



Goodluck India Limited

(Formerly Goodluck Steel Tubes Limited)
A Govt. of India Recognized Export House

Administrative Office

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Factory

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Distt. Bulandshahar, (U.P.) India

Goodluck Metalics

(Unit of Goodluck India Ltd.)

Works:

Village - Sikra, Taluka - Bhachau
(Kutch), Gujarat - 370140. India

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ERW Black/Painted
Galvanized Pipes & Tubes
(Rounds & Sections)

Pre- Galvanized Tubes
Galvanized Coils

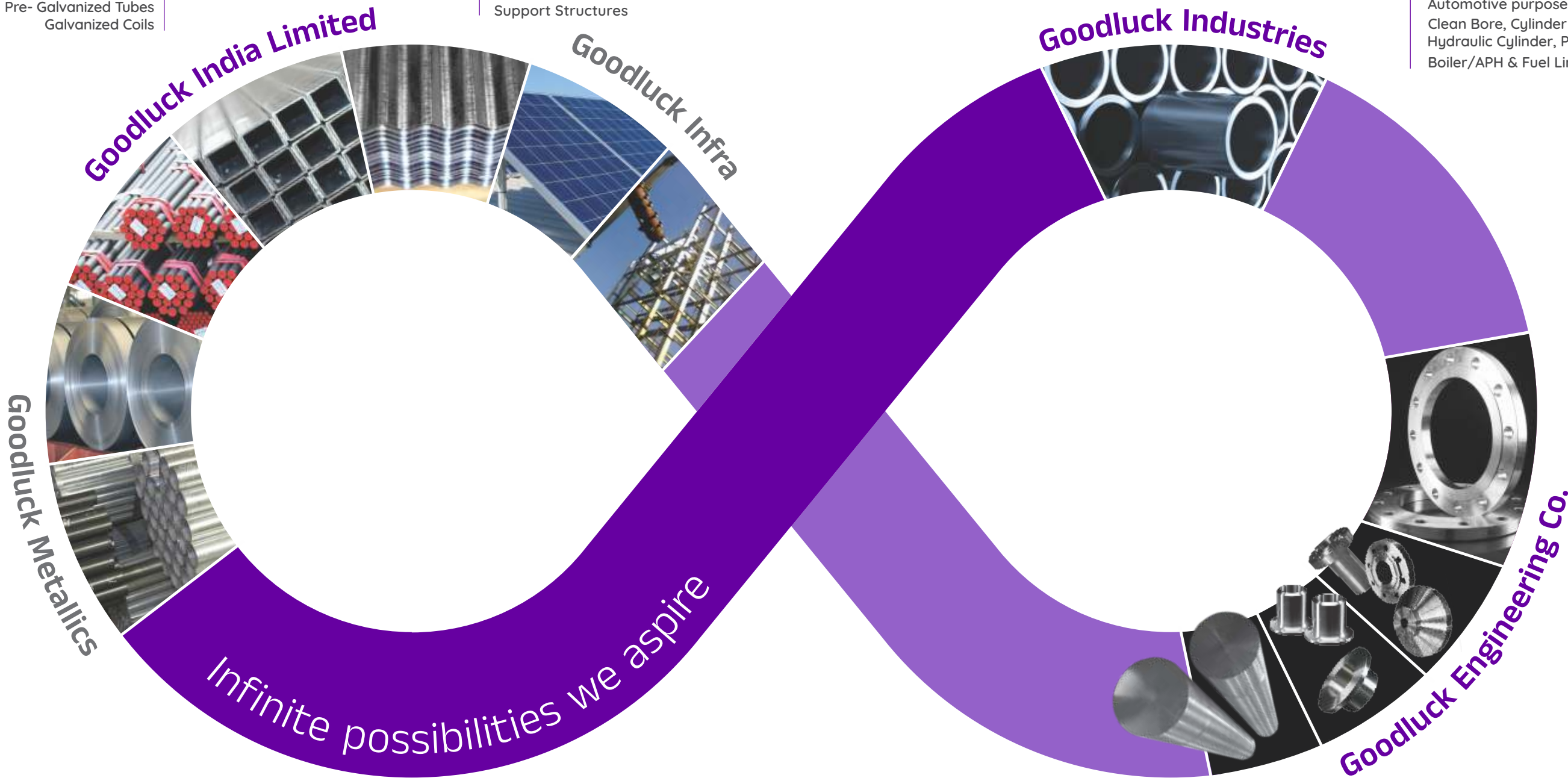
GOODLUCK
Goodluck India Limited

A versatile business group
with **strong foundation**

ERW Black/Painted
Galvanized Pipes & Tubes
(Rounds & Sections)
Pre- Galvanized Tubes
Galvanized Coils

Transmission & Telecom Towers
Fabricated Steel Structures
Railway/Road Bridges
Support Structures

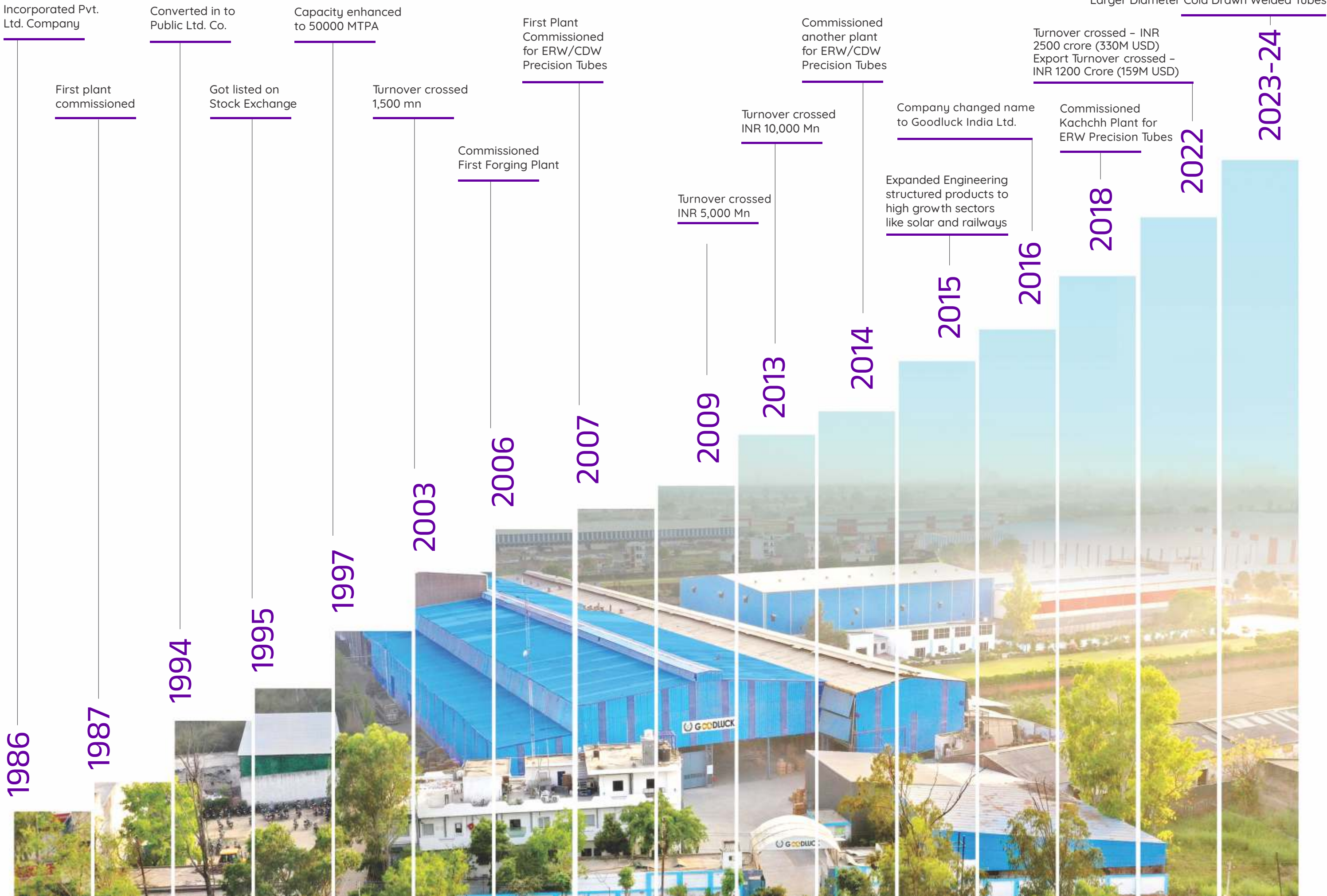
ERW - Round, Square
& Section Tubes
CDW - Tubes specially for
Automotive purpose
Clean Bore, Cylinder Bore,
Hydraulic Cylinder, Profiles Tubes
Boiler/APH & Fuel Line Tubes.



Goodluck India Group is a manufacturer and exporter of wide range of ERW Hot Dip Galvanized Pipes, Black Pipes, Black & GI Hollow Sections, CR Coils, CRCA, Galvanized Plain & Corrugated Sheets, ERW Precision & CDW Tubes, Power & Telecom Towers, Solar Structures, Forged Flanges and Custom Forgings. The company was established three decades ago.

With its innovative and progressive approach, the group today is one of the leading and fastest business groups in the Steel Industry. An ISO-9001, AS 9100D, IATF-16949, ISO-14001 & OH&SMS-45001 & CE certified organization, Goodluck India Group operates under five verticals; Goodluck India Limited, Goodluck Industries, Goodluck Engineering Co., Goodluck Metallica & Goodluck Infra.

Our Journey



Achieve the extraordinary

Life is too short to settle for the ordinary. So we commit to doing something singular, something unexpected, something no one else has done or dared to do.

Make it fun

We work hard and we play hard. Life is short, so we might as well make it a fun ride.

Show up curious

Curiosity can take you places! Thinking differently is in our DNA. We work to challenge one another to push boundaries and think beyond the box.

Change lives

We have one chance to make a difference — for our customers, our teammates, our partners, our neighbours, ourselves — and we are here to seize it.

Focus on focus

Even when things get hectic, we never lose sight of our goals. We execute on the details. We take pride in our work.

State-of-the-art pipe & section making technology

It's all about in-time delivery

Goodluck India Limited

Established in the year 1986 Goodluck India Ltd. is an ISO 9001:2015, TS-16949, EMS 14001, OH&SMS 45001, CE certified & UL approved.

Goodluck India Ltd. engaged in manufacturing and exporting of a wide range of ERW Hot Dip Galvanized Pipes, Black Pipes, Black & GI hollow sections, CR coils, CRCA, Galvanized & Plain Corrugated Sheets. We also specialize in providing telecommunication, solar mounting and railway structures. These are acclaimed for high tensile strength, long service life and higher efficiency.

Our plant is situated at Sikandarabad industrial area, just 45 km. from Delhi. It has the state-of-the-art tube mills, galvanizing units, cold rolling mills galvanized coil unit and corrugation machines. Pipe and lattice type structures are also fabricated and galvanized here.

We are the First Pipe company in India to work towards sustainable environment and our Unit Goodluck Metallica has received an EPD from International reputed agency.

Goodluck Metallica (Unit of Goodluck India Ltd.)

In order to meet the growing demand of Steel Tubes & Pipes in both domestic as well as international market and to be more competitive internationally, the group has set up a new Export focused facility under its subsidiary name Goodluck Metallica at Kachchh, (west coast of India) in State of Gujarat, close to India's premium international sea ports - Mundra and Kandla. The new ISO 9001 certified facility have added 1,20,000 MT per annum to our existing capacities and its strategic location; close to the port; will help the company to overcome global competition. We can proudly say that today Goodluck Metallica is one of the best ERW mills in India and is exporting to over 100 destinations across the Globe every month .

Manufacturing Tubes & Sheet according to Specifications

IS : 1239 (Part - 1) 2004	ISO : 65-1981	BS : 1387/1992
IS : 1161/2014	EN : 10219	BS : 534/1990
IS : 3589/2001	EN : 10217	BS : 1139/EN39
IS : 3601/2006	EN : 10255	BS : 3059
IS : 9295/1983	AS : 1074	BS : 6323
IS : 4270/2001	AS/NZS : 1163	DIN : 2458
IS : 2713/1980	SLS : 829	DIN : 2439
ASTM : A 500	IS/ISO : 3183/2007	DIN : 2440
ASTM : A-423	IS : 277/2018	DIN : 2441
ASTM : A-120	IS : 4923 : 2017	DIN : 1626
ASTM : A-53		JIS : G-3452
ASTM : A 135 & 795		

**ISO 9001:2015, EMS 14001, OH&SMS 45001
TS-16949, CE Certified, UL,
Activ fire approved Company**



Conforming to the highest standards

Delivering high quality

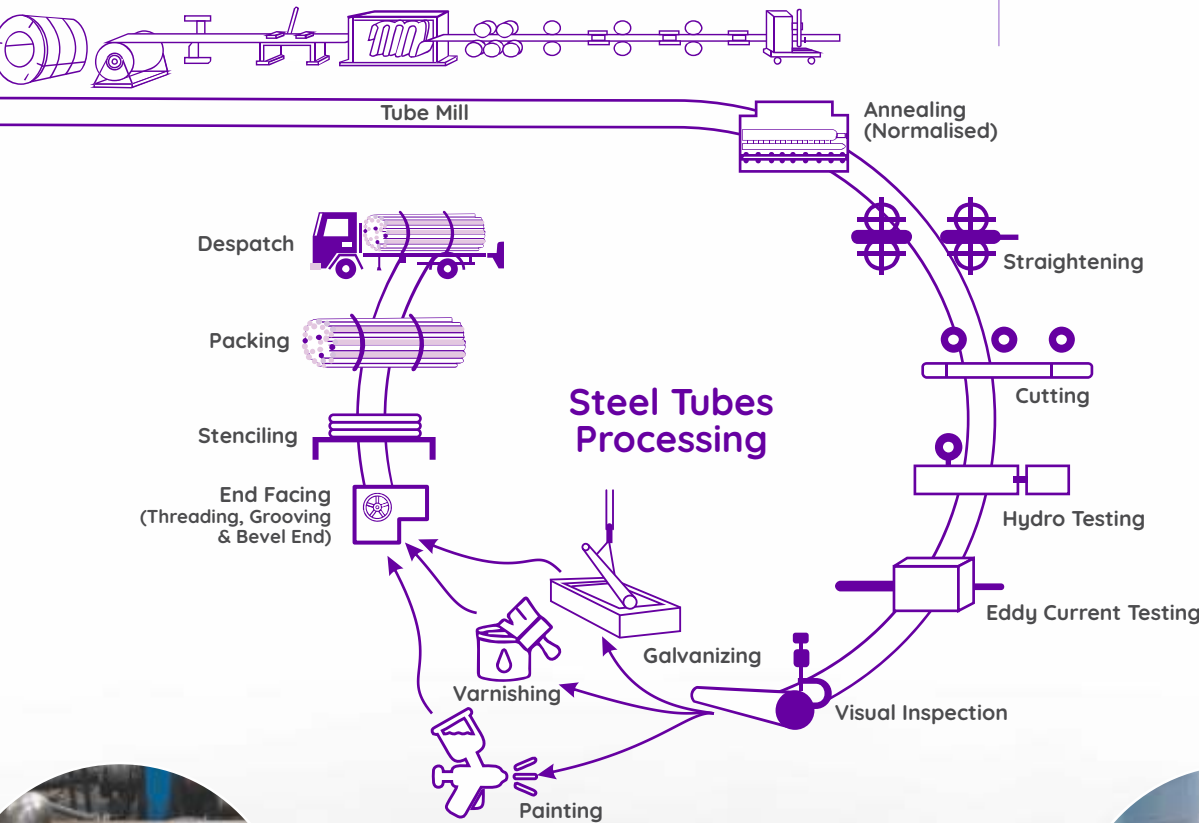
Equivalent Standards of Tubes with Applications

S.No.	Standard End Use	Indian	British/European	American	Japanese	German	Australian
1.	Water, Gas, Steam	IS-1239	BS-1387 EN-10255	ASTM A-53	-	DIN-2439, 2440 & 2441	AS 1074
2.	Water, Sewage	IS-3589	BS-5534	-	-	-	-
3.	Structural, Scaffolding	IS-1161	BS-1139, 6323 EN-39 EN-10219	ASTM A-500	JIS G 3444	-	AS 1163
4.	Idlers, Belt Conveyers	IS-9295	BS-6323	ASTM A-513	-	-	-
5.	Water Wells, Casing	IS-4270	BS-879	-	-	-	-
6.	Sectional Tubes (Sq. & Rect.)	IS-4923	--	ASTM A-500	JIS G 3466	DIN-2395	AS 1163
7.	Furniture Tube	IS-7138	-	-	JIS G 3445	-	-
8.	Oil Pipes / Pressure	IS\ISO-3183	EN-10217	API5L	JIS G 3452	DIN-17177	
9.	Mechanical Application	IS-3601	BS-6323	-	JIS G 3445	DIN-2393	
10.	Hydro Carbon & Process Industries	IS-6286	-	-	-	-	-
11.	Boiler & APH Tubes	-	BS: 3059, 6323	ASTM A 423 Gr 1 & Gr 2	-	-	-



Manufacturing process

Process flow that works with precision



Quality - our mantra to win clients

Recognized by experts

Quality Assurance begins at the raw material stage itself. Material is inspected for chemical composition and tested for other parameters like mechanical properties, gauge variation etc. for total evaluation of raw material to ascertain its suitability for the intended end-use-applications. At the surface-pickling operations, the material is checked for surface finish before it is fed into the tube mills. At the tube mills, each product for the customer is processed according to the norms sequenced by the process control engineers based on stringent international standards and monitored through uncompromising quality control tests at every stage.

