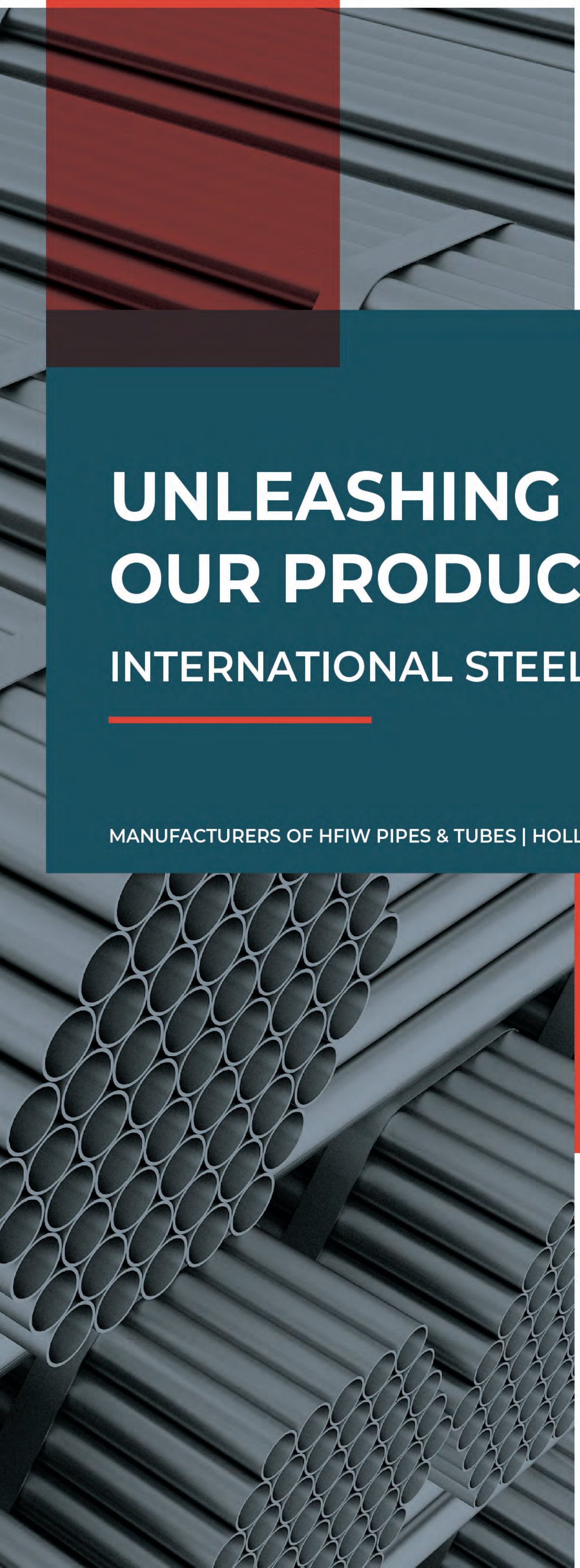


STS
Steels & Tubes
Build a Stronger Product

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:
No.85, 2nd Floor Thangaiya Nagar,
5th Main Road, K K Nagar,
Trichy - 620 021, Tamil Nadu.

Sales office:
No.48, Meyyappa Towers
Sundar Nagar, 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.

