ATLAS SPECIALTY METALS
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Pressure Rating Tables for Stainless Steel Pipe

Notes to the tables of allowable working pressures.

Notes

1. This data is intended to provide a general guide. It must not to be relied upon in the absence of competent professional advice.
2. These allowable pressures were calculated by the formula given in AS 4041-2006 "Pressure Piping", clause 3.14.3. Other design codes may give different allowable pressures. The original specifications must be consulted for full details.
3. These calculations assume Piping Class 1 so only apply if this level of piping construction quality has been achieved.
4. Calculations are for seamless pipe to specification ASTM A312/A312M. A weld join efficiency factor of 85% must be allowed for standard welded pipe, and allowance made for corrosion or wear loss if appropriate.
5. Grade 304 and 316 design pressures are only valid at temperatures above 538°C if carbon content is 0.04% or higher.
6. Allowable working pressures are given in megapascals (MPa). Conversions to other units are:

to convert	to	multiply by
megapascals (MPa)	pounds/sq. inch (psi)	145.0
megapascals (MPa)	ksi	0.145
megapascals (MPa)	kilograms/mm² (kgf/mm²)	0.10197
megapascals (MPa)	bar	10.00

LIMITATION OF LIABILITY

The information contained in this Atlas Specialty Metals series of tables is not an exhaustive statement of all relevant information. It is a general guide for customers to the products and services available from Atlas Specialty Metals and no representation is made or warranty given in relation to this information or the products or processes it describes.

