

Our Products are sure to
STEEL the show



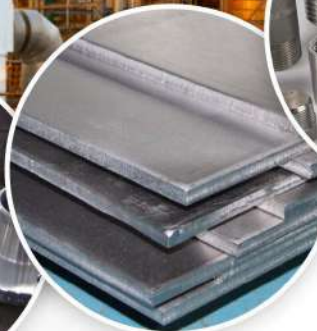
PIPES



**BUTTWELD
FITTINGS**



FLANGES



SHEET



**FORGED
FITTINGS**



The World of Steel

SARCOVAR Tube Industries

STOCKIST, SUPPLIERS OF : FERROUS & NON-FERROUS METALS

PIPES | SHEET | PLATE | COIL

STAINLESS STEEL

CARBON STEEL

ALLOY STEEL



SAROVAR
Tube Industries

Company Profile

Sarovar Tubes Industries is one of the reliable name in the Mumbai Metal Market. Our approach to customers requirement is what makes us different from others. Our better sourcing capability from varied sources within India & abroad is another advantage in dealing with us. Whether big or small we strive to deliver goods with equal devortion.

At Sarovar Tubes Industries, we aim to be a leading force in the metal market, known for our unwavering commitment to excellence and customer satisfaction. Our goal is to continually innovate and provide the best solutions to our clients, ensuring that our products and services meet the highest industry standards.

What makes us stand out is our customer-focused approach. We understand that every customer has unique requirements, and we strive to fulfill those needs with the utmost dedication. Whether you need small quantities or large volumes, we deliver with equal devotion, ensuring that each order is handled with care and precision. We are committed to building long-term relationships with our clients, offering them personalized solutions that are both cost-effective and reliable. Our approach is not just about delivering products, but about providing a complete service experience from start to finish.

Our Product Range

At Sarovar Tubes Industries, we offer a wide range of products that cater to the diverse needs of various industries. Our product portfolio includes:

- **Stainless Steel Seamless Pipes & Tubes:** Our stainless steel pipes and tubes are known for their strength, durability, and resistance to corrosion. They are used in various industrial applications, including construction, automotive, and chemical industries.
- **Carbon Steel Seamless Pipes:** We offer high-quality carbon steel pipes, which are widely used for structural, oil, and gas, as well as other industrial applications.
- **Alloy Steel Pipes:** Our alloy steel pipes are designed to withstand extreme conditions, making them ideal for industries such as oil and gas, power plants, and high-temperature applications.
- **Stainless Steel Sheets, Plates & Coils:** We provide an extensive range of stainless steel sheets, plates, and coils, suitable for various manufacturing and fabrication needs. These products offer superior resistance to corrosion and are highly durable.
- **Competitive Advantage of Sarovar Tubes Industries**
- **Quality Control System**
- **100% Satisfaction Guarantee**
- **Highly Professional Staff**
- **Accurate Testing Processes**

Third Party Inspection

To maintain complete transparency and build trust with our clients, we facilitate third-party inspection from globally recognized agencies upon request. This additional layer of verification reassures our clients of our product integrity and reinforces our commitment to quality.



SAROVAR
Tube Industries

Quality policy

Our quality assurance program is documented in an approved quality assurance manual, which covers all manufacturing, sales and services procedures. We exercise stringent quality control measures for ensuring the accurate dimensions and mechanical properties of our products. Our quality assurance system assures each product to pass through following processes and quality systems:

- Material Control System
- Process Control System
- Machining and Dimensional Control
- Certification and Supplementary Test
- Finishing and Marketing



The impeccable quality standards of our product range as well as services have contributed immensely to the success of our company. Providing our clients with flawless Hydraulic Tubes, CS Seamless Tubes, etc. is the prime motive of us at, Habtec Tubes Industry. For this, we employ innovative techniques of production as well as latest technology in our processes and also ensure that our entire range is in compliance with global standards. We also lay strong emphasis on using finest grade raw material that are sourced from well trusted vendors. In addition, our team of quality inspectors check the whole batch of fabricated products on different parameters like:

- Designs
- Strength
- Dimensional accuracy
- Abrasion and corrosion resistance.

Quality Assurance :

- To strive for customer satisfaction by service and technological integration
- Proper documentation as per well laid out quality manual
- Better supply chain management system to ensure prompt delivery and service to customers
- All products passes through best quality systems for material control, process control, testing, finishing and Packing.
- To train, motivate and encourage employees in achieving company's goals
- Create a sense of responsibility amongst all members of the organization
- To maintain a competent workforce through training
- Continually improve Quality Management System to ensure its continuing suitability to enable us to stay ahead of competition



Client Satisfaction :

We are a client centric organization and constantly endeavor to adopt various measures to give full satisfaction to our clients. This is done by offering them a quality range of Pipes, Tubes, Fittings, Flanges, Sheets and Fasteners at competitive prices. The assistance of our technically qualified engineers & professionals enables us to efficiently cater to the specifications provided by our clients. Our range successfully meets the varied requirements of general piping, construction, and engineering related industries.



SAROVAR
Tube Industries

Carbon Steel Seamless Pipes & Tubes

- ASTM A53 GR. B/A106 GR. B/ API 5L GR.B/ ST-52, ST-35, ST-45, ST-30, 40, A333GR6 etc.
- Line pipes: ASTM A / ASME SA106/A53 GR. A,B/C, API 5L GR. B, ASME SA179, SA192
- Low Temperature: ASTM A / ASME SA333/334 Gr. 1, to 6
- High Yield: API 5L X42, X46, X52, X56, X60, X65, X70, X80, PSL-1, PSL-2
- SAW/EFsW: ASTM A671 & A672
- Form: Seamless, ERW, SAW, LSAW, DSAW, EFsW
- Size: 1/2" NB. To 24" NB. (Seamless)
1/2" to 26" & UPTO 76" (Welded)
- Thickness: Sch. 20 To Sch. XXS (Seamless)
4mm to 12.7mm (Welded)



Alloy Steel Seamless Pipes & Tubes

- ASTM A / ASME SA 335 GR P1, P5, P9, P11, P12, P22, P91, P92, etc.
- ASTM A /ASME SA 691 Gr. 1 cr, 11/4 cr, 21/4 cr, 5 cr, 9cr



Stainless Steel Seamless, Erw Pipes & Tubes

- ASTM A / ASME SA 312 GR. TP 304, 304L, 304H, 309S, 309H, 310S, 310H, 316, 316L, 316Ti, 316H, 316LN, 317, 317L, 321, 321H, 347, 347H, 904L, etc.
S.S. / A.S. / C.S.



