

## JIS G 3452-1988 (SGP)

Nominal size		Outside Diameter		Thickness		Unit Weight (plain end)	
A	B	mm	in	mm	in	lb/ft	kg/m
6	1/8	10.5	0.413	2.0	0.079	0.282	0.419
8	1/4	13.8	0.543	2.3	0.090	0.438	0.652
10	3/8	17.3	0.681	2.3	0.090	0.572	0.851
15	1/2	21.7	0.854	2.8	0.110	0.880	1.31
20	3/4	27.2	1.07	2.8	0.110	1.13	1.68
25	1	34.0	1.34	3.2	0.126	1.63	2.43
32	1 1/4	42.7	1.68	3.5	0.138	2.27	3.38
40	1 1/2	48.6	1.91	3.5	0.138	2.61	3.89
50	2	60.5	2.38	3.8	0.150	3.57	5.31
65	2 1/2	76.3	3.00	4.2	0.165	5.02	7.47
80	3	89.1	3.51	4.2	0.165	5.91	8.79
90	3 1/2	102	4.00	4.2	0.165	6.79	10.1
100	4	114	4.50	4.5	0.177	8.20	12.2
125	5	140	5.50	4.5	0.177	10.1	15.0
150	6	165	6.50	5.0	0.197	13.3	19.8
175	7	191	7.51	5.3	0.209	16.3	24.2
200	8	216	8.52	5.8	0.228	20.2	30.1
225	9	242	9.52	6.2	0.244	24.2	36.0
250	10	267	10.5	6.6	0.260	28.5	42.4
300	12	319	12.5	6.9	0.272	35.6	53.0
350	14	356	14.0	7.9	0.311	45.5	67.7
400	16	406	16.0	7.9	0.311	52.1	77.6
450	18	457	18.0	7.9	0.311	58.7	87.5
500	20	508	20.0	7.9	0.311	65.4	97.4

Tensile Strength : 290N/mm<sup>2</sup>

### Welded steel Pipes Class Extra Light (AA)

Designation of thread	Nominal bore	Outside diameter of black pipe				Thickness		Plain end	
		max.	min			in.	mm	lb/ft	kg/m
in.	mm	in.	mm	in.	mm	in.	mm	lb/ft	kg/m
1/2	15	0.84	21.4	0.83	21	0.063	1.6	0.52	0.773
3/4	20	1.06	26.9	1.04	26.4	0.063	1.6	0.666	0.99
1	25	1.33	33.8	1.31	33.2	0.075	1.9	0.994	1.48
1 1/4	32	1.67	42.5	1.65	41.9	0.075	1.9	1.27	1.89
1 1/2	40	1.9	48.4	1.88	47.8	0.075	1.9	1.45	2.16
2	50	2.3	60.2	2.35	59.6	0.075	1.9	1.83	2.72
2 1/2	65	2.99	76	2.96	75.2	0.075	1.9	2.31	3.45
3	80	3.49	88.7	3.46	87.9	0.083	2.1	3	4.46
3 1/2	90	3.98	102	3.95	101.1	0.083	2.1	3.46	5.15
4	100	4.48	113.9	4.45	113	0.091	2.3	4.23	6.31
5	125	5.53	140.6	5.46	138.7	0.157	4.0	8.99	13.4
6	150	6.54	166.1	6.46	164.1	0.157	4.0	10.7	15.9

**BS 1387-1985****Steel tubes and tubulars suitable for screwing to BS 21 pipe threads**

Tube	Designation of thread	Nominal bore	Outside diameter of black pipe				Thickness	
			max.		min		in.	mm
	in.	mm	in.	mm	in.	mm	in.	mm
<b>Light (A)</b>	1/8	6	0.383	10.1	0.369	9.7	0.072	1.8
	1/4	8	0.532	13.6	0.518	13.2	0.072	1.8
	3/8	10	0.671	17.1	0.656	16.7	0.072	1.8
	1/2	15	0.841	21.4	0.825	21.0	0.080	2.0
	3/4	20	1.059	26.9	1.041	26.4	0.092	2.3
	1	25	1.328	33.8	1.309	33.2	0.104	2.6
	1 1/4	32	1.670	42.5	1.650	41.9	0.116	2.9
	1 1/2	40	1.903	48.4	1.882	47.8	0.116	2.9
	2	50	2.347	60.2	2.307	59.6	0.116	2.9
	2 1/2	65	2.991	76.0	2.960	75.2	0.128	3.2
	3	80	3.491	88.7	3.460	87.9	0.128	3.2
	4	100	4.481	113.9	4.450	113.0	0.144	3.6
<b>Medium (B)</b>	1/8	6	0.411	10.4	0.386	9.8	0.080	2.0
	1/4	8	0.547	13.9	0.522	13.3	0.092	2.3
	3/8	10	0.685	17.4	0.660	16.8	0.092	2.3
	1/2	15	0.856	21.7	0.831	21.1	0.104	2.6
	3/4	20	1.072	27.2	1.047	26.6	0.104	2.6
	1	25	1.346	34.2	1.316	33.4	0.128	3.2
	1 1/4	32	1.687	42.9	1.657	42.1	0.128	3.2
	1 1/2	40	1.919	48.8	1.889	48.0	0.128	3.2
	2	50	2.394	60.8	2.354	59.8	0.144	3.6
	2 1/2	65	3.014	76.6	2.969	75.4	0.144	3.6
	3	80	3.524	89.5	3.469	88.1	0.160	4.0
	4	100	4.524	114.9	4.459	113.3	0.176	4.5
<b>Heavy (C)</b>	1/8	6	0.411	10.4	0.386	9.8	0.104	2.7
	1/4	8	0.547	13.9	0.522	13.3	0.116	2.9
	3/8	10	0.685	17.4	0.660	16.8	0.116	2.9
	1/2	15	0.856	21.7	0.831	21.1	0.128	3.2
	3/4	20	1.072	27.2	1.047	26.6	0.128	3.2
	1	25	1.346	34.2	1.316	33.4	0.160	4.0
	1 1/4	32	1.687	42.9	1.657	42.1	0.160	4.0
	1 1/2	40	1.919	48.8	1.889	48.0	0.160	4.0
	2	50	2.394	60.8	2.354	59.8	0.176	4.5
	2 1/2	65	3.014	76.6	2.969	75.4	0.176	4.5
	3	80	3.524	89.5	3.469	88.1	0.192	5.0
	4	100	4.524	114.9	4.459	113.3	0.212	5.4
5	125	5.534	140.6	5.459	138.7	0.212	5.4	
6	150	6.539	166.1	6.459	164.1	0.212	5.4	

Yield Strength : 195 N/mm<sup>2</sup>Tensile Strength : 320 to 460 N/mm<sup>2</sup>

## Steel tubes and tubulars suitable for screwing to BS 21 pipe threads

Tube	Weight of black pipe				Ordinary sockets			
	Plain end		Screwed and socketed		Min. outside dia.		Min. length	
	lb/ft	kg/m	lb/ft	kg/m	in.	mm	in.	mm
<b>Light (A)</b>	0.243	0.361	0.245	0.364	19/32	15.0	3/4	19
	0.347	0.517	0.350	0.521	23/32	18.5	1 1/16	27
	0.453	0.674	0.457	0.680	7/8	22.0	1 1/8	28
	0.640	0.952	0.646	0.961	1 1/16	27.0	1 7/16	37
	0.944	1.410	0.954	1.420	1 9/32	32.5	1 9/16	39
	1.350	2.010	1.360	2.030	1 9/16	39.5	1 13/16	46
	1.730	2.580	1.750	2.610	1 15/16	49.0	2	51
	2.190	3.250	2.220	3.290	2 3/16	56.0	2	51
	2.760	4.110	2.810	4.180	2 11/16	68.0	2 3/8	60
	3.900	5.800	3.980	5.920	3 5/16	84.0	2 11/16	69
	4.580	6.810	4.690	6.980	3 7/8	98.0	2 15/16	75
	6.640	9.890	6.840	10.200	4 7/8	124.0	3 7/16	87
<b>Medium (B)</b>	0.273	0.407	0.275	0.410	19/32	15.0	3/4	19
	0.437	0.650	0.440	0.654	23/32	18.5	1 1/16	27
	0.573	0.852	0.577	0.858	7/8	22.0	1 1/8	28
	0.822	1.220	0.828	1.230	1 1/16	27.0	1 7/16	37
	1.060	1.580	1.070	1.590	1 9/32	32.5	1 9/16	39
	1.640	2.440	1.650	2.460	1 9/16	39.5	1 13/16	46
	2.110	3.140	2.130	3.170	1 15/16	49.0	2	51
	2.430	3.610	2.460	3.650	2 3/16	56.0	2	51
	3.420	5.100	3.470	5.170	2 11/16	68.0	2 3/8	60
	4.380	6.510	4.460	6.630	3 5/16	84.0	2 11/16	69
	5.690	8.470	5.800	8.640	3 7/8	98.0	2 15/16	75
	8.140	12.100	8.340	12.400	4 7/8	124.0	3 7/16	87
10.900	16.200	11.200	16.700	5 15/16	151.0	3 3/4	96	
12.900	19.200	13.300	19.800	7	178.0	3 3/4	96	
<b>Heavy (C)</b>	0.331	0.493	0.333	0.496	19/32	15.0	3/4	19
	0.517	0.769	0.520	0.773	23/32	18.5	1 1/16	27
	0.686	1.020	0.690	1.030	7/8	22.0	1 1/8	28
	0.977	1.450	0.983	1.460	1 1/16	27.0	1 7/16	37
	1.270	1.900	1.280	1.910	1 9/32	32.5	1 9/16	39
	2.000	2.970	2.010	2.990	1 9/16	39.5	1 13/16	46
	2.580	3.840	2.600	3.870	1 15/16	49.0	2	51
	2.980	4.430	3.010	4.470	2 3/16	56.0	2	51
	4.140	6.170	4.190	6.240	2 11/16	68.0	2 3/8	60
	5.310	7.900	5.390	8.020	3 5/16	84.0	2 11/16	69
	6.760	10.100	6.870	10.300	3 7/8	98.0	2 15/16	75
	9.710	14.400	9.910	14.700	4 7/8	124.0	3 7/16	87
12.000	17.800	12.300	18.300	5 15/16	151.0	3 3/4	96	
14.300	21.200	14.700	21.800	7	178.0	3 3/4	96	