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Atlas Specialty Metals

STAINLESS STEEL GRADE TP304 PIPES - ASTM A 312, Seamless

ALLOWABLE WORKING PRESSURE AT TEMPERATURE

Temperature (°C):					50	100	150	200	250	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725
Design Strength (MPa):					138	138	138	130	122	115	113	111	110	107	105	103	101	100	97	90	78	64	51	41	33	27	21
Size			Sch	WT	Allowable Working Pressure (MPa)																						
DN	NPS	mm	No	(mm)																							
10	⅜	17.15	10S	1.65	25.4	25.4	25.4	23.9	22.4	21.1	20.8	20.4	20.2	19.7	19.3	18.9	18.6	18.4	17.8	16.5	14.3	11.8	9.4	7.5	6.1	5.0	3.9
		17.15	40S	2.31	36.9	36.9	36.9	34.7	32.6	30.7	30.2	29.7	29.4	28.6	28.1	27.5	27.0	26.7	25.9	24.0	20.8	17.1	13.6	11.0	8.8	7.2	5.6
		17.15	80S	3.20	53.9	53.9	53.9	50.7	47.6	44.9	44.1	43.3	42.9	41.8	41.0	40.2	39.4	39.0	37.9	35.1	30.4	25.0	19.9	16.0	12.9	10.5	8.2
15	½	21.34	5S	1.65	20.0	20.0	20.0	18.9	17.7	16.7	16.4	16.1	16.0	15.5	15.2	14.9	14.7	14.5	14.1	13.1	11.3	9.3	7.4	6.0	4.8	3.9	3.0
		21.34	10S	2.11	26.1	26.1	26.1	24.6	23.1	21.8	21.4	21.0	20.8	20.3	19.9	19.5	19.1	18.9	18.4	17.0	14.8	12.1	9.7	7.8	6.3	5.1	4.0
		21.34	40S	2.77	35.4	35.4	35.4	33.3	31.3	29.5	29.0	28.4	28.2	27.4	26.9	26.4	25.9	25.6	24.9	23.1	20.0	16.4	13.1	10.5	8.5	6.9	5.4
		21.34	80S	3.73	49.8	49.8	49.8	46.9	44.1	41.5	40.8	40.1	39.7	38.6	37.9	37.2	36.5	36.1	35.0	32.5	28.2	23.1	18.4	14.8	11.9	9.7	7.6
20	¾	26.67	5S	1.65	15.8	15.8	15.8	14.9	14.0	13.2	12.9	12.7	12.6	12.2	12.0	11.8	11.6	11.4	11.1	10.3	8.9	7.3	5.8	4.7	3.8	3.1	2.4
		26.67	10S	2.11	20.5	20.5	20.5	19.3	18.1	17.1	16.8	16.5	16.4	15.9	15.6	15.3	15.0	14.9	14.4	13.4	11.6	9.5	7.6	6.1	4.9	4.0	3.1
		26.67	40S	2.87	28.7	28.7	28.7	27.0	25.4	23.9	23.5	23.1	22.9	22.2	21.8	21.4	21.0	20.8	20.2	18.7	16.2	13.3	10.6	8.5	6.9	5.6	4.4
		26.67	80S	3.91	40.6	40.6	40.6	38.3	35.9	33.8	33.3	32.7	32.4	31.5	30.9	30.3	29.7	29.4	28.5	26.5	23.0	18.8	15.0	12.1	9.7	7.9	6.2
25	1	33.40	5S	1.65	12.5	12.5	12.5	11.7	11.0	10.4	10.2	10.0	9.9	9.7	9.5	9.3	9.1	9.0	8.8	8.1	7.0	5.8	4.6	3.7	3.0	2.4	1.9
		33.40	10S	2.77	21.6	21.6	21.6	20.3	19.1	18.0	17.7	17.4	17.2	16.7	16.4	16.1	15.8	15.6	15.2	14.1	12.2	10.0	8.0	6.4	5.2	4.2	3.3
		33.40	40S	3.38	26.8	26.8	26.8	25.3	23.7	22.3	22.0	21.6	21.4	20.8	20.4	20.0	19.6	19.4	18.8	17.5	15.2	12.4	9.9	8.0	6.4	5.2	4.1
		33.40	80S	4.55	37.4	37.4	37.4	35.2	33.0	31.1	30.6	30.0	29.8	29.0	28.4	27.9	27.3	27.1	26.3	24.4	21.1	17.3	13.8	11.1	8.9	7.3	5.7
32	1¼	42.16	5S	1.65	9.8	9.8	9.8	9.2	8.7	8.2	8.0	7.9	7.8	7.6	7.4	7.3	7.2	7.1	6.9	6.4	5.5	4.5	3.6	2.9	2.3	1.9	1.5
		42.16	10S	2.77	16.8	16.8	16.8	15.9	14.9	14.0	13.8	13.5	13.4	13.1	12.8	12.6	12.3	12.2	11.8	11.0	9.5	7.8	6.2	5.0	4.0	3.3	2.6
		42.16	40S	3.56	22.0	22.0	22.0	20.7	19.5	18.3	18.0	17.7	17.6	17.1	16.8	16.4	16.1	16.0	15.5	14.4	12.4	10.2	8.1	6.5	5.3	4.3	3.4
		42.16	80S	4.85	30.9	30.9	30.9	29.1	27.3	25.7	25.3	24.8	24.6	24.0	23.5	23.1	22.6	22.4	21.7	20.1	17.5	14.3	11.4	9.2	7.4	6.0	4.7
40	1½	48.26	5S	1.65	8.5	8.5	8.5	8.0	7.5	7.1	7.0	6.8	6.8	6.6	6.5	6.4	6.2	6.2	6.0	5.6	4.8	3.9	3.1	2.5	2.0	1.7	1.3
		48.26	10S	2.77	14.6	14.6	14.6	13.7	12.9	12.2	12.0	11.7	11.6	11.3	11.1	10.9	10.7	10.6	10.3	9.5	8.2	6.8	5.4	4.3	3.5	2.9	2.2
		48.26	40S	3.68	19.7	19.7	19.7	18.6	17.4	16.4	16.2	15.9	15.7	15.3	15.0	14.7	14.4	14.3	13.9	12.9	11.2	9.2	7.3	5.9	4.7	3.9	3.0
		48.26	80S	5.08	28.0	28.0	28.0	26.4	24.8	23.3	22.9	22.5	22.3	21.7	21.3	20.9	20.5	20.3	19.7	18.3	15.8	13.0	10.3	8.3	6.7	5.5	4.3
50	2	60.33	5S	1.65	6.8	6.8	6.8	6.4	6.0	5.6	5.5	5.4	5.4	5.2	5.1	5.1	5.0	4.9	4.8	4.4	3.8	3.1	2.5	2.0	1.6	1.3	1.0
		60.33	10S	2.77	11.6	11.6	11.6	10.9	10.2	9.6	9.5	9.3	9.2	9.0	8.8	8.6	8.5	8.4	8.1	7.5	6.5	5.4	4.3	3.4	2.8	2.3	1.8
		60.33	40S	3.91	16.6	16.6	16.6	15.6	14.7	13.8	13.6	13.3	13.2	12.9	12.6	12.4	12.1	12.0	11.7	10.8	9.4	7.7	6.1	4.9	4.0	3.2	2.5
		60.33	80S	5.54	24.1	24.1	24.1	22.7	21.3	20.1	19.7	19.4	19.2	18.7	18.3	18.0	17.6	17.5	16.9	15.7	13.6	11.2	8.9	7.2	5.8	4.7	3.7
65	2½	73.03	5S	2.11	7.2	7.2	7.2	6.7	6.3	6.0	5.9	5.8	5.7	5.6	5.4	5.3	5.2	5.2	5.0	4.7	4.0	3.3	2.6	2.1	1.7	1.4	1.1
		73.03	10S	3.05	10.5	10.5	10.5	9.9	9.3	8.7	8.6	8.4	8.3	8.1	8.0	7.8	7.7	7.6	7.4	6.8	5.9	4.9	3.9	3.1	2.5	2.0	1.6
		73.03	40S	5.16	18.2	18.2	18.2	17.1	16.1	15.2	14.9	14.6	14.5	14.1	13.8	13.6	13.3	13.2	12.8	11.9	10.3	8.4	6.7	5.4	4.3	3.6	2.8
		73.03	80S	7.01	25.3	25.3	25.3	23.8	22.4	21.1	20.7	20.4	20.2	19.6	19.3	18.9	18.5	18.3	17.8	16.5	14.3	11.7	9.4	7.5	6.1	5.0	3.9
80	3	88.90	5S	2.11	5.9	5.9	5.9	5.5	5.2	4.9	4.8	4.7	4.7	4.5	4.5	4.4	4.3	4.2	4.1	3.8	3.3	2.7	2.2	1.7	1.4	1.1	0.9
		88.90	10S	3.05	8.5	8.5	8.5	8.0	7.6	7.1	7.0	6.9	6.8	6.6	6.5	6.4	6.3	6.2	6.0	5.6	4.8	4.0	3.2	2.5	2.0	1.7	1.3
		88.90	40S	5.49	15.8	15.8	15.8	14.9	13.9	13.1	12.9	12.7	12.6	12.2	12.0	11.8	11.5	11.4	11.1	10.3	8.9	7.3	5.8	4.7	3.8	3.1	2.4
		88.90	80S	7.62	22.4	22.4	22.4	21.1	19.8	18.6	18.3	18.0	17.8	17.4	17.0	16.7	16.4	16.2	15.7	14.6	12.6	10.4	8.3	6.6	5.4	4.4	3.4
