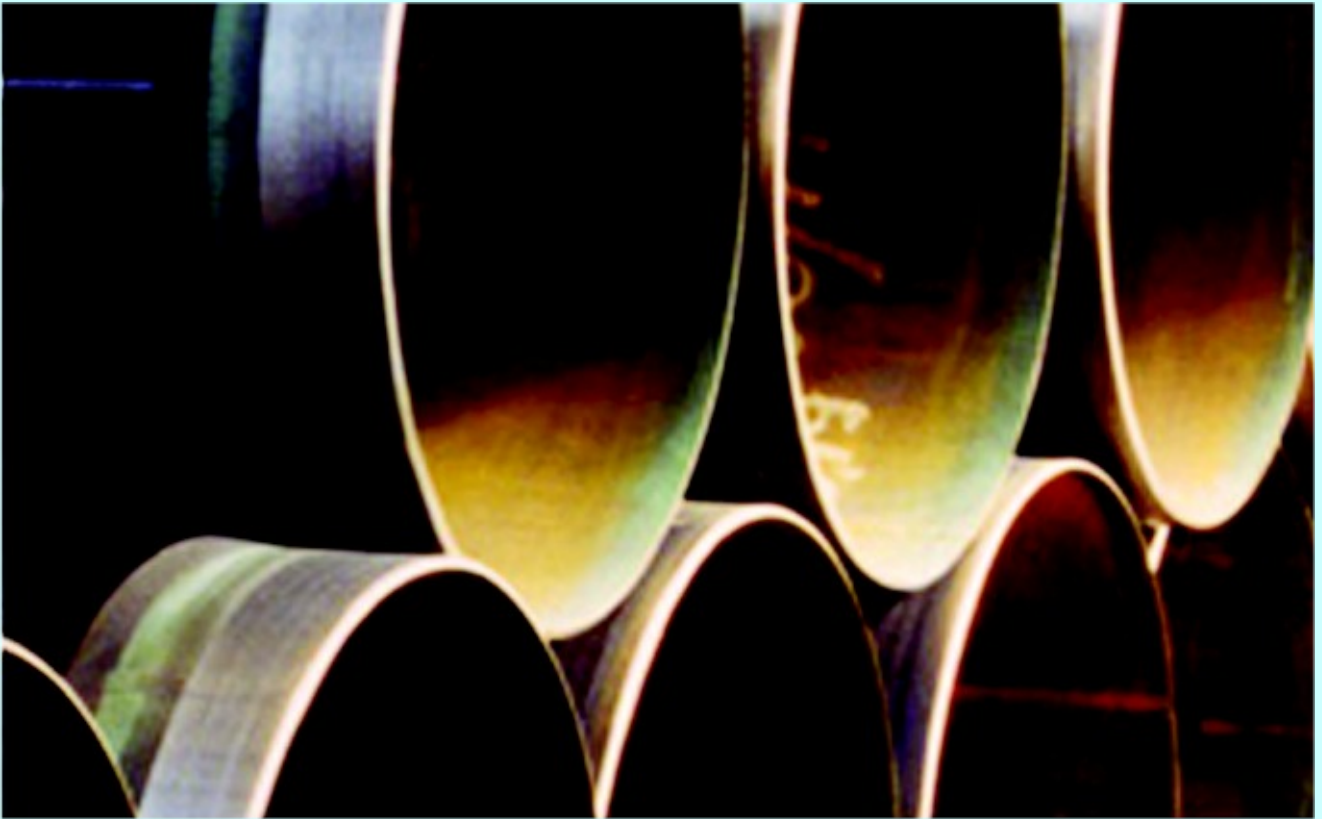


Section I : Pipes



Brief Description of Items

Pipes & Tubes

SEAMLESS CARBON STEEL, STAINLESS STEEL, ALLOY STEEL, LOW TEMPERATURE PIPES/TUBES

Size : 1/4"NB to 24"NB in sch 20,40,60,80,120,160 & XXA (Carbon Steel)
 Size : 1/4"NB to 12" NB in sch 5, 10, 20, 40 (Stainless Steel)
 Mfgs : MSL, ISMT, JINDALSAW, CHINA ETC.....
 Specification : ASTM A106 Grade B, BS/3059/78/Part III/CDS/360, BS/3059/78/Part II/HFS/360, ASTM 210 A- 1/DIN 17175/ST 35-8, BS/3059/1978/Part I, ERW -320, BS/3059/1978/Part I CEW -320, ASTM 335-P-1,P-5, P-11, P-22, P-9, ASTM 213 T-11,1-22 ASTM 209 T-1, DIN 17175 Grade 3 15 MO3, ASTM 200-P-4, P5, P11, P22, P-7.P-9, ASTM199-P-4, P5, P11.P22, P-7,P-9, ASTM A 333 Grade 6, ASTM A 334 Grade 1, ASTM A 179/ ASTM A 214, API 5 L Grade B, ASTM A 53, A 192, API 5L, BS 182,806, 3601, 3602, DIN 2448 etc.....
 Stainless Steel : ASTM A 312 TP 304, 304 L, 316, 316L and 321 etc.....

MILD STEEL BLACK AND GALVANISED PIPES, P.E/ SCR. ENDS

Size : 1/4"NB to 6"NB in LIGHT, MEDIUM & HEAVY DUTY
 Mfgs : ITC(TATA) JINDAL, ZENITH , PRAKASH, WELSPUN, SWASTIK, etc.....
 Specification : IS 1239, 1161, BS 1387, ASTM A 53, API5L Grade B

ERW /SAW/SPIRAL PIPES LINE & TUBES FOR WATER,GAS,OIL.

Size : 8.5/8"O.D. to 60"O.D. X 3mm to 25mm thick
 Mfgs : JINDAL, ZENITH, PRAKASH, WELSPUN, SWASTIK, GPT, etc.....