The engineers are guided by the latest equipment at the R&D centre. Parent materials & soundness is checked by conducting various tests such as yield, tensile, drift expansion, flattening, bend, impact test, etc. that include Leco Carbon apparatus, scanning electron microscope, atomic absorption emission spectrophotometer, universal microscope and micro hardness tester. This facilitates all the required metallurgical tests on the materials.



Flattening Test



Tensile Test



Hardness Testing Machine



Impact Testing



Bend Test



Microscope Test



Polishing Machine



Profile Projector



UTM Testing Machine



Steel tubes for uses in water, gas, air & steam

Conforming to IS:1239 (part-1) 2004/BS:1387/85

N.B. and Series	Outside Diameter		Wall Thickness		Nominal Weight Black Tubes				Nominal Weight Galvanized Tubes				Sockets	
mm	Min (mm)	Max (mm)	mm	SWG	Plain End		Screwed & Socked		Plain End		Screwed & Socked		Minimum OD	Maximum Length
					Kg/m	m/tonne	Kg/m	m/tonne	Kg/m	m/tonne	Kg/m	m/tonne	mm	mm
15 L	21.0	21.4	2.00	14	0.947	1056	0.956	1046	0.947	1056	0.956	1046	27.0	37.0
M	21.0	21.8	2.60	12	1.21	826	1.22	819	1.21	826	1.22	819		
H	21.0	21.8	3.20	10	1.44	694	1.45	689	1.44	689	1.45	689		
20 L	26.4	26.9	2.30	13	1.38	724	1.39	719	1.38	719	1.39	719	32.5	39.0
M	26.5	27.3	2.60	12	1.56	641	1.57	637	1.56	637	1.57	637		
H	26.5	27.3	3.20	10	1.87	534	1.88	532	1.87	532	1.88	532		
25 L	33.2	33.8	2.60	12	1.98	505	2.0	500	1.98	500	2.0	500	39.5	46.0
M	33.3	34.2	3.20	10	2.41	415	2.43	411	2.41	411	2.43	411		
H	33.3	34.2	4.00	8	2.93	341	2.95	339	2.93	339	2.95	339		
32 L	41.9	42.5	2.60	12	2.54	393	2.57	389	2.54	389	2.57	389	49.0	51.0
M	42.0	42.9	3.20	10	3.10	322	3.13	319	3.10	319	3.13	319		
H	42.0	42.9	4.00	8	3.79	264	3.82	261	3.79	261	3.82	261		
40 L	47.8	48.4	2.90	11	3.23	309	3.27	306	3.23	306	3.27	306	56.0	51.0
M	47.9	48.8	3.20	10	3.56	281	3.60	227	3.56	227	3.60	277		
H	47.9	48.8	4.00	8	4.37	229	4.41	226	4.37	226	4.41	226		
50 L	59.6	60.2	2.90	11	4.08	245	4.15	241	4.08	241	4.15	241	68.0	60.0
M	59.7	60.8	3.60	9	5.03	199	5.10	196	5.03	196	5.10	196		
H	59.7	60.8	4.50	7	6.19	161	6.26	159	6.19	159	6.26	159		
65 L	75.2	76.0	3.20	10	5.71	175	5.83	171	5.71	171	5.83	171	84.0	69.0
M	75.3	76.6	3.60	9	6.42	155	6.54	153	6.42	153	6.54	153		
H	75.3	76.6	4.50	7	7.93	126	8.05	124	7.93	124	8.05	124		
80 L	87.9	88.7	3.20	10	6.72	149	6.89	145	6.72	145	6.89	145	98.0	75.0
M	88.0	89.5	4.00	8	8.36	119	8.53	117	8.36	117	8.53	117		
H	88.0	89.5	4.80	6	9.90	101	10.10	96	9.90	96	10.40	96		
100 L	113.0	113.9	3.60	9	9.75	102	10.0	100	9.75	100	10.0	100	124.0	87.0
M	113.1	115.0	4.50	7	12.20	82	12.50	80	12.20	80	12.50	80		
H	113.1	115.0	5.40	5	14.50	69	14.80	67	14.50	67	14.80	67		
125 M	138.5	140.8	4.80	6	15.90	63	16.40	61	15.90	61	16.40	61	151.0	96.0
H	138.5	140.8	5.40	5	17.90	56	18.4	54	17.9	54	18.4	54		
150 M	163.9	166.5	4.80	6	18.90	53	19.50	51	18.90	51	19.50	51	178.0	96.0
H	163.9	166.5	5.40	5	21.30	47	21.9	45	21.30	45	21.9	45		

Tolerances

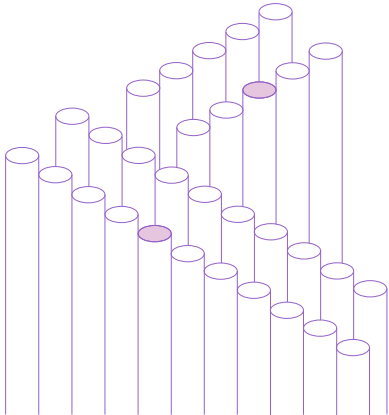
(a) Thickness	+ Not limited -8%	2. Single Tube (Medium And Heavy Series)	+/- 10%	(c) Length	4 to 7 meters unless otherwise specified
1. Light Tube					
2. Medium and Heavy Tubes	+Not limited -10%	3. For Light Series	-5%, +7.5%		
(b) Weight		4. For Quantities per load of 10 tonnes minimum (Medium and heavy Series)	+/- 7.5%		
1. Single Tube (Light Series)	+10% -8%				

Mechanical Properties

TS (MPa)	% EL (Minimum)
320 Min.	12 Upto & Including 25 mm NB 20 Above 25 mm NB

Chemical Composition

As per IS: 10748



Steel tubes for water, gas and sewerage purposes

Conforming to IS:3589/2001 (grade FE 330 and FE 410)

Outside Diameter mm	Thickness mm	Weight (Plain End)	
		Kg / M	M / Tonne
168.3	2.6	10.6	94
	3.2	13.02	77
	4.0	16.20	62
219.1	4.5	18.2	55
	2.6	13.9	72
	3.6	19.1	52
273.0	4.5	23.8	42
	6.3	33.1	30
	7.0	36.61	27
323.9	8.0	41.64	24
	3.6	23.9	42
	4.0	26.5	38
355.6	5.0	33.0	30
	6.3	41.4	24
	7.0	45.92	22
406.4	8.0	52.28	19
	4.0	31.6	31
	4.5	35.4	28
406.4	5.6	44.0	23
	7.1	55.5	18
406.4	4.0	34.7	29
	5.0	43.2	23
	5.6	48.3	21
406.4	8.0	68.6	15
	4.0	39.7	25
	5.0	49.5	20
406.4	6.3	62.2	16
	8.8	86.3	12

Tolerances

a. Outside Diameter +/- 0.75%

b. Thickness +/- 10%

c. Length
Unless otherwise specified, length are in single random Length of 4 to 7 meters or double random Length of 7 to 14 meters

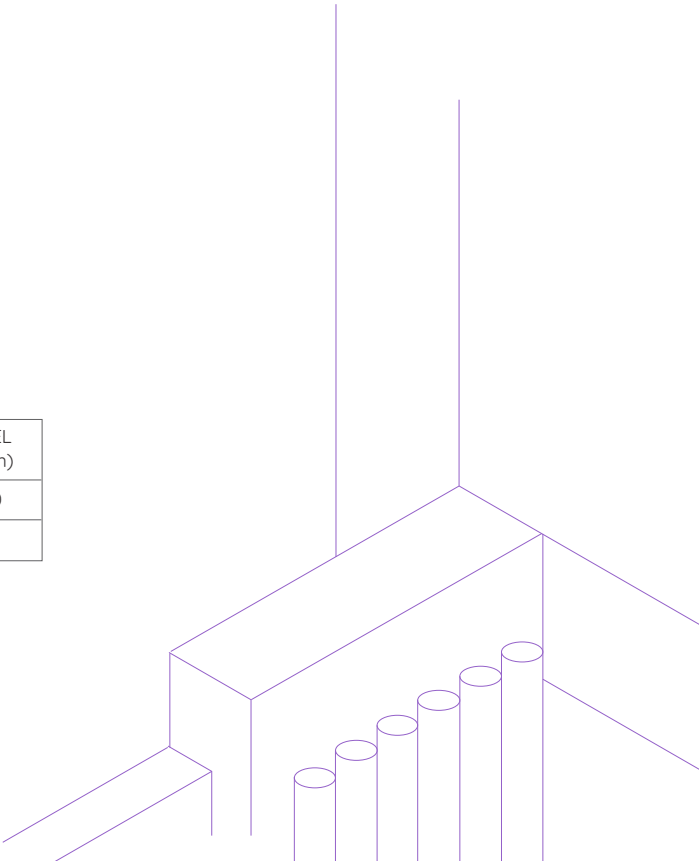
Also Available:
Internal Bead Free & Screwed & Socketed
Black & Galvanized Pipes

Chemical Composition

Steel Grade	% C (Max)	% Mn (Max)	% P (Max)	% S (Max)	CE (Max)
Fe 330	0.16	1.20	0.040	0.040	-
Fe 410	0.20	1.30	0.040	0.040	0.45

Mechanical Properties

YST (MPa) Min	TS (MPa) Min	% EL (Min)
195	330	20
235	410	18



Steel tubes for structural purposes

Conforming to IS: 1161:2014

N.B. and Series	Outside Diameter	Thickness	Nominal Weight Black Tubes Plain End		Calculated Nominal Weight Galvanized Tubes Plain End		N.B. and Series	Outside Diameter	Thickness	Nominal Weight Black Tubes Plain End		Calculated Nominal Weight Galvanized Tubes Plain End	
			Kg/m	m/tonne	Kg/m	m/tonne				Kg/m	m/tonne	Kg/m	m/tonne
15	21.3	2.0	0.947	1058	1.00	1003	110	127.0	4.5	13.60	74	13.90	72
		2.6	1.21	826	1.26	794			4.8	14.50	69	14.80	68
		3.2	1.44	694	1.49	671			5.4	16.20	62	14.80	61
20	26.9	2.3	1.38	725	1.43	699	125	139.7	4.5	15.00	67	15.25	66
		2.6	1.56	641	1.61	621			4.8	15.90	63	16.15	62
		3.2	1.87	535	1.92	521			5.4	17.90	56	18.15	55
25	33.7	2.6	1.98	505	2.03	493	135	152.4	4.5	16.40	61	16.78	60
		3.2	2.41	415	2.46	407			4.8	17.50	57	17.88	56
		4.0	2.93	341	2.98	336			5.4	19.60	51	19.98	55
32	42.4	2.6	2.54	394	2.62	382	150	165.1	4.5	17.80	56	18.20	55
		3.2	3.10	323	3.18	314			4.8	18.90	52	19.80	51
		4.0	3.79	264	3.87	258			5.4	21.30	47	21.70	46
40	48.3	2.9	3.23	310	3.34	299	150	168.3	4.5	18.2	55	18.66	54
		3.2	3.56	281	3.67	272			4.8	19.4	52	19.88	50
		4.0	4.37	229	4.48	223			5.4	21.7	46	22.24	45
50	60.3	2.9	4.08	245	4.20	238			6.3	25.2	40	41.00	24
		3.6	5.03	199	5.15	194	175	193.7	4.8	22.40	45	22.94	44
		4.5	6.19	162	6.31	158			5.4	25.10	40	25.64	39
65	76.1	2.9	5.24	192	5.37	186			5.9	27.30	37	27.84	36
		3.6	6.42	156	6.57	152	200	219.1	4.8	25.40	39	25.95	39
		4.5	7.93	126	8.10	123			5.6	29.50	34	30.05	33
80	88.9	3.2	6.72	149	6.90	145			5.9	31.00	32	31.55	32
		4.0	8.63	120	8.54	117	225	244.5	5.9	34.70	29	35.36	28
		4.8	9.90	101	10.08	99	250	273.0	5.9	38.90	26	39.68	25
90	101.6	3.6	8.70	115	8.97	111	300	323.9	6.3	49.30	20	50.28	20
		4.0	9.63	144	7.20	139	350	355.6	8.0	68.60	15	69.58	14
		4.8	11.50	87	11.77	85							
100	114.3	3.6	9.75	103	9.97	100							
		4.5	12.20	82	12.42	81							
		5.4	14.50	69	14.72	68							

A. Chemical Composition as per IS : 10748

B. Tensile Properties

Grade	Y.S. (MIN) Mpa (Kg/mm2)	T.S. (MIN) Mpa (Kg/mm2)	%age Elongation
YST-210	210 (21.42)	330 (33.66)	20
YST-240	240 (24.48)	410 (41.82)	17
YST-310	310 (31.62)	450 (45.9)	14

NOTE: For tube size upto and including 25 mm NB, elongation of 12% shall be permissible

D. Thickness

For all sizes

Welded Tubes ± 10%

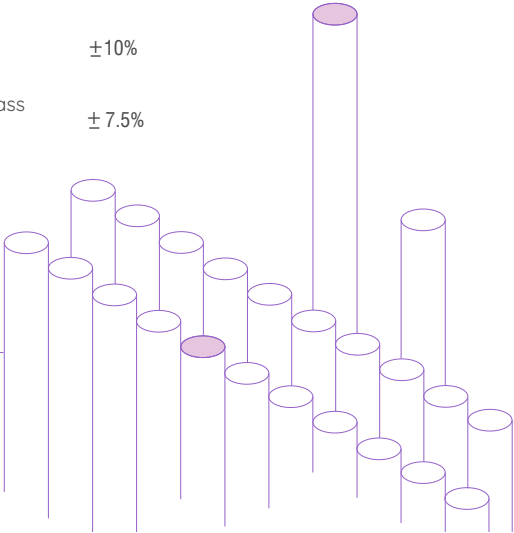
E. Weight

Single tube (Light Class) ±10%

For medium & Heavy Class ± 7.5%

10 Tonne Light, Medium

& Heavy



Steel tubes for line pipes used in oil & petroleum industries

Conforming to IS/ISO:3183:2007 (E)

