



A Division of
**SCULPT ENGINEERING
PRIVATE LIMITED**

UNLEASHING OUR PRODUCT SHOWCASE

INTERNATIONAL STEEL EXCELLENCE

MANUFACTURERS OF HFIW PIPES & TUBES | HOLLOW SECTIONS | APH | COR-TEN | INDUSTRIAL | SS PIPES



Regd. office:
85, 2nd Flr. Thangaiya Nagar,
5th Main Road, K. K. Nagar,
Trichy - 620 021, Tamil Nadu.



About US

Who We Are

In response to the prevailing trend where the predominant production of steel pipes and tubes for the Indian market is concentrated in the northern and eastern regions, the establishment of STS Steels & Tubes was strategically undertaken to address the growing demand in South India.

What We Do

Our geographically strategic positioning is designed to streamline transportation logistics for the southern market. Dedicated to delivering unparalleled products, we unwaveringly adhere to stringent standards, aligning with IS (Indian Standard) specifications such as IS 1239 and 4923. STS is resolute in its commitment to providing top-tier pipes and tubes at a competitive cost, ensuring that our global clientele enjoys unrestricted access to reliable and standards-compliant solutions. We take immense pride in our pivotal role in advancing the accessibility and excellence of steel products on an international scale, leveraging the advantage of a nearby sea port. With this strategic location, we have the capacity to cater to 5000 to 6000 tonnes per month, further enhancing our ability to meet the demands of our clients worldwide.

POLICY ZERO

HIGH FREQUENCY INDUCTION WELDING

Our HFIW system, powered by a 400 KW High Frequency Solid State Welding Machine, is renowned for its precision and efficiency in pipe production. Key features include:

- **Efficient Welding:**

Our High-Frequency Induction Welding excels in creating robust and durable welds in pipes, emphasizing high efficiency.

- **400 KW Power:**

The substantial 400 KW power of our welding machine signifies a high-capacity and robust welding process, ensuring the creation of quality welds in pipes.

- **Production Capacity:**

Our manufacturing process produces 12 to 15 tonnes of pipes per hour, with a daily capacity of 150 to 200 tonnes, showcasing exceptional efficiency and productivity.

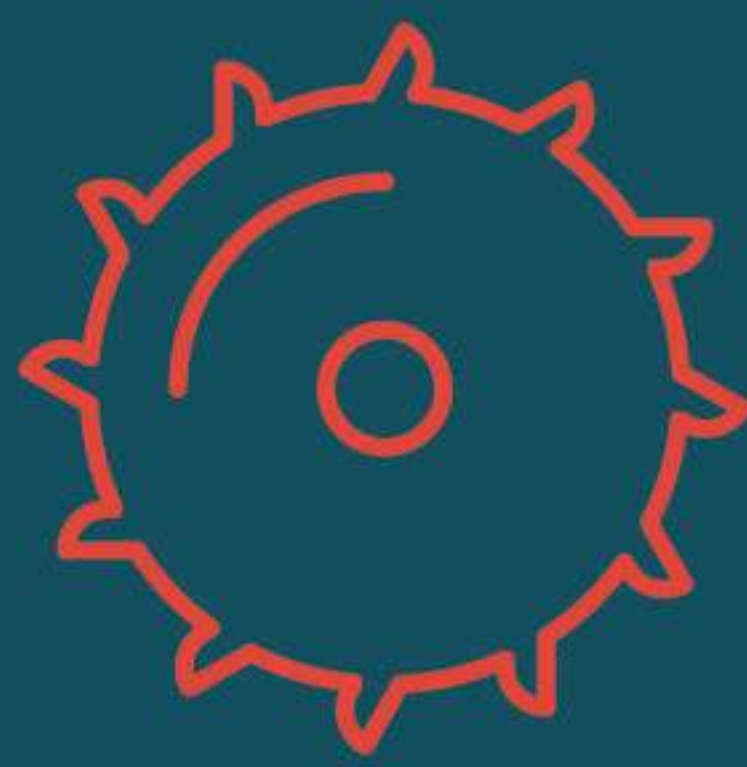


COLD SAW CUTTER

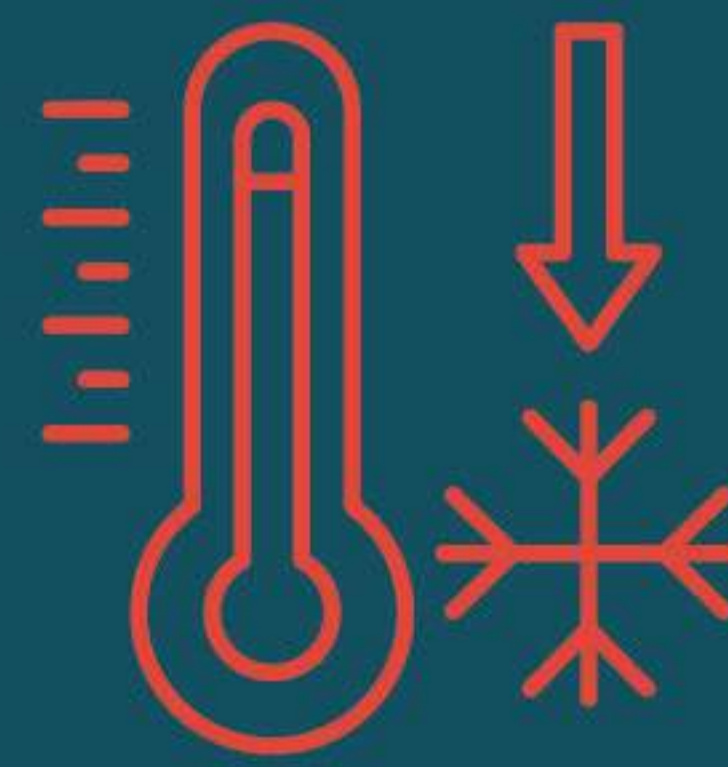
The cold saw uses a circular blade with high-speed steel or tungsten carbide teeth, designed to cut metal with minimal heat. Key Features and Aspects of Cold Saw Cutters:



