CARBON ALLOYS STEEL PIPE DIMENSION WITH TEST PRESSURES ACCORDING TO ANSI B36.10

For ASTM A 53/A 106/A 333/A 335/Specifications

Nominal Size		Outside Diameter		Wall Thickness		Class	Sched No.	Nominal Weight			Test Pressure Min					
											Butt Welded		Grade A		Grade B	
in	mm	in	mm	in	mm			lb/ft	Kg/ft	Kg/m	psi	Kg/cm2	psi	Kg/cm2	psi	Kg/cm2
1/8	6	0.405	10.3	.068	1.7	std	40	0.24	0.11	0.36	700	49.2	700	49.2	700	49.2
				.095	2.4	xs	80	0.31	0.14	0.47	850	59.8	850	59.8	850	59.8
1/4	8	0.540	13.7	.088	2.24	std	40	0.42	0.19	0.63	700	49.2	700	49.2	700	49.2
				.119	3.02	xs	80	0.54	0.24	0.80	850	59.8	850	59.8	850	59.8
3/8	10	0.675	17.1	.091	2.31	std	40	0.57	0.26	0.84	700	49.2	700	49.2	700	49.2
				.126	3.20	xs	80	0.74	0.34	1.10	850	59.8	850	59.8	850	59.8
1/2	15	0.840	21.3	.109	2.77	std	40	0.85	0.39	1.27	700	49.2	700	49.2	700	49.2
				.147	3.73	xs	80	1.09	0.49	1.62	850	59.8	850	59.8	850	59.8
				.188	4.78	--	160	1.31	0.60	1.95	1000	70.3	1000	70.3	1000	70.3
				.294	7.47	xxs	--	1.71	0.78	2.55	1000	70.3	1000	70.3	1000	70.3
3/4	20	1.050	26.7	.113	2.87	std	40	1.13	0.51	1.69	700	49.2	700	49.2	700	49.2
				.154	3.91	xs	80	1.47	0.67	2.20	850	59.8	850	59.8	850	59.8
				.218	5.56	--	160	1.94	0.88	2.90	1000	70.3	1000	70.3	1000	70.3
				308	7.82	xxs	--	2.44	1.11	3.63	1000	70.3	1000	70.3	1000	70.3
1	25	1.315	33.4	.133	3.38	std	40	1.68	0.76	2.50	700	49.2	700	49.2	700	49.2
				.179	4.55	xs	80	2.17	0.98	3.23	850	59.8	850	59.8	850	59.8
				.250	6.35	--	160	2.84	1.29	4.23	1000	70.3	1000	70.3	1000	70.3
				.358	9.09	xxs	--	3.66	1.66	5.45	1000	70.3	1000	70.3	1000	70.3
1 1/4	32	1.660	42.2	.140	3.56	std	40	2.27	1.03	3.38	1000	70.3	1000	70.3	1000	70.3
				.191	4.85	xs	80	3.00	1.36	4.47	1300	91.4	1500	105.5	1500	105.5
				.250	6.35	--	160	3.76	1.71	5.60	1400	98.4	1800	126.5	1800	126.5
				.382	9.70	xxs	--	5.21	2.36	7.76	1400	98.4	1800	126.5	1800	126.5
1 1/2	40	1.900	48.3	.145	3.68	std	40	2.72	1.23	4.05	1000	70.3	1000	70.3	1000	70.3
				.200	5.08	xs	80	3.63	1.65	5.41	1300	91.4	1500	105.5	1600	112.5
				.281	7.14	--	160	4.85	2.20	7.24	1400	98.4	1800	126.5	1900	133.6
				.400	10.15	xxs	--	6.41	2.91	9.55	1400	98.4	1800	126.5	1900	133.6
2	50	2.375	60.3	.154	3.91	std	40	3.65	1.66	5.44	1000	70.3	2300	161.7	2500	175.8
				.218	5.54	xs	80	5.02	2.28	7.48	1300	91.4	2500	175.8	2500	175.8
				.344	8.74	--	160	7.46	3.38	11.11	--	--	2500	175.8	2500	175.8
				.436	11.13	xxs	--	9.03	4.10	13.45	1400	98.4	2500	175.8	2500	175.8
2 1/2	65	2.875	73.0	.203	5.16	std	40	5.79	2.63	8.62	1000	70.3	2500	175.8	2500	175.8
				.276	7.01	xs	80	7.66	3.47	11.41	1300	91.4	2500	175.8	2500	175.8
				.375	9.53	--	160	10.01	4.54	14.91	1400	98.4	2500	175.8	2500	175.8
				.552	14.02	xxs	--	18.70	6.21	20.39	1400	98.4	2500	175.8	2500	175.8
3	80	3.500	88.9	.188	4.78	--	--	6.63	3.01	9.87	1000	70.3	--	--	--	--
				.216	5.49	std	40	7.58	3.44	11.29	1000	70.3	2200	154.7	2500	175.8
				.300	7.62	xs	80	10.25	4.65	15.27	1300	91.4	2500	175.8	2500	175.8
				.438	11.13	-	160	14.31	6.489	21.33	--	--	2500	175.8	2500	175.8
				.600	15.24	xxs	--	18.58	8.13	27.67	--	--	2500	175.8	2500	175.8
3 1/2	90	4.000	101.6	.188	4.78	--	--	7.63	3.46	11.35	1200	84.4	--	--	--	--
				.226	5.74	std	40	9.11	4.13	13.57	1200	84.4	2000	140.6	2400	168.7
				.318	8.08	xs	80	12.51	5.67	18.63	1700	119.5	2800	196.8	2800	196.8
4	100	4.500	114.3	.156	3.96	--	--	7.25	3.29	10.79	1000	70.3	--	--	--	--
				.188	4.78	--	--	8.64	3.92	12.86	1200	84.4	--	--	--	--
				.219	5.56	--	--	10.00	4.54	14.88	1200	84.4	--	--	--	--
				.237	6.02	std	40	10.79	4.89	16.07	1200	84.4	1900	133.6	2200	154.7
				.337	8.56	xs	80	14.98	6.79	22.31	1700	119.5	2700	189.8	2800	196.8
				.438	11.13	--	120	18.98	8.61	28.30	--	--	2800	196.8	2800	196.8
				.531	13.49	--	160	22.52	10.21	33.53	--	--	2800	196.8	2800	196.8
				.674	17.12	xxs	--	27.54	12.49	41.02	--	--	2800	196.8	2800	196.8
5	125	5.563	141.3	.258	6.55	std	40	14.62	6.63	21.78	--	--	1700	119.5	1900	133.6
				.375	9.35	xs	80	20.78	9.43	30.95	--	--	2400	168.7	2800	196.8
				.500	12.70	--	120	27.04	12.27	40.28	--	--	2800	196.8	2800	196.8
				.625	15.88	--	160	32.96	14.95	49.09	--	--	2800	196.8	2800	196.8
				.750	19.05	xxs	--	38.55	17.49	57.42	--	--	2800	196.8	2800	196.8
6	150	6.625	168.3	.280	7.11	std	40	18.97	8.60	28.26	--	--	1500	105.5	1800	126.5
				.432	10.97	xs	80	28.57	12.96	42.56	--	--	2300	161.7	2700	189.8
				.562	14.27	--	120	35.42	16.52	54.20	--	--	2800	196.8	2800	196.8
				.719	18.26	--	160	45.34	20.57	67.55	--	--	2800	196.8	2800	196.8
				.864	21.95	xxs	--	53.16	24.11	79.18	--	--	2800	196.8	2800	196.8
8	200	8.625	219.1	.250	6.35	--	20	22.36	10.14	33.31	--	--	1000	70.3	1200	84.4
				.277	7.04	--	30	24.70	11.70	36.79	--	--	1200	84.4	1300	91.4
				.322	8.18	std	40	28.55	12.95	42.53	--	--	1300	91.4	1600	112.5
				.406	10.31	--	60	35.66	16.18	53.09	--	--	1700	119.5	2000	140.6
				.500	12.70	xs	80	43.39	19.68	64.63	--	--	2100	147.6	2400	168.7
				.594	15.09	--	100	50.93	23.10	75.89	--	--	2500	175.8	2800	196.8
				.719	18.26	--	120	60.69	27.53	90.43	--	--	2800	196.8	2800	196.8
				.812	20.62	--	140	67.79	30.75	100.93	--	--	2800	196.8	2800	196.8
				.875	22.23	xxs	--	72.42	32.85	107.87	--	--	2800	196.8	2800	196.8
				.906	23.01	--	160	74.71	33.89	111.25	--	--	2800	196.8	2800	196.8
				1.102	28.00	--	--	88.65	59.98	131.95	--	--	2500	196.8	2800	196.8
				1.260	32.00	--	--	95.16	64.38	141.64	--	--	2500	196.8	2800	196.8
				1.417	36.00	--	--	109.21	73.89	162.55	--	--	2500	196.8	2800	196.8
				1.574	40.00	--	--	118.69	80.30	176.60	--	--	2500	196.8	2800	196.8