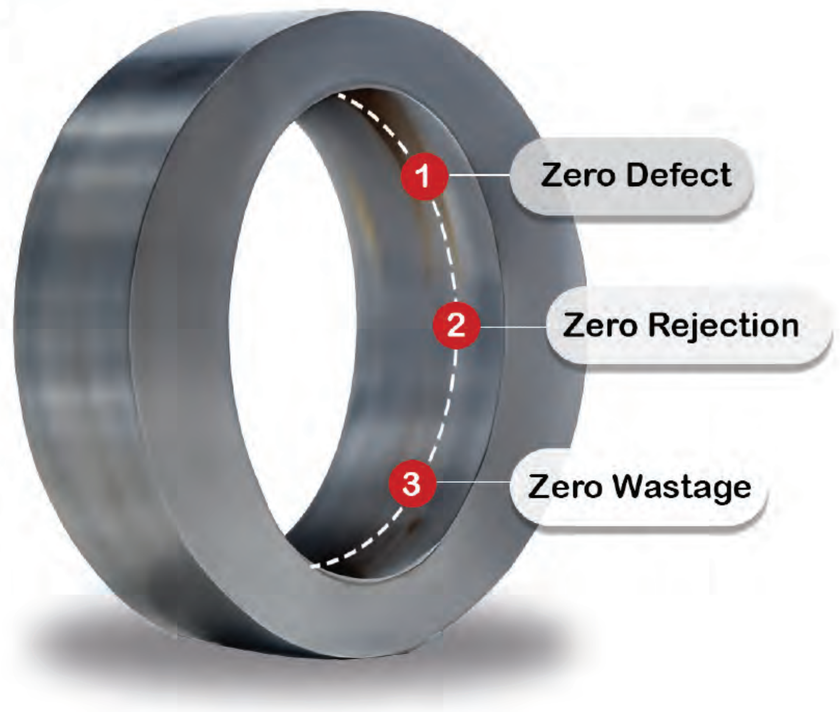
What We Do

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, 4923 and 1161. 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.

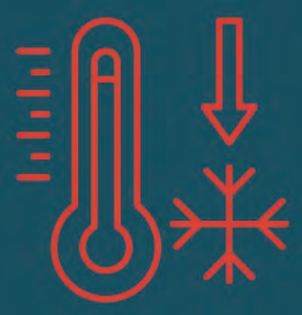
- **Production Capacity:**
  Our manufacturing process produces 12 to 15 tonnes of pipes per hour, with a daily capacity of 150 to 200 tonnes, showcasing exceptional efficiency and productivity.

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 ofCold Saw Cutters:

Greater Effeciency

Circular Saw Blade



Minimal Heat

Precision Cutting

Our Products

HFIW / ERW

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.

RHS

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 INDUSTRIAL & COMMERCIAL USES

IN WATER, GAS, STEAM & AIR

ERW STEEL TUBES IS - 1239 (PART 1)

COMPLIANCES STANDARDS (EN10255, ASTM A53, ISO65, AS1074, BS 1389)

FIRE FIGHTING (ASTM A795 & ASTM A135 - GROOVED PIPES)

	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%		

मानकः पथप्रदर्शकः
Bureau of Indian Standards

- IS 1239 CM/L 6900112514
- IS 4923 CM/L 6900112615
- IS 1161 CM/L 6900120109

HOLLOW STEEL SECTIONS FOR STRUCTURAL USE

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

HOLLOW SECTION TUBES IS - 4923

COMPLIANCES STANDARDS (ASTM 500, AST163, EN 10217 & EN 39)

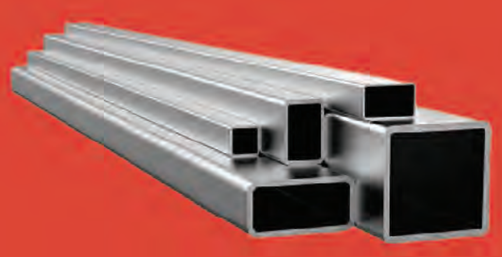
SQUARE HOLLOW SECTION						
Size in mm	25 x 25	31 x 31	38 x 38	50 x 50	72 x 72	91 x 91
Thickness	Weight (Kgs/mtr)					
2	1.36		2.18			
2.6	1.69	2.26	2.75	3.69		
3.2	1.98	2.69	3.29	4.45	6.71	
3.6						9.67
4		3.19	3.95	5.39	8.22	
4.5						11.88
4.8					9.66	12.60

RECTANGULAR HOLLOW SECTION						
Size in mm	40 x 20	50 x 25	60 x 40	75 x 25	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 1S: 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	$90^{\circ} \pm 2^{\circ}$	3t, max where t is the thickness of a section

- SHS 47 x 47 | RHS 56 x 37 special sizes available on order basis.



- IS 1239 CM/L 6900112514
- IS 4923 CM/L 6900112615
- IS 1161 CM/L 6900120109

STEEL TUBES FOR STRUCTURAL PURPOSES

FRAME, TRUSS STRUCTURE, RIGID STEEL FRAME etc.

