



# VARDHMAN TUBE MILL

AN ISO 9001 : 2015 Certified Co.



Manufacturers of Stainless Steel Pipes & Tubes



[vardhmantube.com](http://vardhmantube.com)

# About us

Commenced in the year 2014, **Vardhman Tube Mill** has established itself as one of the reliable manufacturers and distributors of stainless steel pipes & tubes. **Vardhman Tube Mill** an **NSIC** certified company and **SSI** Registration.

In the two years since then, **Vardhman** has steadily built up on a rock solid foundation of enterprise and business values and has grown in to a INR 50 Million company with 15,000 Sq. Ft. area of manufacturing facilities capable to handle 1,000 MT material annually. Today, **Vardhman** offers a wide spectrum of SS pipes and tubes for use in a diverse range of industries including Oil & Gas, Power, Fertilizers, Heat-Exchangers, Paper & Pulp, Pharmaceuticals, Chemicals, Water Treatment, Dairy, Sugar & Food Processing, and the like. With its modern production & quality assurance facilities, Vardhman provides its customers with cost effective, reliable and qualitatively superior products which enjoy a lasting reputation and ensure total satisfaction of its customers.

## Application

### Industries



- Oil & Gas
- Automobile
- Sugar Industries
- Paper & Pulp



- Engineering
- Pharmaceutical



## Third Party Inspection

We also accept third party inspection by reputed agencies like :



Larsen & Toubro Ltd.



**I.B.R.**



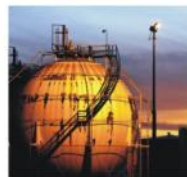
Electromech Engg.



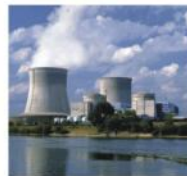
DET NORSKE VERITAS



TATA Project



- Chemical Industries
- Power Plant
- Textile
- Railway



## DIMENSIONS & WEIGHT

### WELDED AND SEAMLESS STAINLESS STEEL PIPES

NB MM	NPS INCHES	OD MM	SCHEDULE - 5 S		SCHEDULE - 10 S		SCHEDULE - 40 S		SCHEDULE - 80 S	
			THK (MM)	KG/ MTR	THK (MM)	KG/ MTR	THK (MM)	KG/ MTR	THK (MM)	KG/ MTR
--	1/8"	10.30	--	--	1.24	0.28	1.73	0.37	2.41	0.47
6	1/4"	13.70	--	--	1.65	0.49	2.24	0.63	3.02	0.80
10	3/8"	17.10	--	--	1.65	0.63	2.31	0.84	3.20	1.10
15	1/2"	21.30	1.65	0.81	2.11	1.00	2.77	1.27	3.73	1.62
20	3/4"	26.70	1.65	1.03	2.11	1.28	2.87	1.69	3.91	2.20
25	1"	33.40	1.65	1.30	2.77	2.09	3.38	2.50	4.55	3.24
32	1 1/4"	42.20	1.65	1.65	2.77	2.70	3.56	3.39	4.85	4.47
40	1 1/2"	48.30	1.65	1.91	2.77	3.11	3.68	4.05	5.08	5.41
50	2"	60.30	1.65	2.40	2.77	3.93	3.91	5.44	5.54	7.48
65	2 1/2"	73.00	2.11	3.69	3.05	5.26	5.16	8.63	7.01	11.41
80	3"	88.90	2.11	4.51	3.05	6.45	5.49	11.29	7.62	15.27
90	3 1/2"	101.60	2.11	5.18	3.05	7.40	5.74	13.57	8.08	18.63
100	4"	114.30	2.11	5.84	3.05	8.36	6.02	16.07	8.56	22.32
125	5"	141.30	2.77	9.47	3.40	11.57	6.55	21.80	9.53	30.97
150	6"	168.30	2.77	11.32	3.40	13.84	7.11	28.26	10.97	42.56
200	8"	219.10	2.77	14.79	3.76	19.96	8.18	42.55	12.70	64.64
250	10"	273.10	3.40	23.96	4.19	27.78	9.27	61.40	15.10	96.01
300	12"	323.90	3.96	31.25	4.57	36.00	9.53	73.88	17.48	132.08
350	14"	355.60	3.96	34.36	4.78	41.30	--	--	--	--
400	16"	406.40	4.19	41.56	4.78	47.29	--	--	--	--
450	18"	457.20	4.19	47.60	4.78	53.26	--	--	--	--
500	20"	508.00	4.78	59.25	5.54	68.61	--	--	--	--
550	22"	559.00	4.78	65.24	5.54	75.53	--	--	--	--
600	24"	610.00	5.54	82.47	6.35	94.45	--	--	--	--
750	30"	762.00	6.35	118.31	7.92	147.36	--	--	--	--

