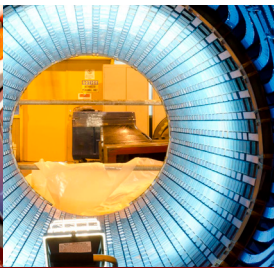
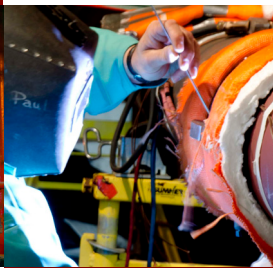




THE OUTAGE EXPERT
PROCESS, HABITS, CULTURE



PIPING
STUFF THAT WORKS

Pipe Size	O.D. in Inches	5	10	20	30	40	STD	60	80	XH	100	120	140	160	XXH
1/8	.405	.035	.049			.068	.068		.095	.095					
		.1383	.1863			.2447	.2447		.3145	.3145					
1/4	.540	.049	.065			.088	.088		.119	.119					
		.2570	.3297			.4248	.4248		.5351	.5351					
3/8	.675	.049	.065			.091	.091		.126	.126					
		.3276	.4235			.5676	.5676		.7388	.7388					
1/2	.840	.065	.083			.109	.109		.147	.147				.187	.294
		.5383	.6710			.8510	.8510		1.088	1.088				1.304	1.714
3/4	1.050	.065	.083			.113	.113		.154	.154				.218	.358
		.6838	.8572			1.31	1.31		1.474	1.474				1.937	3.659
1	1.315	.065	.109			.133	.133		.179	.179				.250	.358
		.8678	1.404			1.679	1.679		2.172	2.172				2.844	3.659

Pipe Size	O.D. in Inches	5	10	20	30	40	STD	60	80	XH	100	120	140	160	XXH
1 1/4	1.660	.065	.109			.140	.140		.191	.191				.250	.382
		1.107	1.806			2.273	2.273		2.997	2.997				3.765	5.214
1 1/2	1.900	.065	.109			.145	.145		.200	.200				.281	.400
		1.274	2.085			2.718	2.718		3.631	3.631				4.859	6.408
2	2.375	.065	.109			.154	.154		.218	.218				.343	.436
		1.604	2.638			3.653	3.653		5.022	5.022				7.444	9.029
2 1/2	2.875	.083	.120												.522
		2.475	3.531												13.70
3	3.500	.083	.120			.216	.216		.300	.300				.437	.600
		3.029	4.332			7.576	7.576		10.25	10.25				14.37	18.58
3 1/2	4.000	.083	.120			.226	.226		.318	.318					.636
		3.472	4.973			9.109	9.109		12.51	12.51					22.85

Pipe Size	O.D. in Inches	5	10	20	30	40	STD	60	80	XH	100	120	140	160	XXH
4	.4500	.083 3.915	.120 5.613			.237 10.79	.237 10.79	.281 12.66	.337 14.98	.337 14.98		.437 .1901		.531 22.51	.674 27.54
4 1/2	5.000						.247 12.53			.355 17.61					.710 32.53
5	5.563	.109 6.439	.134 7.770			.258 14.62	.258 14.62		.375 20.78	.375 20.78		.500 27.04		.625 32.96	.750 38.55
6	6.625	.109 7.585	.134 9.289			.280 18.97	.280 18.97		.432 28.57	.432 28.57		.562 36.39		.718 45.30	.864 53.16
7	7.625						.301 23.57			.500 38.50					.875 63.08
8	8.625	.109 9.914	.148 13.40	.250 22.36	.277 24.70	.322 28.55	.322 28.55	.406 35.64	.500 43.49	.500 43.49	.593 50.87	.718 60.63	.812 67.76	.906 74.69	.875 72.42

Pipe Size	O.D. in Inches	5	10	20	30	40	.56	60	80	XH	100	120	140	160	XXH
9	9.625						.342 33.9			.500 48.72					
10	10.75	.134 15.19	.165 18.7	.250 28.04	.307 34.24	.365 40.48	.365 40.48	.500 54.74	.593 64.33	.500 54.74 .593	.718 76.93	.843 89.20	1.000 104.1	1.125 115.7	
11	11.750						.375 45.55			.500 60.07					
12	12.750	.165 22.18	.180 24.20	.250 33.38	.330 43.77	.406 53.53	.375 49.56	.562 73.16	.687 88.51	.500 65.42	.843 125.5	1.000 125.5	1.125 139.7	1.312 160.3	
14	14		.250 36.71	.312 45.68	.375 54.57	.437 63.37	.375 54.47	.593 84.91	.750 106.1	.500 72.09	.937 130.7	1.093 130.7	1.250 170.2	1.406 189.1	
16	16		.250 42.05	.312 52.36	.375 62.58	.500 82.77	.375 62.58	.656 62.58	.843 107.5	.500 82.77	1.031 164.8	1.218 192.3	1.437 223.5	1.593 245.1	

Pipe Size	O.D. in Inches	5	10	20	30	40	STD	60	80	XH	100	120	140	160	XXH
18	18		.250	.312	.437	.562	.375	.750	.937	.500	1.156	1.375	1.562	1.781	
			47.39	59.03	82.06	104.8	70.59	138.2	170.8	93.45	208	244.1	274.2	308.5	
20	20		.250	.375	.500	.593	.375	.812	1.031	.500	1.280	1.500	1.750	1.968	
			52.73	78.6	104.1	122.9	78.6	166.4	208.9	104.1	256.1	256.1	341.1	379.0	
22	22		.250	.375	.500		.375	.875	1.125	.500	1.375	1.625	1.875	2.125	
			63.41	86.61	114.8		86.61	197.4	250.8	114.8	302.9	353.6	403.0	451.1	
24	24		.312	.375	.562	.687	.375	.968	1.218	.500	1.531	1.812	2.062	2.343	
			85.6	94.62	140.8	171.2	94.62	238.1	296.4	125.2	367.4	429.4	483.1	541.9	
26	26		.312	.500			.375			.500					
			92.26	136.2			102.6			136.2					
28	28		.312	.500	.625		.375			.500					
			98.93	146.8	182.7		110.6			146.8					

Pipe Size	O.D. in Inches	5	10	20	30	40	.56	60	80	XH	100	120	140	160	XXH
30	30		.312	.500	.625		.375			.500					
			10.5	157.5	196.1		118.5			157.5					
32	32		.344	.500	.625	.688	.372			.500					
			123.7	168.2	209.4	230.1	126.7			168.2					
34	34		.500	.500	.625	.688	.375			.500					
			189.6	178.9	236.1	244.8	134.7			178.9					
36	36			.500		.750	.375			.500					
				189.6		282.3	142.7			189.6					
42							.375			.500					
							166.7			221.6					
48							.375			.500					
							190.7			253.6					