



Advance
TRADING COMPANY (Cal.)

"The company with advance motto"

Where customer is a **KING**
We will always at your **ROYAL** service



Website : www.advancetradingcompany.com



Company Profile >>>

Advance Trading Co. (cal.) Started in the year 1975, have made great advances in the field of Stainless Steel and Nickel Alloys in Tubular and Flat forms. Advances in Technology, Service, Quality and Manpower are the key strength of our organization. Unlike many suppliers who claim to supply anything to everything, our philosophy has been to be selective in our offering but to the best in whatever we do. We are specialized in supplying Stainless Steel products in tubular and flat products encompassing Pipes, Tubes, Rods, Wires, Sheets, Plates, Coils, Pipe Fittings, Flanges etc.

Over the years of experience and exposure in varied applications across industries, we are able to garner considerable amount of knowledge in our chosen field which enable us to understand the requirements better and suggest, seek, source and supply the apt material within shortest possible time saving customers valuable time & money.

Along with our experience in the Indian market, we also have excellent sourcing network spread across the world which helps us to source any material at shortest possible time and cost.

Such genuine and consistent hard work has helped us to create many satisfied customers across industries like :

Refineries & Petrochemicals, Oil & Gas, Chemicals & Fertilisers, Cement, Engineering, Construction, Sugar, Nuclear & Thermal, Paper & Pulp.

We cater to all types of clients irrespective of their size of requirements. We always put the customer's & their requirement first, understand them, suggest, source & supply the material at the right price & right time.

INSPECTION : >>>

We offer any third party inspection like



Right product for the right requirement at the right price, i.e. rather than a mere supplier of the product we take utmost efforts in understanding the client's requirement, identifying the right product at the right price. This has resulted in close ties with major customers within India .

As per our corporate philosophy of "Source, Supply, Service" which is wholeheartedly believed and practiced not only by the management but also all the other staff members.

No wonder many of our clients are there with us for the last 30 years for the quality of our products, our service & prices.



TESTING : We offer all types of testing services which will be done at any Govt. approved laboratories like.

- * Physical test
- * Chemical test
- * Tensile Test
- * Flattening Test
- * Bend Test
- * Hydrostatic Test

Product Range

RODS

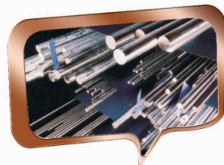
Stainless Steel: ASTM A312 TP/ 202/ 304/ 304L/ 316/ 316L/ 316Ti / 317/ 317L/ 321/ 310/ 347/ 410/ 420/ 904L etc.

Nickel Alloys: Monel, Inconel, Hastelloy, Nickel, Titanium, A-20

Types: Round, Square, Rectangular.

Size: 3mm - 150mm

Process: Cold Drawn, Annealed, Exports Bright / Black.



SHEETS, PLATES

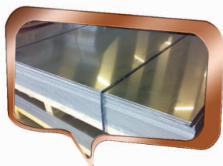
Stainless Steel: ASTM A312 TP/ 202/ 304/ 304L/ 316/ 316L/ 316Ti / 317/ 317L/ 321/ 310/ 347/ 904L etc.

Carbon Steel: ASTM A53 GR. B/ A106 GR. B/API 5L GRADE B/ API 5L GR.X42/ 46/ 52/ 56/ 60/ 65/ 70/ A333 GR. 3/ GR. 6 etc.

Alloy Steel: ASTM A335 GR. P1/ P5/ P9/ P11/ P22/ P91 etc. Brass, Bronze, Titanium, Tantalum, Bismuth, Aluminum, High Speed Steel, Zinc, Lead, etc. with test certificate.

Material Grade: Stainless Steel, Nickel Alloys, Carbon Steel, Alloy Steel, Other Ferrous & Non-Ferrous Metals.

Types: Sheet, Plates, Strips, Patti, Circles, etc.



PIPES

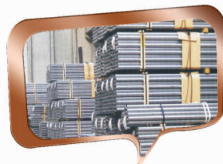
Stainless Steel: ASTM A312 TP 202/ 304/ 304L/ 316/ 316L/ 317/ 317L/ 321/ 310/ 347/ 904L etc.

Alloy Steel: ASTM A335 GR. P1/ P5/ P9/ P11/ P22/ P91 etc. Brass, Bronze, Titanium, Tantalum, Bismuth, Aluminum, High Speed Steel, Zinc, Lead, etc.

Types: Round, Square, Rectangular.

Size: Upto 24" NB. (Seamless & Welded)

Wall Thickness: Sch. 5S to Sch. XXS



BUTT WELD FITTINGS

Stainless Steel: ASTM A403 WP 304/ 304L/ 304H/ 316/ 316L/ 317/ 317L/ 321/ 310/ 347/ 904L etc.

Carbon Steel: ASTM A234 WPB / A420 WPL3/ A420 WPL6/ MSS-SP-75 WPHY 42/ 46/ 52/ 56/ 60/ 65/ 70

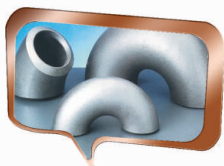
Alloy Steel: ASTM A234 WP1/ WP5/ WP9/ WP11/ WP22/ WP91 etc.

Others: Monel, Nickel, Inconel, Hastelloy, Copper, Brass, Bronze, Titanium, Tantalum, Bismuth, Aluminium, High Speed Steel, Zinc, Lead, etc.