 Specification : IS 3589-GR 330/410.API 5L GR.B/GR X42/X46/X46/X52/X56/X60/X65/X70

ERW LOW CARBON STEEL BOILER TUBES FOR HIGH TEMPERATURE AND PRESSURE

Size : 1/2" Outside dia to 4" Outside dia 11, 10, 9,8,7,6swg.
 Mfgs : ITC(TATA)T.I.
 Specification : BS 3059/3 & 4 IS 19 14

ALL ABOVE PIPES CAN BE OFFERED WITH / WITHOUT IBR FORM IIIA

FITTINGS

FORGED CARBON STEEL, STAINLESS STEEL FITTINGS FOR HIGH PRESSURE 3000/6000/9000 LBS

Type : UNION, COUPLING, ELBOW, TEE, NIPPLE, REDUCER
 Size : 1/4"Dia to 4" Dia
 Specification : ASTM A 1057182 to ANSI B 16.11
 Ends : Screwed BSPT / NPT Socket Weld

BUTTWELD FORGED CARBON STEEL / STAINLESS STEEL

Type : ELBOW (R=1.5D), BEND (R=3D), TEE, REDUCER
 Size : 1/2" to 24"
 Specification : ASTM A 234, A 403 to ANSI B 16.9
 Ends : Buttweld

WATER & GAS LINE GALVANISE / STEEL FITTINGS

Size : 1/2" to 8"
 Specification : IS 1239 Part II, 1879 and With /Without ISI Marked

ALL ABOVE ITEMS WITH / WITHOUT IBR FORM MIC

FLANGES

FORGED / PLATE, CARBON STEEL / STAINLESS STEEL FLANGES.WITHOUT/ WITH IBR FORM INC

Type : SLIPON, BLIND, SCREWED, WELD NECK, LAP JOINT, TUNG & GROOVE, SPECTACLE AND AS PER YOUR DRAWINGS.
 Size : 1/2" to 60"
 Specification : IS 226, IS 2006, IS 2062, SS 304, 316, ASTM A 105/181, ETC AND IN TABLE BS 10, D,E,F,G,H,J,K, ASA 150, 300, 600,900, 1500,2500 lbs Also in ND : 6, 10, 16,20,40

