



INDIA

Garg Tube Limited

A GOVT. OF INDIA RECOGNISED EXPORT HOUSE



Manufacturer & Exporter of :
ERW Black & Galvanized Tubes & Pipes / Scaffolding Tubes



ISO 9001 Certified Company



INDIA

A Govt. of India Recognised Export House



INDIA

Corporate Message

Dear Customers,

I am pleased to take the opportunity to introduce Garg Tubes as a leading manufacturer and exporter of Galvanized and Black Steel Pipes and Tubes, Domestic and abroad, since last 15 years.

Considering the potential available, state-of-the-Art manufacturing plant for Black Steel Tubes & Pipes was installed with the capacity of 10,000 MT in the beginning and having the acceptability of GTL brand pipes and tubes in and abroad, the production capacity increased up to 50,000 MT in short span of time, having sizes 15mm up to 300mm with light, Medium & Heavy Class maintaining the Standard's like IS-1239 Equivalent to BS-1387 and other International Standards.

After successful introduction of Black Steel Tubes, company added the Galvanized Plant to capture the market needs of Galvanized Steel Pipes & Tubes.

Being Proactive, professional and having a Vision to become a leading organisation of India, company kept on adding similar product range with new size and thickness. Large size pipes from 175mm to 300mm, which are in high demand in Domestic & International market where re-construction is on high



Mr. C.L. Agarwal
(Chairman)

speed are the example of company proactive-ness in the business.

The outlook for the Steel Industry is very bright in India & abroad, therefore, all proactive decision are being taken to capture the need at all levels.

New projects are under planning for having more bright future for the company which shall be shared in due course of time.

My Sincere thanks to my dedicated team with whose support the company has been able to achieve the continuous and consistent growth pattern.

Government of India has put thrust on the industry to perform in the Export front and I am proud to inform you that our company has contributed on this front and Government of India has given an "Export House Status" to our company.

Once again I would like to convey my sincere thanks to you for showing your dedication and patronage.

Yours truly,

C.L. Agarwal
Chairman



INDIA



profile

Company Profile



Established in 1994, Garg Tube has through the years established itself as one of the leading manufacturers and exporters of Electric Resistance Welded (E.R.W), Black Steel Tubes, Hot Dipped Galvanized Steel Pipes & tubes, ERW Steel Pipes, Fencing Tubes, Scaffolding Pipes, Square Tubes, Rectangular Tubes etc.

Our Products Conform to :

- IS / BS Standards / Norms like 1161, 1239, 3589, 4270 / ASTM, DIN etc.
- ISO 9001 : 2000 standards

Our organizational structure empowers us with the competitive capability to maintain a leading edge in the marketplace & work to the benefit of our customers. We are market leaders with our fine range of competitively priced, custom-made products.

We manufacture and export premium quality flat and tubular products in Steel segment and have the capability to supply them in any configuration at competitive prices and in quick time. With cutting edge infrastructural facilities, we at Garg Tube Ltd. have the manufacturing capability & production flexibility to respond to the most dynamic & complex needs of our customers.



ISO 9001 Certified Company

Quality Control

Testing Facilities

The following testing facilities are available within our premises

Universal Testing Machine : We have Universal Tensile Machine to carry out a series of quality testing procedures to regulate many features such as tensile strength, crushing, flare, flattening flange, reverse bend on products, & ensure compliance with relevant National & International Standards.

Hydro Testing Machines : To carry out for Quality testing at hydro testing machine to ensure specified water pressure parameters.



quality



Hardness Tester : To ensure the quality of metallurgical composition recommended in the manual of specifications. All other routine tests like Tensile Testing, Flattening Test, Bend Test, Drift Expansion Test, Price Test etc., done periodically and recorded systematically, by our own staff and qualified supervisors ensures that we never compromise on quality.



Enhancing Skill & Knowledge of Workforce e have always recognized the skill and experience of our employees at all the levels and every employee working in the organization is given an equal opportunity to grow through various developmental programmes & trainings. We ensure that our employees find suitable placement in the areas of individualized interests like Production, Maintenance, QAQC, Commercial, Marketing etc. This ensures the best output from every individual.





Manufacturing & Processing of ERW Pipes Black & Gavanised Pipes/Tubes



Enhancing Skill & Knowledge of Workforce

We have always recognized the skill and experience of our employees at all the levels and every employee working in the organization is given an equal opportunity to grow through various developmental programmes & trainings. We ensure that our employees find suitable placement in the areas of individualized interests like Production, Maintenance, QAQC, Commercial, Marketing etc. This ensures the best output from every individual.



Understanding Customer Needs

Tube manufacturers require high quality raw material inputs in quick time for efficient tube manufacturing. It is here that our we have the advantage of understanding the exact requirements of customers and to provide for their needs in quick time without compromising on quality. At Garg Tube Ltd., a coherent system has been implemented for understanding the micro stated and implied needs of the customers and then ensuring their fulfillment through efficient design & production. We have the capability to respond to the most complex demands of customers in very short lead times.

manufacturing



Social Responsibility

Providing value-based services extends not merely to the provision of high quality products but also to the implementation of a system which benefits society & encourages sustain ability. Social responsibility is a guiding principle of all our business practices. Through various initiatives and drives we aim to provide sustainable value-based resources to societies.