Stainless Steel Sheet, Plate & Coil

- Stainless Steel: ASTM A240, Gr. TP 304, 304L, 304LN, 309, 309S, 309H, 310H, 316, 316L, 316H, 316LN, 316Ti, 317, 317L, 321, 321H, 347, 347H, 409, 410, 420, 430 etc.
- Carbon Steel: IS 2062 / ASTM A36, Gr. A,B,C, IS 2002 Gr. 1 & 2 ASTM A516 Gr. 60 & 70
- Alloy Steel: ASTM A387 Gr. 2, 9, 11, 12 & 22 in class 1 & 2 ASTM A204 Gr. A & B, DIN 17175 Gr. 15Mo3 & 16Mo3 with IBR Test Certificate
- Duplex & Super Duplex: ASTM A / ASME SA 790 UNS NO S32205 / S32750 / S31803 / SMO 254
- Range: 0.5mm to 200mm thick in 1000mm to 3000mm width & 2500mm to 12500mm length available with NACE MR 01.75





SAROVAR
Tube Industries

CARBON STEEL LINE PIPE WEIGHTS

Normal Point Size		Outside Dia	Sch. 10	Sch. 20	Sch. 30	Std. Weight	Sch. 40	Extra Strong	Sch. 60	Sch. 80	Sch. 100	Sch. 120	Sch. 140	Sch. 160	XXS Strong
Inch	mm	mm	kg/m	kg/m	kg/m	kg/m	kg/m	kg/m	kg/m	kg/m	kg/m	kg/m	kg/m	kg/m	kg/m
1/8	6	10.3	0.28	-	-	0.37	0.37	0.47	-	0.47	-	-	-	-	-
1/4	8	13.7	0.49	-	-	0.63	0.63	0.80	-	0.80	-	-	-	-	-
3/8	10	17.1	0.63	-	-	0.85	0.85	1.10	-	1.10	-	-	-	-	-
1/2	15	21.3	1.00	-	-	1.27	1.27	1.62	-	1.62	-	-	-	1.95	2.55
3/4	20	26.7	1.27	-	-	1.68	1.68	2.19	-	2.19	-	-	-	2.89	3.63
1	25	33.4	2.09	-	-	2.50	2.50	3.23	-	3.23	-	-	-	4.23	5.45
1 1/4	32	42.2	2.69	-	-	3.38	3.38	4.47	-	4.47	-	-	-	5.60	7.77
1 1/2	40	48.3	3.11	-	-	4.05	4.05	5.41	-	5.41	-	-	-	7.24	9.56
2	50	60.3	3.94	-	-	5.44	5.44	7.48	-	7.48	-	-	-	11.11	13.41
2 1/2	65	73.0	5.25	-	-	8.62	8.63	11.41	-	11.41	-	-	-	14.91	20.39
3	80	88.9	6.46	-	-	11.29	11.29	15.27	-	15.27	-	-	-	21.33	27.67
3 1/2	90	101.6	7.42	-	-	13.57	13.57	18.62	-	18.62	-	-	-	-	-
4	100	114.3	8.37	-	-	16.07	16.07	22.31	-	22.31	-	28.30	-	33.53	41.02
5	125	141.3	11.61	-	-	21.78	21.78	30.95	-	30.95	-	40.28	-	49.09	57.42
6	150	168.3	13.81	-	-	28.26	28.26	42.56	-	42.56	-	54.20	-	67.55	79.18
8	200	219.1	20.01	33.31	36.79	42.53	42.53	64.63	53.09	64.63	75.89	90.43	100.93	111.25	107.87
10	250	273.1	27.79	41.77	51.00	60.29	60.29	81.54	81.54	95.97	114.74	133.00	155.10	172.25	155.10
12	300	323.9	36.00	49.72	65.20	73.82	79.72	97.44	108.96	132.01	159.85	186.92	208.04	238.72	186.92
14	350	355.6	54.68	67.90	81.28	81.28	94.49	107.38	126.68	158.08	194.80	224.60	253.53	281.68	-
16	400	406.4	62.63	77.83	93.21	93.21	123.29	123.29	160.12	203.48	245.50	286.62	333.11	365.30	-
18	450	457.0	70.59	87.71	122.36	105.14	155.91	139.19	205.80	254.59	309.76	363.65	408.45	459.51	-
20	500	508.0	78.54	117.15	155.10	117.07	183.37	155.10	247.85	311.17	381.53	441.49	508.11	564.81	-
22	550	559.0	86.50	129.13	171.01	129.01	-	171.01	294.25	373.83	451.42	527.02	600.63	672.26	-
24	600	610.0	94.45	141.12	209.54	141.12	255.14	186.92	355.02	442.08	547.71	640.03	720.15	808.22	-
26	650	660.0	127.50	202.83	-	152.87	-	202.83	-	-	-	-	-	-	-
28	700	711.0	137.42	218.73	272.18	164.80	-	218.73	-	-	-	-	-	-	-
30	750	762.0	147.36	234.64	292.06	176.73	-	234.64	-	-	-	-	-	-	-
32	800	813.0	157.28	250.55	311.95	188.66	342.70	250.55	-	-	-	-	-	-	-
34	850	864.0	167.20	266.46	331.83	200.59	364.58	266.46	-	-	-	-	-	-	-
36	900	914	177.13	282.36	351.72	212.52	420.56	282.36	-	-	-	-	-	-	-