### WELDED STANDARD TUBES

DIMENSIONS		10 Swg	12 Swg	14 Swg	16 Swg	18 Swg	20 Swg	22 Swg
SIZE IN INCHES	OD IN MM	3.25 MM (WT KG/M)	2.64 MM (WT KG/M)	2.03 MM (WT KG/M)	1.62 MM (WT KG/M)	1.21 MM (WT KG/M)	0.91 MM (WT KG/M)	0.71 MM (WT KG/M)
3/8	9.52	0.549	0.447	0.405	0.341	0.268	0.193	0.165
1/2	12.70	0.768	0.654	0.542	0.451	0.350	0.264	0.213
3/4	19.05	1.285	1.068	0.864	0.710	0.544	0.407	0.320
1	25.40	1.801	1.482	1.187	0.969	0.710	0.549	0.432
1 1/4	31.75	2.318	1.895	1.510	1.228	0.969	0.692	0.543
1 1/2	38.10	2.834	2.309	1.832	1.487	1.228	0.820	0.654
1 3/4	45.00	3.408	2.722	2.191	1.775	1.487	0.834	0.765
2	50.80	3.868	3.136	2.478	2.006	1.540	1.119	0.877
2 1/2	63.50	4.901	3.963	3.123	2.524	1.860	--	--
3	76.20	5.934	4.790	3.453	2.789	2.524	--	--
3 1/2	88.90	6.964	5.617	4.413	3.560	2.789	--	--
4	101.6	8.000	6.444	5.059	4.078	3.040	--	--

Any special / Odd Size can be made as per order

# PROPERTIES, COMPOSITIONS & TEST

## Corrosion Test

This test signifies the corrosion rate per annum which help to know the life of stainless steel material to test. It is carried as per practice A 262-A 763 if demanded by the purchaser.



## Flaring Test

In this test a section of tube is flared with a tool having 60 degree included angle until the mouth of the tube has been expanded without cracking or any imperfection on weld or on parent material.



## Flattening Test

In this test a section of tube is flared with a tool having 60 degree included angle until the mouth of the tube has been expanded without cracking or any imperfection on weld or on parent material.



## Flange Test

A section of tube shall be capable of having flange turned over at a right angle to the body of tube with cracking or showing imperfections on weld or parent metal is subject to rejection. The width of flange shall not be less than 15% and as per specification.



## Hydrostatic / Pneumatic Pressure Test

In this test, each length of finished Pipe/Tube is Hydro tested at their maximum strength.



## Hardness Test

For the determination of softness requires to do further cold work on tube, the hardness test is performed on parent material of tube after annealing. The hardness for 1.7 mm to 5.0 mm and in Brinell scale above 5.10 mm wall thickness of pipe/tube as per the procedure laid down in the specification, less than 1.7mm thk superficial hardness is applicable.



## CHEMICAL COMPOSITION

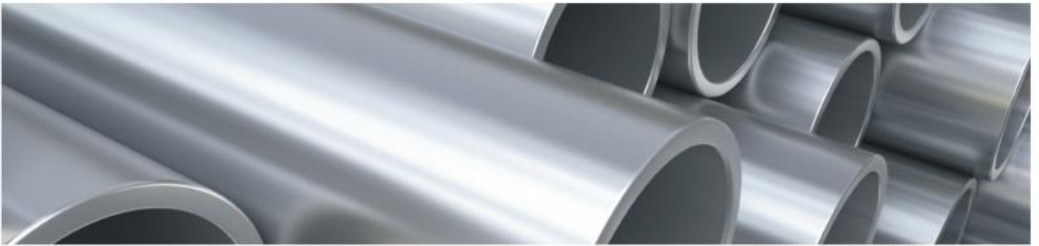
Percentage Stainless Steel Grade Designation	C Max	Si Max	Mn Max	Cr.	Ni.	P Max	S Max	Other Elements
SSLN-4/J1	0.08	0.75	8.00	15.00/17.00	4.00/5.00	0.75	0.030	--
SSLN-2/J3	0.08	0.75	10.05	14.00/16.00	2.00/3.00	0.75	0.030	--
SSLN-1/J4	0.10	0.75	8.5/10.0	15.00/16.00	1.00/1.25	0.09	0.030	--
SS 301	0.15	1.00	2.00	16.00/18.00	6.00/8.00	0.45	0.030	--
SS 304	0.08	0.75	2.00	18.00/20.00	8.00/10.50	0.45	0.030	--
SS 304L	0.03	0.75	2.00	18.00/20.00	8.00/12.00	0.45	0.030	--
SS 310S	0.08	1.50	2.00	24.00/26.00	19.00/22.00	0.45	0.030	--
SS 310	0.25	1.50	2.00	24.00/26.00	19.80/12.00	0.45	0.030	--
SS 316	0.08	0.75	2.00	16.00/18.00	10.00/14.00	0.45	0.030	Mo 2.00/3.00
SS 316Ti	0.08	0.75	2.00	16.00/18.00	10.00/14.00	0.45	0.030	Ti 5X(C+N) min Max=0.70 Mo 2.00/3.00
SS 316L	0.03	0.75	2.00	16.00/18.00	10.00/14.00	0.45	0.030	Mo 2.00/3.00
SS 321	0.08	0.75	2.00	17.00/19.00	9.00/12.00	0.45	0.030	Ti 5X(C+N) min Max=0.70
SS 409	0.03	1.00	1.00	10.50/11.75	0.50 Max	0.40	0.030	Ti 6XC min 0.75 max
SS 430	0.12	1.00	1.00	16.00/18.00	0.75 Max	0.40	0.030	--
SS 410S	0.08	1.00	1.00	11.50/13.50	0.75 Max	0.40	0.030	--
SS 420	0.15	1.00	1.00	12.00/14.00	--	0.40	0.030	--
2205	0.03	1.00	2.00	22.00/23.00	4.50/6.50	0.03	0.020	Mo 2.5 / 3.5
4501	0.03	1.00	1.00	25.30	6.85	0.03	0.010	Cu 0.75
2507	0.03	0.80	1.20	24.00/26.00	6.00/8.00	0.035	0.020	Mo 3.0 / 5.0
904L	0.02	1.00	2.00	19.00/23.00	23.00/28.00	0.045	0.035	Mo 4.0 / 5.0 Cu 1.0 / 2.0
250 SMO	0.02	0.8	1.00	19.50/20.50	18.5 Max	0.03	0.01	Mo 6.0 / 6.5