Nominal Size		Outside Diameter		Wall Thickness		Class	Sched No.	Nominal Weight			Test Pressure Min					
											Butt Welded		Grade A		Grade B	
in	mm	in	mm	in	mm			lb/ft	Kg/ft	Kg/m	psi	Kg/cm2	psi	Kg/cm2	psi	Kg/cm2
10	250	10.750	273.1	.250	6.35	--	20	28.04	12.72	41.77	--	--	850	59.8	1000	70.3
				.279	7.11	--	--	31.20	14.15	46.64	--	--	950	66.8	1100	77.3
				.307	7.80	--	30	34.24	15.53	51.00	--	--	1000	70.3	1200	84.4
				.365	9.27	std	40	40.48	18.36	60.29	--	--	1200	84.4	1400	98.4
				.500	12.70	xs	60	54.74	24.83	81.54	--	--	1700	119.5	2000	140.6
				.594	15.09	--	80	64.40	29.21	95.97	--	--	2000	140.6	2300	161.7
				.719	18.26	--	100	77.00	34.93	114.70	--	--	2400	168.7	2800	196.8
				.844	21.44	--	120	89.27	40.49	133.00	--	--	2800	196.8	2800	196.8
				1.00	25.40	xxs	140	104.13	47.23	155.10	--	--	2800	196.8	2800	196.8
				1.125	28.58	--	160	115.65	52.46	172.25	--	--	2800	196.8	2800	196.8
				--	32.00	--	--	127.75	86.45	190.26	--	--	2800	196.8	2800	196.8
10	250	10.750	273.1		40.00	--	--	154.38	104.47	229.93	--	--	2800	196.8	2800	196.8
12	300	12.750	323.8	.250	6.35	--	20	33.28	15.14	49.72	--	--	700	49.2	800	56.2
				.330	8.38	--	30	43.77	19.85	65.20	--	--	950	66.8	1100	77.3
				.375	9.53	std	--	49.56	22.48	73.82	--	--	1100	77.3	1200	84.4
				.406	10.31	--	40	53.56	24.29	79.72	--	--	1100	77.3	1300	91.4
				.500	12.70	xs	--	65.42	29.67	97.44	--	--	1400	98.4	1600	112.5
				.562	14.27	--	60	73.22	33.21	108.96	--	--	1600	112.5	1900	133.6
				.668	17.48	--	80	88.57	40.17	132.01	--	--	1900	133.6	2300	161.7
				.844	21.44	--	100	107.29	48.67	159.85	--	--	2400	168.7	2800	196.8
				1.000	25.40	xxs	120	125.49	56.92	186.92	--	--	2800	196.8	2800	196.8
				1.125	28.58	--	140	139.68	63.36	208.04	--	--	2800	196.8	2800	196.8
				1.312	33.32	--	160	160.33	72.72	238.72	--	--	2800	196.8	2800	196.8
12	300	12.750	323.8	--	40.00	--	--	188.04	125.25	279.94	--	--	2800	196.8	2800	196.8
14	350	14.000	355.6	.250	6.35	--	10	36.71	16.65	54.68	--	--	650	45.7	750	52.7
				.312	7.92	--	20	45.68	20.72	67.94	--	--	800	56.2	950	66.8
				.375	9.53	std	30	54.57	24.75	81.28	--	--	950	66.8	1100	77.3
				.438	11.13	--	40	63.37	28.74	94.49	--	--	1100	77.3	1300	91.4
				.500	12.70	xs	--	72.09	32.70	107.38	--	--	1300	91.4	1300	91.4
				.594	15.09	--	60	85.01	38.56	126.68	--	--	1500	105.5	1500	105.5
				.750	19.05	--	80	106.13	48.14	158.08	--	--	1900	133.6	2800	196.8
				.938	23.82	--	100	130.79	59.33	194.90	--	--	2400	168.7	2800	196.8
				1.094	27.79	--	120	150.76	68.38	224.60	--	--	2800	196.8	2800	196.8
				1.250	31.75	--	140	170.22	77.21	253.53	--	--	2800	196.8	2800	196.8
				1.406	35.71	--	160	189.15	85.80	281.68	--	--	2800	196.8	2800	196.8
14	350	14.000	355.6	--	40.00	--	--	209.11	141.50	311.31	--	--	2800	196.8	2800	196.8
16	400	16.000	406.4	.250	6.35	--	10	42.05	19.07	62.63	--	--	550	38.7	650	45.7
				.312	7.92	--	20	52.36	32.75	77.86	--	--	700	49.2	800	56.2
				.375	9.53	std	30	62.58	28.39	93.21	--	--	850	59.8	1000	70.3
				.500	12.70	xs	40	82.77	37.54	123.29	--	--	1100	77.3	1300	91.4
				.656	16.66	--	60	107.54	48.78	160.12	--	--	1500	105.5	1700	119.5
				.844	21.44	--	80	136.53	61.95	203.48	--	--	1900	133.6	2200	154.7
				1.031	26.19	--	100	164.86	74.48	245.50	--	--	2300	161.7	2700	189.8
				1.219	30.96	--	120	192.40	87.27	286.62	--	--	2700	189.8	2800	196.8
				1.438	36.53	--	140	223.57	101.41	333.11	--	--	2800	196.8	2800	196.8
16	400	16.000	406.4	1.594	40.49	--	160	245.22	111.23	365.39	--	--	2800	196.8	2800	196.8
18	450	18.000	457.20	.250	6.35	--	10	47.39	21.49	70.59	--	--	550	38.7	650	45.7
				.312	7.92	--	20	59.03	26.76	87.79	--	--	650	45.7	800	56.2
				.375	9.53	std	--	70.59	32.00	105.14	--	--	750	52.7	850	59.8
				.437	11.13	--	30	82.06	37.00	122.36	--	--	850	59.8	1000	70.3
				.500	12.70	xs	--	92.45	42.37	139.19	--	--	1000	70.3	1200	84.4
				.562	14.20	--	40	104.75	47.55	155.91	--	--	1100	77.3	1300	91.4
				.750	19.05	--	60	138.17	62.79	205.80	--	--	1500	105.5	1800	126.6
				.937	23.83	--	80	170.75	77.42	254.59	--	--	1800	126.5	2300	161.7
				1.156	29.36	--	100	207.96	94.48	309.76	--	--	2300	161.7	2800	196.8
				1.375	34.93	--	120	244.14	110.7	363.65	--	--	2700	189.8	2800	196.8
				1.562	39.67	--	140	274.73	124.4	408.45	--	--	2800	196.8	2800	196.8
18	450	18.000	457.20	1.781	45.24	--	160	308.51	139.9	459.51	--	--	2700	189.8	2800	196.8
20	500	20.000	508.00	.250	6.35	--	10	52.73	23.93	78.54	--	--	450	31.6	600	42.2
				.375	9.53	std	20	78.60	35.66	117.07	--	--	650	45.7	800	56.2
				.500	12.70	xs	30	104.13	47.24	155.10	--	--	900	63.3	1000	70.3
				.593	15.09	--	40	122.91	55.78	183.37	--	--	1050	73.8	1200	84.4
				.812	20.62	--	60	166.40	75.59	247.85	--	--	1400	98.4	1700	119.5
				1.031	26.2	--	80	208.87	94.79	311.29	--	--	1800	126.5	2000	140.6
				1.281	32.5	--	100	256.10	116.2	381.09	--	--	2300	161.7	2800	196.8
				1.500	38.0	--	120	296.37	134.4	440.43	--	--	2700	189.8	2800	196.8
				1.750	44.4	--	140	341.10	154.8	507.60	--	--	2800	196.8	2800	196.8
20	500	20.000	508.00	1.968	50.0	--	160	379.01	171.9	564.71	--	--	2800	196.8	2800	196.8
22	550	22.000	558.80	.250	6.35	--	10	57.93	26.33	86.50	--	--	400	28.1	500	35.2
				.375	9.53	std	20	86.50	39.32	129.01	--	--	600	42.2	700	49.2
				.500	12.70	xs	30	114.66	52.12	171.01	--	--	800	56.2	900	63.3
				.875	22.2	--	60	19714	89.61	294.00	--	--	1400	98.4	1500	105.5
				1.126	28.6	--	80	250.14	113.7	373.00	--	--	1800	126.5	2000	140.6
				1.374	34.9	--	100	302.50	137.5	451.00	--	--	2200	154.7	2600	182.8
				1.626	41.3	--	120	352.66	160.3	526.00	--	--	2600	182.8	2800	196.8
				1.874	47.6	--	140	402.38	182.9	600.00	--	--	2800	196.8	2800	196.8
22	550	22.000	558.80	2.126	54.0	--	160	449.90	204.5	671.00	--	--	2800	196.8	2800	196.8
24	600	24.000	609.60	.250	6.35	--	10	63.41	28.77	94.45	--	--	350	24.6	500	35.2
				.375	9.53	std	20	94.62	42.98	140.94	--	--	550	38.7	700	49.2
				.500	12.70	xs	--	125.49	57.00	186.92	--	--	700	49.2	800	56.2
				.552	14.27	--	30	140.80	64.00	209.54	--	--	800	56.2	1000	70.3
				.674	17.48	--	40	171.17	77.72	255.14	--	--	1000	70.3	1200	84.4
				.968	24.61	--	60	238.17	108.29	355.02	--	--	1400	98.4	1600	112.5
				1.218	31.00	--	80	296.36	134.4	441.0	--	--	1800	126.5	2000	140.6
				1.531	38.90	--	100	367.40	166.7	547.0	--	--	2200	154.7	2600	182.8
				1.812	46.00	--	120	429.39	194.88	639.0	--	--	2600	182.8	2800	196.8
24	600	24.000	609.60	2.342	59.50	--	160	541.94	246.0	807.0	--	--	2800	196.8	2800	196.8

