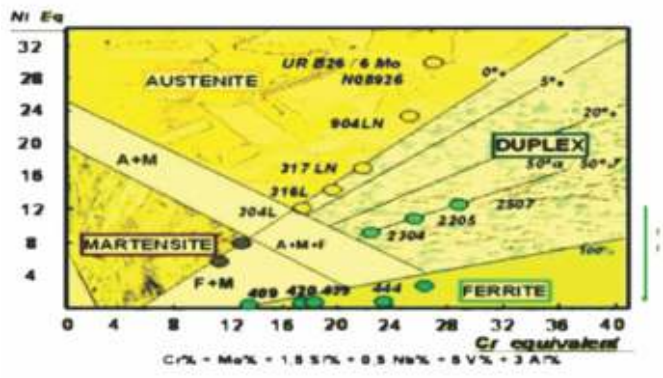
SS SEAMLESS TUBES

- IMS (ISO 9001:2015, ISO 14001:2015, ISO 18001:2007) Certified Company.
- PED 2014/68/EU & AD 2000 Merkblatt W0/W2/W10 Approved Manufacture.
- NORSOK Approved Mill, Vd TÜV 418 Certified Duplex Tubes & Pipes, Vd TÜV 421 Certified 904L / 1.4539 Tubes & Pipes
- All Products are well approved & used by the end users like Shell, Exxon Mobil, Petrobras, PetroJet, Reliance, KOC, Oman Refinery, BASF, Bayer, Covestro, ADMA Group, Zadco, Technimont, ENI & many more.
- Multiple Radius Bends in single Tube without any Weld Joints especially for Cryogenic & Power Applications
- Best suitable Tubes with Inside Surface Finish Ra < 0.4 Microns for Pharma, Dairy & Food applications.

Product Profile



Product Metallurgy & Grades

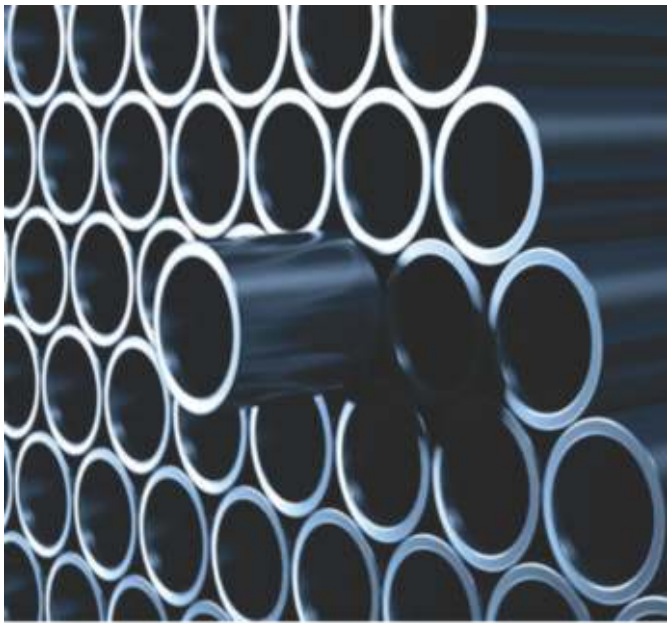
Austenitic Stainless Steel: 304/304 L, 1.4306, 304 H, 310 S, 316/316 L, 316Ti, 317 L, 321/321 H, 347 H, 904 L, UNS No. S31254.

Ferritic Steel: 405, 409 & 410.

Duplex Stainless Steel: UNS 31803 (EN 1.4462), UNS 32750 (EN 1.4410), UNS 32760 (EN 1.4501).

Nickel Alloys: UNS N08020, UNS N08028, UNS N04400, UNS N06600, UNS N06625, UNS N08800, UNS N08825 & UNS N10276.