90	3½	101.60	5S	2.11	5.1	5.1	5.1	4.8	4.5	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.3	2.9	2.4	1.9	1.5	1.2	1.0	0.8
		101.60	10S	3.05	7.4	7.4	7.4	7.0	6.6	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.4	5.4	5.2	4.9	4.2	3.5	2.8	2.2	1.8	1.5	1.1
		101.60	40S	5.74	14.4	14.4	14.4	13.5	12.7	12.0	11.8	11.5	11.4	11.1	10.9	10.7	10.5	10.4	10.1	9.4	8.1	6.7	5.3	4.3	3.4	2.8	2.2
		101.60	80S	8.08	20.6	20.6	20.6	19.4	18.2	17.2	16.9	16.6	16.5	16.0	15.7	15.4	15.1	15.0	14.5	13.5	11.7	9.6	7.6	6.1	4.9	4.0	3.1
100	4	114.30	5S	2.11	4.5	4.5	4.5	4.3	4.0	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.2	3.0	2.6	2.1	1.7	1.3	1.1	0.9	0.7
		114.30	10S	3.05	6.6	6.6	6.6	6.2	5.8	5.5	5.4	5.3	5.3	5.1	5.0	4.9	4.8	4.8	4.6	4.3	3.7	3.1	2.4	2.0	1.6	1.3	1.0
		114.30	40S	6.02	13.3	13.3	13.3	12.6	11.8	11.1	10.9	10.7	10.6	10.3	10.1	10.0	9.8	9.7	9.4	8.7	7.5	6.2	4.9	4.0	3.2	2.6	2.0
		114.30	80S	8.56	19.4	19.4	19.4	18.2	17.1	16.1	15.8	15.6	15.4	15.0	14.7	14.4	14.2	14.0	13.6	12.6	10.9	9.0	7.2	5.8	4.6	3.8	2.9
125	5	141.30	5S	2.77	4.8	4.8	4.8	4.5	4.3	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.1	2.7	2.2	1.8	1.4	1.2	0.9	0.7
		141.30	10S	3.40	5.9	5.9	5.9	5.6	5.2	4.9	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	3.9	3.4	2.8	2.2	1.8	1.4	1.2	0.9
		141.30	40S	6.55	11.7	11.7	11.7	11.0	10.3	9.7	9.6	9.4	9.3	9.0	8.9	8.7	8.5	8.5	8.2	7.6	6.6	5.4	4.3	3.5	2.8	2.3	1.8
		141.30	80S	9.52	17.3	17.3	17.3	16.3	15.3	14.4	14.2	13.9	13.8	13.4	13.2	12.9	12.7	12.5	12.2	11.3	9.8	8.0	6.4	5.1	4.1	3.4	2.6
150	6	168.28	5S	2.77	4.0	4.0	4.0	3.8	3.6	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.8	2.6	2.3	1.9	1.5	1.2	1.0	0.8	0.6
		168.28	10S	3.40	5.0	5.0	5.0	4.7	4.4	4.1	4.1	4.0	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.2	2.8	2.3	1.8	1.5	1.2	1.0	0.8
		168.28	40S	7.11	10.6	10.6	10.6	10.0	9.4	8.8	8.7	8.5	8.4	8.2	8.1	7.9	7.8	7.7	7.4	6.9	6.0	4.9	3.9	3.1	2.5	2.1	1.6
		168.28	80S	10.97	16.7	16.7	16.7	15.7	14.8	13.9	13.7	13.4	13.3	12.9	12.7	12.5	12.2	12.1	11.7	10.9	9.4	7.7	6.2	5.0	4.0	3.3	2.5
200	8	219.08	5S	2.77	3.1	3.1	3.1	2.9	2.7	2.6	2.5	2.5	2.5	2.4	2.3	2.3	2.3	2.2	2.2	2.0	1.7	1.4	1.1	0.9	0.7	0.6	0.5
		219.08	10S	3.76	4.2	4.2	4.2	4.0	3.7	3.5	3.4	3.4	3.4	3.3	3.2	3.1	3.1	3.0	3.0	2.7	2.4	2.0	1.6	1.3	1.0	0.8	0.6
		219.08	40S	8.18	9.3	9.3	9.3	8.8	8.2	7.8	7.6	7.5	7.4	7.2	7.1	7.0	6.8	6.8	6.6	6.1	5.3	4.3	3.4	2.8	2.2	1.8	1.4
		219.08	80S	12.70	14.7	14.7	14.7	13.9	13.0	12.3	12.1	11.9	11.8	11.4	11.2	11.0	10.8	10.7	10.4	9.6	8.3	6.8	5.5	4.4	3.5	2.9	2.2
250	10	273.05	5S	3.40	3.0	3.0	3.0	2.9	2.7	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.0	1.7	1.4	1.1	0.9	0.7	0.6	0.5
		273.05	10S	4.19	3.8	3.8	3.8	3.5	3.3	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.4	2.1	1.7	1.4	1.1	0.9	0.7	0.6
		273.05	40S	9.27	8.4	8.4	8.4	8.0	7.5	7.0	6.9	6.8	6.7	6.6	6.4	6.3	6.2	6.1	5.9	5.5	4.8	3.9	3.1	2.5	2.0	1.7	1.3
		273.05	80S	12.70	11.7	11.7	11.7	11.0	10.4	9.8	9.6	9.4	9.3	9.1	8.9	8.7	8.6	8.5	8.2	7.6	6.6	5.4	4.3	3.5	2.8	2.3	1.8
300	12	323.85	5S	3.96	3.0	3.0	3.0	2.8	2.6	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	1.9	1.7	1.4	1.1	0.9	0.7	0.6	0.5
		323.85	10S	4.57	3.5	3.5	3.5	3.3	3.1	2.9	2.8	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.3	2.0	1.6	1.3	1.0	0.8	0.7	0.5
		323.85	40S	9.52	7.3	7.3	7.3	6.9	6.4	6.1	6.0	5.9	5.8	5.6	5.5	5.4	5.3	5.3	5.1	4.8	4.1	3.4	2.7	2.2	1.7	1.4	1.1
		323.85	80S	12.70	9.8	9.8	9.8	9.2	8.7	8.2	8.0	7.9	7.8	7.6	7.5	7.3	7.2	7.1	6.9	6.4	5.5	4.5	3.6	2.9	2.3	1.9	1.5
350	14	355.60	5S	3.96	2.7	2.7	2.7	2.6	2.4	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.8	1.5	1.3	1.0	0.8	0.6	0.5	0.4
		355.60	10S	4.78	3.3	3.3	3.3	3.1	2.9	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.1	1.9	1.5	1.2	1.0	0.8	0.6	0.5
400	16	406.40	5S	4.19	2.5	2.5	2.5	2.4	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.6	1.4	1.2	0.9	0.7	0.6	0.5	0.4
		406.40	10S	4.78	2.9	2.9	2.9	2.7	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	1.9	1.6	1.3	1.1	0.9	0.7	0.6	0.4
450	18	457.20	5S	4.19	2.2	2.2	2.2	2.1	2.0	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.3	1.0	0.8	0.7	0.5	0.4	0.3
		457.20	10S	4.78	2.5	2.5	2.5	2.4	2.3	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.7	1.4	1.2	0.9	0.8	0.6	0.5	0.4
500	20	508.00	5S	4.78	2.3	2.3	2.3	2.2	2.0	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.5	1.3	1.1	0.8	0.7	0.5	0.4	0.3
		508.00	10S	5.54	2.7	2.7	2.7	2.5	2.4	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.7	1.5	1.2	1.0	0.8	0.6	0.5	0.4
550	22	558.80	5S	4.78	2.1	2.1	2.1	2.0	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.4	1.2	1.0	0.8	0.6	0.5	0.4	0.3
		558.80	10S	5.54	2.4	2.4	2.4	2.3	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.6	1.4	1.1	0.9	0.7	0.6	0.5	0.4
600	24	609.60	5S	5.54	2.2	2.2	2.2	2.1	2.0	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.4	1.3	1.0	0.8	0.7	0.5	0.4	0.3
		609.60	10S	6.35	2.5	2.5	2.5	2.4	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.7	1.4	1.2	0.9	0.8	0.6	0.5	0.4