SAROVAR
Tube Industries

CARBON STEEL, ALLOY STEEL, LOW TEMP, PIPE & TUBES SPECIFICATION

CHEMICAL ANALYSIS									MECHANICAL PROPERTIES			SPECIFIC REQUIREMENT
									TENSILE STRENGTH	YIELD STRENGTH	ELONGATION	
SPECIFICATION	WT	C%	Mn %	P % MAX	S% MAX	Si%	Cr%	Mo%	Mpa	Mpa	50mm MIN Longitudinal	
ASTM A 53/A	AW	0.25MAX	0.95MAX	0.050	0.060	-	-	-	331MIN	250MIN	36	Cr Mo Cu Ni Va 0.40 0.15 0.40 0.40 0.08 Five elements not to exceed 1%
ASTM A 53/B	AW	0.30MAX	1.20MAX	0.050	0.060	-	-	-	413MIN	240MIN	29/5	
ASTM A 106/A	AW	0.25MAX	0.27-0.93	0.025	0.025	0.10MIN	0.40MAX	0.15MAX	330MIN	205MIN	35/28	
ASTM A 106/B	AW	0.30MAX	0.29-1.06	0.025	0.025	0.10MIN	0.40MAX	0.15MAX	415 MIN	240MIN	30/22	
ASTM A 106/C	AW	0.35MAX	0.29-1.06	0.025	0.025	0.10MIN	0.40MAX	0.15MAX	485MIN	275MIN	30/22	
ASTM A 179	MW	0.06-0.18	0.27-0.63	0.048	0.048	-	-	-	325MIN	180MIN	35.0	Hardness 72 HRB Max
ASTM A 214	MW	0.18MAX	0.27-0.63	0.050	0.050	-	-	-	385MIN	180MIN	35.0	Hardness 72 HRB Max
ASTM A 192	MW	0.06-0.18	0.27-0.63	0.048	0.048	0.25MAX	-	-	325MIN	180MIN	35.0	Hardness 77 HRB Max
ASTM A 209/T1	MW	0.10-0.20	0.30-0.80	0.045	0.045	0.10-0.50	-	0.44-0.65	380MIN	205MIN	30/22	Hardness 80 HRB Max
ASTM A 209/T1a	MW	0.15-0.25	0.30-0.80	0.045	0.045	0.10-0.50	-	0.44-0.65	365MIN	195MIN	30/22	Hardness 81 HRB Max
ASTM A 209/T1B	MW	0.14MAX	0.30-0.80	0.045	0.045	0.10-0.50	-	0.44-0.65	415MIN	220MIN	30/22	Hardness 77 HRB Max
ASTM A 210/A-1	MW	0.27max	0.93max	0.048	0.058	0.10MIN	-	-	415MIN	255MIN	30/22	Hardness 79 HRB Max
ASTM A 210/C	MW	0.35MAX	0.29-1.06	0.048	0.058	0.10MIN	-	-	485MIN	275MIN	30/22	Hardness 89 HRB Max
ASTM A 213/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	415MIN	205MIN	30/22	Hardness 85 HRB Max
ASTM A 213/T5	MW	0.15MAX	0.30-0.60	0.030	0.030	0.50MAX	4.00-6.00	0.44-0.65	415MIN	205MIN	30/22	Hardness 85 HRB Max
ASTM A 213/T11	MW	0.15MAX	0.30-0.60	0.030	0.030	0.50-1.00	1.00-1.50	0.44-0.65	415MIN	205MIN	30/22	Hardness 85 HRB Max
ASTM A 213/T12	MW	0.15MAX	0.30-0.61	0.045	0.045	0.50MAX	0.80-1.25	0.44-0.65	415MIN	205MIN	30/22	Hardness 85 HRB Max
ASTM A 213/T22	MW	0.15MAX	0.30-0.60	0.030	0.030	0.50MAX	1.90-2.60	0.87-1.13	415MIN	205MIN	30/22	Hardness 85 HRB Max
ASTM A 333/1	AW	0.30MAX	0.40-1.06	0.025	0.025	-	-	-	380MIN	205MIN	25/20	IMPACT AS -50F FOR 40X10J/18/14 -50F40X10J/18/14 90 HRB MAX
ASTM A 333/6	AW	0.30MAX	0.29-1.06	0.025	0.025	0.10MIN	-	-	415MIN	240MIN	30/22	
ASTM A 334/1	AW	0.30MAX	0.40-1.06	0.025	0.025	-	-	-	380MIN	205MIN	35/28	
ASTM A 334/6	MW	0.30MAX	0.29-1.06	0.025	0.025	0.10MIN	-	-	415MIN	240MIN	30/22	
ASTM A 335/P1	AW	0.10-0.20	0.30-0.80	0.025	0.025	0.10-0.50	-	0.44-0.65	380MIN	205MIN	30/22	V 0.18-0.25, N 0.030-0.070 Al 0.04 max, Ni 0.40 MAX, Cb 0.06-0.10
ASTM A 335/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	380MIN	205MIN	30/22	
ASTM A 335/P5	AW	0.15MAX	0.30-0.60	0.025	0.025	0.50MAX	4.00-6.00	0.45-0.65	415MIN	205MIN	30/22	
ASTM A 335/P9	AW	0.15MAX	0.30-0.60	0.025	0.025	0.25-1.00	8.00-10.00	0.09-1.10	415MIN	172MIN	30/22	
ASTM A 335/P11	AW	0.15MAX	0.30-0.60	0.025	0.025	0.50-1.00	1.00-1.50	0.44-0.65	415MIN	205MIN	30/22	
ASTM A 335/P12	AW	0.15MAX	0.30-0.61	0.025	0.025	0.50MAX	0.80-1.25	0.44-0.65	415MIN	205MIN	50/22	
ASTM A 335/P22	AW	0.15MAX	0.30-0.60	0.025	0.025	0.50MAX	1.90-2.60	0.87-1.13	415MIN	205MIN	30/22	
ASTM A 335/P91		0.08-0.12	0.30-0.60	0.020	0.010	0.20-0.50	8.0-09.50	0.85-1.05	585MIN	475MIN	30/20	
BS/3059/1/33		0.15Max	0.30-0.70	0.050	0.050	-	-	-	324-441	186MIN	25	
BS/3059/2/33		0.15MAX	0.40-0.70	0.050	0.050	0.10-0.35	-	-	324-441	186MIN	21	
BS/3059/2/45		0.12-0.18	0.90-1.20	0.035	0.035	0.10-0.35	-	-	441-560	245MIN	22	
BS/3059/2/620		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	235MIN	22	
DIN/17175/ST35.8		0.17MAX	0.40MIN	0.040	0.040	0.35MAX	-	-	340-441	235MIN	25	
DIN/17175/ST45.8		0.22MAX	0.45MIN	0.040	0.040	0.10-0.35	-	-	441-540	255 MIN	25	
DIN/17175/15MO3		0.12-0.20	0.50-0.80	0.040	0.040	0.10-0.35	-	0.25-0.35	441-540	284MIN	21	
N/17175/13CrMO44		0.10-0.18	0.40-0.70	0.040	0.040	0.10-0.35	0.70-1.60	0.40-0.50	441-570	294MIN	22	
N/17175/10CrM910		0.15MAX	0.40-0.60	0.040	0.040	0.15-0.50	2.0-2.5	0.9-1.10	441-570	294MIN	22	
ASTM A 199/T5	MW	0.50-0.15	0.30-0.60	0.030	0.030	0.50MAX	4.00-6.00	0.45-0.65	415MIN	170MIN	30/22	HARDNESS 85 HRB MAX
ASTM A 199/T11	MW	0.05-0.15	0.30-0.60	0.030	0.030	0.50-1.00	1.00-1.50	0.44-0.65	415MIN	170MIN	30/22	HARDNESS 85 HRB MAX
ASTM A 199/T22	MW	0.05-0.15	0.30-0.60	0.030	0.030	0.50MAX	1.90-2.60	0.87-1.13	415MIN	170MIN	30/22	HARDNESS 85 HRB MAX
ASTM A 199/T4	MW	0.15MAX	0.30-0.60	0.030	0.030	0.50-1.00	2.15-2.85	0.44-0.65	415MIN	170MIN	30/22	HARDNESS 85 HRB MAX
ASTM A 199/T7	MW	0.15MAX	0.30-0.60	0.030	0.030	0.50-1.00	6.00-8.00	0.45-0.65	415MIN	170MIN	30/22	HARDNESS 85 HRB MAX
ASTM A 200/T5	MW	0.15MAX	0.30-0.60	0.030	0.030	0.50-1.00	4.00-6.00	0.45-0.65	415MIN	170MIN	30/22	HARDNESS 85 HRB MAX
ASTM A 200/T11	MW	0.05-0.15	0.30-0.60	0.030	0.030	0.50-1.00	1.00-1.50	0.44-0.65	415MIN	170MIN	30/22	HARDNESS 85 HRB MAX
ASTM A 200/T22	MW	0.05-0.15	0.30-0.60	0.030	0.030	0.50MAX	1.90-2.60	0.87-1.13	415MIN	170MIN	30/22	HARDNESS 85 HRB MAX
ASTM A 200/T4	MW	0.05-0.15	0.30-0.60	0.030	0.030	0.50-1.00	2.15-2.85	0.44-0.65	415MIN	170MIN	30/22	HARDNESS 85 HRB MAX
ASTM A 200/T7	MW	0.15MAX	0.30-0.60	0.030	0.030	0.50-1.00	6.00-8.00	0.45-0.65	415MIN	170MIN	30/22	HARDNESS 85 HRB MAX
ASTM A 199/T9	MW	0.15MAX	0.30-0.60	0.030	0.030	0.25-1.00	8.00-10.0	0.90-1.10	415MIN	170MIN	30/22	HARDNESS 89 HRB MAX



