



NATAL STAINLESS STEEL

American Standard
ASME B 31.3
Pipe, ANSI dimensions

	Grade 304L	
	ASTM A 312	ASTM A 358
Wall thickness tolerance	-12.5%	-0.3mm
Radiographic test	0%	100%
Joint Quality Factor (Ej)	0.8	1.0

Pressure tables for Welded Pipes

Dimensions					Max. allowable pressure in bar (1 bar = 14.50 psi)								
OD mm	NPS	Wall mm	SCH	ASTM	100°F	200°F	300°F	400°F	500°F	600°F	700°F	800°F	900°F
					40°C	93°C	149°C	204°C	260°C	316°C	371°C	427°C	462°C
13.7	1/4	1.65	5S	A 312	212	212	212	201	188	178	171	165	151
17.2	3/8	1.65	5S	A 312	166	166	166	157	147	139	134	129	118
21.3	1/2	1.65	5S	A 312	132	132	132	125	117	111	107	103	94
21.3		2.11	10S	A 312	172	172	172	162	152	144	139	134	122
21.3		2.77	40S	A 312	231	231	231	218	204	193	186	180	164
26.7	3/4	1.65	5S	A 312	104	104	104	99	92	87	84	81	84
26.7		2.11	10S	A 312	135	135	135	128	120	113	109	105	96
26.7		2.87	40S	A 312	187	187	187	177	166	157	151	146	134
33.4	1	1.65	5S	A 312	82	82	82	78	73	69	67	64	59
33.4		2.77	10S	A 312	142	142	142	134	126	119	115	110	101
33.4		3.38	40S	A 312	176	176	176	166	156	147	142	137	125
42.2	1 1/4	1.65	5S	A 312	65	65	65	61	57	54	52	50	46
42.2		2.77	10S	A 312	111	111	111	105	98	93	90	86	79
42.2		3.56	40S	A 312	145	145	145	137	128	121	117	113	103
48.3	1 1/2	1.65	5S	A 312	56	56	56	53	50	47	46	44	40
48.3		2.77	10S	A 312	96	96	96	91	85	81	78	75	69
48.3		3.68	40S	A 312	130	130	130	123	115	109	105	101	92
60.3	2	1.65	5S	A 312	45	45	45	43	40	38	36	35	32
60.3		2.77	10S	A 312	77	77	77	72	68	64	62	60	55
60.3		3.91	40S	A 312	109	109	109	104	97	92	89	85	78
73.0	2 1/2	2.11	5S	A 312	48	48	48	45	42	40	38	37	34
73.0		3.05	10S	A 312	69	69	69	66	61	58	56	54	49
73.0		5.16	40S	A 312	120	120	120	113	106	100	97	93	85
88.9	3	2.11	5S	A 312	39	39	39	37	34	33	31	30	28
88.9		3.05	10S	A 312	57	57	57	54	50	48	46	44	40
88.9		5.49	40S	A 312	104	104	104	98	92	87	84	81	74
101.6	3 1/2	2.11	5S	A 312	34	34	34	32	30	28	27	26	24
101.6		3.05	10S	A 312	49	49	49	47	44	41	40	38	35
101.6		5.74	40S	A 312	95	95	95	90	84	79	77	74	68
114.3	4	2.11	5S	A 312	30	30	30	30	29	27	25	23	21
114.3		3.05	10S	A 312	44	44	44	41	39	37	35	34	31
114.3		6.02	40S	A 312	88	88	88	83	78	74	71	69	63
114.3		8.56	80S	A 358	177	177	177	167	157	148	143	138	126



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141.3	5	2.77	5S	A 312	32	32	32	30	28	27	26	25	23
141.3		3.40	10S	A 312	39	39	39	37	35	33	32	31	28
141.3		6.55	40S	A 312	77	77	77	73	68	65	62	60	55
141.3		9.53	80S	A 358	159	159	159	150	141	133	128	124	113
168.3	6	2.77	5S	A 312	27	27	27	25	24	23	22	21	19
168.3		3.40	10S	A 312	33	33	33	31	29	28	27	26	24
168.3		7.11	40S	A 312	70	70	70	66	62	59	57	55	50
168.3		10.97	80S	A 358	154	154	154	146	136	129	124	120	110
219.1	8	2.77	5S	A 312	21	21	21	19	18	17	17	16	15
219.1		3.76	10S	A 312	28	28	28	26	25	23	23	22	20
219.1		6.35	20	A 312	48	48	48	45	42	40	39	37	34
219.1		8.18	40S	A 312	62	62	62	58	55	52	50	48	44
219.1	8	10.31	60	A 358	109	109	109	103	97	92	88	85	78
219.1		12.70	80	A 358	137	137	137	129	121	114	110	106	97
219.1		15.09	100	A 358	164	164	164	155	146	138	133	128	117
219.1		18.26	120	A 358	202	202	202	191	179	169	163	157	144
273.0	10	3.40	5S	A 312	20	20	20	19	18	17	16	16	14
273.0		4.19	10S	A 312	25	25	25	24	22	21	20	19	18
273.0		6.35	20	A 312	38	38	38	36	34	32	31	30	27
273.0		9.27	40S	A 312	56	56	56	53	50	47	45	44	40
273.0	10	12.70	60	A 358	109	109	109	103	90	91	88	84	77
273.0		15.09	80	A 358	130	130	130	123	116	109	105	102	93
273.0		18.26	100	A 358	160	160	160	151	142	134	129	124	114
273.0		21.44	120	A 358	190	190	190	180	168	159	154	148	135