Important - refer to the associated Notes to this table.

Atlas Specialty Metals

STAINLESS STEEL GRADE TP304L PIPES - ASTM A 312, Seamless

ALLOWABLE WORKING PRESSURE AT TEMPERATURE

Temperature (°C):					50	100	150	200	250	300	325	350	375	400	425	450	475	500	525
Design Strength (MPa):					115	115	115	109	103	98	96	94	93	92	90	88	84	73	60
Size			Sch	WT	Allowable Working Pressure (MPa)														
DN	NPS	mm	No	(mm)															
10	⅜	17.15	10S	1.65	21.1	21.1	21.1	20.0	18.9	18.0	17.6	17.3	17.1	16.9	16.5	16.2	15.4	13.4	11.0
		17.15	40S	2.31	30.7	30.7	30.7	29.1	27.5	26.2	25.7	25.1	24.9	24.6	24.0	23.5	22.4	19.5	16.0
		17.15	80S	3.20	44.9	44.9	44.9	42.5	40.2	38.2	37.5	36.7	36.3	35.9	35.1	34.3	32.8	28.5	23.4
15	½	21.34	5S	1.65	16.7	16.7	16.7	15.8	14.9	14.2	13.9	13.6	13.5	13.4	13.1	12.8	12.2	10.6	8.7
		21.34	10S	2.11	21.8	21.8	21.8	20.6	19.5	18.6	18.2	17.8	17.6	17.4	17.0	16.7	15.9	13.8	11.4
		21.34	40S	2.77	29.5	29.5	29.5	27.9	26.4	25.1	24.6	24.1	23.8	23.6	23.1	22.6	21.5	18.7	15.4
		21.34	80S	3.73	41.5	41.5	41.5	39.4	37.2	35.4	34.7	33.9	33.6	33.2	32.5	31.8	30.3	26.4	21.7
20	¾	26.67	5S	1.65	13.2	13.2	13.2	12.5	11.8	11.2	11.0	10.8	10.6	10.5	10.3	10.1	9.6	8.4	6.9
		26.67	10S	2.11	17.1	17.1	17.1	16.2	15.3	14.6	14.3	14.0	13.8	13.7	13.4	13.1	12.5	10.9	8.9
		26.67	40S	2.87	23.9	23.9	23.9	22.7	21.4	20.4	20.0	19.5	19.3	19.1	18.7	18.3	17.5	15.2	12.5
		26.67	80S	3.91	33.8	33.8	33.8	32.1	30.3	28.8	28.3	27.7	27.4	27.1	26.5	25.9	24.7	21.5	17.7
25	1	33.40	5S	1.65	10.4	10.4	10.4	9.8	9.3	8.9	8.7	8.5	8.4	8.3	8.1	8.0	7.6	6.6	5.4
		33.40	10S	2.77	18.0	18.0	18.0	17.1	16.1	15.3	15.0	14.7	14.6	14.4	14.1	13.8	13.1	11.4	9.4
		33.40	40S	3.38	22.3	22.3	22.3	21.2	20.0	19.0	18.7	18.3	18.1	17.9	17.5	17.1	16.3	14.2	11.7
		33.40	80S	4.55	31.1	31.1	31.1	29.5	27.9	26.5	26.0	25.4	25.2	24.9	24.4	23.8	22.7	19.8	16.2
32	1¼	42.16	5S	1.65	8.2	8.2	8.2	7.7	7.3	6.9	6.8	6.7	6.6	6.5	6.4	6.2	6.0	5.2	4.3
		42.16	10S	2.77	14.0	14.0	14.0	13.3	12.6	12.0	11.7	11.5	11.3	11.2	11.0	10.7	10.2	8.9	7.3
		42.16	40S	3.56	18.3	18.3	18.3	17.4	16.4	15.6	15.3	15.0	14.8	14.7	14.4	14.0	13.4	11.6	9.6
		42.16	80S	4.85	25.7	25.7	25.7	24.4	23.1	21.9	21.5	21.0	20.8	20.6	20.1	19.7	18.8	16.3	13.4
40	1½	48.26	5S	1.65	7.1	7.1	7.1	6.7	6.4	6.0	5.9	5.8	5.7	5.7	5.6	5.4	5.2	4.5	3.7
		48.26	10S	2.77	12.2	12.2	12.2	11.5	10.9	10.4	10.2	9.9	9.8	9.7	9.5	9.3	8.9	7.7	6.3
		48.26	40S	3.68	16.4	16.4	16.4	15.6	14.7	14.0	13.7	13.4	13.3	13.2	12.9	12.6	12.0	10.4	8.6
		48.26	80S	5.08	23.3	23.3	23.3	22.1	20.9	19.9	19.5	19.1	18.9	18.7	18.3	17.9	17.0	14.8	12.2
50	2	60.33	5S	1.65	5.6	5.6	5.6	5.3	5.1	4.8	4.7	4.6	4.6	4.5	4.4	4.3	4.1	3.6	2.9
		60.33	10S	2.77	9.6	9.6	9.6	9.1	8.6	8.2	8.0	7.9	7.8	7.7	7.5	7.4	7.0	6.1	5.0
		60.33	40S	3.91	13.8	13.8	13.8	13.1	12.4	11.8	11.5	11.3	11.2	11.1	10.8	10.6	10.1	8.8	7.2
		60.33	80S	5.54	20.1	20.1	20.1	19.0	18.0	17.1	16.8	16.4	16.3	16.1	15.7	15.4	14.7	12.8	10.5
65	2½	73.03	5S	2.11	6.0	6.0	6.0	5.7	5.3	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.4	3.8	3.1
		73.03	10S	3.05	8.7	8.7	8.7	8.3	7.8	7.4	7.3	7.1	7.1	7.0	6.8	6.7	6.4	5.5	4.6
		73.03	40S	5.16	15.2	15.2	15.2	14.4	13.6	12.9	12.7	12.4	12.3	12.1	11.9	11.6	11.1	9.6	7.9
		73.03	80S	7.01	21.1	21.1	21.1	20.0	18.9	18.0	17.6	17.2	17.1	16.9	16.5	16.1	15.4	13.4	11.0
80	3	88.90	5S	2.11	4.9	4.9	4.9	4.6	4.4	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.1	2.5
		88.90	10S	3.05	7.1	7.1	7.1	6.7	6.4	6.1	5.9	5.8	5.8	5.7	5.6	5.4	5.2	4.5	3.7
		88.90	40S	5.49	13.1	13.1	13.1	12.5	11.8	11.2	11.0	10.7	10.6	10.5	10.3	10.1	9.6	8.3	6.9
		88.90	80S	7.62	18.6	18.6	18.6	17.7	16.7	15.9	15.6	15.2	15.1	14.9	14.6	14.3	13.6	11.8	9.7
90	3½	101.60	5S	2.11	4.3	4.3	4.3	4.0	3.8	3.6	3.6	3.5	3.4	3.4	3.3	3.3	3.1	2.7	2.2