SAROVAR
Tube Industries

Pipe dimension in accordance to **ANSI B 36 - 10**

NOMINAL THICKNESS AND WEIGHTS OF STAINLESS STEEL PIPES

Size of Pipe & Tubes		Number of Schedule													
		5S		10S		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	1.27	-	-
3/4"	26.7	1.65	1.03	2.11	1.27	-	-	2.5	1.500	-	-	2.87	1.68	-	-
1"	33.4	1.65	1.29	2.77	2.09	-	-	2.5	2.24	-	-	3.38	2.50	-	-
1 1/4"	42.2	1.65	1.65	2.77	2.69	-	-	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	3.94	-	-	3.0	4.9	-	-	3.91	5.44	-	-
2 1/2"	73.0	2.11	3.70	3.05	5.26	-	-	4.00	6	-	-	5.16	8.69	-	-
3"	88.9	2.11	4.50	3.05	6.45	-	-	4.00	8.423	-	-	5.49	11.29	-	-
3 1/2"	101.6	2.11	5.20	3.05	7.41	-	-	4.5	9.62	-	-	5.74	13.57	-	-
4"	114.3	2.11	5.81	3.05	8.37	-	-	4.5	12.255	-	-	6.02	16.08	-	-
5"	141.3	2.77	9.45	3.40	11.61	-	-	5.00	16.900	-	-	6.55	21.77	-	-
6"	168.3	2.77	11.31	3.40	14.04	-	-	6.35	22.08	-	-	7.11	28.26	-	-
8"	219.1	2.77	14.78	3.76	20.27	-	-	6.35	33.32	7.04	36.82	8.18	42.55	10.31	53.09
10"	273.1	3.40	22.62	4.19	27.80	-	-	6.35	41.76	7.80	51.01	9.27	60.30	12.70	81.53
12"	323.9	3.96	31.36	4.57	36.17	-	-	6.35	49.71	8.38	65.19	10.31	79.71	14.27	108.93
14"	355.6	3.96	34.23	4.78	54.69	6.35	55.53	7.92	67.91	9.53	81.33	11.31	94.55	15.09	126.72
16"	406.4	4.19	41.60	4.78	47.60	6.35	63.61	7.92	77.83	9.52	93.27	12.17	123.30	16.66	160.13
18"	457.0	4.19	46.83	4.78	54.15	6.35	71.69	87.71	89.10	11.13	122.38	14.27	155.91	19.05	205.75
20"	508.0	4.78	59.22	5.54	69.70	6.35	79.76	9.52	117.15	12.70	155.13	15.09	183.43	21.62	247.84
22"	559.0	4.78	63.75	6.35	76.76	6.35	87.84	9.52	129.14	12.70	171.10	-	-	22.22	294.27
24"	609.6	5.54	82.60	6.35	95.92	6.35	95.92	9.52	141.12	14.27	209.65	17.48	255.43	24.61	442.11
26"	660.4	-	-	-	-	7.92	129.40	12.70	202.74	-	-	-	-	-	-
28"	711.2	-	-	-	-	7.92	139.47	12.70	218.71	15.88	272.23	-	-	-	-
30"	762.0	-	4	-	-	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	364.58	-	-
36"	914.4	-	-	-	-	7.92	178.26	12.70	284.75	15.88	357.28	19.05	420.56	-	-

N.B. Thickness and weight "Standard" Extra-Strong and "Double Extra-strong" within swell elges have a correspondant value in a "Schedule".

For different thickness that suitable the weights can proceed by the following formular $\frac{24.66 (D-t)}{1000}$