As part of our social responsibility we aim to

- » Take good care of the environment around us
- » Plant tree saplings to re-energize wastelands & create green cover
- » Organize awareness drives among people for family planning, literacy and safe & healthy working environment.



Quality - A Prerequisite

Sr. No.	Machine	Purpose
1	Universal Testing Machines	For material testing (mechanical properties.)
2.	Non Destructive Test	
a.	Eddy Current Testing Machine	For on line flaw detection on welds.
3.	Hydro Testing Machine	
4.	Vickers Micro Hardness Tester	For checking micro hardness on weld, heat affected zone and material
5.	Digital Ultrasonic Thickness Gauge	For checking thickness & pipes.
6.	Mandrills and Fixtures	For welding root bent test.
7.	Hydraulic Press	For flattening and weld ductility test.
8.	Bending Machine	For pipe bend test

Manufacturing & Processing

The process utilises the latest technology and modern equipments for producing high quality ERW Pipes

1. Slit Preparations

HR Coils are slitted to predetermined widths for each size of pipe and thickness. Slitted coil is uncoiled at the entry of ERW mill and the ends are sheared and welded one after another to make it single endless strip.

2. Forming

Slitted coils are initially formed into U shape and then into a cylindrical shape with open edges using a series of forming rolls.

3. Welding

The open edges are heated to the required temperature through high frequency low voltage high current and press welded by forge rolls making perfect and strong butt weld without filler materials.

4. Debeading

Weld flash on top and inside (if needed) is trimmed out through carbide tools.

5. Seam Annealing

Whenever required, welding portion and heat affected zone is put to normalising with medium frequency normaliser and then cooled down in air cooling bed.

6. Sizing & Cutting

After water quenching, slight reduction is applied to pipes with sizing rolls to give them desired accurate outside diameter.