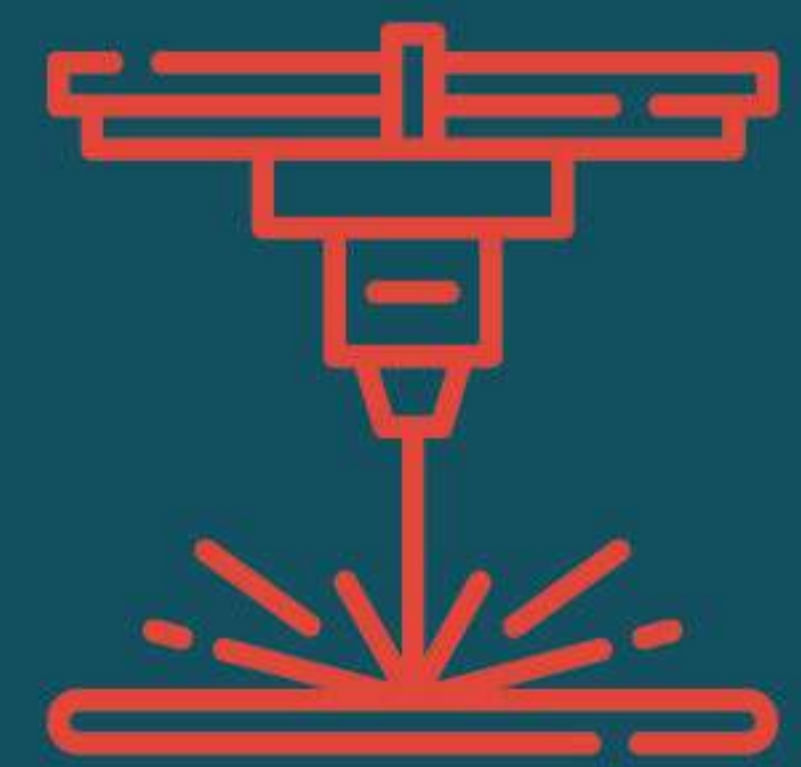
Greater Efficiency



Circular Saw Blade



Minimal Heat



Precision Cutting



Our Products

HFIW / ERW



RHS



In our lineup of steel products, we proudly offer High-Frequency Induction Welded (HFIW) Steel Pipes and Tubes that meet IS1239 and IS4923 standards. Known for their exceptional strength and durability, these tubes are essential components for applications demanding unparalleled performance and reliability.

HFIW Steel Pipes and Tubes IS1239 and IS4923 are ideal for demanding applications. Their strength is evident in air, steam, and water lines, withstanding varying pressures and temperatures. Whether for industrial airflow, steam, or water, these tubes ensure reliable, efficient performance.

Beyond conventional applications, the reliability of HFIW Steel Pipes and Tubes extends to fire-fighting systems. In critical situations, a dependable system is vital. These tubes, capable of withstanding high pressure and temperature, are essential in the network of pipes delivering water, playing a significant role in controlling and extinguishing fires.

Evaluating HFIW Steel Pipes and Tubes IS1239 and IS4923 involves understanding their high-frequency induction welding process. This ensures strength and adherence to standards, making them ideal for demanding conditions and essential for industries needing reliable performance.

CHS



SHS



STEEL PIPES FOR ORDINARY USES

IN WATER, GAS, STEAM & AIR

ERW STEEL TUBES IS - 1239 (PART 1)

	INCH	1"	1 ¼ "	1 ½"	2"	2 ½"	3"	4"	5"	6"
	MM	25	32	40	50	65	80	100	125	150
A- Class	OD-MIN	33.2	41.9	47.8	59.6	75.2	87.9	113		
	OD-MAX	33.8	42.5	48.4	60.2	76	88.7	113.9		
	Thickness	2.6	2.6	2.9	2.9	3.2	3.2	3.6		
	kg/mtr	1.98	2.54	3.23	4.08	5.71	6.72	9.75		
B- Class	OD-MIN	33.3	42	47.9	59.7	75.3	88	113.1	138.5	163.9
	OD-MAX	34.2	42.9	48.8	60.8	76.6	89.5	115	140.8	166.5
	Thickness	3.2	3.2	3.2	3.6	3.6	4	4.5	4.8	4.8
	kg/mtr	2.41	3.10	3.56	5.03	6.42	8.36	12.20	15.9	18.9
C- Class	OD-MIN	33.3	42	47.9	59.7	75.3	88	113.1	138.5	163.9
	OD-MAX	34.2	42.9	48.8	60.8	76.6	89.5	115	140.8	166.5
	Thickness	4	4	4	4.5	4.5	4.8	5.4	5.4	5.4
	kg/mtr	2.93	3.79	4.37	6.19	7.93	9.90	14.50	17.9	21.3

TOLERANCE FOR IS: 1239

Thickness		Weight		Length	
1	Light tubes	+ Not Limited -8 Percent	1 Single tube (Light Series)	+10% -8%	1 Unless otherwise specified 4 to 7 mtr
2	Medium and Heavy Tubes	+ Not Limited -10 Percent	2 Single Tube (Medium & Heavy Series)	±10%	
			3 For Quantity per Load of 10 tones Minimum (Light Series)	+7.50% -5%	
			4 For Quantity per Load of 10 tones Minimum (Medium & Heavy Series)	±7.5%	