NB (mm)	OD (mm)	Wall Thickness (mm)	Plain End Weight (Kg/m)	Test Pressure (Min)	
				Grade L 210 STD 100 kpa	Grade L 245 STD 100 kpa
80	88.90	3.20	676	89	104
		3.60	7.57	101	117
		4.00	8.37	112	130
		4.40	9.17	123	143
		4.80	9.95	134	156
		5.50	11.31	154	172
90	101.60	3.60	8.70	88	102
		4.00	9.63	98	114
		4.40	10.55	108	125
		4.80	11.46	117	137
		5.70	13.48	139	162
		6.40	15.02	156	182
		7.10	16.55	174	193
100	114.30	3.60	9.83	78	91
		4.00	10.88	87	101
		4.80	12.96	104	121
		5.20	13.99	113	132
		5.60	15.01	122	142
		6.00	16.02	130	152
		6.40	17.03	139	162
		7.10	18.77	154	180
125	141.30	3.20	10.90	56	65
		4.00	13.54	70	82
		4.80	16.16	84	98
		5.60	18.74	98	115
		6.60	21.92	116	135
		7.10	23.50	125	145
150	168.30	3.60	14.62	53	62
		4.00	16.21	59	76
		4.80	19.35	71	81
		5.20	20.91	77	89
		5.60	22.47	83	96
		6.40	25.55	94	110
		7.10	28.22	105	122

A. Outside Diameter - The Outside diameter

tolerance shall be as follows,

Pipe Body	Tolerance
For Size	+ 0.40 mm
60.3 mm and less	- 0.80 mm
60.3 mm and above	+/- 0.75%

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

Type For	Tolerance
Welded Pipes =/< 5.0 mm thick	+/- 0.5 mm
> 5.00 mm to < 15.0 mm	+/- 0.1 t

NB (mm)	OD (mm)	Wall Thickness (mm)	Plain End Weight (Kg/m)	Test Pressure (Min)	
				Grade L 210 STD 100 kpa	Grade L 245 STD 100 kpa
200	219.10	4.80	25.37	54	63
		5.60	29.48	63	74
		6.40	33.57	73	84
		7.00	36.61	79	92
250	273.10	4.80	31.76	44	51
		5.60	36.94	51	59
		6.40	42.09	58	68
		7.10	46.57	65	75
		7.80	51.03	71	83
		8.70	56.72	79	92
		9.30	60.50	85	98
300	323.90	4.80	37.77	37	43
		5.60	43.96	43	50
		6.40	50.11	49	57
		7.10	55.47	54	63
		7.90	61.56	61	71
		8.40	65.35	64	75
		8.70	67.62	67	78
		9.50	73.65	73	85
350	355.60	4.80	41.52	34	39
		5.20	44.93	36	42
		6.40	55.11	45	52
		7.10	61.02	50	58
		7.90	67.74	55	64
		8.70	74.42	61	71
		9.50	81.08	66	77
400	406.40	4.80	47.54	29	34
		5.20	51.45	32	37
		5.60	55.35	34	40
		6.40	63.13	39	46
		7.10	69.91	43	51
		7.90	77.63	48	56
		8.70	85.32	53	62
		9.50	92.98	58	68

C. Weight -

The Tolerance shall be as follows:

Grade L - 210 & L - 245	+ 10.0%
	- 3.5%
Grade L - 175	+ 10.0%
	- 5.0%
Special Plain End Pipes - All Grades	+ 10.0%
	- 5.0%

Car loads lots for min 18000 Kg or more

Grade L 210 & L 245	- 1.75%
Grade L 175	- 2.5%

Hollow steel sections for structural use

Conforming to IS : 4923 2017
(Hot Dip/Black, Galvanized & Pre Galvanized)

Square Hollow Sections (SHS)

Section SHS (mm)	Depth D (mm)	Width B (mm)	Thickness T (mm)	Weight W (Kg/m)	Mtr. / Tonne
20 x 20	20.00	20.00	1.80	0.964	1037
	20.00	20.00	2.00	1.05	952
	20.00	20.00	2.40	1.21	826
	20.00	20.00	2.60	1.28	779
25 x 25	25.00	25.00	2.60	1.69	591
	25.00	25.00	3.20	1.98	504
30 x 30	30.00	30.00	2.60	2.10	476
	30.00	30.00	3.20	2.49	402
	30.00	30.00	4.00	2.94	340
32 x 32	32.00	32.00	2.00	1.80	555
	32.00	32.00	2.40	2.11	473
	32.00	32.00	2.60	2.26	442
	32.00	32.00	2.90	2.48	403
	32.00	32.00	3.20	2.69	372
35 x 35	35.00	35.00	1.60	1.63	615
	35.00	35.00	1.80	1.81	552
	35.00	35.00	2.00	1.99	502
	35.00	35.00	2.60	2.51	399
	35.00	35.00	3.20	2.99	335
38 x 38	38.00	38.00	2.00	2.80	459
	38.00	38.00	2.40	2.57	390
	38.00	38.00	2.60	2.75	363
	38.00	38.00	2.90	3.03	330
	38.00	38.00	3.20	3.29	304
	38.00	38.00	3.60	3.63	276
40 x 40	40.00	40.00	2.60	2.92	343
	40.00	40.00	3.20	3.49	286
	40.00	40.00	3.60	3.85	260
	40.00	40.00	4.00	4.20	238
49.5 x 49.5	49.5	49.5	2.00	2.90	345
	49.5	49.5	2.40	3.43	291
	49.5	49.5	2.60	3.69	271
	49.5	49.5	2.90	4.07	245
	49.5	49.5	3.20	4.45	225
	49.5	49.5	3.60	4.93	203
	49.5	49.5	4.00	5.39	185
	49.5	49.5	4.50	5.95	168
60 x 60	60.00	60.00	2.00	3.56	281
	60.00	60.00	2.40	4.22	237
	60.00	60.00	2.60	4.55	220
	60.00	60.00	2.90	5.03	199
	60.00	60.00	3.20	5.50	182
	60.00	60.00	3.60	6.11	164
	60.00	60.00	4.00	6.71	149
70 x 70	70.00	70.00	2.40	4.98	201
	70.00	70.00	2.60	5.37	186
	70.00	70.00	2.90	5.94	168
	70.00	70.00	3.20	6.51	154
	70.00	70.00	3.60	7.24	138
	70.00	70.00	4.00	7.97	126
	70.00	70.00	4.50	8.85	113
	72.00	72.00	3.20	6.71	149
72 x 72	72.00	72.00	4.00	8.22	122
	72.00	72.00	4.80	9.66	103
80 x 80	80.00	80.00	2.40	5.73	174
	80.00	80.00	2.60	6.18	162
	80.00	80.00	2.90	6.85	146
	80.00	80.00	3.20	7.51	133
	80.00	80.00	3.60	8.37	119
	80.00	80.00	4.00	9.22	108
	80.00	80.00	4.50	10.26	97
	91.5	91.5	3.6	9.67	103
91.5 x 91.5	91.5	91.5	4.5	11.88	84
	91.5	91.5	5.4	14.01	71
100 x 100	100.00	100.00	3.20	9.52	105
	100.00	100.00	3.60	10.64	94
	100.00	100.00	4.00	11.73	85
	100.00	100.00	4.50	13.09	76
	100.00	100.00	4.80	13.88	72
	100.00	100.00	5.00	14.41	69
	132.00	132.00	4.80	18.71	53
132 x 132	132.00	132.00	5.40	20.88	48
	150.00	150.00	5.0	22.26	45
	150.00	150.00	6.0	26.40	38

Grade	T.S. (min) Mpa	Y.S. (min) Mpa	Elongation	
			25.4 mm & under	Over 25.4 mm
Yst - 210	330	210	12	20
Yst - 240	410	240	10	15
Yst - 310	450	310	8	10
Yst - 355	490	355	8	10

Rectangular Hollow Sections (RHS)

Section SHS (mm)	Depth D (mm)	Width B (mm)	Thickness T (mm)	Weight W (Kg/m)	Mtr. / Tonne
30 x 30	30.00	20.00	2.00	1.36	733
40 x 20	40.00	20.00	2.00	1.68	596
40 x 30	40.00	30.00	2.00	1.99	502
	40.00	30.00	2.40	2.34	427
	40.00	30.00	2.60	2.51	399
	40.00	30.00	2.90	2.75	363
40 x 30	40.00	30.00	3.20	2.99	335
	40.00	30.00	4.00	3.57	280
50 x 25	50.00	25.00	2.90	2.98	335
	50.00	25.00	3.20	3.24	309
50 x 30	50.00	30.00	2.00	2.31	434
	50.00	30.00	2.40	2.72	368
	50.00	30.00	2.60	2.92	343
	50.00	30.00	2.90	3.21	312
	50.00	30.00	3.20	3.49	286
	50.00	30.00	4.00	4.20	238
50 x 40	50.00	40.00	2.00	2.62	382
	50.00	40.00	2.40	3.09	323
	50.00	40.00	2.60	3.33	301
	50.00	40.00	2.90	3.66	273
	50.00	40.00	3.20	3.99	250
60 x 30	60.00	30.00	1.60	2.13	471
	60.00	30.00	1.80	2.38	421
	60.00	30.00	2.00	2.62	382
	60.00	30.00	2.60	3.33	301
66 x 33	66.00	33.00	2.90	4.07	245
	66.00	33.00	3.60	4.93	203
	66.00	33.00	4.50	5.95	168
	60.00	40.00	2.00	2.93	341
60 x 40	60.00	40.00	2.40	3.47	288
	60.00	40.00	2.60	3.73	268
	60.00	40.00	3.20	4.50	222
	60.00	40.00	4.00	5.45	183
	70.00	30.00	2.90	4.12	243
70 x 30	70.00	30.00	3.20	4.50	222
	70.00	30.00	4.00	5.45	183
75 x 50	75.00	50.00	1.60	3.01	332
	75.00	50.00	1.80	3.37	297
	75.00	50.00	2.00	3.72	269
	75.00	50.00	2.60	4.75	210
	75.00	50.00	3.20	5.75	174
76 x 38	76.00	38.00	2.90	4.76	210
	76.00	38.00	3.20	5.20	192
	76.00	38.00	3.60	5.77	173
	76.00	38.00	4.00	6.33	158
80 x 40	80.00	40.00	2.90	5.03	199
	80.00	40.00	3.20	5.50	182
	80.00	40.00	4.00	6.71	149
80 x 50	80.00	50.00	2.90	5.49	182
	80.00	50.00	3.20	6.00	167
	80.00	50.00	3.60	6.68	150
	80.00	50.00	4.00	7.34	136
	96.00	48.00	3.20	6.71	149
96 x 48	96.00	48.00	4.00	8.22	122
	96.00	48.00	4.80	9.66	103
100 x 50	100.00	50.00	3.20	7.01	143
	100.00	50.00	3.60	7.81	128
	100.00	50.00	4.00	8.59	116
	100.00	50.00	4.50	9.55	105
	115.00	60.00	3.20	8.26	121
115 x 60	115.00	60.00	3.60	9.22	108
	115.00	60.00	4.00	10.16	98
	115.00	60.00	4.50	11.32	88
	115.00	60.00	4.80	12.00	83
	115.00	60.00	5.00	12.45	80
122 x 61	122.00	61.00	3.6	9.67	103
	122.00	61.00	4.5	11.88	84
	122.00	61.00	5.4	14.01	71
145 x 82	145.00	82.00	4.8	15.92	63
	145.00	82.00	5.4	17.74	56
160 x 80	160.00	80.00	4.00	14.25	70
	160.00	80.00	5.00	17.55	57
172 x 92	172.00	92.00	4.8	18.71	56
	172.00	92.00	5.4	20.88	48

Tolerance

O.D. : 1% With Minimum +/- 0.5 mm, Thickness: +/-10% Weight : - 8% + 10%

Single Pipe : - 8% + 10%, On lots of 10 Tonne : +/- 7.5%



ERW steel tubes for idlers for belt conveyors

Conforming to IS : 9295 - 1983 dimensions & nominal masses

Outside Diameter mm	Thickness mm	Mass kg / Mtr	Mtr / tone
63.50	3.65	5.39	186
	4.05	5.87	170
	4.50	6.55	153
	4.85	7.01	143
	5.40	7.74	129
76.10	6.30	8.89	112
	3.65	6.52	153
	4.05	7.20	139
	4.50	7.95	126
	4.85	8.52	117
88.90	5.40	9.41	106
	6.30	10.84	92
	4.05	8.47	118
	4.50	9.36	107
	4.85	10.05	99
101.60	5.40	11.12	90
	6.30	12.83	78
	4.05	9.74	103
	4.50	10.78	93
	4.85	11.57	86
108.0	5.40	12.81	78
	6.30	14.81	68
	4.05	10.38	96
	4.85	12.34	81
	6.30	15.80	63
114.30	4.50	12.19	82
	4.85	13.09	76
	5.40	14.50	69
	6.30	16.78	60
	4.50	13.60	74
127.0	4.85	14.61	68
	5.40	16.19	62
	6.30	18.75	53

Outside Diameter mm	Thickness mm	Mass kg / Mtr	Mtr / tone
133.0	4.50	14.30	70
	5.40	16.99	59
	6.30	19.69	51
139.70	4.50	15.00	67
	4.85	16.13	62
	5.40	17.90	56
	6.30	20.73	48
152.40	4.50	16.40	61
	4.85	17.65	57
	5.40	19.50	51
	6.30	22.70	44
159.00	4.50	17.10	58
	4.85	18.44	54
	5.40	20.46	49
	6.30	23.72	42
165.10	4.50	17.80	56
	4.85	19.17	52
	5.40	21.27	47
168.30	6.30	24.67	41
	4.50	18.20	55
	4.85	19.55	51
	5.40	21.69	46
193.70	6.30	25.17	40
	5.40	25.10	40
	6.30	29.12	34
219.10	5.40	28.50	35
	6.30	33.06	30

Tolerances
* Outside Diameter + / - 0.8%
* Ovality below 168.3mm OD 0.5 mm
* Ovality including 168.3mm and above 1.0 mm
* Weight Kg / Mtr : Single tube +/- 10%
For truck load of ten tonne +/- 7.5%
* Thickness +/- 10%

Carbon steel tubes suitable for screwing

Conforming to ISO : 65

DN	DN Designator	Outside Diameter1 D mm	Thicknesses (T) and masses per unit length (M) according to the series											
			Heavy Series			Medium Series			Light Series 1			Light Series 2		
			T mm	Plain end M kg/m	Screwed Socketed M kg/m	T mm	Plain end M kg/m	Screwed Socketed M kg/m	T mm	Plain end M kg/m	Screwed Socketed M kg/m	T mm	Plain end M kg/m	Screwed Socketed M kg/m
15	1/2	21.3	3.2	1.44	1.45	2.6	1.21	1.22	2.3	1.09	1.09	2.0	0.947	0.956
20	3/4	26.9	3.2	1.87	1.88	2.6	1.56	1.57	2.3	1.39	1.40	2.3	1.38	1.39
25	1	33.7	4.0	2.93	2.95	3.2	2.41	2.43	2.9	2.20	2.22	2.6	1.98	2.00
32	1 1/4	42.4	4.0	3.97	3.82	3.2	3.10	3.13	2.9	2.82	2.85	2.6	2.54	2.57
40	1 1/2	48.3	4.0	4.37	4.41	3.2	3.56	3.60	2.9	3.24	3.28	2.9	3.23	3.27
50	2	60.3	4.5	6.19	6.26	3.6	5.03	5.10	3.2	4.49	4.56	2.9	4.08	4.15
65	2 1/2	76.1	4.5	7.93	8.05	3.6	6.42	6.54	3.2	5.73	5.85	3.2	5.71	5.83
80	3	88.9	5.0	10.3	10.5	4.0	8.36	8.53	3.6	7.55	7.72	3.2	6.72	6.89
100	4	114.3	5.4	14.5	14.8	4.5	12.2	12.5	4.0	10.8	11.1	3.6	9.75	10.0
125	5	139.7	5.4	17.9	18.4	5.0	16.6	17.1	-	-	-	-	-	-
150	6	165.12	5.4	21.3	21.9	5.0	19.8	20.4	-	-	-	-	-	-