		101.60	10S	3.05	6.2	6.2	6.2	5.9	5.6	5.3	5.2	5.1	5.0	5.0	4.9	4.7	4.5	3.9	3.2
		101.60	40S	5.74	12.0	12.0	12.0	11.3	10.7	10.2	10.0	9.8	9.7	9.6	9.4	9.2	8.7	7.6	6.2
		101.60	80S	8.08	17.2	17.2	17.2	16.3	15.4	14.7	14.4	14.1	13.9	13.8	13.5	13.2	12.6	10.9	9.0
100	4	114.30	5S	2.11	3.8	3.8	3.8	3.6	3.4	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.8	2.4	2.0
		114.30	10S	3.05	5.5	5.5	5.5	5.2	4.9	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.0	3.5	2.9
		114.30	40S	6.02	11.1	11.1	11.1	10.5	10.0	9.5	9.3	9.1	9.0	8.9	8.7	8.5	8.1	7.1	5.8
		114.30	80S	8.56	16.1	16.1	16.1	15.3	14.4	13.7	13.5	13.2	13.0	12.9	12.6	12.3	11.8	10.2	8.4
125	5	141.30	5S	2.77	4.0	4.0	4.0	3.8	3.6	3.4	3.4	3.3	3.2	3.2	3.1	3.1	2.9	2.5	2.1
		141.30	10S	3.40	4.9	4.9	4.9	4.7	4.4	4.2	4.1	4.0	4.0	4.0	3.9	3.8	3.6	3.1	2.6
		141.30	40S	6.55	9.7	9.7	9.7	9.2	8.7	8.3	8.1	7.9	7.9	7.8	7.6	7.4	7.1	6.2	5.1
		141.30	80S	9.52	14.4	14.4	14.4	13.7	12.9	12.3	12.0	11.8	11.7	11.5	11.3	11.0	10.5	9.1	7.5
150	6	168.28	5S	2.77	3.4	3.4	3.4	3.2	3.0	2.9	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.1	1.8
		168.28	10S	3.40	4.1	4.1	4.1	3.9	3.7	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.0	2.6	2.2
		168.28	40S	7.11	8.8	8.8	8.8	8.4	7.9	7.5	7.4	7.2	7.1	7.1	6.9	6.8	6.4	5.6	4.6
		168.28	80S	10.97	13.9	13.9	13.9	13.2	12.5	11.9	11.6	11.4	11.3	11.1	10.9	10.6	10.2	8.8	7.3
200	8	219.08	5S	2.77	2.6	2.6	2.6	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.0	2.0	1.9	1.6	1.3
		219.08	10S	3.76	3.5	3.5	3.5	3.3	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.2	1.8
		219.08	40S	8.18	7.8	7.8	7.8	7.4	7.0	6.6	6.5	6.3	6.3	6.2	6.1	5.9	5.7	4.9	4.1
		219.08	80S	12.70	12.3	12.3	12.3	11.6	11.0	10.5	10.3	10.0	9.9	9.8	9.6	9.4	9.0	7.8	6.4
250	10	273.05	5S	3.40	2.5	2.5	2.5	2.4	2.3	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.6	1.3
		273.05	10S	4.19	3.1	3.1	3.1	3.0	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.0	1.6
		273.05	40S	9.27	7.0	7.0	7.0	6.7	6.3	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.1	4.5	3.7
		273.05	80S	12.70	9.8	9.8	9.8	9.2	8.7	8.3	8.1	8.0	7.9	7.8	7.6	7.5	7.1	6.2	5.1
300	12	323.85	5S	3.96	2.5	2.5	2.5	2.4	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.6	1.3
		323.85	10S	4.57	2.9	2.9	2.9	2.7	2.6	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.1	1.8	1.5
		323.85	40S	9.52	6.1	6.1	6.1	5.8	5.4	5.2	5.1	5.0	4.9	4.9	4.8	4.6	4.4	3.9	3.2
		323.85	80S	12.70	8.2	8.2	8.2	7.7	7.3	7.0	6.8	6.7	6.6	6.5	6.4	6.3	6.0	5.2	4.3
350	14	355.60	5S	3.96	2.3	2.3	2.3	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.4	1.2
		355.60	10S	4.78	2.7	2.7	2.7	2.6	2.5	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	1.7	1.4
400	16	406.40	5S	4.19	2.1	2.1	2.1	2.0	1.9	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.5	1.3	1.1
		406.40	10S	4.78	2.4	2.4	2.4	2.3	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.7	1.5	1.2
450	18	457.20	5S	4.19	1.9	1.9	1.9	1.8	1.7	1.6	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.2	1.0
		457.20	10S	4.78	2.1	2.1	2.1	2.0	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.3	1.1
500	20	508.00	5S	4.78	1.9	1.9	1.9	1.8	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.4	1.2	1.0
		508.00	10S	5.54	2.2	2.2	2.2	2.1	2.0	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.6	1.4	1.2
550	22	558.80	5S	4.78	1.7	1.7	1.7	1.6	1.6	1.5	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.1	0.9
		558.80	10S	5.54	2.0	2.0	2.0	1.9	1.8	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.3	1.1
600	24	609.60	5S	5.54	1.8	1.8	1.8	1.7	1.7	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.3	1.2	1.0
		609.60	10S	6.35	2.1	2.1	2.1	2.0	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.5	1.3	1.1

