165	35.99	-78.88	-61.00	18.11	-41.64	-1372.29	-2762.55	-2505.10	-1629.74	-540.03
3	6	166	31.30	-134.97	-89.55	-14.12	74.09	5725.12	-306.50	2669.15	2749.47	3015.54
3	6	167	-23.75	-116.03	-109.89	-29.89	23.00	3664.52	1590.88	1934.48	3320.92	771.00
3	6	168	235.53	-7.04	170.56	57.93	107.41	6672.28	-5107.90	2732.96	-1168.58	5557.66
3	6	169	253.25	-29.96	186.89	36.40	119.96	1.500e+04	-2188.13	1.356e+04	-747.68	4762.55
3	6	170	345.88	-78.29	311.50	-43.92	115.76	1.037e+04	322.11	9676.84	1015.79	2547.38
3	6	171	300.75	-92.70	294.67	-86.62	48.54	1.204e+04	1323.12	1.152e+04	1843.05	2302.72
3	6	172	352.78	-57.38	349.35	-53.94	-37.36	7519.17	-2024.89	7484.59	-1990.31	573.42
3	6	173	238.75	-59.79	216.27	-37.30	-78.78	1.110e+04	-5186.00	1.045e+04	-4533.09	-3194.92
3	6	174	222.60	-22.28	176.18	24.15	-95.99	3724.11	-8536.36	-226.96	-4585.29	-5729.84
3	6	175	43.45	-118.18	-75.06	0.33	-71.49	3134.41	-4005.31	-860.95	-9.95	-3544.41
3	6	176	1.23	-90.58	-86.62	-2.73	-18.65	1703.40	-2540.45	-2098.83	1261.79	-1295.81
3	6	177	72.44	-77.75	-9.29	3.99	74.80	2828.84	-2060.84	-567.28	1335.28	2252.17
3	6	178	27.91	-52.97	-17.12	-7.93	40.18	210.97	-1253.60	-978.11	-64.52	572.34
3	6	179	108.07	-89.37	-1.34	20.04	98.14	7197.17	-1.028e+04	-2868.55	-211.18	8635.41
3	6	180	107.49	-85.30	-21.57	43.77	90.69	3476.75	-7386.54	-3724.29	-185.49	5135.37
3	6	181	197.12	-39.91	-15.00	172.21	72.69	-1123.76	-5631.08	-5429.90	-1324.94	930.75
3	6	182	0.57	-20.26	-9.19	-10.50	10.39	-4401.37	-7096.28	-7085.72	-4411.93	168.40
3	6	183	-1.99	-198.16	-15.67	-184.48	-49.97	-7562.35	-8899.68	-8392.64	-8069.39	-648.84
3	6	184	45.60	-117.69	-13.87	-58.22	-78.57	-3206.82	-1.414e+04	-9319.98	-8027.99	-5428.87
3	6	185	89.32	-114.61	-21.66	-3.64	-101.56	1943.93	-1.532e+04	-7260.54	-6119.05	-8614.84
3	6	186	73.67	-80.07	-0.26	-6.14	-76.81	1190.35	-5290.73	-4326.05	225.67	-2306.85
3	6	187	19.70	-67.49	-31.15	-16.64	-42.99	837.29	-2912.74	-2843.75	768.31	-503.91
3	6	188	104.93	-31.53	53.12	20.28	66.23	-124.19	-5802.50	-4298.37	-1628.32	2505.70
3	6	189	132.60	32.99	101.93	63.66	45.98	-3802.14	-4684.40	-4612.67	-3873.87	-241.12
3	6	190	28.01	-227.54	-185.72	-13.81	94.54	2201.19	-7127.49	-5176.43	250.13	3793.97
3	6	191	60.47	-233.45	-202.05	29.07	90.79	-1360.80	-1.813e+04	-1.783e+04	-1660.88	2222.79
3	6	192	42.88	-369.03	-359.75	33.60	61.11	-5247.45	-1.457e+04	-1.452e+04	-5298.62	-688.85
3	6	193	68.63	-319.85	-318.10	66.88	-26.06	-9214.03	-1.964e+04	-1.909e+04	-9761.63	-2325.25
3	6	194	58.23	-360.74	-336.91	34.40	-97.04	-8225.41	-1.789e+04	-1.731e+04	-8809.77	-2303.59

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	198 di 288

3	6	195	8.39	-282.76	-230.08	-44.29	-112.08	-4438.13	-2.122e+04	-2.029e+04	-5367.81	-3839.17
3	6	196	6.25	-261.25	-205.56	-49.44	-108.61	-1179.02	-1.006e+04	-8184.13	-3053.33	-3623.49
3	6	197	121.16	-30.27	56.74	34.16	-74.87	-3420.68	-8828.89	-7882.51	-4367.06	-2054.89
3	6	198	169.51	47.90	126.22	91.19	-58.23	-5556.81	-8175.83	-7969.33	-5763.31	705.82
3	6	199	78.68	-47.19	-2.67	34.16	60.18	1718.87	-3162.11	-732.34	-710.90	2440.47
3	6	200	66.33	-36.85	56.50	-27.02	30.30	2551.53	-810.08	-664.52	2405.97	684.20
3	6	201	102.24	-111.22	-67.96	58.98	85.81	1123.54	-6118.86	-3021.98	-1973.34	3583.04
3	6	202	104.27	-159.90	-123.07	67.44	91.50	-859.29	-4904.81	-4673.65	-1090.45	939.00
3	6	203	121.76	-164.51	-147.03	104.28	68.55	-4057.57	-8805.41	-7596.86	-5266.12	-2068.19
3	6	204	88.22	-209.24	-209.20	88.17	3.79	-4524.48	-8013.31	-7005.24	-5532.55	-1581.39
3	6	205	83.64	-207.06	-182.89	59.47	-80.26	-4810.52	-7958.00	-7946.30	-4822.21	-191.47
3	6	206	111.94	-195.84	-132.59	48.69	-124.36	-1577.15	-5833.86	-5121.53	-2289.48	-1588.95
3	6	207	117.47	-125.18	-57.41	49.70	-108.87	94.85	-8279.66	-4521.53	-3663.27	-4165.21
3	6	208	93.41	-59.68	0.76	32.97	-74.83	755.17	-4302.78	-1839.79	-1707.81	-2528.11
3	6	209	91.36	-39.72	70.07	-18.43	-48.35	1414.15	-2642.60	-2641.53	1413.09	-65.76
3	6	210	53.17	-29.08	-5.81	29.90	37.04	3963.74	1877.15	3436.17	2404.72	906.91
3	6	211	45.26	-7.67	18.02	19.57	26.46	1531.05	494.05	1274.66	750.44	447.37
3	6	212	104.77	-28.35	6.33	70.08	58.43	192.67	-3567.82	-1514.73	-1860.43	1872.29
3	6	213	146.53	-29.24	-4.36	121.65	61.27	-3299.00	-4709.30	-3573.13	-4435.17	558.08
3	6	214	133.11	-20.99	-9.88	121.99	39.86	-3041.91	-4344.52	-4073.96	-3312.47	-528.43
3	6	215	132.08	-95.16	-95.13	132.05	-2.56	1832.35	-894.10	1819.67	-881.42	-185.46
3	6	216	135.17	-39.80	-24.81	120.18	-48.96	-3579.34	-4144.13	-3777.44	-3946.03	-269.52
3	6	217	144.64	-48.95	-8.81	104.50	-78.48	-2731.75	-5772.63	-3932.43	-4571.94	-1486.44
3	6	218	130.68	-30.99	16.14	83.55	-73.47	65.41	-4565.52	-1849.52	-2650.59	-2280.56
3	6	219	69.70	-30.41	-1.27	40.56	-45.48	4616.14	2145.97	3981.99	2780.11	-1079.03
3	6	220	55.45	-15.10	15.54	24.81	-34.97	1887.23	840.13	1373.01	1354.35	-523.47
3	6	221	40.73	-5.36	16.87	18.50	23.04	1168.80	127.89	692.07	604.62	518.61
3	6	222	21.79	-2.07	10.83	8.88	11.89	1323.93	-505.86	473.44	344.63	912.63
3	6	223	67.58	-24.92	-4.61	47.27	38.29	132.88	-523.14	56.90	-447.16	209.94
3	6	224	134.44	-20.05	-14.20	128.59	29.48	-240.66	-2585.05	-378.53	-2447.18	551.55
3	6	225	209.57	28.47	33.57	204.47	29.97	-2020.53	-2450.75	-2343.07	-2128.22	186.36
3	6	226	203.09	-20.03	-19.91	202.97	-5.19	1263.25	647.39	1191.65	718.99	-197.40
3	6	227	252.74	45.65	53.50	244.89	-39.55	-3285.77	-3954.43	-3306.50	-3933.69	115.90
3	6	228	178.79	-19.13	-11.26	170.92	-38.66	-298.26	-4948.87	-697.14	-4549.99	-1302.28
3	6	229	89.22	-23.26	-2.92	68.88	-43.29	515.41	-1465.24	397.27	-1347.10	-469.09
3	6	230	39.69	-11.09	11.47	17.13	-25.23	2116.43	570.61	1438.37	1248.68	-767.07
3	6	231	32.05	-7.78e-02	15.62	16.35	-16.06	2000.22	-920.08	622.59	457.54	-1457.81
3	23	133	1.95	-21.08	-12.18	-6.95	11.21	779.08	-980.94	-51.20	-150.65	878.61
3	23	134	14.39	-48.74	-12.38	-21.97	31.20	-758.16	-1095.96	-1092.18	-761.94	-35.52
3	23	135	31.12	-55.87	5.04	-29.80	39.85	-613.46	-3177.99	-2424.89	-1366.57	1167.99
3	23	136	10.79	-55.78	-18.87	-26.13	33.09	-884.44	-1858.05	-1405.56	-1336.93	485.59
3	23	137	17.15	-87.25	3.78	-73.88	34.89	-2.33	-1254.73	-132.91	-1124.15	382.74
3	23	138	31.88	-106.03	-1.31	-72.84	58.96	2313.36	-2076.17	1108.63	-871.44	1958.78
3	23	139	3.07	-160.04	-3.93	-153.04	33.05	1378.05	-1451.04	1360.96	-1433.95	219.25
3	23	140	50.77	-138.25	34.15	-121.63	53.52	2407.42	-646.20	1845.26	-84.04	1183.47
3	23	141	27.74	-187.68	27.74	-187.68	-0.46	149.53	-4439.71	-202.74	-4087.44	1221.71
3	23	142	39.07	-149.71	32.74	-143.38	33.98	2934.80	-1915.58	2934.77	-1915.55	-11.85
3	23	143	-2.87	-234.57	-3.35	-234.10	-10.52	-612.21	-4204.61	-658.46	-4158.36	-404.97
3	23	144	88.46	-121.62	87.74	-120.91	-12.20	8.28	-3589.15	-20.05	-3560.82	-318.00
3	23	145	3.11	-216.70	1.66	-215.25	-17.79	1341.69	-2768.58	869.33	-2296.23	-1310.87
3	23	146	59.37	-146.30	40.18	-127.10	-59.83	2974.85	-1620.97	2749.32	-1395.44	-992.79
3	23	147	6.45	-170.18	-7.73	-156.00	-47.99	2018.73	-822.20	1544.94	-348.41	-1059.02
3	23	148	65.14	-141.26	27.87	-103.99	-79.39	3656.22	-1473.08	1923.67	259.46	-2425.91
3	23	149	45.40	-68.35	22.33	-45.28	-45.74	-500.34	-1873.87	-804.99	-1569.22	-570.64
3	23	150	39.04	-131.03	-9.29	-82.70	-76.70	3215.59	-2257.73	1346.32	-388.46	-2595.56
3	23	151	20.70	-52.89	-19.55	-12.64	-36.63	-975.23	-2032.72	-1885.18	-1122.77	-366.41
3	23	152	29.81	-66.69	-4.00	-32.88	-46.04	-746.42	-3361.26	-2261.05	-1846.63	-1290.89
3	23	153	-0.33	-28.25	-16.22	-12.36	-13.82	1244.47	-1556.85	-150.84	-161.53	-1400.65
3	23	154	12.37	-56.46	-24.39	-19.70	-34.34	-1048.52	-1856.95	-1098.30	-1807.17	-194.34
3	23	155	52.19	-60.10	9.16	-17.08	54.59	1883.72	-6059.32	-3448.17	-727.42	3731.26
3	23	156	32.40	-81.50	-64.46	15.37	40.62	-1186.85	-2536.60	-2244.79	-1478.66	555.62
3	23	157	114.87	-98.98	75.36	-59.47	83.00	4179.27	-5217.53	415.05	-1453.32	4604.59
3	23	158	152.57	-97.24	127.53	-72.19	75.03	4927.40	-2875.02	4213.01	-2160.63	2250.25
3	23	159	168.46	-125.22	156.76	-113.52	57.44	5228.91	-1509.83	4836.65	-1117.57	-1577.80
3	23	160	221.99	-97.84	221.35	-97.20	-14.25	3442.47	-1418.05	2957.97	-933.55	-1456.08
3	23	161	214.19	-110.52	180.16	-76.49	-99.45	5154.92	-1557.60	5053.16	-1845.84	-820.21
3	23	162	179.00	-113.96	115.12	-50.07	-120.97	6150.47	-2354.06	4793.93	-997.51	-3113.93
3	23	163	120.45	-113.60	52.81	-45.97	-106.09	6486.40	-4099.48	2025.02	361.90	-5227.21
3	23	164	53.35	-74.14	2.59	-23.38	-62.41	3505.54	-4182.22	-1304.20	627.52	-3720.55
3	23	165	12.17	-121.05	-101.47	-7.40	-47.17	934.31	-351.15	932.05	-348.89	-53.83
3	23	166	40.65	-118.61	-76.17	-1.79	70.41	3325.21	-3887.38	-673.79	111.62	3584.85
3	23	167	0.43	-92.56	-88.26	-3.88	19.53	1747.90	-2288.79	-1870.77	1329.89	1229.90
3	23	168	219.05	-22.98	173.23	22.83	94.81	3927.88	-8320.79	36.13	-4429.04	5702.89
3	23	169	236.08	-59.64	212.78	-36.34	79.66	1.139e+04	-5041.57	1.075e+04	-4401.11	3180.63
3	23	170	350.69	-57.83	346.84	-53.98	39.46	7845.14	-1842.37	7810.78	-1808.00	-575.93
3	23	171	299.21	-92.57	293.65	-87.01	-46.34	1.233e+04	1544.03	1.183e+04	2044.87	-2270.13
3	23	172	344.70	-76.53	311.50	-43.33	-113.50	1.065e+04	486.08	9978.68	1153.63	-2517.30

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	199 di 288

3	23	173	252.36	-28.94	187.66	35.76	-118.38	1.523e+04	-2032.31	1.381e+04	-616.67	-4736.27
3	23	174	235.31	-8.25	170.51	56.55	-107.63	6817.82	-4909.83	2944.64	-1036.65	-5515.59
3	23	175	30.15	-135.33	-89.52	-15.66	-74.04	5870.69	-236.32	2794.73	2839.64	-3053.42
3	23	176	-25.47	-118.65	-112.11	-32.01	-23.81	3742.75	1776.38	2092.95	3426.18	-722.69
3	23	177	72.67	-80.33	-1.10	-6.56	76.45	1226.62	-5128.56	-4140.75	238.81	2302.59
3	23	178	20.53	-67.43	-30.69	-16.21	43.38	785.31	-2823.27	-2754.43	716.48	493.62
3	23	179	86.24	-112.65	-21.91	-4.51	99.06	2154.51	-1.512e+04	-6998.45	-5971.36	8624.14
3	23	180	46.93	-119.27	-14.05	-58.29	80.10	-2965.44	-1.383e+04	-8981.11	-7811.47	5399.27
3	23	181	-0.83	-197.93	-15.57	-183.19	51.84	-7297.61	-8618.89	-8074.57	-7841.93	650.32
3	23	182	-1.44	-18.65	-9.21	-10.87	-8.57	-4178.38	-6771.17	-6760.64	-4188.91	-164.91
3	23	183	194.47	-38.49	-14.95	170.93	-70.21	-953.56	-5344.06	-5141.78	-1155.85	-920.45
3	23	184	105.00	-83.63	-21.82	43.19	-88.54	3682.12	-7144.62	-3435.36	-27.14	-5138.15
3	23	185	108.86	-91.45	-2.00	19.41	-99.58	7334.69	-1.008e+04	-2648.77	-100.60	-8615.68
3	23	186	71.38	-77.87	-10.21	3.72	-74.30	2890.63	-1934.17	-404.45	1360.92	-2245.12
3	23	187	28.91	-52.65	-16.34	-7.39	-40.53	130.58	-1141.63	-900.66	-110.40	-498.50
3	23	188	119.79	-30.38	56.43	32.98	74.16	-3313.74	-8676.79	-7719.60	-4270.93	2053.59
3	23	189	167.70	46.97	125.09	89.58	57.70	-5473.04	-8004.53	-7806.08	-5671.49	-680.43
3	23	190	4.98	-258.75	-203.40	-50.37	107.39	-1029.40	-9943.00	-8050.09	-2922.31	3645.48
3	23	191	9.14	-280.66	-226.94	-44.57	112.61	-4298.10	-2.105e+04	-2.012e+04	-5225.24	3830.27
3	23	192	59.26	-359.21	-334.55	34.60	98.55	-8055.60	-1.771e+04	-1.713e+04	-8638.27	2299.52
3	23	193	68.38	-319.34	-317.34	66.39	27.71	-8997.55	-1.943e+04	-1.888e+04	-9542.91	2322.08
3	23	194	42.26	-367.82	-359.21	33.66	-58.77	-5087.64	-1.441e+04	-1.437e+04	-5136.53	673.45
3	23	195	60.02	-233.64	-203.27	29.65	-89.41	-1262.19	-1.796e+04	-1.765e+04	-1564.85	-2227.36
3	23	196	27.11	-228.83	-186.80	-14.92	-94.81	2328.18	-6989.12	-5035.05	374.10	-3793.19
3	23	197	103.91	-33.28	51.73	18.90	-66.60	-23.76	-5637.22	-4132.27	-1528.70	-2486.58
3	23	198	131.70	32.75	101.17	63.28	-45.70	-3790.47	-4520.06	-4460.46	-3850.06	199.82
3	23	199	92.25	-59.08	0.52	32.64	73.94	843.41	-4240.18	-1748.01	-1648.75	2541.31
3	23	200	90.35	-39.18	69.45	-18.28	47.65	1414.84	-2552.46	-2549.87	1412.25	101.38
3	23	201	116.64	-124.42	-56.81	49.03	108.30	174.16	-8196.05	-4450.70	-3571.20	4161.94
3	23	202	111.69	-195.51	-131.64	47.82	124.66	-1461.29	-5746.46	-5045.66	-2162.09	1584.90
3	23	203	84.07	-207.49	-182.66	59.24	81.38	-4664.97	-7834.43	-7822.56	-4676.84	193.56
3	23	204	88.85	-208.47	-208.45	88.83	-2.11	-4408.38	-7912.28	-6914.10	-5406.56	1581.51
3	23	205	120.88	-164.43	-147.76	104.21	-66.91	-3928.13	-8661.78	-7478.84	-5111.07	2049.46
3	23	206	103.15	-160.12	-124.12	67.15	-90.45	-734.45	-4799.41	-4571.01	-962.84	-936.08
3	23	207	101.53	-111.39	-68.49	58.64	-85.40	1189.66	-6013.27	-2933.08	-1890.53	-3563.54
3	23	208	78.00	-47.72	-2.79	33.07	-60.24	1810.48	-3077.80	-612.58	-654.73	-2444.05
3	23	209	64.39	-39.71	54.18	-29.51	-30.95	2687.29	-608.98	-458.27	2536.58	-688.53
3	23	210	68.83	-30.35	-1.52	40.01	45.03	4627.21	2161.85	3986.86	2802.20	1081.04
3	23	211	55.47	-14.21	16.19	25.07	34.55	1916.12	790.09	1372.47	1333.74	562.68
3	23	212	129.98	-31.36	15.54	83.08	73.26	97.69	-4495.89	-1809.37	-2588.83	2263.48
3	23	213	144.20	-49.56	-9.31	103.94	78.61	-2645.33	-5693.07	-3879.62	-4458.79	1496.10
3	23	214	134.50	-40.92	-25.55	119.13	49.60	-3436.35	-4052.58	-3692.17	-3796.75	303.65
3	23	215	131.48	-94.82	-94.76	131.43	3.58	1860.41	-760.11	1845.78	-745.49	195.20
3	23	216	132.17	-21.96	-11.55	121.76	-38.68	-2920.20	-4226.72	-3972.61	-3174.31	517.13
3	23	217	146.48	-28.92	-4.76	122.33	-60.45	-3243.57	-4632.18	-3548.97	-4326.78	-575.16
3	23	218	104.95	-28.11	6.29	70.55	-58.25	222.90	-3527.38	-1474.04	-1830.44	-1866.65
3	23	219	53.14	-29.44	-6.21	29.91	-37.13	4018.63	1893.20	3517.43	2394.40	-902.25
3	23	220	46.02	-9.01	17.23	19.78	-27.49	1501.40	537.94	1328.79	710.56	-369.48
3	23	221	39.92	-12.15	11.59	16.18	25.93	2048.11	613.52	1394.13	1267.50	714.49
3	23	222	31.88	-5.00e-02	16.06	15.77	15.96	1979.47	-899.52	600.32	479.63	1438.23
3	23	223	87.88	-24.78	-4.08	67.17	43.64	568.37	-1357.32	455.44	-1244.40	452.45
3	23	224	176.37	-19.21	-11.46	168.62	38.15	-259.94	-4810.77	-680.11	-4390.60	1317.41
3	23	225	250.47	44.59	52.38	242.67	39.30	-3232.48	-3774.20	-3249.14	-3757.54	-93.54
3	23	226	205.02	-19.38	-19.26	204.90	5.20	1214.32	693.06	1140.84	766.55	181.40
3	23	227	209.07	27.51	32.36	204.22	-29.29	-1842.44	-2393.00	-2274.49	-1960.95	-226.28
3	23	228	135.30	-20.31	-14.54	129.53	-29.40	-197.62	-2484.53	-345.29	-2336.87	-562.04
3	23	229	68.77	-24.09	-4.23	48.91	-38.07	100.58	-513.95	30.20	-443.57	-195.70
3	23	230	41.31	-3.23	17.42	20.66	-22.21	1200.81	64.97	669.73	596.05	-566.72
3	23	231	21.55	-2.39	9.64	9.52	-11.97	1319.41	-508.10	509.81	301.50	-907.80
3	69	133	-0.77	-8.49	-6.43	-2.83	3.41	591.37	-559.91	64.06	-32.60	573.61
3	69	134	13.03	-24.97	-8.09	-3.84	18.88	-456.06	-794.58	-745.45	-505.19	-119.24
3	69	135	11.90	-27.59	-2.78	-12.90	19.08	53.49	-1492.48	-753.46	-685.54	772.24
3	69	136	6.92	-25.63	-11.14	-7.57	16.18	-496.89	-718.41	-507.51	-707.79	-47.33
3	69	137	21.65	-27.32	13.57	-19.24	18.18	-448.14	-1391.46	-514.36	-1325.24	241.00
3	69	138	20.52	-56.36	-0.46	-35.39	34.24	1121.76	-1743.46	338.10	-959.80	1277.20
3	69	139	-3.31	-75.96	-9.51	-69.76	20.30	929.25	-1412.63	880.72	-1364.10	333.62
3	69	140	34.83	-60.57	20.11	-45.85	34.46	998.25	-1901.11	236.70	-1139.55	1275.95
3	69	141	18.58	-86.99	18.57	-86.98	-0.73	-170.17	-3076.70	-476.98	-2769.90	893.09
3	69	142	31.42	-68.29	23.06	-59.93	27.64	872.93	-2163.98	760.64	-2051.70	573.05
3	69	143	-8.58	-113.34	-8.73	-113.18	4.01	-17.95	-2807.08	-24.49	-2800.54	134.93
3	69	144	34.07	-51.98	33.73	-51.64	5.40	359.73	-2924.25	354.43	-2918.96	131.77
3	69	145	29.57	-78.09	28.92	-77.43	8.38	-640.81	-3744.84	-910.97	-3474.68	-874.99
3	69	146	23.99	-69.78	21.09	-66.88	-16.23	838.01	-2254.59	829.04	-2245.62	-166.28
3	69	147	-4.47	-74.26	-7.83	-70.89	-14.95	793.61	-1737.21	793.61	-1737.21	-1.45
3	69	148	29.17	-60.32	22.35	-53.50	-23.74	586.90	-1610.08	231.81	-1254.99	-808.72
3	69	149	9.01	-37.00	4.86	-32.86	-13.17	-134.97	-1079.58	-170.33	-1044.23	-179.28
3	69	150	17.04	-47.14	1.80	-31.91	-27.31	808.43	-1665.18	250.07	-1106.83	-1034.11