* In accordance to ANSI B 36.19



SAROVAR
Tube Industries

Pipe dimension in accordance to **ANSI B 36 - 10**

NOMINAL THICKNESS AND WEIGHTS OF STAINLESS STEEL PIPES

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	1.95	2.77	1.26	3.73	1.62	7.47	2.55
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	4.24	3.38	2.50	4.55	3.23	0.09	5.45
4.85	4.47	-	-	-	-	-	-	6.35	5.61	3.56	3.38	4.85	4.46	9.70	7.77
5.08	5.41	-	-	-	-	-	-	7.14	7.24	3.68	4.05	5.08	5.40	10.15	9.56
5.54	7.48	-	-	-	-	-	-	8.74	11.11	3.91	5.44	5.54	7.48	11.07	13.41
7.01	11.41	-	-	-	-	-	-	9.52	14.92	5.16	8.62	7.01	11.40	14.02	20.39
7.62	15.27	-	-	-	-	-	-	11.13	21.35	5.49	11.28	7.62	15.27	15.24	27.11
8.08	18.64	-	-	-	-	-	-	-	-	5.74	13.57	8.08	18.64	-	-
8.56	22.32	-	-	11.13	28.32	-	-	13.49	33.54	6.02	16.08	8.56	22.32	17.12	41.03
9.53	30.97	-	-	12.70	40.28	-	-	15.88	49.12	6.55	21.77	9.52	30.97	19.05	57.43
10.97	42.56	-	-	14.27	54.20	-	-	18.26	67.57	7.11	28.26	10.97	42.56	21.95	79.11
12.70	64.63	15.09	75.89	18.26	90.32	20.62	100.93	23.01	112.97	8.18	42.49	12.70	64.57	22.22	107.78
15.09	95.98	18.26	114.71	21.44	133.01	25.40	155.10	28.58	172.27	9.27	60.29	12.70	81.53	25.40	156.20
17.48	132.05	21.44	159.87	25.90	186.92	28.58	208.68	33.32	238.69	9.52	73.86	12.70	97.44	25.40	186.92
19.05	158.11	23.83	194.98	27.79	224.88	31.75	253.58	35.71	281.72	9.52	81.33	12.70	107.40	-	-
21.44	203.54	26.19	245.57	30.96	286.66	36.53	333.21	40.49	365.38	9.52	93.27	12.70	123.31	-	-
23.83	309.64	29.36	309.64	34.92	363.58	39.67	408.28	45.24	459.39	9.52	105.17	12.70	139.16	-	-
26.19	311.19	32.54	381.55	38.10	441.52	44.45	508.15	50.01	564.85	9.52	117.15	12.70	155.13	-	-
28.58	373.85	34.92	451.45	41.28	527.05	47.62	600.67	53.98	672.30	9.52	129.14	12.70	171.10	-	-
30.96	442.4	38.89	547.74	46.02	640.67	52.37	720.19	59.54	808.27	9.52	141.12	12.70	187.07	-	-
-	-	-	-	-	-	-	-	-	-	9.52	152.88	12.70	202.74	-	-
-	-	-	-	-	-	-	-	-	-	9.52	164.86	12.70	218.71	-	-
-	-	-	-	-	-	-	-	-	-	9.52	176.57	12.70	234.44	-	-
-	-	-	-	-	-	-	-	-	-	9.52	188.50	12.70	250.33	-	-
-	-	-	-	-	-	-	-	-	-	9.52	200.42	12.70	266.22	-	-
-	-	-	-	-	-	-	-	-	-	9.52	212.34	12.70	282.12	-	-

N.B. Thickness and weight "Standard" Extra-Strong and "Double Extra-strong" within swell elges have a correspondant value in a "Schedule".

For different thickness that suitable the weights can proceed by the following formular $\frac{24.66 (D-t)}{1000} t$

* In accordance to ANSI B 36.19



SAROVAR
Tube Industries

CARBON STEEL/ALLOY STEEL SEAMLESS TUBES & PIPES

Size		Condition	: Heat Treated, Hard Drawn, Stress Relieved
Output Diameter	: 6.00mm to 219.9mm	Standards	: ASTM A 53, A106, A-179, A-192, A-210, A-213, A-333, ASTM A 334, A-335, BS-3059, BS-6323, DIN-17175, DIN-2391
Wall Thickness	: 0.7mm to 12mm		
Length	: Random Length 4-7 MTR Fixed Length max 30 MTR We also produce "U" tube in radius 1.5 D to 2 MTR - as per customer requirement.		

Tolerance

Standard	Size Range OC	OD Tolerance	W.T. Tolerance	Fixed Length Tolerance
ASTM A 106 1/8"-1-1/2" NB incl. Pipes for high temperature service	+/-0.40mm 1-1/2"-4" NB incl. 4"-8" NB incl.	-12.5% +/-0.80mm +1.60/-0.80mm	+/-5% (Weight tolerance +10%, -3.5%)	
ASTM A 179 Upto 25.4 mm Seamless low carbon H.E & Condenser Pipes ASTM A192 50.8-63.5 mm incl. Seamless carbon Steel Boiler Tubes ASTM A 210 101.6-190.5 mm incl. Seamless Medium Carbon Steel Boiler & H.E Tubes	+/-0.10mm 25.40-38.10 mm incl. 38.10-50.8 mm incl. +/-0.25mm 63.5-76.0 mm incl. 76.2-101.6 mm incl. +0.38/-0.64mm	+20/-0% +/-0.15mm +/-0.20mm +22/-0% +/-0.30mm +/-0.38mm +22/-0%	+3/-0mm +20/-0% +22/-0% +5/-0mm +22/-0% +22/-0% +5/-0mm	+3/-0mm +3/-0mm +5/-0mm +5/-0mm
BS 3059 Steel Boiler & Super Heater Tubes	Part I CF Part II S1	+/-0.5% min ≥+/-0.10mm +/-0.75% min	+/-7.50%	+3.0/-mm Up to 6Mtr.
DIN 2391 Seamless & Precision Steel Tubes 39.98-50.01mm	Part II S2 Upto 29.97mm 29.97-40.64mm +/-0.20mm 50.01-60.00mm	≥+/-0.30mm +/-0.076mm +/-0.152 mm +/-10% +/-0.249mm	+/-10% +/-10% +/-10%	
BS 6323 (Part 4) Seamless Tubes for automobile, mechanical & general engg. purpose	Upto 30mm 31-50mm 51-70mm 71-90mm 91-110mm 111-130mm 131-160mm	+/-0.10mm +/-0.15mm +/-0.20mm +/-0.25mm +/-0.30mm +/-0.35mm +/-0.45mm	+/-10% (min +/-0.10mm)	+2/-0mm (upto 500mm) +3/-0mm (500-2000mm) +5/-0mm (2001-5000mm) +10/-0mm (5001-10000mm)

Test

Standard	Product	Tensile	Flattening/	Flaring	Hardness	Hydrostatic	Non Destructive Electric Test
ASTM A 106	✓	✓	✓	-	-	✓	-
ASTM A 179	✓	✓	✓	✓	✓	✓	On request
ASTM A 192	✓	✓	✓	✓	✓	✓	On request
ASTM A 210	✓	✓	✓	✓	✓	✓	On request
ASTM A 333	✓	✓	✓	-	Impact-Hardness	✓	On request
ASTM A 334	✓	✓	✓	✓	Impact	✓	On request
BS 3059	✓	✓	✓	✓	-	✓	On request
DIN 2391	✓	✓	✓	-	-	✓	On request
BS 6323	✓	✓	✓	-	-	On request	On request