Yield Strength : 195 N/mm<sup>2</sup>  
Tensile Strength : 320 to 460 N/mm<sup>2</sup>

## API 5L (1991) and ASTM A53 (1997)

API Specification 5L line pipes (1991 edition); seamless and welded line pipes for conveying water, gaseous and liquid hydrocarbons and for the construction of chemical and industrial plants, oil refineries etc.

ASTM A53 (1997 edition) Steel pipes, black and hot-dipped, zinc-coated, welded and seamless, with nominal (average) diameter from 1/8" - 26".

Please note that API 5L pipes might be heat-treated, ASTM A53 pipes are all cold formed.

### Chemical composition

The chemical composition of the API 5L and ASTM A53 pipes are shown below.

Delivery condition	Grade	C max. %	Mn max. %	P max. %	S max. %
<b>API 5L</b>					
S - W	A	0.22	0.90	0.04	0.05
S - W	B	0.27	1.15	0.04	0.05
S - W	X42	0.29	1.25	0.04	0.05
S - W	X46	0.31	1.35	0.04	0.05
S - W	X52	0.31	1.35	0.04	0.05
S - W	X56	0.26	1.35	0.04	0.05
S - W	X60	0.26	1.35	0.04	0.05
W	X65	0.26	1.40	0.04	0.05
W	X70	0.23	1.60	0.04	0.05
W	X80	0.18	1.80	0.03	0.018
<b>ASTM A53</b>					
S - W	A	0.25	0.95	0.05	0.06
S - W	B	0.30	1.20	0.05	0.06
F	-	-	-	0.08	0.06

Notes: S = Seamless, W = electric-resistance Welded, F = Furnace-welded

Table 28 – API 5L and ASTM A53 Pipes: Chemical composition

### Mechanical properties

The mechanical properties for the API 5L and ASTM A53 pipes are shown in Table 29 below.

Delivery condition	Grade	Min. Yield strength N/mm <sup>2</sup>	Min. Tensile strength N/mm <sup>2</sup>
<b>API 5L</b>			
S - W	A	207	331
S - W	B	241	413
S - W	X42	289	413
S - W	X46	317	434
S - W	X52	358	455
S - W	X56	386	489
S - W	X60	413	517
W	X65	448	530
W	X70	482	565
W	X80	551	620-827
<b>ASTM A53</b>			
S - W	A	205	330
S - W	B	240	415
F	-	170	310

Table 29 – API 5L and ASTM A53 Pipes: Mechanical properties

The tables on the following pages show the available sizes with outside diameter, plain end weight, wall thickness, designation, and hydrostatic test pressure.

**Section sizes**

OD = outer diameter, ID = inner diameter  
 Δ = Sizes only from ASTM A53 (1997). Schedule Nos. are taken from ASTM A53.  
 ASTM sizes do not have an alternative size or grades X42 to X80.

Size OD	Wall thickness		Unit weight	ID	Butt weld	Hydrostatic test pressure									
	Sch. No (Class)	t mm				Values given in (psi). 1psi = 6.895MPa.									
inch mm			kg/m	mm		A	B	X42	X46	X52	X56	X60	X65	X70	X80
<b>1/8</b> <b>10.3</b>	Δ40(Std)	1.7	0.36	6.9	700	700	700	-	-	-	-	-	-	-	-
	Δ80(XS)	2.4	0.47	5.5	850	850	850	-	-	-	-	-	-	-	-
<b>1/4</b> <b>13.7</b>	Δ40(Std)	2.2	0.62	9.3	700	700	700	-	-	-	-	-	-	-	-
	Δ80(XS)	3.0	0.79	7.7	850	850	850	-	-	-	-	-	-	-	-
<b>3/8</b> <b>17.2</b>	Δ40(Std)	2.3	0.84	12.5	700	700	700	-	-	-	-	-	-	-	-
	Δ80(XS)	3.2	1.10	10.1	850	850	850	-	-	-	-	-	-	-	-
<b>1/2</b> <b>21.3</b>	Δ40(Std)	2.8	1.28	15.7	700	700	700	-	-	-	-	-	-	-	-
	Δ80(XS)	3.7	1.61	13.9	850	850	850	-	-	-	-	-	-	-	-
	Δ160	4.8	1.95	11.7	900	900	900	-	-	-	-	-	-	-	-
	Δ(XXS)	7.5	2.55	6.3	1000	1000	1000	-	-	-	-	-	-	-	-
<b>3/4</b> <b>26.7</b>	Δ40(Std)	2.9	1.70	20.9	700	700	700	-	-	-	-	-	-	-	-
	Δ80(XS)	3.9	2.19	18.9	850	850	850	-	-	-	-	-	-	-	-
	Δ160	5.6	2.89	15.5	950	950	950	-	-	-	-	-	-	-	-
	Δ(XXS)	7.8	3.64	11.1	1000	1000	1000	-	-	-	-	-	-	-	-
<b>1</b> <b>33.4</b>	40 (Std)	3.4	2.52	26.6	700	700	700	-	-	-	-	-	-	-	-
	80 (XS)	4.5	3.21	24.4	850	850	850	-	-	-	-	-	-	-	-
	Δ160	6.4	4.23	20.7	1000	950	950	-	-	-	-	-	-	-	-
	(XXS)	9.1	5.45	15.2	-	1000	1000	-	-	-	-	-	-	-	-
<b>1 1/4</b> <b>42.2</b>	40 (Std)	3.6	3.43	35.0	1000	1200	1300	-	-	-	-	-	-	-	-
	80 (XS)	4.9	4.51	32.4	1300	1800	1900	-	-	-	-	-	-	-	-
	Δ160	6.4	5.60	29.5	1400	1900	2000	-	-	-	-	-	-	-	-
	(XXS)	9.7	7.77	22.8	-	2200	2300	-	-	-	-	-	-	-	-
<b>1 1/2</b> <b>48.3</b>	40 (Std)	3.7	4.07	40.9	-	1200	1300	-	-	-	-	-	-	-	-
	80 (XS)	5.1	5.43	38.1	-	1800	1900	-	-	-	-	-	-	-	-
	Δ160	7.1	7.23	34.0	-	1950	2050	-	-	-	-	-	-	-	-
	(XXS)	10.2	9.58	27.9	-	2200	2300	-	-	-	-	-	-	-	-
<b>2 3/8</b> <b>60.3</b>		2.1	3.01	56.1	Std.	1260	1470	1760	1930	2180	2350	2520	2730	2940	3000
					Alt.	1570	1830	2200	2410	2730	2940	3000	3000	3000	3000
	(Std)	2.8	3.97	54.6	Std.	1650	1930	2310	2530	2860	3000	3000	3000	3000	3000
					Alt.	2070	2410	2890	3000	3000	3000	3000	3000	3000	3000
		3.2	4.51	53.9	Std.	1890	2210	2650	2910	3000	3000	3000	3000	3000	3000
					Alt.	2370	2500	3000	3000	3000	3000	3000	3000	3000	3000
		3.6	5.03	53.1	Std.	2140	2490	2990	3000	3000	3000	3000	3000	3000	3000
					Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000
	40 (Std)	3.9	5.42	52.5	Std.	2330	2500	3000	3000	3000	3000	3000	3000	3000	3000
					Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000
		4.4	6.07	51.5	Std.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000
					Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000
		4.8	6.57	50.7	Std.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000
					Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000
	80 (XS)	5.5	7.43	49.3	Std.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000
					Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000
		6.4	8.51	47.5	Std.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000
					Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000
		7.1	9.31	46.1	Std.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000
					Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000