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	200 di 288

3	69	151	8.15	-23.25	-5.53	-9.56	-15.57	-206.18	-582.96	-462.85	-326.29	175.58
3	69	152	12.71	-23.89	0.73	-11.91	-17.17	92.87	-1400.07	-859.04	-448.17	-717.65
3	69	153	-0.29	-5.38	-3.68	-1.98	-2.40	409.75	-333.58	53.04	23.14	-371.37
3	69	154	8.34	-25.28	-7.16	-9.77	-16.76	-511.73	-659.10	-656.89	-513.93	17.90
3	69	155	24.67	-28.71	2.72	-6.76	26.27	1242.06	-2940.05	-1600.78	-97.21	1951.24
3	69	156	-1.13	-55.84	-48.63	-8.34	18.51	138.88	-317.09	-313.55	135.35	39.99
3	69	157	54.05	-49.26	24.30	-19.50	46.78	2241.68	-2992.76	52.90	-803.97	2581.91
3	69	158	73.10	-48.46	47.78	-23.14	49.37	2674.65	-2330.88	1853.87	-1510.09	1853.32
3	69	159	93.68	-52.75	79.23	-38.30	43.67	1459.37	-2452.14	1377.33	-2370.11	560.49
3	69	160	99.48	-46.72	99.17	-46.41	6.68	378.37	-2319.55	254.02	-2195.21	565.70
3	69	161	75.72	-57.67	70.55	-52.50	-25.75	1331.46	-2273.17	1296.29	-2238.00	354.31
3	69	162	63.73	-41.81	53.92	-32.00	-30.65	2185.38	-2505.56	1619.93	-1940.11	-1527.33
3	69	163	52.82	-43.69	34.04	-24.92	-38.20	1346.21	-3410.66	-573.34	-1491.11	-2333.75
3	69	164	25.24	-23.74	5.22	-3.71	-24.08	623.00	-3683.35	-2450.81	-609.54	-1946.43
3	69	165	8.85	-40.30	-33.39	1.93	-17.09	-344.05	-1672.04	-1635.98	-380.11	-215.86
3	69	166	17.72	-60.46	-42.93	0.19	32.60	1933.21	-1617.01	-422.15	738.35	1677.60
3	69	167	2.14	-44.09	-44.08	2.14	0.51	980.33	-1237.12	-1001.46	744.66	683.41
3	69	168	92.08	-8.04	61.70	22.35	46.03	2571.51	-4092.91	6.52	-1527.92	3242.68
3	69	169	105.81	-16.53	76.41	12.88	52.27	4944.55	-2961.60	4187.99	-2205.04	2325.76
3	69	170	144.14	-39.39	129.62	-24.87	49.54	2759.85	-1801.67	2516.48	-1558.30	1025.14
3	69	171	126.10	-44.09	123.94	-41.93	19.06	3320.65	-1525.25	3157.28	-1361.88	874.64
3	69	172	146.63	-30.49	144.67	-28.53	-18.49	1695.07	-2701.65	1689.65	-2696.22	154.35
3	69	173	100.25	-26.47	89.08	-15.30	-35.93	3427.02	-4052.76	3000.48	-3626.22	-1734.49
3	69	174	87.66	-13.14	64.86	9.66	-42.17	1440.62	-5380.82	-1121.16	-2819.05	-3303.38
3	69	175	22.85	-54.11	-37.05	5.80	-31.96	975.82	-3050.17	-1767.16	-307.19	-1875.97
3	69	176	12.06	-35.50	-35.48	12.04	1.10	261.70	-2822.73	-2542.71	-18.32	-886.17
3	69	177	24.85	-30.56	-6.45	0.74	27.47	1340.12	-2007.46	-1660.25	992.91	1020.67
3	69	178	9.74	-41.14	-20.86	-10.54	24.91	235.24	-1585.14	-1524.61	174.71	-326.38
3	69	179	42.84	-37.83	-7.52	12.53	39.07	1459.55	-7573.53	-4120.77	-1993.21	4389.48
3	69	180	41.15	-48.16	-19.08	12.07	41.85	-1506.93	-6331.16	-5306.89	-2531.20	1972.86
3	69	181	72.76	-26.28	-14.99	61.48	31.47	-3259.05	-6257.54	-6196.26	-3320.33	424.25
3	69	182	-5.14	-14.42	-9.07	-10.49	4.59	-4294.89	-6924.52	-6922.85	-4296.56	66.30
3	69	183	-8.25	-80.30	-15.26	-73.30	-21.35	-5805.74	-7382.76	-7317.99	-5870.52	-312.98
3	69	184	15.09	-57.69	-16.20	-26.40	-36.03	-4151.71	-8764.36	-7423.44	-5492.64	-2094.55
3	69	185	36.89	-48.46	-15.27	3.70	-41.60	-560.64	-9442.68	-5782.25	-4221.08	-4371.88
3	69	186	25.16	-31.26	-3.07	-3.03	-28.21	855.96	-3354.58	-3079.21	580.59	-1040.97
3	69	187	6.79	-46.59	-26.01	-13.78	-25.98	539.27	-2277.91	-2228.19	489.54	370.95
3	69	188	41.05	-15.21	12.24	13.60	28.12	-924.02	-3596.10	-3277.77	-1242.35	865.60
3	69	189	77.57	20.81	50.77	47.61	28.34	-2233.95	-4063.58	-3832.14	-2465.40	-608.19
3	69	190	16.61	-98.43	-81.19	-0.63	41.06	-771.32	-4717.90	-4134.35	-1354.86	1400.89
3	69	191	23.22	-106.76	-90.97	7.43	42.46	-2335.18	-1.005e+04	-9970.83	-2416.79	789.41
3	69	192	17.51	-163.87	-158.65	12.29	30.33	-4539.15	-8695.69	-8674.54	-4560.30	-295.78
3	69	193	22.66	-147.76	-147.26	22.16	-9.16	-6162.68	-1.065e+04	-1.047e+04	-6339.96	-873.66
3	69	194	22.94	-161.10	-150.74	12.58	-42.43	-5710.72	-9900.10	-9728.49	-5882.32	-830.35
3	69	195	3.38	-126.41	-103.16	-19.87	-49.77	-3554.02	-1.116e+04	-1.089e+04	-3821.19	-1400.18
3	69	196	8.29	-112.15	-89.79	-14.07	-46.83	-2046.43	-5810.44	-5260.28	-2596.59	-1329.71
3	69	197	47.85	-15.89	13.21	18.75	-31.75	-2081.39	-4811.18	-4623.25	-2269.31	-691.14
3	69	198	92.27	26.10	60.03	58.34	-33.07	-2916.57	-5369.71	-5091.44	-3194.84	777.95
3	69	199	42.71	-22.11	1.23	19.37	31.12	-328.95	-1869.62	-1458.13	-740.44	681.65
3	69	200	23.07	-17.85	21.00	-15.79	8.96	1293.89	-1096.09	-1041.84	1239.64	355.97
3	69	201	47.39	-50.31	-28.72	25.81	40.53	-673.71	-3271.70	-2042.19	-1903.23	1297.14
3	69	202	46.97	-73.17	-54.31	28.12	43.70	-1284.63	-2101.00	-2073.45	-1312.18	147.42
3	69	203	48.36	-71.13	-63.68	40.91	28.89	-3226.44	-4995.90	-4114.39	-4107.95	-884.72
3	69	204	37.86	-86.11	-86.08	37.83	2.04	-3706.88	-4893.92	-4320.40	-4280.40	-593.18
3	69	205	33.56	-86.89	-77.52	24.18	-32.27	-3938.01	-4251.11	-4247.87	-3941.24	31.68
3	69	206	49.74	-87.09	-58.63	21.28	-55.54	-1541.56	-2453.47	-2232.81	-1762.22	-390.55
3	69	207	53.32	-56.09	-25.20	22.43	-49.24	-1057.71	-4079.07	-2597.86	-2538.92	-1510.39
3	69	208	48.41	-27.24	2.55	18.63	-36.96	-682.92	-2290.38	-1860.36	-1112.94	-711.57
3	69	209	31.39	-19.23	25.49	-13.34	-16.23	907.47	-1748.47	-1743.67	902.68	-112.72
3	69	210	22.69	-10.76	-2.13	14.05	14.64	2315.46	1211.02	2037.58	1488.89	479.25
3	69	211	17.14	-4.84	5.57	6.74	10.97	632.57	36.22	613.93	54.87	103.79
3	69	212	46.08	-12.44	3.57	30.08	26.09	-194.44	-2206.58	-691.86	-1709.16	868.02
3	69	213	66.89	-9.92	3.87	53.10	29.48	-2011.24	-3198.11	-2016.78	-3192.57	80.91
3	69	214	54.79	-5.73	0.15	48.91	17.92	-1788.38	-3124.10	-1918.38	-2994.11	-395.91
3	69	215	62.14	-40.37	-40.36	62.14	-0.60	1450.04	-1490.41	1448.57	-1488.94	-65.84
3	69	216	55.55	-12.73	-5.74	48.56	-20.69	-1796.43	-3242.76	-1803.93	-3235.26	103.88
3	69	217	66.68	-17.46	2.17	47.05	-35.59	-2010.50	-3395.33	-2161.93	-3243.91	-432.17
3	69	218	56.11	-13.26	7.41	35.45	-31.73	-230.69	-2602.77	-817.52	-2015.94	-1023.54
3	69	219	29.18	-11.39	-0.48	18.28	-17.99	2575.82	1311.38	2269.07	1618.12	-542.01
3	69	220	21.27	-8.41	4.14	8.73	-14.66	693.28	254.32	670.41	277.20	-97.56
3	69	221	14.11	-1.27	6.10	6.74	7.68	449.89	-123.16	27.06	299.67	252.03
3	69	222	7.45	-0.76	3.45	3.24	4.10	708.35	-116.85	339.50	252.00	410.27
3	69	223	27.18	-8.84	-0.70	19.05	15.06	58.35	-851.57	57.62	-850.83	25.83
3	69	224	57.09	-11.79	-10.50	55.80	9.35	181.45	-2426.73	143.04	-2388.32	314.16
3	69	225	102.08	25.17	30.79	96.46	20.02	-1531.99	-2761.32	-1611.12	-2682.19	-301.69
3	69	226	82.14	-14.49	-14.45	82.10	-1.93	562.31	-635.88	557.20	-630.77	-78.09
3	69	227	119.11	31.42	38.21	112.31	-23.44	-1856.22	-3475.07	-1968.75	-3362.54	411.71

Progetto esecutivo

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	201 di 288

3	69	228	74.87	-11.42	-9.45	72.90	-12.90	133.81	-3303.89	27.56	-3197.64	-594.95
3	69	229	36.26	-7.36	0.45	28.44	-16.73	170.91	-1236.11	159.76	-1224.95	-124.78
3	69	230	13.87	-2.47	4.13	7.27	-8.02	815.38	31.91	313.61	533.68	-375.96
3	69	231	11.42	-0.19	4.76	6.46	-5.74	968.00	-278.98	414.25	274.77	-619.57
3	78	133	0.34	-6.02	-4.57	-1.11	2.67	415.53	-341.48	88.30	-14.25	375.02
3	78	134	9.97	-23.39	-5.45	-7.96	16.63	-154.79	-652.54	-450.91	-356.42	-244.35
3	78	135	12.49	-23.61	0.66	-11.78	16.95	84.11	-1402.92	-828.47	-490.35	724.04
3	78	136	6.89	-25.38	-8.55	-9.94	16.12	-562.48	-637.13	-633.43	-566.18	16.20
3	78	137	10.73	-35.43	6.11	-30.80	13.87	-203.71	-1160.15	-235.84	-1128.02	172.33
3	78	138	17.67	-47.07	2.35	-31.76	27.51	803.94	-1689.47	248.74	-1134.27	1037.35
3	78	139	-4.63	-72.65	-8.00	-69.28	14.76	805.71	-1766.91	805.64	-1766.85	12.62
3	78	140	29.70	-60.12	22.45	-52.87	24.47	570.79	-1620.10	215.01	-1264.32	808.02
3	78	141	29.14	-77.30	28.56	-76.72	-7.82	-628.21	-3748.25	-889.93	-3486.53	864.92
3	78	142	23.86	-69.68	20.48	-66.30	17.46	843.08	-2261.83	831.95	-2250.70	185.55
3	78	143	-8.58	-113.46	-8.73	-113.31	-3.95	-15.53	-2812.90	-24.84	-2803.60	-161.04
3	78	144	33.99	-51.92	33.78	-51.71	-4.24	357.98	-2924.53	353.95	-2920.50	-114.91
3	78	145	18.93	-87.96	18.91	-87.94	1.27	-184.33	-3115.62	-496.55	-2803.41	-904.28
3	78	146	31.32	-68.27	23.71	-60.66	-26.47	865.68	-2152.41	760.25	-2046.98	-554.14
3	78	147	-3.17	-77.72	-9.34	-71.55	-20.54	914.86	-1381.72	868.27	-1335.12	-323.79
3	78	148	34.19	-60.77	20.04	-46.62	-33.82	1018.69	-1890.34	256.64	-1128.30	-1279.10
3	78	149	19.81	-28.84	12.34	-21.37	-17.54	-378.22	-1314.09	-449.78	-1242.53	-248.69
3	78	150	19.94	-56.58	-1.02	-35.62	-34.12	1130.68	-1722.48	340.68	-932.48	-1276.67
3	78	151	11.33	-24.99	-8.20	-5.46	-18.10	-467.97	-767.78	-759.28	-476.46	49.74
3	78	152	12.27	-28.05	-2.72	-13.06	-19.49	53.96	-1486.48	-787.41	-645.12	-766.93
3	78	153	-0.86	-8.38	-5.55	-3.70	-3.65	587.96	-554.80	28.50	4.66	-571.26
3	78	154	8.53	-25.73	-9.77	-7.43	-17.10	-470.10	-800.82	-532.86	-738.06	129.67
3	78	155	24.50	-23.51	5.21	-4.22	23.53	638.50	-3671.11	-2422.85	-609.75	1954.83
3	78	156	7.14	-40.76	-34.34	0.72	16.32	-276.64	-1588.92	-1548.26	-317.30	227.38
3	78	157	52.12	-43.62	33.19	-24.68	38.13	1364.59	-3418.23	-560.65	-1493.00	2345.53
3	78	158	63.48	-42.27	52.93	-31.72	31.69	2192.29	-2510.46	1628.12	-1946.29	1528.03
3	78	159	76.26	-58.24	70.47	-52.45	27.31	1334.14	-2274.35	1299.89	-2240.10	-349.88
3	78	160	99.47	-46.63	99.31	-46.47	-4.76	372.22	-2310.07	256.46	-2194.30	-545.09
3	78	161	93.01	-52.01	79.46	-38.46	-42.21	1463.76	-2447.26	1383.37	-2366.86	-554.94
3	78	162	73.21	-47.77	48.94	-23.49	-48.45	2667.63	-2329.11	1842.96	-1504.44	-1854.88
3	78	163	54.81	-49.32	25.24	-19.75	-46.96	2229.00	-2991.48	41.72	-804.19	-2575.74
3	78	164	25.47	-29.01	2.73	-6.27	-26.87	1228.34	-2956.22	-1630.01	-97.87	-1946.99
3	78	165	0.59	-55.48	-47.76	-7.13	-19.32	73.21	-403.37	-401.41	71.25	-30.46
3	78	166	22.07	-54.25	-37.72	5.53	31.44	1013.19	-3053.04	-1742.26	-297.59	1900.47
3	78	167	12.59	-35.26	-35.24	12.57	-1.11	241.93	-2791.68	-2510.96	-38.79	879.08
3	78	168	85.90	-12.95	63.34	9.61	41.49	1465.55	-5379.14	-1099.03	-2814.57	3313.11
3	78	169	99.00	-26.88	86.80	-14.68	37.24	3455.60	-4061.36	3029.46	-3635.21	1738.31
3	78	170	146.13	-31.28	143.66	-28.81	20.78	1703.97	-2689.13	1698.97	-2684.14	-148.00
3	78	171	125.81	-43.66	124.12	-41.97	-16.81	3317.82	-1514.76	3162.09	-1359.03	-853.43
3	78	172	144.32	-37.91	131.05	-24.65	-47.34	2761.53	-1807.66	2521.25	-1567.38	-1019.88
3	78	173	106.52	-15.42	78.84	12.26	-51.08	4936.50	-2954.66	4177.53	-2195.69	-2326.61
3	78	174	93.96	-8.17	63.35	22.44	-46.79	2556.21	-4096.36	-7.64	-1532.50	-3237.73
3	78	175	18.50	-60.43	-42.36	0.44	-33.16	1940.48	-1652.82	-442.95	730.61	-1698.13
3	78	176	1.57	-44.47	-44.46	1.57	-0.54	1004.24	-1264.84	-1029.62	769.03	-691.66
3	78	177	25.19	-31.37	-3.06	-3.12	28.28	847.80	-3351.43	-3074.95	571.33	1041.41
3	78	178	6.68	-46.76	-26.23	-13.86	26.00	530.77	-2269.28	-2227.30	488.79	-340.27
3	78	179	34.92	-46.56	-15.18	3.53	39.65	-534.29	-9455.81	-5770.90	-4219.20	4392.78
3	78	180	17.09	-59.63	-16.14	-26.40	38.01	-4156.97	-8743.40	-7415.90	-5484.47	2079.96
3	78	181	-6.71	-81.41	-15.24	-72.88	23.75	-5791.17	-7385.68	-7318.42	-5858.43	320.49
3	78	182	-7.11	-12.45	-9.07	-10.49	-2.57	-4295.88	-6925.05	-6923.69	-4297.23	-59.67
3	78	183	70.93	-24.89	-15.03	61.06	-29.13	-3273.76	-6271.39	-6211.48	-3333.68	-419.54
3	78	184	39.34	-46.42	-19.13	12.05	-39.94	-1501.20	-6359.52	-5320.32	-2540.40	-1992.19
3	78	185	44.81	-39.85	-7.74	12.70	-41.08	1445.77	-7569.61	-4128.07	-1995.77	-4379.80
3	78	186	24.84	-30.54	-6.53	0.84	-27.44	1346.77	-2006.95	-1661.68	1001.50	-1019.18
3	78	187	9.88	-41.01	-20.66	-10.47	-24.93	247.52	-1597.37	-1525.53	175.68	356.90
3	78	188	47.68	-14.96	13.82	18.90	31.22	-2086.82	-4826.47	-4633.82	-2279.46	700.47
3	78	189	91.83	25.91	59.92	57.82	32.95	-2888.94	-5379.73	-5099.75	-3168.93	-786.76
3	78	190	8.06	-110.29	-88.16	-14.08	46.15	-2044.00	-5834.70	-5276.12	-2602.58	1343.65
3	78	191	4.21	-125.56	-100.87	-20.47	50.93	-3543.32	-1.118e+04	-1.091e+04	-3809.44	1400.40
3	78	192	24.11	-161.32	-149.84	12.63	44.69	-5716.11	-9903.58	-9731.79	-5887.90	830.57
3	78	193	22.95	-148.19	-147.45	22.21	11.18	-6163.44	-1.066e+04	-1.048e+04	-6344.28	883.14
3	78	194	16.76	-164.35	-159.87	12.28	-28.13	-4539.34	-8710.32	-8689.57	-4560.09	293.45
3	78	195	22.77	-108.28	-93.55	8.03	-41.40	-2347.66	-1.005e+04	-9970.59	-2430.43	-794.33
3	78	196	16.87	-100.53	-83.01	-0.66	-41.84	-771.75	-4705.18	-4126.88	-1350.05	-1392.94
3	78	197	41.28	-16.17	11.63	13.48	-28.71	-920.06	-3583.55	-3268.52	-1235.08	-860.13
3	78	198	78.11	21.01	50.93	48.19	-28.51	-2265.79	-4055.33	-3825.24	-2495.88	599.01
3	78	199	48.24	-26.64	2.51	19.09	36.51	-686.05	-2313.65	-1881.91	-1117.80	718.54
3	78	200	32.03	-17.52	26.54	-12.03	15.56	845.60	-1819.59	-1813.47	839.47	127.59
3	78	201	53.41	-55.66	-24.49	22.25	49.27	-1055.07	-4102.23	-2617.45	-2539.85	1523.09
3	78	202	50.42	-87.09	-57.61	20.94	56.43	-1545.15	-2470.90	-2251.07	-1764.98	393.94
3	78	203	34.37	-87.45	-77.15	24.07	33.89	-3943.40	-4253.42	-4249.86	-3946.96	-33.03
3	78	204	37.88	-86.22	-86.22	37.88	-0.18	-3701.10	-4904.88	-4323.81	-4282.16	601.53
3	78	205	47.81	-70.92	-64.25	41.14	-27.34	-3229.91	-4997.24	-4121.82	-4105.32	883.63

Progetto esecutivo

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	202 di 288

3	78	206	46.56	-73.54	-55.49	28.51	-42.91	-1282.12	-2089.76	-2062.43	-1309.45	-146.04
3	78	207	47.49	-50.84	-29.38	26.03	-40.61	-676.01	-3259.35	-2033.19	-1902.17	-1290.01
3	78	208	42.97	-22.75	1.26	18.95	-31.64	-323.38	-1850.15	-1436.09	-737.45	-678.77
3	78	209	22.42	-19.47	20.04	-17.09	-9.70	1353.19	-1022.52	-972.82	1303.49	-340.00
3	78	210	28.79	-11.18	-0.38	17.99	17.75	2555.28	1312.46	2230.66	1637.08	545.95
3	78	211	20.88	-7.25	4.90	8.72	13.94	700.43	230.28	641.90	288.81	155.22
3	78	212	55.81	-13.62	7.17	35.02	31.80	-230.00	-2590.23	-819.23	-2001.00	1021.54
3	78	213	66.71	-18.13	2.16	46.42	36.19	-1998.34	-3394.25	-2149.36	-3243.23	433.60
3	78	214	55.87	-13.05	-5.33	48.15	21.73	-1806.18	-3240.96	-1811.76	-3235.38	-89.30
3	78	215	62.25	-40.46	-40.43	62.23	1.73	1455.60	-1497.49	1453.53	-1495.42	78.14
3	78	216	54.70	-5.50	-0.29	49.49	-16.92	-1778.20	-3139.36	-1915.22	-3002.33	409.55
3	78	217	67.05	-9.38	3.86	53.81	-28.93	-2028.40	-3198.94	-2034.07	-3193.27	-81.30
3	78	218	46.50	-12.12	3.81	30.57	-26.08	-194.88	-2223.62	-691.58	-1726.92	-872.33
3	78	219	23.14	-11.01	-2.23	14.37	-14.92	2338.98	1208.69	2078.55	1469.12	-475.96
3	78	220	17.58	-5.98	4.83	6.77	-11.74	647.65	41.86	643.97	45.54	-47.06
3	78	221	13.66	-4.05	3.99	5.62	8.81	776.81	78.93	305.76	549.99	326.87
3	78	222	11.35	4.42e-02	5.57	5.83	5.65	961.57	-269.39	384.99	307.19	614.25
3	78	223	34.88	-8.62	-0.34	26.61	17.07	213.17	-1183.80	201.92	-1172.54	124.90
3	78	224	73.24	-11.33	-9.36	71.27	12.76	127.52	-3284.77	18.39	-3175.64	600.40
3	78	225	118.51	31.32	38.35	111.49	23.73	-1861.15	-3483.57	-1977.68	-3367.04	-418.90
3	78	226	82.26	-14.50	-14.46	82.22	2.00	561.73	-635.98	558.18	-632.42	65.17
3	78	227	102.94	25.28	30.67	97.54	-19.75	-1529.03	-2760.69	-1603.81	-2685.91	294.13
3	78	228	58.94	-11.88	-10.58	57.63	-9.53	186.38	-2451.70	149.61	-2414.93	-309.26
3	78	229	28.58	-7.53	9.60e-02	20.96	-14.74	15.98	-905.48	15.08	-904.58	-28.83
3	78	230	14.30	0.34	6.27	8.38	-6.90	486.51	-164.40	35.92	286.19	-300.44
3	78	231	7.52	-0.99	2.65	3.88	-4.21	718.26	-129.18	369.16	219.92	-417.10
3	134	133	4.18	-1.45	7.40e-03	2.72	-2.46	214.98	25.40	180.23	60.15	73.35
3	134	134	7.66	-8.15	-1.21	0.72	7.85	289.33	-473.05	-64.24	-119.48	-380.19
3	134	135	1.33	-4.64	-2.49	-0.82	2.86	562.52	-356.42	161.25	44.84	455.77
3	134	136	4.21	-6.68	-2.56	9.54e-02	5.28	125.61	-382.96	-152.14	-105.22	-253.20
3	134	137	7.61	-4.18	7.55	-4.11	0.87	-296.21	-1124.94	-299.07	-1122.08	48.55
3	134	138	8.87	-11.24	4.37	-6.74	8.38	-72.76	-1459.91	-261.13	-1971.55	475.19
3	134	139	-9.01	-19.34	-10.57	-17.78	3.69	480.32	-1952.37	474.38	-1946.43	-120.06
3	134	140	16.98	-12.66	15.31	-10.99	6.84	-540.80	-2180.91	-772.97	-1948.74	571.74
3	134	141	32.29	-12.51	28.76	-8.98	-12.07	-1093.67	-3279.00	-1295.85	-3076.82	633.21
3	134	142	14.17	-20.91	12.55	-19.29	7.37	-388.88	-2456.75	-432.44	-2413.19	296.95
3	134	143	-11.89	-39.23	-11.89	-39.23	3.64e-02	345.74	-1965.19	345.66	-1965.12	-12.97
3	134	144	0.60	-9.38	0.57	-9.35	0.60	579.85	-2502.22	579.83	-2502.20	8.46
3	134	145	32.83	-13.64	29.10	-9.91	12.63	-1106.13	-3292.99	-1314.65	-3084.47	-642.28
3	134	146	14.32	-21.07	13.22	-19.97	-6.14	-396.20	-2446.87	-434.95	-2408.13	-279.19
3	134	147	-8.98	-21.07	-10.41	-19.64	-3.90	470.37	-1918.46	463.31	-1971.39	129.68
3	134	148	16.59	-13.00	15.25	-11.66	-6.15	-520.75	-2171.60	-753.54	-1938.82	-574.54
3	134	149	6.29	-6.33	6.29	-6.33	-0.19	-230.12	-1039.35	-234.19	-1035.28	-57.25
3	134	150	8.25	-11.41	3.80	-6.95	-8.23	-66.54	-1431.12	-257.51	-1240.15	-473.42
3	134	151	5.82	-8.02	-1.27	-0.93	-6.92	227.88	-395.50	-77.66	-89.97	311.63
3	134	152	1.56	-4.98	-2.42	-1.00	-3.19	558.48	-342.59	127.84	88.05	-450.10
3	134	153	3.88	-1.15	0.89	1.83	2.48	195.96	45.85	144.65	97.16	-71.20
3	134	154	5.65	-6.59	-1.16	0.22	-6.08	176.86	-449.71	-177.18	-95.66	310.62
3	134	155	7.41	-1.93	2.24	3.24	4.64	-68.05	-2197.77	-1756.26	-509.56	863.35
3	134	156	-8.76	-17.58	-17.39	-8.95	1.27	430.02	-1052.57	-1051.60	429.04	37.96
3	134	157	13.59	-10.31	7.08	-3.79	10.64	-320.36	-2282.42	-1115.61	-1487.18	963.28
3	134	158	8.67	-8.92	7.01	-7.25	5.15	591.67	-2280.26	94.12	-1782.71	1086.91
3	134	159	19.66	-17.70	17.37	-15.40	8.96	-736.69	-2946.36	-808.82	-2874.23	392.65
3	134	160	24.63	-15.51	24.61	-15.48	1.01	-1350.73	-2913.42	-1350.77	-2913.38	7.59
3	134	161	19.19	-16.99	17.61	-15.41	-7.39	-735.25	-2944.09	-806.86	-2872.49	-391.20
3	134	162	9.18	-8.60	8.13	-7.56	-4.18	586.85	-2275.33	85.66	-1774.14	-1087.80
3	134	163	14.33	-10.39	7.99	-4.04	-10.80	-332.83	-2276.38	-1125.83	-1483.37	-955.19
3	134	164	8.32	-2.30	2.25	3.77	-5.25	-78.56	-2215.48	-1784.51	-509.54	-857.45
3	134	165	-7.25	-16.94	-16.45	-7.73	-2.11	367.79	-1139.12	-1138.66	367.34	-26.28
3	134	166	11.31	-16.83	-14.72	9.20	7.42	-155.07	-2685.60	-2333.77	-506.91	875.53
3	134	167	27.44	-9.61	-4.05	21.88	-13.23	-647.76	-3012.61	-2824.09	-836.28	640.54
3	134	168	7.57	-10.82	-4.21	0.95	8.82	102.25	-3595.71	-1711.42	-1782.04	1848.65
3	134	169	16.53	-8.55	9.54	-1.57	11.24	-1204.95	-3504.61	-1584.42	-3125.14	853.60
3	134	170	21.91	-15.99	19.45	-13.52	9.35	-1912.95	-3174.49	-1921.91	-3165.53	105.94
3	134	171	20.52	-14.88	20.49	-14.84	1.14	-2012.40	-3365.20	-2012.43	-3365.16	7.15
3	134	172	22.06	-14.73	20.65	-13.31	-7.06	-1909.42	-3177.78	-1918.17	-3169.03	-104.99
3	134	173	17.20	-7.24	12.04	-2.08	-9.98	-1215.09	-3495.75	-1600.73	-3110.11	-854.87
3	134	174	9.01	-10.45	-2.53	1.08	-9.56	88.21	-3595.11	-1724.96	-1781.94	-1841.44
3	134	175	11.88	-16.52	-14.07	9.43	-7.98	-163.01	-2700.08	-2351.80	-511.30	-873.11
3	134	176	26.86	-9.94	-4.37	21.30	13.18	-623.32	-3039.31	-2851.10	-811.52	-647.52
3	134	177	-0.82	-5.12	-4.74	-1.20	-1.22	805.78	-2388.75	-2364.98	782.00	274.55
3	134	178	-1.23	-34.50	-23.53	-12.20	15.64	633.14	-2177.53	-1876.09	331.71	-869.70
3	134	179	8.55	-11.87	-11.33	8.01	3.27	-1991.11	-6061.68	-4944.77	-3108.01	1816.31
3	134	180	0.89	-25.71	-17.59	-7.23	12.25	-4007.70	-6360.21	-6358.88	-4009.03	55.90
3	134	181	-2.56	-18.47	-15.08	-5.96	6.52	-4582.77	-6759.54	-6753.19	-4589.12	117.45
3	134	182	-8.48	-11.05	-9.05	-10.48	1.06	-4291.19	-6916.09	-6916.08	-4291.19	4.27
3	134	183	-4.34	-16.61	-15.11	-5.84	-4.02	-4586.12	-6761.67	-6755.97	-4591.82	-111.20