SAROVAR
Tube Industries

STAINLESS STEEL SEAMLESS & WELDED TUBES & PIPES

Tolerance

Specification	Allowable Outside Diameter Variation in mm			Allowable Wall Thickness Variation		Exact Length Testing Tolerance in mm		
ASTM-A213 Seamless Boiler Superheater and Heat Exchanger Tubes	Nominal Diameter Under 25.4 25.4-38.1 incl 38.1-50.8 excl 50.8-63.5 excl 63.5-76.2 incl 76.2-101.6 incl	Over .1016 .1524 .2032 .254 .3048 .381	Under .1016 .1524 .2032 .254 .3048 .381	%Over +20 +22 +22 +2 +22 +22	%Under -0 -0 -0 -0 -0 -0	Over 3.175 3.175 3.176 4.46 4.76 4.76	Under 0 0 0 0 0 0	Tension Test Flattening Test Flare Test Hardness Test 100% Hydrostatic test Refer to ASTM A-450
ASTM-A249 Welded Boiler Superheater, Heat Exchanger And Condenser Tubes	Under 25.4 25.4-38.1 incl 38.1-50.8 Excl 50.0-63.5 excl 63.5-76.2 incl 76.2-101.6 incl	.1016 .1524 .2032 .254 .3848 .381	.1016 .1524 .2032 .254 .3048 .381	+10 +10 +10 +10 +10 +10	-10 -10 -10 -10 -10 -10	3.175 3.175 3.175 4.76 4.76 4.76	0 0 0 0 0 0	Tension Test Flattening Test Flare Test Reverse Bend Test Hardness Test 100% Hydrostatic Test *Reverse flattening Test Refer to ASTM A-450 *Wherever applicable
ASTM-A269 Seamless & Welded Tubing for General Service	Unpt 12.7 12.7-38.1 excl 38.1-88.9 excl 88.9-139.7 excl 139.7-203.2 excl	.13 .13 .25 .38 .76	.13 .13 .25 .38 .76	+15 +10 +10 +10 +10	-15 -10 -10 -10 -10	3.2 3.2 4.8 4.8 4.8	0 0 0 0 0	Flare Test Flange Test (Welded Only) Hardness Test Reverse Flattening Test (Welded only) 100% Hydrostatic Test Refer to ASTM-A269
ASTM-A270 Seamless & Welded Sanitary Tubing	25.4 38.1 50.8 60.5 76.2 101.6	.05 .05 .05 .05 .08 .08	.20 .20 .28 .28 .30 .38	+12.5 +12.5 +12.5 +12.5 +12.5 +12.5	-12.5 -12.5 -12.5 -12.5 -12.5 -12.5	3.2 3.2 3.2 3.2 3.2 3.2	0 0 0 0 0 0	Reverse flattening Test 100% Hydrostatic Test External polish on all tubes Refer to ASTM A-270
ASTM-A312 Seamless & Welded pipe	3.175-38.1 incl 38.1-1016 incl 101.6-203.2 incl	.79 .4 1.59	.79 .79 .79	12.5% under Minimum Wall nominal wall Specified		6.4 6.4 6.4 (Normally Random Lengths ordered)	0 0 0	Tension Test Flattening Test 100% Hydrostatic Test Refer to ASTM A-530
ASTM A-358 Welded pipe	219.08-750mm or 0.01 inch	+0.5%		-0.3		6.0		Refer to ASTM A-530



SAROVAR
Tube Industries

CHEMICAL COMPOSITION OF STAINLESS STEEL

Grade	Chemical Composition - Per cent									Nearest Equivalent Specification		
	AISI	C Max	Mn Max	P Max	S Max	Si Max	Cr	Ni	Mo	Other Element	I.S	En
202		0.15	7.5/10	0.06	0.03	1	17.0/19.0	4.0/6.0	-	-	-	-
301		0.15	2.0 max	0.045	0.040	1.0	16.0/18.0	6.0/8.0	-	-	10Cr 17Ni7	-
302		0.15	2.0	0.045	0.030	1.0	17.0/19.0	8.0/10.0	-	-	07Cr18Ni9	En-58A
303		0.15	2.0	0.045	-	1.0	17.0/19.0	8.0/10.0	-	-	15Cr18Ni9	En-58M
304		0.08	2.0	0.045	0.030	1.0	18.0/20.0	8.0/10.0	-	-	04Cr18Ni10	En-58E
304L		0.030	2.0	0.045	0.030	1.0	18.0/20.0	8.0/10.0	-	-	02Cr18Ni11	-
308		0.08	2.0	0.040	0.030	1.0	10.0/21.0	10.0/12.0	-	-	-	-
309		0.20	2.0 max	0.045	0.030	1.0	22.0/24.0	12.0/15.0	-	-	20Cr24Ni12	-
309S		0.08	2.0	0.045	0.030	1.0	22.0/24.0	12.0/15.0	-	-	-	-
310		0.25	2.0	0.045	0.030	1.50	24.0/26.0	19.0/22.0	-	-	10Cr25Ni12	-
310S		0.08	2.0	0.045	0.030	1.50	24.0/26.0	19.0/22.0	-	-	-	-
314		0.25	2.0	0.040	0.030	1.5 to 3	25.0/26.0	19.0/22.0	-	-	-	-
316		0.08	2.0	0.045	0.030	1.0	16.0/18.0	10.0/14.0	2.0/3.0	-	04Cr17Ni12Mo2	En 58H
316L		0.030	2.0	0.045	0.030	1.0	16.0/18.0	10.0/14.0	2.0/3.0	-	03Cr17Ni12Mo2	-
317		0.08	2.0	0.045	0.030	1.0	18.0/20.0	11.0/15.0	3.0/4.0	-	-	-
317L		0.030	2.0	0.045	0.030	1.0	18.0/20.0	11.0/15.0	3.0/4.0	-	Tiy5 c Min	-
316TI		0.080	2.0	0.045	0.030	1.0	16.0/18.0	10.0/14.0	2.0/3.0	Ti5xCmin	-	-
321		0.08	2.0	0.045	0.030	1.0	17.0/19.0	9.0/12.0	-	Ti5xCmin	04Cr18Ni10Ti20	En-58C
347		0.08	2.0	0.045	0.030	1.0	17.0/19.0	9.0/12.0	-	Nb/Ta10xCmin	04Cr18Ni10Nb-40	En-58G
430		0.12	1.0	0.040	0.030	0.75	14.0/18.0	0.60	-	-	07Cr17	En-60
446		0.20	1.50max	0.040	0.030	1.0	23.0/27.0	0.60max	-	N-25max	-	-
403		0.15	1.0	0.040	0.030	0.50	11.5/13.0	0.60	-	-	-	-
410		0.15	1.0	0.040	0.030	1.0	11.5/13.5	0.60	-	-	12Cr13	En-58A
410S		0.08	1.0	0.040	0.030	1.0	11.5/13.5	0.60max	-	-	-	-
414		0.15	1.0max	0.040	0.030	1.0	11.5/13.5	1.25/2.50	-	-	-	-
420		over.15	1.0	0.040	0.030	1.0	12.0/14.0	0.60	-	-	22Cr13	En56C&D
431		0.20	1.0max	0.040	0.030	1.0	15.0/17.0	1.25/2.50	0.75max	-	15Cr16Ni2	En-57
440A		0.60/0.70	1.0	0.040	0.030	1.0	16/18	-	-	-	-	-
440B		0.75	1.0	0.040	0.030	1.0	16.0/18.0	-	0.75max	-	-	-
409		0.08	1.0	0.045	0.030	1.0	10.5/11.75	0.50max	-	6x%cmn.75max	-	-
440C		0.95	1.0	0.040	0.030	1.0	16/18	-	0.75max	-	-	-
409M		0.028	0.8/1.2	0.030	0.030	40 to.75	11.0/12.0	0.75	-	T10.25/0.75	-	-
446		0.20	1.50	0.040	0.030	1.0	23.0/30.0	0.50	-	-	N 0.25max	-