Tolerances

Outer Diameter as per above table Thickness

Light Series 1		Light Series 1	
+ Not Limited	-12.5%	+ Not Limited	-8%

Weight

Light Series 1		Light Series 1	
Single Tube	10 Tonn Load	Single Tube	10 Tonn Load
+ / - 10%	+ / - 7.5%	+10% -8%	+ / - 5%

Steel tubes for water wells (casing pipes)

Conforming to IS : 4270 / 2001

N.B. of Pipe MM	Outside Diameter	Thickness	Nominal Weight Black Tubes Plain End	
			kg/m	m/tonne
100	114.3	5.4	14.5	69
125	141.3	5.4	18.1	55
		7.1	23.5	43
150	168.3	5.4	21.6	46
		7.1	28.2	35
175	193.7	6.4	29.6	34
		8.0	36.6	27
200	219.1	6.4	33.6	30
		8.0	41.6	24
225	244.5	7.1	41.6	24
		9.0	52.3	19
250	273.1	8.0	52.3	19
		10.0	64.9	15
300	323.9	8.0	62.3	16
		10.0	77.4	13
350	355.6	9.52	81.25	12
400	406.4	9.52	93.17	11

A. PHYSICAL PROPERTIES

Grade	Y. S. (min) MPa (kg/mm2)	T. S. (min) MPa (kg/mm2)	% age Elongation
Fe410	235	410	15
Fe450	275	450	13

B. Tolerance

1. Outside Diameter	1%
2. Thickness	
Welded tube Up to	+15% }
And including 406.4 MM	-12.5% }
Over 406.4 MM outside Diameter	+15% }
	- 10% }
3. Weight	- 8%
Single Tube	+ 10%



DIN pipes

Steel Tubes Conforming to DIN 2440

Nominal Size DN	Size is Inch	OD MM	Wall Thickness	Socket Dimension		Mass P. E. Tube (kg/ mtr)	Mass Socked Tube (kg/ mtr)	Socket Dimension	
				Dia Min (mm)	Length Min (mm)			Dia Min (mm)	Length Min (mm)
15	½	21.3	2.65	21.8	21.0	1.22	1.23	26.4	34.0
20	3/4	26.9	2.65	27.3	26.5	1.58	1.59	31.8	36.0
25	1	33.7	3.25	34.2	33.3	2.44	2.46	39.5	43.0
32	1 1/4	42.4	3.25	42.9	42.0	3.14	3.17	48.3	48.0
40	1 1/2	48.3	3.25	48.8	47.9	3.61	3.65	54.5	48.0
50	2	60.3	3.65	60.8	59.7	5.10	5.17	66.3	56.0
65	2 1/2	76.1	3.65	76.6	75.3	6.51	6.63	82.0	65.0
80	3	88.9	4.05	89.5	88.0	8.47	8.64	95.0	71.0
100	4	114.3	4.50	115.0	113.1	12.10	12.40	122.0	83.0
125	5	139.7	4.85	140.8	138.5	16.20	16.70	147.0	92.0
150	6	165.1	4.85	166.5	163.9	19.20	19.8	174.0	92.0

Material	Tolerance
St. 33-2 Confirming to DIN 17100	Wall Thickness -12.5% For single tube + / - 10%
Galvanizing in accordance with Din 2444	Mass For ten tonne lot + / -7.5%

Scaffolding pipes conforming to BS EN 39

Size	Outside diameter	48.3 mm
Type	Wall thickness (in mm)	Weight in Kg/Mtr
3	3.20	3.56
4	4.00	4.37

Tolerances on dimensions
Characteristics Tolerances
External Dimensions ±0.50mm.
Thickness For -10%
Straightness 0.20% of total length
Mass per unit length Not less than 7.5% the specified mass on individual lengths

Mechanical Properties			
Grade	YS (MPa) Min	TS (MPa) Min	% EL (Min)
S235 GT	235	340-520	24

Chemical Composition (%) Max.						
C (Max)	Si (Max)	Mn (Max)	P (Max)	S (Max)	Al (Min)	
0.200	0.04	1.40	0.04	0.045	0.02	

Flatteing Test 1. Flatten upto 75% of tube dia for weld test (Weld at 0°& 90° position)

Scaffolding pipes conforming to BS EN 10219 (High-Tensile)

Size	Outside diameter	48.3 mm
Type	Wall thickness (in mm)	Weight in Kg/Mtr
1 1/2"	3.20	3.56

Tolerances on dimensions
Characteristics Tolerances
External Dimensions ±1%, with a minimum of ±0.5 mm and a maximum of ±10 mm
Thickness For do ≤ 406.4 mm, T ≤ 5mm : ±10%, T > 5mm ± 0.5mm; For do > 406.4 mm: ±10% with a max of ±2 mm
Out-of-roundness 2% for hollow sections having a diameter to thickness ratio not exceeding 100
Straightness 0.20% of total length
Mass per unit length ± 6% on individual delivered lengths

Mechanical Properties							
Grade	YS Min MPa	TS Min MPa		% EL (Min)	Minimum impact energy J		
		< 3	≥3 ≤40		≤ 40	-20°C	0°C
S355 JOH	355	510-680	470-630	20	—	27	—

Chemical Composition (%) Max.							
Grade	C (Max)	Si (Max)	Mn (Max)	P (Max)	S (Max)	N (Min)	CEV
S355 JOH	0.220	0.550	1.600	0.035	0.035	0.009	0.450

ASTM pipes

Pipes conforming to ASTM A - 53 GR A & B

NPS Designator	DN Designator	Outside Diameter		Schedule No.	Thickness		Mass of Plain end Pipe		Hydrostatic Test Pressure		Pieces/ bundle
		Inch	mm		Inch	mm	lb/ft.	Kg/mtr.	Grade A-Mpa	Grade B-Mpa	
½	15	0.840	21.3	40	0.109	2.77	0.850	1.27	4.8	4.8	120
¾	20	1.050	26.7	40	0.113	2.87	1.130	1.69	4.8	4.8	84
1	25	1.315	33.4	40	0.133	3.38	1.680	2.50	4.8	4.8	60
1¼	32	1.660	42.2	40	0.140	3.56	2.270	3.39	8.3	9.0	42
1½	40	1.900	48.3	40	0.145	3.68	2.720	4.05	8.3	9.0	36
2	50	2.375	60.3	40	0.154	3.91	3.660	5.44	15.9	17.2	26
2½	65	2.874	73.0	40	0.203	5.16	5.800	8.63	17.2	17.2	18
3	80	3.500	88.9	40	0.216	5.49	7.580	11.29	15.3	17.2	14
4	100	4.500	114.3	40	0.237	6.02	10.800	16.07	13.1	15.2	10
5	125	5.563	141.3	40	0.258	6.55	14.630	21.77	11.5	13.4	7
6	150	6.625	168.3	40	0.280	7.11	18.990	28.26	10.5	12.3	7
8	200	8.625	219.1	20	0.250	6.35	22.380	33.31	7.2	8.4	---
8	200	8.625	219.1	40	0.322	8.18	28.580	42.55	9.2	10.8	---
10	250	10.750	273.1	20	0.250	6.35	28.060	41.75	5.8	6.8	---
10	250	10.750	273.1	40	0.365	9.27	40.520	60.29	8.4	9.9	---
12	300	12.750	323.9	20	0.250	6.35	33.410	49.71	4.9	5.7	---
12	300	12.750	323.9	30	0.330	8.38	43.810	65.18	6.4	7.5	---
12	300	12.750	323.9	STD	0.375	9.52	49.610	73.78	7.3	8.5	---
12	300	12.750	323.9	40	0.406	10.31	53.570	79.70	7.9	9.2	---
14	350	14.000	355.6	10	0.250	6.35	36.750	54.69	4.4	5.2	---
14	350	14.000	355.6	30	0.375	9.52	54.620	81.25	6.6	7.7	---
14	350	14.000	355.6	40	0.438	11.13	63.500	94.55	7.8	9.0	---
16	400	16.000	406.4	10	0.250	6.35	42.090	62.64	3.9	4.5	---
16	400	16.000	406.4	30	0.375	9.52	62.640	93.17	5.8	6.8	---
16	400	16.000	406.4	40	0.500	12.70	82.850	123.30	7.7	9.0	—

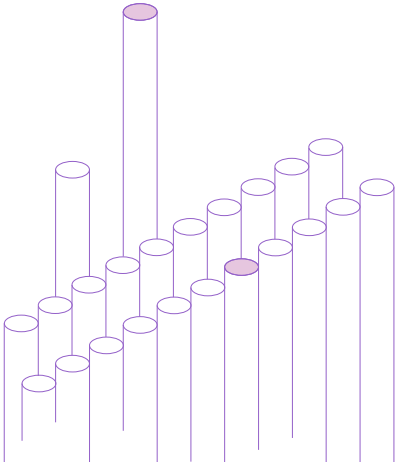
Tolerances	Testing
Outside Diameter Pipe size upto & including DN 40 +/- 0.4 mm of OD Pipe size DN 50 or larger +/- 1% of OD	Online NDT For Pipes NPS 2 (DN 50) or larger Weld seam of each pipe shall be tested by Eddy Current Test
Thickness - 12.5% (max) / + Not specified	Bend Test For pipe upto & including DN 50 Bending Angle 90° Bending Radius 12 times to the OD of tube (No cracks in body & weld)
Weight +/- 10%	Flattening (0° & 90°) For Pipes over DN 50 1. Flatten upto 2/3 of OD for ductility of weld 2. Flatten upto 1/3 of OD for ductility of steel 3. Full flattening for testing of lamination or unsound material
Mechanical Properties	
	Grade A Grade B
Yield Strength	205 Mpa (Min) 240 Mpa (Min)
Tensile Strength	330 Mpa (Min) 415 Mpa (Min)
Elongation	As per ASTM A-53 As per ASTM A-53

Chemical Composition (Maximum %)									
Grade	Carbon	Manganese	Phosphorus	Sulphur	Copper	Nickel	Chromium	Molybdenum	Vanadium
Grade A	0.250	0.950	0.050	0.045	0.400	0.400	0.400	0.150	0.080
Grade B	0.300	1.200	0.050	0.045	0.400	0.400	0.400	0.150	0.080

Cu + Ni + Cr + Mb + V < 1%

Galvanizing	
As per ASTM A-53 with test method ASTM A90/A90M	
Min. of any surface of specimen	0.400Kg/Mtr² (55 microns approx)
Average of one specimen	0.490Kg/Mtr² (70 microns approx)
Average of two specimens	0.550Kg/Mtr² (79 microns approx)

Marking/Stenciling
Online stenciling as per the standard & client requirements.



Technical data of pipes



Pipes Conforming to ASTM A795 / ASTM A135

This specification covers Black and Zinc-Coated (Hot-Dipped Galvanized) welded steel pipe in use for fire protection systems.

Dimensions, Weights, and Test Pressure For Light-Weight Fire Protection Pipe—Schedule 10

NPS Designator	Outside Diameter	Diameter Tolerance		Standard Thickness		Schedule	Weight		Test Pressure	
	(mm)	(Min)	(Max)	(mm)	(inch)		(Kg/mtr)	(lb/ft)	(psi)	(kPa)
3/4	26.7	26.30	27.10	2.11	0.083	10	1.28	0.86	700	4800
1	33.4	33.00	33.80	2.77	0.109	10	2.09	1.41	700	4800
1¼	42.2	41.80	42.60	2.77	0.109	10	2.69	1.81	1000	6900
1½	48.3	47.90	48.70	2.77	0.109	10	3.11	2.09	1000	6900
2	60.3	59.70	60.90	2.77	0.109	10	3.93	2.64	1000	6900
2½	73.0	72.27	73.73	3.05	0.120	10	5.26	3.53	1000	6900
3	88.9	88.01	89.79	3.05	0.120	10	6.46	4.34	1000	6900
3½	101.6	100.58	102.62	3.05	0.120	10	7.41	4.98	1200	8300
4	114.3	113.16	115.44	3.05	0.120	10	8.37	5.62	1200	8300
5	141.3	139.89	142.71	3.40	0.134	10	11.58	7.78	1200	8300
6	168.3	166.62	169.98	3.40	0.134	10	13.85	9.30	1000	6900
8	219.1	216.91	221.29	4.78	0.188	10	25.26	16.96	800	5500
10	273.0	270.27	275.73	4.78	0.188	10	31.62	21.23	700	4800

Chemical Composition

Grade	Chemical Composition (Maximum)			
	C %	Mn %	P %	S %
A	0.250	0.950	0.035	0.035
B	0.300	1.200	0.035	0.035

Mechanical Properties

	Grade A	Grade B
Yield Strength	205 Mpa (Min)	240 Mpa (Min)
Tensile Strength	330 Mpa (Min)	415 Mpa (Min)

Technical Details

Characteristics	Tolerances & Technical details
Outside Diameter	NPS 11/2 [DN 40] and under ± 0.016 inch [0.41 mm] & NPS 2 [DN 50] and over ± 1 % of OD.
Thickness	-12.5% of specific wall thickness.
Weight	For each tube ± 5% of standard weight.
Heat Treatment	The weld seam of pipe in Grade B shall be heat treated after welding to a minimum of 1000 °F [540 °C] so that no untempered martensite remains.
Flatteing Test	Keep the weld at 0° or 90° from the line of direction of force and flatten upto 66% of OD, No cracks or breaks are allowed on the weld. Further flatten upto 33% of OD, No cracks or breaks are allowed in the material and during third step, Evidence of laminated or unsound material or of incomplete weld that is revealed during the entire flattening test shall be cause for rejection.
Hydro Test	Each length of pipe shall be tested by hydrostatic test without leakage through the pipe wall.
Nondestructive Test	Each length of pipe, size 2NPS (50DN) and larger shall be tested by Eddy-Current Test.
Mass of Zinc Coating	Average of two specimens 460 gm/mtr² & Individual specimen not less than 400 gm/mtr².
Surface Protection	Black & Galvanized coating as per Customer requirement.
End	Pipe shall be finished with Square cut (plain End), Beval End (30° -0/+5°), Roll Groove & Threading.
Threading	All threads shall be in accordance with the gaging practice and tolerances of ASME B1.20.1.
Marking (Stencilling)	”Goodluck, Specification designation, Grade, Outside diameter, Thickness, Process of manufacturing & Heat No.” on pipe and any thing specific as per customer requirement.

Technical data of pipes

Pipes Conforming to ASTM A500

(Cold-formed welded carbon steel round, square & rectangular shape structural tubing for welded, riveted, or

bolted construction of bridges and buildings, and for general structural purposes.)