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	203 di 288

3	134	184	-0.85	-23.90	-17.66	-7.10	-10.25	-4003.03	-6362.83	-6360.54	-4005.31	-73.33
3	134	185	9.53	-12.78	-11.46	8.21	-5.26	-2000.12	-6047.08	-4946.90	-3100.29	-1800.55
3	134	186	-0.71	-5.18	-4.80	-1.10	1.26	816.15	-2386.32	-2362.73	792.56	-273.85
3	134	187	-1.08	-34.32	-23.29	-12.12	-15.66	651.70	-2194.35	-1873.93	331.28	899.59
3	134	188	10.96	-13.65	-12.56	9.87	5.06	-1023.17	-2709.82	-2699.84	-1033.15	-129.37
3	134	189	48.92	9.00	19.75	38.17	17.71	-1294.21	-3730.67	-3397.28	-1627.60	-837.34
3	134	190	10.25	-20.62	-17.94	7.58	8.68	-2362.20	-3539.08	-3536.49	-2364.79	-55.08
3	134	191	1.09	-30.83	-23.81	-5.93	13.22	-2905.45	-5247.26	-5244.55	-2908.17	-79.74
3	134	192	2.68	-40.44	-36.94	-0.81	11.77	-4155.71	-5171.91	-5168.44	-4159.19	-59.30
3	134	193	-4.89	-43.83	-43.80	-4.92	1.12	-4324.66	-5288.60	-5288.53	-4324.74	8.59
3	134	194	1.39	-40.30	-38.09	-0.82	-9.34	-4147.73	-5175.82	-5171.88	-4151.67	63.53
3	134	195	0.21	-31.83	-26.40	-5.22	-12.02	-2911.66	-5231.06	-5228.29	-2914.43	80.06
3	134	196	10.53	-22.65	-19.73	7.61	-9.40	-2350.27	-3523.68	-3519.98	-2353.96	65.77
3	134	197	11.02	-14.52	-13.21	9.71	-5.64	-1009.20	-2695.89	-2684.87	-1020.22	135.86
3	134	198	49.46	9.06	19.85	38.68	-17.87	-1319.97	-3714.00	-3381.70	-1652.27	827.72
3	134	199	21.04	-6.95	3.60	10.49	13.57	-654.27	-2042.63	-1923.88	-773.02	-388.28
3	134	200	1.19	-10.27	-0.32	-8.75	-3.88	530.55	-1316.78	-1305.09	518.86	146.47
3	134	201	14.56	-13.76	-4.91	5.72	13.13	-1448.21	-1900.51	-1466.19	-1882.54	-88.36
3	134	202	12.86	-21.15	-12.60	4.31	14.75	-409.99	-1583.08	-512.72	-1480.35	-331.60
3	134	203	3.88	-14.42	-13.00	2.46	4.90	-2010.18	-3469.13	-2029.40	-3449.92	-166.33
3	134	204	7.00	-11.56	-11.51	6.95	0.99	-2711.17	-3555.67	-2711.22	-3555.62	6.68
3	134	205	3.29	-14.07	-13.47	2.68	-3.19	-2012.02	-3466.17	-2032.04	-3446.15	169.43
3	134	206	12.10	-21.14	-13.77	4.73	-13.81	-393.19	-1580.13	-497.31	-1476.01	335.78
3	134	207	14.48	-14.21	-5.67	5.94	-13.12	-1426.82	-1899.99	-1448.70	-1878.12	99.37
3	134	208	21.25	-7.60	3.62	10.02	-14.06	-642.56	-2020.62	-1897.36	-765.83	393.28
3	134	209	-0.40	-11.08	-1.43	-10.05	3.16	590.51	-1237.78	-1228.32	581.05	-131.19
3	134	210	4.74	-7.34e-02	0.17	4.50	1.06	1310.77	803.12	1182.58	931.31	220.55
3	134	211	8.32e-02	-3.24	-2.04	-1.11	1.59	229.75	-379.47	210.01	-359.73	-107.87
3	134	212	10.59	-2.90	1.96	5.73	6.47	-153.56	-1676.60	-200.70	-1629.46	263.77
3	134	213	20.49	-0.12	8.98	11.39	10.23	-1051.63	-2498.14	-1082.87	-2466.90	-210.26
3	134	214	10.39	0.87	6.59	4.68	4.66	-587.37	-2892.29	-633.68	-2845.98	-323.40
3	134	215	19.85	-7.23	-7.21	19.84	0.60	1226.15	-1902.02	1226.14	-1902.00	6.93
3	134	216	9.31	2.11	6.18	5.23	-3.57	-579.06	-2899.79	-629.73	-2849.12	339.15
3	134	217	20.24	0.80	8.94	12.10	-9.60	-1065.66	-2499.05	-1098.16	-2466.56	213.36
3	134	218	10.89	-2.52	2.18	6.19	-6.40	-152.13	-1693.23	-199.26	-1646.10	-265.37
3	134	219	5.15	-0.29	5.16e-02	4.81	-1.31	1333.99	799.20	1223.17	910.02	-216.76
3	134	220	0.58	-4.45	-2.81	-1.07	-2.36	281.81	-412.05	240.47	-370.71	164.23
3	134	221	1.17	-2.12	-0.50	-0.45	-1.65	130.96	-384.28	-367.50	114.18	91.46
3	134	222	0.17	-1.33	-1.01	-0.15	-0.62	342.86	111.61	258.33	196.15	111.37
3	134	223	2.77	0.91	1.77	1.91	0.93	59.46	-1119.43	53.68	-1113.65	82.35
3	134	224	12.19	-8.51	-8.13	11.81	-2.78	460.32	-2406.18	450.59	-2396.44	166.75
3	134	225	44.38	16.15	29.37	31.16	14.09	-1004.92	-3249.19	-1181.80	-3072.31	-604.71
3	134	226	8.21	-11.28	-11.28	8.21	5.44e-02	185.76	-1465.36	185.74	-1465.35	-5.52
3	134	227	44.49	16.80	29.20	32.09	-13.77	-999.27	-3241.88	-1172.16	-3068.99	598.19
3	134	228	13.92	-8.54	-8.22	13.60	2.66	467.16	-2429.45	458.32	-2420.61	-159.83
3	134	229	4.12	2.38	2.59	3.91	-0.56	16.88	-1174.36	11.38	-1168.86	80.75
3	134	230	3.01	-2.15	-0.39	1.25	2.45	137.48	-399.64	-360.72	98.56	-139.24
3	134	231	0.61	-1.91	-1.80	0.50	0.52	358.03	93.96	287.87	164.12	-116.64
3	136	133	4.28	-1.49	2.24e-02	2.77	-2.54	218.94	24.28	182.11	61.12	76.24
3	136	134	7.83	-8.33	-1.23	0.74	8.02	297.16	-483.59	-62.97	-123.46	-389.20
3	136	135	1.37	-4.72	-2.47	-0.88	2.94	567.54	-375.70	154.18	37.65	468.00
3	136	136	4.39	-6.91	-2.59	7.28e-02	5.49	132.02	-395.85	-159.25	-104.57	-262.51
3	136	137	7.80	-4.34	7.72	-4.27	0.94	-304.58	-1148.18	-307.35	-1145.41	48.32
3	136	138	9.12	-11.54	4.51	-6.93	8.60	-73.22	-1491.68	-268.58	-1296.33	488.82
3	136	139	-9.23	-19.87	-10.79	-18.31	3.76	489.76	-1989.12	483.73	-1983.09	-122.09
3	136	140	17.35	-13.01	15.62	-11.28	7.04	-549.11	-2224.75	-786.92	-1986.93	584.76
3	136	141	32.90	-12.96	29.31	-9.38	-12.31	-1115.30	-3344.69	-1321.87	-3138.12	646.42
3	136	142	14.50	-21.45	12.83	-19.77	7.58	-397.38	-2503.67	-441.73	-2459.31	302.42
3	136	143	-12.12	-40.22	-12.12	-40.22	3.55e-02	354.26	-2007.26	354.18	-2007.17	-14.17
3	136	144	0.70	-9.72	0.66	-9.68	0.62	583.75	-2557.59	583.73	-2557.56	8.87
3	136	145	33.48	-14.13	29.68	-10.33	12.91	-1128.90	-3359.78	-1342.21	-3146.46	-656.03
3	136	146	14.67	-21.62	13.54	-20.49	-6.30	-404.81	-2493.24	-444.16	-2453.90	-283.94
3	136	147	-9.18	-21.66	-10.62	-20.22	-3.99	479.20	-1953.08	471.99	-1945.86	132.28
3	136	148	16.94	-13.35	15.55	-11.96	-6.33	-527.48	-2214.59	-766.48	-1975.60	-588.30
3	136	149	6.38	-6.58	6.38	-6.58	-0.19	-234.04	-1056.76	-238.15	-1052.65	-58.04
3	136	150	8.45	-11.70	3.88	-7.13	-8.43	-66.32	-1460.38	-264.30	-1262.40	-486.62
3	136	151	5.93	-8.17	-1.28	-0.95	-7.05	231.95	-401.03	-77.50	-91.59	316.41
3	136	152	1.63	-5.09	-2.41	-1.05	-3.29	564.89	-359.75	120.63	84.51	-461.96
3	136	153	3.99	-1.21	0.94	1.83	2.56	198.90	45.68	144.86	99.72	-73.22
3	136	154	5.92	-6.78	-1.08	0.22	-6.32	185.11	-464.43	-184.41	-94.90	321.67
3	136	155	7.68	-1.99	2.37	3.32	4.81	-69.26	-2244.60	-1791.67	-522.19	883.25
3	136	156	-8.84	-17.81	-17.61	-9.04	1.32	433.59	-1077.57	-1076.69	432.71	36.42
3	136	157	14.03	-10.58	7.31	-3.85	10.97	-322.88	-2332.70	-1138.83	-1516.75	986.99
3	136	158	9.02	-9.15	7.28	-7.41	5.34	601.94	-2333.44	92.87	-1824.36	1111.38
3	136	159	20.24	-18.11	17.90	-15.77	9.18	-747.89	-3002.68	-821.37	-2929.19	400.37
3	136	160	25.31	-15.88	25.28	-15.86	1.04	-1371.49	-2969.99	-1371.53	-2969.95	7.91
3	136	161	19.73	-17.37	18.11	-15.75	-7.59	-746.39	-2999.82	-819.43	-2926.78	-399.07

Progetto esecutivo

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	204 di 288

3	136	162	9.53	-8.81	8.43	-7.72	-4.34	598.29	-2327.47	84.94	-1814.12	-1112.85
3	136	163	14.82	-10.67	8.27	-4.12	-11.14	-334.52	-2325.95	-1148.54	-1511.92	-979.00
3	136	164	8.63	-2.37	2.39	3.87	-5.45	-79.59	-2262.69	-1820.91	-521.37	-877.09
3	136	165	-7.28	-17.18	-16.66	-7.79	-2.20	369.72	-1167.76	-1167.36	369.32	-24.81
3	136	166	11.66	-17.15	-14.94	9.45	7.66	-158.39	-2740.78	-2380.90	-518.27	894.34
3	136	167	28.02	-9.76	-4.06	22.32	-13.52	-660.36	-3075.65	-2882.59	-853.43	655.01
3	136	168	7.87	-11.04	-4.16	0.99	9.09	113.67	-3671.09	-1739.76	-1817.66	1891.98
3	136	169	17.12	-8.75	9.93	-1.56	11.59	-1213.90	-3576.63	-1600.07	-3190.46	873.66
3	136	170	22.64	-16.35	20.11	-13.81	9.62	-1937.91	-3234.61	-1947.06	-3225.45	108.57
3	136	171	21.23	-15.15	21.19	-15.11	1.17	-2039.74	-3428.85	-2039.78	-3428.81	7.19
3	136	172	22.81	-15.03	21.35	-13.58	-7.28	-1934.18	-3237.61	-1943.18	-3228.60	-107.95
3	136	173	17.81	-7.38	12.49	-2.06	-10.28	-1224.09	-3566.79	-1616.85	-3174.03	-875.13
3	136	174	9.36	-10.67	-2.45	1.14	-9.85	100.37	-3670.07	-1753.35	-1816.35	-1884.96
3	136	175	12.26	-16.83	-14.28	9.70	-8.23	-165.47	-2756.14	-2399.78	-521.84	-892.31
3	136	176	27.42	-10.13	-4.41	21.71	13.49	-635.48	-3104.11	-2911.63	-827.96	-661.90
3	136	177	-0.83	-5.14	-4.76	-1.21	-1.23	816.33	-2443.33	-2418.79	791.78	281.80
3	136	178	-1.18	-35.26	-23.96	-12.47	16.04	649.57	-2225.58	-1916.29	340.28	-890.84
3	136	179	8.76	-12.06	-11.49	8.20	3.38	-2019.42	-6197.65	-5045.46	-3171.61	1867.24
3	136	180	1.04	-26.30	-17.90	-7.35	12.61	-4088.48	-6488.47	-6487.10	-4089.85	57.27
3	136	181	-2.53	-18.87	-15.36	-6.04	6.71	-4675.15	-6896.69	-6890.09	-4681.76	120.98
3	136	182	-8.63	-11.23	-9.22	-10.64	1.09	-4378.23	-7057.09	-7057.08	-4378.23	4.39
3	136	183	-4.34	-16.95	-15.40	-5.89	-4.14	-4679.20	-6899.49	-6893.56	-4685.13	-114.56
3	136	184	-0.73	-24.44	-17.99	-7.18	-10.55	-4082.85	-6491.54	-6489.19	-4085.20	-75.19
3	136	185	9.82	-13.04	-11.66	8.45	-5.43	-2027.60	-6182.47	-5048.12	-3161.96	-1851.04
3	136	186	-0.70	-5.22	-4.83	-1.09	1.27	829.32	-2440.32	-2415.97	804.98	-281.09
3	136	187	-1.00	-35.04	-23.66	-12.37	-16.06	668.65	-2242.49	-1913.59	339.75	921.57
3	136	188	11.20	-13.88	-12.74	10.07	5.22	-1048.41	-2764.81	-2755.19	-1058.03	-128.13
3	136	189	49.99	9.30	20.30	38.99	18.07	-1321.75	-3809.22	-3467.65	-1663.32	-856.15
3	136	190	10.55	-21.11	-18.33	7.78	8.95	-2414.23	-3618.77	-3616.88	-2416.12	-47.64
3	136	191	1.19	-31.65	-24.43	-6.02	13.60	-2964.27	-5368.74	-5366.20	-2966.81	-78.13
3	136	192	2.85	-41.52	-37.93	-0.75	12.11	-4243.70	-5290.44	-5286.89	-4247.25	-60.85
3	136	193	-4.91	-44.98	-44.94	-4.95	1.15	-4415.44	-5408.83	-5408.75	-4415.52	8.99
3	136	194	1.53	-41.37	-39.11	-0.73	-9.60	-4235.01	-5294.46	-5290.39	-4239.08	65.56
3	136	195	0.31	-32.69	-27.11	-5.27	-12.37	-2969.67	-5352.09	-5349.49	-2972.27	78.63
3	136	196	10.85	-23.20	-20.18	7.83	-9.69	-2400.87	-3602.49	-3599.58	-2403.78	59.01
3	136	197	11.28	-14.78	-13.42	9.92	-5.81	-1033.07	-2750.86	-2740.14	-1043.78	135.26
3	136	198	50.56	9.34	20.38	39.51	-18.26	-1348.59	-3792.97	-3452.89	-1688.67	845.95
3	136	199	21.59	-7.16	3.67	10.76	13.93	-670.65	-2084.00	-1963.70	-790.95	-394.40
3	136	200	1.36	-10.44	-0.20	-8.88	-3.99	539.04	-1346.18	-1333.96	526.82	151.25
3	136	201	15.01	-14.18	-5.07	5.90	13.52	-1483.12	-1939.28	-1500.16	-1922.24	-86.51
3	136	202	13.23	-21.69	-12.93	4.47	15.14	-429.31	-1617.15	-532.80	-1513.67	-334.98
3	136	203	4.06	-14.85	-13.39	2.60	5.05	-2058.44	-3540.51	-2077.87	-3521.08	-168.58
3	136	204	7.27	-11.97	-11.92	7.22	1.01	-2772.16	-3629.39	-2772.21	-3629.34	6.77
3	136	205	3.47	-14.51	-13.89	2.86	-3.28	-2060.36	-3536.90	-2080.66	-3516.59	171.94
3	136	206	12.46	-21.69	-14.13	4.91	-14.17	-410.90	-1613.05	-516.19	-1507.76	339.83
3	136	207	14.91	-14.61	-5.83	6.12	-13.50	-1460.27	-1937.89	-1481.37	-1916.78	98.15
3	136	208	21.79	-7.80	3.71	10.28	-14.43	-657.98	-2061.40	-1936.61	-782.76	399.44
3	136	209	-0.29	-11.29	-1.35	-10.23	3.26	600.65	-1266.00	-1256.17	590.82	-135.14
3	136	210	4.87	-7.40e-02	0.19	4.61	1.12	1336.10	815.64	1203.61	948.12	226.72
3	136	211	6.31e-02	-3.33	-2.11	-1.16	1.63	232.66	-386.21	212.82	-366.37	-109.02
3	136	212	10.90	-2.99	2.01	5.90	6.67	-158.06	-1711.94	-206.61	-1663.38	270.35
3	136	213	21.02	-0.16	9.14	11.73	10.51	-1074.48	-2550.20	-1105.81	-2518.86	-212.74
3	136	214	10.68	0.90	6.67	4.91	4.81	-602.26	-2950.66	-649.25	-2903.67	-328.84
3	136	215	20.39	-7.42	-7.40	20.38	0.61	1246.94	-1941.45	1246.93	-1941.43	6.95
3	136	216	9.60	2.15	6.29	5.46	-3.70	-593.63	-2958.08	-645.03	-2906.68	344.81
3	136	217	20.78	0.77	9.09	12.45	-9.87	-1088.25	-2550.20	-1121.08	-2517.38	216.58
3	136	218	11.22	-2.63	2.19	6.40	-6.60	-155.86	-1727.56	-204.57	-1678.85	-272.37
3	136	219	5.30	-0.30	6.18e-02	4.95	-1.37	1361.16	813.66	1246.15	928.67	-223.03
3	136	220	0.60	-4.52	-2.83	-1.09	-2.41	286.63	-419.72	244.73	-377.82	166.86
3	136	221	1.14	-2.18	-0.53	-0.51	-1.66	132.25	-391.77	-374.61	115.08	93.29
3	136	222	0.19	-1.37	-1.01	-0.17	-0.66	349.03	114.14	262.87	200.30	113.20
3	136	223	2.85	0.97	1.81	2.00	0.94	60.07	-1142.79	54.32	-1137.03	-83.01
3	136	224	12.57	-8.68	-8.29	12.19	-2.83	469.60	-2454.96	459.66	-2445.02	170.21
3	136	225	45.37	16.58	29.96	31.99	14.36	-1024.51	-3313.83	-1205.27	-3133.07	-617.37
3	136	226	8.55	-11.52	-11.52	8.55	5.79e-02	190.04	-1494.26	190.03	-1494.24	-4.85
3	136	227	45.52	17.23	29.80	32.95	-14.06	-1019.53	-3306.98	-1196.37	-3130.13	610.95
3	136	228	14.35	-8.70	-8.38	14.03	2.71	476.30	-2477.72	467.24	-2468.66	-163.40
3	136	229	4.25	2.39	2.60	4.03	-0.60	18.92	-1195.88	13.33	-1190.30	82.16
3	136	230	3.02	-2.19	-0.40	1.23	2.48	139.24	-407.04	-368.37	100.57	-140.11
3	136	231	0.60	-1.94	-1.82	0.48	0.54	364.99	95.52	292.58	167.93	-119.45
3	138	133	4.23	-1.47	1.49e-02	2.74	-2.50	216.96	24.85	181.17	60.63	74.80
3	138	134	7.75	-8.24	-1.22	0.73	7.93	293.24	-478.32	-63.61	-121.47	-384.69
3	138	135	1.35	-4.68	-2.48	-0.85	2.90	565.02	-366.06	157.72	41.25	461.89
3	138	136	4.30	-6.79	-2.58	8.41e-02	5.38	128.81	-389.40	-155.69	-104.90	-257.86
3	138	137	7.70	-4.26	7.63	-4.19	0.90	-300.40	-1136.56	-303.21	-1133.75	48.44
3	138	138	9.00	-11.39	4.44	-6.84	8.49	-72.99	-1475.80	-264.85	-1283.94	482.01
3	138	139	-9.12	-19.61	-10.68	-18.05	3.73	485.04	-1970.74	479.05	-1964.76	-121.07