Size OD	Wall thickness		Unit weight	ID	Hydrostatic test pressure										
	Sch. no (Class)	t			Values given in (psi). 1psi = 6.895MPa.										
inch mm		mm	kg/m	mm		A	B	X42	X46	X52	X56	X60	X65	X70	X80
2 3/8 60.3	Δ160	8.7	11.10	42.8	Std.	2500	2500	-	-	-	-	-	-	-	-
		Alt.	-	-	-	-	-	-	-	-	-	-	-	-	
	(XXS)	11.1	13.47	38.1	Std.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000
					Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000
2 7/8 73.0		2.1	3.67	68.8	Std.	1040	1210	1460	1590	1800	1940	2030	2250	2430	2770
		Alt.	1300	1520	1820	1990	2250	2430	2600	2810	3000	3000	3000		
		2.8	4.85	67.4	Std.	1360	1590	1910	2090	2370	2550	2730	2960	3000	3000
		Alt.	1710	1990	2390	2620	2960	3000	3000	3000	3000	3000	3000		
		3.2	5.51	66.6	Std.	1570	1830	2190	2400	2710	2920	3000	3000	3000	3000
		Alt.	1960	2280	2740	3000	3000	3000	3000	3000	3000	3000	3000		
		3.6	6.16	65.8	Std.	1770	2060	2470	2710	3000	3000	3000	3000	3000	3000
		Alt.	2210	2500	3000	3000	3000	3000	3000	3000	3000	3000	3000		
		4.0	6.81	65.0	Std.	1950	2280	2730	3000	3000	3000	3000	3000	3000	3000
		Alt.	2440	2500	3000	3000	3000	3000	3000	3000	3000	3000	3000		
		4.4	7.44	64.2	Std.	2150	2500	3000	3000	3000	3000	3000	3000	3000	3000
		Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	3000		
	4.8	8.07	63.4	Std.	2350	2500	3000	3000	3000	3000	3000	3000	3000	3000	
	Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	40 (Std)	5.2	8.69	62.6	Std.	2500	2500	3000	3000	3000	3000	3000	3000	3000	
	Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	5.5	9.16	62.0	Std.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	
	Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	6.4	10.51	60.2	Std.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	
	Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	80 (XS)	7.0	11.39	59.0	Std.	2500	2500	3000	3000	3000	3000	3000	3000	3000	
	Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	Δ160	9.5	14.89	54.0	Std.	2500	2500	-	-	-	-	-	-	-	
	Alt.	-	-	-	-	-	-	-	-	-	-	-	-		
(XXS)	14.0	20.37	45.0	Std.	2500	2500	3000	3000	3000	3000	3000	3000	3000		
Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	3000				
3 1/2 88.9		2.1	4.50	84.7	Std.	850	1000	1200	1310	1480	1590	1710	1850	1990	2270
		Alt.	1070	1250	1490	1640	1850	1990	2130	2310	2490	2840			
		2.8	5.95	83.3	Std.	1120	1310	1570	1720	1940	2090	2240	2430	2620	2990
		Alt.	1400	1640	1960	2150	2430	2620	2800	3000	3000	3000			
		3.2	6.76	82.5	Std.	1290	1500	1800	1970	2230	2400	2570	2790	3000	3000
		Alt.	1610	1880	2250	2460	2790	3000	3000	3000	3000	3000			
		3.6	7.57	81.7	Std.	1450	1690	2030	2220	2510	2710	2900	3000	3000	3000
		Alt.	1810	2120	2540	2780	3000	3000	3000	3000	3000	3000			
		4.0	8.37	80.9	Std.	1600	1870	2250	2460	2780	3000	3000	3000	3000	3000
		Alt.	2010	2340	2810	3000	3000	3000	3000	3000	3000	3000			
		4.4	9.17	80.1	Std.	1770	2060	2480	2710	3000	3000	3000	3000	3000	3000
		Alt.	2210	2500	3000	3000	3000	3000	3000	3000	3000	3000			
	4.8	9.95	79.3	Std.	1930	2260	2710	2970	3000	3000	3000	3000	3000	3000	
	Alt.	2420	2500	3000	3000	3000	3000	3000	3000	3000	3000				
	40 (Std)	5.5	11.31	77.9	Std.	2220	2500	3000	3000	3000	3000	3000	3000	3000	
	Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000				
	6.4	13.02	76.1	Std.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	
	Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000				
	7.1	14.32	74.7	Std.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	
	Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000				
	80 (XS)	7.6	15.24	73.7	Std.	2500	2500	3000	3000	3000	3000	3000	3000	3000	
	Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000				

PIPES

Size OD	Wall thickness		Unit weight		ID	Hydrostatic test pressure										
	inch	Sch. no (Class)	t mm	kg/m		mm	Values given in (psi). 1psi = 6.895MPa.									
mm						A	B	X42	X46	X52	X56	X60	X65	X70	X80	
3 ½ 88.9	Δ160	11.1	21.30	66.6	Std.	2500	2500	-	-	-	-	-	-	-	-	
		Alt.	-	-	-	-	-	-	-	-	-	-	-	-	-	
	(XXS)	15.2	27.63	58.5	Std.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	
					Alt.	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	
4 101.6		2.1	5.15	97.4	Std.	750	870	1050	1150	1290	1390	1490	1620	1740	1990	
					Alt.	930	1090	1310	1430	1620	1740	1870	2020	2180	2460	
		2.8	6.82	96.0	Std.	980	1140	1370	1500	1700	1830	1960	2130	2290	2620	
					Alt.	1230	1430	1720	1880	2130	2290	2450	2660	2860	3000	
		3.2	7.76	95.2	Std.	1130	1310	1580	1730	1950	2100	2250	2440	2630	3000	
					Alt.	1410	1640	1970	2160	2440	2630	2810	3000	3000	3000	
		3.6	8.70	94.4	Std.	1270	1480	1780	1950	2200	2370	2540	2750	2960	3000	
					Alt.	1590	1850	2220	2430	2750	2960	3000	3000	3000	3000	
		4.0	9.63	93.6	Std.	1400	1640	1970	2150	2430	2620	2810	3000	3000	3000	
					Alt.	1760	2050	2460	2690	3000	3000	3000	3000	3000	3000	
		4.4	10.55	92.8	Std.	1550	1810	2170	2370	2680	2890	3000	3000	3000	3000	
					Alt.	1940	2260	2710	2970	3000	3000	3000	3000	3000	3000	
	4.8	11.46	92.0	Std.	1690	1970	2370	2590	2930	3000	3000	3000	3000	3000		
				Alt.	2120	2470	2960	3000	3000	3000	3000	3000	3000	3000		
	40 (Std)	5.7	13.48	90.2	Std.	2930	2370	2850	3000	3000	3000	3000	3000	3000		
					Alt.	2540	2800	3000	3000	3000	3000	3000	3000	3000	3000	
	6.4	15.02	88.8	Std.	2250	2630	3000	3000	3000	3000	3000	3000	3000	3000		
				Alt.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000		
	7.1	16.55	87.4	Std.	2530	2800	3000	3000	3000	3000	3000	3000	3000	3000		
				Alt.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000		
	80 (XS)	8.1	18.68	85.4	Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000		
					Alt.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
	4 ½ 114.30		2.1	5.81	110.1	Std.	660	770	930	1020	1150	1240	1330	1440	1550	1770
						Alt.	830	970	1160	1270	1440	1550	1660	1800	1940	2210
3.2			8.77	107.9	Std.	1000	1170	1400	1530	1730	1870	2000	2170	2330	2670	
					Alt.	1250	1460	1750	1920	2170	2330	2500	2710	2920	3000	
3.6			9.83	107.1	Std.	1130	1320	1580	1730	1960	2110	2260	2440	2630	3000	
					Alt.	1410	1650	1970	2160	2440	2630	2820	3000	3000	3000	
4.0			10.88	106.3	Std.	1250	1460	1750	1910	2160	2330	2500	2700	2910	3000	
					Alt.	1560	1820	2180	2390	2700	2910	3000	3000	3000	3000	
4.4			11.92	105.5	Std.	1380	1610	1930	2110	2390	2570	2750	2980	3000	3000	
					Alt.	1720	2010	2410	2640	2980	3000	3000	3000	3000	3000	
4.8			12.96	104.7	Std.	1500	1750	2110	2310	2610	2810	3000	3000	3000	3000	
					Alt.	1880	2190	2630	2880	3000	3000	3000	3000	3000	3000	
5.2		13.99	103.9	Std.	1620	1890	2270	2490	2810	3000	3000	3000	3000	3000		
				Alt.	2030	2370	2840	3000	3000	3000	3000	3000	3000	3000		
5.6		15.01	103.1	Std.	1750	2040	2450	2690	3000	3000	3000	3000	3000	3000		
				Alt.	2190	2560	3000	3000	3000	3000	3000	3000	3000	3000		
40 (Std)		6.0	16.02	102.3	Std.	1900	2210	2650	2910	3000	3000	3000	3000	3000		
					Alt.	2370	2770	3000	3000	3000	3000	3000	3000	3000	3000	
6.4		17.03	101.5	Std.	2000	2330	2800	3000	3000	3000	3000	3000	3000	3000		
				Alt.	2500	2800	3000	3000	3000	3000	3000	3000	3000	3000		
7.1		18.77	100.1	Std.	2250	2620	3000	3000	3000	3000	3000	3000	3000	3000		
				Alt.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000		
7.9		20.73	98.5	Std.	2500	2800	3000	3000	3000	3000	3000	3000	3000	3000		
				Alt.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000		
80 (XS)	8.6	22.42	97.1	Std.	2700	2800	3000	3000	3000	3000	3000	3000	3000			
				Alt.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000		