CM/L-6900112514

HOLLOW STEEL SECTIONS FOR STRUCTURAL USE

SQUARE HOLLOW SECTION (SHS) & RECTANGULAR HOLLOW SECTION (RHS)

HOLLOW SECTION TUBES IS - 4923

SQUARE HOLLOW SECTION						
Size in mm	25 x 25	31 x 31	38 x 38	49.5 x 49.5	72 x 72	91.5 x 91.5
Thickness	Weight (Kgs/mtr)					
2	1.36		2.18			
2.6	1.69	2.26	2.75	3.69		
3.2	1.98	2.69	3.29	4.45	6.71	
3.6						9.67
4		3.19	3.95	5.39	8.22	
4.5						11.88
4.8					9.66	12.60

RECTANGULAR HOLLOW SECTION						
Size in mm	50x25	60x40	66x33	70x30	80x40	100x50
Thickness	Weight (Kgs/mtr)					
2.6			3.69			
2.9	2.98		4.07	4.12	5.03	
3.2	3.24	4.12		4.5	5.5	7.01
3.6			4.93			
4				5.45	6.71	8.59
4.5			5.95			

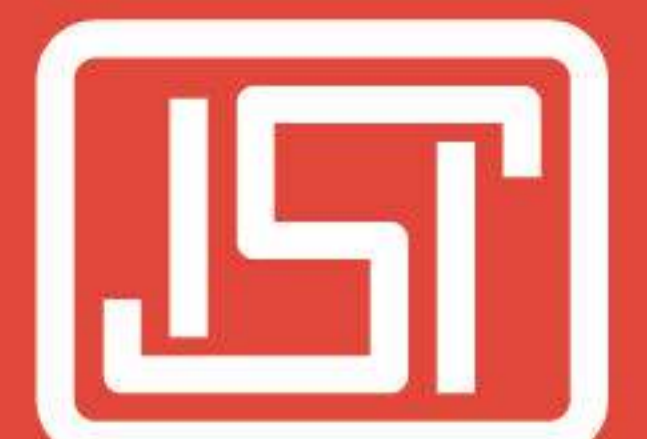
TOLERANCE FOR IS: 4923

Thickness for all sizes	On Individual Length	On Lots of 10 Tones	Outside Dimensions	Squareness of Corner	Radius of Corners - Outside
±7.5%	Weight +10% to -8%	±7%	±1% of length of the side to be measured of sides with a minimum of ±0.5mm	90° ± 2°	3t, max where t is the thickness of a section

• SHS 47 x 47 | RHS 40 x 20, 56 x 37 & 75 x 25 special sizes available on order basis.



IS 4923



CM/L-6900112615

STEEL TUBES FOR STRUCTURAL PURPOSES

FRAME, TRUSS STRUCTURE, RIGID STEEL FRAME etc.

STRUCTURAL STEEL TUBES IS - 1161

	INCH	1"	1 ¼ "	1 ½"	2"	2 ½"	3"	4"	5"	6"
	MM	25	32	40	50	65	80	100	125	150
A- Class	OD	33.7	42.4	48.3	60.3	76.1	88.9	114.3	139.7	165.1
	Thickness	2.6	2.6	2.9	2.9	3.2	3.2	3.6	4.5	4.5
	kg/mtr	1.98	2.54	3.23	4.08	5.71	6.72	9.75	15	17.8
B- Class	OD	33.7	42.4	48.3	60.3	76.1	88.9	114.3	139.7	165.1
	Thickness	3.2	3.2	3.2	3.6	3.6	4	4.5	4.8	4.8
	kg/mtr	2.41	3.1	3.56	5.03	6.42	8.36	12.2	15.9	18.9
C- Class	OD	33.7	42.4	48.3	60.3	76.1	88.9	114.3	139.7	165.1
	Thickness	4.0	4.0	4.0	4.50	4.50	4.80	4.8	5.4	5.4
	kg/mtr	2.93	3.79	4.37	6.19	7.93	9.90	14.5	17.9	21.3

TOLERANCE FOR IS: 1161

Thickness		Weight		Length	
1	Welded tubess	+ Not Limited - 10 Percent	1 Single tube Light Medium & Heavy 2 10 tonne lots light Medium & Heavy	+10% -8% ±10% ±5% ±7%	1 Unless otherwise specified 4 to 7 mtr



DISCOVER THE APPEAL OF COR-TEN STEEL

Embraced by Roll-Formed Product Users :

COR-TEN steel is capturing the attention of roll-formed product users due to its distinctive appearance and natural weathering properties, making it a preferred choice for various architectural projects.

Weathering Steel at its Best :

Developed to eliminate the need for painting, COR-TEN forms a stable rust-like patina over time, providing enhanced resistance to atmospheric corrosion compared to conventional steels.

Protection Against the Elements :

COR-TEN's innate ability to resist the corrosive effects of weather elements such as rain, snow, and fog is thanks to its formation of a protective layer of dark brown oxidation.



THE LEGACY OF COR-TEN

Trademark and Continuity :

Although initially trademarked by United States Steel Corporation (USS), the COR-TEN legacy persists even after USS's plate business transitioned to International Steel Group, now ArcelorMittal, ensuring continued availability of COR-TEN branded materials.

Standard Designations :

Originally designated A 242 ("COR-TEN A") by ASTM International, newer grades like A 588 ("COR-TEN B") and A 606 for thin sheet have been introduced, complying with Indian standards as per IRS M-41.