Square Hollow Sections		Rectangular Hollow Sections		Round Hollow Tubes		Rectangular Hollow Sections	
Nominal Size	Thickness Range	Nominal Size	Thickness Range	Nominal Size	Wall Thickness	Nominal Size	Thickness Range
(MM)	(MM)	(MM)	(MM)	(MM)	(MM)	(MM)	(MM)
30x20	1.2 mm ~ 2.5 mm	20x20	1 mm ~ 2.5 mm	21.3	1 mm ~ 2.5 mm	48.3	1.2 mm ~ 4.5 mm
40x20	1.2 mm ~ 2.9 mm	25x25	1.2 mm ~ 3.0 mm	22.2	1 mm ~ 2.5 mm	50.8	1.2 mm ~ 4.5 mm
40x25	1.2 mm ~ 3.0 mm	30x30	1.2 mm ~ 3.5 mm	25.4	1 mm ~ 3.5 mm	60.3	1.6 mm ~ 5.0 mm
40x30	1.2 mm ~ 2.5 mm	31.75x31.75	1.2 mm ~ 3.5 mm	26.9	1 mm ~ 3.5 mm	63.5	1.6 mm ~ 5.0 mm
50x25	1.2 mm ~ 3.2 mm	40x40	1.2 mm ~ 3.5 mm	28.6	1 mm ~ 3.5 mm	69.9	1.8 mm ~ 5.0 mm
50x30	1.2 mm ~ 3.5 mm	50x50	1.6 mm ~ 4.0 mm	31.8	1 mm ~ 3.5 mm	73.0	1.8 mm ~ 5.0 mm
60x30	1.6 mm ~ 3.5 mm	60x60	1.6 mm ~ 4.0 mm	33.7	1.2 mm ~ 4.0 mm	76.1	1.8 mm ~ 5.0 mm
50x40	1.6 mm ~ 3.5 mm	70x70	2.0 mm ~ 3.8 mm	38.1	1.2 mm ~ 4.0 mm	88.9	1.8 mm ~ 5.0 mm
60x40	1.6 mm ~ 4.0 mm	80x80	2.3 mm ~ 4.0 mm	40.0	1.2 mm ~ 4.0 mm	101.6	2.0 mm ~ 5.0 mm
75x25	1.6 mm ~ 2.5 mm	90x90	2.3 mm ~ 5.0 mm	42.4	1.2 mm ~ 4.0 mm	114.3	2.3 mm ~ 5.0 mm
80x40	1.6 mm ~ 4.0 mm	101.6x101.6	2.5 mm ~ 3.0 mm	44.5	1.2 mm ~ 4.0 mm		
80x50	1.8 mm ~ 4.0 mm						
90x50	2.0 mm ~ 3.8 mm						
96x48	2.0 mm ~ 3.8 mm						
100x50	2.0 mm ~ 3.8 mm						
120x60	2.3 mm ~ 5.0 mm						

Chemical Compositions (%)

Elements	Grade A & B		Grade C	
	Heat Analysis	Product Analysis	Heat Analysis	Product Analysis
Carbon (Maximum)	0.260	0.300	0.230	0.270
Manganese (Maximum)	1.350	1.400	1.350	1.400
Phosphorus (Maximum)	0.035	0.045	0.035	0.045
Sulfur (Maximum)	0.035	0.045	0.035	0.045
Copper (Minimum)	0.200	0.180	0.200	0.180

For each reduction of 0.01 percentage point below the specified maximum for carbon, an increase of 0.06 percentage point above the specified maximum for manganese is permitted, up to a maximum of 1.50 % by heat analysis and 1.60 % by product analysis.

Mechanical Properties

Elements	Round Structural Tubing			Shaped Structural Tubing		
	Grade A	Grade B	Grade C	Grade A	Grade B	Grade C
Tensile Strength (Mpa) minimum	310	400	425	310	400	425
Yield Strength (Mpa) minimum	230	290	315	270	315	345
%Elongation in (50mm) minimum	25	23	21	25	23	21

Technical Details			
Characteristics	Tolerances & Technical details	Twist	For Square & Rectangular Section 1½ Inch [40mm] and under = 0.050 Inch [1.3mm] Over 1½ to 2½ Inch [40mm to 65mm] = 0.062 Inch [1.6mm] Over 2½ to 4 Inch [65mm to 100mm] = 0.075 Inch [1.9mm] Over 4 to 6 Inch [100mm to 150mm] = 0.087 Inch [2.2mm] Over 6 to 8 Inch [150mm to 200mm] = 0.100 Inch [2.5mm] Over 8 Inch [200mm] = 0.112 Inch [2.8mm]
Outside Diameter (OD)	For Round Pipes, OD 1.90 Inch (48.3mm) and smaller ± 0.50 % & OD 2.00 Inch (60.3mm) and larger ± 0.75 % For Square & Rectangular Section 2½ Inch [65mm] or under ± 0.020 Inch (0.50 mm) Over 2½ to 3¼ [65mm to 90mm] ± 0.025 Inch (0.60mm) Over 3½ to 5½ [90mm to 140mm] ± 0.030 Inch (0.80mm) Over 5½ [140mm] ± 1.0 % of OD		
Thickness	± 10% of specific wall thickness.	Flattening Test	Keep the weld at 90° and flatten upto 66% of OD, No cracks or breaks are allowed on the weld. Further flatten upto 50% of OD, No cracks or breaks are allowed in the material and during third step full flatten for soundness or lamination.
Length	Pipe shall be furnished in single random length, double random length or in uniform length as per the customer requirement.		
Straightness	2 mm/mtr	Surface Protection	Black & Galvanized coating as per Customer requirement.
Squareness (Square & rectangular)	90° ± 2° max.		
Radius	3 times of thickness maximum	Marking (Stencilling)	Goodluck, Specification designation and Grade” on pipe and any thing specific as per customer requirement.

European standard for steel tubes and pipes for ordinary services

Pipes Conforming to EN : 10255

Nominal Size		Class	Outside Diameter (mm)		Thick. (mm)	Weight (Plain End) (Kg/mtr.)	Weight (Socketed) (Kg/mtr.)	Pcs per Bundle
MM	Inch		Min	Max				
15mm	1/2	L1	21.0	21.7	2.30	1.08	1.09	169
20mm	3/4	L1	26.4	27.1	2.30	1.39	1.40	127
25mm	1	L1	33.2	34.0	2.90	2.20	2.22	91
32mm	1 1/4	L1	41.9	42.7	2.90	2.82	2.85	61
40mm	1 1/2	L1	47.8	48.6	2.90	3.24	3.28	61
50mm	2	L1	59.6	60.7	3.20	4.49	4.56	37
65mm	2 1/2	L1	75.2	76.3	3.20	5.73	5.85	24
80mm	3	L1	87.9	89.4	3.60	7.55	7.72	19
100mm	4	L1	113.0	114.9	4.00	10.80	11.10	14
15mm	1/2	L2	21.0	21.4	2.00	0.947	0.956	169
20mm	3/4	L2	26.4	26.9	2.30	1.380	1.390	127
25mm	1	L2	33.2	33.8	2.60	1.98	2.00	91
32mm	1 1/4	L2	41.9	42.5	2.60	2.540	2.570	61
40mm	1 1/2	L2	47.8	48.4	2.90	3.230	3.270	61
50mm	2	L2	59.6	60.2	2.90	4.08	4.15	37
65mm	2 1/2	L2	75.2	76.0	3.20	5.710	5.830	24
80mm	3	L2	87.9	88.7	3.20	6.720	6.890	19
100mm	4	L2	113.0	113.9	3.60	9.75	10.00	14
15mm	1/2	L	21.0	21.7	2.30	1.08	1.09	169
20mm	3/4	L	26.4	27.1	2.30	1.40	1.41	127
25mm	1	L	33.2	34.0	2.90	2.20	2.22	91
32mm	1 1/4	L	41.9	42.7	2.90	2.82	2.85	61
40mm	1 1/2	L	47.8	48.6	2.90	3.25	3.29	61
50mm	2	L	59.6	60.7	3.20	4.51	4.58	37
65mm	2 1/2	L	75.2	76.0	3.20	5.75	5.87	24
80mm	3	L	87.9	88.7	3.20	6.76	6.93	19
100mm	4	L	113.0	113.9	3.60	9.83	10.10	14
125mm	5	L	138.5	140.8	4.50	15.00	15.50	7
150mm	6	L	163.9	166.5	4.50	17.80	18.40	7
15mm	1/2	M	21.0	21.8	2.60	1.21	1.22	169
20mm	3/4	M	26.5	27.3	2.60	1.56	1.57	127
25mm	1	M	33.3	34.2	3.20	2.41	2.43	91
32mm	1 1/4	M	42.0	42.9	3.20	3.10	3.13	61
40mm	1 1/2	M	47.9	48.8	3.20	3.56	3.60	61
50mm	2	M	59.7	60.8	3.60	5.03	5.10	37
65mm	2 1/2	M	75.3	76.6	3.60	6.42	6.54	24
80mm	3	M	88.0	89.5	4.00	8.36	8.53	19
100mm	4	M	113.1	115.0	4.50	12.20	12.50	14
125mm	5	M	138.5	140.8	5.00	16.60	17.10	7
150mm	6	M	163.9	166.5	5.00	19.80	20.40	7
15mm	1/2	H	21.0	21.8	3.20	1.44	1.45	169
20mm	3/4	H	26.5	27.3	3.20	1.87	1.88	127
25mm	1	H	33.3	34.2	4.00	2.93	2.95	91
32mm	1 1/4	H	42.0	42.9	4.00	3.79	3.82	61
40mm	1 1/2	H	47.9	48.8	4.00	4.37	4.41	61
50mm	2	H	59.7	60.8	4.50	6.19	6.26	37
65mm	2 1/2	H	75.3	76.6	4.50	7.93	8.05	24
80mm	3	H	88.0	89.5	5.00	10.30	10.50	19
100mm	4	H	113.1	115.0	5.40	14.50	14.80	10
125mm	5	H	138.5	140.8	5.40	17.90	18.40	7
150mm	6	H	163.9	166.5	5.40	21.30	21.90	7

Tolerances

(Outside Diameter as per above table)

Thickness	Medium	Heavy	Light L	Light L1	Light L2
	±10%	±10%	±10%	-8%	-8%

Weight : ±7.5% for M, H & L series (on lot)
and +10%/-8% for L1 & L2 series

Mechanical Properties

Yield Strength	195 MPa (Minimum)
Tensile Strength	320 to 520 Mpa
%Elongation	20% Minimum

Chemical Composition

Carbon	0.20 % Max
Manganese	1.40 % Max
Phosphorous	0.035 % Max
Sulphur	0.030 % Max

Bend Test

Black Tube

For Tubes upto & including 2"

Bending angle 90°

Bending radius As per EN 10255

Weld Position outside of the bend

Galvanized Tube

Bending angle 90°

Bending radius 8 times to the OD of Tube

Weld Position outside of the bend

Flattening Test

For Tubes above 2"

1. Flatten upto 75% of tube dia for weld test
(Weld at 12 or 3 O'clock position)

2. Flatten upto 60% of tube dia for raw material test

Leak Tightness Test 100% Hydrotesting at 50 bar or online eddy current testing

Galvanizing Test As per EN 10240 / EN ISO 1461

Threading As per EN 10226-1

European standard for steel tubes and pipes for structural purposes

Pipes Conforming to EN : 10219-1&2 Circular Hollow Section

SIZE OD (mm)	WALL THICKNESS (mm)										
	2	2.5	3	4	5	6	6.3	8	10	12	12.5
	Mass per unit length (Kg/mtr)										
21.3	0.95	1.16	1.35								
26.9	1.23	1.50	1.77								
33.7	1.56	1.92	2.27								
42.4	1.99	2.46	2.91	3.79							
48.3	2.28	2.82	3.35	4.37	5.34						
60.3	2.88	3.56	4.24	5.55	6.82						
76.1	3.65	4.54	5.41	7.11	8.77	10.40	10.80				
88.9	4.29	5.33	6.36	8.38	10.30	12.30	12.80				
101.6	4.91	6.11	7.29	9.63	11.90	14.10	14.80				
114.3		6.89	8.23	10.90	13.50	16.00	16.80	21.00			
139.7			10.10	13.40	16.60	19.80	20.70	26.00	32.00		
168.3			12.20	16.20	20.10	24.00	25.20	31.60	39.00		
219.1				21.20	26.40	31.50	33.10	41.60	51.60	61.30	63.70
244.5					29.50	35.30	37.00	46.70	57.80	68.80	71.50
273.0					33.00	39.50	41.40	52.30	64.90	77.20	80.30

Tolerances on dimensions

Characteristics	Tolerances
External Dimensions	±1%, with a minimum of ±0.5 mm and a maximum of ±10 mm
Thickness	For do ≤ 406.4 mm, T ≤ 5mm : ±10%, T > 5mm ± 0.5mm; For do > 406.4 mm: ±10% with a max of ±2 mm
Out-of-roundness	2% for hollow sections having a diameter to thickness ratio not exceeding 100
Straightness	0.20% of total length
Mass per unit length	± 6% on individual delivered lengths

Mechanical Properties

Grade	YS Min MPa	TS Min MPa		% EL (Min)	Minimum impact energy J		
		< 3	≥ 3 ≤ 40		-20° C	0° C	20° C
S235 JRH	235	360-510	360-510	24	-	-	27
S275 J0H	275	430-580	410-560	20	-	27	-
S275 J2H					27	-	-
S355 J0H	235	510-680	470-630	20	-	27	-
S355 J2H					27	-	-
S355 K2H					40	-	-

Chemical Composition (%) max.

Grade	C	Si	Mn	P	S	N	CEV
S235 JRH	0.170	-	1.400	0.040	0.040	0.009	0.350
S275 J0H	0.200	-	1.500	0.035	0.035	0.009	0.400
S275 J2H	0.200	-	1.500	0.030	0.030	-	0.400
S355 J0H	0.220	0.550	1.600	0.035	0.035	0.009	0.450
S355 J2H	0.220	0.550	1.600	0.030	0.030	-	0.450
S355 K2H	0.220	0.550	1.600	0.030	0.030	-	0.450



European standard for steel tubes and pipes for pressure purposes

Pipes Conforming to EN : 10217-1

SIZE OD (mm)	WALL THICKNESS (mm)															
	1.8	2.0	2.3	2.6	2.9	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0	8.8	10.0
21.3																
26.9																
33.7																
42.4																
48.3																
60.3																
76.1																
88.9																
114.3																
139.7																
168.3																
219.1																
244.5																
273.0																
323.9																

*Preferred thickness are as per shaded area with blue color

Tolerances on dimensions

Outside Diameter	For ≤ 219.1: ±1% or ±0.5 mm whichever is greater; For > 219.1: ±0.75% or ± 6 mm whichever is smaller
Thickness	For T ≤ 5mm: ±10% or ± 0.3mm whichever is greater; for 5< T ≤ 40 mm: ± 8% or ± 2 mm whichever is smaller
Height of weld seam	Outside trimmed and inside 1.5 mm for Quality TR1 & 0.5+0.05t mm for Quality TR2
Straightness	0.15% of total length and 3 mm over any 1 m length

Mechanical Properties

Grade	YS Min MPa		TS Min MPa	% EL (Min)		Minimum impact energy J		
						0°C	-10°C	0°C
	T ≤ 16	16 <T≤ 40		long.	trans.	long.		trans.
P195TR1	195	185	320-440	27	25	–	–	–
P195TR2	195	185	320-440	27	25	40	28	27
P235TR1	235	225	360-500	25	23	--	--	--
P235TR2	235	225	360-500	25	23	40	28	27
P265TR1	265	255	410-570	21	19	--	--	--
P265TR2	265	255	410-570	21	19	40	28	27

Chemical Composition (%) Max.