PIPES

Size OD	Wall thickness		Unit weight	ID	Hydrostatic test pressure											
	Sch. no (Class)	t mm			Values given in (psi). 1psi = 6.895MPa.											
inch mm	Sch. no (Class)	t mm	kg/m	mm	A	B	X42	X46	X52	X56	X60	X65	X70	X80		
4 1/2 114.30	120	11.1	28.25	92.1	Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
					Alt.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
	(XXS)	17.1	40.99	80.1	Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
					Alt.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
					Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
5 9/16 141.3	40	2.1	7.21	137.1	Std.	540	630	750	820	930	1000	1040	1160	1250	1430	
					Alt.	810	940	1130	1240	1400	1500	1630	1750	1890	2160	
					Std.	1010	1180	1410	1550	1750	1910	2020	2120	2360	2690	
					Alt.	1220	1420	1700	1870	2110	2270	2430	2640	2840	3000	
					Std.	1420	1650	1990	2170	2460	2650	2830	3000	3000	3000	
					Alt.	1670	1950	2340	2560	2890	3000	3000	3000	3000	3000	
					Std.	1820	2120	2550	2790	3000	3000	3000	3000	3000	3000	
	80 (XS)	9.5	30.88	122.3	115.9	Std.	2430	2800	3000	3000	3000	3000	3000	3000	3000	3000
						Alt.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000
						Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000
						Alt.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000
						Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000
						Alt.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000

Size OD	Wall thickness		Unit weight	ID	Hydrostatic test pressure													
	Sch. No. (Class)	mm			Values given in (psi). 1psi = 6.895MPa.													
inch mm	Sch. No. (Class)	mm	kg/m	mm	A		B		X42	X46	X52	X56	X60	X65	X70	X80		
6 5/8 168.3	40	2.1	8.61	164.1	Std.	450	560	530	660	790	860	980	1050	1130	1220	1320	1500	
					Alt.	590	740	690	860	1040	1140	1280	1380	1480	1600	1730	1970	
					Std.	680	850	790	990	1190	1300	1470	1580	1700	1840	1980	2260	
					Alt.	770	960	890	1120	1340	1470	1660	1790	1920	2080	2230	2550	
					Std.	850	1060	990	1240	1480	1620	1840	1980	2120	2300	2470	2830	
					Alt.	930	1170	1090	1360	1640	1790	2030	2180	2340	2530	2730	3000	
					Std.	1020	1280	1190	1490	1790	1960	2210	2380	2550	2770	2980	3000	
					Alt.	1100	1380	1290	1610	1930	2110	2390	2570	2760	2990	3000	3000	
					Std.	1190	1490	1390	1740	2080	2280	2580	2780	2980	3000	3000	3000	
					Alt.	1360	1700	1580	1980	2380	2600	2940	3000	3000	3000	3000	3000	
	80 (XS)	7.1	28.22	154.1	152.0	Std.	1520	1900	1780	2220	2660	2920	3000	3000	3000	3000	3000	3000
						Alt.	1700	2120	1980	2470	2970	3000	3000	3000	3000	3000	3000	
						Std.	1870	2340	2180	2500	3000	3000	3000	3000	3000	3000	3000	
						Alt.	2040	2550	2380	2800	3000	3000	3000	3000	3000	3000	3000	
						Std.	2350	2800	2740	2800	3000	3000	3000	3000	3000	3000	3000	
						Alt.	2720	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	
						Std.	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	
						Alt.	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	
						Std.	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	
						Alt.	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	
120	14.3	54.31	139.7	139.7	Std.	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000		
					Alt.	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000			
					Std.	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000			
					Alt.	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000			
160	18.3	67.69	131.7	131.7	Std.	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000			
					Alt.	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000			
					Std.	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000			
					Alt.	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000			
(XXS)	21.9	79.10	124.4	124.4	Std.	2800	-	2800	-	-	-	-	-	-	-			
					Alt.	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000			
8 5/8 219.1	3.2	17.04	212.7	212.7	Std.	520	650	610	760	910	1000	1130	1220	1300	1410	1520	1740	
					Alt.	650	810	760	950	1140	1250	1410	1520	1630	1760	1900	2170	
					Std.	780	980	920	1140	1370	1500	1700	1830	1960	2130	2290	2620	
					Alt.	850	1060	990	1240	1480	1620	1840	2000	2120	2290	2470	2820	





Size OD	Wall thickness		Unit weight	ID	Hydrostatic test pressure Values given in (psi). 1psi = 6.895MPa.												
	inch mm	Sch. No. (Class)			t mm	kg/m	mm	A		B		X42	X46	X52	X56	X60	X65
					Std.	Alt.	Std.	Alt.									
<b>8 5/8</b> <b>219.1</b>	20	5.6	29.48	207.9	910	1140	1070	1330	1600	1750	1980	2130	2290	2480	2670	3000	3000
		6.4	33.57	206.3	1040	1300	1220	1520	1830	2000	2260	2430	2610	2830	3000	3000	3000
	30	7.0	36.61	205.1	1160	1450	1350	1690	2020	2220	2510	2700	2890	3000	3000	3000	3000
		7.9	41.14	203.3	1300	1630	1520	1900	2280	2500	2820	3000	3000	3000	3000	3000	3000
		8.2	42.65	202.7	1340	1680	1570	1960	2350	2580	2910	3000	3000	3000	3000	3000	3000
	40	8.7	45.14	201.7	1440	1790	1680	2090	2510	2750	3000	3000	3000	3000	3000	3000	3000
		9.5	49.10	200.1	1570	1960	1830	2280	2740	3000	3000	3000	3000	3000	3000	3000	3000
		10.3	53.03	198.5	1700	-	2000	-	-	-	-	-	-	-	-	-	-
	Δ60	11.1	56.94	196.9	1830	2290	2130	2670	3000	3000	3000	3000	3000	3000	3000	3000	3000
		12.7	64.64	193.7	2090	2610	2430	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000
	80 (XS)	14.3	72.22	190.5	2350	2800	2740	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000
		15.1	75.81	188.9	2500	-	2800	-	-	-	-	-	-	-	-	-	-
	Δ100	15.9	79.67	187.3	2610	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000
		18.3	90.62	182.5	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000
	120	19.1	94.20	180.9	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000
		20.6	100.84	177.9	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000
	(XXS)	22.2	107.79	174.7	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000
Δ160		23.0	111.14	173.1	2800	-	2800	-	-	-	-	-	-	-	-	-	
	25.4	121.32	168.3	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	
<b>10 3/4</b> <b>273.1</b>	4.0	26.54	265.1	520	650	610	760	1040	1130	1280	1380	1480	1600	1730	1970		
		31.76	263.5	630	790	730	920	1250	1370	1550	1660	1780	1930	2080	2380		
		34.35	262.7	680	850	790	990	1350	1480	1670	1800	1930	2090	2250	2570		
	20	36.94	261.9	730	920	860	1070	1450	1590	1800	1940	2080	2250	2420	2770		
		42.09	260.3	840	1050	980	1220	1660	1820	2060	2210	2370	2570	2770	3000		
		46.57	258.9	930	1170	1090	1360	1850	2030	2290	2470	2650	2870	3000	3000		
	30	51.03	257.5	1030	1290	1200	1500	2040	2230	2520	2720	2910	3000	3000	3000		
		56.72	255.7	1150	1440	1340	1680	2280	2500	2830	3000	3000	3000	3000	3000		
	40	60.50	254.5	1220	1530	1430	1780	2420	2660	3000	3000	3000	3000	3000	3000		
		71.72	250.9	1470	1830	1710	2140	2910	3000	3000	3000	3000	3000	3000	3000		
<b>10 3/4</b> <b>273.1</b>	60 (XS)	12.7	81.55	247.7	1670	2090	1950	2440	3000	3000	3000	3000	3000	3000	3000	3000	
		14.3	91.26	244.5	1880	2350	2200	2740	3000	3000	3000	3000	3000	3000	3000	3000	
	Δ80	15.1	95.87	242.9	1990	-	2320	-	-	-	-	-	-	-	-	-	
		15.9	100.85	241.3	2090	2620	2440	2800	3000	3000	3000	3000	3000	3000	3000	3000	
	100	18.3	114.99	236.5	2410	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
		20.6	128.27	231.9	2720	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
	Δ120	21.4	132.86	230.2	2800	-	2800	-	-	-	-	-	-	-	-	-	
		22.2	137.36	228.7	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
	140	23.8	146.30	225.5	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
		25.4	155.10	222.3	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
	Δ160	28.6	172.25	172.1	2800	-	2800	-	-	-	-	-	-	-	-	-	
		31.8	188.75	209.5	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
<b>12 3/4</b> <b>323.9</b>	4.4	34.67	315.1	490	610	570	710	960	1050	1190	1280	1380	1490	1610	1830		
		37.77	314.3	530	660	620	770	1050	1150	1300	1400	1500	1630	1750	2010		
		40.87	313.5	570	720	670	840	1140	1250	1410	1520	1620	1760	1890	2170		
	20	43.59	312.7	620	770	720	900	1230	1340	1520	1640	1750	1900	2040	2340		
		50.11	311.1	710	880	820	1030	1400	1530	1730	1870	2000	2170	2330	2670		
		55.47	309.7	790	990	930	1160	1570	1720	1950	2100	2250	2440	2620	3000		
	30	61.56	308.1	880	1100	1030	1280	1750	1910	2160	2330	2500	2700	2910	3000		
		65.35	307.1	930	1160	1090	1360	1850	2020	2290	2460	2640	2860	3000	3000		
	(Std)	67.62	306.5	970	1210	1130	1420	1930	2110	2390	2570	2750	2980	3000	3000		
		73.65	304.9	1060	1320	1240	1540	2100	2300	2600	2800	3000	3000	3000	3000		
	40	79.65	303.3	1150	1430	1340	1670	2270	2490	2810	3000	3000	3000	3000	3000		