WHY CHOOSE COR-TEN?

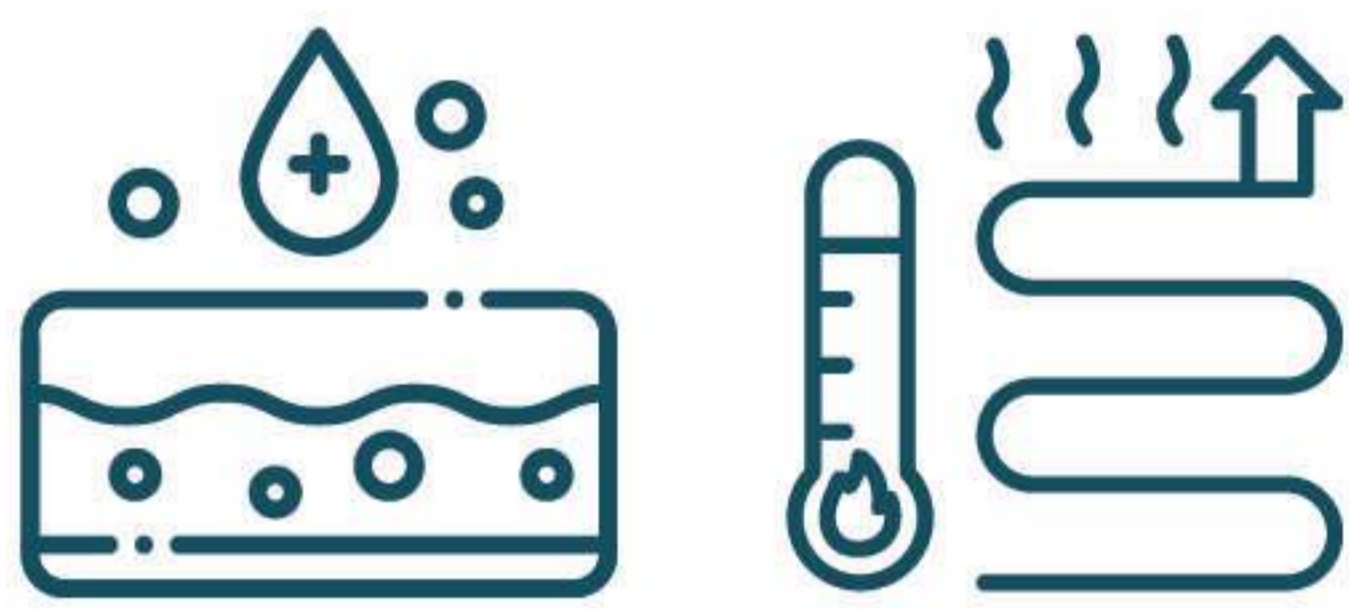
COR-TEN Steel ERW APH/Boiler tubes, meeting ASTM A 423 Gr.1 standards, are replacing traditional carbon steel, offering performance lasting four to eight times longer than carbon steel tubes.

APH TUBE MANUFACTURING (ERW)

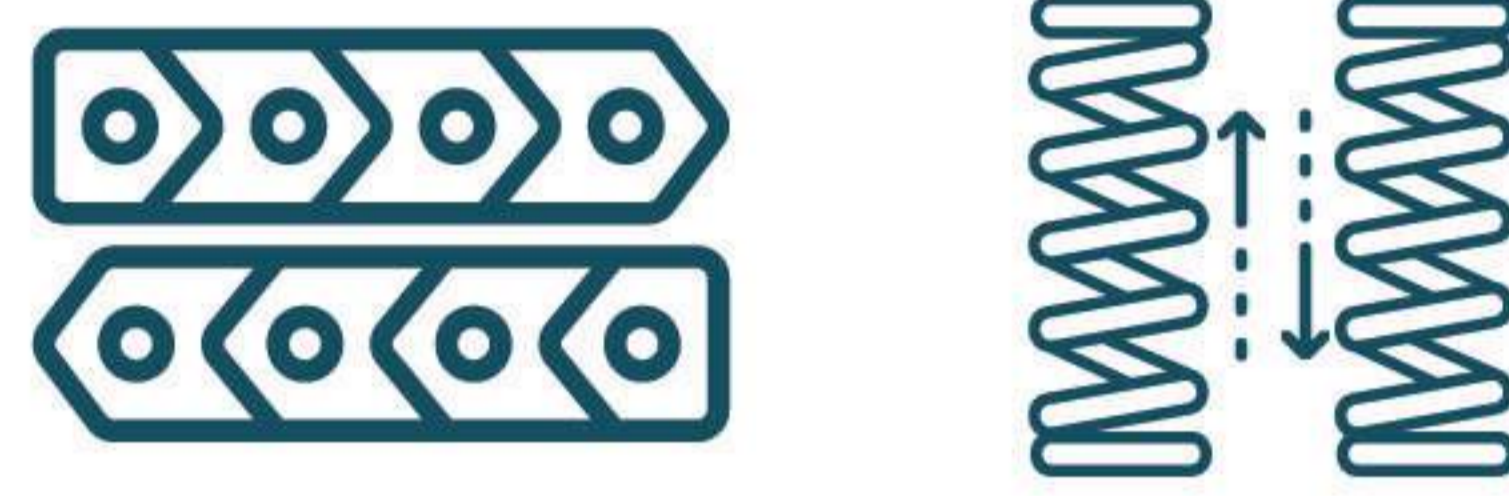
Meeting Stringent Standards :

Air Pre-Heater (APH) tubes are manufactured across a wide range to meet specific customer requirements. These tubes adhere to both national and international standards such as ASTM A423, BS-3059 Part-I & Part II (with IBR), BS-6323 Part-V, and SA 214.