Grade	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	Nb	Ti	V	Cr+Cu+Mo+Ni
P195TR1	0.130	0.350	0.700	0.025	0.020	0.300	0.080	0.300	–	0.300	0.010	0.040	0.020	0.700
P195TR2	0.130	0.350	0.700	0.025	0.020	0.300	0.080	0.300	0.020	0.300	0.010	0.040	0.020	0.700
P235TR1	0.160	0.350	1.200	0.025	0.020	0.300	0.080	0.300	--	0.300	0.010	0.040	0.020	0.700
P235TR2	0.160	0.350	1.200	0.025	0.020	0.300	0.080	0.300	0.020	0.300	0.010	0.040	0.020	0.700
P265TR1	0.200	0.400	1.400	0.025	0.020	0.300	0.080	0.300	--	0.300	0.010	0.040	0.020	0.700
P265TR2	0.200	0.400	1.400	0.025	0.020	0.300	0.080	0.300	0.020	0.300	0.010	0.040	0.020	0.700

Drift Expanding Test: For sizes D≤150mm & T≤10mm

Grade	P195 TR1&2	P235 TR1&2	P265 TR1&2
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% increase in diameter

For d/D≤0.8	10	10	8
For d/D>0.8	12	12	10

Leak Tightness Test	: 100% Hydrotesting at 70 bar or Electromagnetic testing
Non Destructive Test	: Full length of weld seam shall be subjected to non destructively test for the detection of longitudinal imperfections

Australian standard for steel tubes and tubulars for ordinary services

Pipes Conforming to AS : 1074

Nominal Size		Class	Outside Diameter (mm)		Thick. (mm)	Weight (Plain End) (Kg/mtr.)	Weight (Socketed) (Kg/mtr.)	Pcs per Bundle
MM	Inch		Min	Max				
15	½"	L	21.0	21.4	2.00	0.947	0.956	217
20	¾"	L	26.4	26.9	2.30	1.380	1.390	127
25	1"	L	33.2	33.8	2.60	1.980	2.000	91
32	1¼"	L	41.9	42.5	2.60	2.540	2.570	61
40	1½"	L	47.8	48.4	2.90	3.230	3.270	61
50	2"	L	59.6	60.2	2.90	4.080	4.150	37
65	2½"	L	75.2	76.0	3.20	5.710	5.830	37
80	3"	L	87.9	88.7	3.20	6.720	6.890	19
100	4"	L	113.0	113.9	3.60	9.750	10.000	19
15	½"	M	21.1	21.7	2.60	1.210	1.220	217
20	¾"	M	26.6	27.2	2.60	1.560	1.570	127
25	1"	M	33.4	34.2	3.20	2.410	2.430	91
32	1¼"	M	42.1	42.9	3.20	3.100	3.130	61
40	1½"	M	48.0	48.8	3.20	3.570	3.610	61
50	2"	M	59.8	60.8	3.60	5.030	5.100	37
65	2½"	M	75.4	76.6	3.60	6.430	6.550	37
80	3"	M	88.1	89.5	4.00	8.370	8.540	19
100	4"	M	113.3	114.9	4.50	12.200	12.500	19
125	5"	M	138.7	140.6	5.00	16.600	17.100	13
150	6"	M	164.1	166.1	5.00	19.700	20.300	10
15	½"	H	21.1	21.7	3.20	1.440	1.450	217
20	¾"	H	26.6	27.2	3.20	1.870	1.880	127
25	1"	H	33.4	34.2	4.00	2.940	2.960	91
32	1¼"	H	42.1	42.9	4.00	3.800	3.830	61
40	1½"	H	48.0	48.8	4.00	4.380	4.420	61
50	2"	H	59.8	60.8	4.50	6.190	6.260	37
65	2½"	H	75.4	76.6	4.50	7.930	8.050	37
80	3"	H	88.1	89.5	5.00	10.300	10.500	19
100	4"	H	113.3	114.9	5.40	14.500	14.800	19
125	5"	H	138.7	140.6	5.40	17.900	18.400	13
150	6"	H	164.1	166.1	5.40	21.300	21.900	10

Tolerances

(Outside Diameter as per above table)

Thickness	Light	Medium	Heavy
	-8%	-10%	-10%
	+unlimited	+unlimited	+unlimited

Weight : -8% & +10% (for single tube)

Mechanical Properties

Yield Strength	195 MPa (Minimum)
Tenslie Strength	320 to 460 Mpa
%Elongation	20% Minimum

Chemical Composition

Phosphorous (P)	0.045 % Max
Sulphur (S)	0.045 % Max
Carbon Equivalent (CE)	0.040 Max

Ductility Test	For Tubes upto & including 2"
Black Tube	Bending angle 180° Bending radius 6 times to the OD of Tube Weld Position 3 O'clock
Galvanized Tube	Bending angle 90° Bending radius 8 times to the OD of Tube Weld Position 3 O'clock
Ductility Test	For Tubes above 2" 1. Flatten upto 75% of tube dia for weld test (Weld at 3 O'clock position) 2. Flatten upto 60% of tube dia for raw material test
Leak Tightness Test	100% Hydrotesting at 5 MPa or online eddy current testing or ultrasonic testing
Galvanizing Test	As per AS / NZS 4792
Threading	As per AS 1722-1



Circular hollow section

Pipes Conforming to AS/NZS : 1163

SIZE	WALL THICKNESS (mm)																		
CHS OD	2.30	2.60	3.00	3.20	3.50	3.60	4.00	4.50	4.80	4.90	5.00	5.40	5.50	5.90	6.00	6.40	7.10	8.20	9.30
mm	Mass per unit length (Kg/mtr)																		
21.3		1.20		1.43		1.57													
26.9		1.56		1.87			2.26												
33.7				2.41			2.93	3.24											
42.4				3.09			3.79			4.53									
48.3				3.56			4.37					5.71							
60.3						5.03		6.19				7.31							
76.1	4.19			5.75		6.44		7.95						10.20					
88.9		5.53		6.76			8.38		9.96		10.30		11.30	12.10					
101.6		6.35		7.77			9.63				11.90								
114.3				8.77		9.83		12.20	13.00			14.50			16.00				
139.7			10.10		11.80						16.60	17.90							
165.1			12.00		13.90						19.70	21.30							
168.3									19.40							25.60	28.20		
219.1									25.40							33.60		42.60	
273.1									31.80							42.10			60.50
323.9																50.10			73.70
355.6																			81.10
406.4																			93.00

Tolerances on dimensions

Characteristics	Tolerances
External Dimensions	±1%, with a minimum of ±0.5 mm and a maximum of ±10 mm
Thickness	For do ≤ 406.4 mm: ±10%; For do > 406.4 mm: ±10% with a max of ±2 mm
Out-of-roundness	2% for hollow sections having a diameter to thickness ratio not exceeding 100
Straightness	0.20% of total length
Mass per unit length	Not less than 0.96 times the specified mass on individual lengths

Mechanical Properties

Grade	YS Min	TS Min	% EL (Min)			Minimum Absorbed Energy, Joules					
	MPa	MPa	do/t			Avg. of 3 tests			Individual tests		
			≤15	>15≤30	>30	10x10	10x7.5	10x5.0	10x10	10x7.5	10x5.0
C250, C250L0	250	320	18	20	22	27	22	18	20	16	13
C350, C350L0	350	430	16	18	20	27	22	18	20	16	13
C450, C450L0	450	500	12	14	16	27	22	18	20	16	13

Chemical Composition (%) Max.

Grade	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Ai	V+Nb	CE
C250, C250L0	0.120	0.05	0.50	0.03	0.03	0.25	0.25	0.15	0.10	0.02	0.01	0.04	0.10	0.03	0.25
C350, C350L0	0.200	0.45	1.60	0.03	0.03	0.25	0.25	0.30	0.10	0.10	0.01	0.04	0.10	0.11	0.43
C450, C450L0	0.200	0.45	1.70	0.03	0.03	0.25	0.25	0.50	0.35	0.10	0.01	0.04	0.10	0.11	0.43

Manipulation (Bend Test)	For Galvanized Tubes upto & including 60.3 mm	
	Bending angle	90°
	Bending radius	6 times to the OD of Tube
Flattening Test	1. Flatten upto 75% of tube dia for weld test (Weld at 45° position for dos≤60mm) 2. Flatten upto 75% of tube dia for weld test (Weld at 90° position for do>60mm)	

Sri-Lankan standard for galvanized steel pipes

Pipes Conforming to SLS - 829 : 2009

Nominal Size (DN)	Thread Size Designation	Class/ Series	Outside Diameter (mm)		Thick. (mm)	Weight (Kg/mtr.)	Socket Dimension (mm)	
			Min	Max			Minimum O.D.	Minimum Length
15mm	1/2	L1	21.0	21.4	1.80	0.866	26.4	34
20mm	3/4	L1	26.4	26.9	1.80	1.110	31.8	36
25mm	1	L1	33.2	33.8	2.00	1.560	39.5	43
32mm	1 1/4	L1	41.9	42.5	2.30	2.270	48.3	48
40mm	1 1/2	L1	47.8	48.4	2.30	2.610	54.5	48
50mm	2	L1	59.6	60.2	2.30	3.290	66.3	56
65mm	2 1/2	L1	75.2	76.0	2.60	4.710	82	65
65mm	3	L1	87.9	88.7	2.90	6.150	95	71
100mm	4	L1	113.0	113.9	3.20	8.770	122	83
15mm	1/2	L	21.0	21.4	2.00	0.947	26.4	34
20mm	3/4	L	26.4	26.9	2.30	1.380	31.8	36
25mm	1	L	33.2	33.8	2.60	1.980	39.5	43
32mm	1 1/4	L	41.9	42.5	2.60	2.540	48.3	48
40mm	1 1/2	L	47.8	48.4	2.90	3.230	54.5	48
50mm	2	L	59.6	60.2	2.90	4.080	66.3	56
65mm	2 1/2	L	75.2	76.0	3.20	5.710	82	65
65mm	3	L	87.9	88.7	3.20	6.720	95	71
100mm	4	L	113.0	113.9	3.60	9.750	122	83
15mm	1/2	M	21.0	21.8	2.60	1.21	26.4	34
20mm	3/4	M	26.5	27.3	2.60	1.56	31.8	36
25mm	1	M	33.3	34.2	3.20	2.41	39.5	43
32mm	1 1/4	M	42.0	42.9	3.20	3.10	48.3	48
40mm	1 1/2	M	47.9	48.8	3.20	3.56	54.5	48
50mm	2	M	59.7	60.8	3.60	5.03	66.3	56
65mm	2 1/2	M	75.3	76.6	3.60	6.42	82	65
65mm	3	M	88.0	89.5	4.00	8.36	95	71
100mm	4	M	113.1	115.0	4.50	12.20	122	83
125mm	5	M	138.5	140.8	5.00	16.60	147	92
150mm	6	M	163.9	166.5	5.00	19.80	174	92
15mm	1/2	H	21.0	21.8	3.20	1.44	26.4	34
20mm	3/4	H	26.5	27.3	3.20	1.87	31.8	36
25mm	1	H	33.3	34.2	4.00	2.93	39.5	43
32mm	1 1/4	H	42.0	42.9	4.00	3.79	48.3	48
40mm	1 1/2	H	47.9	48.8	4.00	4.37	54.5	48
50mm	2	H	59.7	60.8	4.50	6.19	66.3	56
65mm	2 1/2	H	75.3	76.6	4.50	7.93	82	65
65mm	3	H	88.0	89.5	5.00	10.30	95	71
100mm	4	H	113.1	115.0	5.40	14.50	122	83
125mm	5	H	138.5	140.8	5.40	17.90	147	92
150mm	6	H	163.9	166.5	5.40	21.30	174	92

Tolerances

(Outside Diameter as per above table)

Thickness	Medium	Heavy	Light L	Light L1
	±10%	±10%	-8%	-8%

Weight : For M & H Series ±10% on each pipe & ±7.5% on lot
For L1 & L Series +10/-8% on each pipe & ±5% on lot

Mechanical Properties

Yield Strength	195 MPa (Minimum)
Tensile Strength	320 Mpa (Minimum)
%Elongation	20% Minimum

Chemical Composition

Carbon	0.20 % Max
Manganese	1.40 % Max
Phosphorous	0.040 % Max
Sulphur	0.040 % Max

Bend Test	For Tubes upto & including 2"	
Black Tube	Bending angle	90°
	Bending radius	8 times to the OD of Tube
Flattening Test	For Tubes above 2"	
	1. Flatten upto 75% of tube dia for weld test (Weld at 90° position)	
	2. Flatten upto 60% of tube dia for raw material test	
Leak Tightness Test	100% Hydrotesting at 5 MPa or online eddy current testing	
Galvanizing Test	Zinc Coating for M & H Series 400 g/m² & for L1 & L Series 360 g/m² Uniformity Test Free Bore test (for tubes upto 1")	
Threading	As per ISO 7-1	

Electrical conduits

UL 6 – Galvanized Rigid Metal Conduits

Goodluck RIGID CONDUITS are hot dipped galvanized both inside and outside. The rigid conduits are threaded both ends with state-of-the-art Automatic threading machines and supplied with UL approved couplings on one end and other end protected with color coded plastic thread protection caps. The external and internal surface of the conduits is hot dipped galvanized and then a clear anti-corrosion coating is done for higher protection against corrosion giving the rigid conduits long life. Rigid conduits

are for the job that requires physical protection that only thickest walls can provide and rigid conduits are known for their thick walls and heaviest weights. Goodluck RMC is tough enough for use in outdoor applications, energy and manufacturing plants and corrosive environments.

Goodluck rigid conduits have prestigious UL6 certification. (File No. E510369). We also make rigid conduits as per American national Standard for electrical rigid conduit (ANSI C80.1)

Trade Size	Metric Designator	Outside Diameter*		Nominal Wall Thickness**		Min. Acceptable Weight of Ten Pcs of Conduits With Couplings	Qty In Master Bundle	Qty In Inner Bundle	End Caps Color
		in	mm	in	mm				
1/2"	16	0.840	21.34	0.104	2.64	35.8	250	10	Black
3/4"	21	1.050	26.67	0.107	2.72	47.6	200	5	Red
1"	27	1.315	33.40	0.126	3.20	69.4	125	5	Blue
1 1/4"	35	1.660	42.16	0.133	3.38	91.2	90		Red
1 1/2"	41	1.900	48.26	0.138	3.51	112.9	80		Black
2"	53	2.375	60.33	0.146	3.71	150.6	60		Blue
2.5"	63	2.875	73.03	0.193	4.90	239.0	37		Black
3"	78	3.500	88.90	0.205	5.21	309.6	30		Blue
3 1/2"	91	4.000	101.60	0.215	5.46	376.9	25		Black
4"	103	4.500	114.30	0.225	5.72	441.0	20		Blue
5"	129	5.563	141.30	0.245	6.22	535.8	15		Blue
6"	155	6.625	168.28	0.266	6.76	791.7	10		Blue

Applicable Tolerances -

Length: 10 Feet (3.05 Meters) +/- 0.25 inch (6.35 mm)

Outside Diameter: **TRADE SIZE ½” TO 1-1/2”: ±0.015” (±0.38MM)**
; TRADE SIZE 2” – 6” : ±1%

**Wall thickness mentioned are just for information only and not a requirement of UL standard.

We also produce rigid conduits in **20 feet (6 Meters) length**. 20 Feet conduit provide quick and easy installation and also fewer fittings.

Features of Goodluck Rigid Conduits –

1. Higher corrosion resistance with superior & uniform galvanizing quality.
2. Accurate dimensions and uniform wall thickness.
3. Clean and smooth internal surface.
4. Easy coupling and fast installation.
5. Easy wire pushing and pulling.
6. Easy & good fabrication properties like smooth cutting, bending & welding.
7. Uniform and consistent quality.
8. Meets the underwriters laboratories specifications UL6.
9. Tested and certified for safety.



