



You can count on us

**SEAMLESS PIPES AND TUBES
(CARBON AND ALLOY STEEL)**



JINDAL SAW LTD.
TOTAL PIPE SOLUTIONS

JINDAL SAW LIMITED

Who we are. What we do. How we do it.

An eventful journey began in 1984, with a single product and led to the establishment of a multi-product company in just over four decades. Jindal SAW Limited is a part of the multi-billion dollar O.P. Jindal Group, which is one of the topmost industry houses in India and the foremost indigenous steel producer and exporter.

Achievements in a nutshell:

- Complete solutions provider in the pipe industry.
- Manufacturing expanse: Large Diameter Submerged Arc Welded pipes and Spiral pipes, Ductile Iron pipes & fittings, Carbon & Alloy Steel (Seamless) pipes & tubes, Stainless Steel (Seamless & Welded) pipes & tubes, and many other supporting verticals like hot induction bends, connector casings, anti-corrosion & concrete weight coatings, pellets & Clad pipes.
- A widespread global presence, operating through production facilities strategically located in India, the United States of America (USA) and the United Arab Emirates (UAE). The European Union (EU) is supplied through an associated entity.
- An extensive and varied customer base, including some of the biggest companies and entities in global oil and gas production, water/sewerage supplies, engineering and procurement (linked to oil and gas), transportation, power generation and certain industrial applications.
- A strong foundation of knowledge, a well-diversified and de-risked model, and an uninterrupted flow of business know-how across operations, all riding on competent human resources.
- The highest standards of corporate governance, stringently followed, across the organisation and its dealings with external stakeholders. Internal and external auditors are amongst the four largest audit firms.
- A solid financial standing that supports operations and the pursuit of big opportunities in every stream.

**Because rhythm
creates music**
*Just as our units consistently
manufacture masterpieces*

STRATEGIC BUSINESS UNITS

Seamless Pipes and Tubes (Carbon & Alloy Steel):

- Carbon and Alloy Steel (Seamless) pipes and tubes are versatile and find a wide variety of applications across different industries.
- Our portfolio covers line pipes, process pipes, OCTG and pipes and tubes for general mechanical engineering. The company has emerged as a trusted supplier to major OEMs domestically and abroad. Some of our clients include ONGC, Oil India, GE, Thermax, Godrej, SKF, Petrofac, L&T, Proclad for ADNOC, IDMC Ltd., Tata and Biocon.

Large Diameter Submerged Arc Welded Line Pipes (LSAW Pipes):

- Submerged Arc Welded (SAW) pipes, typically of large diameter, find application in transportation of oil, gas, water and slurry. We are one of the largest SAW pipe manufacturing businesses in the world.
- Our facilities can produce pipes of up to 158" in outer diameter. Besides India, the company exports products to Americas, Middle East and Africa.

Ductile Iron Pipes (DI Pipes):

Ductile Iron pipes find usage in carriage of water (both potable and waste). Given our overall capacities of 1M+ MTPA including our Abu Dhabi facility, our

operation is counted as amongst the top three largest DI pipe producers in the world. This is a high-potential business where we supply pipes ranging up to 2,200 mm in diameter with external and internal coatings.

Stainless Steel Pipes & Tubes:

Jindal SAW has an unparalleled Stainless Steel product range capacity and takes pride in providing Total Pipe Solutions (Seamless, Stainless and Special Nickel Alloys) to multiple industries across the globe.

The tubes are manufactured under stringent global standards & industry norms and in various grades and dimensions as per customer specifications.

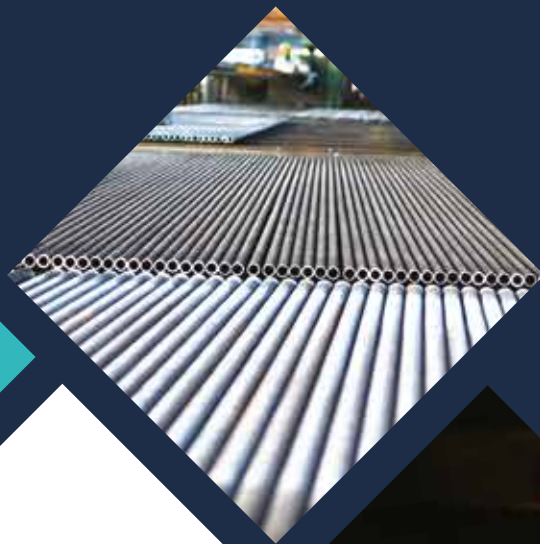
Mining and Pellet:

The company operates a mine-head, integrated beneficiation and pellet production facility of 1.65 million MTPA at Bhilwara, Rajasthan. We have obtained a 50-year mining lease for a low grade iron ore mine spread out over 1989 acres. Ours is the first beneficiation plant in the country at a mine head. Through beneficiation, we are upgrading the low-grade magnetite iron ore to high grade with over 65% Fe grade. The majority of these pellets are sold on merchant basis to the market, both domestically and via export.