POPULAR STANDARDS AND SPECIFICATIONS

QUALITY		CHEMICAL ANALYSIS									MECHANICAL PROPERTIES			SPECIFIC REQUIREMNT
SMLS	WELED	SPECIFICATION	WT	C %	Mn %	P % MAX	S % MAX	Si %	Cr %	Mo %	TENSILE STRENGTH Mpa	YIELD STRESS Mpa	ELONGATION IN50 mm Min Longitudinal	
Carbon Steel Pipes / **Tubes** Conform To Various Specifications As Listed Below														
*	*	ASTM A53/A	AW	0.25 Max	0.95 Max	0.050	0.060	--	--	--	331 Min	207 Min	36	------
*	*	ASTM A53/B	AW	0.30 Max	1.20 Max	0.050	0.060	--	--	--	413 Min	240 Min	29.5	------
*	--	ASTM A106/A	AW	0.25 Max	0.27-0.93	0.025	0.025	0.10 Min	0.40 Max	0.15 Max	330 Min	205 Min	35/28	CR MO CU NI VA
*	--	ASTM A106/B	AW	0.30 Max	0.29-1.06	0.025	0.025	0.10 Min	0.40 Max	0.15 Max	415 Min	240 Min	30/22	.40 .15 .40 .40 .08
*	--	ASTM A106/C	AW	0.35 Max	0.29-1.06	0.025	0.025	0.10 Min	0.40 Max	0.15 Max	485 Min	275 Min	30/22	Five Elements Not To Exceed 1%
*	--	**ASTM A179**	MW	0.06-0.18	0.27-0.63	0.048	0.048	--	--	--	325 Min	180 Min	35.0	Hardness 72HRB Max
--	*	**ASTM A214**	MW	0.18 Max	0.27-0.63	0.050	0.050	--	--	--	385 Min	180 Min	35.0	Hardness 72HRB Max
*	--	**ASTM A192**	MW	0.06-0.18	0.27-0.63	0.048	0.048	0.25 Max	--	--	325 Min	180 Min	35.0	Hardness 77HRB Max
*	*	ASTM A333/1	AW	0.30 Max	0.40-1.06	0.025	0.025	--	--	--	380 Min	205 Min	25/20	Impact Test -50 F 40 x 10 J14
*	*	ASTM A333/6	AW	0.30 Max	0.29-1.06	0.025	0.025	0.10 Min	--	--	415 Min	240 Min	30/18	Impact Test -50 F 40 x 10 J14
*	*	**ASTM A334/1**	MW	0.30 Max	0.40-1.06	0.025	0.025	--	--	--	380 Min	205 Min	35/28	-50 F 40 x 10 J14 85 HRB Max
*	*	**ASTM A334/6**	MW	0.30 Max	0.29-1.06	0.025	0.025	0.10 Min	--	--	415 Min	240 Min	30/22	-50 F 40 x 10 J14 85 HRB Max
*	*	**BS/3059/90/PartI/320**		0.16 Max	0.30-0.70	0.040	0.040	--	--	--	320-480	186 Min	25	--
*	*	**BS/3059/90/PartII/360**		0.17 Max	0.40-0.80	0.035	0.035	0.10-0.35	--	--	360-500	235 Min	21	--
*	--	**BS/3059/90/PartII/440**		0.12-0.18	0.90-1.20	0.035	0.035	0.10-0.35	--	--	480-560	245 Min	22	--
*	--	**ASTM A210/A-1**	MW	0.27 Max	0.93 Max	0.048	0.058	0.10 Min	--	--	415 Min	255 Min	30/22	Hardness 79HRB Max
*	--	**ASTM A210/C**	MW	0.35 Max	0.29-1.06	0.048	0.058	0.10 Min	--	--	485 Min	275 Min	30/22	Hardness 89HRB Max
*	--	**DIN/17175/ST35.8**		0.17 Max	0.40-0.80	0.040	0.040	0.35 Max	--	--	340-480	235 Min	25	--
*	--	**DIN/17175/ST45.8**		0.22 Max	0.40-1.20	0.040	0.040	0.10-0.35	--	--	410-540	255 Min	21	--
*	--	**DIN 2391 ST 35**	AW	0.17 Max	0.40 Min	0.025	0.025				340-470	235 Min	25	
*	--	**DIN 2391 ST 45**	AW	0.21 Max	0.40 Min	0.025	0.025				440-570	255 Min	21	
*	--	**DIN 2391 ST 52**	AW	0.22 Max	1.60 Max	0.025	0.025				490-630	355 Min	22	
--	*	**ASTM A178/A**	MW	0.06-0.18	0.27-0.63	0.050	0.050	0.50-1.00	--	--	325 Min	172 Min	30/22	--
--	*	**ASTM A178/C**	MW	0.35 Max	0.80 Max	0.035	0.035	--	--	--	415 Min	255 Min	35	--
--	*	**ASTM A178/D**	MW	0.27 Max	1.00-1.50	0.050	0.050	0.10 Min	--	--	485 Min	180 Min	30	--
--	*	**BS 6323 Part V/1**	AW	0.13 Max	0.60 Max	0.050	0.050				300 Min	200 Min	10 / 20	
--	*	**BS 6323 Part V/2**	AW	0.16 Max	0.70 Max	0.050	0.050				340 Min	250 Min	8 / 15	
--	*	**BS 6323 Part V/3**	AW	0.20 Max	0.90 Max	0.050	0.050	0.35 Max			400 Min	300 Min	7 / 12	
PSL - 1	--	API 5L GR. A - 25	AW	0.21 Max	0.60 Max	0.030	0.030				310 Min	172 Min		SMLS C% .21 Max
PSL - 1	PSL - 1	API 5L GR. A	AW	0.22 Max	0.90 Max	0.030	0.030				331 Min	207 Min		SMLS C% .22 Max
PSL - 1	PSL - 1	API 5L GR. B	AW	0.26 Max	1.20 Max	0.030	0.030				414 Min	241 Min		SMLS C% .28 Max
PSL - 1	PSL - 1	API 5L GR. X - 42	AW	0.26 Max	1.30 Max	0.030	0.030				414 Min	290 Min		SMLS C% .28 Max
PSL - 1	PSL - 1	API 5L GR. X - 46	AW	0.26 Max	1.40 Max	0.030	0.030				434 Min	317 Min	SI Unit	SMLS C% .28 Max
PSL - 1	PSL - 1	API 5L GR. X - 52	AW	0.26 Max	1.40 Max	0.030	0.030				455 Min	359 Min	e=1944	SMLS C% .28 Max
PSL - 1	PSL - 1	API 5L GR. X - 56	AW	0.26 Max	1.40 Max	0.030	0.030				490 Min	386 Min	A^{02}/U^{09}	SMLS C% .28 Max
PSL -1	PSL -1	API 5L GR. X - 60	AW	0.26 Max	1.40 Max	0.030	0.030				517 Min	414 Min		SMLS C% .28 Max