Types: Elbow, Tee, Reducer, Return Bends, Stub-Ends, Cap, Collar, Cross, Insert etc.

Size: 1/4" NB TO 32" NB. (Seamless & Welded)

Wall Thickness: Sch. 5S TO Sch. XXS.



FLANGES

Stainless Steel: ASTM A182 F304/ 304L/ 304H/ 316/ 316L/ 317/ 317L/ 321/ 310/ 347/ 904L etc.

Carbon Steel: ASTM A105/ A694F42/ 46/ 52/ 56/ 60/ 65/ 70/ A350 LF3/ A350 LF2, etc.

Alloy Steel: ASTM A182 F1/ F5/ F9/ F11/ F22/ F91 etc.

Nickel Alloys: Monel, Nickel, Inconel, Hastelloy, Titanium, Tantalum, Alloy - 20 etc.

Types: Weldneck, Slipon, Blind, Socket Weld, Lap Joint, Spectacles, Ring Joint,

Orifice, Long Weldneck, Deck Flange, RTJ, Flange

Size: 1/2" NB TO 24" NB.



CHEMICAL COMPOSITION OF STAINLESS STEEL

Chemical Composition of Stainless Steel										Nearest Equivalent Specification		
USN NO.	AISI Grade	C Max	Mn Max	P Max	S Max	Si Max	Cr	Ni	Mo	Cu	I.S.	Other Element
Austenitic												
S20100	201	0.15	5.5/7.5	0.06	0.03	1	16.0/18.0	3.5/5.5	-	-	-	-
S20200	202	0.15	7.5/10	0.06	0.03	1	17.0/19.0	4.0/6.0	-	-	-	-
S30100	301	0.15	2.0max	0.045	0.040	1.0	16.0/18.0	6.0/8.0	-	-	10Cr17Ni7	-
S30200	302	0.15	2.0	0.045	0.030	1.0	17.0/19.0	8.0/10.0	-	-	07Cr18Ni9	E-4-3-4%
S30300	303	0.15	2.0	0.045	0.15 min	1.0	17.0/19.0	8.0/10.0	-	-	15Cr18Ni9	E-4-1%Max
S30400	304	0.08	2.0	0.045	0.030	1.0	18.0/20.0	8.0/10.0	-	-	04Cr18Ni10	-
S30403	304L	0.030	2.0	0.045	0.030	1.0	18.0/20.0	8.0/12.0	-	-	02Cr18Ni11	-
S30453	304LN	0.030	2.0	0.045	0.030	0.75	18.0/20.0	8.0/11.0	-	-	-	-
S30409	304H	0.05	2.0	0.045	0.03	1	18.0/20.0	8.5/9.5	-	-	-	CU--2.2.50
S30900	309	0.20	2.0max	0.045	0.030	1.0	22.0/24.0	12.0/15.0	-	-	20Cr24Ni12	-
S30908	309S	0.08	2.0	0.045	0.030	1.0	22.0/24.0	12.0/15.0	-	-	-	-
S31009	310H ¹	0.25	2.0	0.045	0.030	1.50	24.0/26.0	19.0/22.0	-	-	10Cr25Ni12	-
S31008	310S	0.08	2.0	0.045	0.030	1.50	24.0/26.0	19.0/22.0	-	-	-	-
S31600	316	0.08	2.0	0.045	0.030	1.0	16.0/18.0	10.0/14.0	2.0/3.0	-	04Cr17Ni12Mo2	-
S31603	316L	0.030	2.0	0.045	0.030	1.0	16.0/18.0	10.0/14.0	2.0/3.0	-	03Cr17Ni12Mo2	-
S31653	316LN	0.030	2.0	0.045	0.030	0.75	16.0/18.0	10.0/14.0	2.0/3.0	-	-	-
S31635	316Ti	0.080	2.0	0.045	0.030	1.0	16.0/18.0	10.0/14.0	2.0/3.0	-	-	Ti5xCmin
S31700	317	0.08	2.0	0.045	0.030	1.0	18.0/20.0	11.0/15.0	3.0/4.0	-	-	-
S31703	317L	0.030	2.0	0.045	0.030	1.0	18.0/20.0	11.0/15.0	3.0/4.0	-	-	N:0.10/0.22
S31753	317LN	0.03	2.0	0.045	0.03	1	18.0/20.0	11.0/15.0	3.0/4.0	-	-	N:0.10/0.22
S32100	321	0.08	2.0	0.045	0.030	1.0	17.0/19.0	9.0/12.0	-	-	04Cr18Ni10Ti20	Ti5xCmin
S34700	347	0.08	2.0	0.045	0.030	1.0	17.0/19.0	9.0/12.0	-	-	04Cr18Ni10Nb-40	Nb/Ta10xCmin
N08904	904L ⁰	0.02	2.0	0.045	0.035	1	19.0/23.0	23.0/28.0	4.0-5.0	-	-	CU : 1-2
Ferritic												
S41000	410	0.15	1.00	0.040	0.030	1.0	11.50-13.50	0.75	---	---	---	---
S41008	410S	0.08	1.00	0.040	0.030	1.0	11.50-13.50	0.60	---	---	---	---
S42900	429 ¹	0.12	1.00	0.040	0.030	1.0	14.00-16.00	---	---	---	---	---
S43000	430	0.12	1.00	0.040	0.030	1.0	16.00-18.00	0.75	---	---	---	---
S43035	439	0.07	1.00	0.040	0.030	1.0	17.00-19.00	0.050	---	0.04	---	Ti 0.20 + 4 (C+N) min; 1.10
S44400	444	0.025	1.00	0.040	0.030	1.0	17.5-19.5	1.00	1.75-2.50	0.035	---	max Al 0.15max Ti + Cb 0.20 + 4 (C+N min) Ti 6 X C-0.75
	409L	≤ 0.030	≤ 1.00	≤ 1.00	-	-	-	10.50~11.75	~	-	-	-
Duplex & Super Duplex												
S31803	---	0.030	2.00	0.030	0.020	1.0	21.0-23.0	4.5-6.5	2.5-3.5	---	0.08-0.20	---
S32550	255 ¹	0.040	1.50	0.040	0.030	1.0	24.0-27.0	4.5-6.5	2.9-3.9	1.50-2.50	0.10-0.25	---
S32750	2507	0.030	1.20	0.035	0.020	0.8	24.0-26.0	6.0-8.0	3.0-5.0	0.50	0.24-0.32	---
S32760	---	0.030	1.00	0.030	0.010	1.0	24.0-26.0	6.0-8.0	3.0-4.0	0.50-1.00	0.20-0.30	W 0.50-1.00