Important - refer to the associated Notes to this table.

Atlas Specialty Metals

STAINLESS STEEL GRADE TP316 PIPES - ASTM A 312, Seamless

ALLOWABLE WORKING PRESSURE AT TEMPERATURE

Temperature (°C):					50	100	150	200	250	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700
Design Strength (MPa):					138	138	138	133	125	119	117	114	112	111	110	108	107	106	106	103	95	81	65	50	39	30
Size			Sch	WT	Allowable Working Pressure (MPa)																					
DN	NPS	mm	No	(mm)																						
10	⅜	17.15	10S	1.65	25.4	25.4	25.4	24.5	23.0	21.9	21.5	21.0	20.6	20.4	20.2	19.9	19.7	19.5	19.5	18.9	17.5	14.9	11.9	9.2	7.2	5.5
		17.15	40S	2.31	36.9	36.9	36.9	35.5	33.4	31.8	31.3	30.5	29.9	29.7	29.4	28.9	28.6	28.3	28.3	27.5	25.4	21.6	17.4	13.4	10.4	8.0
		17.15	80S	3.20	53.9	53.9	53.9	51.9	48.8	46.4	45.7	44.5	43.7	43.3	42.9	42.1	41.8	41.4	41.4	40.2	37.1	31.6	25.4	19.5	15.2	11.7
15	½	21.34	5S	1.65	20.0	20.0	20.0	19.3	18.1	17.3	17.0	16.5	16.3	16.1	16.0	15.7	15.5	15.4	15.4	14.9	13.8	11.8	9.4	7.3	5.7	4.4
		21.34	10S	2.11	26.1	26.1	26.1	25.2	23.7	22.5	22.2	21.6	21.2	21.0	20.8	20.5	20.3	20.1	20.1	19.5	18.0	15.3	12.3	9.5	7.4	5.7
		21.34	40S	2.77	35.4	35.4	35.4	34.1	32.0	30.5	30.0	29.2	28.7	28.4	28.2	27.7	27.4	27.2	27.2	26.4	24.3	20.8	16.7	12.8	10.0	7.7
		21.34	80S	3.73	49.8	49.8	49.8	48.0	45.1	43.0	42.2	41.2	40.4	40.1	39.7	39.0	38.6	38.3	38.3	37.2	34.3	29.2	23.5	18.1	14.1	10.8
20	¾	26.67	5S	1.65	15.8	15.8	15.8	15.2	14.3	13.6	13.4	13.0	12.8	12.7	12.6	12.4	12.2	12.1	12.1	11.8	10.9	9.3	7.4	5.7	4.5	3.4
		26.67	10S	2.11	20.5	20.5	20.5	19.8	18.6	17.7	17.4	17.0	16.7	16.5	16.4	16.1	15.9	15.8	15.8	15.3	14.1	12.0	9.7	7.4	5.8	4.5
		26.67	40S	2.87	28.7	28.7	28.7	27.7	26.0	24.7	24.3	23.7	23.3	23.1	22.9	22.5	22.2	22.0	22.0	21.4	19.8	16.8	13.5	10.4	8.1	6.2
		26.67	80S	3.91	40.6	40.6	40.6	39.1	36.8	35.0	34.4	33.6	33.0	32.7	32.4	31.8	31.5	31.2	31.2	30.3	28.0	23.8	19.1	14.7	11.5	8.8
25	1	33.40	5S	1.65	12.5	12.5	12.5	12.0	11.3	10.8	10.6	10.3	10.1	10.0	9.9	9.8	9.7	9.6	9.6	9.3	8.6	7.3	5.9	4.5	3.5	2.7
		33.40	10S	2.77	21.6	21.6	21.6	20.8	19.6	18.6	18.3	17.8	17.5	17.4	17.2	16.9	16.7	16.6	16.6	16.1	14.9	12.7	10.2	7.8	6.1	4.7
		33.40	40S	3.38	26.8	26.8	26.8	25.8	24.3	23.1	22.7	22.2	21.8	21.6	21.4	21.0	20.8	20.6	20.6	20.0	18.5	15.7	12.6	9.7	7.6	5.8
		33.40	80S	4.55	37.4	37.4	37.4	36.0	33.8	32.2	31.7	30.9	30.3	30.0	29.8	29.2	29.0	28.7	28.7	27.9	25.7	21.9	17.6	13.5	10.6	8.1
32	1¼	42.16	5S	1.65	9.8	9.8	9.8	9.4	8.9	8.4	8.3	8.1	7.9	7.9	7.8	7.7	7.6	7.5	7.5	7.3	6.7	5.7	4.6	3.5	2.8	2.1
		42.16	10S	2.77	16.8	16.8	16.8	16.2	15.2	14.5	14.3	13.9	13.7	13.5	13.4	13.2	13.1	12.9	12.9	12.6	11.6	9.9	7.9	6.1	4.8	3.7
		42.16	40S	3.56	22.0	22.0	22.0	21.2	19.9	19.0	18.7	18.2	17.9	17.7	17.6	17.2	17.1	16.9	16.9	16.4	15.2	12.9	10.4	8.0	6.2	4.8
		42.16	80S	4.85	30.9	30.9	30.9	29.8	28.0	26.6	26.2	25.5	25.1	24.8	24.6	24.2	24.0	23.7	23.7	23.1	21.3	18.1	14.6	11.2	8.7	6.7
40	1½	48.26	5S	1.65	8.5	8.5	8.5	8.2	7.7	7.3	7.2	7.0	6.9	6.8	6.8	6.7	6.6	6.5	6.5	6.4	5.9	5.0	4.0	3.1	2.4	1.9
		48.26	10S	2.77	14.6	14.6	14.6	14.1	13.2	12.6	12.4	12.1	11.8	11.7	11.6	11.4	11.3	11.2	11.2	10.9	10.0	8.6	6.9	5.3	4.1	3.2
		48.26	40S	3.68	19.7	19.7	19.7	19.0	17.9	17.0	16.7	16.3	16.0	15.9	15.7	15.4	15.3	15.2	15.2	14.7	13.6	11.6	9.3	7.1	5.6	4.3
		48.26	80S	5.08	28.0	28.0	28.0	27.0	25.4	24.1	23.7	23.1	22.7	22.5	22.3	21.9	21.7	21.5	21.5	20.9	19.3	16.4	13.2	10.1	7.9	6.1
50	2	60.33	5S	1.65	6.8	6.8	6.8	6.5	6.1	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.2	5.2	5.1	4.7	4.0	3.2	2.5	1.9	1.5
		60.33	10S	2.77	11.6	11.6	11.6	11.1	10.5	10.0	9.8	9.5	9.4	9.3	9.2	9.0	9.0	8.9	8.9	8.6	8.0	6.8	5.4	4.2	3.3	2.5
		60.33	40S	3.91	16.6	16.6	16.6	16.0	15.0	14.3	14.1	13.7	13.5	13.3	13.2	13.0	12.9	12.7	12.7	12.4	11.4	9.7	7.8	6.0	4.7	3.6
		60.33	80S	5.54	24.1	24.1	24.1	23.2	21.8	20.8	20.4	19.9	19.6	19.4	19.2	18.9	18.7	18.5	18.5	18.0	16.6	14.2	11.4	8.7	6.8	5.2
65	2½	73.03	5S	2.11	7.2	7.2	7.2	6.9	6.5	6.2	6.1	5.9	5.8	5.8	5.7	5.6	5.6	5.5	5.5	5.3	4.9	4.2	3.4	2.6	2.0	1.6
		73.03	10S	3.05	10.5	10.5	10.5	10.1	9.5	9.0	8.9	8.6	8.5	8.4	8.3	8.2	8.1	8.0	8.0	7.8	7.2	6.1	4.9	3.8	3.0	2.3
		73.03	40S	5.16	18.2	18.2	18.2	17.5	16.5	15.7	15.4	15.0	14.8	14.6	14.5	14.2	14.1	14.0	14.0	13.6	12.5	10.7	8.6	6.6	5.1	4.0
		73.03	80S	7.01	25.3	25.3	25.3	24.4	22.9	21.8	21.5	20.9	20.5	20.4	20.2	19.8	19.6	19.4	19.4	18.9	17.4	14.9	11.9	9.2	7.2	5.5
80	3	88.90	5S	2.11	5.9	5.9	5.9	5.6	5.3	5.0	5.0	4.8	4.8	4.7	4.7	4.6	4.5	4.5	4.5	4.4	4.0	3.4	2.8	2.1	1.7	1.3
		88.90	10S	3.05	8.5	8.5	8.5	8.2	7.7	7.4	7.2	7.1	6.9	6.9	6.8	6.7	6.6	6.6	6.6	6.4	5.9	5.0	4.0	3.1	2.4	1.9
		88.90	40S	5.49	15.8	15.8	15.8	15.2	14.3	13.6	13.4	13.0	12.8	12.7	12.6	12.3	12.2	12.1	12.1	11.8	10.9	9.3	7.4	5.7	4.5	3.4
		88.90	80S	7.62	22.4	22.4	22.4	21.6	20.3	19.3	19.0	18.5	18.2	18.0	17.8	17.5	17.4	17.2	17.2	16.7	15.4	13.1	10.5	8.1	6.3	4.9