Size OD	Wall thickness		Unit Weight	ID	Hydrostatic test pressure Values given in (psi). 1psi = 6.895MPa.														
	inch	Sch. No. (Class)			t mm	kg/m	mm	A		B		X42	X46	X52	X56	X60	X65	X70	X80
<b>12 3/4</b> <b>323.9</b>	(XS)	11.1	85.62	301.7	1240	1550	1440	1800	2450	2690	3000	3000	3000	3000	3000	3000	3000	3000	
		12.7	97.46	298.5	1410	1760	1650	2060	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	60	14.3	109.18	295.3	1590	1980	1850	2310	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
		15.9	120.76	292.1	1760	2210	2060	2570	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	80	17.5	132.23	288.9	1940	2430	2270	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
		19.1	143.56	285.7	2120	2650	2470	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	Δ100	20.6	154.08	282.7	2290	2800	2670	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
		21.4	159.69	281.0	2390	-	2780	-	-	-	-	-	-	-	-	-	-	-	-
	120(XXS)	22.2	165.17	279.5	2470	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
		23.8	176.13	276.3	2650	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	140	25.4	186.91	273.1	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
		27.0	197.68	269.9	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	Δ160	28.6	208.27	266.7	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
		31.8	229.06	260.3	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	<b>14</b> <b>355.6</b>	10	4.8	41.52	346.0	480	600	560	700	960	1050	1190	1280	1370	1480	1600	1730	1970	2040
			5.2	44.93	345.2	520	650	610	760	1040	1140	1290	1390	1480	1600	1730	1970	2040	
20		5.3	45.78	345.0	540	680	630	790	1070	1170	1330	1430	1530	1660	1790	2040	2130	2430	
		5.6	48.33	344.4	560	700	660	820	1120	1220	1380	1490	1600	1730	1860	2130	2430		
30(Std)		6.4	55.11	342.8	640	800	750	940	1280	1400	1580	1700	1820	1970	2130	2430	2730	3000	
		7.1	61.02	341.4	720	900	840	1050	1430	1570	1770	1910	2050	2220	2390	2730	3000		
40		7.9	67.74	339.8	800	1000	940	1170	1590	1740	1970	2120	2270	2460	2650	3000	3000		
		8.7	74.42	338.2	880	1110	1030	1290	1750	1920	2170	2340	2510	2720	2920	3000	3000		
Δ60		9.5	81.08	336.6	960	1210	1120	1410	1910	2090	2370	2550	2730	2960	3000	3000	3000		
		10.3	87.71	335.0	1040	1310	1220	1520	2070	2270	2560	2760	2960	3000	3000	3000	3000		
(XS)		11.1	94.30	333.4	1130	1410	1310	1640	2230	2450	2770	2980	3000	3000	3000	3000	3000		
		11.9	100.86	331.8	1210	1510	1410	1760	2390	2620	2960	3000	3000	3000	3000	3000	3000		
Δ120		12.7	107.39	330.2	1290	1610	1500	1880	2550	2790	3000	3000	3000	3000	3000	3000	3000		
		14.3	120.36	327.0	1450	1810	1690	2110	2870	3000	3000	3000	3000	3000	3000	3000	3000		
80		15.1	126.55	325.4	1530	-	1780	-	-	-	-	-	-	-	-	-	-		
		15.9	133.19	323.8	1610	2010	1880	2340	3000	3000	3000	3000	3000	3000	3000	3000	3000		
100	17.5	145.91	320.6	1770	2210	2060	2580	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	19.1	158.49	317.4	1930	2410	2250	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000			
Δ160	20.6	170.18	314.4	2090	2610	2440	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	22.2	182.52	311.2	2250	2800	2620	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000			
Δ	23.8	194.74	308.0	2410	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	25.4	206.83	304.8	2570	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000			
Δ	27.0	218.79	301.6	2730	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	27.8	224.64	300.0	2740	-	2800	-	-	-	-	-	-	-	-	-	-			
Δ	28.6	230.63	298.4	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	31.8	253.31	292.1	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000			
Δ	35.7	281.40	284.2	2800	-	2800	-	-	-	-	-	-	-	-	-	-			
	50.8	381.40	254.0	2800	-	2800	-	-	-	-	-	-	-	-	-	-			
Δ	54.0	401.03	247.7	2800	-	2800	-	-	-	-	-	-	-	-	-	-			
	55.9	412.56	243.8	2800	-	2800	-	-	-	-	-	-	-	-	-	-			
Δ	63.5	456.89	228.6	2800	-	2800	-	-	-	-	-	-	-	-	-	-			
	4.8	47.54	396.8	420	530	490	620	840	920	1040	1120	1200	1300	1400	1600				
16 406.4	10	5.2	51.45	396.0	460	570	530	670	910	990	1120	1210	1290	1400	1510	1730			
		5.6	55.35	395.2	490	620	570	720	980	1070	1210	1300	1400	1510	1630	1860			
20	6.4	63.13	393.6	560	700	660	820	1120	1220	1380	1490	1590	1730	1860	2130				
	7.1	69.91	392.2	630	790	740	920	1250	1370	1550	1670	1790	1940	2090	2390				
Δ	7.9	77.63	390.6	700	880	820	1020	1390	1520	1720	1860	1990	2150	2320	2650				



Size OD	Wall thickness		Unit weight		ID	Hydrostatic test pressure													
	inch	Sch. No. (Class)	t mm	kg/m		mm	Values given in (psi). 1psi = 6.895MPa.												
						A		B		X42	X46	X52	X56	X60	X65	X70	X80		
						Std.	Alt.	Std.	Alt.										
<b>16</b> <b>406.4</b>	30(Std)	8.7	85.32	389.0	770	970	900	1130	1540	1680	1900	2050	2190	2380	2560	2920			
		9.5	92.98	387.4	840	1050	980	1230	1670	1830	2070	2230	2390	2590	2790	3000			
		10.3	100.61	385.8	910	1110	1070	1330	1810	1980	2240	2420	2590	2800	3000	3000			
		11.1	108.20	384.2	990	1230	1150	1440	1950	2140	2420	2610	2790	3000	3000	3000			
		11.9	115.77	382.6	1060	1320	1230	1540	2090	2290	2590	2790	2990	3000	3000	3000			
		12.7	123.30	381.0	1120	1410	1310	1640	2230	2440	2760	2980	3000	3000	3000	3000			
		14.3	138.27	377.8	1260	1580	1480	1840	2510	2750	3000	3000	3000	3000	3000	3000			
		15.9	153.14	374.6	1410	1760	1640	2050	2790	3000	3000	3000	3000	3000	3000	3000			
		16.7	159.96	373.1	1480	-	1720	-	-	-	-	-	-	-	-	-	-	-	-
		17.5	167.83	371.4	1550	1940	1810	2260	3000	3000	3000	3000	3000	3000	3000	3000	3000		
		19.1	182.42	368.2	1690	2110	1970	2460	3000	3000	3000	3000	3000	3000	3000	3000	3000		
		20.6	195.98	365.2	1830	2280	2130	2660	3000	3000	3000	3000	3000	3000	3000	3000	3000		
	21.4	203.29	363.5	1900	-	2220	-	-	-	-	-	-	-	-	-	-	-	-	
	22.2	210.33	362.0	1970	2460	2300	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	23.8	224.55	358.8	2110	2640	2460	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	25.4	238.64	355.6	2250	2800	2620	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	26.2	245.25	354.0	2320	-	2710	-	-	-	-	-	-	-	-	-	-	-	-	
	27.0	252.61	352.4	2390	2800	2790	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	28.6	266.45	349.2	2530	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	30.2	280.17	346.0	2670	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	31.0	286.33	344.5	2740	-	2800	-	-	-	-	-	-	-	-	-	-	-	-	
	31.8	293.76	342.8	2800	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000			
	36.5	333.35	332.8	2800	-	2800	-	-	-	-	-	-	-	-	-	-	-	-	
	40.5	364.93	325.4	2800	-	2800	-	-	-	-	-	-	-	-	-	-	-	-	
<b>18</b> <b>457.2</b>	10	4.8	53.53	447.4	380	470	440	550	750	820	920	990	1070	1150	1240	1420			
		5.6	62.34	445.8	440	550	510	640	870	950	1080	1160	1240	1340	1450	1650			
		6.4	71.12	444.2	500	620	580	730	990	1090	1230	1320	1420	1530	1650	1890			
		7.1	78.77	442.8	560	700	660	820	1110	1220	1380	1490	1590	1730	1860	2120			
		7.9	87.49	441.2	620	780	730	910	1240	1360	1530	1650	1770	1920	2060	2350			
		8.7	96.18	439.6	690	860	800	1000	1360	1490	1690	1820	1950	2110	2270	2600			
	(Std)	9.5	104.84	438.0	750	940	880	1090	1490	1630	1840	1980	2120	2300	2480	2830			
		10.3	113.46	436.4	810	1020	950	1180	1610	1760	1990	2150	2300	2490	2680	3000			
		11.1	122.05	434.8	880	1100	1020	1280	1740	1900	2150	2320	2480	2690	2900	3000			
		11.9	130.62	433.2	940	1170	1090	1370	1860	2040	2300	2480	2660	2880	3000	3000			
		12.7	139.15	431.6	1000	1250	1170	1460	1980	2170	2460	2640	2830	3000	3000	3000			
		14.3	156.11	428.4	1120	1400	1310	1640	2230	2440	2760	2970	3000	3000	3000	3000			
	40	15.9	172.95	425.2	1250	1560	1460	1820	2480	2720	3000	3000	3000	3000	3000	3000			
		17.5	189.67	422.0	1380	1720	1610	2010	2730	2990	3000	3000	3000	3000	3000	3000			
		19.1	206.25	418.8	1500	1880	1750	2190	2980	3000	3000	3000	3000	3000	3000	3000			
		20.6	221.69	415.8	1620	2030	1890	2370	3000	3000	3000	3000	3000	3000	3000	3000			
		22.2	238.03	412.6	1750	2190	2040	2550	3000	3000	3000	3000	3000	3000	3000	3000			
		23.8	254.25	409.4	1880	2340	2190	2740	3000	3000	3000	3000	3000	3000	3000	3000			
	60	25.4	270.34	406.2	2000	2500	2330	2800	3000	3000	3000	3000	3000	3000	3000	3000			
		27.0	286.30	403.0	2120	2660	2480	2800	3000	3000	3000	3000	3000	3000	3000	3000			
		28.6	302.14	399.8	2250	2800	2620	2800	3000	3000	3000	3000	3000	3000	3000	3000			
		29.4	309.41	398.5	2310	-	2700	-	-	-	-	-	-	-	-	-	-	-	
		30.2	317.85	396.6	2370	2800	2770	2800	3000	3000	3000	3000	3000	3000	3000	3000			
		31.8	333.44	393.4	2500	2800	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000			
80	34.9	363.28	387.4	2750	-	2800	-	-	-	-	-	-	-	-	-	-	-		
	39.7	408.04	377.9	2800	-	2800	-	-	-	-	-	-	-	-	-	-	-		
	45.2	459.05	366.7	2800	-	2800	-	-	-	-	-	-	-	-	-	-	-		