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 or Longitudinal	
Alloy Steel Pipes / Tubes Conform To Various Specifications As Listed Below															
*	--	BS5059/90/Part10/620		0.10-0.15	0.40-0.70	0.040	0.040	0.15-0.35	0.70-1.10	0.45-0.65		441-618	235 Min	22	AL max 0.020
*	--	BS5059/90/Part10/622		0.08-0.15	0.40-0.70	0.040	0.040	0.60 Max	2.00-2.50	0.90-1.20		440-590	175 Min	20	AL max 0.020
*	--	DIN17175/13CRMO44		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	284 Min	22	---
*	--	DIN17175/16CRM10		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	284 Min	22	---
*	--	DIN17175/15MO3		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 A209T1	M/W	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 A209T2	M/W	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 A209T1B	M/W	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	.38 - 1.06	0.030	0.030	.1 Min	--	--	--	415-585	240 Min	22-30	-50°F 10x10J17.8	
*	*	WPL 9		.20 Max	.40 - 1.06	0.030	0.030	--	--	--	435-610	315 Min	22-28	-100°F 10x10J17.8		
*	*	WPL 3		.20 Max	.3' - .64	0.050	0.050	.13 - .37	--	--	3.1-3.82	450-620	240 Min	22-30	-150°F 10x10J17.8	
*	*	WPL 8		.13 Max	.90 Max	0.030	0.030	.13 - .37	--	--	8.4-9.6	600-665	515 Min	16-20	-320°F 10x10J33.8	

High Temperature Service Fitting Conform To ASTM/234														Class	Tensile	Yield	
*	--	WFB		0.30 Max	0.29-1.08	0.050	0.050	.10 Min	-----	-----	-----	415 Min	240 Min	22-35			
*	--	WFC		0.35 Max	0.29-1.06	0.050	0.050	.10 Min	-----	-----	-----	485 Min	275 Min	22-30			
*	--	WFB 1		0.28 Max	0.30-0.80	0.045	0.045	.10-0.50	-----	44-0.65	-----	360 Min	208 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*	465 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	0.30-0.80	0.030	0.030	.50-1.00	1.0-1.0	.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	1.9-2.8	.57-1.13	-----	415 Min	205 Min	22-30	Cl3*	515 Min	310 Min
*	--	WP 5		0.15 Max	0.30-0.80	0.040	0.030	.50 Max	4.0-8.0	.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	0.408	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	0.644	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	1.560	.128	3.25	1.90
1"	25 mm	1.512	38.80	.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	.118	2.90	3.250	.128	3.25	3.610	.160	4.05	4.43
2"	50 mm	2.375	60.30	.118	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	6.810	.176	4.47	7.90
3"	75 mm	3.500	88.90	.128	3.25	6.870	.160	4.05	8.470	.192	4.85	10.1
4"	100 mm	4.500	114.30	.144	3.65	9.890	.176	4.30	12.10	.212	5.42	14.4
5"	125 mm	5.500	139.70	--	--	--	.192	4.85	16.20	.212	5.42	17.6
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	26.61	32.07	38.15	---	---	---	---	---	---
5.20	24.08	27.42	34.34	40.84	---	---	---	---	---	---
5.60	25.85	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	36.66	45.98	54.75	60.26	68.04	77.82	86.60	104.24	---
7.94	---	41.33	51.00	61.63	68.07	78.02	87.97	97.91	117.88	---
8.18	---	42.53	53.42	63.85	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	---

Test Pressure in Kg/cm²

Outside Diameter size inches	Weight Kg/m	Wall Thickness inches		API-5L										IS-3589		ASTM, A-671 & A-672	
				Grade x70	Grade x65	Grade x60	Grade x56	Grade x52	Grade x46	Grade x42	Grade A	Grade B	Grade 330	Grade 410	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	30	34	29	36	29	34
		188.24	9.5	0.375	104	96	89	83	77	68	63	-	-	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