90	3½	101.60	5S	2.11	5.1	5.1	5.1	4.9	4.6	4.4	4.3	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.5	3.0	2.4	1.9	1.4	1.1
		101.60	10S	3.05	7.4	7.4	7.4	7.2	6.7	6.4	6.3	6.2	6.0	6.0	5.9	5.8	5.8	5.7	5.7	5.6	5.1	4.4	3.5	2.7	2.1	1.6
		101.60	40S	5.74	14.4	14.4	14.4	13.8	13.0	12.4	12.2	11.9	11.6	11.5	11.4	11.2	11.1	11.0	11.0	10.7	9.9	8.4	6.8	5.2	4.1	3.1
		101.60	80S	8.08	20.6	20.6	20.6	19.9	18.7	17.8	17.5	17.1	16.8	16.6	16.5	16.2	16.0	15.9	15.9	15.4	14.2	12.1	9.7	7.5	5.8	4.5
100	4	114.30	5S	2.11	4.5	4.5	4.5	4.4	4.1	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.1	2.7	2.1	1.6	1.3	1.0
		114.30	10S	3.05	6.6	6.6	6.6	6.4	6.0	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1	5.1	5.1	4.9	4.5	3.9	3.1	2.4	1.9	1.4
		114.30	40S	6.02	13.3	13.3	13.3	12.9	12.1	11.5	11.3	11.0	10.8	10.7	10.6	10.4	10.3	10.2	10.2	10.0	9.2	7.8	6.3	4.8	3.8	2.9
		114.30	80S	8.56	19.4	19.4	19.4	18.7	17.5	16.7	16.4	16.0	15.7	15.6	15.4	15.1	15.0	14.9	14.9	14.4	13.3	11.4	9.1	7.0	5.5	4.2
125	5	141.30	5S	2.77	4.8	4.8	4.8	4.6	4.4	4.2	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.3	2.8	2.3	1.7	1.4	1.0
		141.30	10S	3.40	5.9	5.9	5.9	5.7	5.4	5.1	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.6	4.6	4.4	4.1	3.5	2.8	2.2	1.7	1.3
		141.30	40S	6.55	11.7	11.7	11.7	11.2	10.6	10.1	9.9	9.6	9.5	9.4	9.3	9.1	9.0	9.0	9.0	8.7	8.0	6.8	5.5	4.2	3.3	2.5
		141.30	80S	9.52	17.3	17.3	17.3	16.7	15.7	14.9	14.7	14.3	14.0	13.9	13.8	13.5	13.4	13.3	13.3	12.9	11.9	10.1	8.1	6.3	4.9	3.8
150	6	168.28	5S	2.77	4.0	4.0	4.0	3.9	3.7	3.5	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.0	2.8	2.4	1.9	1.5	1.1	0.9
		168.28	10S	3.40	5.0	5.0	5.0	4.8	4.5	4.3	4.2	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.4	2.9	2.3	1.8	1.4	1.1
		168.28	40S	7.11	10.6	10.6	10.6	10.2	9.6	9.1	9.0	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.1	7.9	7.3	6.2	5.0	3.8	3.0	2.3
		168.28	80S	10.97	16.7	16.7	16.7	16.1	15.1	14.4	14.2	13.8	13.5	13.4	13.3	13.1	12.9	12.8	12.8	12.5	11.5	9.8	7.9	6.0	4.7	3.6
200	8	219.08	5S	2.77	3.1	3.1	3.1	3.0	2.8	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.3	2.1	1.8	1.5	1.1	0.9	0.7
		219.08	10S	3.76	4.2	4.2	4.2	4.1	3.8	3.6	3.6	3.5	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.1	2.9	2.5	2.0	1.5	1.2	0.9
		219.08	40S	8.18	9.3	9.3	9.3	9.0	8.4	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.2	7.2	7.0	6.4	5.5	4.4	3.4	2.6	2.0
		219.08	80S	12.70	14.7	14.7	14.7	14.2	13.4	12.7	12.5	12.2	12.0	11.9	11.8	11.5	11.4	11.3	11.3	11.0	10.2	8.7	6.9	5.3	4.2	3.2
250	10	273.05	5S	3.40	3.0	3.0	3.0	2.9	2.8	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.1	1.8	1.4	1.1	0.9	0.7
		273.05	10S	4.19	3.8	3.8	3.8	3.6	3.4	3.2	3.2	3.1	3.0	3.0	3.0	2.9	2.9	2.9	2.9	2.8	2.6	2.2	1.8	1.4	1.1	0.8
		273.05	40S	9.27	8.4	8.4	8.4	8.1	7.7	7.3	7.2	7.0	6.9	6.8	6.7	6.6	6.6	6.5	6.5	6.3	5.8	5.0	4.0	3.1	2.4	1.8
		273.05	80S	12.70	11.7	11.7	11.7	11.3	10.6	10.1	9.9	9.7	9.5	9.4	9.3	9.2	9.1	9.0	9.0	8.7	8.1	6.9	5.5	4.2	3.3	2.5
300	12	323.85	5S	3.96	3.0	3.0	3.0	2.9	2.7	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.1	1.8	1.4	1.1	0.8	0.6
		323.85	10S	4.57	3.5	3.5	3.5	3.3	3.1	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.7	2.6	2.4	2.0	1.6	1.3	1.0	0.8
		323.85	40S	9.52	7.3	7.3	7.3	7.0	6.6	6.3	6.2	6.0	5.9	5.9	5.8	5.7	5.6	5.6	5.6	5.4	5.0	4.3	3.4	2.6	2.1	1.6
		323.85	80S	12.70	9.8	9.8	9.8	9.5	8.9	8.5	8.3	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.5	7.3	6.8	5.8	4.6	3.6	2.8	2.1
350	14	355.60	5S	3.96	2.7	2.7	2.7	2.6	2.5	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	1.9	1.6	1.3	1.0	0.8	0.6
		355.60	10S	4.78	3.3	3.3	3.3	3.2	3.0	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.5	2.3	1.9	1.5	1.2	0.9	0.7
400	16	406.40	5S	4.19	2.5	2.5	2.5	2.4	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.7	1.5	1.2	0.9	0.7	0.5
		406.40	10S	4.78	2.9	2.9	2.9	2.8	2.6	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.0	1.7	1.4	1.0	0.8	0.6
450	18	457.20	5S	4.19	2.2	2.2	2.2	2.2	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.5	1.3	1.1	0.8	0.6	0.5
		457.20	10S	4.78	2.5	2.5	2.5	2.5	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.8	1.5	1.2	0.9	0.7	0.6
500	20	508.00	5S	4.78	2.3	2.3	2.3	2.2	2.1	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.6	1.3	1.1	0.8	0.6	0.5
		508.00	10S	5.54	2.7	2.7	2.7	2.6	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.8	1.6	1.3	1.0	0.8	0.6
550	22	558.80	5S	4.78	2.1	2.1	2.1	2.0	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.4	1.2	1.0	0.8	0.6	0.5
		558.80	10S	5.54	2.4	2.4	2.4	2.3	2.2	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.7	1.4	1.1	0.9	0.7	0.5
600	24	609.60	5S	5.54	2.2	2.2	2.2	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.5	1.3	1.0	0.8	0.6	0.5
		609.60	10S	6.35	2.5	2.5	2.5	2.4	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.7	1.5	1.2	0.9	0.7	0.6