Light wall metal conduits

UL 797 – Electrical Metallic Tubing (EMT)

Goodluck EMT is a steel raceway of circular hollow sections which is non-threaded i.e. plain ends and is produced by high quality mild steel hot rolled coils. The exterior and interior of the EMT is protected by superior quality zinc coating done by in-line hot dipped galvanizing process. Additionally the exterior surface of EMT is coated by clear anti-corrosion coating or a zinc chromate coating for higher protection against corrosion giving the EMT long life and good smooth finish. The internal surface of the EMT is further coated with an organic zinc lubricants or higher grade organic epoxy resin by a state of art patented on – line automatic machine. This coating gives EMT a smooth internal surface which makes wire pushing and pulling easy and also protects against the corrosion.

Trade Size	Metric	Outside Diameter*		Nominal Wall Thickness**		Approx Weight/100 ft (30.5m)		Inner Budle Qty	Master Budle Qty
		in	mm	in	mm	lb	kg		
1/2"	16	0.706	17.93	0.042	1.07	30	13.6	10.0	700
3/4"	21	0.922	23.42	0.049	1.24	46	20.9	10.0	500
1"	27	1.163	29.54	0.057	1.45	67	30.4	10.0	300
1 1/4"	35	1.51	38.35	0.065	1.65	101	45.8	5.0	200
1 1/2"	41	1.74	44.2	0.065	1.65	116	52.6	5.0	150
2"	53	2.197	55.8	0.065	1.65	148	67.1		120
2 1/2"	63	2.875	73.03	0.072	1.83	216	98		61
3"	78	3.5	88.9	0.072	1.83	263	119.3		51
3 1/2"	91	4	101.6	0.083	2.11	349	158.3		37
4"	103	4.5	114.3	0.083	2.11	393	178.3		30

Applicable Tolerances -

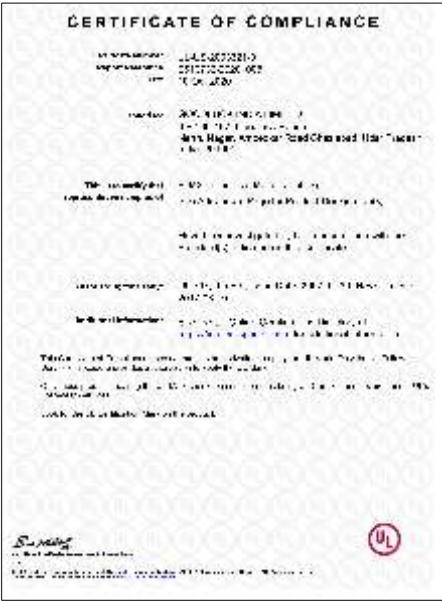
Length: 10 Feet (3.05 Meters) +/- 0.25 inch (6.35 mm)

Outside Diameter:

- **TRADE SIZE ½” TO 2” (16 to 53) : ± 0.005” (±0.13 mm)**
- **TRADE SIZE 2 ½” (63) : ± 0.010” (0.25 mm)**
- **TRADE SIZE 3” (78) : ± 0.050” (0.38 mm)**
- **TRADE SIZE 3½” TO 4” (91 to 103): ± 0.020” (±0.51 mm)**

Features of Goodluck EMT-

1. Higher Corrosion resistance with superior and uniform galvanizing quality.
2. Accurate dimensions and uniform wall thickness.
3. High quality internal coating with high grade organic epoxy resins/zinc
4. Clean, smooth and defect-free interior surface.
5. Easy and fast installation.
6. Easy wire pushing and pulling.
7. Easy & good fabrication properties like smooth cutting, bending & welding.
8. Uniform and consistent quality.
9. Meets the Underwriters Laboratories specifications UL797.
10. Tested and certified for Safety.



Electrical conduits

UL 1242 - Electrical Intermediate Metal Conduit

Goodluck IMC CONDUITS are produced of high quality steel using an electric resistance welding process and hot dipped galvanized both inside and outside.

Goodluck Intermediate metal conduit (IMC) are approximately one third lighter than rigid metal conduit (RMC) so it keeps our customer's costs down and increase

productivity. IMC can be interchangeably used for rigid conduits and have same threads and use same couplings and fittings.

Goodluck IMC conduits have prestigious UL 1242 certifications for IMC.

Trade Size	Metric Designator	Outside Diameter*		Nominal Wall Thickness**		Approx Weight 100 FT (30.5M)	Inner Bundle	Master Bundle	Thread Protector Color
		in	mm	lb.	mm				
1/2"	16	0.815	20.7	1.97	62	28.1	10	350	Yellow
3/4"	21	1.029	26.13	2.10	84	38.1	5	250	Green
1"	27	1.29	32.76	2.35	119	54.00	5	170	Orange
1 1/4"	35	1.638	41.6	2.41	158	71.7		135	Green
1 1/2"	41	1.883	47.82	2.54	194	88		110	Yellow
2"	53	2.36	59.94	2.67	256	116.1		80	Orange
2 1/2"	63	2.857	72.56	3.81	441	200		37	Yellow
3"	78	3.476	88.29	3.81	543	246.3		30	Orange
3 1/2"	91	3.971	100.86	3.81	629	285.3		24	Yellow
4"	103	4.466	113.43	3.81	700	317.5		24	Orange

Applicable Tolerances -

*OUTSIDE DIAMETER TOLERANCES:

TRADE SIZES 1/2" TO 1" : +/- .005" (0.13MM)
TRADE SIZES 1-1/4" TO 2" : +/- .0075" (0.19MM)
TRADE SIZES 2-1/2" TO 4" : +/- .010" (0.25MM)

**WALL THICKNESS TOLERANCES:

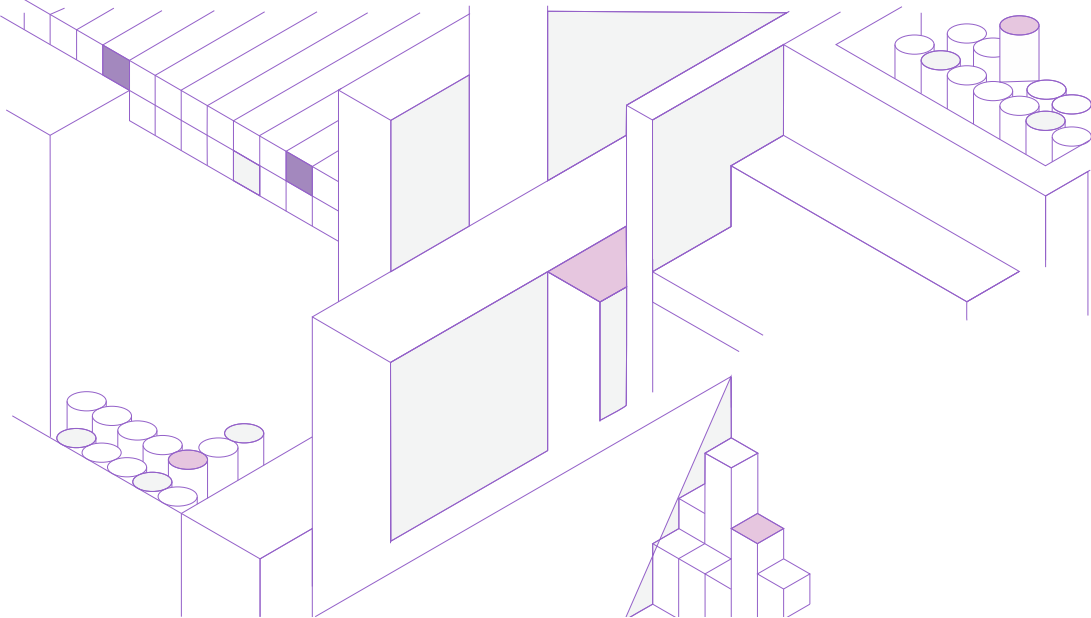
TRADE SIZES 1/2"TO 1" : +/- 0.19 MM
TRADE SIZES 1 1/4"TO 4" : +/- 0.25 MM

LENGTH TOLERANCE = 10 FT. (3.05M)
WITH A TOLERANCE OF +/- .25 IN. (6.35MM)

Features of Goodluck IMC Conduits -

1. Cost effective as weighs less than Rigid
2. Quick and easy installations.
3. Meets the Underwriters Laboratories specifications UI1242
4. Tested and certified for Safety.

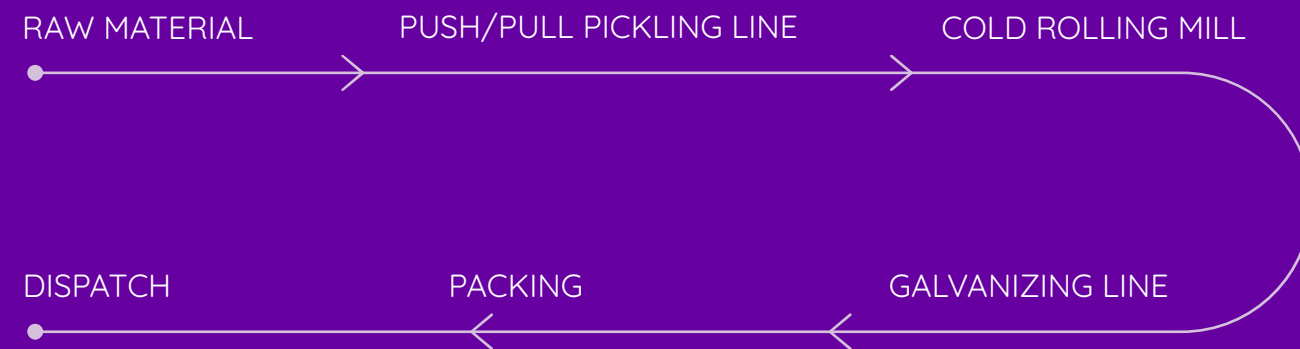
We can also produce IMC conduits in 20 feet (6 Meters) length. 20 Feet conduit provided quick and easy installation and also fewer fittings.



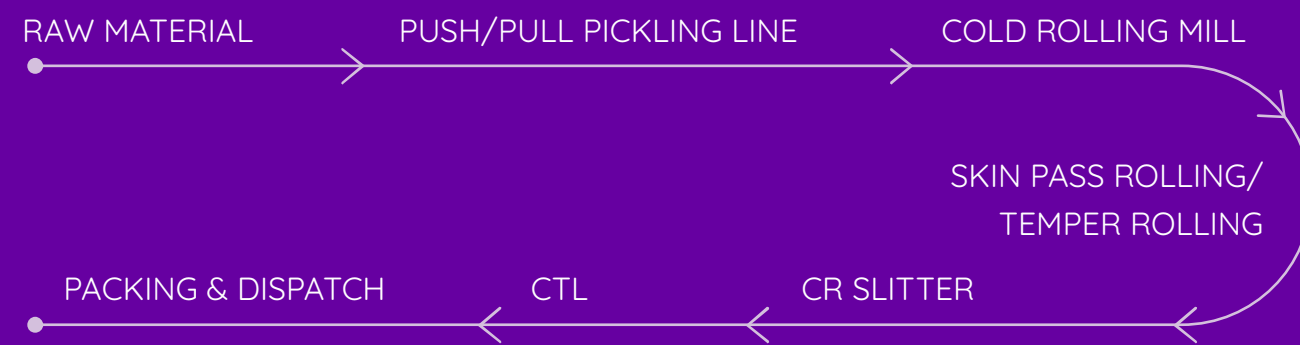
CR/CRCA/HRPO & GP/GC Sheets

GP/GC

GP/GC



CRCA



Raw material

Our integrated manufacturing processes start with sourcing the best quality of Hot Rolled Coils. Consistency of raw material quality is maintained by our reliable suppliers. Our suppliers for HR Coils include Tata Steel, Steel Authority of India, JSW, Arcelor Mittal Nippon Steel India (AM/NS India) & POSCO. All these companies have their local stockyard at Ghaziabad for timely delivery of material.

Push/pull pickling line

To ensure the right quality input of HR Coils to the mill, the unit is equipped with advance technology Pickling Line. High pressure hot acid jet is sprayed on strips thereby removing scales of HR Coils & produce clean bright surface, suitable for Cold Rolling and other processes.

Cold rolling

4 High reversible mills are designed and engineered with latest technology viz Hydraulic Automatic Gauge Control (AGC) for rolling in very close thickness tolerances, positive and negative roll bending for controlling the strip shape etc. Various other features are also part of Mill Management System for maintaining the consistency of product quality.

Annealing

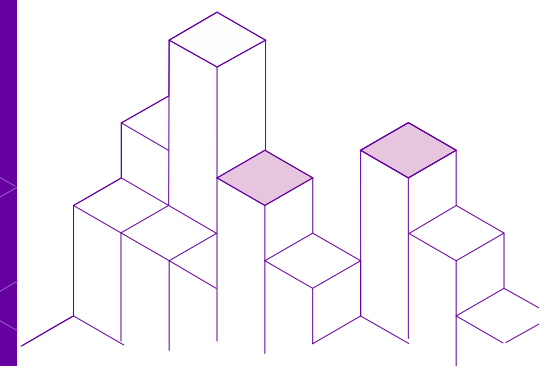
Cold Rolled Coils are annealed under protective atmosphere for retaining the properties of material. Bell Annealing furnaces are installed for producing clean and bright strip having excellent metallurgical and surface properties.

Skin pass rolling/ temper rolling

This process is carried out at the 4 High Mill with non-reversible operation. Approx 1% to 5% reduction is applied on annealed coils for preventing stretcher strain marking on strip. Bridle rolls are provided to enhance the process capability at temper rolling.

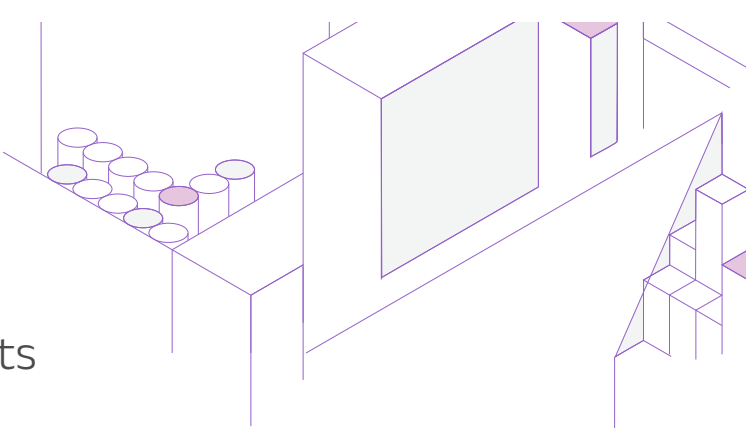
Galvanizing line

The Galvanized sheets & coils manufactured by the company have strong zinc adhesion and corrosion resistance achieved by applying a special coating of zinc & zinc alloys. Further the life of coating is enhanced by giving a special chemical treatment on the surface so as to prevent the attack of environmental pollutants.