SAROVAR
Tube Industries

MECHANICAL PROPERTIES OF STAINLESS STEEL

Tensile Strangth min. Ksi(Mpa)	Yield Point min. Ksi (Mpa)	Elongation. % (G.L.: 2in or 50mm)				Hardness Test	
		Full Selection Specimen	Strip Specimen		Round	Brinell max	Rockwell max
			<6/16in	<5/16in	Specimen		
75(515)	30(205)	35	35	56t + 17.50	28	192	B 90
75(515)	30(205)	35	35	56t + 17.50	28	192	B 90
70(485)	25(205)	35	35	56t + 17.50	28	192	B 90
80(550)	35(240)	35	35	56t + 17.50	28	192	B 90
75(515)	30(205)	35	35	56t + 17.50	28	192	B 90
75(515)	30(205)	35	35	56t + 17.50	28	192	B 90
75(515)	30(205)	35	35	56t + 17.50	28	192	B 90
75(515)	30(205)	35	35	56t + 17.50	28	192	B 90
75(515)	30(205)	35	35	56t + 17.50	28	192	B 90
70(485)	25(170)	35	35	56t + 17.50	28	192	B 90
80(485)	35(240)	35	35	56t + 17.50	28	192	B 90
75(515)	30(205)	35	35	56t + 17.50	28	192	B 90
75(515)	30(205)	35	35	56t + 17.50	28	192	B 90
75(515)	30(205)	35	35	56t + 17.50	28	192	B 90
75(515)	30(205)	35	35	56t + 17.50	28	192	B 90
75(515)	30(205)	35	35	56t + 17.50	28	192	B 90
75(515)	30(205)	35	35	56t + 17.50	28	192	B 90
90(621)	70(483)	20	20	*2	-	171	C 28
60(415)	30(205)	20	20	*2	-	207	B 95
55(380)	30(205)	20	20	*2	-	207	B 95
60(415)	30(205)	20	20	*2	-	207	B 95
60(415)	35(240)	20	20	*2	-	190	B 90
60(415)	35(240)	20	20	*2	-	190	B 90
70(485)	40(275)	20	20	*2	-	207	B 95
70(485)	40(275)	18	18	*2	-	207	B 95
60(415)	30(205)	20	20	*2	-	190	B 90



SAROVAR
Tube Industries

MILD STEEL PIPES CONFIRMING TO IS : 1239 (PART 1) - 1979

Nominal Bore		Outside Diameter		Light		Medium		Heavy	
				Thickness	Weight	Thickness	Weight	Thickness	Weight
Inch	In mm	In	mm	mm	kg/mtr	mm	Kg/Mtr.	mm	Kg/Mtr.
1/8"	3 mm	0.406	10.32	1.80	0.361	2.00	0.407	2.65	0.493
1/4"	6 mm	0.532	13.49	1.80	0.517	2.35	0.650	2.90	0.769
3/8"	10 mm	0.872	17.10	1.80	0.674	2.35	0.852	2.90	1.02
1/2"	15 mm	0.844	21.43	2.00	0.952	2.65	1.122	3.25	1.45
3/4"	20 mm	1.094	27.20	2.35	1.410	2.65	1.580	3.25	1.90
1"	25 mm	1.312	33.80	2.65	2.010	3.25	2.440	4.05	2.97
1.1/4"	32 mm	1.656	42.90	2.65	2.580	3.25	3.140	4.05	3.84
1.1/2"	40 mm	1.906	48.40	2.90	3.250	3.25	3.610	4.05	4.43
2"	50 mm	2.375	60.30	2.90	4.110	3.65	5.100	4.47	6.17
2.1/2"	65 mm	3.004	76.20	3.25	5.840	3.65	6.610	4.47	7.90
3"	80 mm	3.500	88.90	3.25	6.810	4.05	8.470	4.85	10.1
4"	100 mm	4.500	114.30	3.65	9.890	4.50	12.10	5.40	14.4
5"	125 mm	5.500	139.70	-	-	4.85	16.20	5.40	17.8
6"	150 mm	6.500	165.10	-	-	4.85	19.20	5.40	21.2

BIG DIAMETER ERW PIPES CONFIRMING TO IS : 3589

Wall Thickness in mm	Nominal Bore 7" NB 193.7 mm OD	Nominal Bore 8" NB 219.1 mm OD	Nominal Bore 10" NB 273 mm OD	Nominal Bore 12" NB 323.7 mm OD	Nominal Bore 14" NB 355.6 mm OD	Nominal Bore 16" NB 406.4 mm OD	Nominal Bore 18" NB 457 mm OD	Nominal Bore 20" NB 508 mm OD
kg/mtr	kg/mtr	kg/mtr	kg/mtr	kg/mtr	kg/mtr	kg/mtr	kg/mtr	kg/mtr
4.85	22.59	25.62	32.07	38.13	-	-	-	-
5.20	24.17	27.43	34.34	40.85	-	-	-	-
5.60	26.00	29.28	36.93	43.93	48.11	-	-	-
6.00	27.88	31.53	39.50	47.02	51.49	61.00	69.00	-
6.35	29.34	33.28	41.73	49.67	54.43	62.35	70.50	78.50
7.01	32.27	36.76	46.43	55.45	61.82	69.04	-	-
7.94	-	41.00	50.95	61.85	67.98	77.92	87.80	-
8.18	-	42.56	53.42	65.12	-	-	-	-
9.53	-	51.50	60.24	73.75	81.21	93.13	105.00	117.00
12.70	-	-	-	-	107.28	123.30	139.00	155.00

Tolerance on Thickness and Weight : as per IS 1239
The following manufacturing tolerance shall be permitted on the tubes and sockets.