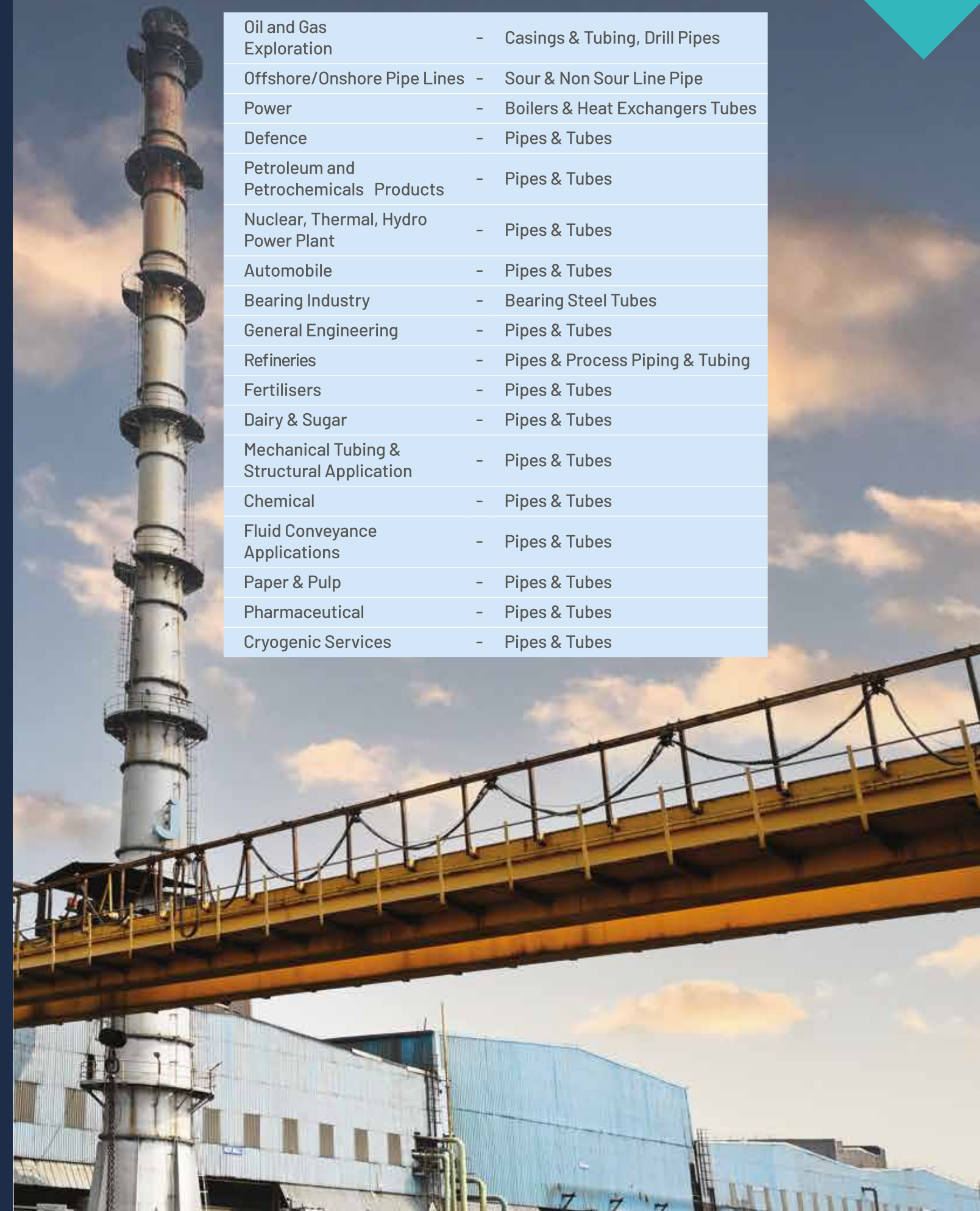
Because steady builds empires

Standing tall to connect the world through our products



MARKET SEGMENTS AND USER INDUSTRY

Oil and Gas Exploration	- Casings & Tubing, Drill Pipes
Offshore/Onshore Pipe Lines	- Sour & Non Sour Line Pipe
Power	- Boilers & Heat Exchangers Tubes
Defence	- Pipes & Tubes
Petroleum and Petrochemicals Products	- Pipes & Tubes
Nuclear, Thermal, Hydro Power Plant	- Pipes & Tubes
Automobile	- Pipes & Tubes
Bearing Industry	- Bearing Steel Tubes
General Engineering	- Pipes & Tubes
Refineries	- Pipes & Process Piping & Tubing
Fertilisers	- Pipes & Tubes
Dairy & Sugar	- Pipes & Tubes
Mechanical Tubing & Structural Application	- Pipes & Tubes
Chemical	- Pipes & Tubes
Fluid Conveyance Applications	- Pipes & Tubes
Paper & Pulp	- Pipes & Tubes
Pharmaceutical	- Pipes & Tubes
Cryogenic Services	- Pipes & Tubes