Progetto esecutivo

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
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3	138	140	17.17	-12.84	15.47	-11.14	6.94	-544.95	-2202.83	-779.95	-1967.84	578.25
3	138	141	32.59	-12.74	29.04	-9.18	-12.19	-1104.48	-3311.85	-1308.86	-3107.47	639.81
3	138	142	14.34	-21.18	12.69	-19.53	7.48	-393.13	-2480.21	-437.08	-2436.25	299.69
3	138	143	-12.00	-39.72	-12.00	-39.72	3.60e-02	350.00	-1986.23	349.92	-1986.15	-13.57
3	138	144	0.65	-9.55	0.62	-9.51	0.61	581.80	-2529.91	581.78	-2529.88	8.66
3	138	145	33.15	-13.88	29.39	-10.12	12.77	-1117.51	-3326.38	-1328.43	-3115.46	-649.16
3	138	146	14.50	-21.35	13.38	-20.23	-6.22	-400.51	-2470.06	-439.55	-2431.01	-281.56
3	138	147	-9.08	-21.36	-10.51	-19.93	-3.95	474.79	-1935.77	467.65	-1928.63	130.98
3	138	148	16.76	-13.18	15.40	-11.81	-6.24	-524.12	-2193.10	-760.01	-1957.21	-581.42
3	138	149	6.34	-6.46	6.33	-6.45	-0.19	-232.08	-1048.05	-236.17	-1043.96	-57.65
3	138	150	8.35	-11.55	3.84	-7.04	-8.33	-66.43	-1445.75	-260.91	-1251.27	-480.02
3	138	151	5.88	-8.09	-1.28	-0.94	-6.98	229.91	-398.27	-77.58	-90.78	314.02
3	138	152	1.60	-5.03	-2.41	-1.02	-3.24	561.68	-351.17	124.24	86.28	-456.03
3	138	153	3.94	-1.18	0.92	1.83	2.52	197.43	45.77	144.75	98.44	-72.21
3	138	154	5.79	-6.69	-1.12	0.22	-6.20	180.99	-457.06	-180.80	-95.28	316.15
3	138	155	7.54	-1.96	2.31	3.28	4.73	-68.65	-2221.18	-1773.97	-515.87	873.30
3	138	156	-8.80	-17.69	-17.50	-8.99	1.29	431.80	-1065.07	-1064.15	430.88	37.19
3	138	157	13.81	-10.44	7.19	-3.82	10.81	-321.62	-2307.56	-1127.22	-1501.96	975.13
3	138	158	8.84	-9.03	7.15	-7.33	5.24	596.81	-2306.85	93.50	-1803.54	1099.15
3	138	159	19.95	-17.90	17.64	-15.59	9.07	-742.29	-2974.52	-815.10	-2901.71	396.51
3	138	160	24.97	-15.69	24.95	-15.67	1.03	-1361.11	-2941.70	-1361.15	-2941.66	7.75
3	138	161	19.46	-17.18	17.86	-15.58	-7.49	-740.82	-2971.96	-813.15	-2899.63	-395.13
3	138	162	9.35	-8.71	8.28	-7.64	-4.26	592.57	-2301.40	85.30	-1794.13	-1100.32
3	138	163	14.58	-10.53	8.13	-4.08	-10.97	-333.67	-2301.16	-1137.19	-1497.65	-967.10
3	138	164	8.47	-2.33	2.32	3.82	-5.35	-79.08	-2239.09	-1802.71	-515.46	-867.27
3	138	165	-7.26	-17.06	-16.56	-7.76	-2.15	368.76	-1153.44	-1153.01	368.33	-25.55
3	138	166	11.48	-16.99	-14.83	9.32	7.54	-156.73	-2713.19	-2357.33	-512.59	884.93
3	138	167	27.73	-9.68	-4.05	22.10	-13.38	-654.06	-3044.13	-2853.34	-844.85	647.77
3	138	168	7.72	-10.93	-4.18	0.97	8.96	107.96	-3633.40	-1725.59	-1799.85	1870.31
3	138	169	16.82	-8.65	9.74	-1.56	11.42	-1209.43	-3540.61	-1592.24	-3157.80	863.63
3	138	170	22.28	-16.17	19.78	-13.67	9.48	-1925.43	-3204.55	-1934.49	-3195.49	107.26
3	138	171	20.88	-15.02	20.84	-14.98	1.15	-2026.07	-3397.02	-2026.10	-3396.98	7.17
3	138	172	22.43	-14.88	21.00	-13.45	-7.17	-1921.80	-3207.69	-1930.67	-3198.82	-106.47
3	138	173	17.51	-7.31	12.27	-2.07	-10.13	-1219.59	-3531.27	-1608.79	-3142.07	-865.00
3	138	174	9.18	-10.56	-2.49	1.11	-9.71	94.29	-3632.59	-1739.16	-1799.14	-1863.20
3	138	175	12.07	-16.68	-14.18	9.57	-8.10	-164.24	-2728.11	-2375.79	-516.57	-882.71
3	138	176	27.14	-10.03	-4.39	21.50	13.33	-629.40	-3071.71	-2881.37	-819.74	-654.71
3	138	177	-0.82	-5.13	-4.75	-1.21	-1.23	811.05	-2416.04	-2391.88	786.89	278.18
3	138	178	-1.20	-34.88	-23.75	-12.33	15.84	641.35	-2201.56	-1896.19	335.99	-880.27
3	138	179	8.66	-11.96	-11.41	8.10	3.33	-2005.27	-6129.66	-4995.12	-3139.81	1841.77
3	138	180	0.97	-26.01	-17.75	-7.29	12.43	-4048.09	-6424.34	-6422.99	-4049.44	56.58
3	138	181	-2.54	-18.67	-15.22	-6.00	6.62	-4628.96	-6828.12	-6821.64	-4635.44	119.21
3	138	182	-8.55	-11.14	-9.14	-10.56	1.08	-4334.71	-6986.59	-6986.58	-4334.71	4.33
3	138	183	-4.34	-16.78	-15.25	-5.86	-4.08	-4632.66	-6830.58	-6824.76	-4638.48	-112.88
3	138	184	-0.79	-24.17	-17.82	-7.14	-10.40	-4042.94	-6427.18	-6424.87	-4045.25	-74.26
3	138	185	9.68	-12.91	-11.56	8.33	-5.35	-2013.86	-6114.77	-4997.51	-3131.13	-1825.79
3	138	186	-0.70	-5.20	-4.81	-1.09	1.26	822.74	-2413.32	-2389.35	798.77	-277.47
3	138	187	-1.04	-34.68	-23.47	-12.24	-15.86	660.17	-2218.42	-1893.76	335.51	910.58
3	138	188	11.08	-13.76	-12.65	9.97	5.14	-1035.79	-2737.31	-2727.51	-1045.59	-128.75
3	138	189	49.46	9.15	20.03	38.58	17.89	-1307.98	-3769.95	-3432.46	-1645.46	-846.74
3	138	190	10.40	-20.86	-18.14	7.68	8.82	-2388.23	-3578.91	-3576.69	-2390.45	-51.36
3	138	191	1.14	-31.24	-24.12	-5.98	13.41	-2934.86	-5308.00	-5305.37	-2937.49	-78.93
3	138	192	2.76	-40.98	-37.43	-0.78	11.94	-4199.71	-5231.17	-5227.66	-4203.22	-60.07
3	138	193	-4.90	-44.40	-44.37	-4.93	1.13	-4370.05	-5348.72	-5348.64	-4370.13	8.79
3	138	194	1.46	-40.84	-38.60	-0.78	-9.47	-4191.37	-5235.14	-5231.13	-4195.37	64.54
3	138	195	0.26	-32.26	-26.75	-5.25	-12.19	-2940.67	-5291.57	-5288.89	-2943.35	79.35
3	138	196	10.69	-22.93	-19.95	7.72	-9.54	-2375.58	-3563.07	-3559.78	-2378.87	62.39
3	138	197	11.15	-14.65	-13.32	9.82	-5.72	-1021.14	-2723.37	-2712.51	-1032.00	135.56
3	138	198	50.01	9.20	20.12	39.09	-18.06	-1334.28	-3753.48	-3417.29	-1670.47	836.84
3	138	199	21.32	-7.06	3.64	10.63	13.75	-662.46	-2063.31	-1943.79	-781.99	-391.34
3	138	200	1.28	-10.35	-0.26	-8.81	-3.94	534.79	-1331.48	-1319.53	522.84	148.86
3	138	201	14.78	-13.97	-4.99	5.81	13.32	-1465.67	-1919.89	-1483.17	-1902.39	-87.43
3	138	202	13.04	-21.42	-12.77	4.39	14.94	-419.65	-1600.12	-522.76	-1497.01	-333.29
3	138	203	3.97	-14.64	-13.20	2.53	4.98	-2034.31	-3504.82	-2053.63	-3485.50	-167.45
3	138	204	7.14	-11.77	-11.71	7.08	1.00	-2741.67	-3592.53	-2741.72	-3592.48	6.72
3	138	205	3.38	-14.29	-13.68	2.77	-3.23	-2036.19	-3501.53	-2056.35	-3481.37	170.69
3	138	206	12.28	-21.41	-13.95	4.82	-13.99	-402.04	-1596.59	-506.75	-1491.89	337.81
3	138	207	14.69	-14.41	-5.75	6.03	-13.31	-1443.54	-1918.94	-1465.03	-1897.45	98.76
3	138	208	21.52	-7.70	3.67	10.15	-14.24	-650.27	-2041.01	-1916.98	-774.29	396.36
3	138	209	-0.34	-11.19	-1.39	-10.14	3.21	595.58	-1251.89	-1242.24	585.93	-133.17
3	138	210	4.81	-7.37e-02	0.18	4.55	1.09	1323.43	809.38	1193.10	939.72	223.64
3	138	211	7.31e-02	-3.28	-2.07	-1.14	1.61	231.20	-382.84	211.41	-363.05	-108.44
3	138	212	10.74	-2.94	1.98	5.82	6.57	-155.81	-1694.27	-203.66	-1646.42	267.06
3	138	213	20.76	-0.14	9.06	11.56	10.37	-1063.06	-2524.17	-1094.34	-2492.88	-211.50
3	138	214	10.54	0.89	6.63	4.80	4.74	-594.81	-2921.47	-641.46	-2874.83	-326.12
3	138	215	20.12	-7.32	-7.31	20.11	0.60	1236.55	-1921.73	1236.53	-1921.72	6.94
3	138	216	9.45	2.13	6.24	5.35	-3.63	-586.34	-2928.93	-637.38	-2877.90	341.98

Progetto esecutivo

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	206 di 288

3	138	217	20.51	0.78	9.02	12.27	-9.73	-1076.96	-2524.63	-1109.62	-2491.97	214.97
3	138	218	11.05	-2.58	2.18	6.29	-6.50	-153.99	-1710.40	-201.92	-1662.47	-268.87
3	138	219	5.23	-0.29	5.67e-02	4.88	-1.34	1347.57	806.43	1234.66	919.35	-219.89
3	138	220	0.59	-4.49	-2.82	-1.08	-2.38	284.22	-415.89	242.60	-374.27	165.54
3	138	221	1.16	-2.15	-0.52	-0.48	-1.66	131.61	-388.03	-371.05	114.63	92.37
3	138	222	0.18	-1.35	-1.01	-0.16	-0.64	345.95	112.88	260.60	198.23	112.28
3	138	223	2.81	0.94	1.79	1.96	0.93	59.76	-1131.11	54.00	-1125.34	-82.68
3	138	224	12.38	-8.60	-8.21	12.00	-2.81	464.96	-2430.57	455.13	-2420.73	168.48
3	138	225	44.88	16.36	29.67	31.57	14.22	-1014.72	-3281.51	-1193.54	-3102.69	-611.04
3	138	226	8.38	-11.40	-11.40	8.38	5.61e-02	187.90	-1479.81	187.88	-1479.79	-5.19
3	138	227	45.01	17.01	29.50	32.52	-13.91	-1009.40	-3274.43	-1184.27	-3099.56	604.57
3	138	228	14.14	-8.62	-8.30	13.82	2.69	471.73	-2453.59	462.78	-2444.63	-161.61
3	138	229	4.18	2.38	2.59	3.97	-0.58	17.90	-1185.12	12.36	-1179.58	81.46
3	138	230	3.02	-2.17	-0.39	1.24	2.46	138.36	-403.34	-364.55	99.57	-139.67
3	138	231	0.61	-1.93	-1.81	0.49	0.53	361.51	94.74	290.22	166.03	-118.05
3	140	133	4.18	-1.45	7.40e-03	2.72	-2.46	214.98	25.40	180.23	60.15	73.35
3	140	134	7.66	-8.15	-1.21	0.72	7.85	289.33	-473.05	-64.24	-119.48	-380.19
3	140	135	1.33	-4.64	-2.49	-0.82	2.86	562.52	-356.42	161.25	44.84	455.77
3	140	136	4.21	-6.68	-2.56	9.54e-02	5.28	125.61	-382.96	-152.14	-105.22	-253.20
3	140	137	7.61	-4.18	7.55	-4.11	0.87	-296.21	-1124.94	-299.07	-1122.08	48.55
3	140	138	8.87	-11.24	4.37	-6.74	8.38	-72.76	-1459.91	-261.13	-1271.55	475.19
3	140	139	-9.01	-19.34	-10.57	-17.78	3.69	480.32	-1952.37	474.38	-1946.43	-120.06
3	140	140	16.98	-12.66	15.31	-10.99	6.84	-540.80	-2180.91	-772.97	-1948.74	571.74
3	140	141	32.29	-12.51	28.76	-8.98	-12.07	-1093.67	-3279.00	-1295.85	-3076.82	633.21
3	140	142	14.17	-20.91	12.55	-19.29	7.37	-388.88	-2456.75	-432.44	-2413.19	296.95
3	140	143	-11.89	-39.23	-11.89	-39.23	3.64e-02	345.74	-1965.19	345.66	-1965.12	-12.97
3	140	144	0.60	-9.38	0.57	-9.35	0.60	579.85	-2502.22	579.83	-2502.20	8.46
3	140	145	32.83	-13.64	29.10	-9.91	12.63	-1106.13	-3292.99	-1314.65	-3084.47	-642.28
3	140	146	14.32	-21.07	13.22	-19.97	-6.14	-396.20	-2446.87	-434.95	-2408.13	-279.19
3	140	147	-8.98	-21.07	-10.41	-19.64	-3.90	470.37	-1918.46	463.31	-1911.39	129.68
3	140	148	16.59	-13.00	15.25	-11.66	-6.15	-520.75	-2171.60	-753.54	-1938.82	-574.54
3	140	149	6.29	-6.33	6.29	-6.33	-0.19	-230.12	-1039.35	-234.19	-1035.28	-57.25
3	140	150	8.25	-11.41	3.80	-6.95	-8.23	-66.54	-1431.12	-257.51	-1240.15	-473.42
3	140	151	5.82	-8.02	-1.27	-0.93	-6.92	227.88	-395.50	-77.66	-89.97	311.63
3	140	152	1.56	-4.98	-2.42	-1.00	-3.19	558.48	-342.59	127.84	88.05	-450.10
3	140	153	3.88	-1.15	0.89	1.83	2.48	195.96	45.85	144.65	97.16	-71.20
3	140	154	5.65	-6.59	-1.16	0.22	-6.08	176.86	-449.71	-177.18	-95.66	310.62
3	140	155	7.41	-1.93	2.24	3.24	4.64	-68.05	-2197.77	-1756.26	-509.56	863.35
3	140	156	-8.76	-17.58	-17.39	-8.95	1.27	430.02	-1052.57	-1051.60	429.04	37.96
3	140	157	13.59	-10.31	7.08	-3.79	10.64	-320.36	-2282.42	-1115.61	-1487.18	963.28
3	140	158	8.67	-8.92	7.01	-7.25	5.15	591.67	-2280.26	94.12	-1782.71	1086.91
3	140	159	19.66	-17.70	17.37	-15.40	8.96	-736.69	-2946.36	-808.82	-2874.23	392.65
3	140	160	24.63	-15.51	24.61	-15.48	1.01	-1350.73	-2913.42	-1350.77	-2913.38	7.59
3	140	161	19.19	-16.99	17.61	-15.41	-7.39	-735.25	-2944.09	-806.86	-2872.49	-391.20
3	140	162	9.18	-8.60	8.13	-7.56	-4.18	586.85	-2275.33	85.66	-1774.14	-1087.80
3	140	163	14.33	-10.39	7.99	-4.04	-10.80	-332.83	-2276.38	-1125.83	-1483.37	-955.19
3	140	164	8.32	-2.30	2.25	3.77	-5.25	-78.56	-2215.48	-1784.51	-509.54	-857.45
3	140	165	-7.25	-16.94	-16.45	-7.73	-2.11	367.79	-1139.12	-1138.66	367.34	-26.28
3	140	166	11.31	-16.83	-14.72	9.20	7.42	-155.07	-2685.60	-2333.77	-506.91	875.53
3	140	167	27.44	-9.61	-4.05	21.88	-13.23	-647.76	-3012.61	-2824.09	-836.28	640.54
3	140	168	7.57	-10.82	-4.21	0.95	8.82	102.25	-3595.71	-1711.42	-1782.04	1848.65
3	140	169	16.53	-8.55	9.54	-1.57	11.24	-1204.95	-3504.61	-1584.42	-3125.14	853.60
3	140	170	21.91	-15.99	19.45	-13.52	9.35	-1912.95	-3174.49	-1921.91	-3165.53	105.94
3	140	171	20.52	-14.88	20.49	-14.84	1.14	-2012.40	-3365.20	-2012.43	-3365.16	7.15
3	140	172	22.06	-14.73	20.65	-13.31	-7.06	-1909.42	-3177.78	-1918.17	-3169.03	-104.99
3	140	173	17.20	-7.24	12.04	-2.08	-9.98	-1215.09	-3495.75	-1600.73	-3110.11	-854.87
3	140	174	9.01	-10.45	-2.53	1.08	-9.56	88.21	-3595.11	-1724.96	-1781.94	-1841.44
3	140	175	11.88	-16.52	-14.07	9.43	-7.98	-163.01	-2700.08	-2351.80	-511.30	-873.11
3	140	176	26.86	-9.94	-4.37	21.30	13.18	-623.32	-3039.31	-2851.10	-811.52	-647.52
3	140	177	-0.82	-5.12	-4.74	-1.20	-1.22	805.78	-2388.75	-2364.98	782.00	274.55
3	140	178	-1.23	-34.50	-23.53	-12.20	15.64	633.14	-2177.53	-1876.09	331.71	-869.70
3	140	179	8.55	-11.87	-11.33	8.01	3.27	-1991.11	-6061.68	-4944.77	-3108.01	1816.31
3	140	180	0.89	-25.71	-17.59	-7.23	12.25	-4007.70	-6360.21	-6358.88	-4009.03	55.90
3	140	181	-2.56	-18.47	-15.08	-5.96	6.52	-4582.77	-6759.54	-6753.19	-4589.12	117.45
3	140	182	-8.48	-11.05	-9.05	-10.48	1.06	-4291.19	-6916.09	-6916.08	-4291.19	4.27
3	140	183	-4.34	-16.61	-15.11	-5.84	-4.02	-4586.12	-6761.67	-6755.97	-4591.82	-111.20
3	140	184	-0.85	-23.90	-17.66	-7.10	-10.25	-4003.03	-6362.83	-6360.54	-4005.31	-73.33
3	140	185	9.53	-12.78	-11.46	8.21	-5.26	-2000.12	-6047.08	-4946.90	-3100.29	-1800.55
3	140	186	-0.71	-5.18	-4.80	-1.10	1.26	816.15	-2386.32	-2362.73	792.56	-273.85
3	140	187	-1.08	-34.32	-23.29	-12.12	-15.66	651.70	-2194.35	-1873.93	331.28	899.59
3	140	188	10.96	-13.65	-12.56	9.87	5.06	-1023.17	-2709.82	-2699.84	-1033.15	-129.37
3	140	189	48.92	9.00	19.75	38.17	17.71	-1294.21	-3730.67	-3397.28	-1627.60	-837.34
3	140	190	10.25	-20.62	-17.94	7.58	8.68	-2362.20	-3539.08	-3536.49	-2364.79	-55.08
3	140	191	1.09	-30.83	-23.81	-5.93	13.22	-2905.45	-5247.26	-5244.55	-2908.17	-79.74
3	140	192	2.68	-40.44	-36.94	-0.81	11.77	-4155.71	-5171.91	-5168.44	-4159.19	-59.30
3	140	193	-4.89	-43.83	-43.80	-4.92	1.12	-4324.66	-5288.60	-5288.53	-4324.74	8.59
3	140	194	1.39	-40.30	-38.09	-0.82	-9.34	-4147.73	-5175.82	-5171.88	-4151.67	63.53

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	207 di 288

3	140	195	0.21	-31.83	-26.40	-5.22	-12.02	-2911.66	-5231.06	-5228.29	-2914.43	80.06
3	140	196	10.53	-22.65	-19.73	7.61	-9.40	-2350.27	-3523.68	-3519.98	-2353.96	65.77
3	140	197	11.02	-14.52	-13.21	9.71	-5.64	-1009.20	-2695.89	-2684.87	-1020.22	135.86
3	140	198	49.46	9.06	19.85	38.68	-17.87	-1319.97	-3714.00	-3381.70	-1652.27	827.72
3	140	199	21.04	-6.95	3.60	10.49	13.57	-654.27	-2042.63	-1923.88	-773.02	-388.28
3	140	200	1.19	-10.27	-0.32	-8.75	-3.88	530.55	-1316.78	-1305.09	518.86	146.47
3	140	201	14.56	-13.76	-4.91	5.72	13.13	-1448.21	-1900.51	-1466.19	-1882.54	-88.36
3	140	202	12.86	-21.15	-12.60	4.31	14.75	-409.99	-1583.08	-512.72	-1480.35	-331.60
3	140	203	3.88	-14.42	-13.00	2.46	4.90	-2010.18	-3469.13	-2029.40	-3449.92	-166.33
3	140	204	7.00	-11.56	-11.51	6.95	0.99	-2711.17	-3555.67	-2711.22	-3555.62	6.68
3	140	205	3.29	-14.07	-13.47	2.68	-3.19	-2012.02	-3466.17	-2032.04	-3446.15	169.43
3	140	206	12.10	-21.14	-13.77	4.73	-13.81	-393.19	-1580.13	-497.31	-1476.01	335.78
3	140	207	14.48	-14.21	-5.67	5.94	-13.12	-1426.82	-1899.99	-1448.70	-1878.12	99.37
3	140	208	21.25	-7.60	3.62	10.02	-14.06	-642.56	-2020.62	-1897.36	-765.83	393.28
3	140	209	-0.40	-11.08	-1.43	-10.05	3.16	590.51	-1237.78	-1228.32	581.05	-131.19
3	140	210	4.74	-7.34e-02	0.17	4.50	1.06	1310.77	803.12	1182.58	931.31	220.55
3	140	211	8.32e-02	-3.24	-2.04	-1.11	1.59	229.75	-379.47	210.01	-359.73	-107.87
3	140	212	10.59	-2.90	1.96	5.73	6.47	-153.56	-1676.60	-200.70	-1629.46	263.77
3	140	213	20.49	-0.12	8.98	11.39	10.23	-1051.63	-2498.14	-1082.87	-2466.90	-210.26
3	140	214	10.39	0.87	6.59	4.68	4.66	-587.37	-2892.29	-633.68	-2845.98	-323.40
3	140	215	19.85	-7.23	-7.21	19.84	0.60	1226.15	-1902.02	1226.14	-1902.00	6.93
3	140	216	9.31	2.11	6.18	5.23	-3.57	-579.06	-2899.79	-629.73	-2849.12	339.15
3	140	217	20.24	0.80	8.94	12.10	-9.60	-1065.66	-2499.05	-1098.16	-2466.56	213.36
3	140	218	10.89	-2.52	2.18	6.19	-6.40	-152.13	-1693.23	-199.26	-1646.10	-265.37
3	140	219	5.15	-0.29	5.16e-02	4.81	-1.31	1333.99	799.20	1223.17	910.02	-216.76
3	140	220	0.58	-4.45	-2.81	-1.07	-2.36	281.81	-412.05	240.47	-370.71	164.23
3	140	221	1.17	-2.12	-0.50	-0.45	-1.65	130.96	-384.28	-367.50	114.18	91.46
3	140	222	0.17	-1.33	-1.01	-0.15	-0.62	342.86	111.61	258.33	196.15	111.37
3	140	223	2.77	0.91	1.77	1.91	0.93	59.46	-1119.43	53.68	-1113.65	-82.35
3	140	224	12.19	-8.51	-8.13	11.81	-2.78	460.32	-2406.18	450.59	-2396.44	166.75
3	140	225	44.38	16.15	29.37	31.16	14.09	-1004.92	-3249.19	-1181.80	-3072.31	-604.71
3	140	226	8.21	-11.28	-11.28	8.21	5.44e-02	185.76	-1465.36	185.74	-1465.35	-5.52
3	140	227	44.49	16.80	29.20	32.09	-13.77	-999.27	-3241.88	-1172.16	-3068.99	598.19
3	140	228	13.92	-8.54	-8.22	13.60	2.66	467.16	-2429.45	458.32	-2420.61	-159.83
3	140	229	4.12	2.38	2.59	3.91	-0.56	16.88	-1174.36	11.38	-1168.86	80.75
3	140	230	3.01	-2.15	-0.39	1.25	2.45	137.48	-399.64	-360.72	98.56	-139.24
3	140	231	0.61	-1.91	-1.80	0.50	0.52	358.03	93.96	287.87	164.12	-116.64
M_G			N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
			352.78	-369.03	-359.75	-235.64	-124.36	-2.122e+04	-2.029e+04	-9761.63	-8615.68	
					349.35	244.89	124.66	1.523e+04	1.381e+04	3426.18	8635.41	

V stab	(ASTE) verifica come da par. 4.2.4.1.3.1 per punto (4.2.41)		
V stab	(TRAVI E PILASTRI) verifica come da par. 4.2.4.1.3 per punti (C4.2.32) o (C4.2.36) (membrature inflesse e compresse senza/con presenza di instabilità flessio-torsionale)		
BetaxL	B22xL	B33xL	lunghezze libere di inflessione (se indicato riferiti al piano di normale 22 o 33 rispettivamente)
Snellezza	snellezza massima		
Classe	classe del profilo		
Chi mn	coefficiente di riduzione (della capacità) per la modalità di instabilità pertinente		
Rif. cmb	combinazioni in cui si sono rispettivamente attinti i valori di verifica più elevati		
V flst	(TRAVI E PILASTRI) verifica di stabilità come da par. 4.2.4.1.3.2 per punto (4.2.48)		
B1-1 x L	Beta 1-1 x L: interasse tra i ritegni torsionali		
Chi LT	coefficiente di riduzione (della capacità) per la modalità di instabilità flessio-torsionale		
Snell adim	Valore della snellezza adimensionale, utilizzato per il controllo previsto al par. 7.5.5		
v.Omeg	Valore del rapporto capacità/domanda per l'azione di interesse (momento per travi e azione assiale per aste) utilizzato per l'amplificazione delle azioni		
f.Om. N	Fattore di amplificazione delle azioni assiali per travi e colonne (prodotto di 1.1 x Omega x gamma rd materiale); utilizzato come specificato al par. 7.5.5		
f.Om. T	Fattore di amplificazione delle azioni (assiali, flettenti e taglianti) per colonne (prodotto di 1.1 x Omega x gamma rd materiale); utilizzato come specificato al par. 7.5.4		
V.7.5.4 M Ed	Verifica come prevista al punto 7.5.4 e valore dell'azione flettente		
V.7.5.5 N Ed	Verifica come prevista al punto 7.5.5 e valore dell'azione assiale		
V.7.5.6 V Ed,G V Ed,M	Verifica come prevista al punto 7.5.6 e valore dei tagli dovuti ai carichi e alla capacità		
V.7.5.10 V Ed	Verifica come prevista al punto 7.5.10 e valore dell'azione di taglio		
sovr. Xi (Xf, Yi, Yf)	Valore della sovreresistenza come prevista al par. 7.5.4.2 (i valori non sono normalizzati pertanto saranno maggiori uguali a gamma rd in base alla classe di duttilità)		

Nel caso in cui λ_{S} sia minore di 0,2, oppure nel caso in cui la sollecitazione di calcolo N_{Ed} sia inferiore a $0,04 N_{cr}$, gli effetti legati ai fenomeni di instabilità sono trascurati, come da paragrafo 4.2.4.1.3.1

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
56	VERIFICA DI STABILITA' DI ASTE COMPRESSE IN ACCIAIO - METODO OMEGA
57	LUCE LIBERA DI TRAVI E ASTE IN ACCIAIO
58	LUCE LIBERA DI COLONNE IN ACCIAIO
59	SVERGOLAMENTO DI TRAVI IN ACCIAIO
61	ACCIAIO D.M. 2008
63	GERARCHIA RESISTENZE STRUTTURE IN ACCIAIO
64	STABILITA' DI ASTE COMPOSTE IN ACCIAIO
73	VALUTAZIONE EFFETTO P-δ SU PILASTRATA
74	VALUTAZIONE EFFETTO P-δ SU TELAIO 3D