Stainless Steel is essentially a low carbon steel which contains chromium at 10% or more by weight. It is this addition of chromium that gives the steel its unique stainless corrosion resisting Properties. The corrosion resistance and other useful properties of the steel are enhanced by increased chromium content and the addition of other elements such as molybdenum, nickel and nitrogen.

CHEMICAL COMPOSITION & MECHANICAL PROPERTIES OF PIPES

SUMMARY OF THE MAIN ASTM STANDARDS GENERALLY USED FOR PIPING																
ASTM	Grade	C	Min	P	S	Si	Ni	Cr	Mo	Cu	Others	Tensile Strength	Yield Strength Mini-MPa/Psi Mini-MPa/Psi	Elong min/1	Impact test at	
A 53	A	0.25	0.95	0.05	0.06		0.40 max	0.40 max	0.15 max	0.40 max	0.08 max	300-48000	205-30000	36		
	B	0.30	1.20	0.05	0.06		0.40 max	0.40 max	0.15 max	0.40 max	0.08 max	415-60000	240-35000	29.5		
A 106	A	0.25	0.27-0.93	0.025	0.025	0.10 mini	0.40 max	0.40 max	0.15 max	0.40 max	0.08 max	330-48000	205-30000	L35-T25		
	B	0.30	0.29-1.06	0.025	0.025	0.10 mini	0.40 max	0.40 max	0.15 max	0.40 max	0.08 max	415-60000	240-35000	L30-T16.5		
	C	0.35	0.29-1.06	0.025	0.025	0.10 mini	0.40 max	0.40 max	0.15 max	0.40 max	0.08 max	485-70000	275-40000	L30-T16.5		
A 333	1	0.25	0.27-0.93	0.025	0.025		0.40 max	0.40 max	0.15 max	0.40 max	0.08 max	380-55000	205-3000	L35-T25	-45 -50	
	3	0.19	0.31-0.64	0.025	0.025	0.18-0.37	3.18-3.82					450-65000	240-35000	L30-T20	-100 -150	
	4	0.12	0.50-1.05	0.025	0.025	0.18-0.37	0.47-0.98	0.44-1.01		0.40-0.75	Al-0.40-0.30%	415-60000	240-35000	L30-T16	-100 -150	
	6	0.30	0.29-1.06	0.025	0.025	0.10 mini						415-60000	240-35000	L30-T16	-45 -50	
	9	0.20	0.40-1.06	0.025	0.025		1.60-2.24			0.75-1.25		435-63000	315-46000	L28	-75 -100	
A 335	P 1	0.10-0.20	0.30-0.80	0.025	0.025	0.10-0.50			0.44-0.65			380-55000	205-30000	L30-T20		
	P 5	0.15	0.30-0.60	0.025	0.025	0.50		4.00-6.00	0.45-0.65			415-60000	205-30000	L30-T20		
	P 9	0.15	0.30-0.60	0.025	0.025	0.25-1.00		8.00-10.0	0.90-1.10			415-60000	205-30000	L30-T20		
	P 11	0.05-0.15	0.30-0.60	0.025	0.025	0.50-1.00		1.00-1.50	0.44-0.65			415-60000	205-30000	L30-T20		
	P 12	0.05-0.15	0.30-0.61	0.025	0.025	0.50		0.80-1.25	0.44-0.65			415-60000	220-32000	L30-T20		
	P 21	0.05-0.15	0.30-0.60	0.025	0.025	0.50		2.65-3.35	0.80-1.06			415-60000	205-30000	L30-T20		
	P 22	0.05-0.15	0.30-0.60	0.025	0.025	0.50		1.90-2.60	0.87-1.13			415-60000	205-30000	L30-T20		
	P 91	0.08-0.12	0.30-0.60	0.020	0.010	0.20-0.50	0.40 max	8.00-9.50	0.85-1.05		Vo-0.18-0.25%	585-85000	415-65000	L20		
A 358	TP 304	0.08	2.00	0.045	0.030	0.75	8.0-10.50	18.0-20.0	-							
	TP 316S	0.08	2.00	0.045	0.030	1.50	19.0-22.0	24.0-26.0	-							
	TP 316	0.08	2.00	0.045	0.030	0.75	10.0-14.0	16.0-18.0	2.0-3.0							
	TP 316L	0.030	2.00	0.045	0.030	0.75	10.4-14.0	16.0-18.0	2.0-3.0							
	TP 317L	0.035	2.00	0.045	0.030	0.75	11.0-15.0	18.0-20.0	3.0-4.0							
	TP 321	0.08	2.00	0.045	0.030	0.75	9.0-12.0	17.0-20.0	-							
	TP 347	0.08	2.00	0.045	0.030	0.75	9.0-13.0	17.0-20.0	-							
													Class 1 : Double welded pipes & full Radiography			
													Class 2 : Double welded no Radiography			
													Class 3 : Single welded full Radiography			
													Class 4 : Single welded full Radiography			
													Class 5 : Double Welded spool Radiography			
													root pass without addition of filler metal			
													T5C<0.70%			
													Cb 0.06<1.00%			