--	PSL -1	API 5L GR. X - 65	AW	0.26 Max	1.45 Max	0.030	0.030				531 Min	448 Min		SMLS C% --
--	PSL -1	API 5L GR. X - 70	AW	0.26 Max	1.65 Max	0.030	0.030				565 Min	483 Min		
														C.E. IMPACT ENERGY
														PCM IIW J FT/LB
PSL - 2	PSL - 2	API 5L GR. B	AW	0.22 Max	1.20 Max	0.025	0.015				414-758	241-448		0.25 0.43 T/L 27/41 T/L 20/30
PSL - 2	PSL - 2	API 5L GR. X - 42	AW	0.22 Max	1.30 Max	0.025	0.015				414-758	290-496		0.25 0.43 T/L 27/41 T/L 20/30
PSL - 2	PSL - 2	API 5L GR. X - 46	AW	0.22 Max	1.40 Max	0.025	0.015				434-758	317-524	SI Unit	0.25 0.43 T/L 27/41 T/L 20/30
PSL - 2	PSL - 2	API 5L GR. X - 52	AW	0.22 Max	1.40 Max	0.025	0.015				455-758	359-531	e=1944	0.25 0.43 T/L 27/41 T/L 20/30
PSL - 2	PSL - 2	API 5L GR. X - 56	AW	0.22 Max	1.40 Max	0.025	0.015				490-758	386-544	A^{02}/U^{09}	0.25 0.43 T/L 27/41 T/L 20/30
PSL - 2	PSL - 2	API 5L GR. X - 60	AW	0.22 Max	1.40 Max	0.025	0.015				517-758	414-565		0.25 0.43 T/L 27/41 T/L 20/30
--	PSL - 2	API 5L GR. X - 65	AW	0.22 Max	1.45 Max	0.025	0.015				531-758	448-565		0.25 0.43 T/L 27/41 T/L 20/30
--	PSL -2	API 5L GR. X - 70	AW	0.22 Max	1.65 Max	0.025	0.015				565-758	483-565		0.25 0.43 T/L 27/41 T/L 20/30
*	*	IS 1978 / YST 210	AW	0.22 Max	0.90 Max	0.040	0.050				330 Min	210 Min		
*	*	IS 1978 / YST 240	AW	0.27 Max	1.15 Max	0.040	0.050				410 Min	240 Min		
*	*	IS 1979 / YST 290	AW	0.28 Max	1.25 Max	0.040	0.050				410 Min	290 Min		
*	*	IS 1979 / YST 320	AW	0.30 Max	1.35 Max	0.040	0.050				430 Min	320 Min		
*	*	IS 1979 / YST 360	AW	0.30 Max	1.35 Max	0.040	0.050				450-550	360 Min	e=1942.57	
*	*	IS 1979 / YST 390	AW	0.26 Max	1.35 Max	0.040	0.050				490-520	390 Min	$A^{0.2}/U^{0.9}$	
*	*	IS 1979 / YST 410	AW	0.26 Max	1.35 Max	0.040	0.050				520-540	410 Min		
*	*	IS 1979 / YST 450	AW	0.26 Max	1.40 Max	0.040	0.050				530-550	450 Min		
*	*	IS 1979 / YST 480	AW	0.23 Max	1.60 Max	0.040	0.050				565 Min	480 Min		
--	*	IS 3589 Gr. 330	AW	0.16 Max	1.20 Max	0.040	0.040				330 Min	195 Min	20 GL=5.65	
--	*	IS 3589 Gr. 410	AW	0.20 Max	1.30 Max	0.040	0.040				410 Min	235 Min	18 GL=5.65	
--	*	IS 3589 Gr. 450	AW	0.25 Max	1.20 Max	0.040	0.040				450 Min	275 Min	15 GL=5.65	
--	*	IS 1161 / YST 210	AW	0.12 Max	0.60 Max	0.050	0.050				330 Min	210 Min	20 GL=5.65	
--	*	IS 1161 / YST 240	AW	0.16 Max	1.20 Max	0.050	0.050				410 Min	240 Min	17 GL=5.65	
--	*	IS 1161 / YST 310	AW	0.25 Max	1.30 Max	0.050	0.050				450 Min	310 Min	14 GL=5.65	
*	--	ASTM A335/P1	AW	0.10-0.20	0.30-0.80	0.025	0.025	0.10-0.50	--	0.44-0.65	380 Min	205 Min	30	------
*	--	ASTM A335/P2	AW	0.10-0.20	0.30-0.61	0.025	0.025	0.10-0.30	0.50-0.81	0.44-0.65	380 Min	205 Min	30	------
*	--	ASTM A335/P5	AW	0.15 Max	0.30-0.60	0.025	0.025	0.50 Max	4.00-6.00	0.44-0.65	415 Min	205 Min	30	------
*	--	ASTM A335/P9	AW	0.15 Max	0.30-0.60	0.030	0.030	0.25-1.00	8.00-10.00	0.90-1.10	415 Min	172 Min	30/22	------
*	--	ASTM A335/P11	AW	0.15 Max	0.30-0.60	0.025	0.025	0.50-1.00	1.00-1.50	0.44-0.65	415 Min	205 Min	30	------
*	--	ASTM A355/P12	AW	0.15 Max	0.30-0.61	0.025	0.025	0.50 Max	0.80-1.25	0.44-0.65	415 Min	205 Min	30	------
*	--	ASTM A335/P22	AW	0.15 Max	0.30-0.61	0.025	0.025	0.50 Max	1.90-2.60	0.87-1.13	415 Min	205 Min	30	------
*	--	**ASTM A213/T2**	MW	0.10-0.20	0.30-0.61	0.045	0.045	0.10-0.30	0.50-0.81	0.44-0.65	415 Min	205 Min	30/22	Hardness 85HRB Max
*	--	**ASTM A213/T5**	MW	0.15 Max	0.30-0.60	0.030	0.030	0.50 Max	4.00-6.00	0.44-0.65	415 Min	205 Min	30/22	Hardness 85HRB Max
*	--	**ASTM A213/T9**	MW	0.15 Max	0.30-0.60	0.030	0.030	0.25-1.00	8.00-10.00	0.90-1.10	415 Min	170 Min	30/22	Hardness 89HRB Max
*	--	**ASTM A213T/11**	MW	0.15 Max	0.30-0.60	0.030	0.030	0.50-1.00	1.00-1.50	0.44-0.65	415 Min	205 Min	30/22	Hardness 85HRB Max
*	--	**ASTM A213/T12**	MW	0.15 Max	0.30-0.61	0.045	0.045	0.50 Max	0.80-1.25	0.44-0.65	415 Min	205 Min	30/22	Hardness 85HRB Max
*	--	**ASTM 213/T-22**	MW	0.15 Max	0.30-0.60	0.030	0.030	0.50 Max	1.90-2.60	0.87-1.13	415 Min	205 Min	30/22	Hardness 85HRB Max