Trave	Stato	Note	V/V T	V N/M	V stab	Cl.LamS 22	LamS 33	Snell.	Chi mn	V flstLamS LT	Chi LT	Rif. cmb
11	ok	s=7,m=13	0.03	0.48		1						58,55,0,0
12	ok	s=8,m=13	5.44e-03	0.50		1						58,58,0,0
13	ok	s=7,m=13	0.02	0.36	0.34	1	1.3	1.3	99.3	0.47		58,58,58,0
14	ok	s=8,m=13	0.03	0.60	0.74	1	1.1	1.1	84.9	0.59		58,58,56,0
15	ok	s=6,m=13	0.02	0.10		3						58,58,0,0
16	ok	s=6,m=13	0.02	0.13		3						58,62,0,0
17	ok	s=7,m=13	0.02	0.59	0.85	1	1.3	1.3	99.3	0.47		58,55,57,0
18	ok	s=8,m=13	0.01	0.52		1						58,68,0,0
19	ok	s=8,m=13	0.03	0.37		1						58,58,0,0
20	ok	s=6,m=13	8.42e-03	0.09		3						62,50,0,0
21	ok	s=6,m=13	9.12e-03	0.13		3						58,2,0,0
24	ok	s=7,m=13	0.03	0.47		1						58,58,0,0
26	ok	s=8,m=13	9.47e-03	0.46		1						56,2,0,0
27	ok	s=7,m=13	0.01	0.30	0.32	1	1.3	1.3	99.3	0.47		56,57,58,0
28	ok	s=8,m=13	0.02	0.49	0.60	1	1.1	1.1	84.9	0.59		56,56,56,0
29	ok	s=6,m=13	6.86e-03	0.14		3						58,54,0,0
30	ok	s=6,m=13	7.50e-03	0.18		3						56,2,0,0
31	ok	s=7,m=13	0.02	0.49	0.70	1	1.3	1.3	99.3	0.47		56,56,58,0
32	ok	s=8,m=13	0.01	0.46		1						58,2,0,0
33	ok	s=8,m=13	0.02	0.31	0.28	1	1.1	1.1	84.9	0.59		56,56,56,0
34	ok	s=6,m=13	6.82e-03	0.13		3						56,64,0,0
35	ok	s=6,m=13	6.96e-03	0.18		3						57,2,0,0
38	ok	s=8,m=13	8.19e-03	0.43		1						56,2,0,0

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	210 di 288

39	ok s=7,m=13	0.01	0.25	0.28	1	1.3	1.3	99.3	0.47	56,56,57,0
40	ok s=8,m=13	0.02	0.40	0.49	1	1.1	1.1	84.9	0.59	56,56,55,0
41	ok s=6,m=13	7.05e-03	0.21		3					56,54,0,0
42	ok s=6,m=13	6.36e-03	0.18	0.20	3	0.5	0.2	34.7	0.90	56,2,2,0
43	ok s=7,m=13	0.01	0.39	0.55	1	1.3	1.3	99.3	0.47	56,56,57,0
44	ok s=8,m=13	8.63e-03	0.43		1					58,2,0,0
45	ok s=8,m=13	0.01	0.26	0.27	1	1.1	1.1	84.9	0.59	56,56,56,0
46	ok s=6,m=13	6.45e-03	0.21		3					2,64,0,0
47	ok s=6,m=13	5.97e-03	0.19	0.20	3	0.5	0.2	34.7	0.90	56,2,2,0
50	ok s=8,m=13	5.75e-03	0.41		1					2,2,0,0
51	ok s=7,m=13	6.01e-03	0.16	0.23	1	1.3	1.3	99.3	0.47	38,42,42,0
52	ok s=8,m=13	0.01	0.30	0.37	1	1.1	1.1	84.9	0.59	58,55,55,0
53	ok s=6,m=13	0.01	0.22		3					56,54,0,0
54	ok s=6,m=13	0.01	0.27	0.32	3	0.5	0.2	34.7	0.90	56,2,2,0
55	ok s=7,m=13	5.85e-03	0.27	0.42	1	1.3	1.3	99.3	0.47	54,56,58,0
56	ok s=8,m=13	5.73e-03	0.42		1					2,2,0,0
57	ok s=8,m=13	0.01	0.20	0.23	1	1.1	1.1	84.9	0.59	58,56,56,0
58	ok s=6,m=13	0.01	0.22		3					56,56,0,0
59	ok s=6,m=13	0.01	0.27	0.33	3	0.5	0.2	34.7	0.90	56,2,2,0
62	ok s=8,m=13	8.79e-03	0.39		1					56,2,0,0
63	ok s=7,m=13	5.12e-03	0.13	0.20	1	1.3	1.3	99.3	0.47	38,40,41,0
64	ok s=8,m=13	5.75e-03	0.22	0.29	1	1.1	1.1	84.9	0.59	65,67,67,0
65	ok s=6,m=13	6.03e-03	0.28		3					2,54,0,0
66	ok s=6,m=13	2.30e-03	0.30	0.36	3	0.5	0.2	34.7	0.90	56,2,2,0
67	ok s=7,m=13	4.99e-03	0.23	0.35	1	1.3	1.3	99.3	0.47	38,56,57,0
68	ok s=8,m=13	7.51e-03	0.40		1					56,2,0,0
69	ok s=8,m=13	7.87e-03	0.14	0.17	1	1.1	1.1	84.9	0.59	56,40,40,0
70	ok s=6,m=13	5.91e-03	0.29		3					2,56,0,0
71	ok s=6,m=13	3.62e-03	0.30	0.37	3	0.5	0.2	34.7	0.90	56,2,2,0
74	ok s=8,m=13	7.64e-03	0.36		1					56,2,0,0
75	ok s=7,m=13	4.36e-03	0.12	0.19	1	1.3	1.3	99.3	0.47	38,66,41,0
76	ok s=8,m=13	6.30e-03	0.18	0.24	1	1.1	1.1	84.9	0.59	64,67,67,0
77	ok s=6,m=13	3.01e-03	0.32		3					56,54,0,0
78	ok s=6,m=13	2.78e-03	0.34	0.42	3	0.5	0.2	34.7	0.90	2,2,2,0
79	ok s=7,m=13	4.24e-03	0.19	0.30	1	1.3	1.3	99.3	0.47	38,55,58,0
80	ok s=8,m=13	6.73e-03	0.36		1					56,2,0,0
81	ok s=8,m=13	6.24e-03	0.12	0.15	1	1.1	1.1	84.9	0.59	64,40,40,0
82	ok s=6,m=13	3.17e-03	0.33		3					56,56,0,0
83	ok s=6,m=13	3.03e-03	0.34	0.42	3	0.5	0.2	34.7	0.90	56,2,2,0
86	ok s=8,m=13	6.48e-03	0.32		1					56,2,0,0
87	ok s=7,m=13	3.69e-03	0.13	0.19	1	1.3	1.3	99.3	0.47	38,50,41,0
88	ok s=8,m=13	5.66e-03	0.16	0.19	1	1.1	1.1	84.9	0.59	48,62,67,0
89	ok s=6,m=13	3.13e-03	0.36		3					56,54,0,0
90	ok s=6,m=13	2.77e-03	0.38	0.46	3	0.5	0.2	34.7	0.90	56,2,2,0
91	ok s=7,m=13	3.61e-03	0.16	0.28	1	1.3	1.3	99.3	0.47	38,58,58,0
92	ok s=8,m=13	5.81e-03	0.32		1					56,2,0,0
93	ok s=8,m=13	5.78e-03	0.10	0.14	1	1.1	1.1	84.9	0.59	48,65,40,0
94	ok s=6,m=13	3.32e-03	0.37		3					56,56,0,0
95	ok s=6,m=13	3.03e-03	0.38	0.46	3	0.5	0.2	34.7	0.90	56,2,2,0
98	ok s=8,m=13	5.57e-03	0.29		1					56,2,0,0
99	ok s=7,m=13	3.91e-03	0.14	0.19	1	1.3	1.3	99.3	0.47	66,50,41,0
100	ok s=8,m=13	5.28e-03	0.15	0.17	1	1.1	1.1	84.9	0.59	48,62,67,0
101	ok s=6,m=13	3.15e-03	0.39		3					56,54,0,0
102	ok s=6,m=13	2.85e-03	0.41	0.50	3	0.5	0.2	34.7	0.90	56,2,2,0
103	ok s=7,m=13	3.59e-03	0.16	0.27	1	1.3	1.3	99.3	0.47	66,58,62,0
104	ok s=8,m=13	4.93e-03	0.28		1					56,2,0,0
105	ok s=8,m=13	5.32e-03	0.11	0.14	1	1.1	1.1	84.9	0.59	48,49,40,0
106	ok s=6,m=13	3.34e-03	0.40		3					56,56,0,0
107	ok s=6,m=13	3.06e-03	0.41	0.50	3	0.5	0.2	34.7	0.90	56,2,2,0
110	ok s=8,m=13	4.76e-03	0.26		1					56,60,0,0
111	ok s=7,m=13	4.51e-03	0.14	0.18	1	1.3	1.3	99.3	0.47	54,50,41,0
112	ok s=8,m=13	4.98e-03	0.15	0.16	1	1.1	1.1	84.9	0.59	48,62,67,0
113	ok s=6,m=13	3.17e-03	0.42		3					56,62,0,0
114	ok s=6,m=13	2.89e-03	0.44	0.54	3	0.5	0.2	34.7	0.90	56,2,2,0
115	ok s=7,m=13	4.31e-03	0.16	0.25	1	1.3	1.3	99.3	0.47	54,67,62,0
116	ok s=8,m=13	4.17e-03	0.26		1					56,66,0,0
117	ok s=8,m=13	5.00e-03	0.11	0.14	1	1.1	1.1	84.9	0.59	48,48,40,0
118	ok s=6,m=13	3.33e-03	0.43		3					56,56,0,0
119	ok s=6,m=13	3.06e-03	0.43	0.53	3	0.5	0.2	34.7	0.90	56,2,2,0
122	ok s=8,m=13	4.07e-03	0.24		1					56,60,0,0
123	ok s=7,m=13	4.93e-03	0.14	0.17	1	1.3	1.3	99.3	0.47	60,49,41,0
124	ok s=8,m=13	5.28e-03	0.15	0.14	1	1.1	1.1	84.9	0.59	54,62,67,0
125	ok s=6,m=13	3.16e-03	0.44		3					56,54,0,0
126	ok s=6,m=13	2.90e-03	0.47	0.57	3	0.5	0.2	34.7	0.90	56,2,2,0
127	ok s=7,m=13	4.80e-03	0.15	0.22	1	1.3	1.3	99.3	0.47	54,67,46,0
128	ok s=8,m=13	4.62e-03	0.24		1					54,66,0,0
129	ok s=8,m=13	5.44e-03	0.12	0.15	1	1.1	1.1	84.9	0.59	54,48,40,0

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	211 di 288

130	ok s=6,m=13 3.29e-03	0.45		3						56,56,0,0
131	ok s=6,m=13 3.03e-03	0.45	0.56	3	0.5	0.2	34.7	0.90		56,2,2,0
134	ok s=8,m=13 4.79e-03	0.22		1						59,60,0,0
135	ok s=7,m=13 5.52e-03	0.13	0.16	1	1.3	1.3	99.3	0.47		60,41,41,0
136	ok s=8,m=13 5.71e-03	0.14	0.14	1	1.1	1.1	84.9	0.59		54,62,51,0
137	ok s=6,m=13 3.12e-03	0.46		3						56,54,0,0
138	ok s=6,m=13 2.87e-03	0.49	0.60	3	0.5	0.2	34.7	0.90		56,2,2,0
139	ok s=7,m=13 5.08e-03	0.15	0.20	1	1.3	1.3	99.3	0.47		59,52,46,0
140	ok s=8,m=13 4.92e-03	0.21		1						54,58,0,0
141	ok s=8,m=13 5.95e-03	0.12	0.15	1	1.1	1.1	84.9	0.59		60,48,40,0
142	ok s=6,m=13 3.22e-03	0.47		3						56,56,0,0
143	ok s=6,m=13 2.97e-03	0.47	0.58	3	0.5	0.2	34.7	0.90		56,2,2,0
146	ok s=8,m=13 5.46e-03	0.20		1						60,68,0,0
147	ok s=7,m=13 6.03e-03	0.13	0.14	1	1.3	1.3	99.3	0.47		56,40,41,0
148	ok s=8,m=13 6.10e-03	0.13	0.14	1	1.1	1.1	84.9	0.59		60,46,51,0
149	ok s=6,m=13 3.05e-03	0.48		3						56,54,0,0
150	ok s=6,m=13 2.81e-03	0.50	0.62	3	0.5	0.2	34.7	0.90		56,2,2,0
151	ok s=7,m=13 5.63e-03	0.15	0.19	1	1.3	1.3	99.3	0.47		60,52,46,0
152	ok s=8,m=13 5.02e-03	0.18		1						56,58,0,0
153	ok s=8,m=13 6.58e-03	0.12	0.14	1	1.1	1.1	84.9	0.59		56,40,40,0
154	ok s=6,m=13 3.10e-03	0.48		3						56,56,0,0
155	ok s=6,m=13 2.91e-03	0.48	0.60	3	0.5	0.2	34.7	0.90		56,2,2,0
158	ok s=8,m=13 6.02e-03	0.18		1						56,68,0,0
159	ok s=7,m=13 6.43e-03	0.13	0.12	1	1.3	1.3	99.3	0.47		56,40,41,0
160	ok s=8,m=13 6.67e-03	0.12	0.13	1	1.1	1.1	84.9	0.59		56,42,39,0
161	ok s=6,m=13 2.94e-03	0.50		3						68,54,0,0
162	ok s=6,m=13 2.65e-03	0.51	0.64	3	0.5	0.2	34.7	0.90		68,2,2,0
163	ok s=7,m=13 6.10e-03	0.15	0.16	1	1.3	1.3	99.3	0.47		56,40,42,0
164	ok s=8,m=13 5.55e-03	0.15		1						56,58,0,0
165	ok s=8,m=13 7.09e-03	0.12	0.13	1	1.1	1.1	84.9	0.59		56,40,40,0
166	ok s=6,m=13 3.06e-03	0.49		3						56,56,0,0
167	ok s=6,m=13 2.71e-03	0.49	0.61	3	0.5	0.2	34.7	0.90		68,2,2,0
170	ok s=8,m=13 6.47e-03	0.15		1						56,68,0,0
171	ok s=7,m=13 6.75e-03	0.13		1						56,40,0,0
172	ok s=8,m=13 7.16e-03	0.12		1						56,40,0,0
173	ok s=6,m=13 2.83e-03	0.51		3						68,2,0,0
174	ok s=6,m=13 2.34e-03	0.52	0.63	3	0.5	0.2	34.7	0.90		2,2,2,0
175	ok s=7,m=13 6.59e-03	0.13	0.14	1	1.3	1.3	99.3	0.47		56,40,42,0
176	ok s=8,m=13 5.80e-03	0.11		1						56,44,0,0
177	ok s=8,m=13 7.39e-03	0.11		1						56,40,0,0
178	ok s=6,m=13 3.43e-03	0.50		3						68,56,0,0
179	ok s=6,m=13 2.88e-03	0.49	0.61	3	0.5	0.2	34.7	0.90		68,2,2,0
182	ok s=8,m=13 7.31e-03	0.12		1						56,68,0,0
183	ok s=7,m=13 4.54e-03	0.09		1						56,40,0,0
184	ok s=8,m=13 7.73e-03	0.13		1						56,64,0,0
185	ok s=6,m=13 5.43e-03	0.54		3						2,2,0,0
186	ok s=6,m=13 0.01	0.54	0.76	3	0.5	0.2	34.7	0.90		48,2,2,0
187	ok s=7,m=13 9.10e-03	0.15		1						56,40,0,0
188	ok s=8,m=13 6.39e-03	0.10		1						57,44,0,0
189	ok s=8,m=13 7.32e-03	0.10		1						58,40,0,0
190	ok s=6,m=13 0.01	0.51		3						68,56,0,0
191	ok s=6,m=13 5.20e-03	0.49	0.62	3	0.5	0.2	34.7	0.90		2,2,2,0
195	ok s=7,m=13 0.03	0.48		1						38,43,0,0
196	ok s=8,m=13 5.44e-03	0.50		1						38,38,0,0
197	ok s=7,m=13 0.02	0.36	0.34	1	1.3	1.3	99.3	0.47		38,38,38,0
198	ok s=8,m=13 0.03	0.60	0.74	1	1.1	1.1	84.9	0.59		38,38,44,0
199	ok s=6,m=13 0.02	0.10		3						38,38,0,0
200	ok s=6,m=13 0.02	0.13		3						38,50,0,0
201	ok s=7,m=13 0.02	0.59	0.85	1	1.3	1.3	99.3	0.47		38,43,37,0
202	ok s=8,m=13 0.01	0.52		1						38,48,0,0
203	ok s=8,m=13 0.03	0.37		1						38,38,0,0
204	ok s=6,m=13 8.42e-03	0.09		3						50,62,0,0
205	ok s=6,m=13 9.12e-03	0.13		3						38,2,0,0
208	ok s=7,m=13 0.03	0.47		1						38,38,0,0
210	ok s=8,m=13 9.47e-03	0.46		1						44,2,0,0
211	ok s=7,m=13 0.01	0.30	0.32	1	1.3	1.3	99.3	0.47		44,37,38,0
212	ok s=8,m=13 0.02	0.49	0.60	1	1.1	1.1	84.9	0.59		44,44,44,0
213	ok s=6,m=13 6.86e-03	0.14		3						38,42,0,0
214	ok s=6,m=13 7.50e-03	0.18		3						44,2,0,0
215	ok s=7,m=13 0.02	0.49	0.70	1	1.3	1.3	99.3	0.47		44,44,38,0
216	ok s=8,m=13 0.01	0.46		1						38,2,0,0
217	ok s=8,m=13 0.02	0.31	0.28	1	1.1	1.1	84.9	0.59		44,44,44,0
218	ok s=6,m=13 6.82e-03	0.13		3						44,52,0,0
219	ok s=6,m=13 6.96e-03	0.18		3						37,2,0,0
222	ok s=8,m=13 8.19e-03	0.43		1						44,2,0,0
223	ok s=7,m=13 0.01	0.25	0.28	1	1.3	1.3	99.3	0.47		44,44,37,0
224	ok s=8,m=13 0.02	0.40	0.49	1	1.1	1.1	84.9	0.59		44,44,43,0

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	212 di 288

225	ok s=6,m=13 7.05e-03	0.21		3						44,42,0,0
226	ok s=6,m=13 6.36e-03	0.18	0.20	3	0.5	0.2	34.7	0.90		44,2,2,0
227	ok s=7,m=13 0.01	0.39	0.55	1	1.3	1.3	99.3	0.47		44,44,37,0
228	ok s=8,m=13 8.63e-03	0.43		1						38,2,0,0
229	ok s=8,m=13 0.01	0.26	0.27	1	1.1	1.1	84.9	0.59		44,44,44,0
230	ok s=6,m=13 6.45e-03	0.21		3						2,52,0,0
231	ok s=6,m=13 5.97e-03	0.19	0.20	3	0.5	0.2	34.7	0.90		44,2,2,0
234	ok s=8,m=13 5.75e-03	0.41		1						2,2,0,0
235	ok s=7,m=13 6.01e-03	0.16	0.23	1	1.3	1.3	99.3	0.47		58,54,54,0
236	ok s=8,m=13 0.01	0.30	0.37	1	1.1	1.1	84.9	0.59		38,43,43,0
237	ok s=6,m=13 0.01	0.22		3						44,42,0,0
238	ok s=6,m=13 0.01	0.27	0.32	3	0.5	0.2	34.7	0.90		44,2,2,0
239	ok s=7,m=13 5.85e-03	0.27	0.42	1	1.3	1.3	99.3	0.47		42,44,38,0
240	ok s=8,m=13 5.73e-03	0.42		1						2,2,0,0
241	ok s=8,m=13 0.01	0.20	0.23	1	1.1	1.1	84.9	0.59		38,44,44,0
242	ok s=6,m=13 0.01	0.22		3						44,44,0,0
243	ok s=6,m=13 0.01	0.27	0.33	3	0.5	0.2	34.7	0.90		44,2,2,0
246	ok s=8,m=13 8.79e-03	0.39		1						44,2,0,0
247	ok s=7,m=13 5.12e-03	0.13	0.20	1	1.3	1.3	99.3	0.47		58,60,53,0
248	ok s=8,m=13 5.75e-03	0.22	0.29	1	1.1	1.1	84.9	0.59		45,47,47,0
249	ok s=6,m=13 6.03e-03	0.28		3						2,42,0,0
250	ok s=6,m=13 2.30e-03	0.30	0.36	3	0.5	0.2	34.7	0.90		44,2,2,0
251	ok s=7,m=13 4.99e-03	0.23	0.35	1	1.3	1.3	99.3	0.47		58,44,37,0
252	ok s=8,m=13 7.51e-03	0.40		1						44,2,0,0
253	ok s=8,m=13 7.87e-03	0.14	0.17	1	1.1	1.1	84.9	0.59		44,60,60,0
254	ok s=6,m=13 5.91e-03	0.29		3						2,44,0,0
255	ok s=6,m=13 3.62e-03	0.30	0.37	3	0.5	0.2	34.7	0.90		44,2,2,0
258	ok s=8,m=13 7.64e-03	0.36		1						44,2,0,0
259	ok s=7,m=13 4.36e-03	0.12	0.19	1	1.3	1.3	99.3	0.47		58,46,53,0
260	ok s=8,m=13 6.30e-03	0.18	0.24	1	1.1	1.1	84.9	0.59		52,47,47,0
261	ok s=6,m=13 3.01e-03	0.32		3						44,42,0,0
262	ok s=6,m=13 2.78e-03	0.34	0.42	3	0.5	0.2	34.7	0.90		2,2,2,0
263	ok s=7,m=13 4.24e-03	0.19	0.30	1	1.3	1.3	99.3	0.47		58,43,38,0
264	ok s=8,m=13 6.73e-03	0.36		1						44,2,0,0
265	ok s=8,m=13 6.24e-03	0.12	0.15	1	1.1	1.1	84.9	0.59		52,60,60,0
266	ok s=6,m=13 3.17e-03	0.33		3						44,44,0,0
267	ok s=6,m=13 3.03e-03	0.34	0.42	3	0.5	0.2	34.7	0.90		44,2,2,0
270	ok s=8,m=13 6.48e-03	0.32		1						44,2,0,0
271	ok s=7,m=13 3.69e-03	0.13	0.19	1	1.3	1.3	99.3	0.47		58,62,53,0
272	ok s=8,m=13 5.66e-03	0.16	0.19	1	1.1	1.1	84.9	0.59		68,50,47,0
273	ok s=6,m=13 3.13e-03	0.36		3						44,42,0,0
274	ok s=6,m=13 2.77e-03	0.38	0.46	3	0.5	0.2	34.7	0.90		44,2,2,0
275	ok s=7,m=13 3.61e-03	0.16	0.28	1	1.3	1.3	99.3	0.47		58,38,38,0
276	ok s=8,m=13 5.81e-03	0.32		1						44,2,0,0
277	ok s=8,m=13 5.78e-03	0.10	0.14	1	1.1	1.1	84.9	0.59		68,45,60,0
278	ok s=6,m=13 3.32e-03	0.37		3						44,44,0,0
279	ok s=6,m=13 3.03e-03	0.38	0.46	3	0.5	0.2	34.7	0.90		44,2,2,0
282	ok s=8,m=13 5.57e-03	0.29		1						44,2,0,0
283	ok s=7,m=13 3.91e-03	0.14	0.19	1	1.3	1.3	99.3	0.47		46,62,53,0
284	ok s=8,m=13 5.28e-03	0.15	0.17	1	1.1	1.1	84.9	0.59		68,50,47,0
285	ok s=6,m=13 3.15e-03	0.39		3						44,42,0,0
286	ok s=6,m=13 2.85e-03	0.41	0.50	3	0.5	0.2	34.7	0.90		44,2,2,0
287	ok s=7,m=13 3.59e-03	0.16	0.27	1	1.3	1.3	99.3	0.47		46,38,50,0
288	ok s=8,m=13 4.93e-03	0.28		1						44,2,0,0
289	ok s=8,m=13 5.32e-03	0.11	0.14	1	1.1	1.1	84.9	0.59		68,61,60,0
290	ok s=6,m=13 3.34e-03	0.40		3						44,44,0,0
291	ok s=6,m=13 3.06e-03	0.41	0.50	3	0.5	0.2	34.7	0.90		44,2,2,0
294	ok s=8,m=13 4.76e-03	0.26		1						44,40,0,0
295	ok s=7,m=13 4.51e-03	0.14	0.18	1	1.3	1.3	99.3	0.47		42,62,53,0
296	ok s=8,m=13 4.98e-03	0.15	0.16	1	1.1	1.1	84.9	0.59		68,50,47,0
297	ok s=6,m=13 3.17e-03	0.42		3						44,50,0,0
298	ok s=6,m=13 2.89e-03	0.44	0.54	3	0.5	0.2	34.7	0.90		44,2,2,0
299	ok s=7,m=13 4.31e-03	0.16	0.25	1	1.3	1.3	99.3	0.47		42,47,50,0
300	ok s=8,m=13 4.17e-03	0.26		1						44,46,0,0
301	ok s=8,m=13 5.00e-03	0.11	0.14	1	1.1	1.1	84.9	0.59		68,68,60,0
302	ok s=6,m=13 3.33e-03	0.43		3						44,44,0,0
303	ok s=6,m=13 3.06e-03	0.43	0.53	3	0.5	0.2	34.7	0.90		44,2,2,0
306	ok s=8,m=13 4.07e-03	0.24		1						44,40,0,0
307	ok s=7,m=13 4.93e-03	0.14	0.17	1	1.3	1.3	99.3	0.47		40,61,53,0
308	ok s=8,m=13 5.28e-03	0.15	0.14	1	1.1	1.1	84.9	0.59		42,50,47,0
309	ok s=6,m=13 3.16e-03	0.44		3						44,42,0,0
310	ok s=6,m=13 2.90e-03	0.47	0.57	3	0.5	0.2	34.7	0.90		44,2,2,0
311	ok s=7,m=13 4.80e-03	0.15	0.22	1	1.3	1.3	99.3	0.47		42,47,66,0
312	ok s=8,m=13 4.62e-03	0.24		1						42,46,0,0
313	ok s=8,m=13 5.44e-03	0.12	0.15	1	1.1	1.1	84.9	0.59		42,68,60,0
314	ok s=6,m=13 3.29e-03	0.45		3						44,44,0,0
315	ok s=6,m=13 3.03e-03	0.45	0.56	3	0.5	0.2	34.7	0.90		44,2,2,0