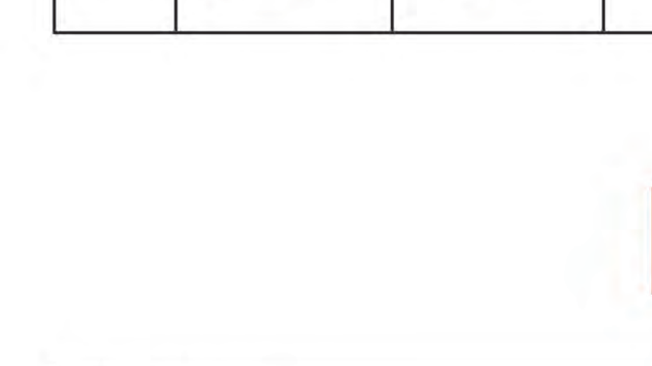
STRUCTURAL STEEL TUBES IS - 1161

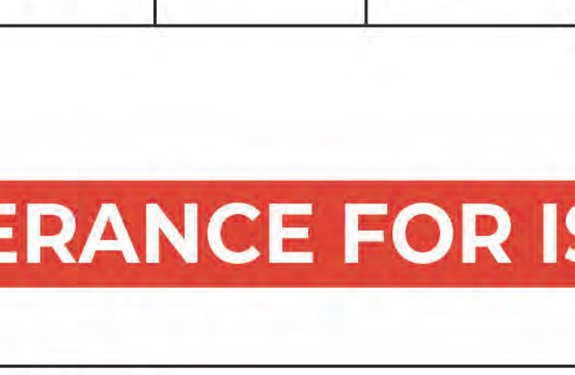
COMPLIANCES STANDARDS (EN 10219 & EN 39, ASTM 500, AS1163 & BS-4360)

	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	+10% -8%	**1** Unless otherwise specified	4 to 7 mtr
		Medium & Heavy	±10%		
		2 10 tonne lots light	±5%		
		Medium & Heavy	±7%		





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?

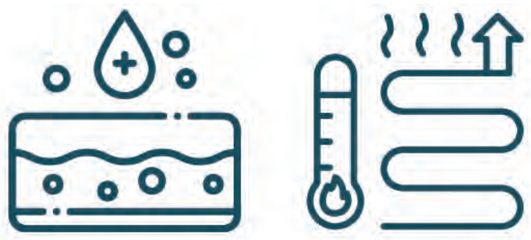
COR-TEN Steel ERW APH/Boiler tubes, meeting ASTM A 423 Gr.1 standards, are replacing traditional carbon steel, offering performance lasting four to eight times longer than carbon steel tubes.

APH TUBE MANUFACTURING (ERW)

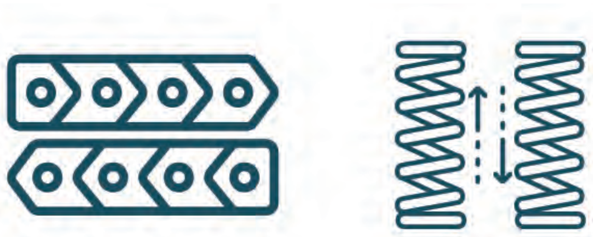
Meeting Stringent Standards :

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.

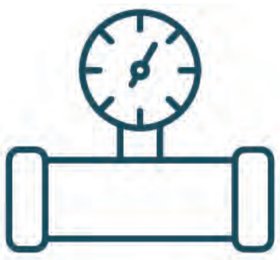
Manufacturing Steps for Desired Characteristics



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.

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.

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.

4. JIS G3461 :

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

5.ASTM A214 :

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

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 Max.	0.55 Max.	0.06 Max.	0.06 To 0.16.	0.10 Min.	0.20 To 0.60	0.24 To 1.31	0.20 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	Mehanical 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

We manufacture stainless steel pipes and tubes, exclusively branded as Tejas

At STS Steels & Tubes, we offer stainless steel pipes in multiple grades—202, 304, 316, and 316L—each suited for specific applications based on durability, corrosion resistance, and mechanical strength.