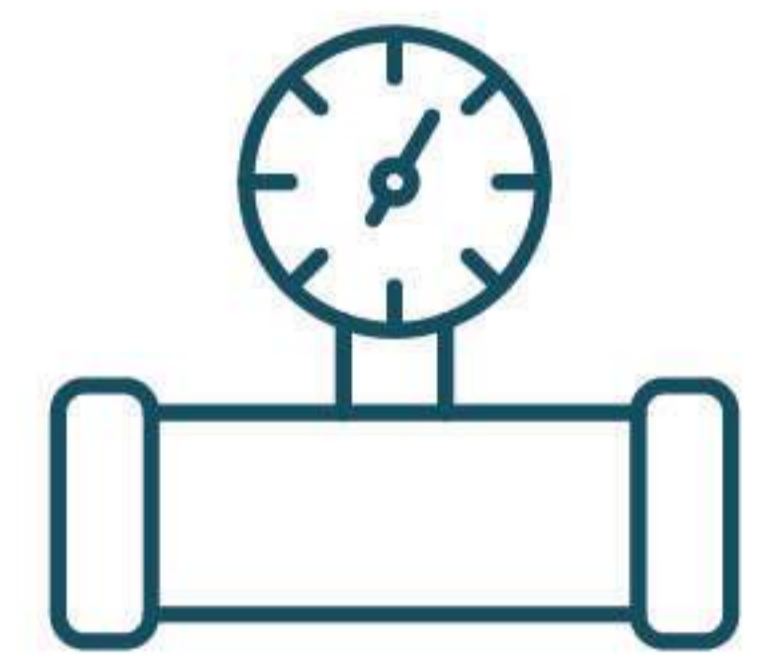
Manufacturing Steps for Desired Characteristics



Annealing and Surface Treatment



Straightening and Eddy Current Testing



Hydro Testing (IBR Tubes)

NOTABLE SPECIFICATIONS

1. ASTM A 423 Gr. 1 (COR-TEN Steel ERW) :

These tubes, crafted from COR-TEN steel, are specifically designed for Air Pre-Heater applications. Widely utilized in sugar mills, power plants, fertilizer plants, and other process-oriented facilities where the atmosphere is highly corrosive.

3. BS 3059 Part 1 (Now BS EN 10217-1) :

This specification caters low-tensile carbon steel boiler and superheater tubes. Approved by the IBR, it now falls under the BS EN umbrella.

5. ASTM A214 :

Defines standards for electric-resistance welded carbon steel heat exchanger and condenser tubes.

2. BS-6323 Part V (Now BS EN 10305-5, BS EN 10296-1, BS EN 10305-3) :

Originally designated for welded steel tubes in automobiles, mechanical, and general engineering purposes, this standard has evolved into the current BS EN specifications.

4. JIS G3461 :

Outlines requirements for carbon steel tubes used in boilers and heat exchangers, ensuring compatibility with Japanese industrial standards.

COR-TEN AND CARBON STEEL APH TUBES

CHEMICAL PROPERTIES

COR-TEN STEEL APH TUBES

Specification	Type	Grade	Chemical Properties							
			C%	Mn%	S%	P%	Si%	Cu%	Cr%	Ni%
ASTM A 423	ERW	1	0.15	0.55	0.06	0.06	0.10	0.20	0.24	0.20
			Max.	Max.	Max.	To 0.16.	Min.	To 0.60	To 1.31	To 0.70

CARBON STEEL APH TUBES

Specification	Type	Grade	Chemical Composition%							
			C		Ms		P	S	SI	
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
IS: 2416 Part-IV	ERW	310	0.08	0.25	0.35	1.4	0.05	0.05	-	0.35
		360	0.06	0.25	0.35	1.4	0.05	0.05	-	0.35
		440	0.08	0.25	0.35	1.4	0.05	0.05	-	0.35
IS: 11714 Part-III	ERW	-	0.06	0.18	0.27	0.63	0.048	0.058	-	-
IS: 1914 Part-IV	ERW	320	0.06	0.25	0.35	1.4	0.05	0.05	-	0.35
		360	0.06	0.25	0.35	1.4	0.05	0.05	-	0.35
		440	0.08	0.25	0.35	1.4	0.05	0.05	-	0.35
BS:3059 Part-I	ERW	320	-	0.16	0.30	0.70	0.040	0.040	-	0.35
BS:3059 Part-II	ERW	360	-	0.17	0.4	0.8	0.035	0.035	0.1	0.35
		440	0.12	0.18	0.9	1.2	0.035	0.035	0.1	0.35
BS:6323 Part-V	ERW	ERW-1	-	0.13	-	0.6	0.05	0.05	-	-
		ERW-2	-	0.16	-	0.7	0.05	0.05	-	-
		ERW-3	-	0.2	-	0.9	0.05	0.05	-	0.35
ASTM A-178	ERW	A	0.06	0.18	0.27	0.63	0.035	0.035	-	-
		C	-	0.35	-	0.8	0.035	0.035	-	-
ASTM A-214	ERW	-	-	0.18	0.27	0.63	0.035	0.035	-	-
ASTM A-333 & A334	ERW	1	-	0.30	0.40	1.06	0.025	0.025	-	-
		6	-	0.30	0.29	1.06	0.025	0.025	0.10	-