Class 1 : Double welded pipe & full Radiography
 Class 2 : Double welded no Radiography
 Class 3 : Single welded full Radiography
 Class 4 : Single welded full Radiography
 root pass without addition of filler metal
 Class 5 : Double Welded spot Radiography

ANSI B 36 - 10 NOMINAL THICKNESS AND WEIGHTS OF STAINLESS STEEL PIPES

Pipe dimension in accordance to

Size of Pipe & Tubes		Number of Schedule													
		5S		10		10S		20		30		40		60	
Nominal in inch	Outside in inch	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m
1/8"	10.3	1.0	0.23	1.28	0.28	-	-	1.60	0.345	-	-	1.73	0.36	-	-
1/4"	13.7	1.2	0.37	1.65	0.49	-	-	2.00	0.580	-	-	2.24	0.63	-	-
3/8"	17.1	1.2	0.47	1.65	0.63	-	-	2.00	0.750	-	-	2.31	0.85	-	-
1/2"	21.3	1.65	0.80	2.11	1.00	-	-	2.5	1.15	-	-	2.77	1.26	-	-
3/4"	26.7	1.65	1.03	2.11	1.28	-	-	2.5	1.500	-	-	2.87	1.68	-	-
1"	33.4	1.65	1.29	2.77	2.09	-	-	2.9	2.24	-	-	3.38	2.50	-	-
1 1/4"	42.2	1.65	1.65	2.77	2.73	-	-	3.0	2.910	-	-	3.56	3.38	-	-
1 1/2"	48.3	1.65	1.90	2.77	3.11	-	-	3.0	3.370	-	-	3.68	4.05	-	-
2"	60.3	1.65	2.38	2.77	3.99	-	-	3.0	4.9	-	-	3.91	5.43	-	-
2 1/2"	73.0	2.11	3.70	3.05	5.26	-	-	4.00	6.80	-	-	5.16	8.62	-	-
3"	88.9	2.11	4.50	3.05	6.45	-	-	4.00	8.423	-	-	5.49	11.47	-	-
3 1/2"	101.6	2.11	5.20	3.05	7.41	-	-	4.5	10.500	-	-	5.74	13.78	-	-
4"	114.3	2.11	5.81	3.05	8.50	-	-	4.5	12.255	-	-	6.02	16.32	-	-
5"	141.3	2.77	9.45	3.40	11.74	-	-	5.00	16.900	-	-	6.56	21.80	-	-
6"	168.3	2.77	11.31	3.40	14.04	-	-	6.35	25.500	-	-	7.11	28.69	-	-
8"	219.1	2.77	14.78	3.76	20.27	-	-	6.35	33.28	7.04	37.38	8.18	42.70	10.31	53.07
10"	273.0	3.40	22.62	4.19	27.80	-	-	6.35	42.41	7.80	51.81	9.27	60.30	12.70	82.8
12"	323.9	3.96	31.36	4.57	36.17	-	-	6.35	50.48	8.38	66.20	10.31	79.71	14.27	110.62
14"	355.6	3.96	34.23	4.78	41.60	6.35	55.53	7.92	68.98	9.52	82.58	11.13	95.00	15.09	128.42
16"	406.4	4.19	41.60	4.78	47.60	6.35	63.61	7.92	79.03	9.52	94.20	12.17	125.2	16.66	162.59
18"	457.2	4.19	46.83	4.78	54.15	6.35	71.69	7.92	89.10	11.13	124.32	14.27	158.27	19.05	209.00
20"	508.0	4.78	59.22	5.54	69.70	6.35	79.76	9.52	118.93	12.70	156.04	15.09	185.89	21.62	251.65
22"	558.8	4.78	63.75	5.54	76.76	6.35	87.84	9.52	131.07	12.70	172.04	-	-	22.22	298.55
24"	609.6	5.54	82.60	6.35	95.92	6.35	95.92	9.52	143.20	14.27	211.72	17.48	258.74	24.61	360.21
26"	660.4	-	-	-	-	7.92	129.40	12.70	205.97	-	-	-	-	-	-
28"	711.2	-	-	-	-	7.92	139.47	12.70	222.13	15.88	276.48	-	-	-	-
30"	762.0	-	-	-	-	7.92	148.55	12.70	238.28	15.88	296.68	-	-	-	-
32"	812.8	-	-	-	-	7.92	158.3	12.70	254.44	15.88	316.88	17.48	342.17	-	-
34"	863.6	-	-	-	-	7.92	168.32	12.70	270.50	15.88	336.96	17.48	364.01	-	-
36"	914.4	-	-	-	-	7.92	178.26	12.70	284.75	15.88	357.28	19.05	420.21	-	-