Continued:

Dimensions					Max. allowable pressure in bar (1 bar = 14.50 psi)								
OD mm	NPS	Wall mm	SCH	ASTM	100°F	200°F	300°F	400°F	500°F	600°F	700°F	800°F	900°F
					40°C	93°C	149°C	204°C	260°C	316°C	371°C	427°C	462°C
323.9	12	3.96	5S	A 312	20	20	20	19	18	17	16	15	14
323.9		4.57	10S	A 312	23	23	23	22	20	19	19	18	16
323.9		6.35	20	A 312	32	32	32	30	28	27	26	25	23
323.9		9.53	40S	A 312	48	48	48	46	43	41	39	38	35
323.9	12	10.31	40	A 358	73	73	73	69	65	61	59	57	52
323.9		12.70	XS	A 358	91	91	91	86	81	76	74	71	65
323.9		14.27	60	A 358	103	103	103	97	91	86	83	80	73
323.9		17.48	80	A 358	128	128	128	121	113	107	103	99	91
323.9		21.44	100	A 358	159	159	159	150	141	133	128	123	113
323.9		25.40	120	A 358	190	190	190	180	169	159	154	148	136
355.6	14	3.96	5S	A 312	18	18	18	17	16	15	15	14	13
355.6		4.78	10S	A 312	22	22	22	21	19	18	18	17	16
355.6		6.35	10	A 312	29	29	29	28	26	24	24	23	21
355.6	14	7.92	20	A 358	50	50	50	48	44	42	41	39	36
355.6		9.53	30	A 358	61	61	61	58	54	51	49	48	43



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355.6		11.13	40	A 358	72	72	72	68	64	60	58	56	51
355.6		12.70	XS	A 358	83	83	83	78	73	69	67	64	59
355.6		15.09	60	A 358	99	99	99	94	88	83	80	77	71
355.6		19.05	80	A 358	127	127	127	120	112	106	102	99	90
355.6		23.83	100	A 358	161	161	161	152	143	135	130	125	115
355.6		27.79	120	A 358	190	190	190	180	168	159	153	148	135
406.4	16	4.19	5S	A 312	17	17	17	16	15	14	14	13	12
406.4		4.78	10S	A 312	19	19	19	18	17	16	15	15	14
406.4		6.35	10	A 312	25	25	25	24	23	21	21	20	18
406.4	16	7.92	20	A 358	44	44	44	41	39	37	35	34	31
406.4		9.53	30	A 358	53	53	53	50	47	45	43	41	38
406.4		12.70	40	A 358	72	72	72	68	64	60	58	56	51
406.4		16.66	60	A 358	96	96	96	91	85	80	77	75	68
406.4		21.44	80	A 358	125	125	125	118	111	105	101	97	89
406.4		26.19	100	A 358	155	155	155	146	137	130	125	120	110
406.4		30.96	120	A 358	185	185	185	175	164	155	149	144	132
457	18	4.19	5S	A 312	15	15	15	14	13	12	12	12	11
457		4.78	10S	A 312	17	17	17	16	15	14	14	13	12
457		6.35	10	A 312	23	23	23	21	20	19	18	18	16
457	18	7.92	20	A 358	39	39	39	37	34	33	31	30	28
457		9.53	30	A 358	47	47	47	45	42	40	38	37	34
457		12.70	XS	A 358	64	64	64	60	57	54	52	50	46
457		14.27	40	A 358	72	72	72	68	64	60	58	56	51
457		17.48	-	A 358	89	89	89	84	79	75	72	69	64
457		19.05	60	A 358	98	98	98	92	87	82	79	76	70
457		23.83	80	A 358	124	124	124	117	110	104	100	96	88
508	20	4.78	5S	A 312	15	15	15	14	14	13	12	12	11
508		5.54	10S	A 358	22	22	22	21	20	19	18	17	16
508		6.35	10	A 312	20	20	20	19	18	17	16	16	14
508	20	9.53	20	A 358	52	52	52	40	38	38	34	33	30
508		12.70	30	A 358	57	57	57	54	51	48	46	45	41
508		15.09	40	A 358	69	69	69	65	61	58	55	53	49
508		20.62	60	A 358	95	95	95	90	84	80	77	74	68
508		26.19	80	A 358	122	122	122	116	108	103	99	95	87
508		32.54	100	A 358	154	154	154	146	136	129	124	120	110
610	24	5.54	5S	A 312	15	15	15	14	13	12	12	11	10
610		6.35	10S	A 358	21	21	21	20	19	18	17	16	15
610		9.53	20	A 358	35	35	35	33	31	30	29	27	25
610		12.70	XS	A 358	48	48	48	45	42	40	38	37	34
610		14.27	30	A 358	54	54	54	51	48	45	43	42	38
610		17.48	40	A 358	66	66	66	63	59	56	54	52	47
610		24.59	60	A 358	95	95	95	90	84	79	77	74	67
610		30.94	80	A 358	121	121	121	114	107	101	97	94	86