Important - refer to the associated Notes to this table.

Atlas Specialty Metals

STAINLESS STEEL GRADE TP316L PIPES - ASTM A 312, Seamless

ALLOWABLE WORKING PRESSURE AT TEMPERATURE

Temperature (°C):					50	100	150	200	250	300	325	350	375	400	425	450	475	500	525
Design Strength (MPa):					115	115	115	108	101	95	92	91	89	87	86	84	82	80	78
Size			Sch	WT	Allowable Working Pressure (MPa)														
DN	NPS	mm	No	(mm)															
10	⅜	17.15	10S	1.65	21.1	21.1	21.1	19.9	18.6	17.5	16.9	16.7	16.4	16.0	15.8	15.4	15.1	14.7	14.3
		17.15	40S	2.31	30.7	30.7	30.7	28.9	27.0	25.4	24.6	24.3	23.8	23.2	23.0	22.4	21.9	21.4	20.8
		17.15	80S	3.20	44.9	44.9	44.9	42.1	39.4	37.1	35.9	35.5	34.7	34.0	33.6	32.8	32.0	31.2	30.4
15	½	21.34	5S	1.65	16.7	16.7	16.7	15.7	14.7	13.8	13.4	13.2	12.9	12.6	12.5	12.2	11.9	11.6	11.3
		21.34	10S	2.11	21.8	21.8	21.8	20.5	19.1	18.0	17.4	17.2	16.9	16.5	16.3	15.9	15.5	15.2	14.8
		21.34	40S	2.77	29.5	29.5	29.5	27.7	25.9	24.3	23.6	23.3	22.8	22.3	22.0	21.5	21.0	20.5	20.0
		21.34	80S	3.73	41.5	41.5	41.5	39.0	36.5	34.3	33.2	32.9	32.1	31.4	31.1	30.3	29.6	28.9	28.2
20	¾	26.67	5S	1.65	13.2	13.2	13.2	12.4	11.6	10.9	10.5	10.4	10.2	10.0	9.8	9.6	9.4	9.2	8.9
		26.67	10S	2.11	17.1	17.1	17.1	16.1	15.0	14.1	13.7	13.5	13.2	12.9	12.8	12.5	12.2	11.9	11.6
		26.67	40S	2.87	23.9	23.9	23.9	22.5	21.0	19.8	19.1	18.9	18.5	18.1	17.9	17.5	17.0	16.6	16.2
		26.67	80S	3.91	33.8	33.8	33.8	31.8	29.7	28.0	27.1	26.8	26.2	25.6	25.3	24.7	24.1	23.5	23.0
25	1	33.40	5S	1.65	10.4	10.4	10.4	9.8	9.1	8.6	8.3	8.2	8.0	7.9	7.8	7.6	7.4	7.2	7.0
		33.40	10S	2.77	18.0	18.0	18.0	16.9	15.8	14.9	14.4	14.2	13.9	13.6	13.5	13.1	12.8	12.5	12.2
		33.40	40S	3.38	22.3	22.3	22.3	21.0	19.6	18.5	17.9	17.7	17.3	16.9	16.7	16.3	15.9	15.5	15.2
		33.40	80S	4.55	31.1	31.1	31.1	29.2	27.3	25.7	24.9	24.6	24.1	23.5	23.3	22.7	22.2	21.7	21.1
32	1¼	42.16	5S	1.65	8.2	8.2	8.2	7.7	7.2	6.7	6.5	6.5	6.3	6.2	6.1	6.0	5.8	5.7	5.5
		42.16	10S	2.77	14.0	14.0	14.0	13.2	12.3	11.6	11.2	11.1	10.9	10.6	10.5	10.2	10.0	9.8	9.5
		42.16	40S	3.56	18.3	18.3	18.3	17.2	16.1	15.2	14.7	14.5	14.2	13.9	13.7	13.4	13.1	12.8	12.4
		42.16	80S	4.85	25.7	25.7	25.7	24.2	22.6	21.3	20.6	20.4	19.9	19.5	19.3	18.8	18.4	17.9	17.5
40	1½	48.26	5S	1.65	7.1	7.1	7.1	6.7	6.2	5.9	5.7	5.6	5.5	5.4	5.3	5.2	5.1	4.9	4.8
		48.26	10S	2.77	12.2	12.2	12.2	11.4	10.7	10.0	9.7	9.6	9.4	9.2	9.1	8.9	8.7	8.5	8.2
		48.26	40S	3.68	16.4	16.4	16.4	15.4	14.4	13.6	13.2	13.0	12.7	12.4	12.3	12.0	11.7	11.4	11.2
		48.26	80S	5.08	23.3	23.3	23.3	21.9	20.5	19.3	18.7	18.5	18.1	17.7	17.4	17.0	16.6	16.2	15.8
50	2	60.33	5S	1.65	5.6	5.6	5.6	5.3	5.0	4.7	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8
		60.33	10S	2.77	9.6	9.6	9.6	9.0	8.5	8.0	7.7	7.6	7.5	7.3	7.2	7.0	6.9	6.7	6.5
		60.33	40S	3.91	13.8	13.8	13.8	13.0	12.1	11.4	11.1	10.9	10.7	10.5	10.3	10.1	9.9	9.6	9.4
		60.33	80S	5.54	20.1	20.1	20.1	18.9	17.6	16.6	16.1	15.9	15.6	15.2	15.0	14.7	14.3	14.0	13.6
65	2½	73.03	5S	2.11	6.0	6.0	6.0	5.6	5.2	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.1	4.0
		73.03	10S	3.05	8.7	8.7	8.7	8.2	7.7	7.2	7.0	6.9	6.8	6.6	6.5	6.4	6.2	6.1	5.9
		73.03	40S	5.16	15.2	15.2	15.2	14.2	13.3	12.5	12.1	12.0	11.7	11.5	11.3	11.1	10.8	10.5	10.3
		73.03	80S	7.01	21.1	21.1	21.1	19.8	18.5	17.4	16.9	16.7	16.3	16.0	15.8	15.4	15.0	14.7	14.3
80	3	88.90	5S	2.11	4.9	4.9	4.9	4.6	4.3	4.0	3.9	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.3
		88.90	10S	3.05	7.1	7.1	7.1	6.7	6.3	5.9	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.8
		88.90	40S	5.49	13.1	13.1	13.1	12.3	11.5	10.9	10.5	10.4	10.2	9.9	9.8	9.6	9.4	9.1	8.9
		88.90	80S	7.62	18.6	18.6	18.6	17.5	16.4	15.4	14.9	14.8	14.4	14.1	13.9	13.6	13.3	13.0	12.6
90	3½	101.60	5S	2.11	4.3	4.3	4.3	4.0	3.7	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9
		101.60	10S	3.05	6.2	6.2	6.2	5.8	5.4	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2
		101.60	40S	5.74	12.0	12.0	12.0	11.2	10.5	9.9	9.6	9.5	9.3	9.0	8.9	8.7	8.5	8.3	8.1
		101.60	80S	8.08	17.2	17.2	17.2	16.2	15.1	14.2	13.8	13.6	13.3	13.0	12.9	12.6	12.3	12.0	11.7
100	4	114.30	5S	2.11	3.8	3.8	3.8	3.5	3.3	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.6	2.6
		114.30	10S	3.05	5.5	5.5	5.5	5.2	4.8	4.5	4.4	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7
		114.30	40S	6.02	11.1	11.1	11.1	10.4	9.8	9.2	8.9	8.8	8.6	8.4	8.3	8.1	7.9	7.7	7.5
		114.30	80S	8.56	16.1	16.1	16.1	15.1	14.2	13.3	12.9	12.8	12.5	12.2	12.1	11.8	11.5	11.2	10.9
125	5	141.30	5S	2.77	4.0	4.0	4.0	3.8	3.5	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.7
		141.30	10S	3.40	4.9	4.9	4.9	4.6	4.3	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.4	3.4
		141.30	40S	6.55	9.7	9.7	9.7	9.1	8.5	8.0	7.8	7.7	7.5	7.4	7.3	7.1	6.9	6.8	6.6
		141.30	80S	9.52	14.4	14.4	14.4	13.5	12.7	11.9	11.5	11.4	11.2	10.9	10.8	10.5	10.3	10.0	9.8
150	6	168.28	5S	2.77	3.4	3.4	3.4	3.2	3.0	2.8	2.7	2.7	2.6	2.5	2.5	2.5	2.4	2.3	2.3
		168.28	10S	3.40	4.1	4.1	4.1	3.9	3.6	3.4	3.3	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.8
		168.28	40S	7.11	8.8	8.8	8.8	8.3	7.8	7.3	7.1	7.0	6.8	6.7	6.6	6.4	6.3	6.1	6.0
		168.28	80S	10.97	13.9	13.9	13.9	13.1	12.2	11.5	11.1	11.0	10.8	10.5	10.4	10.2	9.9	9.7	9.4
200	8	219.08	5S	2.77	2.6	2.6	2.6	2.4	2.3	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.7
		219.08	10S	3.76	3.5	3.5	3.5	3.3	3.1	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.4	2.4
		219.08	40S	8.18	7.8	7.8	7.8	7.3	6.8	6.4	6.2	6.1	6.0	5.9	5.8	5.7	5.5	5.4	5.3
		219.08	80S	12.70	12.3	12.3	12.3	11.5	10.8	10.2	9.8	9.7	9.5	9.3	9.2	9.0	8.8	8.5	8.3
250	10	273.05	5S	3.40	2.5	2.5	2.5	2.4	2.2	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.7
		273.05	10S	4.19	3.1	3.1	3.1	2.9	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1
		273.05	40S	9.27	7.0	7.0	7.0	6.6	6.2	5.8	5.6	5.6	5.4	5.3	5.3	5.1	5.0	4.9	4.8
		273.05	80S	12.70	9.8	9.8	9.8	9.2	8.6	8.1	7.8	7.7	7.6	7.4	7.3	7.1	7.0	6.8	6.6
300	12	323.85	5S	3.96	2.5	2.5	2.5	2.3	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.7	1.7
		323.85	10S	4.57	2.9	2.9	2.9	2.7	2.5	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0
		323.85	40S	9.52	6.1	6.1	6.1	5.7	5.3	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1
		323.85	80S	12.70	8.2	8.2	8.2	7.7	7.2	6.8	6.5	6.5	6.3	6.2	6.1	6.0	5.8	5.7	5.5
350	14	355.60	5S	3.96	2.3	2.3	2.3	2.1	2.0	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.5
		355.60	10S	4.78	2.7	2.7	2.7	2.6	2.4	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9
400	16	406.40	5S	4.19	2.1	2.1	2.1	2.0	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.4
		406.40	10S	4.78	2.4	2.4	2.4	2.2	2.1	2.0	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.7	1.6
450	18	457.20	5S	4.19	1.9	1.9	1.9	1.7	1.6	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.3	1.3	1.3
		457.20	10S	4.78	2.1	2.1	2.1	2.0	1.9	1.8	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.4
500	20	508.00	5S	4.78	1.9	1.9	1.9	1.8	1.7	1.6	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.3	1.3
		508.00	10S	5.54	2.2	2.2	2.2	2.1	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.5	1.5
550	22	558.80	5S	4.78	1.7	1.7	1.7	1.6	1.5	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.2	1.2	1.2
		558.80	10S	5.54	2.0	2.0	2.0	1.9	1.8	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.4	1.4	1.4
600	24	609.60	5S	5.54	1.8	1.8	1.8	1.7	1.6	1.5	1.5	1.5	1.4	1.4	1.4	1.3	1.3	1.3	1.3
		609.60	10S	6.35	2.1	2.1	2.1	2.0	1.9	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.4

Important - refer to the associated Notes to this table.