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	214 di 288

35	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62	0.0	0.0	0.0	0.0	0.0	0.0	0.0
63	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67	0.0	0.0	0.0	0.0	0.0	0.0	0.0
68	0.0	0.0	0.0	0.0	0.0	0.0	0.0
69	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0
71	0.0	0.0	0.0	0.0	0.0	0.0	0.0
74	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88	0.0	0.0	0.0	0.0	0.0	0.0	0.0
89	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0
91	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
94	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95	0.0	0.0	0.0	0.0	0.0	0.0	0.0
98	0.0	0.0	0.0	0.0	0.0	0.0	0.0
99	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
101	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103	0.0	0.0	0.0	0.0	0.0	0.0	0.0
104	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0
111	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112	0.0	0.0	0.0	0.0	0.0	0.0	0.0
113	0.0	0.0	0.0	0.0	0.0	0.0	0.0
114	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115	0.0	0.0	0.0	0.0	0.0	0.0	0.0
116	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117	0.0	0.0	0.0	0.0	0.0	0.0	0.0
118	0.0	0.0	0.0	0.0	0.0	0.0	0.0
119	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122	0.0	0.0	0.0	0.0	0.0	0.0	0.0
123	0.0	0.0	0.0	0.0	0.0	0.0	0.0
124	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125	0.0	0.0	0.0	0.0	0.0	0.0	0.0
126	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127	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	215 di 288

128	0.0	0.0	0.0	0.0	0.0	0.0	0.0
129	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130	0.0	0.0	0.0	0.0	0.0	0.0	0.0
131	0.0	0.0	0.0	0.0	0.0	0.0	0.0
134	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135	0.0	0.0	0.0	0.0	0.0	0.0	0.0
136	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137	0.0	0.0	0.0	0.0	0.0	0.0	0.0
138	0.0	0.0	0.0	0.0	0.0	0.0	0.0
139	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140	0.0	0.0	0.0	0.0	0.0	0.0	0.0
141	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142	0.0	0.0	0.0	0.0	0.0	0.0	0.0
143	0.0	0.0	0.0	0.0	0.0	0.0	0.0
146	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147	0.0	0.0	0.0	0.0	0.0	0.0	0.0
148	0.0	0.0	0.0	0.0	0.0	0.0	0.0
149	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150	0.0	0.0	0.0	0.0	0.0	0.0	0.0
151	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152	0.0	0.0	0.0	0.0	0.0	0.0	0.0
153	0.0	0.0	0.0	0.0	0.0	0.0	0.0
154	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155	0.0	0.0	0.0	0.0	0.0	0.0	0.0
158	0.0	0.0	0.0	0.0	0.0	0.0	0.0
159	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160	0.0	0.0	0.0	0.0	0.0	0.0	0.0
161	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162	0.0	0.0	0.0	0.0	0.0	0.0	0.0
163	0.0	0.0	0.0	0.0	0.0	0.0	0.0
164	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165	0.0	0.0	0.0	0.0	0.0	0.0	0.0
166	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170	0.0	0.0	0.0	0.0	0.0	0.0	0.0
171	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172	0.0	0.0	0.0	0.0	0.0	0.0	0.0
173	0.0	0.0	0.0	0.0	0.0	0.0	0.0
174	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175	0.0	0.0	0.0	0.0	0.0	0.0	0.0
176	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177	0.0	0.0	0.0	0.0	0.0	0.0	0.0
178	0.0	0.0	0.0	0.0	0.0	0.0	0.0
179	0.0	0.0	0.0	0.0	0.0	0.0	0.0
182	0.0	0.0	0.0	0.0	0.0	0.0	0.0
183	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184	0.0	0.0	0.0	0.0	0.0	0.0	0.0
185	0.0	0.0	0.0	0.0	0.0	0.0	0.0
186	0.0	0.0	0.0	0.0	0.0	0.0	0.0
187	0.0	0.0	0.0	0.0	0.0	0.0	0.0
188	0.0	0.0	0.0	0.0	0.0	0.0	0.0
189	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190	0.0	0.0	0.0	0.0	0.0	0.0	0.0
191	0.0	0.0	0.0	0.0	0.0	0.0	0.0
195	0.0	0.0	0.0	0.0	0.0	0.0	0.0
196	0.0	0.0	0.0	0.0	0.0	0.0	0.0
197	0.0	0.0	0.0	0.0	0.0	0.0	0.0
198	0.0	0.0	0.0	0.0	0.0	0.0	0.0
199	0.0	0.0	0.0	0.0	0.0	0.0	0.0
200	0.0	0.0	0.0	0.0	0.0	0.0	0.0
201	0.0	0.0	0.0	0.0	0.0	0.0	0.0
202	0.0	0.0	0.0	0.0	0.0	0.0	0.0
203	0.0	0.0	0.0	0.0	0.0	0.0	0.0
204	0.0	0.0	0.0	0.0	0.0	0.0	0.0
205	0.0	0.0	0.0	0.0	0.0	0.0	0.0
208	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210	0.0	0.0	0.0	0.0	0.0	0.0	0.0
211	0.0	0.0	0.0	0.0	0.0	0.0	0.0
212	0.0	0.0	0.0	0.0	0.0	0.0	0.0
213	0.0	0.0	0.0	0.0	0.0	0.0	0.0
214	0.0	0.0	0.0	0.0	0.0	0.0	0.0
215	0.0	0.0	0.0	0.0	0.0	0.0	0.0
216	0.0	0.0	0.0	0.0	0.0	0.0	0.0
217	0.0	0.0	0.0	0.0	0.0	0.0	0.0
218	0.0	0.0	0.0	0.0	0.0	0.0	0.0
219	0.0	0.0	0.0	0.0	0.0	0.0	0.0
222	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	216 di 288

223	0.0	0.0	0.0	0.0	0.0	0.0	0.0
224	0.0	0.0	0.0	0.0	0.0	0.0	0.0
225	0.0	0.0	0.0	0.0	0.0	0.0	0.0
226	0.0	0.0	0.0	0.0	0.0	0.0	0.0
227	0.0	0.0	0.0	0.0	0.0	0.0	0.0
228	0.0	0.0	0.0	0.0	0.0	0.0	0.0
229	0.0	0.0	0.0	0.0	0.0	0.0	0.0
230	0.0	0.0	0.0	0.0	0.0	0.0	0.0
231	0.0	0.0	0.0	0.0	0.0	0.0	0.0
234	0.0	0.0	0.0	0.0	0.0	0.0	0.0
235	0.0	0.0	0.0	0.0	0.0	0.0	0.0
236	0.0	0.0	0.0	0.0	0.0	0.0	0.0
237	0.0	0.0	0.0	0.0	0.0	0.0	0.0
238	0.0	0.0	0.0	0.0	0.0	0.0	0.0
239	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240	0.0	0.0	0.0	0.0	0.0	0.0	0.0
241	0.0	0.0	0.0	0.0	0.0	0.0	0.0
242	0.0	0.0	0.0	0.0	0.0	0.0	0.0
243	0.0	0.0	0.0	0.0	0.0	0.0	0.0
246	0.0	0.0	0.0	0.0	0.0	0.0	0.0
247	0.0	0.0	0.0	0.0	0.0	0.0	0.0
248	0.0	0.0	0.0	0.0	0.0	0.0	0.0
249	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250	0.0	0.0	0.0	0.0	0.0	0.0	0.0
251	0.0	0.0	0.0	0.0	0.0	0.0	0.0
252	0.0	0.0	0.0	0.0	0.0	0.0	0.0
253	0.0	0.0	0.0	0.0	0.0	0.0	0.0
254	0.0	0.0	0.0	0.0	0.0	0.0	0.0
255	0.0	0.0	0.0	0.0	0.0	0.0	0.0
258	0.0	0.0	0.0	0.0	0.0	0.0	0.0
259	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260	0.0	0.0	0.0	0.0	0.0	0.0	0.0
261	0.0	0.0	0.0	0.0	0.0	0.0	0.0
262	0.0	0.0	0.0	0.0	0.0	0.0	0.0
263	0.0	0.0	0.0	0.0	0.0	0.0	0.0
264	0.0	0.0	0.0	0.0	0.0	0.0	0.0
265	0.0	0.0	0.0	0.0	0.0	0.0	0.0
266	0.0	0.0	0.0	0.0	0.0	0.0	0.0
267	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270	0.0	0.0	0.0	0.0	0.0	0.0	0.0
271	0.0	0.0	0.0	0.0	0.0	0.0	0.0
272	0.0	0.0	0.0	0.0	0.0	0.0	0.0
273	0.0	0.0	0.0	0.0	0.0	0.0	0.0
274	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275	0.0	0.0	0.0	0.0	0.0	0.0	0.0
276	0.0	0.0	0.0	0.0	0.0	0.0	0.0
277	0.0	0.0	0.0	0.0	0.0	0.0	0.0
278	0.0	0.0	0.0	0.0	0.0	0.0	0.0
279	0.0	0.0	0.0	0.0	0.0	0.0	0.0
282	0.0	0.0	0.0	0.0	0.0	0.0	0.0
283	0.0	0.0	0.0	0.0	0.0	0.0	0.0
284	0.0	0.0	0.0	0.0	0.0	0.0	0.0
285	0.0	0.0	0.0	0.0	0.0	0.0	0.0
286	0.0	0.0	0.0	0.0	0.0	0.0	0.0
287	0.0	0.0	0.0	0.0	0.0	0.0	0.0
288	0.0	0.0	0.0	0.0	0.0	0.0	0.0
289	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290	0.0	0.0	0.0	0.0	0.0	0.0	0.0
291	0.0	0.0	0.0	0.0	0.0	0.0	0.0
294	0.0	0.0	0.0	0.0	0.0	0.0	0.0
295	0.0	0.0	0.0	0.0	0.0	0.0	0.0
296	0.0	0.0	0.0	0.0	0.0	0.0	0.0
297	0.0	0.0	0.0	0.0	0.0	0.0	0.0
298	0.0	0.0	0.0	0.0	0.0	0.0	0.0
299	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300	0.0	0.0	0.0	0.0	0.0	0.0	0.0
301	0.0	0.0	0.0	0.0	0.0	0.0	0.0
302	0.0	0.0	0.0	0.0	0.0	0.0	0.0
303	0.0	0.0	0.0	0.0	0.0	0.0	0.0
306	0.0	0.0	0.0	0.0	0.0	0.0	0.0
307	0.0	0.0	0.0	0.0	0.0	0.0	0.0
308	0.0	0.0	0.0	0.0	0.0	0.0	0.0
309	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310	0.0	0.0	0.0	0.0	0.0	0.0	0.0
311	0.0	0.0	0.0	0.0	0.0	0.0	0.0
312	0.0	0.0	0.0	0.0	0.0	0.0	0.0
313	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	217 di 288

314	0.0	0.0	0.0	0.0	0.0	0.0	0.0
315	0.0	0.0	0.0	0.0	0.0	0.0	0.0
318	0.0	0.0	0.0	0.0	0.0	0.0	0.0
319	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320	0.0	0.0	0.0	0.0	0.0	0.0	0.0
321	0.0	0.0	0.0	0.0	0.0	0.0	0.0
322	0.0	0.0	0.0	0.0	0.0	0.0	0.0
323	0.0	0.0	0.0	0.0	0.0	0.0	0.0
324	0.0	0.0	0.0	0.0	0.0	0.0	0.0
325	0.0	0.0	0.0	0.0	0.0	0.0	0.0
326	0.0	0.0	0.0	0.0	0.0	0.0	0.0
327	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330	0.0	0.0	0.0	0.0	0.0	0.0	0.0
331	0.0	0.0	0.0	0.0	0.0	0.0	0.0
332	0.0	0.0	0.0	0.0	0.0	0.0	0.0
333	0.0	0.0	0.0	0.0	0.0	0.0	0.0
334	0.0	0.0	0.0	0.0	0.0	0.0	0.0
335	0.0	0.0	0.0	0.0	0.0	0.0	0.0
336	0.0	0.0	0.0	0.0	0.0	0.0	0.0
337	0.0	0.0	0.0	0.0	0.0	0.0	0.0
338	0.0	0.0	0.0	0.0	0.0	0.0	0.0
339	0.0	0.0	0.0	0.0	0.0	0.0	0.0
342	0.0	0.0	0.0	0.0	0.0	0.0	0.0
343	0.0	0.0	0.0	0.0	0.0	0.0	0.0
344	0.0	0.0	0.0	0.0	0.0	0.0	0.0
345	0.0	0.0	0.0	0.0	0.0	0.0	0.0
346	0.0	0.0	0.0	0.0	0.0	0.0	0.0
347	0.0	0.0	0.0	0.0	0.0	0.0	0.0
348	0.0	0.0	0.0	0.0	0.0	0.0	0.0
349	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350	0.0	0.0	0.0	0.0	0.0	0.0	0.0
351	0.0	0.0	0.0	0.0	0.0	0.0	0.0
354	0.0	0.0	0.0	0.0	0.0	0.0	0.0
355	0.0	0.0	0.0	0.0	0.0	0.0	0.0
356	0.0	0.0	0.0	0.0	0.0	0.0	0.0
357	0.0	0.0	0.0	0.0	0.0	0.0	0.0
358	0.0	0.0	0.0	0.0	0.0	0.0	0.0
359	0.0	0.0	0.0	0.0	0.0	0.0	0.0
360	0.0	0.0	0.0	0.0	0.0	0.0	0.0
361	0.0	0.0	0.0	0.0	0.0	0.0	0.0
362	0.0	0.0	0.0	0.0	0.0	0.0	0.0
363	0.0	0.0	0.0	0.0	0.0	0.0	0.0
365	0.0	0.0	0.0	0.0	0.0	0.0	0.0
366	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367	0.0	0.0	0.0	0.0	0.0	0.0	0.0
368	0.0	0.0	0.0	0.0	0.0	0.0	0.0
369	0.0	0.0	0.0	0.0	0.0	0.0	0.0
370	0.0	0.0	0.0	0.0	0.0	0.0	0.0
371	0.0	0.0	0.0	0.0	0.0	0.0	0.0
372	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	V N/M	V stab	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
				0.0	0.0	0.0	0.0	0.0	0.0	0.0

Pilas.	Stato	Note	V V/T	V N/M	V stab	Cl.LamS 22	LamS 33	Snell.	Chi mn	V flstLamS LT	Chi LT	Rif. cmb
1	ok	s=1,m=13	0.04	0.29	0.32	1	0.6	0.6	43.5	0.90		24,32,32,0
2	ok	s=1,m=13	0.05	0.41	0.45	1	0.6	0.6	43.5	0.90		30,46,46,0
3	ok	s=1,m=13	0.05	0.34	0.37	1	0.6	0.6	43.5	0.90		46,46,46,0
4	ok	s=1,m=13	0.06	0.37	0.43	1	0.6	0.6	43.5	0.90		51,42,42,0
5	ok	s=1,m=13	0.05	0.25	0.28	1	0.6	0.6	43.5	0.90		51,10,10,0
6	ok	s=1,m=13	0.04	0.12		1						24,24,0,0
9	ok	s=9,m=13	0.03	0.55	0.43	1	0.7	0.7	56.3	0.83		58,68,68,0
10	ok	s=9,m=13	0.02	0.44	0.31	1	0.7	0.7	56.3	0.83		58,68,2,0
22	ok	s=9,m=13	0.02	0.43	0.34	1	0.7	0.7	56.3	0.83		56,68,2,0
23	ok	s=9,m=13	0.02	0.45	0.32	1	0.7	0.7	56.3	0.83		58,58,58,0
25	ok	s=9,m=13	0.02	0.36	0.29	1	0.7	0.7	56.3	0.83		58,58,2,0
36	ok	s=9,m=13	0.02	0.38	0.29	1	0.7	0.7	56.3	0.83		56,68,2,0
37	ok	s=9,m=13	0.02	0.32	0.28	1	0.7	0.7	56.3	0.83		58,2,2,0
48	ok	s=9,m=13	0.02	0.34	0.28	1	0.7	0.7	56.3	0.83		56,68,2,0
49	ok	s=7,m=13 9.11e-03	0.45	0.82	1	1.3	1.3	99.3	0.47			56,2,2,0
60	ok	s=7,m=13 9.34e-03	0.45	0.83	1	1.3	1.3	99.3	0.47			56,2,2,0
61	ok	s=7,m=13 8.12e-03	0.43	0.78	1	1.3	1.3	99.3	0.47			56,2,2,0
72	ok	s=7,m=13 8.69e-03	0.43	0.79	1	1.3	1.3	99.3	0.47			56,2,2,0
73	ok	s=7,m=13 7.42e-03	0.38	0.69	1	1.3	1.3	99.3	0.47			56,2,2,0

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	218 di 288

84	ok s=7,m=13 7.94e-03	0.38	0.70	1	1.3	1.3	99.3	0.47	56,2,2,0
85	ok s=7,m=13 6.77e-03	0.34	0.61	1	1.3	1.3	99.3	0.47	56,2,2,0
96	ok s=7,m=13 7.26e-03	0.34	0.62	1	1.3	1.3	99.3	0.47	56,2,2,0
97	ok s=7,m=13 6.20e-03	0.30	0.52	1	1.3	1.3	99.3	0.47	56,66,2,0
108	ok s=7,m=13 6.68e-03	0.30	0.54	1	1.3	1.3	99.3	0.47	56,60,2,0
109	ok s=7,m=13 5.70e-03	0.28	0.44	1	1.3	1.3	99.3	0.47	56,66,2,0
120	ok s=7,m=13 6.16e-03	0.28	0.48	1	1.3	1.3	99.3	0.47	56,60,60,0
121	ok s=7,m=13 5.25e-03	0.25	0.36	1	1.3	1.3	99.3	0.47	56,66,2,0
132	ok s=7,m=13 5.69e-03	0.26	0.39	1	1.3	1.3	99.3	0.47	56,60,2,0
133	ok s=7,m=13 4.82e-03	0.22	0.29	1	1.3	1.3	99.3	0.47	56,66,58,0
144	ok s=7,m=13 5.25e-03	0.23	0.32	1	1.3	1.3	99.3	0.47	56,60,68,0
145	ok s=7,m=13 4.71e-03	0.18	0.22	1	1.3	1.3	99.3	0.47	56,58,58,0
156	ok s=7,m=13 5.11e-03	0.20	0.25	1	1.3	1.3	99.3	0.47	56,68,68,0
157	ok s=7,m=13 5.14e-03	0.14	0.15	1	1.3	1.3	99.3	0.47	56,58,58,0
168	ok s=7,m=13 5.58e-03	0.17	0.18	1	1.3	1.3	99.3	0.47	56,68,68,0
169	ok s=7,m=13 5.32e-03	0.11	0.09	1	1.3	1.3	99.3	0.47	56,44,44,0
180	ok s=7,m=13 6.12e-03	0.13	0.10	1	1.3	1.3	99.3	0.47	56,68,68,0
181	ok s=7,m=13 3.63e-03	0.08		1					56,56,0,0
192	ok s=7,m=13 8.63e-03	0.16		1					40,48,0,0
193	ok s=9,m=13 0.03	0.55	0.43	1	0.7	0.7	56.3	0.83	38,48,48,0
194	ok s=9,m=13 0.02	0.44	0.31	1	0.7	0.7	56.3	0.83	38,48,2,0
206	ok s=9,m=13 0.02	0.43	0.34	1	0.7	0.7	56.3	0.83	44,38,2,0
207	ok s=9,m=13 0.02	0.45	0.32	1	0.7	0.7	56.3	0.83	38,38,38,0
209	ok s=9,m=13 0.02	0.36	0.29	1	0.7	0.7	56.3	0.83	38,38,2,0
220	ok s=9,m=13 0.02	0.38	0.29	1	0.7	0.7	56.3	0.83	44,48,2,0
221	ok s=9,m=13 0.02	0.32	0.28	1	0.7	0.7	56.3	0.83	38,2,2,0
232	ok s=9,m=13 0.02	0.34	0.28	1	0.7	0.7	56.3	0.83	44,48,2,0
233	ok s=7,m=13 9.11e-03	0.45	0.82	1	1.3	1.3	99.3	0.47	44,2,2,0
244	ok s=7,m=13 9.34e-03	0.45	0.83	1	1.3	1.3	99.3	0.47	44,2,2,0
245	ok s=7,m=13 8.12e-03	0.43	0.78	1	1.3	1.3	99.3	0.47	44,2,2,0
256	ok s=7,m=13 8.69e-03	0.43	0.79	1	1.3	1.3	99.3	0.47	44,2,2,0
257	ok s=7,m=13 7.42e-03	0.38	0.69	1	1.3	1.3	99.3	0.47	44,2,2,0
268	ok s=7,m=13 7.94e-03	0.38	0.70	1	1.3	1.3	99.3	0.47	44,2,2,0
269	ok s=7,m=13 6.77e-03	0.34	0.61	1	1.3	1.3	99.3	0.47	44,2,2,0
280	ok s=7,m=13 7.26e-03	0.34	0.62	1	1.3	1.3	99.3	0.47	44,2,2,0
281	ok s=7,m=13 6.20e-03	0.30	0.52	1	1.3	1.3	99.3	0.47	44,46,2,0
292	ok s=7,m=13 6.68e-03	0.30	0.54	1	1.3	1.3	99.3	0.47	44,40,2,0
293	ok s=7,m=13 5.70e-03	0.28	0.44	1	1.3	1.3	99.3	0.47	44,46,2,0
304	ok s=7,m=13 6.16e-03	0.28	0.48	1	1.3	1.3	99.3	0.47	44,40,40,0
305	ok s=7,m=13 5.25e-03	0.25	0.36	1	1.3	1.3	99.3	0.47	44,46,2,0
316	ok s=7,m=13 5.69e-03	0.26	0.39	1	1.3	1.3	99.3	0.47	44,40,2,0
317	ok s=7,m=13 4.82e-03	0.22	0.29	1	1.3	1.3	99.3	0.47	44,46,38,0
328	ok s=7,m=13 5.25e-03	0.23	0.32	1	1.3	1.3	99.3	0.47	44,40,48,0
329	ok s=7,m=13 4.71e-03	0.18	0.22	1	1.3	1.3	99.3	0.47	44,38,38,0
340	ok s=7,m=13 5.11e-03	0.20	0.25	1	1.3	1.3	99.3	0.47	44,48,48,0
341	ok s=7,m=13 5.14e-03	0.14	0.15	1	1.3	1.3	99.3	0.47	44,38,38,0
352	ok s=7,m=13 5.58e-03	0.17	0.18	1	1.3	1.3	99.3	0.47	44,48,48,0
353	ok s=7,m=13 5.32e-03	0.11	0.09	1	1.3	1.3	99.3	0.47	44,56,56,0
364	ok s=7,m=13 6.12e-03	0.13	0.10	1	1.3	1.3	99.3	0.47	44,48,48,0
374	ok s=1,m=13 0.06	0.36	0.41	1	0.6	0.6	43.5	0.90	40,52,52,0
375	ok s=1,m=13 0.05	0.34	0.36	1	0.6	0.6	43.5	0.90	40,40,40,0
376	ok s=1,m=13 0.05	0.41	0.45	1	0.6	0.6	43.5	0.90	16,40,40,0
377	ok s=1,m=13 0.05	0.23	0.25	1	0.6	0.6	43.5	0.90	53,64,16,0
378	ok s=1,m=13 0.05	0.24	0.25	1	0.6	0.6	43.5	0.90	66,54,14,0
379	ok s=1,m=13 0.04	0.24	0.28	1	0.6	0.6	43.5	0.90	34,34,34,0
380	ok s=1,m=13 0.04	0.24	0.27	1	0.6	0.6	43.5	0.90	20,20,20,0
381	ok s=1,m=13 0.05	0.27	0.29	1	0.6	0.6	43.5	0.90	8,8,40,0
382	ok s=1,m=13 0.05	0.27	0.29	1	0.6	0.6	43.5	0.90	22,22,22,0
383	ok s=1,m=13 0.05	0.25	0.22	1	0.6	0.6	43.5	0.90	46,42,10,0
384	ok s=1,m=13 0.05	0.24	0.22	1	0.6	0.6	43.5	0.90	40,52,28,0
385	ok s=1,m=13 0.06	0.38	0.44	1	0.6	0.6	43.5	0.90	60,60,60,0
386	ok s=1,m=13 0.05	0.30	0.34	1	0.6	0.6	43.5	0.90	53,60,60,0
387	ok s=1,m=13 0.06	0.34	0.39	1	0.6	0.6	43.5	0.90	53,64,64,0
388	ok s=1,m=13 0.05	0.27	0.31	1	0.6	0.6	43.5	0.90	66,14,14,0
389	ok s=1,m=13 0.06	0.36	0.41	1	0.6	0.6	43.5	0.90	66,54,54,0
390	ok s=1,m=13 0.05	0.31	0.36	1	0.6	0.6	43.5	0.90	66,66,66,0
391	ok s=1,m=13 0.06	0.39	0.45	1	0.6	0.6	43.5	0.90	26,66,66,0
392	ok s=1,m=13 0.05	0.27	0.31	1	0.6	0.6	43.5	0.90	36,10,10,0
393	ok s=1,m=13 0.04	0.13		1					18,16,0,0

Pilas.	V V/T	V N/M	V stab	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT
	0.06	0.55	0.83	1.30	1.30	99.31	0.47			