QUALITY		CHEMICAL ANALYSIS										MECHANICAL PROPERTIES			SPECIFIC REQUIREMENT
SMLS	ERW	SPECIFICATION	WT	C %	Mn %	P % MAX	S % MAX	Si %	Cr %	MO %	Ni %	TENSILE STRENGTH Mpa	YIELD STRESS Mpa	ELONGATION IN 50 mm Min Longitudinal	
Alloy Steel Pipes / **Tubes** Conform To Various Specifications As Listed Below															
*	--	**BS/3059/90/PartII/620**		0.10-0.15	0.40-0.70	0.040	0.040	0.10-0.35	0.70-1.10	0.45-0.65		441-618	235 Min	22	AL max 0.020
*	--	**BS/3059/90/PartII/622**		0.08-0.15	0.40-0.70	0.040	0.040	0.50 Max	2.00-2.50	0.90-1.20		440-590	175 Min	20	AL max 0.020
*	--	**DIN/17175/13CrM044**		0.10-0.18	0.40-0.70	0.040	0.040	0.10-0.35	0.70-1.00	0.40-0.50		441-570	294 Min	22	------
*	--	**DIN/17175/10CRM910**		0.15 Max	0.40-0.60	0.040	0.040	0.15-0.50	2.0-2.5	0.90-1.10		441-570	294 Min	22	------
*	--	**DIN/17175/15M03**		0.12-0.20	0.50-0.80	0.040	0.040	0.10-0.35	--	0.25-0.35		441-540	284 Min	21	
*	--	**ASTM A209/T1**	MW	0.10-0.20	0.30-0.80	0.045	0.045	0.15-0.50	--	0.44-0.65		380 Min	205 Min	30/22	Hardness 80HRB Max
*	--	**ASTM A209/Ta**	MW	0.15-0.25	0.30-0.80	0.045	0.045	0.15-0.50	--	0.44-0.65		365 Min	195 Min	30/22	Hardness 81HRB Max
*	--	**ASTM A209/T1B**	MW	0.14 Max	0.30-0.80	0.045	0.045	0.15-0.50	--	0.44-0.65		415 Min	220 Min	30/22	Hardness 77HRB Max

Low Temperature Service Fitting Conform To ASTM/420													Imp. Test At (-)°
*	*	WPL 6		.30 Max	.39 - 1.06	0.030	0.030	.1 Min	--	--	--	415 - 585	240 Min	22-30	-50°F10x10J17.6
*	*	WPL 9		.20 Max	.40 - 1.06	0.030	0.030	--	--	--	1.6 - 2.24	435 - 610	315 Min	22-28	-100°F10x10J17.6
*	*	WPL 3		.20 Max	.31 - .64	0.050	0.050	.13 - .37	--	--	3.1 -3.82	450 - 620	240 Min	22-30	-150°F10x10J17.6
*	*	WPL 8		.13 Max	.90 Max	0.030	0.030	.13 - .37	--	--	8.4 - 9.6	690 - 865	515 Min	16-20	-320°F10x10J33.9

High Temperature Service Fitting Conform To ASTM/234													Class	Tensile	Yeild
*	--	WPB		0.30 Max	0.29-1.06	0.050	0.050	.10 Min	------	------	------	415 Min	240 Min	22-38			
*	--	WPC		0.35 Max	0.29-1.06	0.050	0.050	.10 Min	------	------	------	485 Min	275 Min	22-30			
*	--	WPB 1		0.28 Max	0.30-0.90	0.045	0.045	.10-.50	------	.44-0.65	------	380 Min	205 Min	22-30			
*	--	WP12CL11/C12*		0.20 Max	0.30-0.80	0.045	0.045	.60 Max	.80-1.25	.44-0.65	------	415 Min	205 Min	22-30	Cl2*	485 Min	275 Min
*	--	WP11CL12/C13*		0.20 Max	0.30-0.80	0.040	0.040	.50-1.00	1.0-1.5	.44-0.65	------	485 Min	275 Min	22-30	Cl3*	515 Min	310 Min
*	--	WP 11b		0.15 Max	0.30-0.60	0.030	0.030	.50-1.00	1.0-1.5	.44-0.65	------	415 Min	205 Min	22-30			
*	--	WP 22 CL1/CL3*		0.15 Max	0.30-0.60	0.040	0.040	.50 Max	1.9-2.6	.87-1.13	------	415 Min	205 Min	22-30	Cl3*	515 Min	310 Min
*	--	WP 5		0.15 Max	0.30-0.60	0.040	0.030	.50 Max	4.0-6.0	.44-0.65	------	415 Min	205 Min	22-30			
*	--	WP 9		0.15 Max	0.30-0.60	0.030	0.030	.25-1.00	8.0-10	.90-1.11	------	415 Min	205 Min	22-30			

Mild Steel Pipes Confirm to IS 1239 - Part 1 1990

Nominal bore		Outside diameter		Light			Medium			Heavy		
				Thickness		Weight	Thickness		Weight	Thickness		Weight
in Inch	in MM	in	MM	in	MM	Kg/m	in	MM	Kg/m	in	MM	Kg/m
1/8"	6 mm	0.406	10.32	072	1.80	.361	.080	2.00	.407	.104	2.65	.493
1/4"	8 mm	0.532	13.49	.072	1.80	.517	.090	2.35	.650	.116	2.90	.769
3/8"	10 mm	0.872	17.10	.072	1.80	.674	.092	2.35	.852	.116	2.90	1.02
1/2"	15 mm	0.844	21.43	.080	2.00	.952	.104	2.65	1.122	.128	3.25	1.45
3/4"	20 mm	1.094	27.20	.092	2.35	1.410	.104	2.65	1.580	.128	3.25	1.90
1"	25 mm	1.312	33.80	.104	2.65	2.010	.128	3.25	2.440	.160	4.05	2.97
1 1/4"	32 mm	1.656	42.90	.104	2.65	2.580	.128	3.25	3.140	.160	4.05	3.84
1 1/2"	40 mm	1.906	48.40	.116	2.90	3.250	.128	3.25	3.610	.160	4.05	4.43
2"	50 mm	2.375	60.30	.116	2.90	4.110	.144	3.65	5.100	.176	4.47	6.17
2 1/2"	65 mm	3.004	76.20	.126	3.25	5.840	.144	3.65	6.610	.176	4.47	7.90
3'	80 mm	3.500	88.90	.128	3.25	6.810	.160	4.05	8.470	.192	4.85	10.1
4"	100 mm	4.500	114.30	.144	3.65	9.890	.176	4.50	12.10	.212	5.42	14.4
5"	125 mm	5.500	139.70	--	--	--	.192	4.85	16.20	.212	5.42	17.8
6"	150 mm	6.500	165.10	--	--	--	.192	4.85	19.20	.212	5.40	21.2

ERW Pipes Confirm to IS 3589-1991 Grade 330/410 Weight in Kg/mtr

AVAILABLE EX- STOCK BIG DIAMETER ERW PIPES CONFIRM TO IS 3589-1991 Grade 330/ **410** Weight in Kg/mtr									
Wall Thickness in mm	7"NB 193.7 mm OD	8"NB 219.1 mm OD	10"NB 273 mm OD	12"NB 323.7 mm OD	14"NB 355.6 mm OD	**16"NB 406.4 mm OD**	**18"NB 457 mm OD**	**20"NB 508 mm OD**	**24"NB 610 mm OD**
4.85	22.50	25.61	32.07	38.13	---	**---**	**---**	**---**	**---**
5.20	24.08	27.42	34.34	40.84	---	**---**	**---**	**---**	**---**
5.60	25.88	29.47	36.93	43.93	48.33	**55.35**	**---**	**---**	**---**
6.00	27.67	31.52	39.51	47.01	51.73	**59.24**	**66.76**	**74.28**	**89.37**
6.35	29.23	33.30	41.75	49.69	54.69	**62.64**	**70.60**	**78.55**	**94.53**
7.01	32.15	36.65	45.98	54.75	60.26	**69.04**	**77.82**	**86.60**	**104.24**
7.94	---	41.33	51.90	61.83	68.07	**78.02**	**87.97**	**97.91**	**117.88**
8.18	---	42.53	53.42	63.65	70.08	**80.33**	**90.58**	**100.82**	**121.40**
9.53	---	49.23	61.92	73.83	81.33	**93.27**	**105.21**	**117.15**	**141.12**
12.7	---	---	---	---	---	**---**	**139.21**	**155.12**	**187.06**

SAW/Spiral Line Pipe to IS 3589 / API 5L GR B

SPECIFICATIONS - APPLICATIONS

Specifications	Applications
IS 3589	Steel pipes for water, gas and sewage.
API 5L/IS 1978	Line pipes for conveying gas, water & oil in oil & natural gas industry.
ASTM A671	Pipes suitable for high pressure at low temperatures.
ASTM A672	Pipes suitable for high pressure at moderate temperatures.
ASTM A691	Carbon and Alloy steel pipes for high pressure at high temperatures.