PIPES

Size		Wall thickness		Unit weight		Hydrostatic test pressure												
OD				ID		Values given in (psi). 1psi = 6.895MPa.												
inch	Sch. No.	t				A		B		X42	X46	X52	X56	X60	X65	X70	X80	
mm	(Class)	mm	kg/m	mm		Std.	Alt.	Std.	Alt.									
<b>20</b> <b>508.0</b>	10	5.6	69.38	496.8		390	490	460	570	830	910	1020	1100	1180	1280	1380	1580	
		6.4	79.16	495.2		450	560	520	660	950	1040	1170	1260	1350	1460	1580	1800	
		7.1	87.70	493.8		510	630	590	740	1060	1160	1320	1420	1520	1640	1770	2020	
		7.9	97.43	492.2		560	700	660	820	1180	1290	1460	1570	1680	1830	1970	2250	
		8.7	107.12	490.6		620	770	720	900	1300	1420	1610	1730	1860	2010	2170	2480	
	20(Std)	9.5	116.78	489.0		680	840	790	980	1420	1550	1760	1890	2030	2190	2360	2700	
		10.3	126.41	487.4		730	910	850	1070	1530	1680	1900	2050	2190	2380	2560	2920	
		11.1	136.01	485.8		790	990	920	1150	1660	1810	2050	2210	2370	2560	2760	3000	
		11.9	145.58	484.2		840	1060	980	1230	1770	1940	2190	2360	2530	2740	2950	3000	
		12.7	155.12	482.6		900	1120	1050	1310	1890	2070	2340	2520	2700	2930	3000	3000	
	30(XS)	14.3	174.10	479.4		1010	1260	1180	1480	2120	2330	2630	2830	3000	3000	3000	3000	
		Δ40	15.1	183.19	477.8		1170	-	1250	-	-	-	-	-	-	-	-	-
			15.9	192.95	476.2		1120	1410	1310	1640	2360	2590	2930	3000	3000	3000	3000	3000
			17.5	211.68	473.0		1240	1550	1440	1810	2600	2850	3000	3000	3000	3000	3000	3000
			19.1	230.27	469.8		1350	1690	1580	1970	2840	3000	3000	3000	3000	3000	3000	3000
	20.6		247.60	466.8		1460	1830	1710	2130	3000	3000	3000	3000	3000	3000	3000	3000	
	60	22.2	265.95	463.6		1580	1970	1840	2300	3000	3000	3000	3000	3000	3000	3000	3000	
		23.8	284.18	460.4		1690	2110	1970	2460	3000	3000	3000	3000	3000	3000	3000	3000	
		25.4	302.28	457.2		1800	2250	2100	2620	3000	3000	3000	3000	3000	3000	3000	3000	
		Δ80	26.2	310.80	455.6		1860	-	2170	-	-	-	-	-	-	-	-	-
			27.0	320.26	454.0		1910	2390	2230	2750	3000	3000	3000	3000	3000	3000	3000	3000
	28.6		338.11	450.8		2020	2530	2360	2750	3000	3000	3000	3000	3000	3000	3000	3000	
	30.2		355.83	447.6		2140	2670	2490	2750	3000	3000	3000	3000	3000	3000	3000	3000	
	31.8		373.43	444.4		2250	2750	2620	2750	3000	3000	3000	3000	3000	3000	3000	3000	
	Δ100	32.5	381.07	442.9		2310	-	2690	-	-	-	-	-	-	-	-	-	
		33.3	389.81	441.4		2360	2750	2750	2750	3000	3000	3000	3000	3000	3000	3000	3000	
		34.9	407.17	438.2		2480	2750	2750	2750	3000	3000	3000	3000	3000	3000	3000	3000	
		Δ120	38.1	440.99	431.8		2700	-	2800	-	-	-	-	-	-	-	-	-
			44.5	507.56	419.1		2800	-	2800	-	-	-	-	-	-	-	-	-
	Δ160	50.0	564.10	408.0		2800	-	2800	-	-	-	-	-	-	-	-	-	
<b>22</b> <b>558.8</b>	10	5.6	76.42	547.8		360	450	420	520	750	820	930	1000	1080	1160	1250	1430	
		6.4	87.21	546.2		410	510	480	600	860	940	1060	1150	1230	1330	1430	1640	
		7.1	96.63	544.8		460	570	540	670	970	1060	1200	1290	1380	1490	1610	1840	
		7.9	107.36	543.2		510	640	600	740	1070	1170	1330	1430	1530	1660	1790	2040	
		8.7	118.06	541.6		560	700	660	820	1180	1290	1460	1580	1690	1830	1970	2250	
	20	9.5	128.73	540.0		610	770	720	890	1290	1410	1600	1720	1840	1990	2150	2450	
		10.3	139.37	538.4		660	830	780	970	1400	1530	1730	1860	1990	2160	2330	2660	
		11.1	149.97	536.8		720	900	840	1050	1510	1650	1860	2010	2150	2330	2510	2870	
		11.9	160.55	535.2		770	960	900	1120	1610	1770	2000	2150	2300	2490	2690	3000	
		12.7	171.09	533.6		820	1020	950	1190	1720	1880	2130	2290	2450	2660	2860	3000	
	30	14.3	192.08	530.4		920	1150	1070	1340	1930	2120	2390	2570	2760	2990	3000	3000	
		15.9	212.95	527.2		1020	1280	1190	1490	2150	2350	2660	2860	3000	3000	3000	3000	
		17.5	233.68	524.0		1130	1410	1310	1640	2360	2590	2930	3000	3000	3000	3000	3000	
		19.1	254.30	520.8		1230	1530	1430	1790	2580	2820	3000	3000	3000	3000	3000	3000	
		20.6	273.51	517.8		1330	1660	1550	1940	2790	3000	3000	3000	3000	3000	3000	3000	
	40	22.2	293.87	514.6		1430	1790	1670	2090	3000	3000	3000	3000	3000	3000	3000	3000	
		23.8	314.11	511.4		1530	1920	1790	2240	3000	3000	3000	3000	3000	3000	3000	3000	
		25.4	334.23	508.2		1640	2050	1910	2390	3000	3000	3000	3000	3000	3000	3000	3000	
		27.0	354.22	505.0		1740	2170	2030	2500	3000	3000	3000	3000	3000	3000	3000	3000	
		28.6	374.08	501.8		1840	2300	2150	2500	3000	3000	3000	3000	3000	3000	3000	3000	
	Δ160	30.2	393.81	498.6		1940	2430	2270	2500	3000	3000	3000	3000	3000	3000	3000	3000	
		31.8	413.42	495.4		2050	2500	2390	2500	3000	3000	3000	3000	3000	3000	3000	3000	