Pilas.	f.Om. N	f.Om. T	Stato	V V/T	V N/M	V stab	V flst	Rif. cmbV[7.5.10]	V Ed sovr.	Xi sovr.	Xf sovr.	Yi sovr.	Yf daN
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PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
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1	0.0	0.0	ok	0.0	0.0	0,0,0,0
2	0.0	0.0	ok	0.0	0.0	0,0,0,0
3	0.0	0.0	ok	0.0	0.0	0,0,0,0
4	0.0	0.0	ok	0.0	0.0	0,0,0,0
5	0.0	0.0	ok	0.0	0.0	0,0,0,0
6	0.0	0.0	ok	0.0	0.0	0,0,0,0
9	0.0	0.0	ok	0.0	0.0	0,0,0,0
10	0.0	0.0	ok	0.0	0.0	0,0,0,0
22	0.0	0.0	ok	0.0	0.0	0,0,0,0
23	0.0	0.0	ok	0.0	0.0	0,0,0,0
25	0.0	0.0	ok	0.0	0.0	0,0,0,0
36	0.0	0.0	ok	0.0	0.0	0,0,0,0
37	0.0	0.0	ok	0.0	0.0	0,0,0,0
48	0.0	0.0	ok	0.0	0.0	0,0,0,0
49	0.0	0.0	ok	0.0	0.0	0,0,0,0
60	0.0	0.0	ok	0.0	0.0	0,0,0,0
61	0.0	0.0	ok	0.0	0.0	0,0,0,0
72	0.0	0.0	ok	0.0	0.0	0,0,0,0
73	0.0	0.0	ok	0.0	0.0	0,0,0,0
84	0.0	0.0	ok	0.0	0.0	0,0,0,0
85	0.0	0.0	ok	0.0	0.0	0,0,0,0
96	0.0	0.0	ok	0.0	0.0	0,0,0,0
97	0.0	0.0	ok	0.0	0.0	0,0,0,0
108	0.0	0.0	ok	0.0	0.0	0,0,0,0
109	0.0	0.0	ok	0.0	0.0	0,0,0,0
120	0.0	0.0	ok	0.0	0.0	0,0,0,0
121	0.0	0.0	ok	0.0	0.0	0,0,0,0
132	0.0	0.0	ok	0.0	0.0	0,0,0,0
133	0.0	0.0	ok	0.0	0.0	0,0,0,0
144	0.0	0.0	ok	0.0	0.0	0,0,0,0
145	0.0	0.0	ok	0.0	0.0	0,0,0,0
156	0.0	0.0	ok	0.0	0.0	0,0,0,0
157	0.0	0.0	ok	0.0	0.0	0,0,0,0
168	0.0	0.0	ok	0.0	0.0	0,0,0,0
169	0.0	0.0	ok	0.0	0.0	0,0,0,0
180	0.0	0.0	ok	0.0	0.0	0,0,0,0
181	0.0	0.0	ok	0.0	0.0	0,0,0,0
192	0.0	0.0	ok	0.0	0.0	0,0,0,0
193	0.0	0.0	ok	0.0	0.0	0,0,0,0
194	0.0	0.0	ok	0.0	0.0	0,0,0,0
206	0.0	0.0	ok	0.0	0.0	0,0,0,0
207	0.0	0.0	ok	0.0	0.0	0,0,0,0
209	0.0	0.0	ok	0.0	0.0	0,0,0,0
220	0.0	0.0	ok	0.0	0.0	0,0,0,0
221	0.0	0.0	ok	0.0	0.0	0,0,0,0
232	0.0	0.0	ok	0.0	0.0	0,0,0,0
233	0.0	0.0	ok	0.0	0.0	0,0,0,0
244	0.0	0.0	ok	0.0	0.0	0,0,0,0
245	0.0	0.0	ok	0.0	0.0	0,0,0,0
256	0.0	0.0	ok	0.0	0.0	0,0,0,0
257	0.0	0.0	ok	0.0	0.0	0,0,0,0
268	0.0	0.0	ok	0.0	0.0	0,0,0,0
269	0.0	0.0	ok	0.0	0.0	0,0,0,0
280	0.0	0.0	ok	0.0	0.0	0,0,0,0
281	0.0	0.0	ok	0.0	0.0	0,0,0,0
292	0.0	0.0	ok	0.0	0.0	0,0,0,0
293	0.0	0.0	ok	0.0	0.0	0,0,0,0
304	0.0	0.0	ok	0.0	0.0	0,0,0,0
305	0.0	0.0	ok	0.0	0.0	0,0,0,0
316	0.0	0.0	ok	0.0	0.0	0,0,0,0
317	0.0	0.0	ok	0.0	0.0	0,0,0,0
328	0.0	0.0	ok	0.0	0.0	0,0,0,0
329	0.0	0.0	ok	0.0	0.0	0,0,0,0
340	0.0	0.0	ok	0.0	0.0	0,0,0,0
341	0.0	0.0	ok	0.0	0.0	0,0,0,0
352	0.0	0.0	ok	0.0	0.0	0,0,0,0
353	0.0	0.0	ok	0.0	0.0	0,0,0,0
364	0.0	0.0	ok	0.0	0.0	0,0,0,0
374	0.0	0.0	ok	0.0	0.0	0,0,0,0
375	0.0	0.0	ok	0.0	0.0	0,0,0,0
376	0.0	0.0	ok	0.0	0.0	0,0,0,0
377	0.0	0.0	ok	0.0	0.0	0,0,0,0
378	0.0	0.0	ok	0.0	0.0	0,0,0,0
379	0.0	0.0	ok	0.0	0.0	0,0,0,0
380	0.0	0.0	ok	0.0	0.0	0,0,0,0
381	0.0	0.0	ok	0.0	0.0	0,0,0,0
382	0.0	0.0	ok	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	220 di 288

383	0.0	0.0	ok	0.0	0.0	0,0,0,0
384	0.0	0.0	ok	0.0	0.0	0,0,0,0
385	0.0	0.0	ok	0.0	0.0	0,0,0,0
386	0.0	0.0	ok	0.0	0.0	0,0,0,0
387	0.0	0.0	ok	0.0	0.0	0,0,0,0
388	0.0	0.0	ok	0.0	0.0	0,0,0,0
389	0.0	0.0	ok	0.0	0.0	0,0,0,0
390	0.0	0.0	ok	0.0	0.0	0,0,0,0
391	0.0	0.0	ok	0.0	0.0	0,0,0,0
392	0.0	0.0	ok	0.0	0.0	0,0,0,0
393	0.0	0.0	ok	0.0	0.0	0,0,0,0

Pilas.

V V/T V N/M V stab V flst
0.0 0.0

V[7.5.10] V Ed sovr. Xi sovr. Xf sovr. Yi sovr. Yf

STATI LIMITE D' ESERCIZIO ACCIAIO

LEGENDA TABELLA STATI LIMITE D' ESERCIZIO ACCIAIO

In tabella vengono riportati i valori di interesse per il controllo degli stati limite d'esercizio.

In particolare vengono riportati, per gli elementi trave, i risultati relativi alle combinazioni considerate (rare o caratteristiche).

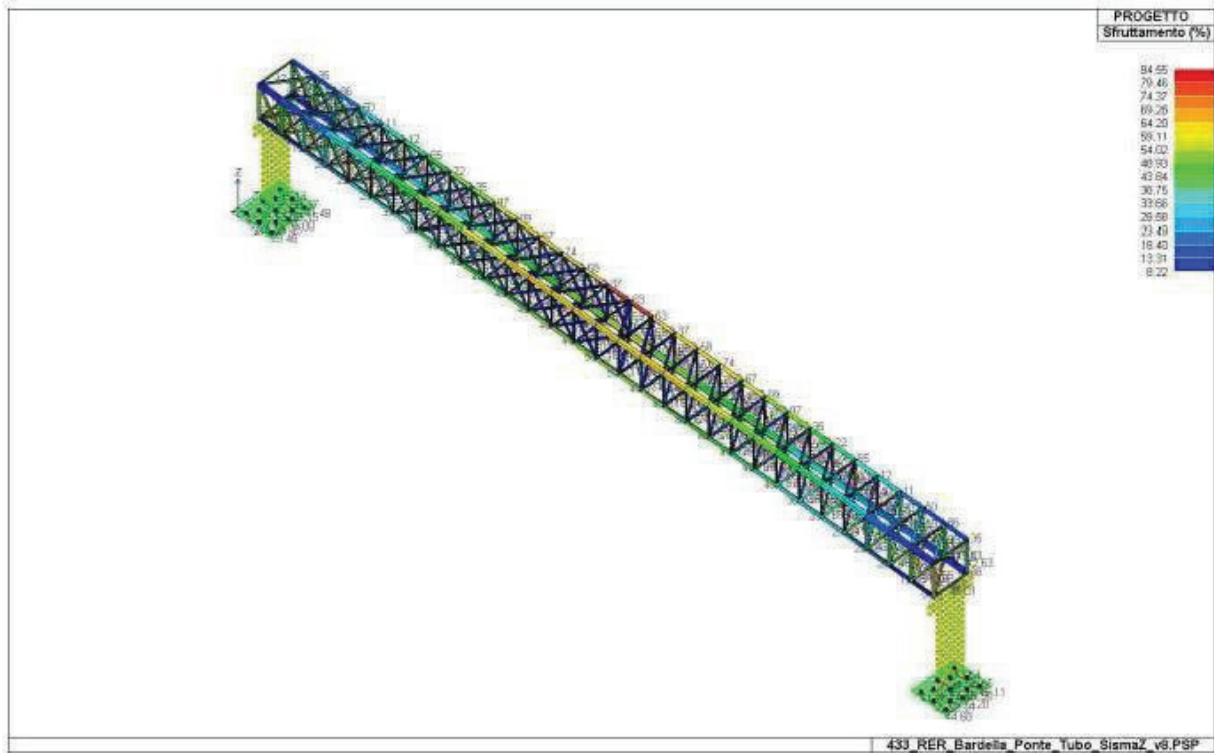
I valori di interesse sono i seguenti:

f*1000/L	massima deformazione normalizzata in combinazioni rare
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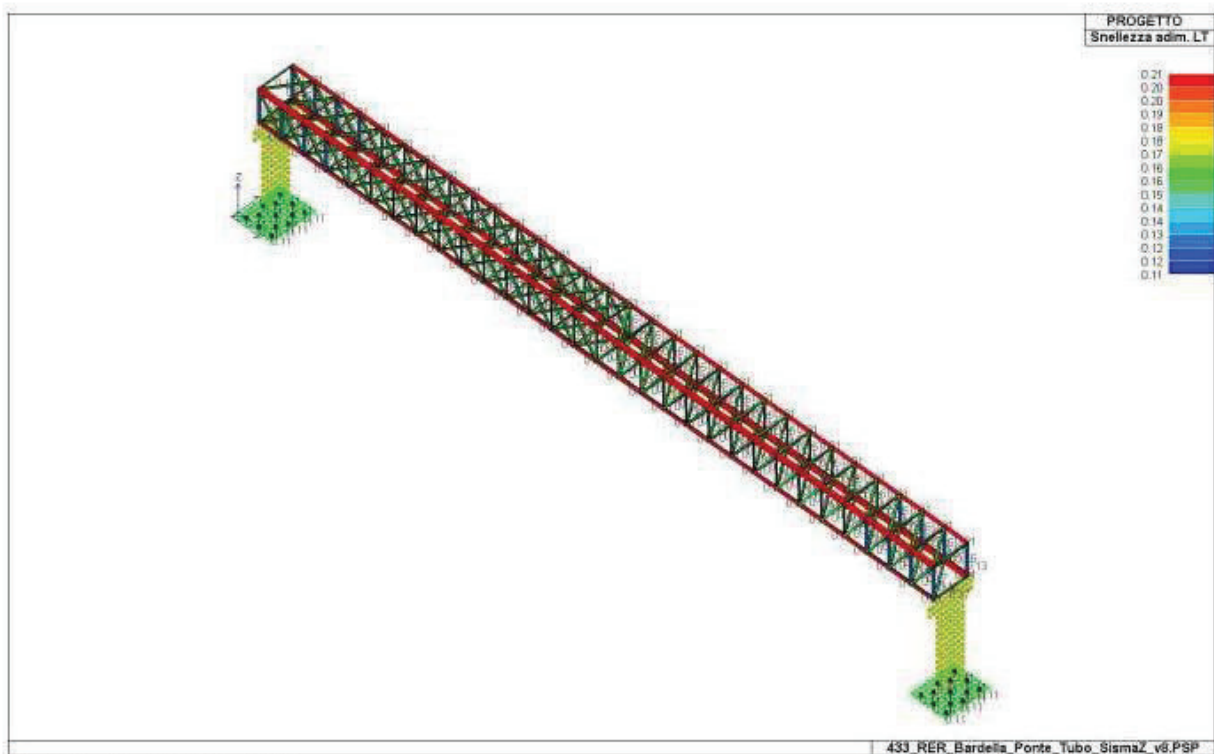
Si precisa che i valori di massima deformazione per travi sono riferiti ai due piani locali (1-2 con momenti flettenti 3-3 e 1-3 con momenti flettenti 2-2). Il valore riportato (massimo) è espresso in 1000/L per rendere agevole il confronto di più valori e in particolare di più range di valori (ad esempio 2 rappresenta L/500, 4 L/250 e così via).

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
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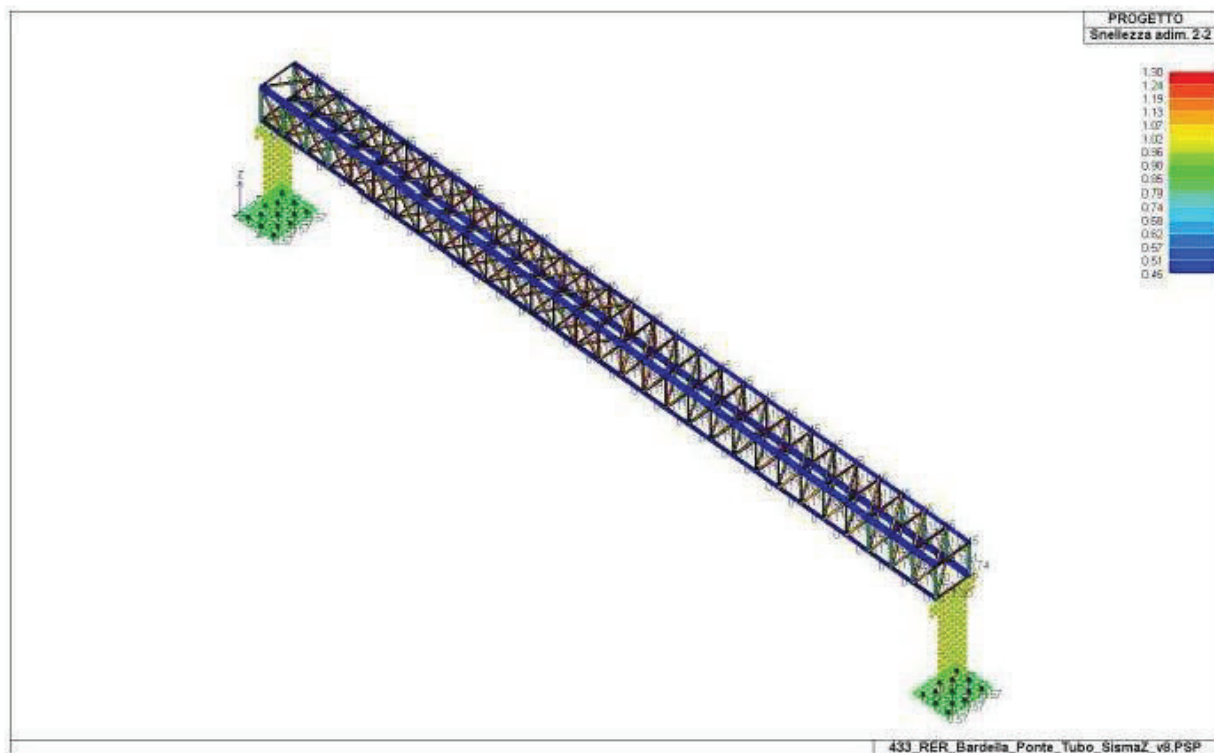
73_PRO_ST_SFRUTTAMENTO



73_PRO_ST_SNELLEZZATOR

PONTE-TUBO - RELAZIONE DI CALCOLO

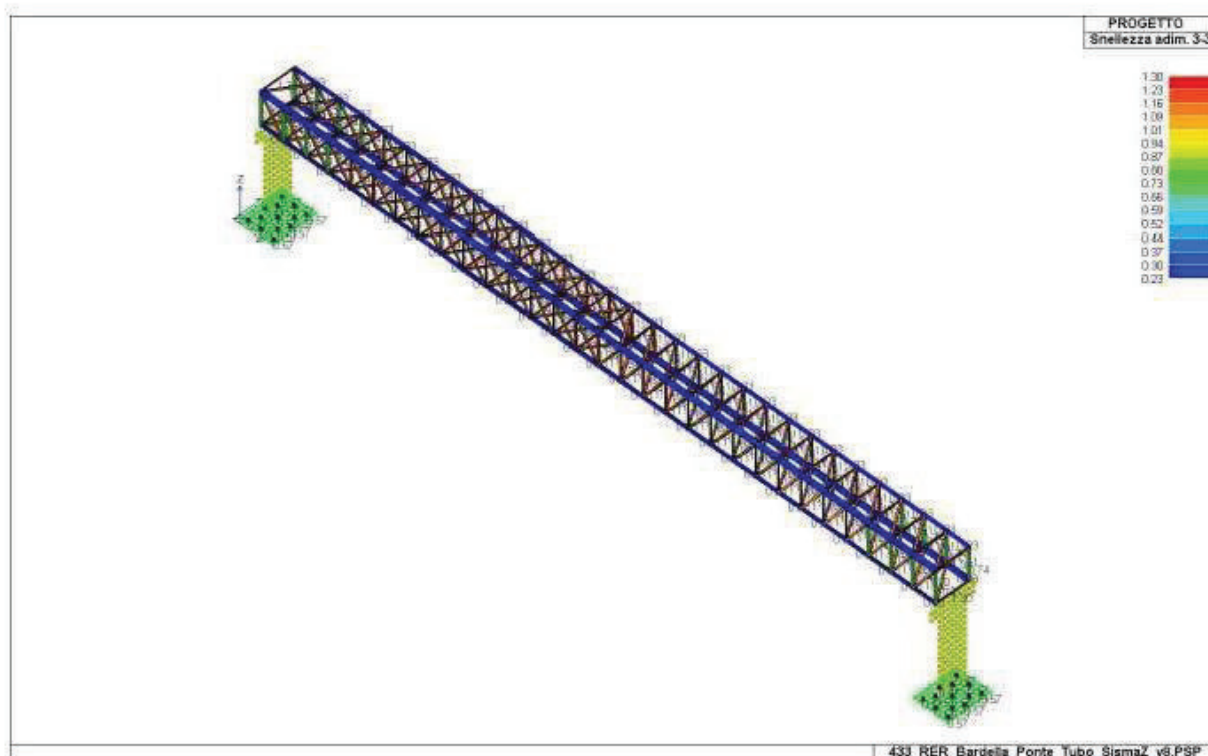
COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	224 di 288



73_PRO_ST_SNELLEZZA.XX

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
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73_PRO_ST_SNELLEZZAY

VERIFICHE ELEMENTI PARETE E/O GUSCIO IN C.A.

LEGENDA TABELLA VERIFICHE ELEMENTI PARETE E GUSCIO IN C.A.

Per le pareti in c.a., in ottemperanza al cap. 7 del DM 17-01-18, viene effettuata una doppia progettazione: sia come *Singolo Elemento* sia come *Parete Sismica* o *Parete Debolmente Armata*.

Per la progettazione come *Singolo Elemento* di ogni elemento vengono riportati il codice dello stato di verifica con le sigle **Ok** e **NV**, il rapporto x/d , la verifica per sollecitazioni ultime (verifica a compressione media gli sforzi membranali, verifica a presso-flessionale e verifica a sollecitazioni taglianti), gli sforzi membranali e flessionali, il quantitativo di armatura nella direzione principale e secondaria sia inferiore che superiore e il quantitativo di armatura a taglio.

Per la progettazione come *Parete Sismica* o *Parete Debolmente Armata* vengono riportate invece le caratteristiche geometriche della parete e delle zone dissipative (quest'ultime solo nel caso di parete sismica), i coefficienti di verifica a compressione assiale, pressoflessione e sollecitazioni taglianti.

Inoltre vengono riportate per ogni quota significativa l'armatura principale e secondaria, l'armatura in zona confinata (solo per parete sismica) e non confinata, l'armatura concentrata all'estremità (per pareti debolmente armate), lo sforzo assiale aggiuntivo per q superiore a 2 e i valori di sviluppo di taglio e momento. Per le pareti debolmente armate viene riportato anche lo stato di verifica relativo alla snellezza.

Le azioni derivate dall'analisi, in ogni combinazione di calcolo, sono elaborate come previsto al punto 7.4.4.5.1: traslazione del momento, incremento e variazione diagramma taglio, incremento e decremento sforzo assiale

La progettazione nel caso dei gusci viene effettuata una progettazione come *Singolo Elemento*, riportando in tabella il rapporto x/d , la verifica per sollecitazioni ultime, (verifica a compressione media gli sforzi membranali, verifica a presso-flessionale e verifica a sollecitazioni taglianti) di ogni elemento.

Per ogni elemento, viene riportata inoltre la maglia di armatura necessaria in relazione alle risultanze della progettazione dei nodi dell'elemento stesso. Le quantità di armature necessarie sono armature (disposte rispettivamente in direzione principale e secondaria, inferiore e superiore) distribuite nell'elemento ed espresse in centimetri quadri per sviluppo lineare pari ad un metro.

Nel caso dei gusci viene effettuata, inoltre, la verifica a punzonamento, riportando in tabella il codice dello stato di verifica, il coefficiente di verifica per piastre prive di armature a taglio lungo il perimetro resistente e lungo il perimetro del pilastro, coefficiente di incremento dovuto ai momenti flettenti, fattore di amplificazione per le fondazioni, il fattore di amplificazione dell'altezza utile per individuare il perimetro di verifica lungo il quale l'armatura a taglio non è richiesta, il quantitativo di armatura a punzonamento, il numero di serie di armature, il numero di braccia di armatura ed il riferimento alla combinazione più gravosa.

Simbologia adottata nelle tabelle di verifica

Per gli elementi con progettazione "*Singolo Elemento ...*" è presente una tabella con i simboli di seguito descritti:

Macro Guscio	Numero del macroelemento di tipo guscio (elementi non verticali contigui ed analoghi per proprietà)
Macro Setto	Numero del macroelemento di tipo setto (elementi verticali contigui ed analoghi per proprietà)
Spessore	Spessore della parete
Id Materiale	Codice del materiale assegnato all'elemento
Id Criterio	Codice del criterio di progetto assegnato all'elemento
Progettazione	Sigla tipo di Elemento: - Singolo Elemento; - Singolo Elemento FONDAZIONE; - Singolo Elemento NON DISSIPATIVO

Per gli elementi con progettazione "*Parete Sismica* o *Parete Debolmente Armata*" è presente una tabella con i simboli di seguito descritti:

Parete	Numero della PARETE SISMICA
Parete PDA	Numero della PARETE DEBOLMENTE ARMATA
H totale	Altezza complessiva della parete
Spessore	Spessore della parete
H critica	Altezza come da punto 7.4.4.5.1 per traslazione momento (solo in Parete Sismica)
H critica V	Altezza della zona dissipativa (solo in Parete Sismica)
L totale	Larghezza di base della parete
L confinata	Lunghezza della zona dissipativa (solo in Parete Sismica)
Verif. N	Verifica di cui al punto 7.4.4.5.1 compressione semplice
Verif. N-M	Verifica di cui al punto 7.4.4.5.1 pressoflessione
Fattore V	Fattore di amplificazione del taglio di cui al punto 7.4.4.5.1
Diagramma V	Diagramma elaborato per effetto modi superiori come da fig. 7.4.4
Verif. V	Verifica di cui al punto 7.4.4.5.1 taglio (compressione cls, trazione acciaio, scorrimento in zona critica) (solo in Parete Sismica)
Verifica Snellezza	Verifica di cui al punto 7.4.4.5.1 limitazione compressione per prevenire l'instabilità (solo in Parete Debolmente Armata)
Prog. composta	Sigla per la progettazione composta

Per le verifiche degli elementi con progettazione "*Singolo Elemento ...*" e *Progettazione Composta* è presente una tabella con i simboli di seguito descritti:

Nodo	numero del nodo
------	-----------------

Stato	codice di verifica dell'elemento ok o NV
x/d	rapporto tra posizione dell'asse neutro e altezza utile alla rottura della sezione (per sola flessione)
V N/M	Verifica delle sollecitazioni Normali (momento e sforzo normale)
Ver. rid	Rapporto Nd/Nu (Nu ottenuto con riduzione del 25% di fcd)
Af pr+	quantità di armatura richiesta in direzione principale relativa alla faccia positiva (estradosso piastre) (valore derivante da calcolo o minimo normativo)
Af pr-	quantità di armatura richiesta in direzione principale relativa alla faccia negativa (intradosso piastre) (valore derivante da calcolo o minimo normativo)
Af sec+	quantità di armatura richiesta in direzione secondaria relativa alla faccia positiva (estradosso piastre) (valore derivante da calcolo o minimo normativo)
Af sec-	quantità di armatura richiesta in direzione secondaria relativa alla faccia negativa (intradosso piastre) (valore derivante da calcolo o minimo normativo)
Nz No Nzo	Sforzi membranali per pareti e/o setti verticali
Mz Mo Mzo	Sforzi flessionali per pareti e/o setti verticali
Nx Ny Nxy	Sforzi membranali per gusci orizzontali
Mx My Mxy	Sforzi flessionali per gusci orizzontali

Nodo	numero del nodo
Stato	codice di verifica dell'elemento ok o NV
Max tau	Tensione tangenziale Massima
Ver V pr	Verifica a taglio nella direzione principale lato calcestruzzo
Ver V sec	Verifica a taglio nella direzione secondaria lato calcestruzzo
Af V pr	Armatura nella direzione principale
V pr-	Verifica dell'armatura nella direzione principale
Af V sec	Armatura nella direzione secondaria
V sec-	Verifica dell'armatura nella direzione secondaria

Per le verifiche degli elementi con progettazione "*Parete Sismica o Parete Debolmente Armata*", oltre alla tabella con le verifiche per gli elementi con progettazione "*Singolo Elemento ...*", è presente una tabella con i simboli di seguito descritti:

Quota	Ascissa verticale di riferimento
Af conf.	Numero e diametro armatura presente in una zona confinata
Af std	Diametro e passo armatura in zona non confinata (doppia maglia)
Af estremi	Diametro dei ferri di estremità del pannello; se posto uguale 0, viene utilizzato il diametro standard
Af V (ori)	Diametro e passo armatura orizzontale (doppia maglia)
Ver. N	Rapporto tra azione di calcolo e resistenza a compressione (normalizzato a 1 in quanto da confrontare con 40% in CDB e 35 % in CDA)
Ver. N/M	Rapporto tra azione di calcolo e resistenza a pressoflessione
Ver. V acc(7)	Rapporto tra azione di calcolo e resistenza a taglio-trazione per alfaS minore di 2 secondo paragrafo 7.4.4.5.1
Ver. V cls	Rapporto tra azione di calcolo e resistenza a taglio-compressione
Ver. V acc	Rapporto tra azione di calcolo e resistenza a taglio-trazione
Ver. V scorr.	Rapporto tra azione di calcolo e resistenza a taglio scorrimento
N add	Sforzo assiale di cui al punto 7.4.4.5.1 da sommare e sottrarre nelle verifiche quando q supera 2
N invil M invil	Inviluppo del Momento e Sforzo Normale come al punto 7.4.4.5.1 (informativo) (solo in Parete Sismica)