 N.B. Thickness and weight "Standard" Extra-Strong and "Double Extra-Strong" within swell edges have a correspondent value in a "Schedule". * In accordance to ANSI B 36.19 For different thickness that suitable the weights can proceed by the following formula $24.66 (D-t)$

_1000

ANSI B 36 - 10 NOMINAL THICKNESS AND WEIGHTS OF STAINLESS STEEL PIPES

Pipe dimension in accordance to

Number of Schedule															
80		100		120		140		160		Standard		Extra-Strong		Double Extra-Strong	
mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m
2.41	0.46	-	-	-	-	-	-	-	-	1.73	0.36	2.41	0.46	-	-
3.02	0.80	-	-	-	-	-	-	-	-	2.24	0.63	3.02	0.80	-	-
3.20	1.10	-	-	-	-	-	-	-	-	2.31	0.85	3.20	1.10	-	-
3.73	1.62	-	-	-	-	-	-	4.78	1.97	2.77	1.26	3.73	1.62	7.47	2.54
3.91	2.21	-	-	-	-	-	-	5.56	2.93	2.87	1.68	3.91	2.19	7.82	3.63
4.55	3.23	-	-	-	-	-	-	6.35	4.30	3.38	2.50	4.55	3.23	9.09	5.45
4.85	4.50	-	-	-	-	-	-	6.35	5.69	3.56	3.38	4.85	4.46	9.70	7.75
5.08	5.49	-	-	-	-	-	-	7.14	7.35	3.68	4.05	5.08	5.40	10.16	9.54
5.54	7.60	-	-	-	-	-	-	8.74	11.26	3.91	5.43	5.54	7.47	11.07	13.44
7.01	11.59	-	-	-	-	-	-	9.52	15.15	5.16	8.62	7.01	11.40	14.02	20.39
7.62	15.25	-	-	-	-	-	-	11.13	21.67	5.49	11.28	7.62	15.25	15.24	28.11
8.08	18.62	-	-	-	-	-	-	-	5.74	13.56	8.08	18.62	-	-	-
8.56	22.29	-	-	11.13	28.25	-	-	13.49	34.05	6.02	16.06	8.56	22.29	17.12	41.66
9.52	30.92	-	-	12.70	40.24	-	-	15.88	49.87	6.55	21.76	9.52	30.92	19.05	58.31
10.97	43.21	-	-	14.27	54.20	-	-	18.26	68.53	7.11	28.23	10.97	42.52	21.95	79.11
12.70	65.63	15.09	76.93	18.26	90.32	20.62	102.47	23.01	112.97	8.18	42.49	12.70	64.57	22.22	107.78
15.09	97.27	18.26	116.38	21.44	134.90	25.40	157.51	28.58	174.95	9.27	60.24	15.09	81.46	25.40	155.5
17.48	133.88	21.44	162.14	25.40	189.82	28.58	211.31	33.32	242.40	9.52	73.76	17.48	97.36	25.40	189.92
19.05	159.00	23.83	197.74	27.79	227.88	31.75	257.47	35.71	286.04	9.52	81.21	19.05	107.28	-	-
21.44	203.50	26.19	249.34	30.96	290.88	36.53	338.32	40.49	370.74	9.52	93.13	21.44	123.18	-	-
23.83	258.29	29.36	314.54	34.92	369.34	39.67	414.74	45.24	466.67	9.52	105.05	23.83	139.07	-	-
26.19	315.97	32.54	387.41	38.10	448.3	44.45	515.94	50.01	573.31	9.52	116.97	26.19	154.97	-	-
28.58	379.70	34.92	457.83	41.28	535.17	47.62	609.30	53.98	682.57	9.52	128.89	28.58	170.86	-	-
30.96	448.3	38.89	555.76	46.02	649.44	52.37	730.72	59.54	819.70	9.52	140.81	30.96	186.75	-	-
-	-	-	-	-	-	-	-	-	-	9.52	152.73	30.96	202.65	-	-
-	-	-	-	-	-	-	-	-	-	9.52	164.65	30.96	234.44	-	-
-	-	-	-	-	-	-	-	-	-	9.52	176.57	30.96	234.44	-	-
-	-	-	-	-	-	-	-	-	-	9.52	188.50	30.96	250.33	-	-
-	-	-	-	-	-	-	-	-	-	9.52	200.42	30.96	266.22	-	-
-	-	-	-	-	-	-	-	-	-	9.52	212.34	30.96	282.12	-	-

N.B. Thickness and weight "Standard" Extra-Strong and "Double Extra-Strong" within swell elges have a correspondant value in a "Schedule". * In accordance to ANSI B 36.19
 For different thickness that suitable the weights can proceed by the following formula: $24.66 (C - J) t$