COR-TEN AND CARBON STEEL APH TUBES

MECHANICAL PROPERTIES

COR-TEN STEEL APH TUBES

Specification	Type	Grade	Mechanical Properties				Weld Properties		
A.STIU.4U	ERW	1	Hardness HRB	Y.S. Mpa	T.S. Mpa	E%	Rev. Flattening Test	Flattening Test	Flange Test
			87 Max.	255 Min.	415 Min.	25 Min.	Free From Crack	Distance b/w Plates 20.11 mm	12.50% of OD

CARBON STEEL APH TUBES

Specification	Mechanical Properties								
	Yield Strength				Tensile Strength				% Elongation
	Min.		Max.		Min.		Max.		
	PSI	MPs.	PSI	MPs.	PSI	MPs.	PSI	MPs.	
IS: 2416 Part-IV	-	152	-	-	-	0.05	304	402	(100-RM / 9.81)/C, C=2.20, RM=Measured T.S
	-	177	-	-	-	0.05	353	451	
	-	201	-	-	-	0.05	402	500	
IS: 11714 Part-III	-	-	-	-	-	0.058	-	-	
IS: 1914 Part-IV	-	176	-	-	-	0.05	320	480	(100-RM / 9.81)/C, C=2.20, RM=Measured T.S
	-	198	-	-	-	0.05	360	500	
	-	242	-	-	-	0.05	440	580	
BS:3059 Part-I	-	195	-	-	-	0.040	320	480	25
BS:3059 Part-II	-	235	-	-	-	0.035	360	500	24
	-	245	-	-	-	0.035	480	580	21
BS:6323 Part-V	-	200	-	-	-	0.05	300	-	10(Dia<20) 20(Dia<20)
	-	250	-	-	-	0.05	340	-	8 (Dia<20) 15(Dia<20)
	-	300	-	-	-	0.05	400	-	7 (Dia<20) 12(Dia<20)
ASTM A-178	26.000	180	-	-	47.000	0.035	325	-	35
	37.000	255	-	-	60.000	0.035	415	-	30
ASTM A-214	-	-	-	-	-	0.035	-	-	
ASTM A-333 & A334	30.000	205	-	-	55.000	0.025	380	-	35
	35.000	240	-	-	60.000	0.025	415	-	30

STAINLESS STEEL PIPES

In partnership with JSL, we manufacture stainless steel pipes and tubes, exclusively branded as Tejas JSL



SQUARE PIPES

Stainless steel square pipes are known for their strength and versatility, commonly used in structural and aesthetic applications.

Grades Available: JT/202, 304, 316.

Sizes and Dimensions:

- Side Dimensions: Ranges from 10 x 10 to 200 x 200 mm.
- Wall Thickness: Ranges from 1mm to 6mm.

Applications:

- Architectural Frameworks: Railings, gates, and fencing.
- Furniture Manufacturing: Modern furniture designs.
- Structural Components: Supports, beams, and frameworks.



ROUND PIPES

Round pipes are the most commonly used stainless steel pipes, offering strength and ease of fabrication for various applications.

Grades Available: JT/202, 304, 316.

Sizes and Dimensions:

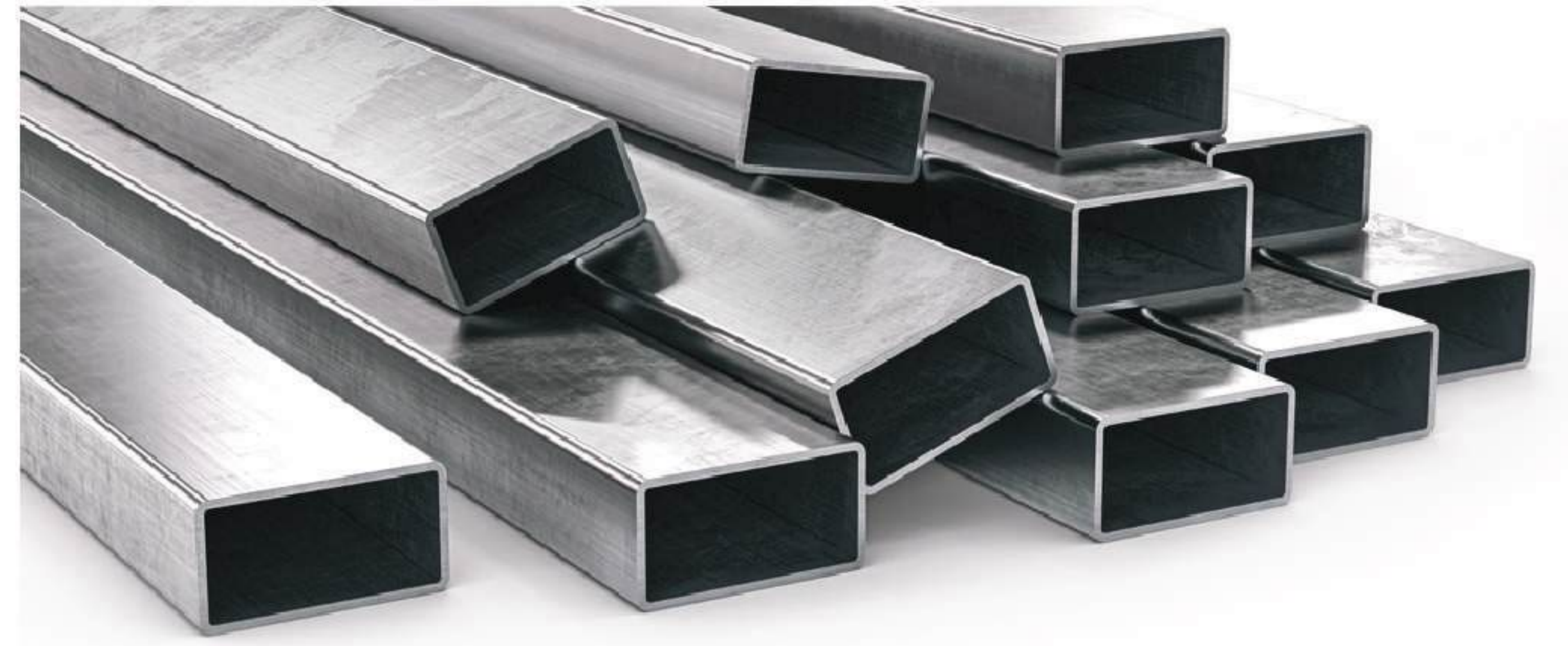
- Outer Diameter (OD): Ranges from 6mm to 600mm.
- Thickness: Ranges from 0.5mm to 20mm.