Quota	Ascissa verticale di riferimento
N v. N	Valore dello sforzo assiale per cui Ver. N attinge il massimo valore
N v. M/N, M v. M/N	Valore dello sforzo assiale e momento per cui Ver. N/M attinge il massimo valore
N v. M/N, M v. M/N Mo v. M/N	Valore dello sforzo assiale e dei momenti per cui Ver. N/M attinge il massimo valore (per le pareti estese debolmente armate)
N v. Vcls, V v. Vcls,	Valore dello sforzo assiale e taglio per cui Ver. V. cls attinge il massimo valore
N v. Vacc, M v. Vacc, V v. Vacc,	Valore dello sforzo assiale, momento e taglio per cui Ver. V. acc attinge il massimo valore
N v. Vscorr, M v. Vscorr, V v. Vscorr,	Valore dello sforzo assiale, momento e taglio per cui Ver. V. scorr.e
N v. N	Valore dello sforzo assiale per cui Ver. N attinge il massimo valore
N v. M/N, M v. M/N	Valore dello sforzo assiale e momento per cui Ver. N/M attinge il massimo valore
N v. M/N, M v. M/N Mo v. M/N	Valore dello sforzo assiale e dei momenti per cui Ver. N/M attinge il massimo valore (per le pareti estese debolmente armate)
N v. Vcls, V v. Vcls,	Valore dello sforzo assiale e taglio per cui Ver. V. cls attinge il massimo valore

Quota	Ascissa verticale di riferimento
CtgT Vcls	Valore di ctg(teta) adottato nella verifica V compressione cls
Vrsd Vcls	Valore della resistenza a taglio trazione (armatura di calcolo)
Vrcd Vcls	Valore della resistenza a taglio compressione
CtgT Vacc	Valore di ctg(teta) adottato nella verifica V trazione armatura
Vrsd Vacc	Valore della resistenza a taglio trazione (armatura presente)
Vrcd Vacc	Valore della resistenza a taglio compressione
Vdd	Valore del contributo alla resistenza allo scorrimento come da [7.4.20]
Vid	Valore del contributo alla resistenza allo scorrimento come da [7.4.21]
A s.i.	Somma delle aree di armature
Incli.	Angolo di inclinazione delle armature
Dist.	Distanza alla base tra le armature inclinate

Quota	Ascissa verticale di riferimento
-------	----------------------------------

V[7.4.16]	Verifica a taglio-trazione dell'armatura dell'anima (7.4.16)
N M V	Sollecitazioni di calcolo della condizione più gravosa
Alfas	Rapporto di Taglio
Vrd,c	Resistenza a taglio degli elementi non armati
VRd,s	Resistenza a taglio nei confronti dello scorrimento
V[7.4.17]	Verifica a taglio-trazione dell'armatura dell'anima (7.4.17)
roH	Rapporto tra l'armatura orizzontale e l'area della sezione relativa di calcestruzzo
roV	Rapporto tra l'armatura verticale e l'area della sezione relativa di calcestruzzo
roN	Sforzo normale adimensionalizzato Ned/(bw fyd)

Per la verifica a **Punzonamento** è presente una tabella con i simboli di seguito descritti:

Nodo	numero del nodo
Stato	codice di verifica dell'elemento ok o NV
V. 6.47	Fattore di sicurezza per la verifica per piastre prive di armature a taglio lungo il perimetro resistente U1
V. 6.53	Fattore di sicurezza per la verifica per piastre prive di armature a taglio lungo il perimetro del pilastro U0
Beta	Fattore di incremento dovuto ai momenti flettenti
f. a fon	fattore di amplificazione per le fondazioni (solo per gusci di fondazione)
f. Uout	fattore di amplificazione dell'altezza utile per individuare il perimetro di verifica lungo il quale l'armatura a taglio non è richiesta
Aw tot	Quantitativo di armatura per la verifica di piastre munite di armatura (formula 6.52 dell'EC2)
Asw,min	Quantitativo minimo di armatura previsto dai dettagli costruttivi (formula 9.11 dell'EC2)
n. x serie	Numero di serie di armature
n.ser 0(R)	Numero di braccia delle armature in direzione 0 (o numero di braccia radiale)
n.ser 90	Numero di braccia delle armature in direzione 90 (solo se armatura cruciforme)
Rif. cmb	Riferimento combinazioni da cui si generano le verifiche più gravose

PROGETTAZIONE DELLE FONDAZIONI

Il D.M.17/01/2018 - par: 7.2.5 prevede:

"Sia per CD*A" sia per CD*B" il dimensionamento delle strutture di fondazione e la verifica di sicurezza del complesso fondazione-terreno devono essere eseguiti assumendo come azione in fondazione, trasmessa dagli elementi soprastanti, una tra le seguenti:

- quella derivante dall'analisi strutturale eseguita ipotizzando comportamento strutturale non dissipativo;
- [...];
- quella trasferita dagli elementi soprastanti nell'ipotesi di comportamento strutturale dissipativo, amplificata di un coefficiente pari a 1,30 in CD*A" e 1,10 in CD*B";

Nel contesto visualizzazione risultati e nella stampa della relazione sulle fondazioni PRO_SAP mostra le sollecitazioni che derivano dall'analisi non incrementate sia in termini di pressioni sul terreno che in termini di sollecitazioni.

La progettazione degli elementi strutturali con proprietà fondazione è effettuata da PRO_SAP (per travi e platee) o da PRO_CAD Plinti (per plinti e pali di fondazione) incrementando le sollecitazioni delle combinazioni con sisma di un coefficiente pari 1.1 in CDB e 1.3 in CDA per pali, plinti, travi e platee.

Per i bicchieri dei plinti di fondazione prefabbricati l'incremento delle sollecitazioni ha un fattore pari a 1.2 in CDB e 1.35 in CDA.

N.B.: nel caso di comportamento strutturale non dissipativo la progettazione viene effettuata senza nessun incremento.

Le verifiche geotecniche vengono effettuate dal modulo geotecnico incrementando automaticamente le sollecitazioni del fattore 1.1 in CDB e 1.3 in CDA per pali, plinti, travi e platee.

N.B.: nel caso di comportamento strutturale non dissipativo le verifiche geotecniche vengono effettuate senza nessun incremento.

Macro Guscio	Spessore	Id Materiale	Id Criterio	Progettazione
	cm			
1	100.00	5	1	Singolo elemento

Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
									daN/cm	daN/cm	daN/cm	daN	daN	daN
490	ok	0.04	5.53e-02	7.63e-03	15.7	15.7	15.7	15.7	40.4	87.5	-12.0	-1462.3	-2878.3	378.6
491	ok	0.04	0.1	1.54e-02	15.7	15.7	15.7	15.7	-17.2	63.1	48.0	-730.1	-2806.1	1441.2
492	ok	0.04	0.2	1.69e-02	15.7	15.7	15.7	15.7	83.6	131.3	62.4	-4166.6	-9429.8	-1637.9
493	ok	0.04	8.35e-02	1.60e-02	15.7	15.7	15.7	15.7	-3.2	-68.8	-34.9	-271.5	-4307.5	-755.3
494	ok	0.04	0.2	1.70e-02	15.7	15.7	15.7	15.7	85.1	131.1	-63.8	-4237.3	-9401.4	1683.9
495	ok	0.04	0.1	1.55e-02	15.7	15.7	15.7	15.7	-1.3	74.2	-30.2	-247.0	-6039.4	-1952.4
496	ok	0.04	5.20e-02	7.76e-03	15.7	15.7	15.7	15.7	44.6	24.0	26.2	-1577.6	-1761.2	896.2
497	ok	0.04	4.50e-02	4.16e-03	15.7	15.7	15.7	15.7	-12.0	41.9	35.3	-1899.0	-1652.2	420.7
498	ok	0.04	2.99e-02	1.83e-03	15.7	15.7	15.7	15.7	17.6	15.6	-19.4	436.8	365.2	-1281.6
507	ok	0.04	3.50e-02	2.29e-03	15.7	15.7	15.7	15.7	16.5	16.8	-15.0	618.8	451.0	-1435.4

Progetto esecutivo

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	229 di 288

508	ok	0.04	4.38e-02	4.59e-03	15.7	15.7	15.7	15.7	10.6	14.3	-32.5	1553.3	1896.2	-700.8
509	ok	0.04		0.1 5.95e-03	15.7	15.7	15.7	15.7	-32.8	17.6	-44.8	5050.4	3288.3	-991.1
510	ok	0.04	4.55e-02	4.71e-03	15.7	15.7	15.7	15.7	-22.7	-28.7	46.1	-1357.0	-2071.1	754.8
511	ok	0.04	9.13e-02	7.62e-03	15.7	15.7	15.7	15.7	24.9	93.4	-23.8	-597.3	-4748.8	-560.6
512	ok	0.04		0.1 1.16e-02	15.7	15.7	15.7	15.7	33.7	101.9	-120.4	-3979.3	-4067.2	-3005.5
513	ok	0.04		0.1 1.39e-02	15.7	15.7	15.7	15.7	-2.2	159.1	-16.5	-441.3	-6841.8	-2100.7
514	ok	0.04		0.1 9.62e-03	15.7	15.7	15.7	15.7	-11.0	93.8	-122.0	-5983.3	-5380.5	-1994.6
515	ok	0.04		0.2 1.39e-02	15.7	15.7	15.7	15.7	77.4	222.5	-54.7	-4348.3	-9701.1	2338.5
516	ok	0.04		0.2 1.03e-02	15.7	15.7	15.7	15.7	-32.5	44.1	17.3	2362.4	-7654.4	-3800.9
517	ok	0.04	7.89e-02	1.29e-02	15.7	15.7	15.7	15.7	-1.7	-179.2	1.6	-892.7	-4065.6	-1379.3
518	ok	0.04		0.1 1.18e-02	15.7	15.7	15.7	15.7	3.2	128.4	-9.0	433.1	-6096.8	-911.3
519	ok	0.04		0.2 1.38e-02	15.7	15.7	15.7	15.7	78.0	221.2	54.7	-4351.9	-9699.1	-2352.8
520	ok	0.04		0.2 1.03e-02	15.7	15.7	15.7	15.7	72.4	101.5	5.1	-4827.4	-4864.3	-3226.6
521	ok	0.04		0.1 1.38e-02	15.7	15.7	15.7	15.7	-2.4	158.1	16.3	-425.3	-6848.1	2095.6
522	ok	0.04		0.1 9.68e-03	15.7	15.7	15.7	15.7	-10.7	94.6	121.5	-6002.1	-5397.9	1984.3
523	ok	0.04	9.09e-02	7.41e-03	15.7	15.7	15.7	15.7	12.9	123.2	43.3	-267.4	-3102.7	766.7
524	ok	0.04		0.1 1.16e-02	15.7	15.7	15.7	15.7	34.0	102.5	120.3	-3977.6	-4114.6	3020.1
525	ok	0.04	4.47e-02	4.53e-03	15.7	15.7	15.7	15.7	-10.4	-13.5	-16.4	-2138.6	-593.2	-712.4
526	ok	0.04		0.1 5.90e-03	15.7	15.7	15.7	15.7	-30.0	18.0	46.0	5118.0	3322.3	1072.4
527	ok	0.04	3.50e-02	2.30e-03	15.7	15.7	15.7	15.7	12.7	16.9	9.8	564.3	425.9	1299.2
528	ok	0.04	4.70e-02	4.64e-03	15.7	15.7	15.7	15.7	10.7	24.5	51.8	2140.1	1470.3	447.6
529	ok	0.04		0.2 6.93e-03	15.7	15.7	15.7	15.7	28.8	68.5	-76.0	-5456.3	-3685.6	-5540.9
530	ok	0.04		0.2 1.08e-02	15.7	15.7	15.7	15.7	-106.4	-35.5	59.4	5753.4	2474.9	-1491.7
531	ok	0.04		0.2 1.57e-02	15.7	15.7	15.7	15.7	41.0	69.4	-70.1	-6328.4	-4872.9	-6190.3
532	ok	0.04		0.1 1.97e-02	15.7	15.7	15.7	15.7	-20.9	51.1	-103.9	-5482.9	-2364.8	-2884.0
533	ok	0.04		0.3 2.19e-02	15.7	15.7	15.7	15.7	91.0	121.7	-34.6	-7874.5	-5967.5	6352.1
534	ok	0.04		0.3 1.65e-02	15.7	15.7	15.7	15.7	-232.3	105.3	69.5	-1.222e+04	-6997.9	-3943.1
535	ok	0.04		0.3 2.18e-02	15.7	15.7	15.7	15.7	87.6	117.4	31.0	-7791.2	-5759.0	-6289.5
536	ok	0.04		0.1 1.96e-02	15.7	15.7	15.7	15.7	-23.2	52.0	103.4	-5520.3	-2390.0	2926.6
537	ok	0.04		0.2 1.56e-02	15.7	15.7	15.7	15.7	42.2	70.2	69.2	-6380.0	-4891.8	6204.9
538	ok	0.04		0.2 6.87e-03	15.7	15.7	15.7	15.7	6.3	7.5	38.5	-6853.7	-3801.1	1783.1
539	ok	0.04		0.2 1.10e-02	15.7	15.7	15.7	15.7	88.3	-9.6	44.4	-8161.6	-542.1	-942.8
540	ok	0.04		0.2 1.36e-02	15.7	15.7	15.7	15.7	32.4	13.5	-50.0	-1.183e+04	-7416.1	-756.9
541	ok	0.04		0.3 6.73e-03	15.7	15.7	15.7	15.7	150.4	106.4	-83.3	-1.214e+04	-6089.5	3718.2
542	ok	0.04		0.2 2.05e-02	15.7	15.7	15.7	15.7	-248.4	-26.3	-137.3	-1.080e+04	-6288.9	-2893.4
543	ok	0.04		0.5 2.23e-02	15.7	15.7	15.7	15.7	-198.9	-17.2	-116.0	-3.079e+04	-8269.9	-3391.4
544	ok	0.04		0.3 3.02e-02	15.7	15.7	15.7	15.7	-382.2	107.2	-110.9	-2.056e+04	-1.184e+04	-1383.6
545	ok	0.04		0.3 2.32e-02	15.7	15.7	15.7	15.7	-337.7	93.6	78.2	-2.437e+04	-1.190e+04	2074.8
546	ok	0.04		0.3 3.03e-02	15.7	15.7	15.7	15.7	-382.4	108.2	109.1	-2.055e+04	-1.186e+04	1416.2
547	ok	0.04		0.5 2.24e-02	15.7	15.7	15.7	15.7	-200.0	-15.9	114.2	-3.078e+04	-8332.0	3423.8
548	ok	0.04		0.2 2.06e-02	15.7	15.7	15.7	15.7	-135.3	10.5	50.1	-1.137e+04	-9696.2	147.2
549	ok	0.04		0.2 1.36e-02	15.7	15.7	15.7	15.7	56.1	58.7	16.0	-1.189e+04	-5238.9	-1450.1
550	ok	0.04		0.3 6.78e-03	15.7	15.7	15.7	15.7	159.1	109.2	87.3	-1.248e+04	-6202.2	-3913.0
551	ok	0.04		0.2 1.68e-02	15.7	15.7	15.7	15.7	57.4	-22.6	-52.6	-1.053e+04	-3723.2	-867.1
552	ok	0.04		0.1 7.88e-03	15.7	15.7	15.7	15.7	-42.4	-24.8	-8.4	-5333.9	1520.6	2728.7
553	ok	0.04		0.4 2.32e-02	15.7	15.7	15.7	15.7	-152.1	-44.1	-23.9	-1.700e+04	-1.953e+04	-4255.7
554	ok	0.04		0.6 2.20e-02	15.7	15.7	15.7	15.7	-205.7	-60.3	-88.3	-3.737e+04	-1.411e+04	-1.191e+04
555	ok	0.05		0.4 6.35e-02	15.7	21.6	15.7	21.6	-255.3	-925.3	-189.2	-1.936e+04	-1.800e+04	-4878.6
556	ok	0.05		0.4 6.47e-02	15.7	23.2	15.7	23.2	-433.8	-361.0	103.5	-2.851e+04	-1.221e+04	1977.5
557	ok	0.05		0.4 6.35e-02	15.7	21.6	15.7	21.6	-470.9	-374.3	72.9	-2.574e+04	-1.140e+04	3745.9
558	ok	0.04		0.6 2.20e-02	15.7	15.7	15.7	15.7	-211.8	-60.3	85.5	-3.729e+04	-1.416e+04	1.194e+04
559	ok	0.04		0.4 2.30e-02	15.7	15.7	15.7	15.7	-256.9	-36.3	60.5	-1.536e+04	-1.007e+04	1.179e+04
560	ok	0.04		0.2 1.68e-02	15.7	15.7	15.7	15.7	150.1	16.2	139.9	-9450.0	-1407.3	3161.4
561	ok	0.04		0.1 7.95e-03	15.7	15.7	15.7	15.7	-43.2	-25.0	9.5	-5375.3	1547.2	-2844.9
562	ok	0.04		0.2 1.40e-02	15.7	15.7	15.7	15.7	69.2	33.7	22.7	-1.126e+04	-7220.2	200.3
563	ok	0.04		0.3 8.59e-03	15.7	15.7	15.7	15.7	156.6	103.5	59.6	-1.414e+04	-6186.2	-3494.4
564	ok	0.04		0.2 1.90e-02	15.7	15.7	15.7	15.7	-98.1	1.0	27.7	-8516.4	-8501.0	-1668.6
565	ok	0.04		0.5 1.71e-02	15.7	15.7	15.7	15.7	-125.1	-39.1	69.5	-2.711e+04	-7612.0	3447.9
566	ok	0.04		0.4 2.94e-02	15.7	15.7	15.7	15.7	-331.6	-73.5	84.9	-1.671e+04	-6089.1	5334.1
567	ok	0.04		0.4 2.17e-02	15.7	15.7	15.7	15.7	-50.2	95.8	-273.9	-8468.5	-8348.5	-8497.9
568	ok	0.04		0.4 2.92e-02	15.7	15.7	15.7	15.7	4.8	-150.8	-79.8	-9122.7	-9483.4	-7067.5
569	ok	0.04		0.5 1.70e-02	15.7	15.7	15.7	15.7	-122.8	-38.5	-70.8	-2.715e+04	-7639.3	-3431.4
570	ok	0.04		0.2 1.88e-02	15.7	15.7	15.7	15.7	-92.9	2.4	-27.9	-8763.9	-8517.4	1615.7
571	ok	0.04		0.2 1.41e-02	15.7	15.7	15.7	15.7	71.8	34.0	-21.4	-1.136e+04	-7282.7	-217.3
572	ok	0.04		0.3 8.70e-03	15.7	15.7	15.7	15.7	159.2	102.5	-60.7	-1.429e+04	-6161.8	3547.5
573	ok	0.04		0.2 8.66e-03	15.7	15.7	15.7	15.7	24.1	54.3	45.8	-6861.6	-3362.5	-1419.2
574	ok	0.04		0.2 1.15e-02	15.7	15.7	15.7	15.7	113.9	26.4	28.6	-1.075e+04	-1703.5	-581.4
575	ok	0.04		0.2 1.13e-02	15.7	15.7	15.7	15.7	37.0	58.6	60.8	-5064.4	-4401.2	4411.2
576	ok	0.04		0.2 1.74e-02	15.7	15.7	15.7	15.7	-11.6	38.3	102.7	-4542.2	-2786.4	1650.1
577	ok	0.04		0.2 1.93e-02	15.7	15.7	15.7	15.7	-1.4	100.3	29.6	-6843.4	-4510.3	-4279.2
578	ok	0.04		0.2 1.55e-02	15.7	15.7	15.7	15.7	-211.1	34.8	-84.2	-1.022e+04	-5299.4	-765.9
579	ok	0.04		0.2 1.94e-02	15.7	15.7	15.7	15.7	-0.4	99.9	-31.1	-6840.5	-4495.3	4274.1
580	ok	0.04		0.2 1.74e-02	15.7	15.7	15.7	15.7	24.3	-26.2	-79.9	-2893.0	-5356.5	-1190.3
581	ok	0.04		0.2 1.12e-02	15.7	15.7	15.7	15.7	37.1	59.8	-60.9	-5061.6	-4463.1	-4430.2
582	ok	0.04		0.2 8.72e-03	15.7	15.7	15.7	15.7	23.0	57.1	-46.7	-6918.4	-3476.8	1478.5
583	ok	0.04		0.2 1.15e-02	15.7	15.7	15.7	15.7	121.7	29.9	-24.8	-1.114e+04	-1857.4	386.9
584	ok	0.04	8.15e-02	6.32e-03	15.7	15.7	15.7	15.7	39.3	-23.6	-75.0	-4070.2	-2073.5	-1324.9

PONTE-TUBO - RELAZIONE DI CALCOLO

COMMESSA	LOTTO	ELABORATO	DOCUMENTO	REV.	FOGLIO
433	I-1	B_1	519_v3	1	230 di 288

585	ok	0.04	5.19e-02	4.84e-03	15.7	15.7	15.7	15.7	5.9	-12.9	-23.0	-2015.3	-569.3	-1238.2
586	ok	0.04	0.1	1.30e-02	15.7	15.7	15.7	15.7	-35.0	-124.5	-109.1	4183.1	2755.1	-4243.8
587	ok	0.04	0.1	1.28e-02	15.7	15.7	15.7	15.7	-2.0	67.6	96.0	-5135.3	-4601.3	2145.8
588	ok	0.04	0.1	1.24e-02	15.7	15.7	15.7	15.7	70.2	77.5	-45.8	-4642.7	-3905.8	-3650.6
589	ok	0.04	0.1	1.06e-02	15.7	15.7	15.7	15.7	4.3	-24.0	-37.3	-36.1	-6124.6	-655.7
590	ok	0.04	0.1	1.23e-02	15.7	15.7	15.7	15.7	-7.6	-15.7	-11.8	1971.6	-6628.4	-3759.6
591	ok	0.04	0.1	1.28e-02	15.7	15.7	15.7	15.7	-2.7	68.3	-97.1	-5088.4	-4609.0	-2137.1
592	ok	0.04	0.1	1.30e-02	15.7	15.7	15.7	15.7	47.2	89.6	-112.1	-4509.8	-3981.4	-2496.7
593	ok	0.04	8.42e-02	6.27e-03	15.7	15.7	15.7	15.7	41.1	-29.8	42.4	-4318.7	-1173.7	1413.7
594	ok	0.04	5.21e-02	4.80e-03	15.7	15.7	15.7	15.7	-15.9	-24.5	53.0	-2426.2	-1442.4	643.3
595	ok	0.04	4.65e-02	4.09e-03	15.7	15.7	15.7	15.7	-18.6	-3.2	-50.5	-1961.8	-1800.6	-233.4
596	ok	0.04	3.00e-02	1.80e-03	15.7	15.7	15.7	15.7	16.4	16.7	18.8	479.9	319.5	1288.5

Nodo	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
	0.05	0.62	0.06	15.71	23.18	15.71	23.18	-470.91	-925.30	-273.91	-3.737e+04	-1.953e+04	-1.191e+04
								159.21	222.55	139.91	5753.41	3322.25	1.194e+04

Nodo	Stato	Max tau daN/cm2	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr daN/cm	V sec daN/cm
490	ok	2.82						
491	ok	2.77						
492	ok	2.18						
493	ok	2.33						
494	ok	2.17						
495	ok	2.82						
496	ok	2.87						
497	ok	3.49						
498	ok	2.19						
507	ok	2.51						
508	ok Av	3.59	0.10	0.07	3.3	2.4	275.0	200.6
509	ok Av	11.09	0.29	0.25	9.6	8.2	798.8	681.4
510	ok Av	4.01	0.08	0.11	2.7	3.7	221.2	309.1
511	ok	2.94						
512	ok Av	5.35	0.10	0.17	3.4	5.5	282.3	456.2
513	ok	2.71						
514	ok	2.67						
515	ok	1.78						
516	ok Av	4.23	0.11	0.10	3.7	3.4	305.2	280.8
517	ok	2.23						
518	ok Av	9.97	0.29	0.18	9.7	5.9	807.2	490.8
519	ok	1.79						
520	ok Av	4.21	0.11	0.10	3.7	3.3	304.6	279.2
521	ok	2.70						
522	ok	2.65						
523	ok	2.93						
524	ok Av	5.35	0.10	0.16	3.4	5.5	282.4	455.7
525	ok Av	3.61	0.10	0.07	3.3	2.4	275.2	203.5
526	ok Av	11.12	0.29	0.25	9.6	8.2	801.7	683.0
527	ok	2.51						
528	ok Av	3.99	0.08	0.11	2.6	3.7	218.3	308.8
529	ok Av	6.51	0.21	0.07	7.1	2.3	590.3	191.3
530	ok Av	3.84	0.13	0.02	4.3	0.7	358.9	57.1
531	ok Av	5.10	0.17	0.06	5.7	2.0	476.6	170.4
532	ok Av	11.04	0.34	0.17	11.2	5.7	933.7	472.7
533	ok Av	6.14	0.21	0.09	6.9	2.9	579.0	239.8
534	ok Av	6.80	0.23	0.05	7.6	1.6	630.9	131.6
535	ok Av	6.14	0.21	0.09	6.9	2.9	579.5	238.9
536	ok Av	11.06	0.34	0.17	11.2	5.7	935.7	473.3
537	ok Av	5.11	0.17	0.06	5.7	2.0	478.1	169.6
538	ok Av	6.52	0.21	0.07	7.1	2.3	591.9	192.0
539	ok Av	3.86	0.13	0.02	4.3	0.7	360.9	57.2
540	ok Av	3.65	0.12	0.07	4.1	2.3	339.7	193.5
541	ok Av	3.61	0.12	0.01	4.1	0.5	339.6	40.4
542	ok Av	8.01	0.27	0.09	8.8	2.8	734.5	235.8
543	ok Av	8.94	0.30	0.09	10.0	3.1	831.3	254.8
544	ok Av	7.03	0.24	0.04	7.9	1.2	662.3	101.0
545	ok Av	6.05	0.21	0.02	6.8	0.8	568.8	66.1
546	ok Av	7.04	0.24	0.04	8.0	1.2	663.3	100.8
547	ok Av	8.94	0.30	0.09	10.0	3.1	832.0	255.1
548	ok Av	8.03	0.27	0.09	8.8	2.8	736.2	235.0
549	ok Av	3.66	0.12	0.07	4.1	2.3	340.6	192.7
550	ok Av	3.64	0.12	0.01	4.1	0.5	342.1	40.6
551	ok Av	11.90	0.18	0.37	6.0	12.2	503.6	1019.0
552	ok	3.37						
553	ok Av	13.92	0.30	0.37	9.9	12.4	823.6	1033.6
554	ok Av	9.56	0.32	0.13	10.7	4.5	892.6	372.5