PIPES

Size OD	Wall thickness		Unit weight		ID	Hydrostatic test pressure												
	inch	Sch. No. (Class)	t mm	kg/m		mm	Values given in (psi). 1psi = 6.895MPa.											
						A		B		X42	X46	X52	X56	X60	X65	X70	X80	
						Std.	Alt.	Std.	Alt.									
<b>22</b> <b>558.8</b>			33.3	431.69	492.4	2150	2500	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	
			34.9	451.06	489.2	2250	2500	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	3000
			36.5	470.30	486.0	2350	2500	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	3000
			38.1	489.41	482.8	2450	2500	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	3000
<b>24</b> <b>609.6</b>	10		6.4	95.26	597.2	380	470	440	550	790	860	980	1050	1130	1220	1310	1500	
			7.1	105.56	595.8	420	530	490	610	890	970	1100	1180	1260	1370	1480	1690	
			7.9	117.30	594.2	470	580	550	680	980	1080	1220	1310	1400	1520	1640	1870	
			8.7	129.00	592.6	520	640	600	750	1080	1190	1340	1440	1550	1680	1810	2060	
		20(Std)		9.5	140.68	591.0	560	700	660	820	1180	1290	1460	1580	1690	1830	1970	2250
			10.3	152.32	589.4	610	760	710	890	1280	1400	1580	1710	1830	1980	2130	2440	
			11.1	163.93	587.8	660	820	770	960	1380	1510	1710	1840	1970	2140	2300	2630	
			11.9	175.51	586.2	700	880	820	1030	1480	1620	1830	1970	2110	2290	2460	2810	
		(XS)		12.7	187.06	584.6	750	940	880	1090	1580	1730	1950	2100	2250	2440	2630	3000
			14.3	210.07	581.4	840	1050	980	1230	1770	1940	2190	2360	2530	2740	2950	3000	
		30		15.9	232.94	578.2	940	1170	1090	1370	1970	2160	2440	2630	2810	3000	3000	3000
			17.5	255.69	575.0	1030	1290	1200	1500	2170	2370	2680	2890	3000	3000	3000	3000	
			19.1	278.32	571.8	1120	1410	1310	1640	2360	2590	2930	3000	3000	3000	3000	3000	
			20.6	299.41	568.8	1220	1520	1420	1780	2560	2800	3000	3000	3000	3000	3000	3000	
		40		22.2	321.79	565.6	1310	1640	1530	1910	2760	3000	3000	3000	3000	3000	3000	
			23.8	344.05	562.4	1410	1760	1640	2050	2950	3000	3000	3000	3000	3000	3000		
			24.6	355.41	560.4	1450	-	1700	-	-	-	-	-	-	-	-		
			25.4	366.17	559.2	1500	1880	1750	2190	3000	3000	3000	3000	3000	3000	3000		
		Δ60		27.0	388.17	556.0	1590	1990	1860	2300	3000	3000	3000	3000	3000	3000	3000	
			28.6	410.05	552.8	1690	2110	1970	2300	3000	3000	3000	3000	3000	3000	3000		
			30.2	431.80	549.6	1780	2230	2080	2300	3000	3000	3000	3000	3000	3000	3000		
			31.0	441.31	547.7	1830	-	2130	-	-	-	-	-	-	-	-		
		Δ80		31.8	453.42	546.4	1880	2300	2190	2300	3000	3000	3000	3000	3000	3000	3000	
			33.3	473.57	543.4	1970	2300	2300	2300	3000	3000	3000	3000	3000	3000	3000		
	34.9		494.95	540.2	2060	2300	2300	2300	3000	3000	3000	3000	3000	3000	3000			
	36.5		516.20	537.0	2160	2300	2300	2300	3000	3000	3000	3000	3000	3000	3000			
	Δ100		38.1	537.33	533.8	2250	2300	2300	2300	3000	3000	3000	3000	3000	3000			
		38.9	546.68	531.8	2300	-	2680	-	-	-	-	-	-	-				
		39.7	558.32	530.6	2300	2300	2300	2300	3000	3000	3000	3000	3000	3000				
		46.0	638.93	517.6	2720	-	2800	-	-	-	-	-	-	-				
	Δ140	52.4	718.88	504.9	2800	-	2800	-	-	-	-	-	-	-				
	Δ160	59.5	806.75	490.5	2800	-	2800	-	-	-	-	-	-	-				
<b>26</b> <b>660.0</b>			6.4	103.15	647.2	350	430	400	500	730	800	900	970	1040	1130	1210	1380	
			7.1	114.31	645.8	390	490	450	570	820	890	1010	1090	1170	1260	1360	1560	
		10		7.9	127.04	644.2	430	540	500	630	910	990	1120	1210	1300	1400	1510	1730
			8.7	139.73	642.6	480	600	560	690	1000	1100	1240	1330	1430	1550	1670	1910	
			9.5	152.39	641.0	520	650	610	760	1090	1190	1350	1450	1560	1690	1820	2080	
			10.3	165.02	639.4	560	700	660	820	1180	1290	1460	1570	1690	1830	1970	2250	
		(Std)		11.1	177.62	637.8	610	760	710	880	1270	1390	1580	1700	1820	1970	2120	2430
			11.9	190.19	636.2	650	810	760	950	1360	1490	1690	1820	1950	2110	2270	2600	
			12.7	202.72	634.6	690	870	810	1010	1450	1590	1800	1940	2080	2250	2420	2770	
			14.3	227.70	631.4	780	970	910	1130	1630	1790	2020	2180	2330	2530	2720	3000	
		20(XS)		15.9	252.55	628.2	870	1080	1010	1260	1820	1990	2250	2420	2600	2810	3000	3000
			17.5	277.27	625.0	950	1190	1110	1390	2000	2190	2480	2670	2860	3000	3000	3000	
			19.1	301.87	621.8	1040	1300	1210	1510	2180	2390	2700	2910	3000	3000	3000	3000	
			20.6	324.81	618.8	1120	1410	1310	1640	2360	2590	2920	3000	3000	3000	3000	3000	
			22.2	349.16	615.6	1210	1510	1410	1770	2540	2790	3000	3000	3000	3000	3000	3000	
			23.8	373.39	612.4	1300	1620	1520	1890	2730	2990	3000	3000	3000	3000	3000	3000	
	25.4		397.49	609.2	1380	1730	1620	2000	2910	3000	3000	3000	3000	3000	3000	3000		