Note : For details Refer to Respective ASTM Standards

## PHYSICAL PROPERTIES

Grade TP	Tensile Strength ksi (M pa)	Yield Strength ksi (M pa)	Elongation in 2 inches % min	Max. Hardness		Thermal conductivity cal /sec. Cm. Oc at Temp. Range 20-500 QC	Co-efficient of expansion x 10 Cm/ Cm. / QC at Temp. range 20-870 QC
				Brinell	Rockwell QB		
304	75 (515)	30 (205)	35	200	90	0.051	19.8
304L	70 (485)	25 (170)	35	200	90	0.051	19.8
310	75 (515)	30 (205)	35	200	90	0.044	18.8
316	75 (515)	30 (205)	35	200	90	0.042	19.3
316L	75 (485)	25 (170)	35	200	90	0.042	19.3
316Ti	70 (540)	25 (205)	35	200	90	0.042	19.3
321	75 (515)	30 (205)	35	200	90	0.051	19.8
317L	75 (515)	30 (205)	35	200	90	0.049	17.5

## STAINLESS WELDED PIPES & TUBES



Size	Thickness	Specification
1/8" NB to 5"NB	SCH 5, 10, 40/S, 80/S	ASTM A-312, A-554, A-249, A-260, A-778, A-268 and it's equivalent ASME, DIN and EN standards
10MM OD TO 127MM OD	0.8MM to 5MM	ASTM A-312, A-554, A-249, A-260 A-778, A-268 and it's equivalent ASME, DIN and EN standards

## ARCHITECTURAL PIPES & TUBES



Size	Thickness	Specification
10x10, 12x12, 15x15, 20x20, 25x15 25x25, 30x30, 40x20, 40x40, 50x25, 50x30, 50x50, 60x40, 75x25	0.8MM to 3MM	ASTM A-312, A-554, A-249, A-260, A-778, A-268 and it's equivalent ASME, DIN and EN standards
25x25, 30x30, 40x40, 50x25,50X50, 60x40, 60X60, 70X70, 75X75, 75x25, 80X80, 90X90,100x50, 100X100	2MM to 5MM	ASTM A-312, A-554, A-249, A-260 A-778, A-268 and it's equivalent ASME, DIN and EN standards



Stainless Steel ERW Pipes



S. S. Seamless Pipes



S. S. Heat Exchanger Tubes

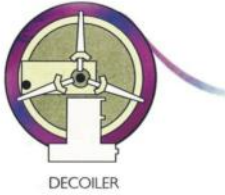


S.S. EFW Pipes (Electrofusion)

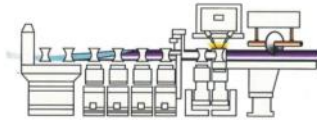
**Length :** as per customer specification upto 15 mtr.

**Finishing :** Pipes & Tubes can be supplied in **MATT / MIRROR** or **SILVER** finish as per customer requirement.

## PROCESS FLOW CHART

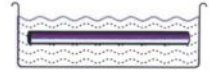


DECOILER

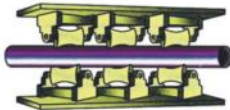


FORMING

TIG WELDING



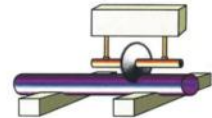
PICKLING & COATING



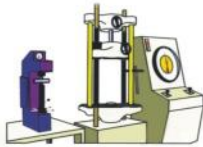
STRAIGHTENING



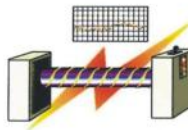
100% HYDRO TESTING



CUTTING TO LENGTH



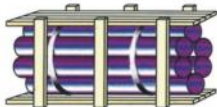
DESTRUCTIVE MECHANICAL TESTING



EDDY CURRENT TESTING



100% VISUAL INSPECTION



PACKING



**VARDHMAN**  
**TUBE MILL**

AN ISO 9001 : 2015 Certified Co.

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