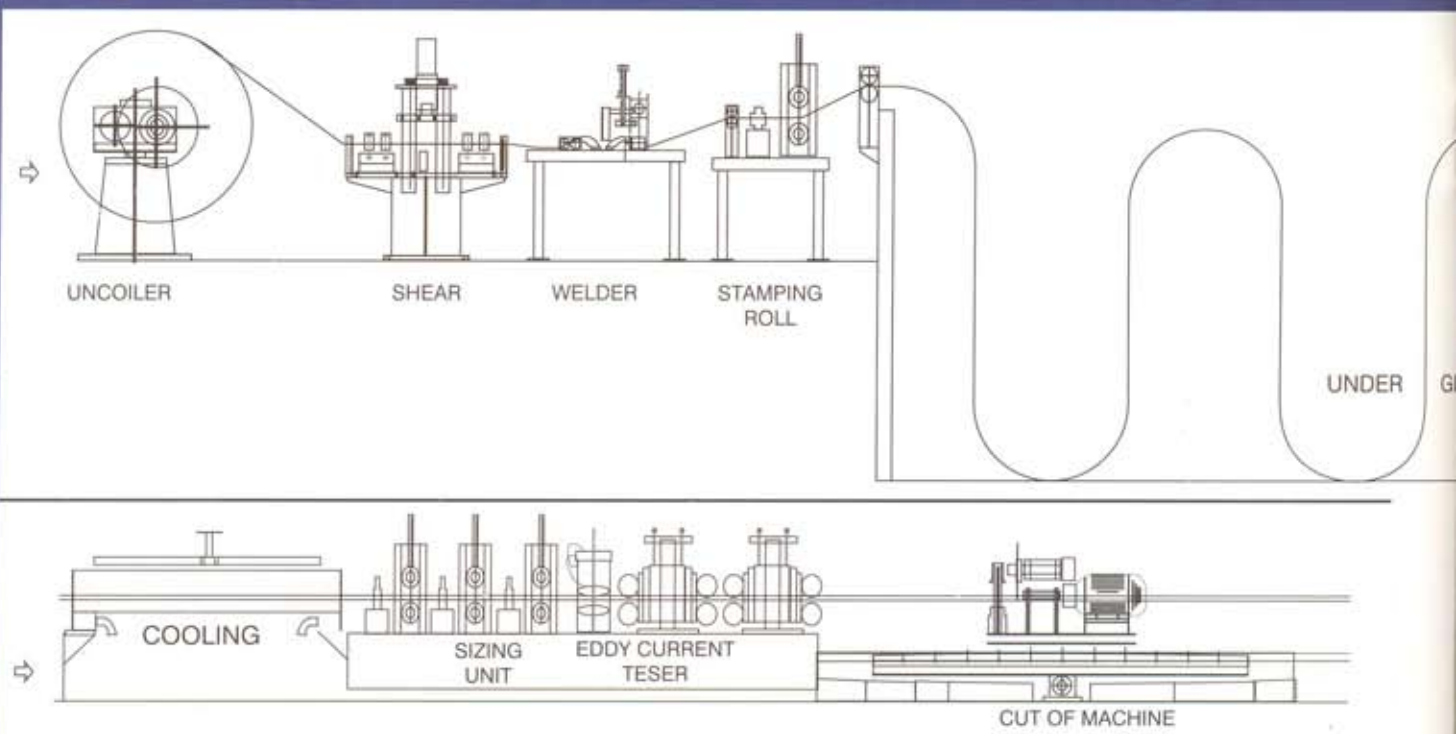
7. Facing and Bevelling

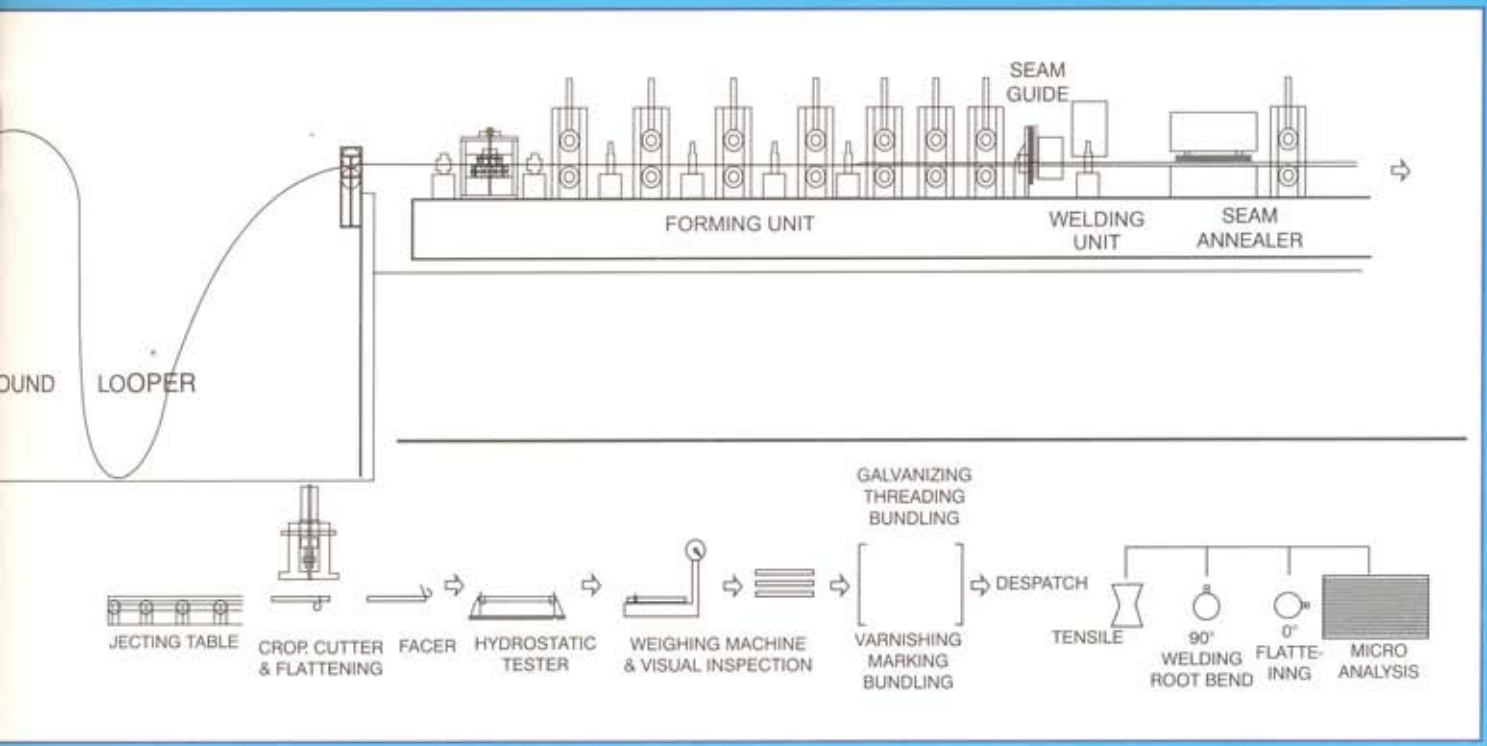
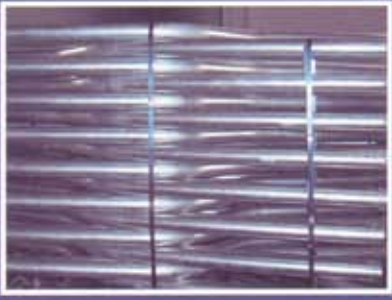
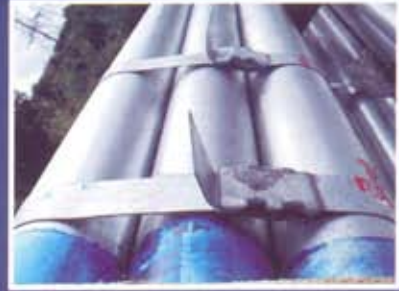
The pipe ends are faced and bevelled by the end facer. All the processes are continuous with auto arrangements. These plain ended tubes go for further processing as per the customer need like galvanizing, black varnishing etc.

8. Packing

Finished pipes are bundled in desired number of pieces as per customer's requirement and packed properly to ensure freshness till delivery.

Manufacturing Process...