- (a) **Thickness**
- (1) **Butt welded Light tubes** + Not limited
- 8 percent
- Medium and Heavy tubes** + Not Limited
- 10 percent
- (2) **Seamless tubes** + Not Limited
- 12.5 percent
- (b) **Weight :**
- (1) **Single tube (light series)** + 10 percent
- 8 percent
- (2) **Single tube (medium and heavy series)** + 10 percent

MAXIMUM PERMISSIBLE PRESSURE AND TEMPERATURE FOR TUBES WITH STEEL COUPLINGS OR SCREWED AND SOCKETED JOINTS

Nominal Bore	Maximum Permissible Pressure	Maximum Permissible Temperature
mm	N/mm ²	Kg./cm ²
Upto and Including 25 mm	1.20	12.24
Over 25 mm upto and Including 40 mm	1.03	10.50
Over 40 mm upto and Including 80 mm	0.86	8.77
over 80 mm upto and Including 100 mm	0.69	7.04
	0.83	8.47
Over 100 mm upto and Including 125 mm	0.69	7.04
Over 125 mm upto and Including 150 mm	0.50	5.10

For tubes fitted with appropriate fittings of suitably butt welded together, the Max. permissible pressure shall be 21.00 Kg/cm² and Max. permissible temp. 260°C



SAROVAR
Tube Industries

NICKEL BASE ALLOYS

NOMINAL CHEMICAL COMPOSITION, % (not for specification purposes)

Nickel	Ni	C	Mn	Fe	S	Si	Cu	Cr	Co	Mo	Al	Ti	Other
Nickel200	99.2	0.10	0.3	0.4	0.005	0.18	0.10	-	0.25	-	-	-	-
Nickel201	99.0	0.02	0.35	0.4	0.005	0.18	0.25	-	0.25	-	-	-	-
Nickel205	99.6	0.02	0.3	0.2	0.004	0.08	0.05	-	0.1	-	-	0.03 Mg	0.05
Nickel212	97.7	0.010	2.0	0.05	0.005	0.05	0.03	-	-	-	-	-	-
Nickel222	99.5	0.01	0.02	0.04	0.0025	0.01	0.01	0.01	0.06	0.01	0.01	Mg0.08	-
Nickel270	99.98	0.01	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	Mg<0.001	-
	Ni	C	Mn	Fe	S	Si	Cu	Cr	Co	Mo	Al	Ti	Other
K.MONEL alloy 400	63.0 min	0.15	1.25 max	2.5max	0.024max	0.05max	31.0	-	-	-	-	-	-
K.MONEL alloy 500	63.0 min	0.25	1.5 max	2.0max	0.010max	0.5	30.0	-	-	-	2.9	0.6	-
Cast MONEL alloy	63.0 min	0.07	0.75	2.5max	0.02 max	0.04max	30.0	0.10max	-	0.20max	0.05max	0.01max	-
Cast MONEL alloy	63.0 min	0.03max	0.020max	2.5max	0.02max	0.04max	30.0	0.10	-	0.20max	0.05max	0.01max	-
INCONEL alloy 600	72.0 min	0.025 max	1.0 max	8.0	0.05 max	0.05max	0.05 max	14 - 17	-	-	-	-	Nb +
INCONEL alloy 625	Bal	0.025max	0.25	3.0max	0.015max	0.5 max	-	21 - 23	-	8 - 10	0.25	0.25	3.65
INCOLOY alloy 800	32 - 34	0.025max	1.5max	Bal.	0.015max	-	0.75 max	20 - 22	0.5 max	-	0.15 - 0.40	0.35 - 0.60	Al + Ti max. 1.0
INCOLOY alloy 825	38 - 46	0.025max	1.0max	Bal.	0.03 max	0.5max	2.25	19.5 - 23.5	1.5 - 3	2.5 - 3.5	0.20max	0.9	Ti 0.6 - 1.2
INCOLOY alloy 904	32.5	0.025	0.025	Bal.	0.015	0.25	0.25	-	14.5	-	0.1	1.6	-
INCOLOY alloy DS	37.0	0.10 max	0.21 max	Bal.	-	2.3 max	2.3 max	18.0	-	-	-	-	-
Hastelloy C22	Bal	0.010 max	-	2 - 6	-	0.08 max.	-	20 - 22.5	2.5 max.	12.5-14.5	2.50	Co	W-2.50 3.50
Hastelloy C-276	Bal	0.010 max	1.00	5.50	-	-	-	15 - 16.5	15 - 16.5	15 - 17	-	-	W-3.75uV.1-0.3 Si-0.02 Co-2.50
Hastelloy C-4	Bal	0.009 max.	1.00	3.00	0.7	-	-	14.5 17.5	5.575	14.00 17.00	-	0.70	Co-2.00 Si-0.05 P-0.04

PHYSICAL AND MECHANICAL PROPERTIES

	Density Kg/dm ³	Melting Range °C	Specefic heat at 20° C J/KgC	Thermal Conductivity at 20° C W/mC	Thermal Expansion 10-6° C 20-95° C	Electrical resistivity at 20° C microhm cm	Tensile strength N/mn ²	Hardness HV
Nickel 200	8.89	1435-1445	456	74.9	13.3	9.5	380-550	90-120
Nickel 201	8.89	1435-1445	456	79.2	13.3	7.6	340-410	75-100
Nickel 205	8.89	1435-1445	456	74.9	13.3	9.5	340	77
Nickel 212	8.86	1435-1445	430	44.1	-	10.9	476	144
Nickel 222	8.89	1435-1445	456	74.9	13.3	8.8	340	77
Nickel 270	8.89	1455	460	85.7	13.3	7.5	340	80
Monel alloy 400	8.83	1300-1350	419	21.7	14.1	51.0	480-620	111-151
Monel alloy k-500	8.46	1315-1350	419	17.4	13.7	61.4	620-760	141-189
Inconel alloy 600	8.42	1370-1425	461	14.8	13.3	103	550-690	121-173
Inconel alloy 625	8.44	1290-1350	410	9.8	12.8	129	830-1040	146-247
Incoloy alloy 800	7.95	1355-1385	502	11.7	14.2	99	520-700	121-188
Incoloy alloy 825	8.14	1370-1400	441	10.9	14.0	113	580-730	121-183
Incoloy alloy 904	8.12	-	442	14.9	4.6	72	923	-
Incoloy alloy DS	7.92	1330-1400	452	12.0	14.1	108	680	208



The World of Steel

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