Special Grades: EN 1.4835, EN 1.4435, EN 1.4335, UNS No. S31050, 316L UG, UNS No. S30815



Seamless

Specifications: ASME & ASTM A 213 / A 268 / A 269 / A312 / A 789 / A 790 / SB 165/ SB 423/ SB 444 / SB 729 / SB 829 / EN 10216-5 / EN 10297-2 / DIN 2391

OD: 3.175 mm to 323.90 mm

N.B: 1/8"- 12"

Thickness: 0.5 mm to 15 mm

Length: Up to 30 Meters

Process Features: Bright Annealed / Solution Annealed – Pickled – Passivated

Surface Finish: Bright / Pickled / Polished (ID & OD)

Production

- Tubes & Pipes With Superior Corrossion Resistance upto 12 MPY in Acc. to ASTM A 262- IGC Pr. B & C, EN ISO 3651 / 2 Method A,B,C.
- Diction of Transfer & Longitudinal Imperfections in Accordance to EN 10246 6 & 7 & as per ASTM E 213 & E 246.
- ID – Electropolished (Ra 2 up to 0.4u) & OD – Mechanical Polished up to 800 Grits.
- In House Testing Facilities – Water Leak (Hydro) Test, Air Underwater (Pneumatic) Test, Eddy Current Testing, Ultrasonic Testing, IGC Pr. A & E to Assure & Certify the right Product Quality in line

Quality & Testing

NDE – Automatic Ultrasonic Test (UT)	6.00 mm OD to 355 mm OD – Off line Rota Type Automatic water Immersion Ultrasonic Testing Machine.
NDE – Manual Ultrasonic Test (UT)	15.88 mm OD to 323 mm OD Upto 15 mm Thickness
NDE – Eddy Current Test (ECT)	Upto 76.2 mm OD
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Pneumatic Test (Air Under Water)	6 mm OD to 50.8 mm OD Upto max 500 PSI
Hydrostatic Test	3.175 mm OD to 219 mm OD
Ultrasonic Thickness Gauges	Upto 15 mm (Digital)
Spectroscope	Spectromax
Possitive Material Identification (PMI)	Niton
Corrosion Testing	Laboratory Glassware to test IGC Pr. A & E aac. ASTM A 262 & EN ISO 3651 / 2
Tensile Flange / Flare / Flattening / Reverse Flattening Bend Test	UTE 40 – FIE Make with (Extenso Meter)
Hardness Test	Twin Hardness Tester, RAB-SAROJ make
Micro Structure Analysis & Grain Examination	Polishing Machine Electro Etching Machine Inverted Metallurgical Microscope with Optics & CCD Camera
Dimensional Checking	Digital Vernier Caliper, Flat & Ball Micrometer etc of Mitutoyo make

PIPE SELECTION GUIDE AS PER ANSI B36.19 STANDARD

Nominal Bore pipe size in			Schedule SS		Schedule 10S		Schedule 40S		Schedule 80S	
N.B in inch.	N.B in mm	mm	Wall Thickness in mm	Weight kg/mtr.	Wall Thickness in mm	Weight kg/mtr.	Wall Thickness in mm	Weight kg/mtr.	Wall Thickness in mm	Weight kg/mtr.
1/4"	8	13.72	1.24	0.380	1.65	0.499	2.24	0.644	3.02	0.809
3/8"	10	17.15	1.40	0.544	1.65	0.640	2.31	0.858	3.20	1.118
1/2"	10	21.30	1.65	0.815	2.11	1.016	2.77	1.288	3.74	1.645
3/4"	20	26.70	1.65	1.034	2.11	1.298	2.87	1.710	3.91	2.228
1"	25	33.40	1.65	1.312	2.77	2.125	3.38	2.541	4.55	3.287
1 1/4"	32	42.20	1.65	1.674	2.77	2.732	3.56	3.441	4.85	4.531
1 1/2"	40	48.30	1.65	1.926	2.77	3.155	3.68	4.108	5.08	5.493
2"	50	60.30	1.65	2.424	2.77	3.992	3.91	5.524	5.54	7.601
2 1/2"	65	73.00	2.11	3.747	3.05	5.345	5.16	8.769	7.01	11.589
3"	80	88.90	2.11	4.585	3.05	6.557	5.49	11.466	7.62	15.509
3 1/2"	90	101.60	2.11	5.260	3.05	7.526	5.74	13.778	8.08	18.921
4"	100	114.30	2.11	5.930	3.05	8.496	6.02	16.322	8.56	22.685
5"	125	141.30	2.77	9.610	3.40	11.740	6.55	22.101	9.52	31.444
6"	150	168.30	2.77	11.480	3.40	14.037	7.11	28.694	10.97	43.211
8"	200	219.08	2.77	15.000	3.76	20.290	8.18	43.230	12.70	65.670
10"	250	273.50	3.40	22.950	4.19	28.200	9.27	61.220	12.70	82.780
12"	300	232.90	3.96	31.750	4.57	36.530	9.53	74.990	12.70	98.920