Applications:

- Plumbing: Water and gas pipelines.
- Industrial Piping: Chemical, petrochemical, and oil & gas industries.
- Automotive: Exhaust systems and structural components.

QUALITY ASSURANCE

All pipes undergo rigorous testing to meet international standards, ensuring consistent quality and performance.



RECTANGULAR PIPES

Stainless steel rectangular pipes are ideal for both structural and decorative purposes, combining strength with aesthetic appeal.

Grades Available: JT/202, 304, 316.

Sizes and Dimensions:

- Side Lengths: Ranges from 20mm x 10mm to 150mm x 100mm.
- Thickness: Ranges from 1mm to 8mm.

Applications:

- Construction: Structural supports and frameworks.
- Furniture: Modern design and manufacturing.
- Automotive: Structural components and frames.



SLOTTED PIPES

Slotted stainless steel pipes feature slots or perforations, making them ideal for applications requiring fluid filtration or controlled flow.

Grades Available: JT/202, 304, 316.

Sizes and Dimensions:

- Slot Width: Customizable based on application requirements.
- Pipe Diameter: Ranges from 10mm to 300mm.

Applications:

- Water Filtration Systems: Filtration systems and drainage.
- Architectural Design: Balustrades, handrails & decorative elements.
- Agricultural Irrigation: Controlled water flow in irrigation systems.

CERTIFICATIONS



STAINLESS STEEL PIPES & TUBES

STRUCTURAL, CLADDING, RAILINGS etc.

STRUCTURAL PROPERTIES

Dimensions (mm) & Weight (Kgs)														
Square					Round					Rectangular				
Sizes	1.2mm	1.5mm	2mm	3mm	Sizes	1.2mm	1.5mm	2mm	3mm	Sizes	1.2mm	1.5mm	2mm	3mm
10 x 10	2.13	2.58	3.26		12.7	2.13	2.58	3.26		13 x 26	4.4	5.4	7	
12 x 12	2.68	3.26	4.17		15.8	2.68	3.26	4.17		10 x 40	5.51	6.8	8.9	
15 x 15	3.26	3.98	5.13		19.05	3.26	3.98	5.13		20 x 40	6.64	8.21	10.76	16.42
20 x 20	4.39	5.39	7.01		25.4	4.39	5.39	7.01		25 x 50	8.2	10.5	14	21
25 x 25	5.51	6.8	8.89	13.6	31.75	5.51	6.8	8.89	13.6	60 x 40	11.4	13.84	18.27	27.68
30 x 30	6.64	8.21	10.76	16.42	38.1	6.64	8.21	10.76	16.42	80 x 40	13.4	16.65	22.02	33.3
40 x 40	8.89	11.02	14.51	22.04	50.8	8.89	11.02	14.51	22.04	30 x 10	4.4	5.4	7	10.8
50 x 50	11.14	13.84	18.27	27.68	63.5	11.14	13.84	18.27	27.68	25 x 75	11.4	13.84	18.27	27.68
60 x 60	13.39	16.65	22.02	33.3	76.2	13.39	16.65	22.02	33.3	50 x 10	6.64	8.21	10.76	16.42
80 x 80	17.9	22.28	29.53	44.56	101.6	17.9	22.28	29.53	44.56	10 x 20	3.26	3.98	5.13	7.96

Thickness	1.2mm/18Guage	1.5mm/16Guage	12mm/14Guage	3mm/10Guage	0.95mm/20Guage	0.79mm/22Guage
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*The above mentioned weights are indicative for one tube measuring 6.1 meter

STAINLESS STEEL SLOTTED PIPE

Outer Diameter	40 x 40 x 15, 50.8x15, 50x50x15
Wall Thickness	1.2mm/18Guage, 1.5mm/16Guage
Grades	JT.202, 304
Surface Finish	Matt, Mirror



CHEMICAL ANALYSIS

JT / SS 202											
Grade	Numerical symbol as per IS 15997		%C	%Mn	%S	%P	%Si	%Ni	%Cr	%Cu	%N
JT/202	N7	Min	-	9.5	-	-	-	0.4	14	0.4	-
		Max	0.14	11	0.015	0.1	0.75	0.95	15.25	0.8	0.2

ASTM 312 / SS 304										
Grade		%C	%Mn	%S	%P	%Si	%Ni	%Cr	%N	
304	Min	-	-	-	-	-	8	18	-	
	Max	0.07	2	0.03	0.045	0.75	12	20	0.1	