BS : 1387 of 1985 (Black and Galvanised Steel Pipes)

CLASS	Normal Bore		Outside Diameter		Thick-ness	Weight of Black Pipes				Weight of Galavanised Pipes (Calculated)				No. of Pcs Per Bundle
			Max.	Min.		Plain Ended		Screwed & Socketed		Plain Ended		Screwed & Socketed		
	Inch	mm	mm	mm	mm	kg/mtr	mtr/ton	kg/mtr	mtr/ton	kg/mtr	mtr/ton	kg/mtr	mtr/ton	
YELLOW LIGHT (A)	½	15	21.4	21.0	2.00	0.947	1056	0.956	1046	1.000	1000	1.007	993	160
	¾	20	26.9	26.4	2.30	1.380	725	1.390	719	1.440	694	1.460	685	110
	1	25	33.8	33.2	2.60	1.980	505	2.000	500	2.060	485	2.090	478	80
	1¼	32	42.5	41.9	2.60	2.540	394	2.570	389	2.640	379	2.680	373	61
	1½	40	48.5	47.8	2.90	3.230	310	3.270	306	3.350	298	3.400	294	51
	2	50	60.2	59.6	2.90	4.080	245	4.150	241	4.220	237	4.300	233	37
	2½	65	76.0	75.2	3.20	5.710	175	5.830	172	5.890	170	6.020	166	27
	3	80	88.7	87.9	3.20	6.720	149	6.890	145	6.930	144	7.100	141	24
	4	100	113.9	113.0	3.60	9.750	103	10.000	100	10.030	100	10.280	97	16
BLUE MEDIUM (B)	½	15	21.7	21.1	2.60	1.210	826	1.220	820	1.250	800	1.260	794	130
	¾	20	27.2	26.6	2.60	1.560	641	1.570	637	1.620	617	1.640	610	100
	1	25	34.2	33.4	3.20	2.410	415	2.430	412	2.490	402	2.510	398	65
	1¼	32	42.9	42.1	3.20	3.100	323	3.130	319	3.200	312	3.230	310	51
	1½	40	48.8	48.0	3.20	3.570	280	3.610	277	3.680	272	3.720	269	44
	2	50	60.8	59.8	3.60	5.030	199	5.100	196	5.170	193	5.250	190	30
	2½	65	76.6	75.4	3.60	6.430	156	6.550	153	6.610	151	6.730	149	24
	3	80	89.5	88.1	4.00	8.370	119	8.540	117	8.580	117	8.760	114	19
	4	100	114.9	113.3	4.50	12.200	82	12.500	80	12.480	80	12.690	79	14
RED HEAVY (C)	½	15	21.7	21.1	3.20	1.440	694	1.450	690	1.490	671	1.500	667	110
	¾	20	27.2	26.6	3.20	1.870	535	1.880	532	1.930	518	1.950	513	80
	1	25	34.2	33.4	4.00	2.940	340	2.960	338	3.010	332	3.040	329	55
	1¼	32	42.9	42.1	4.00	3.800	263	3.830	261	3.900	256	3.930	254	44
	1½	40	48.8	48.0	4.00	4.380	228	4.420	226	4.490	223	4.530	221	37
	2	50	60.8	59.8	4.50	6.190	162	6.260	160	6.330	158	6.400	156	27
	2½	65	76.6	75.4	4.50	7.930	126	8.050	124	8.110	123	8.230	121	20
	3	80	89.5	88.1	5.00	10.300	97	10.500	95	10.510	95	10.710	93	16
	4	100	114.9	113.3	5.40	14.500	69	14.800	68	14.770	68	14.990	67	12
5	125	140.6	138.7	5.40	17.900	56	18.400	54	18.210	55	18.630	54	10	
6	150	166.1	164.1	5.40	21.300	47	21.900	46	21.680	46	22.220	45	7	

TOLERANCES

A. Thickness

- | | | | |
|----------------|----------------------|---------------------------|-----------------------|
| 1. Light Tubes | + Not limited
-8% | 2. Medium and Heavy Tubes | + Not limited
-10% |
|----------------|----------------------|---------------------------|-----------------------|

B. Weight

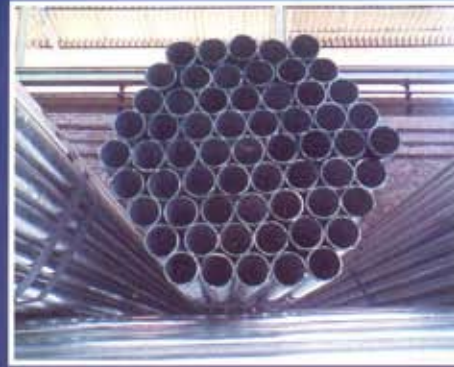
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|--|--------------|---|-------|
| 1. Single tube (Light series) | + 10%
-8% | 2. Single tube (Medium & Heavy series) | ±10% |
| 3. For Quantities per Load of 10 tonnes minimum (Light series) | ±5% | 4. For Quantities per Load of 10 tonnes minimum (Medium & heavy series) | ±7.5% |

C. Length

4 to 6.5 meters unless otherwise specified.