$$\frac{1000}{\text{---}}$$

NICKEL AND NICKEL ALLOYS COMPARATIVE CHART

ALLOY	UNS Nr	WS Nr	C	Cr	Ni	CU	Mo	Co	Fe	Min	Al	Ti	Others %
INCONEL G3	N06985	2.4619	0.015 max	21-23.5	36.0 min	1.5-2.5	6-8.0	5.0 max	16-21.0	1.0 max	-	-	W<1.5 Si<1.0 Nb<0.5 P<0.04 S<0.03
INCOLOY 800	N08800	1.4876	0.1 max	19-23.0	30-35.0	0.75 max	-	-	39.5 min	1.5 max	0.15-0.60	0.15-0.60	Si<1.0 S<0.015
INCOLOY 800H	N08810	1.4876	0.08	21	32.5	-	-	-	46	-	-	-	Al+Ti 0.85-1.2
INCOLOY 800HT	N08811	-	0.06-0.1	19-23.0	30-35.0	0.75 min	-	-	39.5 min	1.5 max	0.15-0.60	0.15-0.60	Al+Ti 0.85-1.2 Si<1.0 S<0.015
INCOLOY 028	N08028	1.4563	0.015 max	26-28.0	30-32.0	1-1.4	3-4.0	-	bal	-	-	-	N 0.04 - 0.07
ALLOY 31	N08031	1.4562	0.015 max	26-28.0	30-32.0	1-1.4	6-7.0	-	bal	-	-	-	N 0.15 - 0.25
INCOLOY 801	N08801	-	-	21	32	-	-	-	45	-	-	1	-
INCOLOY 802	N08802	-	0.4	21	32.5	-	-	-	46	-	-	-	-
INCOLOY 803	S35045	-	0.6-0.10	25-29	32-37	0.75 max	-	-	bal	1.5 max	0.15-0.6	0.15-0.6	Si<1.0 S<0.015
INCOLOY 825	N08825	2.4658	0.05 max	19.5-23.5	38-46.0	1.5-3.0	2.5-3.5	-	22.0 min	1.0 max	0.2 max	0.6-1.2	Si<0.5 S<0.03
INCOLOY 840	-	1.4847	-	20	20	-	-	-	60	-	-	-	-
INCOLOY 864	S35135	-	0.03	21	34	-	4.2	-	bal	-	-	0.6	Si 0.8
NI-SPAN C-902	N09902	-	0.06 max	4.9-5.75	41-43.5	-	-	-	bal	0.8 max	0.3-0.8	2.2-2.75	Si<1.0 S<0.04 P<0.04
INCOLOY 903	N19903	-	-	-	38	-	-	15	42	-	0.7	1.4	Nb3.0
INCOLOY 907	N19907	2.4693	-	-	38	-	-	13	42	-	0.03	1.5	Nb 4.7 S0.15
INCOLOY 909	N19909	2.4692	-	-	38	-	-	13	42	-	0.03	1.5	Nb 4.7 S0.4
INCOLOY 925	N09925	-	0.03 max	19.5-22.5	42-46.0	1.5-3.0	2.5-3.5	-	22.0 min	1.0 max	0.1-0.5	1.9-2.4	Si<0.5 Nb<0.5 P<0.03 S<0.03
INCOLOY DS	-	1.4862	0.1 max	17-19.0	34.5-41.0	0.5 max	-	-	bal	0.8-1.5	-	0.2 max	Si 1.9 - 2.6 S<0.03
INCOLOY 020	N08020	2.4660	0.02 max	19-21	35-38	3.0-4.0	2.0-3.0	-	37	-	-	-	Nb 0.6
INCOLOY 25-6Mo	N08926	1.4529	-	20	25	1.2	6.5	-	47	-	-	-	N0.5
INCOLOY A-286	S66286	1.4890	-	15	25.5	-	1.25	-	56.5	-	-	2.1	-

SUMMARY OF THE MAIN ASTM STANDARDS GENERALLY USED FOR SHEETS / PLATES

ASTM	Grade	Chemical requirements percent (%)										Mechanical requirements			
		C	Mn	P	S	Si	N	Cr	Mo	Cu	Others	Tensile Strength min-MPa	Yield Strength min-MPa	Elong min %	Hardness Brinell
A240	304	0.08	2.00	0.045	0.030	0.75	8.00-10.5	18.00-20.0				515	205	40	201
	304L	0.03	2.00	0.045	0.030	0.75	8.00-12.0	18.00-20.0				485	170	40	201
	310	0.08	2.00	0.045	0.030	1.50	19.0-22.0	24.0-26.0	2.00-3.00			515	205	40	217
	316	0.08	2.00	0.045	0.030	0.75	10.0-14.0	16.0-18.0	2.00-3.00			515	205	40	217
	316L	0.03	2.00	0.045	0.030	0.75	10.0-14.0	16.0-18.0	2.00-3.00			485	170	40	217
	317L	0.03	2.00	0.045	0.030	0.75	11.0-15.0	18.0-20.0	3.00-4.00			515	205	40	217
A307	321	0.08	2.00	0.045	0.030	0.75	8.00-12.0	17.0-19.0			TR:50Cr, 17Ni	515	205	40	217
	347	0.08	2.00	0.045	0.030	0.75	8.00-13.0	17.0-19.0			Qu, 1/2 Ni, 1/2 Cu, 1/2 Ti	515	205	40	217
	2	0.050-0.21	0.55-0.80	0.035	0.040	0.15-0.40		0.50-0.80	0.45-0.60			Class 1	205	40	201
	5	0.15	0.30-0.60	0.040	0.030	0.050		4.00-6.00	0.45-0.65			Class 2	230	310	22
	7	0.15	0.30-0.60	0.030	0.030	1.00		6.00-8.00	0.45-0.65			max201HB	max201HB	max201HB	max201HB
	9	0.15	0.30-0.60	0.030	0.030	1.00		8.00-10.0	0.90-1.10			max201HB	max201HB	max201HB	max201HB
A315	11	0.04-0.17	0.40-0.65	0.035	0.04	0.50-0.80		1.00-1.50	0.45-0.65			415	205	310	18
	12	0.04-0.17	0.40-0.65	0.035	0.04	0.50-0.80		0.80-1.15	0.45-0.60			415	205	310	18
	21	0.04-0.17	0.30-0.60	0.035	0.035	0.50		2.75-3.25	0.90-1.10			380	450	230	275
	22	0.05-0.17	0.30-0.60	0.035	0.035	0.50		2.00-2.50	0.90-1.10			415	515	205	310
	55	0.22	0.90	0.035	0.04	0.15-0.40						380-515	205	27	max201HB
	60	0.27	0.90	0.035	0.04	0.15-0.40						415-550	220	25	max201HB
A515	65	0.31	0.90	0.035	0.04	0.15-0.40						450-585	240	23	max201HB
	70	0.38	1.20	0.035	0.04	0.15-0.40						485-620	260	21	max201HB
	55	0.20	0.65-1.20	0.035	0.04	0.15-0.40						380-515	205	27	max201HB
	60	0.23	0.85-1.20	0.035	0.04	0.15-0.40						415-550	202	25	max201HB
	65	0.26	0.95-1.20	0.035	0.04	0.15-0.40						450-585	240	23	max201HB
	70	0.28	0.85-1.20	0.035	0.04	0.15-0.40						485-620	260	21	max201HB
A537	Class 1	0.24	0.70-1.35	0.035	0.040	0.15-0.40	0.25 max	0.80 max	0.35 max			485-620	345	22	max201HB
	Class 2	0.24	0.70-1.35	0.035	0.040	0.15-0.40	0.25 max	0.80 max	0.35 max			550-660	415	22	max201HB