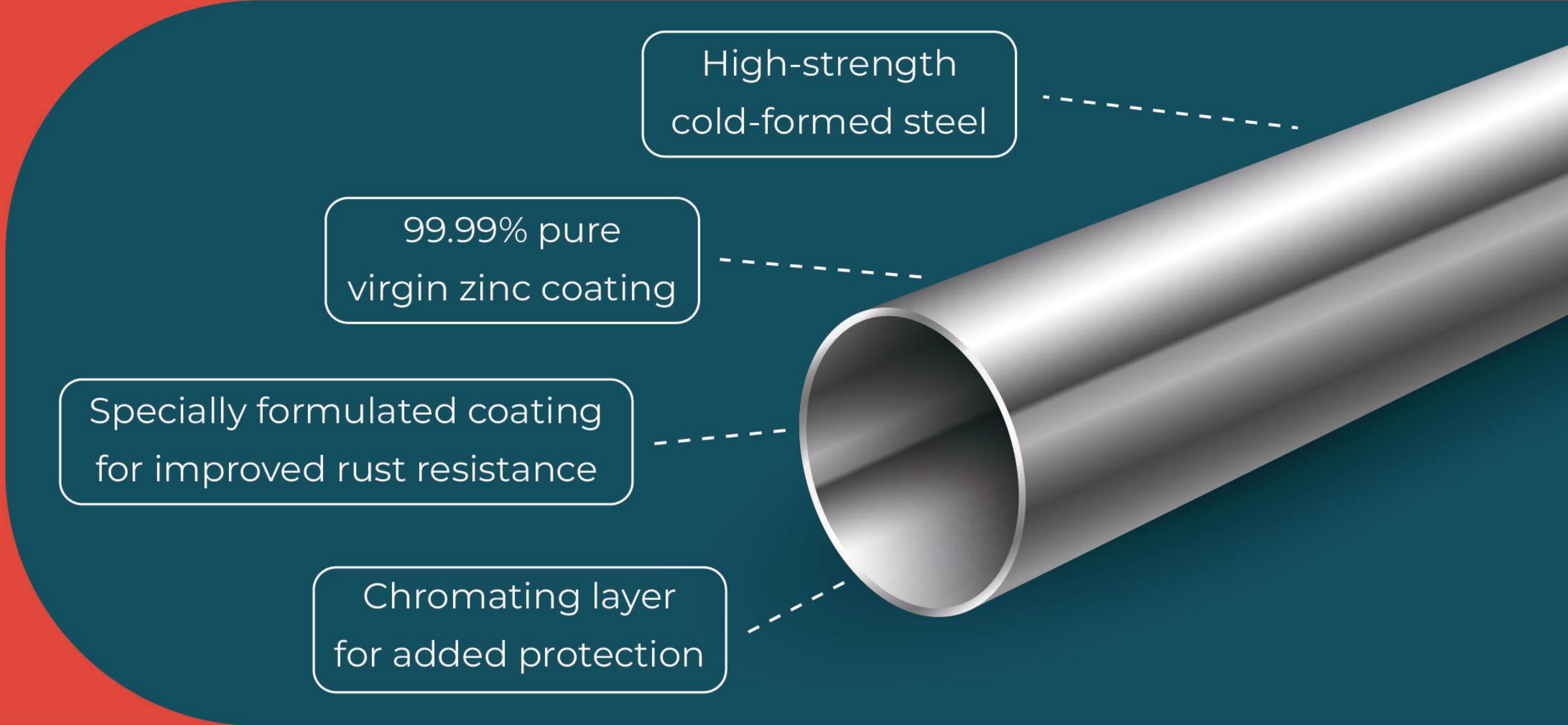
ASTM 312 / SS 316											
Grade		%C	%Mn	%S	%P	%Si	%Ni	%Cr	%Ti	%N	%N
316	Min	-	-	-	-	-	10	16	-	2	-
	Max	0.07	2	0.03	0.045	0.75	14	18	-	3	0.1

PRE-GALVANIZED PIPES

UNIQUE FEATURES

At STS Steels, we utilize cutting-edge technology to produce pre-galvanized pipes that endure over time. Our pipes undergo an advanced, online rust-preventive coating process, offering superior anti-rust properties that enhance durability and reliability in harsh conditions.

KEY FEATURES



Details	Circular Hollow Sections	Rectangular Hollow Sections	Rectangular Hollow Sections
Outer Dimension (mm)	15.88 to 145 (Dia)	20 x 10 to 145 x 82	10 x 10 to 100 x 100
Thickness Range (mm)	0.8 to 2.00 mm	0.8 to 2.50 mm	0.8 to 2.50 mm
Standard	IS 3601	IS 4923	IS 4923
Standard Length	6.00 mtr.	6.00 mtr.	6.00 mtr.
Standard Finish	Normal Spangle	Normal Spangle	Normal Spangle
Zinc Coating	80 to 120 GSM	80 to 120 GSM	80 to 120 GSM
Stamp	As per requirement	As per requirement	As per requirement



CERTIFICATIONS



PIONEERING EXCELLENCE IN STEEL TRADING

Since its inception, STS has become a key player in the steel trading industry, recognized for understanding steel's critical role in modern construction. As a leading supplier in India, we deliver high-quality, reliable products tailored to the diverse needs of our clients in construction and infrastructure. Our commitment to operational excellence and value creation has established us as a trusted partner in driving development initiatives and supporting nation-building efforts.

- Coils
- Pipes and Tubes
- Strips
- Channel and Angle Sections
- Bars and Rods
- Profiles
- Plates and Sheets
- Structural Sections
- Cold Finished Bars
- Grating and Mesh
- Fitting and Flanges
- Rebars

COMPREHENSIVE PRODUCT RANGES





THANK YOU

For Your Time



SCAN ME



Get in Touch    

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