Product specifications

Catering to your specific requirements



Cold Rolled Full Hard Coils/Sheets

Specifications	: JIS G 3141-SPCC-1B & other equivalent specifications
Thickness Range	: 0.140 mm to 2.00 mm
Hardness	: 90 to 98 HRB or 85 HRB Min.
Edge Condition	: Smooth Mill Edges or Trimmed Edges as required.
Surface Finish	: Bright

CRCA (Cold Rolled Close Annealed) Coils/Sheets

Specifications	: IS 513 (D, DD, EDD), JIS G 3141 (SPCC, SPCD, SPCE), DIN 1623 (ST12, ST13, ST14), BS 1449 ASTM
Thickness Range	: 0.25 mm to 2.00 mm (Further closed tolerances on request)
Width Range (mm)	: 50 mm to 1000 mm
Cut-to-length(mm)	: Up to 3500 mm with tolerance of +2/-0 mm
Coil Weight	: 3MT Max
Coil ID	: 508 mm
Hardness	: 45 to 65 HRB (Max) for D/DD, 34/52 (Max) for EDD
Edge Condition	: Trimmed Edges.
Surface Finish	: Super Bright, Bright, Dull & Matt

Tolerances:

Thickness	Specified Thickness Over	(MM) Upto	Tolerances Upto 250 Width (mm) (±)	Tolerance Over 250 mm Width (mm) (±)
	0.14	0.19	0.015	0.015
	0.20	0.40	0.020	0.025
	0.40	0.80	0.025	0.030
	0.80	1.60	0.030	0.035
	1.60	2.00	0.035	0.055
Width (mm)	Specified Thickness Over	(MM) Upto	Tolerances Upto 250 Width (mm) (±)	Tolerance Over 250 mm Width (mm) (±)
	50	250	0.15	0.20
	250	600	0.20	0.25
	600	1050	0.40	0.50



Galvanized Specifications

JAPANESE	IS
JIS G 3302 / SGCH	IS-277

Coils and Sheets (Full hard)

Thickness	: 0.10 to 0.70 mm	Coating	: 90 gm – 300 gm / sq.m. (both sides)
Width	: 750 mm to 1000 mm	Coil inner diameter	: 508 mm
Outer diameter	: 1500 mm maximum	Coil Weight	: 12 MT maximum
Packet Weight	: 3 MT Max	Finish	: Bright Regular
Cut to Length	: 4800 mm (Max)		

Corrugation Details

Width Before Corrugation (mm)	Width After Corrugation (mm)	Pitch (mm)	Depth (mm)	No. of Corrugations
750 / 762	660 / 665 720 / 740 /	75	17.5	8
900 / 914	750 / 760 / 780 / 800 / 810 / 830 /	65 to 85	12.5 to 20.5	10
1000	885/900/930	75	17.5	11



HRPO

Thickness	: 1.4 mm to 6.0 mm	Length Range	: 500 mm to 3500 mm
Width	: 100 mm to 1000 mm	Specification	: IS11513, IS1069

World-class packaging

Packaging as per your needs



Galvanized Coils - Soft Grade

STEEL GRADE
YST120 - YST 550 Mpa

Coils and Sheets

Thickness	: 1.00 mm to 3.50 mm	Coating	: 80 gsm – 300 gsm (both sides)
Width	: 351 mm to 650 mm	Coil inner diameter	: 508 mm/610 mm
Outer diameter	: 1500 mm maximum	Coil Weight	: 5 - 6 MT maximum
Packet Weight (Sheets)	: 3 MT Max	Finish	: Bright Regular Spangles
Cut to Length	: 4800 mm (Max)		



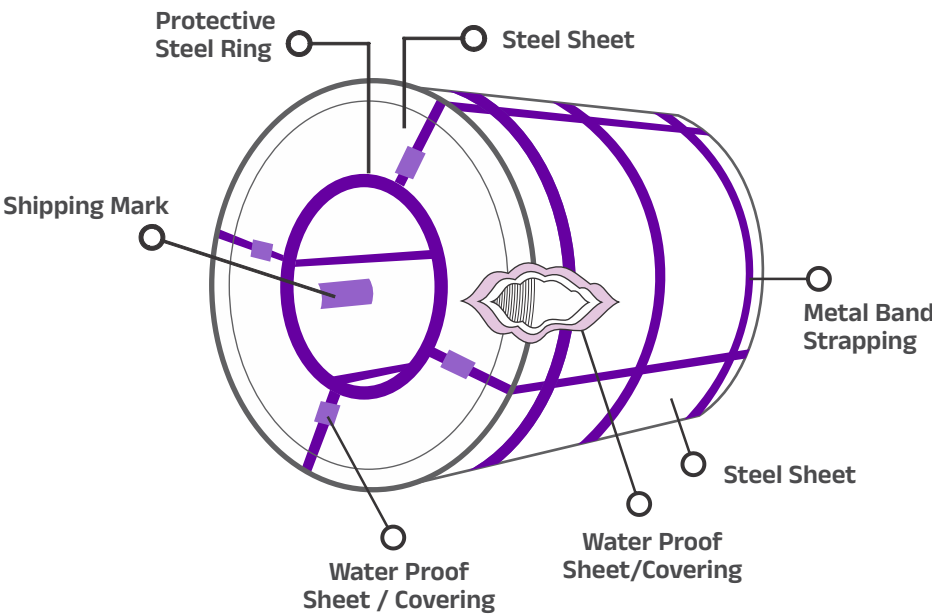
For Coils

Each Coil is wrapped with VCI paper, covered with Galvanized sheets and edge protected. This packing is secure through three metal straps on the circumference and 4 – 5 straps through the eye of the Coil.

Each Coil is tested after coating.

Applications :

Pipes and Tubes, Furlins, Ducting etc.

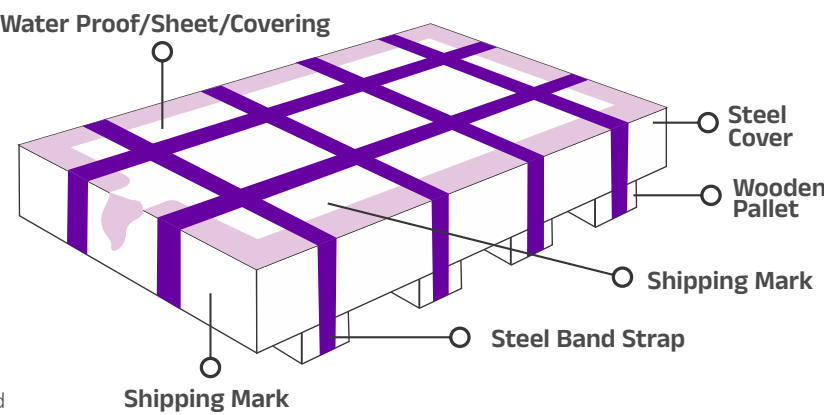


For Sheets

Sheets are wrapped in VCI paper/air bubble polythene and covered with GP/ CR sheets by metal straps, edge protected and fastened on wooden skids.

We can also do GI as per ASTM A123 and can also supply as per Spec ASTM A653

Packing as per customer's requirement can be provided



Goodluck Infra

Building the Nation Infrastructure

Building Infrastructure for the nation. from process industries to building bridges; Goodluck Infra division builds relationships.

Goodluck India Limited has proven record of supplies since the last decade to various sectors of global infrastructure development. The major areas of expertise has been in engineering, manufacturing, erection services for steel structures for:

- Infrastructure and Road Projects
- Mass Rapid Transit Systems like Metro Railways.
- Over Head Electrification projects.
- RDSO design Steel Superstructure Major Bridges over Rivers and Roads using High Performance Steel and Heavier Axle Loads.
- Electrical substation Structures
- Transmission Line Towers
- Telecom Towers
- Solar Module Mounting Structures
- Railway Boggie Parts.

New areas of active Supply are:

- High Speed Railway Corridor and station buildings.
- Launching Girders for Elevated Corridors

Our Products are :

- Steel Bridges for spans upto 145 mtrs. – Open Web, Composite Plate Girders, bow String Girders and Cable Stay bridges.
- Support Structures for Coal Handling, Ash Handling, Boiler Island, Building Structures and others.
- Launching Girders.
- Transmission Line Towers. Columns and Beams.
- Substation Structures.
- Telecom Towers,
- Solar Purlins

Facilities and Location

We are a BSI Certified EMS implemented company having systems regularly audited upon a sustainable manufacturing model. Our highlights are in engineering and manufacturing of critical steel structures through a process and system that harnesses clean environmental systems and ensures safety and health for it's employees and stake holders.

Our facilities are approved by RDSO, Ministry of Railways,, Delhi/Lucknow/Kochi/Gujrat/Pune Metro Rail Corp; RRVNL NTPC , State Power Boards, Power Grid Corporation, MNRE and other subsidiary bodies of Government of India.

We are approved by consultants and inspection bodies from India, Italy, USA and other European countries. We are an Export oriented unit too.

Sikandrabad Works :

We have dedicated 6 bay area of 40000 sq mtr. for fabrication. Dedicated area for CNC machineries, galvanizing and painting . large platform for trial and proto type assembly of 100 mtr. to 150 mtr. Span girders. Fully equipped laboratory within the premises for physical and chemical testing of raw material and finished goods. Output capacity of 70000 mt. of fabricated steel structures – Steel Girders , Support Structures, Galvanized Structures per annum make Goodluck Infra an efficient state-of-the-art workshop.

Bhuj – Gujarat Works

Our second workshop in the Western Corner of India catering to requirements PAN India covers an area of 130,000 sq. mtr. Equally equipped as in Uttar Pradesh, this facility is new and is growing. The coveted national high speed railway project is being executed from this location.

Goodluck India Limited works named Goodluck Metalics has an established state-of-the-art facility approved by RDSO, Indian railways (all divisions and SPV like KRCL) in Gujarat since 2019. The facility is equipped with machinery and expert manpower handling CNC process of manufacturing of steel structural fabrication.



Our other Strengths and Capabilities

- Original manufacturers of round and square hollow sections used for building structures.
- Ease of procurement of raw material from JSPL/ESSAR/SAIL/TATA/JSW.
- Established among Government departments and foreign buyers.
- Facility of forging and furnace annealing of steel coils.
- In-house laboratories for testing. Availability of NDT in-house.
- Trained manpower and staff.

Solar Module Mounting Structures

Design Fabrication Erection

These structures involve pipe, square tube sections and composite (cold formed) purlin structures which are galvanized at 610 GSM and pre galvanized at 550GSM.

We fabricate two types of structures: Traditional and Profile. At Goodluck we have the capacity to produce pipes, plates, purlins for module mounting.

We can cold form different profiles like C, Z, Hot, Omega and Sigma profiles, W and Thrie beam. Our product will carry CE Mark as we have CE Certification for EN 1090.

The highest focus on
engineering excellence

Awards & recognition

Achieving excellence



Hon'ble Commerce Minister (Govt. of India)
Presenting Award to **Shri M. C. Garg (CMD.)**

- ▶ Winners of **Award for Excellence in Exports** for Northern Region from Engineering Export Promotion Council for the last three years.
- ▶ We have achieved certifications from EEPC for our exports to major global destinations.
- ▶ Also won **Silver Trophy** for two consecutive years from Federation of Indian Export Organization.



Our products are favoured
by clients globally



Playing our role in transporting resources, assisting development

The highest focus on engineering excellence



450
Customers

Customers spread
across the world

100
Countries

Customers served
globally across all
business verticals

3500+
Workforce

A motivated and
talented team
powering growth

35
Years

Over three decades
of consistent growth
and progress

World-class
manufacturing facility





Clean Energy & Climate Action has never been more urgent.

Goodluck Metallica
is the first ERW Pipe company
in India to have



verification.



Solar

In process of installing solar panel on the rooftop giving long term sustainable solution for lightning for plants and offices.

Water

With abundance of rain, rainwater harvesting is one of the most important solutions to the water issue of the future particularly in the developing world.



Offices & Plants

Climate neutral design of offices have been completed for use of more natural lights and increasing green space across all factories.

Being a part of a conscious society, Goodluck ensures that the necessary steps are well taken to protect the environment for future generations to come and keep on pursuing newer ideas and technology implementations.

India is our home & the world, our playground

Export to over 100 countries worldwide



- AUSTRALIA
BELGIUM
BOLIVIA
BRAZIL
CANADA
CHILE

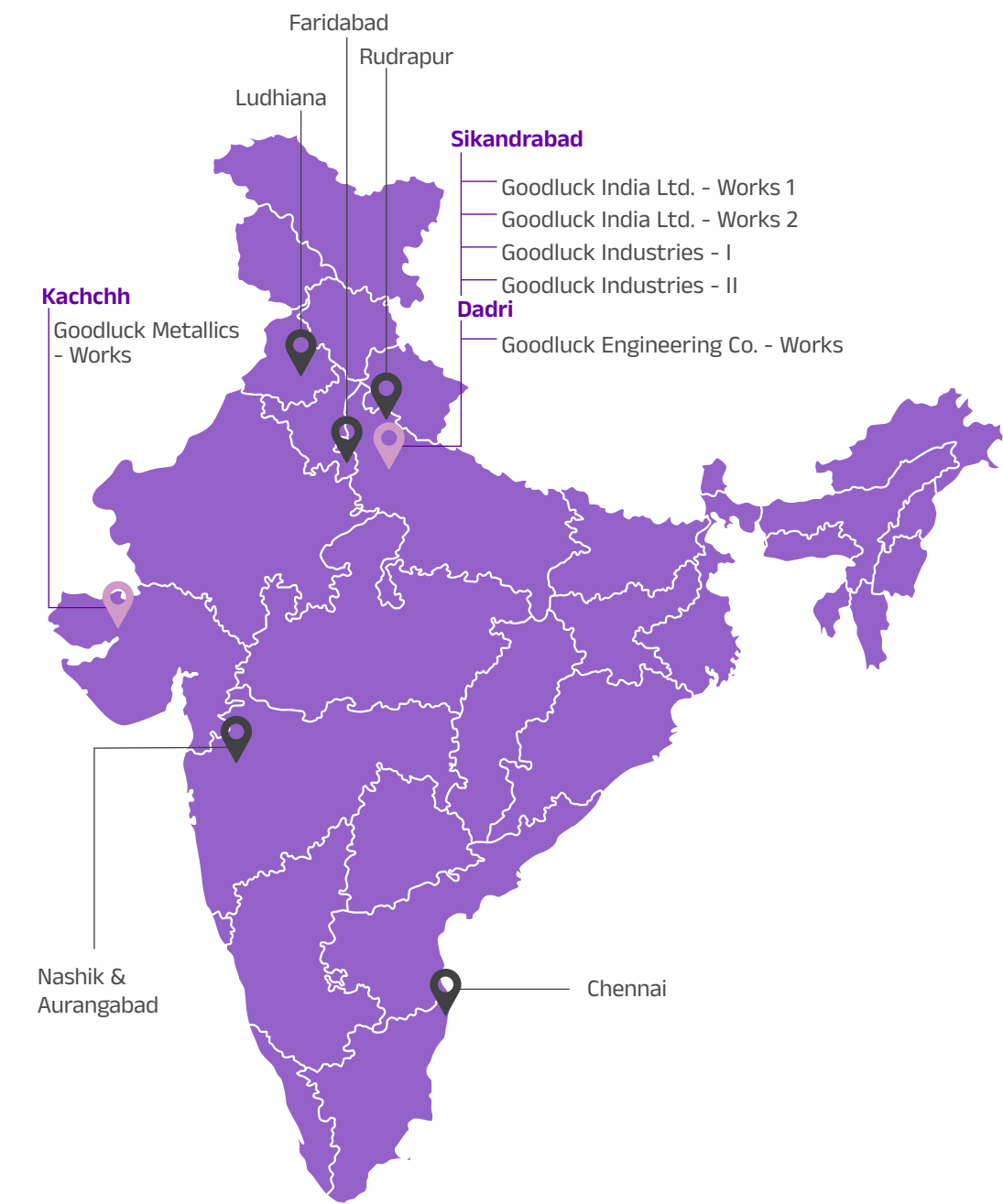
FRANCE
GERMANY
KINGDOM OF SAUDI ARABIA
NEW ZEALAND
NIGERIA
OMAN

SINGAPORE
SOUTH AFRICA
SWEDEN
UNITED STATES OF AMERICA
UNITED ARAB EMIRATES
UNITED KINGDOM

AND TO MORE THAN
100 COUNTRIES...

World-class manufacturing facility in India

With **6 manufacturing facilities** spread across India, we are a part of India's export growth story for products that are vital to several sectors.



- Manufacturing Plant

Warehouse