Standards and Specifications for Seamless Pipes / Tubes

Oil Country Casing, Non-Upset Tubing Line Pipe and High Test Line Pipe	:	API-5A-Grades J 55 and N 80 API-5AX-Grades P 105 and P 110 API-5L-Grades A and B API-5LX-Grades X 42, X 46 and X 52 IS-1978-Grades YST 21 and YST 25
Boiler and Superheater Tubes	:	BS-3059-Grades 33, 45, 620 and 622 ASTM-A-192 ASTM-A-209-Grades T1, T1a, T1b ASTM-A-210-Grades A-1 ASTM-A-213-Grades T 5, T 11 and T 22 IS-1914-Grades CDS & HFS IS-2416-Grades CDS & HFS IRS--R 22-61
Heat Exchanger and Condenser Tubes	:	ASTM-A-179 ASTM-A-199-Grades T 5, T 11 and T 22 ASTM-A-200-Grades T 5, T 11 and T 22
Still Tubes for Refinery Service	:	ASTM-A-161-Grades Low Carbon and T1 ASTM-A-200-Grades T 5, T 11 and T 22
Tubes for Pressure Purpose: Ordinary Duties	:	BS-806/54-Classes A and B BS-3601-Grades 22, 27 and 35
Tubes for Pressure Purposes: High Duties	:	BS-3602-Grades 23, 27 and 35 BS-3604-Grades 620, 621, 622 and 625
Tubes for Low Pressure Service	:	BS-3603-Grades 27 LT 30 and 27 LT 50 A-333-Grades 1 and 6 A-334-Grades 1 and 6
Tubes for High Temperature Service	:	ASTM-A-106-Grades A and B ASTM-A-335-Grades P1, P5, P11 and P22
Tubes for Water and Gas and Steam Services	:	BS-1387 ASTM-A-120 ASTM-A-53-Grades A and B IS-1239
Tubes for Mechanical, Structural and General Engineering Purpose	:	BS-1775-Grades 11, 13, 16, 20, 24, 28 and 35 IS-3601-Grades 21, 25, 32, 38 and 44 IS-1161-Grades YST 22, 25 and 32
Tubes for Rotary Core Drilling Accessories conforming to BS-4019 Part I, 1974	:	Made from suitable grades of steel e.g. 080A37
Automobile Tubes	:	BS-980-Grades CDS 1, 2 and 3
Tubes for Rear Axles and other Mechanical Applications	:	Made from SAE-1040 steel and other special steels
Tubes for Water Wells	:	IS-4270, Grades St-42 and St-55. Plain at Ends to Tables 1 and 2 of the Specification

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 GAUGE 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

Grade	Form	TP 304	C	Mn	P	S	Si	Ni	Cr	Mo	N	Other
304	TP 304	.08 Max	2.00 Max	0.045	0.030	1.00 Max	18-20	9-11	18-20	0.005	0.010	
	TP 304 H	.04-0.10	2.00 Max	0.045	0.030	1.00 Max	18-20	9-11	18-20	0.005	0.010	
	TP 304 L	.030 Max	2.00 Max	0.045	0.030	1.00 Max	18-20	8-13	18-20	0.005	0.010	
	TP 304 LN	.030 Max	2.00 Max	0.040	0.030	0.75 Max	18-21	8-10.5	18-20	0.005	0.010	Nitrogen 0.10-0.18
304N	TP 304 N	.08 Max	2.00 Max	0.040	0.030	0.75 Max	18-20	9-11	18-20	0.005	0.010	Nitrogen 0.10-0.18
	TP 309	0.15 Max	2.00 Max	0.045	0.030	1.00 Max	22-24	12-15	22-24	0.005	0.010	
310	TP 310	0.15 Max	2.00 Max	0.045	0.030	1.00 Max	24-26	19-22	24-26	0.005	0.010	
	TP 316	0.08 Max	2.00 Max	0.045	0.030	1.00 Max	18-18	10-14	18-18	0.005	0.010	
316L	TP 316 L	0.04-0.12	2.00 Max	0.045	0.030	1.00 Max	18-18	10-14	18-18	0.005	0.010	
	TP 316 LN	.030 Max	2.00 Max	0.045	0.030	0.75 Max	18-18	11-14	18-18	0.005	0.010	Nitrogen 0.10-0.18
	TP 316 L	.035 Max	2.00 Max	0.045	0.030	1.00 Max	18-18	10-15	18-18	0.005	0.010	
	TP 316 N	.08 Max	2.00 Max	0.040	0.030	0.75 Max	18-18	11-14	18-18	0.005	0.010	Nitrogen 0.10-0.18
321	TP 321	.08 Max	2.00 Max	0.045	0.030	1.00 Max	17-20	9-13	17-20	0.005	0.010	
	TP 321 H	.04-0.10	2.00 Max	0.045	0.030	1.00 Max	17-20	9-13	17-20	0.005	0.010	
347	TP 347	.08 Max	2.00 Max	0.045	0.030	1.00 Max	17-20	9-13	17-20	0.005	0.010	
	TP 347 H	.04-0.10	2.00 Max	0.045	0.030	1.00 Max	17-20	9-13	17-20	0.005	0.010	