PIPES

Size		Wall thickness		Unit		Hydrostatic test pressure												
OD	Sch. No.	t	weight	ID	Values given in (psi). 1psi = 6.895MPa.													
inch	(Class)	mm	kg/m	mm	A		B		X42	X46	X52	X56	X60	X65	X70	X80		
mm					Std.	Alt.	Std.	Alt.										
<b>28</b> <b>711.0</b>	10	6.4	111.20	698.2	320	400	370	470	680	740	840	900	960	1040	1130	1290		
		7.1	123.24	696.8	360	450	420	530	760	830	940	1010	1080	1170	1260	1450		
		7.9	136.97	695.2	400	500	470	580	840	920	1040	1120	1200	1300	1400	1600		
		8.7	150.67	693.6	440	550	520	650	930	1020	1150	1240	1330	1440	1550	1770		
		9.5	164.34	692.0	480	600	560	700	1010	1110	1250	1350	1450	1570	1690	1930		
		10.3	177.98	690.4	520	650	610	760	1100	1200	1360	1460	1570	1700	1830	2090		
		11.1	191.58	688.8	560	700	660	820	1180	1300	1460	1580	1690	1830	1970	2250		
		11.9	205.15	687.2	600	750	700	880	1270	1390	1570	1690	1810	1960	2110	2410		
		12.7	218.69	685.6	640	800	750	940	1350	1480	1670	1800	1930	2090	2250	2570		
		14.3	245.68	682.4	720	900	840	1050	1520	1660	1880	2020	2170	2350	2530	2890		
	20	30	15.9	272.54	679.2	800	1000	940	1170	1690	1850	2090	2250	2410	2610	2810	3000	
			17.5	299.28	676.0	880	1110	1030	1290	1860	2030	2300	2480	2650	2870	3000	3000	
			19.1	325.89	672.8	960	1210	1120	1410	2020	2220	2510	2700	2890	3000	3000	3000	
			20.6	350.72	669.8	1040	1300	1220	1520	2190	2400	2710	2920	3000	3000	3000	3000	
			22.2	377.08	666.6	1120	1410	1310	1640	2360	2590	2920	3000	3000	3000	3000	3000	
			23.8	403.32	663.4	1210	1510	1410	1760	2530	2770	3000	3000	3000	3000	3000	3000	
			25.4	429.44	660.2	1290	1610	1500	1880	2700	2960	3000	3000	3000	3000	3000	3000	3000
			300	370	350	440	630	690	780	840	900	980	1050	1210				
			340	420	390	490	710	780	880	940	1010	1100	1180	1360				
			370	470	440	550	790	860	970	1050	1120	1220	1310	1510				
410	520	480	600	870	950	1070	1160	1240	1340	1440	1660							
450	560	520	660	940	1040	1170	1260	1350	1460	1580	1810							
490	610	590	710	1020	1120	1270	1360	1460	1580	1710	1960							
530	660	610	770	1100	1210	1370	1470	1580	1710	1840	2110							
560	700	660	820	1180	1290	1460	1570	1690	1830	1970	2260							
600	750	700	880	1260	1380	1560	1680	1800	1950	2100	2410							
670	840	790	980	1420	1550	1750	1890	2020	2190	2360	2700							
750	940	880	1090	1580	1720	1950	2100	2250	2440	2630	3000							
830	1030	960	1200	1730	1900	2150	2310	2480	2680	2890	3000							
900	1120	1050	1310	1890	2070	2340	2520	2700	2920	3000	3000							
970	1220	1140	1420	2050	2240	2530	2730	2920	3000	3000	3000							
1050	1310	1220	1530	2200	2420	2730	2940	3000	3000	3000	3000							
1130	1410	1310	1640	2360	2590	2930	3000	3000	3000	3000	3000							
1200	1500	1400	1750	2520	2760	3000	3000	3000	3000	3000	3000							
1270	1590	1490	1860	2680	2930	3000	3000	3000	3000	3000	3000							
1350	1690	1580	1970	2840	3000	3000	3000	3000	3000	3000	3000							
1430	1780	1660	2080	2990	3000	3000	3000	3000	3000	3000	3000							
<b>32</b> <b>813.0</b>	10	6.4	127.30	800.2	280	350	330	410	590	650	730	790	840	910	980	1130		
		7.1	141.10	798.8	320	400	370	460	660	730	820	890	950	1030	1110	1270		
		7.9	156.84	797.2	350	440	410	510	740	810	910	980	1050	1140	1230	1410		
		8.7	172.56	795.6	390	480	450	560	810	890	1010	1080	1160	1260	1350	1550		
		9.5	188.24	794.0	420	530	490	620	890	970	1100	1180	1270	1370	1480	1690		
		10.3	203.88	792.4	460	570	530	670	960	1050	1190	1280	1370	1480	1600	1830		
		11.1	219.50	790.8	490	620	570	720	1030	1130	1280	1380	1480	1600	1720	1970		
		11.9	235.09	789.2	530	660	620	770	1110	1210	1370	1480	1580	1710	1850	2110		
		12.7	250.64	787.6	560	700	660	820	1180	1290	1460	1580	1690	1830	1970	2250		
		14.3	281.65	784.4	630	790	740	920	1330	1450	1640	1770	1900	2050	2210	2520		
	20	30	15.9	312.54	781.2	700	880	820	1030	1480	1620	1830	1970	2110	2290	2460	2800	
			17.5	343.30	778.0	770	970	900	1130	1630	1780	2010	2170	2320	2520	2710	3000	
			19.1	373.93	774.8	840	1050	980	1230	1770	1940	2190	2360	2530	2740	2950	3000	
			20.6	402.54	771.8	910	1140	1070	1330	1920	2100	2380	2560	2740	2970	3000	3000	
			22.2	432.93	768.6	980	1230	1150	1440	2070	2260	2560	2760	2950	3000	3000	3000	
			23.8	463.19	765.4	1060	1320	1230	1540	2220	2430	2740	2950	3000	3000	3000	3000	



Size		Wall thickness		Unit		Hydrostatic test pressure												
OD				weight		ID		Values given in (psi). 1psi = 6.895MPa.										
inch	Sch. No.	t				A		B		X42	X46	X52	X56	X60	X65	X70	X80	
mm	(Class)	mm	kg/m	mm		Std.	Alt.	Std.	Alt.									
<b>32</b> <b>813.0</b>		25.4	493.32	762.2		1120	1410	1310	1640	2360	2590	2920	3000	3000	3000	3000	3000	
		27.0	523.33	759.0		1190	1490	1390	1740	2510	2750	3000	3000	3000	3000	3000	3000	
		28.6	553.22	755.8		1270	1580	1480	1850	2660	2910	3000	3000	3000	3000	3000	3000	
		30.2	582.98	752.6		1340	1670	1560	1950	2810	3000	3000	3000	3000	3000	3000	3000	
		31.8	612.61	749.4		1410	1760	1640	2050	2950	3000	3000	3000	3000	3000	3000	3000	
<b>34</b> <b>864.0</b>		6.4	135.35	851.2		260	330	310	390	560	610	690	740	790	860	930	1060	
		7.1	150.03	849.8		300	370	350	430	620	680	770	830	890	970	1040	1190	
		7.9	166.78	848.2		330	410	390	480	690	760	860	920	990	1070	1160	1330	
	10	8.7	183.50	846.6		360	460	420	530	760	840	950	1020	1090	1180	1270	1460	
		9.5	200.18	845.0		400	500	460	580	830	910	1030	1110	1190	1290	1390	1590	
		10.3	216.84	843.4		430	540	500	630	900	990	1120	1200	1290	1400	1500	1720	
		11.1	233.46	841.8		460	580	540	680	970	1070	1210	1300	1390	1510	1620	1860	
		11.9	250.05	840.2		500	620	580	720	1040	1140	1290	1390	1490	1610	1740	1990	
		12.7	266.61	838.6		530	660	620	770	1110	1220	1380	1480	1590	1720	1850	2130	
		14.3	299.64	835.4		600	740	690	870	1250	1370	1550	1670	1790	1930	2080	2380	
	30	15.9	332.53	832.2		660	830	770	970	1390	1520	1720	1850	1990	2150	2320	2650	
	40	17.5	365.31	829.0		730	910	850	1060	1530	1680	1890	2040	2190	2370	2550	2910	
		19.1	397.95	825.8		790	990	930	1160	1670	1830	2060	2220	2380	2580	2780	3000	
		20.6	428.44	822.8		860	1070	1000	1250	1810	1980	2240	2410	2580	2790	3000	3000	
		22.2	460.85	819.6		930	1160	1080	1350	1950	2130	2410	2590	2780	3000	3000	3000	
		23.8	493.12	816.4		990	1240	1160	1450	2090	2280	2580	2780	2980	3000	3000	3000	
		25.4	525.27	813.2		1060	1320	1240	1540	2220	2440	2750	2960	3000	3000	3000	3000	
		27.0	557.29	810.0		1120	1410	1310	1640	2360	2590	2920	3000	3000	3000	3000	3000	
		28.6	589.19	806.8		1190	1490	1390	1740	2500	2740	3000	3000	3000	3000	3000	3000	
		30.2	620.96	803.6		1260	1570	1470	1830	2640	2890	3000	3000	3000	3000	3000	3000	
	31.8	652.60	800.4		1320	1650	1540	1930	2780	3000	3000	3000	3000	3000	3000	3000		
<b>36</b> <b>914.0</b>		6.4	143.24	901.2		250	310	290	360	520	580	650	700	750	810	880	1000	
		7.1	158.79	899.8		280	350	330	410	590	650	730	790	840	910	980	1120	
		7.9	176.52	898.2		310	390	360	450	660	720	810	870	940	1010	1090	1250	
	10	8.7	194.22	896.6		340	430	400	500	720	790	890	960	1030	1120	1200	1380	
		9.5	211.90	895.0		380	470	440	550	790	860	980	1050	1120	1220	1310	1500	
		10.3	229.54	893.4		410	510	470	590	850	930	1060	1140	1220	1320	1420	1620	
		11.1	247.15	891.8		440	550	510	640	920	1010	1140	1230	1310	1420	1530	1750	
		11.9	264.72	890.2		470	590	550	680	980	1080	1220	1310	1410	1520	1640	1880	
	20	12.7	282.27	888.6		500	620	580	730	1050	1150	1300	1400	1500	1620	1750	2000	
		14.3	317.27	885.4		560	700	660	820	1180	1290	1460	1570	1690	1820	1970	2250	
	30	15.9	352.14	882.2		620	780	730	910	1310	1440	1620	1750	1880	2030	2190	2500	
		17.5	386.88	879.0		690	860	800	1000	1440	1580	1790	1930	2060	2240	2410	2750	
	40	19.1	421.50	875.8		750	940	880	1090	1580	1720	1950	2100	2250	2440	2630	3000	
		20.6	453.84	872.8		810	1020	950	1180	1710	1870	2110	2270	2440	2640	2840	3000	
		22.2	488.22	869.6		880	1090	1020	1280	1840	2010	2280	2450	2620	2840	3000	3000	
		23.8	522.47	866.4		940	1170	1090	1370	1970	2160	2440	2630	2810	3000	3000	3000	
		25.4	556.59	863.2		1000	1250	1170	1460	2100	2300	2600	2800	3000	3000	3000	3000	
		27.0	590.58	860.0		1060	1330	1240	1550	2230	2440	2760	2970	3000	3000	3000	3000	
		28.6	624.45	856.8		1130	1410	1310	1640	2360	2590	2930	3000	3000	3000	3000	3000	
		30.2	658.19	853.6		1190	1480	1390	1730	2490	2730	3000	3000	3000	3000	3000	3000	
	31.8	691.81	850.4		1250	1560	1460	1820	2630	2870	3000	3000	3000	3000	3000	3000		