NON-DESTRUCTIVE & DESTRUCTIVE TESTS

	NDT			Mechanical & Chemical Requirements		HydroTest
Spec.	Mandatory		Supplementary	Mandatory	Supplementary	
IS 3589	Nil		Nil	Guided Bend, Parent Tensile, Parent Chemical	Nil	Yes
IS 1978	Pipe Ends — Radiography Balance Length — Ultrasonic Test		Nil	Parent Chemical, Parent Tensile, Weld Tensile, Guided Bend Tests	Fracture Toughness, Drop Weight, Tear Test	Yes
API 5L	Pipe Ends — Radiography Balance Length — Ultrasonic Test		Nil	Parent Tensile, Weld Tensile, Guided Bend, Parent Chemical	Fracture Toughness, Drop Weight, Tear Test	Yes
	Class	Heat Treatment	Radiography, Full Weld length			
ASTM A671 & ASTM A672 & ASTM A691	10	N.A.	N.A.	Nil	Parent Chemical, Weld Chemical, Weld Tensile, Transverse, Guided Weld Bend	Tension & Bend Test, Charpy 'V' Test, Hardness Test, MPI for Base Metal	Yes
	11	N.A.	Yes			
	12	N.A.	Yes			
	13	N.A.	N.A.			
	20	Stress Relieving	N.A.			
	21	"	Yes			
	22	"	Yes			
	23	"	N.A.			
	30	Normalising	N.A.			
	31	"	Yes			
	32	"	Yes			
	33	"	N.A.			
	40	Normalising & Tempering	N.A.			
	41	"	Yes			
	42	"	Yes			
	43	"	N.A.			
	50	Quenched & Tempered	N.A.			
	51	"	Yes			
	52	"	Yes			
	53	"	N.A.			

Test Pressure in Kg/cm^2

Outside Diameter size mm	inches	Weight Kg/m	Wall Thickness mm	inches	API-5L Grade x70	Grade x65	Grade x60	Grade x56	Grade x52	Grade x46	Grade x42	Grade A	Grade B	IS-3589 Grade 330	Grade 410	ASTM, A-671 & A-672 Grade B-60 C-60	Grade B-70 C-70
406.4	16	55.35	5.6	0.219	115	106	98	91	85	75	69	34	40	37	46	37	44
		63.13	6.4	0.250	131	122	112	105	97	86	79	39	46	42	52	42	50
		69.91	7.1	0.281	147	136	126	117	109	96	88	44	52	47	52	47	56
		77.63	7.9	0.312	163	151	140	131	121	107	98	49	58	52	52	52	62
		85.32	8.7	0.344	180	167	154	144	134	118	108	54	63	52	52	58	68
		92.98	9.5	0.375	196	182	168	157	146	129	117	59	69	52	52	63	74
		100.61	10.3	0.406	207	196	182	170	157	139	126	59	69	52	52	68	81
		108.20	11.1	0.438	211	211	196	184	170	150	137	69	81	52	52	76	87
		123.30	12.7	0.500	211	211	211	209	194	171	157	79	92	52	52	84	99
453.0	18	62.34	5.6	0.219	102	94	87	82	76	67	61	31	36	33	41	33	39
		71.72	6.4	0.250	116	108	100	93	86	77	70	35	41	38	47	38	45
		78.77	7.1	0.281	131	122	112	105	97	86	78	39	46	42	51	42	49
		87.49	7.9	0.312	145	135	124	116	108	96	87	44	51	47	51	47	55
		96.48	8.7	0.344	160	148	137	128	119	105	96	49	56	51	51	51	61
		104.84	9.5	0.375	174	162	149	139	129	115	105	53	62	51	51	56	66
		113.46	10.3	0.406	189	174	161	151	139	123	113	-	-	51	51	61	72
		122.05	11.1	0.438	204	189	174	163	151	134	122	62	71	51	51	65	77
		139.15	12.7	0.500	211	199	186	172	153	139	140	70	83	51	51	75	88
508.0	20	69.38	5.6	0.219	97	90	83	77	72	64	58	27	32	30	37	30	35
		79.16	6.4	0.250	111	103	95	87	82	73	66	32	37	34	42	34	40
		87.70	7.1	0.281	124	115	107	100	93	82	75	36	41	38	47	38	44
		97.43	7.9	0.312	138	129	118	110	103	91	83	39	46	42	51	42	49
		107.12	8.7	0.344	153	141	131	122	113	100	91	44	51	46	51	46	55
		116.78	9.5	0.375	166	154	142	133	124	109	100	48	56	50	51	50	60
		126.41	10.3	0.406	179	166	154	144	135	118	108	-	-	51	51	55	65
		136.01	11.1	0.438	194	180	166	155	144	128	116	55	64	51	51	59	70
		155.12	12.7	0.500	211	206	190	177	164	146	133	63	73	51	51	67	80
559.0	22	76.42	5.6	0.219	88	82	76	70	65	58	53	25	30	27	34	27	32
		87.21	6.4	0.250	101	93	86	81	75	66	60	29	34	31	38	31	36
		96.63	7.1	0.281	113	105	97	91	84	75	68	32	38	34	42	34	40
		107.36	7.9	0.312	126	117	108	101	93	82	75	36	42	38	47	38	45
		118.06	8.7	0.344	138	129	119	111	103	91	83	39	46	42	51	42	49
		128.73	9.5	0.375	151	140	129	121	112	99	91	43	51	46	51	46	54
		139.37	10.3	0.406	163	151	140	130	121	107	98	-	-	50	51	50	59
		149.97	11.1	0.438	176	163	151	141	131	115	106	51	59	51	51	53	63
		171.09	12.7	0.500	201	187	172	161	150	133	120	57	66	51	51	61	72
610.0	24	95.26	6.4	0.250	92	86	79	74	69	60	56	27	31	28	35	28	33
		105.56	7.1	0.281	104	96	89	83	77	68	63	30	34	31	39	31	37
		117.30	7.9	0.312	115	107	98	92	86	76	69	33	39	35	43	35	41
		129.00	8.7	0.344	127	118	109	101	94	84	76	37	42	38	48	38	45
		140.68	9.5	0.375	138	129	119	111	103	91	83	39	46	42	52	42	50
		152.32	10.3	0.406	150	139	129	119	111	98	90	-	-	45	56	45	54
		163.93	11.1	0.438	161	150	138	129	119	106	97	46	54	49	61	49	58
		187.06	12.7	0.500	185	171	158	148	137	121	111	53	62	51	70	56	66
660.0	26	103.15	6.4	0.250	85	79	73	68	63	56	51	25	28	26	32	26	31
		114.31	7.1	0.281	96	89	82	77	71	63	58	27	32	29	36	29	34
		127.04	7.9	0.312	106	98	91	85	79	70	64	30	35	32	40	32	38
		139.73	8.7	0.344	117	109	101	93	87	77	70	34	39	35	44	35	42
		152.39	9.5	0.375	128	119	110	102	95	84	77	37	43	39	48	39	46
		165.02	10.3	0.406	139	128	118	110	103	91	83	-	-	42	51	42	50
		177.62	11.1	0.438	149	139	128	119	111	98	90	43	50	45	51	45	54
		202.72	12.7	0.500	170	158	146	137	126	112	102	49	57	51	51	52	61