GI Pipes



GI Pipe Product Range -Local

Nominal Size (NPS)	Grade	Outer Dia (mm)		Wall Thickness (mm)	Pipe Standard	Threading Standard	Standard Black Pipe Weight		Pipes/Bundles	Length (Meter)	Acceptance Criteria
		Max.	Min.				Kg/m	Meter/Ton			
½"	EL	21.00	20.60	1.80	GTL	BS-21	0.843	1186	169	1.00-6.50	Good Surface finish with full Galvanizing
¾"	EL	26.60	26.10	2.00	GTL	BS-21	1.201	833	127	1.00-6.50	Good Surface finish with full Galvanizing
1"	EL	33.50	32.80	2.30	GTL	BS-21	1.750	572	91	1.00-6.50	Good Surface finish with full Galvanizing
1¼"	EL	42.20	41.60	2.30	GTL	BS-21	2.246	445	61	1.00-6.50	Good Surface finish with full Galvanizing
1½"	EL	48.10	47.50	2.60	GTL	BS-21	2.898	345	61	1.00-6.50	Good Surface finish with full Galvanizing
2"	EL	60.20	59.30	2.60	GTL	BS-21	3.664	273	37	1.00-6.50	Good Surface finish with full Galvanizing
2½"	EL	75.70	74.90	2.90	GTL	BS-21	5.178	193	37	1.00-6.50	Good Surface finish with full Galvanizing
3"	EL	88.40	87.60	2.90	GTL	BS-21	6.086	164	24	1.00-6.50	Good Surface finish with full Galvanizing
4"	EL	113.50	112.60	3.20	GTL	BS-21	8.668	115	19	1.00-6.50	Good Surface finish with full Galvanizing
5"	EL	139.00	138.00	3.60	GTL	BS-21	11.976	84	07	1.00-6.50	Good Surface finish with full Galvanizing
6"	EL	165.00	163.00	3.60	GTL	BS-21	14.240	70	07	1.00-6.50	Good Surface finish with full Galvanizing

Note : Any specific thickness required can be manufactured

Welded Carbon Steel Pipes for Scaffolding as per BS : 1139

Size		Thickness		Ovality		Weight	
Inches	mm	Inches	mm	Inches	mm	Lbs/foot	Kg/m
1½"	48.3	0.126	3.2	0.02	0.5	2.392	3.56
1½"	48.3	0.157	4.0	0.02	0.5	2.937	4.37

Tolerance

Outside Diameter	Thickness	Weight
+/- 0.5mm	+/- 10%	+/- 7.5% on Single tube

Steel Grade -S235GT

Mechanical Properties

Yield strength - 235 MPA Min
Tensile strength - 340/520 MPA
Elongation - 24% Min.

Chemical Composition

Carbon - 0.20% max.
Silicon - 0.05% max.
Manganese - 0.40% max.
Phosphorous - 0.040% max.
Sulphur - 0.045% max.
Aluminium - 0.02% max.

End finish - Square Cut

Straightness - 1mm in 500mm

Flattening test - Two stages
1. Flatten upto 75% of tube diameter for welding.
2. Flatten upto 60% of tube diameter for material.

Zinc coating - 40 microns minimum outside

Delivery condition -As Rolled condition (without protection) & Hot Dipped Galvanized





INDIA

Welded Carbon

Welded Carbon Steel Tubes As Per Din : 2440

NB	Outside Diameter		Wall Thickness	Mass of Tube		Sockets	
				Plain End	Socketed	Min. Outside Diameter	Min. Length
<i>mm</i>	<i>Max.mm</i>	<i>Min.mm</i>	<i>mm</i>	<i>Kg/m</i>	<i>Kg/m</i>	<i>mm</i>	<i>mm</i>
15	21.8	21.0	2.65	1.22	1.23	26.40	34
20	27.3	26.5	2.65	1.58	1.59	31.80	36
25	34.2	33.3	3.25	2.44	2.46	39.50	43
32	42.9	42.0	3.25	3.14	3.17	48.30	48
40	48.8	47.9	3.25	3.61	3.65	54.50	48
50	60.8	59.7	3.65	5.10	5.17	66.30	56
65	76.6	75.3	3.65	6.51	6.63	82.00	65
80	89.5	88.0	4.05	8.47	8.64	95.00	71
100	115.0	113.1	4.50	12.10	12.40	122.00	83
125	140.8	138.5	4.85	16.20	16.70	147.00	92
150	166.5	163.9	4.85	19.20	19.80	174.00	92

Welded Carbon Steel Tubes As Per Din :2441

NB	Outside Diameter		Wall Thickness	Mass of Tube		Sockets	
				Plain End	Socketed	Min. Outside Diameter	Min. Length
<i>mm</i>	<i>Max.mm</i>	<i>Min.mm</i>	<i>mm</i>	<i>Kg/m</i>	<i>Kg/m</i>	<i>mm</i>	<i>mm</i>
15	21.8	21.0	3.25	1.45	1.46	26.40	34
20	27.3	26.5	3.25	1.90	1.91	31.80	36
25	34.2	33.3	4.05	2.97	2.99	39.50	43
32	42.9	42.0	4.05	3.84	3.87	48.30	48
40	48.8	47.9	4.05	4.43	4.47	54.50	48
50	60.8	59.7	4.50	6.17	6.24	66.30	56
65	76.6	75.3	4.50	7.90	8.02	82.00	65
80	89.5	88.0	4.85	10.10	10.30	95.00	71
100	115.0	113.1	5.40	14.40	14.70	122.00	83
125	140.8	138.5	5.40	17.80	18.30	147.00	92
150	166.5	163.9	5.40	21.20	21.80	174.00	92