IS-2002-62 STEEL PLATES FOR BOILERS

Designation	C	Si	P	S	Tensile strength		Yield Strength		Elongation	
					Max	Min	Max	Min	Test Specimen	Test Piece
IS 2002-1	0.18	0.10-0.35	0.040	0.040	382-442	340	382-442	340	5.65/5c	26
									4.75c	30
IS 2002-2A	0.20	0.10-0.35	0.050	0.050	412-461	461	412-461	461	5.65/5c	25
									4.75c	29
IS 2002-2B	0.22	0.10-0.35	0.050	0.050	510-608	461	510-608	461	5.65/5c	20
									4.75c	24

IS-2002-92 STEEL FOR GENERAL STRUCTURAL PURPOSES

Grade	Designation	% Chemical Composition				Tensile strength min (MPa)	Yield strength min (MPa)	% Elongation in 50mm	Impact Energy (Joule)	Hardness HRC
		C	Mn	S	P					
A	FE410WA	0.22	1.5	0.060	0.008	418	250	23	31	
B	FE410WB	0.22	1.5	0.045	0.040	418	250	23	21 for 27	
C	FE410WC	0.20	1.5	0.040	0.040	418	250	23	21 for 27	

Formula - Weight of Stainless Steel Sheets/Plates = Length (mm) x Width (mm) x Thickness (mm) x 7.86 = Kg/Sheet.

IMPERIAL WIRE AND SHEET METAL GAUGE

No.	Imperial Standard (swg)		Birmingham Wire (bwg)	
	ins	mm	ins	mm
7/0	.500	12.70		
6/0	.464	11.78		
5/0	.432	10.97		
4/0	.400	10.16	.454	11.53
3/0	.372	9.45	.425	10.79
2/0	.348	8.84	.380	9.65
0	.324	8.23	.340	8.63
1	.300	7.62	.300	7.62
2	.276	7.01	.284	7.21
3	.252	6.40	.259	6.58
4	.232	5.89	.238	6.05
5	.212	5.38	.220	5.59
6	.192	4.88	.203	5.16
7	.176	4.47	.180	4.57
8	.160	4.06	.165	4.19
9	.144	3.65	.148	3.76
10	.128	3.25	.134	3.40
11	.116	2.95	.120	3.04
12	.104	2.64	.109	2.77
13	.092	2.34	.095	2.41
14	.080	2.03	.083	2.11
15	.072	1.83	.072	1.83
16	.064	1.63	.065	1.65
17	.056	1.42	.058	1.47
18	.048	1.22	.049	1.24
19	.040	1.02	.042	1.07
20	.036	.914	.035	.888
21	.032	.813	.032	.813
22	.028	.711	.028	.711
23	.024	.610	.025	.635
24	.0220	.559	.022	.559
25	.0200	.508	.020	.508
26	.0180	.457	.018	.457
27	.0164	.417	.016	.406
28	.0148	.376	.014	.356
29	.0136	.345	.013	.330
30	.0124	.315	.012	.305
31	.0116	.295	.010	.254
32	.0108	.274	.009	.228
33	.0100	.254	.008	.203
34	.0092	.234	.007	.178
35	.0084	.213	.005	.127
36	.0076	.193	.004	.102
37	.0068	.173		
38	.0060	.152		
39	.0052	.132		
40	.0048	.122		