Stainless Steel Welded / Seamless Pipes Dimension & Weights

NOMINAL BORE SIZE		OUTSIDE DIAMETER	SCHEDULE 5 S		SCHEDULE 10 S		SCHEDULE 40 S		SCHEDULE 80 S	
MM	INCHES	MM	WALL MM	KG/MTR	WALL MM	KG/MTR	WALL MM:	KG/MTR	WALL MM:	KG/MTR
6	1/4	13.72	--	--	1.65	0.498	2.24	0.644	3.02	0.809
10	3/8"	17.15	--	--	1.65	0.640	2.31	0.858	3.20	1.117
15	1/2"	21.34	1.65	0.813	2.11	1.016	2.77	1.288	3.73	1.644
20	3/4"	26.67	1.65	1.033	2.11	1.297	2.87	1.710	3.91	2.227
25	1"	33.40	1.65	1.311	2.77	2.124	3.38	2.540	4.55	3.286
32	1.1/4"	42.16	1.65	1.673	2.77	2.731	3.56	3.440	4.85	4.529
40	1.1/2"	48.26	1.65	1.925	2.77	3.154	3.68	4.106	5.08	5.490
50	2"	60.33	1.65	2.423	2.77	3.991	3.91	5.522	5.54	7.598
65	2.1/2"	73.03	2.11	3.746	3.05	5.342	5.16	8.766	7.01	11.584
80	3"	88.90	2.11	4.584	3.05	6.554	5.49	11.462	7.62	15.502
100	4"	114.30	2.11	5.925	3.05	8.493	6.02	16.316	8.56	22.656
125	5"	141.30	2.77	9.605	3.40	11.736	6.55	22.092	9.52	31.401
150	6"	168.28	2.77	11.475	3.40	14.032	7.11	28.682	10.97	43.194
200	8"	219.08	2.77	14.997	3.76	20.264	8.18	43.181	12.70	65.604
250	10"	273.05	3.40	22.948	4.19	28.197	9.27	61.204	12.70	82.760
300	12"	323.85	3.96	31.707	4.57	36.522	9.52	74.900	12.70	98.909
350	14"	355.60	3.96	34.854	4.78	41.973	--	--	--	--
400	16"	406.40	4.19	42.182	4.78	48.051	--	--	--	--

DIMENSIONS AND WEIGHT OF STAINLESS STEEL GUAGE TUBES

SIZE	O.D.	10G (3..25)	12G (2.64)	14G (2.03)	16G (1.62)	18G (1.21)	20G (0.91)	22G (0.71)
1/4"	6.35	--	--	--	0.192	0.156	0.124	0.100
5/16"	7.94	0.381	0.350	0.300	0.256	0.204	0.160	0.128
3/8"	9.52	0.510	0.455	0.381	0.320	0.252	0.196	0.157
1/2"	12.70	0.769	0.665	0.542	0.449	0.348	0.269	0.213
3/4"	19.05	1.285	1.084	0.865	0.707	0.540	0.413	0.326
1"	25.40	1.802	1.504	1.187	0.964	0.733	0.558	0.439
1.1/4"	31.75	2.318	1.924	1.510	1.222	0.925	0.702	--
1.1/2"	38.10	2.835	2.343	1.833	1.479	1.117	--	--
1.3/4"	44.45	3.352	2.763	2.155	1.737	1.310	--	--
2"	50.80	3.868	3.182	2.478	1.994	1.502	--	--
2.1/4"	57.15	4.385	3.602	2.801	2.252	1.694	--	--
2.1/2"	63.50	4.901	4.022	3.123	2.509	1.887	--	--
2.3/4"	69.85	5.418	4.441	3.446	2.767	2.079	--	--
3"	76.20	5.934	4.861	3.769	3.024	2.271	--	--
3.1/2"	88.90	6.967	5.700	4.414	3.539	2.656	--	--
4"	101.60	8.001	6.539	5.059	4.054	3.040	--	--

CHEMICAL COMPOSITION OF STAINLESS STEEL PIPE / TUBE CONFIRM TO ASTM / SA312/213 AND WP/CR FITTINGS TO ASTM 403

*	*	TP 304		.08 Max	2.00 Max	0.045	0.030	1.00 Max	18-20	------	8-11	515 Min	205 Min	28.35	--------
*	*	TP 304 H		.04-0.10	2.00 Max	0.045	0.030	1.00 Max	18-20	------	8-11	515 Min	205 Min	28.35	--------
*	*	TP 304 L		.035 Max	2.00 Max	0.045	0.030	1.00 Max	18-20	------	8-13	485 Min	170 Min	28.35	--------
*	*	TP 304 LN		.030 Max	2.00 Max	0.040	0.030	0.75 Max	18-20	------	8-10.5	515 Min	205 Min	28.35	Nitrogen 0.10-0.16
*	*	TP 304 N		.08 Max	2.00 Max	0.040	0.030	0.75 Max	18-20	------	8-11	550 Min	240 Min	28.35	Nitrogen 0.10-0.16
*	*	TP 309		0.15 Max	2.00 Max	0.045	0.030	1.00 Max	22.-24.	-----	12-15	515 Min	205 Min	28-35	------
*	*	TP 310		0.15 Max	2.00 Ma	0.045	0.030	1.50 Max	24.-26.	-----	19-22	515 Min	205 Min	28-35	------
*	*	TP 316		0.08 Max	2.00 Max	0.045	0.030	1.00 Max	16-18	2-3	10-14	515 Min	205 Min	28-35	--------
*	*	TP 316 H		0.04-.10	2.00 Max	0.045	0.030	1.00 Max	16-18	2-3	10-14	515 Min	205 Min	28-35	--------
*	*	TP 316 LN		.030 Max	2.00 Max	0.040	0.030	.75 Max	16-18	2-3	11-14	515 Min	205 Min	28-35	Nitrogen 0.10-0.16
*	*	TP 316 L		.035 Max	2.00 Max	0.045	0.030	1.00 Max	16-18	2-3	10-15	485 Min	170 Min	28-35	--------
*	*	TP 316 N		.08 Max	2.00 Max	0.040	0.030	.75 Max	16-18	2-3	11-14	550 Min	240 Min	28-35	Nitrogen 0 .10-0.16
*	*	TP 321		.08 Max	2.00 Max	0.045	0.030	1.00 Max	17-20	-----	9-13	515 Min	205 Min	28-35	------
*	*	TP 321 H		.04-.10	2.00 Max	0.045	0.030	1.00 Max	17-20	-----	9-13	515 Min	205 Min	28-35	------
*	*	TP 347		.08 Max	2.00 Max	0.045	0.030	1.00 Max	17-20	-----	9-13	515 Min	205 Min	28-35	------
*	*	TP 347 H		.04 -.10	2.00 Max	0.045	0.030	1.00 Max	17-20	-----	9-13	515 Min	205 Min	28-35	------