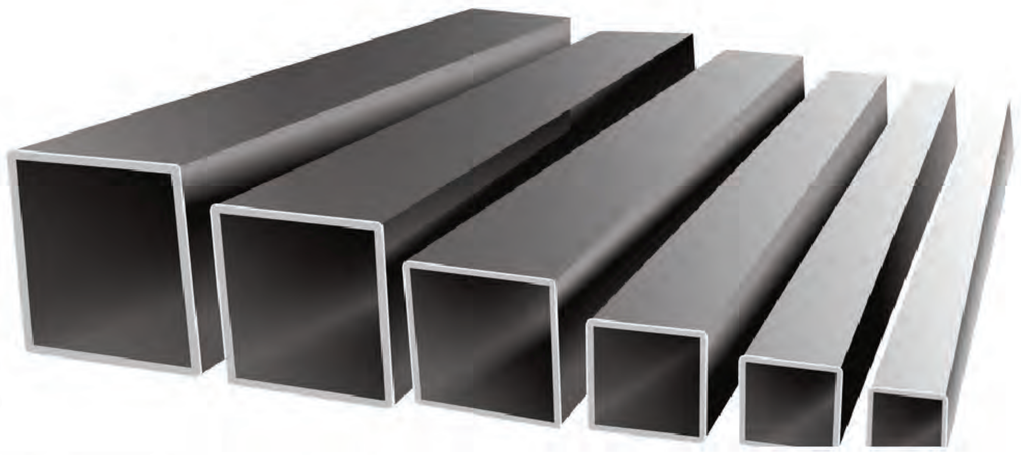
202 Grade is a smart, budget-friendly choice for non-critical stainless steel applications—perfect for furniture, railings, kitchenware, and interior decor.

304 Grade is globally recognized for its superior corrosion protection and is used a cross food-grade, pharmaceutical, and architectural industries.

316 Grade is engineered for harsh and chloride-rich environments, such as coastal regions, marine hardware, and chemical plants.

316L Grade, known for low carbon content, is perfect for critical welding operations and high-purity processing systems where maximum resistance to corrosion and heat is essential.

With consistent quality, fast delivery, and compliance to international specifications, our SS pipes are trusted by fabricators, OEMs, and infrastructure developers across India, We also offer custom sizes, finishes and third-party inspections as per project requirements.



SQUARE PIPES

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

Grades Available: 202, 304, 316, 316L.

Sizes and Dimensions:
- Side Dimensions: Ranges from 12 x 12mm to 50 x 50 mm.
- Wall Thickness: Ranges from 1.2mm to 2.4mm.

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

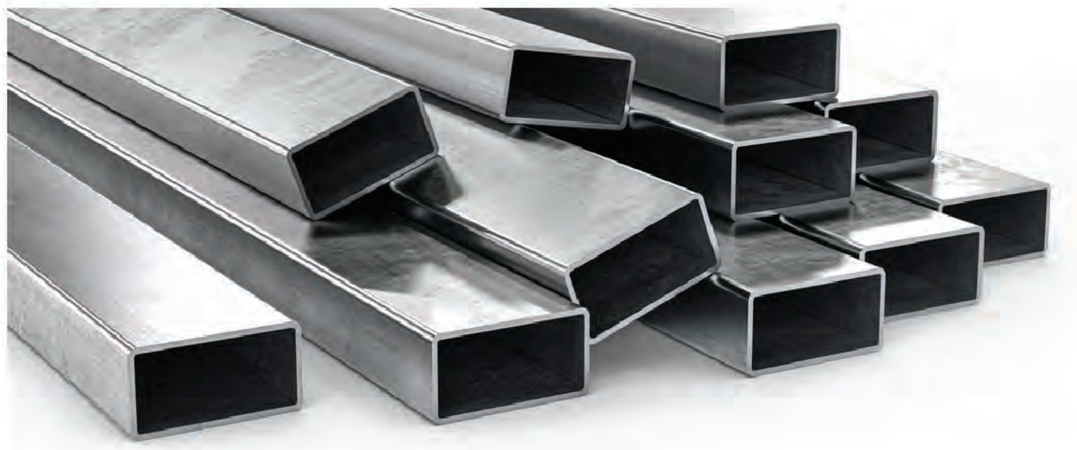
ROUND PIPES

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

Grades Available: 202, 304, 316, 316L.

Sizes and Dimensions:
- Outer Diameter (OD): Ranges from 12.70mm to 76.2mm.
- Thickness: Ranges from 1.2mm to 2.4mm.