Formula of Calculating Weight

- Weight of S.S. Pipe
 $\text{O.D. (mm)} - \text{W. Thick (mm)} \times \text{W. Thick (mm)} \times 0.0248 = \text{Wt. Per Mtr.}$
 $\text{O.D. (mm)} - \text{W. Thick (mm)} \times \text{W. Thick (mm)} \times 0.00756 = \text{Wt. Per Feet.}$
- Weight of S.S. Round Bar
 $\text{DIA (mm)} \times \text{DIA (mm)} \times 0.00623 = \text{Wt. Per Mtr.}$
 $\text{DIA (mm)} \times \text{DIA (mm)} \times 0.0019 = \text{Wt. Per Feet.}$
- Weight of S.S. Square Bar
 $\text{DIA (mm)} \times \text{DIA (mm)} \times 0.00788 = \text{Wt. Per Mtr.}$
 $\text{DIA (mm)} \times \text{DIA (mm)} \times 0.0024 = \text{Wt. Per Feet.}$
- Weight of S.S. Hexagonal Bar
 $\text{A/F (mm)} \times \text{A/F (mm)} \times 0.00680 = \text{Wt. Per Mtr.}$
 $\text{A/F (mm)} \times \text{A/F (mm)} \times 0.002072 = \text{Wt. Per Feet.}$
- Weight of S.S. Flat Bar
 $\text{Width (mm)} \times \text{Thick (mm)} \times 0.00798 = \text{Wt. Per Mtr.}$
 $\text{Width (mm)} \times \text{Thick (mm)} \times 0.00243 = \text{Wt. Per Feet.}$
- Weight of S.S. Sheets & Plates
 $\text{Length (Mtrs)} \times \text{Width (Mtrs)} \times \text{Thick (mm)} \times 8 = \text{Kg. Per Sheet}$
 $\text{Length (Ft)} \times \text{Width (Ft)} \times \text{Thick (mm)} \times 3/4 = \text{Kg. Per Sheet}$
- Weight of S.S. Circle
 $\text{Dia (mm)} \times \text{Dia (mm)} \times \text{Thick (mm)} \div 160 = \text{Gms. Per PC}$
 $\text{Dia (mm)} \times \text{Dia (mm)} \times \text{Thick (mm)} \times 0.0000063 = \text{Kg. Per PC}$
- Weight of Brass Pipe / Copper Pipe
 $\text{O.D. (mm)} - \text{Thick (mm)} \times \text{Thick (mm)} \times 0.0260 = \text{Wt. Per Mtr.}$
- Weight of Lead Pipe
 $\text{O.D. (mm)} - \text{Wt. (mm)} \times \text{Wt. (mm)} \times 0.0345 = \text{Wt. Per Mtr.}$
- Weight of Aluminium Pipe
 $\text{O.D. (mm)} - \text{Thick (mm)} \times \text{Thick (mm)} \times 0.0083 = \text{Wt. Per Mtr.}$
- Weight of Aluminium Sheet
 $\text{Length (Mtr.)} \times \text{Width (Mtr.)} \times \text{Thick (mm)} \times 2.69 = \text{Wt. Per PC}$
- Weight for Conversion of Mtr. To Feet
 $\text{Weight of 1 Mtr.} \div 3.2808 = \text{Feet}$
- Formula for Calculating Width of Sheet for making Pipe
 $\text{Outer DIA} - \text{Wall Thickness} \times 2 \div 7 \text{ Width of Sheet}$
- Formula For Healthy Business
 $\text{Honesty} + \text{Quality of Goods} + \text{Quick Service} + \text{Reasonable rate} = \text{Good Health of Business}$

Forms Available

Stainless steel are available in a wide of product forms, including;

PLATE, SHEET, STRIP, PRECISION-STRIP, BILLET, ENGINEERING ROUNDS, BAR, ROD, WIRE PIPE, TUBE, FORGINGS, RINGS, CASTINGS, SECTIONS-HOT ROLLED EXTRUDED, DRAWN, COLD FORMED, SINTERED PRODUCTS. The flat product form can be obtained in variety of surface finishes and advice should be sought on the suitability of the different finishes for a particular application.

Application Industries >>>

Petrochemicals

Oil & Gas Ind.



Pulp & Paper Plant

Cement Plants



Surgical
Organic Chemicals



Water Piping Systems, Etc.
Heavy Engineering Pipe Lines

Water Treatments

Fabricator



Food & Beverages

Sugar Industries



Textile & Rubber
Pharmaceutical



Nuclear & Thermal Power Plant
(Heat Exchangers + Equipment)

Quality Policy >>>

OUR EXCELLENCE...

Quality is our prime concern. We are able to maintain high quality standards through our committed personnel and sound infrastructure. We ensure that finest quality material is used for our products. To ensure the quality of each material, we are providing Materials Test Certificate along with supply. Our team of experts maintain a vigil on the quality of the products. Every single piece is attached with test certificates and reports. We are continually improving our quality to serve our clients better.

OUR FACILITIES...

We have a sound infrastructure. Our spacious warehouse has the capacity to store large quantities of products. We possess a team of experts who are sourcing products of international standard to keep abreast with the global markets. Our qualified professionals have served as a beacon not only for us but also for the entire industry in establishing top-notch quality standards.

"Customers today want the very most and the very best for the very least amount of money, and on the best terms. Only the individuals and companies that provide absolutely excellent products and services at absolutely excellent prices will survive."



"The company with advance motto"



Stainless Steel, AISI 304, 316, 321, 310, 904L, 317L, 410 & 446,
Monel Metal, Nickel, Inconel & Incolloy, Nimonic, Nichrome,
Hastalloy, Molybdenm, Titanium & Alloy – 20, Duplex Steel &
Ferrous & Non-Ferrous Metals. All In Shape of Round, Sheet,
Wire, Pipe, Pipe Fittings etc.

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Quitters never make it to the winner's circle