TABLE OF GAUGES

	S.W.G. (Standard Wire Gauge)		B.W.G. (Birmingham Wire Gauge)	
Gurage no.	Inch	mm	Inch	mm
8	0.16	4.064	0.165	4.191
10	0.128	3.251	0.134	3.404
12	0.104	2.642	0.109	2.769
14	0.08	2.032	0.083	2.108
16	0.064	1.626	0.065	1.651
18	0.048	1.219	0.049	1.245
19	0.04	1.016	0.042	1.067
20	0.036	0.914	0.035	0.889
22	0.028	0.711	0.028	0.711

CHEMICAL COMPOSITIONS							
Grade	**UNS No.**	**EN No.**	**C**	**Cr**	**Ni**	**Mo**	**Others**
Austenitic & Super Austenitic Stainless Steel							
304	S30400	1.4301	0.08	18.00 - 20.00	8.00 - 12.00	-	-
304 L	S30403	1.4307	0.035	18.00 - 20.00	8.00 - 12.00	-	-
310 S	S31008	1.4845	0.08	24.00 - 26.00	19.00 - 22.00	-	-
316	S31600	1.4401	0.08	16.00 - 18.00	10.00 - 14.00	2.00 - 3.00	-
316 L	S31603	1.4404	0.035	16.00 - 18.00	10.00 - 14.00	2.00 - 3.00	-
316 H	S31609	-	0.04 - 0.10	16.00 - 18.00	10.00 - 14.00	2.00 - 3.00	-
316 Ti	S31635	1.4571	0.08	16.00 - 18.00	10.00 - 14.00	2.00 - 3.00	Ti:5x(C+N) - 0.7
317 L	S31703	1.4438	0.035	18.00 - 20.00	11.00 - 15.00	3.00 - 4.00	-
321	S32100	1.4541	0.08	17.00 - 19.00	9.00 - 12.00	-	Ti:5x(C+N) - 0.7
347	S34700	1.455	0.08	16.00 - 18.00	10.00 - 14.00	-	-
347 H	S34709	1.4551	0.04 - 0.10	17.00 - 20.00	9.00 - 13.00	-	-
904 L	S8904	1.4539	0.02	19.00 - 23.00	23.00 - 28.00	4.00 - 5.00	N:0.10 max Cu : 1.0 - 2.0
Ferritic Stainless Steel							
405	S40500	-	0.08	11.50 - 14.50	0.5	-	-
409	S40900	-	0.08	10.50 - 11.70	0.5	-	-
410	S41000	-	0.15	11.50 - 13.50	-	-	-
Duplex & Super Duplex Stainless Steel							
Alloy 2205	31803	1.4462	0.03	21.00 - 23.00	4.50 - 6.50	2.50 - 3.50	N : 0.08 - 0.20
Alloy 2507	32750	1.441	0.03	24.00 - 26.00	6.00 - 8.00	3.00 - 4.50	N: 0.24 - 0.32
Alloy 32760	32760	1.4501	0.05	24.00 - 26.00	6.00 - 8.00	3.00 - 4.00	N:0.20 - 0.30
Nickel Alloys							
Alloy 20	8020	2.446	0.07	19.00 - 21.00	32.00 - 38.00	2.00 - 3.00	Cu : 3.00 - 4.00
Alloy 28	8028	1.4563	0.03	26.00 - 28.00	30.00 - 34.00	3.00 - 4.00	Cu : 0.60 - 1.40
Monel 400	4400	2.436	0.3	-	63.00 Min	-	Cu: 28.00 - 34.00
Inconel 600	6600	2.4816	0.15	14.00 - 17.00	72.00 Min	-	Fe: 6.00 - 10.00
Inconel 625	6625	2.4865	0.1	20.00 - 23.00	58.00 Min	8.00 10.00	Fe: 5.00 Max Nb+Ta: 3.15 – 4.15
Inconel 800	8800	-	0.1	19.00 - 23.00	30.00 - 35.00	-	Fe: 39.50 Max
Inconel 825	8825	2.4858	0.05	19.50 - 23.50	38.00 - 46.00	2.50 - 3.50	Fe: 22.00 Min
Hastalloy C-276	N 10276	-	0.01	14.50 - 16.50	-	15.00 - 17.00	Fe: 5.00 Max Nb+Ta: 3.15 – 4.15