TOLERANCES

(a) Thickness

1 Light Tubes

+ Not Limited
- 8%

2 Medium and Heavy Tube

+ Not Limited
- 10%

(b) Weight

1 Single Tubes (Light series)

+ 10
- 8%

2 Single Tubes (Medium and Heavy series)

± 10%

3 For Light Series

+/- 5%

4 For Quantities per load of 10 tonnes minimum (Medium and Heavy series)

+/- 7.5%

(c) Length

4 to 7 meters unless otherwise specified

Electric Resistance Welded Carbon Steel Pipe Threaded & Coupled ASTM (SCH 40)

Nominal Size (NPS)	Outside Diameter						Wall Thickness		Nominal Weight		Threads Per Inch	Coupling		Test Pressure			
	Standard		Maximum		Minimum				Threaded and Couplings			Outside Diameter	Minimum Length	Grade A		Grade B	
<i>in</i>	<i>mm</i>	<i>in</i>	<i>mm</i>	<i>in</i>	<i>mm</i>	<i>in</i>	<i>mm</i>	<i>in</i>	<i>Kg/m</i>	<i>Lb/ft</i>				<i>kpa</i>	<i>psi</i>	<i>kpa</i>	<i>psi</i>
½	21.3	0.840	21.7	0.855	20.9	0.825	2.77	0.109	1.27	0.85	14	1.063	1½	4830	700	4830	700
¾	26.7	1.050	27.1	1.065	26.3	1.035	2.87	0.113	1.69	1.13	14	1.313	19/16	4830	700	4830	700
1	33.4	1.315	33.8	1.330	33.0	1.300	3.38	0.133	2.50	1.68	11½	1.576	115/16	4830	700	4830	700
1¼	42.2	1.660	42.6	1.675	41.8	1.645	3.56	0.140	3.40	2.28	11½	1.900	2	6890	1000	7580	1100
1½	48.3	1.900	48.7	1.915	47.9	1.885	3.68	0.145	4.07	2.73	11½	2.200	2	6890	1000	7580	1100
2	60.3	2.375	60.9	2.398	59.7	2.352	3.91	0.154	5.46	3.68	11½	2.750	21/16	15860	2300	17240	2500
2½	73.0	2.875	73.7	2.903	72.3	2.847	5.16	0.203	8.67	5.82	8	3.250	31/16	17240	2500	17240	2500
3	88.9	3.500	89.7	3.535	88.1	3.465	5.49	0.216	11.35	7.62	8	4.000	32/16	15170	2200	17240	2500
3½	101.6	4.000	102.6	4.040	100.6	3.960	5.74	0.226	13.71	9.20	8	4.625	35/16	13790	2000	16550	2400
4	114.3	4.500	115.4	4.545	113.2	4.455	6.02	0.237	18.23	10.89	8	5.000	37/16	13100	1900	15170	2200
5	141.3	5.563	159.0	6.258	123.6	4.868	6.55	0.258	22.07	14.81	8	6.296	311/16	11720	1700	13100	1900
6	168.3	6.625	189.3	7.453	147.3	5.797	7.11	0.280	28.58	19.18	8	7.390	415/16	10340	1500	12410	1800
8	219.1	8.625	246.5	9.703	191.7	7.547	8.18	0.322	43.73	29.35	8	9.625	51/4	8960	1300	11030	1600

TOLERANCES

Outside Diameter	Pipe size upto & including DN 40 +/-0.4mm
	Pipe size DN 50 or larger +/-1%
Thickness	-12.5%(max)
Weight	+/-10%
Galvanizing	
Minimum	490g/Sq Mtr
Average	550 g/Sq Mtr

ERW Carbon Steel Pipe

Electric Resistance Welded Carbon Steel Pipe Plain End ASTM (SCH 40)