Test Pressure in Kg/cm^2

Outside Diameter size mm	inches	Weight Kg/m	Wall Thickness mm	inches	API-5L Grade x70	Grade x65	Grade x60	Grade x56	Grade x52	Grade x46	Grade x42	Grade A	Grade B	IS-3589 Grade 330	Grade 410	ASTM, A-671 & A-672 Grade B-60 C-60	Grade B-70 C-70
711.0	28	111.20	6.4	0.250	79	73	67	63	59	52	48	22	26	24	30	24	29
		123.24	7.1	0.281	89	82	76	71	66	58	53	25	30	27	33	27	32
		136.97	7.9	0.312	98	91	84	79	73	65	59	28	33	30	37	30	35
		150.67	8.7	0.344	109	101	93	87	81	72	65	-	-	33	41	33	39
		164.34	9.5	0.375	119	110	102	95	88	78	71	34	39	36	45	36	43
		177.98	10.3	0.406	128	119	110	103	96	85	78	-	-	39	48	39	46
		191.58	11.1	0.438	139	129	118	111	103	92	83	40	46	42	51	42	50
		218.69	12.7	0.500	158	147	136	126	117	104	95	45	53	48	51	48	57
762.0	30	119.25	6.4	0.250	74	69	63	50	55	49	44	21	25	23	28	23	27
		132.17	7.1	0.281	83	77	71	66	62	55	50	24	27	25	31	25	30
		146.91	7.9	0.312	92	86	79	70	68	60	56	26	31	28	35	28	33
		161.61	8.7	0.344	101	94	87	82	75	67	61	-	-	31	38	31	36
		176.29	9.5	0.375	111	103	95	89	83	73	66	32	37	34	42	34	40
		190.93	10.3	0.406	120	111	103	96	90	79	72	-	-	36	45	36	43
		205.54	11.1	0.438	130	120	111	103	96	85	78	38	43	39	49	39	46
		234.67	12.7	0.500	148	137	126	118	109	97	89	42	49	45	51	45	53
813.0	32	127.30	6.4	0.250	69	64	59	56	51	46	41	20	23	21	26	21	25
		141.10	7.1	0.281	78	72	67	63	58	51	46	22	26	24	29	24	28
		156.84	7.9	0.312	86	80	74	69	64	57	52	25	29	26	33	26	31
		172.56	8.7	0.344	95	89	82	76	71	63	57	-	-	29	36	29	34
		188.24	9.5	0.375	104	96	89	83	77	68	63	30	34	31	39	31	37
		203.88	10.3	0.406	112	104	96	90	84	73	67	-	-	34	42	34	40
		219.50	11.1	0.438	121	112	104	97	90	80	72	35	40	37	46	37	43
		250.64	12.7	0.500	139	129	118	111	103	91	83	40	46	42	51	42	50
864.0	34	135.35	6.4	0.250	65	60	56	52	49	43	39	18	22	20	25	20	24
		150.03	7.1	0.281	73	68	63	58	54	48	44	21	25	22	27	22	27
		166.78	7.9	0.312	82	75	70	65	60	53	49	23	27	25	31	25	29
		183.50	8.7	0.344	89	83	77	72	67	59	53	-	-	27	34	27	32
		200.18	9.5	0.375	98	91	84	78	72	64	58	28	32	30	37	30	35
		216.84	10.3	0.406	105	98	91	84	78	69	63	-	-	32	40	32	38
		233.46	11.1	0.438	114	106	98	92	85	75	68	33	38	35	43	35	41
		266.61	12.7	0.500	130	121	112	104	97	86	78	38	44	40	49	40	47
914.0	36	143.24	6.4	0.250	62	57	53	49	46	41	37	18	20	19	23	19	22
		158.79	7.1	0.281	69	64	59	56	51	46	41	20	23	21	26	21	25
		176.52	7.9	0.312	77	71	66	61	57	51	46	22	25	23	29	23	28
		194.22	8.7	0.344	84	79	72	67	63	56	51	-	-	26	32	26	30
		211.90	9.5	0.375	92	86	79	74	69	60	56	27	31	28	35	28	33
		229.54	10.3	0.406	100	93	86	81	74	65	60	-	-	30	38	30	36
		247.15	11.1	0.438	107	100	92	87	81	71	64	31	36	33	41	33	39
		282.27	12.7	0.500	123	114	105	98	92	81	73	35	41	37	46	37	44
965.0	38	186.46	7.9	0.312	72	67	63	58	54	48	44	21	24	22	27	22	26
		205.17	8.7	0.344	80	75	69	64	60	53	48	23	27	24	30	24	29
		223.84	9.5	0.375	87	81	75	70	65	58	53	25	29	27	33	27	31
		242.49	10.3	0.406	95	88	81	75	70	62	57	27	32	29	36	29	34
		261.11	11.1	0.438	102	95	87	82	71	66	61	29	34	31	38	31	37
		298.24	12.7	0.500	116	108	100	94	87	77	69	33	39	35	44	35	42
1016.0	40	196.39	7.9	0.312	69	64	59	56	51	46	41	20	23	21	26	21	25
		216.11	8.7	0.344	76	71	65	61	56	50	46	22	25	23	29	23	27
		235.79	9.5	0.375	83	77	71	66	62	55	50	24	27	25	31	25	30
		255.45	10.3	0.406	90	83	77	71	66	60	54	26	31	27	34	27	32
		275.07	11.1	0.438	97	90	83	78	71	64	58	28	33	29	36	29	35
		314.22	12.7	0.500	111	103	95	89	83	73	66	32	37	34	42	34	40
1067.0	42	227.05	8.7	0.344	72	67	62	58	54	48	44	20	24	22	27	22	26
		247.74	9.5	0.375	79	73	67	63	59	52	48	22	27	24	30	24	28
		268.40	10.3	0.406	86	79	73	68	63	57	51	25	29	26	32	26	31
		289.03	11.1	0.438	92	86	79	73	69	60	55	27	31	28	35	28	33
		330.19	12.7	0.500	105	98	91	85	78	69	63	31	35	32	40	32	38
1118.0	44	237.99	8.7	0.344	70	64	59	56	51	46	41	20	23	21	26	21	25
		259.69	9.5	0.375	75	70	65	60	56	50	45	22	25	23	28	23	27
		281.35	10.3	0.406	81	75	70	65	60	54	50	24	28	25	31	25	29
		302.99	11.1	0.438	88	82	75	70	65	57	53	26	30	27	33	27	32
		346.16	12.7	0.500	101	94	87	81	74	66	60	29	34	31	38	31	36
1168.0	46	248.72	8.7	0.344	66	61	57	53	49	44	40	19	22	20	25	20	24
		271.40	9.5	0.375	72	67	62	58	53	48	44	20	24	22	27	22	26
		294.05	10.3	0.406	77	72	66	62	58	52	47	23	26	24	30	24	28
		316.67	11.1	0.438	85	78	72	67	62	55	51	24	29	26	32	26	30
		361.82	12.7	0.500	96	90	83	78	71	63	57	28	33	29	36	29	35
1219.0	48	259.66	8.7	0.344	63	59	54	51	47	41	38	18	21	19	24	19	23
		283.35	9.5	0.375	69	64	59	56	51	46	41	20	23	21	26	21	25
		307.01	10.3	0.406	75	69	64	60	55	50	45	22	26	23	28	23	27
		330.63	11.1	0.438	81	75	69	64	60	53	49	24	27	25	30	25	29
		377.79	12.7	0.500	92	86	79	73	69	60	55	27	31	28	35	28	33
1321.0	52	307.25	9.5	0.375	64	59	55	51	48	42	39	18	21	19	24	19	23
		332.92	10.3	0.406	69	64	59	55	51	46	42	20	24	21	26	21	25
		358.55	11.1	0.438	74	69	64	60	55	49	45	21	25	23	28	23	27
		409.74	12.7	0.500	85	80	73	68	63	56	51	24	29	26	32	26	31
1422.0	56	330.91	9.5	0.375	59	55	51	47	44	39	36	17	20	18	22	18	21
		358.57	10.3	0.406	64	60	55	51	48	42	39	19	22	20	24	20	23
		386.20	11.1	0.438	69	64	59	55	51	46	42	20	23	21	26	21	25
		441.37	12.7	0.500	80	73	67	63	59	52	48	23	27	24	30	24	28
1524.0	60	355.69	9.5	0.375	56	51	48	44	41	37	33	16	18	17	21	17	20
		384.89	10.3	0.406	60	55	51	48	44	40	36	18	20	18	23	18	22
		414.12	11.1	0.438	64	60	55	52	48	42	39	19	21	20	24	20	23
		473.31	12.7	0.500	73	69	63	59	55	49	44	21	24	22	28	22	27
1626.0	64	378.70	9.5	0.375	52	49	44	41	39	34	31	15	18	16	20	16	19
		410.38	10.3	0.406	56	52	49	45	42	38	34	17	20	17	21	17	20
		441.82	11.1	0.438	60	56	52	49	45	40	37	17	20	18	23	18	22
		505.26	12.7	0.500	69	64	59	55	51	46	42	19	23	21	26	21	25
1727.0	68	503.30	11.9	0.469	57	52	49	46	40	37	26	17	20	18	23	18	22
		536.89	12.7	0.500	60	55	52	49	43	40	28	18	21	20	25	20	24
1829.0	72	568.83	12.7	0.500	62	57	53	49	46	40	38	17	20	19	23	19	22
		639.93	14.3	0.562	69	64	59	55	51	46	42	19	23	21	26	21	25
1930.0	76	600.46	12.7	0.500	58	54	50	46	44	38	35	17	19	18	22	18	21
		675.55	14.3	0.562	65	61	56	53	49	43	40	19	21	20	25	20	24
2032.0	80	711.52	14.3	0.562	62	57	53	50	46	41	38	17	21	19	24	19	23
		790.50	15.9	0.625	69	64	59	55	51	46	42	19	23	21	26	21	25