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



RECTANGULAR PIPES

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

Grades Available: 202, 304, 316, 316L.

Sizes and Dimensions:
- Side Lengths: Ranges from 26mm x 13mm to 80mm x 40mm.
- Thickness: Ranges from 1.2mm to 2.4mm.

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

QUALITY ASSURANCE

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

CERTIFICATIONS

- IS 1239 CM/L 6900112514
- IS 4923 CM/L 6900112615
- IS 1161 CM/L 6900120109

STAINLESS STEEL PIPES & TUBES

STRUCTURAL, CLADDING, RAILINGS etc.

STRUCTURAL PROPERTIES

Dimensions (mm) & Weight (Kgs)														
Rectangular					Square					Round				
Sizes	1.2mm	1.5mm	2.0mm	2.4mm	Sizes	1.2mm	1.5mm	2.0mm	2.4mm	Sizes	1.2mm	1.5mm	2.0mm	2.4mm
26 x 13	4.25	5.40	7.00		12 x 12	2.68	3.26	4.17		12.7	2.13	2.58	3.26	
40 x 20	6.64	8.21	10.76	16.42	15 x 15	3.26	3.98	5.13		15.9	2.68	3.26	4.17	
50 x 25	8.30	10.50	14.00	21.00	20 x 20	4.39	5.39	7.01		19.1	3.26	3.98	5.13	
80 x 40	13.45	16.65	22.02	33.3	25 x 25	5.51	6.8	8.89	13.60	25.4	4.39	5.39	7.01	
					30 x 30	6.64	8.21	10.76	16.42	31.8	5.51	6.80	8.89	13.60
					40 x 40	8.89	11.02	14.51	22.04	38.1	6.64	8.21	10.76	16.42
					50 x 50	11.14	13.84	18.27	27.68	50.8	8.89	11.02	14.51	22.04
										63.5	11.14	13.84	18.27	27.68
										76.2	13.39	16.65	22.02	33.30

Thickness	1.2mm / 18Guage	1.5mm / 16Guage	2.0mm / 14Guage	3mm / 10Guage	0.95mm / 20Guage	0.79mm / 22Guage

*The above mentioned weights are indicative for one tube measuring 6.1 meter

CHEMICAL ANALYSIS

SS 202											
Grade	Numerical sysmbol as per IS 15997		%C	%Mn	%S	%P	%Si	%Ni	%Cr	%Cu	%N
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	Numerical sysmbol as per IS 15997	%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	Numerical sysmbol as per IS 15997	%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

ASTM 312 / SS 316L										
Grade	Numerical sysmbol as per IS 15997	%C	%Mn	%S	%P	%Si	%Ni	%Cr	%Mo	%N
316L	Min	-	-	-	-	-	10	16	2	-
	Max	0.03	2	0.03	0.045	1	14	18	3	0.1

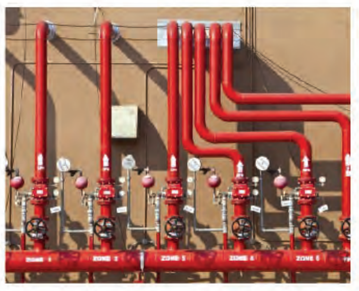
THANK YOU

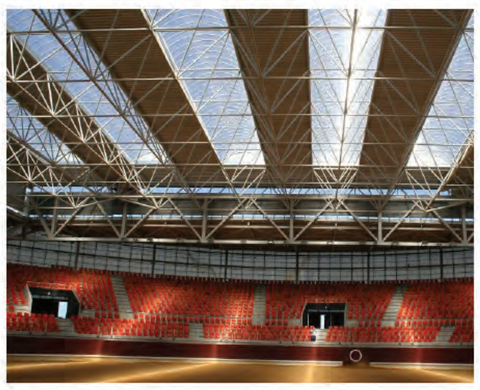
For Your Time

SCAN ME








Get in Touch

+91 89258 36505 | +91 89258 36506

www.stssteels.com

sales@sculptengineering.com

Factory Address:
No. 7A, Sipcot Industrial Estate,
Thiruvengaivasal Village,
Pudukkottai - 622 002, Tamil Nadu.
Ph.: 04322 - 221792