Nominal Size (NPS)	Outside Diameter						Wall Thickness		Nominal Weight		Test Pressure			
	Standard		Maximum		Minimum				Plain Ends		Grade A		Grade B	
<i>in</i>	<i>mm</i>	<i>in</i>	<i>mm</i>	<i>in</i>	<i>mm</i>	<i>in</i>	<i>mm</i>	<i>in</i>	<i>Kg/m</i>	<i>Lb/ft</i>	<i>kpa</i>	<i>psi</i>	<i>kpa</i>	<i>psi</i>
1/2	21.3	0.840	21.7	0.855	20.9	0.825	2.77	0.109	1.27	0.85	4830	700	4830	700
3/4	26.7	1.050	27.1	1.065	26.3	1.035	2.87	0.113	1.69	1.13	4830	700	4830	700
1	33.4	1.315	33.8	1.330	33.0	1.300	3.38	0.133	2.50	1.68	4830	700	4830	700
1 1/4	42.2	1.660	42.6	1.675	41.8	1.645	3.56	0.140	3.39	2.27	8270	1200	8960	1300
1 1/2	48.3	1.900	48.7	1.915	47.9	1.885	3.68	0.145	4.05	2.72	8270	1200	8960	1300
2	60.3	2.375	60.9	2.398	59.7	2.352	3.91	0.154	5.44	3.65	15860	2300	17240	2500
2 1/2	73.0	2.875	73.7	2.903	72.3	2.847	5.16	0.203	8.63	5.79	17240	2500	17240	2500
3	88.9	3.500	89.7	3.535	88.1	3.465	5.49	0.216	11.29	7.58	15310	2220	17240	2500
3 1/2	101.6	4.000	102.6	4.040	100.6	3.960	5.74	0.226	13.57	9.11	14000	2030	16340	2370
4	114.3	4.500	115.4	4.545	113.2	4.455	6.02	0.237	16.07	10.79	13100	1900	15240	2210
5	141.3	5.563	159.0	6.258	123.6	4.868	6.55	0.258	21.77	14.62	11510	1670	13440	1950
6	168.3	6.625	189.3	7.453	147.3	5.797	7.11	0.280	28.26	18.97	10480	1520	12270	1780
8	219.1	8.625	246.5	9.703	191.7	7.547	8.18	0.322	42.55	28.55	9240	1340	10820	1570

Electrical Conduit Pipes & Tubes

We offer a series of electrical conduit pipes, steel conduit pipes, conduit tubes at prices that are sure to be competitive. Customers from both the domestic and international markets can source conduits from us in stipulated time frame. Meeting the diverse requirements of our customers, we manufacture and export conduits in steel (EMT, IMC and Rigid), aluminum and PVC.

Boosted with versatile aspect of our infrastructural set up and team of technologists, we offer an entire range of conduit pipe products like steel conduit pipes, steel conduit tubes, conduit nipples, elbows and couplings in various metals.



Nominal size mm	Outside Diameter			Thickness	Weight (KG / Mtr.)			
	Min	Max	Class 1,2,&3		Class 4			
					Min	Max		
16	15.7	16.0	1.0+0.10	0.324	0.405	0.355	0.470	
			1.4+0.10	0.452	0.531	0.483	0.594	
20	19.7	20.0	1.0+0.10	0.416	0.515	0.457	0.597	
			1.6+0.15	0.643	0.783	0.682	0.862	
25	24.6	25.0	1.2+0.15	0.598	0.784	0.649	0.887	
			1.6+0.15	0.811	0.995	0.860	01.095	
32	31.6	32.0	1.2+0.15	0.796	1.006	0.861	1.139	
			1.6+0.15	1.069	1.301	1.133	1.432	



Sectional Tubes as per IS:4923

Dimensions & Properties of Square Hollow Sections

Designation (mm) D x W x T	Depth or Width (mm)	Thickness (mm)	Weight (Kg/mtr.)	Area of Section (cm ²)	Moment of Inertia (cm ⁴)	Radius of Gyration (cm)	Elastic Modulus (cm ²)	Plastic Modulus (cm ³)
25.0 x 25.0 x 2.6	25.0	2.6	1.69	2.16	1.72	0.89	1.38	1.76
25.0 x 25.0 x 3.2	25.0	3.2	1.98	2.53	1.89	0.86	1.51	1.98
40.0 x 40.0 x 3.2	40.0	3.2	3.49	4.45	9.72	1.48	4.86	6.01
40.0 x 40.0 x 3.6	40.0	3.6	3.85	4.91	10.45	1.46	5.22	6.53
40.0 x 40.0 x 4.0	40.0	4.0	4.20	5.35	11.07	1.44	5.54	7.01
49.5 x 49.5 x 2.9	49.5	2.9	4.07	5.19	18.37	1.88	7.42	8.93
49.5 x 49.5 x 3.6	49.5	3.6	4.93	6.28	21.42	1.85	8.66	10.60
49.5 x 49.5 x 4.5	49.5	4.5	5.95	7.58	24.64	1.80	9.96	12.47

Dimensions & Properties of Rectangular Hollow Sections

Designation (mm) D x W x T	Weight (Kg/mtr.)	Area of Section (cm ²)	Moment of Inertia (cm ⁴)		Radius of Gyration (cm)		Elastic Modulus (cm ²)		Plastic Modulus (cm ³)	
			X - X	X - Y	X - X	Y - Y	X - X	Y - Y	X - X	Y - Y
50 x 25 x 2.9	2.98	3.80	10.93	3.60	1.70	0.97	4.37	2.88	5.72	3.48
50 x 25 x 3.2	3.24	4.13	11.63	3.80	1.68	0.96	4.65	3.04	6.14	3.73
60 x 40 x 2.9	4.12	5.25	24.74	13.11	2.17	1.58	8.25	6.56	10.25	7.73
80 x 40 x 2.9	5.03	6.41	50.87	17.11	2.82	1.63	12.72	8.56	16.07	9.88
80 x 40 x 3.2	5.50	7.01	54.94	18.41	2.80	1.62	13.74	9.21	17.46	10.72
80 x 40 x 4.0	6.71	8.55	64.79	21.49	2.75	1.59	16.20	10.74	20.91	12.77
100 x 50 x 3.2	7.01	8.93	112.29	37.95	3.55	2.06	22.46	15.18	28.20	17.37
100 x 50 x 4.0	8.59	10.95	134.14	44.95	3.50	2.03	26.83	17.98	34.10	20.93

TECHNICAL SPECIFICATIONS Relevant Code : IS 4923 DIMENSIONAL TOLERANCES

- Thickness : All size $\pm 10\%$
- Length : Normal 6.25 meters with tolerance of $\pm 250\text{mm}$
- Straightness : Unless otherwise arranged, the closed structurals shall have straightness of Minimum 1:200 on any length measured at the center of the length (mill straighten condition)
- Weight : On individual length ; + 10% , -8% . On lots of 10.0 tons $\pm 7.5\%$
- Weldability : RHS/SHS are weldable with our any preheating with standard electrodes
- Physical Properties : Minimum yield stress = 310 Mpa,
Minimum tensile stress = 410 Mpa,
% Elongation : 15min.



ERW Pipes & Tubes / Black Steel Pipes & Tubes / Galvanized Pipes & Tubes



ERW Steel Tube for Line Pipes in Oil & Natural Gas Conforming to IS : 1978-82

NB (mm)	OD (mm)	Wall Thickness (mm)	Plain End Weight (Kg/m)	Test Pressure (Min)		NB (mm)	OD (mm)	Wall Thickness (mm)	Plain End Weight (Kg/m)	Test Pressure (Min)	
				Grade Yst 210 STD 100Kpa	Grade Yst 240 STD 100Kpa					Grade Yst 210 STD 100Kpa	Grade Yst 240 STD 100Kpa
80	88.90	3.20	6.76	89	104	200	219.10	4.80	25.37	54	63
		3.60	7.57	101	117			5.60	29.48	63	74
		4.00	8.37	112	130			6.40	33.57	73	84
		4.40	9.17	123	143			7.00	36.61	79	92
		4.80	9.95	134	156						
		5.50	11.31	154	172						
90	101.60	3.60	8.70	88	102	250	273.10	4.80	31.76	44	51
		4.00	9.63	98	114			5.60	36.94	51	59
		4.40	10.55	108	125			6.40	42.09	58	68
		4.80	11.46	117	137			7.10	46.57	65	75
		5.70	13.48	139	162			7.80	51.03	71	83
		6.40	15.02	156	182			8.70	56.72	79	92
		7.10	16.55	174	193			9.30	60.50	85	98
100	114.30	3.60	9.83	78	91	300	323.90	4.80	37.77	37	43
		4.00	10.88	87	101			5.60	43.96	43	50
		4.80	12.96	104	121			6.40	50.11	49	57
		5.20	13.99	113	132			7.10	55.47	54	63
		5.60	15.01	122	142			7.90	61.56	61	71
		6.00	16.02	130	152			8.40	65.35	64	75
		6.40	17.03	139	162			8.70	67.62	67	78
		7.10	18.77	154	180			9.50	73.65	73	85
125	141.30	3.20	10.90	56	65	350	355.60	4.80	41.52	34	39
		4.00	13.94	70	82			5.20	44.93	36	42
		4.80	16.16	84	98			6.40	55.11	45	52
		5.60	18.74	98	115			7.10	61.02	50	58
		6.60	21.92	116	135			7.90	67.74	55	64
		7.10	23.50	125	145			8.70	74.42	61	71
150	168.30	3.60	14.62	53	62	400	406.40	4.80	47.54	29	34
		4.00	16.21	59	76			5.20	51.45	32	37
		4.80	19.35	71	81			5.60	55.35	34	40
		5.20	20.91	77	89			6.40	63.13	39	46
		5.60	22.47	83	96			7.10	69.91	43	51
		6.40	25.55	94	110			7.90	77.63	48	56
		6.40	25.55	94	110			8.70	85.32	53	62
		7.10	28.22	105	122			9.50	92.98	58	68

A. Outside Diameter - The outside diameter tolerances shall be as follows,

Pipe Body For Size	Tolerance
48.3 mm and less	+0.40 mm -0.80 mm
60.3 mm and above	+/-1%

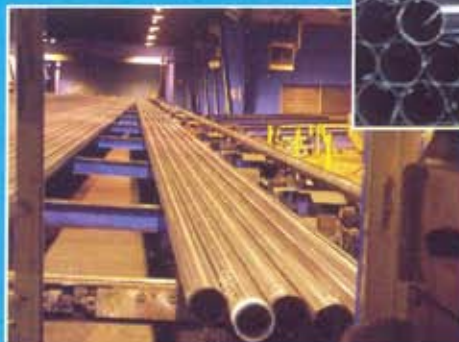
B. Wall Thickness - The Tolerances on the wall thickness of line pipes shall be as follows :

Type	For	Tolerance
Welded Pipes	73.0 mm and smaller	+20.0% -12.5%
	88.9 mm O.D. & Larger	+18.0% -12.5%

C. Weight

Single Lengths
Standard Weight, regular weight, extra strong and double extra strong pipe

Grade Yst - 210 and Yst - 240	+10.0% } -3.5% }
Special plain end pipes - All Grades	+10.0% } -5.0% }
Car loads lots For min 18000 Kg : Grade Yst 210 & Yst 240	-1.75% } -2.5% }





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