PRODUCT PROFILE

PRODUCT	OUTSIDE DIAMETER (D)	WALL THICKNESS (t)	OUTSIDE DIAMETER (D)	WALL THICKNESS (t)
	(inch)	(inch)	(mm)	(mm)
Hot Finished Carbon/ Alloy Steel Seamless tubes and pipes	1.00 to 18.00	0.13 to 1.00	33.40 to 457.20	3.38 to 25.40
Seamless Casing and Tubing conforming to API 5CT	2-3/8 to 13-3/8	0.19 to 0.51	60.30 to 339.70	4.83 to 13.06
Seamless Drill Pipes conforming to API 5DP	2-3/8 to 6-5/8	0.25 to 0.50	60.30 to 168.30	6.45 to 12.70
Cold Finished Carbon/ Alloy Steel Seamless tubes and pipes	0.75 to 6.50	0.08 to 0.75	19.05 to 165.10	2.00 to 19.05
Couplings for OCTG Products			73.02 to 365.12	
Anti-Corrosion 3LPE/ 3 LPP/ FBE/ IFBE Coating	2" to 16" as per ISO 21809/ DIN 30670/ 30678 and customer requirements			

SPECIFICATION:

ASTM (A53, A106), SA (53,106,179,192,210,213), DIN (1629, 2391, 17175), IS (3601, 3074), BS (3059)

API 5L:

- Manufacturer of Line Pipe Couplings - Type of Pipe: SMLS/ Max. Grade: B
- Manufacturer of Line Pipe Plain End at PSL 1 - Type of Pipe: SMLS -
 - o Delivery Condition: N, Q, R/ Max. Grade: X70
- Manufacturer of Line Pipe Plain End at PSL 2 - Type of Pipe: SMLS -
 - o Delivery Condition: N/ Max. Grade: X60
 - o Delivery Condition: Q/ Max. Grade: X70
 - o Delivery Condition: R/ Max. Grade: X42
- Manufacturer of Line Pipe Threaded and Coupled - Type of Pipe: SMLS -
 - o Delivery Condition: N, Q, R/ Max. Grade: B
- Manufacturer of Line Pipe Plain End at PSL 2 - Service Annex H, Manufacturer of Line Pipe Plain End at PSL 2 - Service Annex J - Type of Pipe: SMLS -
 - o Delivery Condition: N/ Max. Grade: X52
 - o Delivery Condition: Q/ Max. Grade: X70
- Processor of Line Pipe Plain End PSL 1 and PSL 2
- Threader of Couplings
- Threader of Pipe

API 5CT:

- Manufacturer of -
 - o Casing or Tubing Couplings, Manufacturer of Coupling Stock or Accessory Material
 - o Seamless Casing or Tubing (Plain End)
 - o Seamless Casing or Tubing (Threaded and Coupled)
 Grades: C110, C90, H40, J55, K55, L80 (1), L80 (13Cr), L80 (9Cr), N80 (1), N80 (Q), P110, Q125, R95, T95
- Manufacturer of Casing or Tubing Pup Joints -
 - o Grades: C110, C90, H40, J55, K55, L80 (1), L80 (13Cr), L80 (9Cr), N80 (1), N80 (Q), P110, Q125, R95
- Processor of -
 - o Casing, Tubing, Coupling Stock, or Accessory Material (Plain End)
 - o Casing or Tubing (Threaded and Coupled)
 Grades: C110, C90, J55, K55, L80 (1), L80 (13Cr), L80 (9Cr), N80 (1), N80 (Q), P110, Q125, R95, T95
- Pipe Threader

API 5DP:

- Drill Pipe Body at PSL 1, PSL 2 and PSL 3 Grade E, Grade G, Grade S, Grade SS105, Grade SS75, Grade SS95, Grade V and Grade X
- Tool Joint at PSL 1, PSL 2, PSL 3

ASTM/ASME/ SAE/ EN/ DIN STEEL GRADES:

SAE 1019, 1035, 1040, 1045, 1518, 1541, 4130, 4140, T11, T12, T22, T91, 8620, EN 19, ST 52, 16MnCr5, 20MnCr5, 20MnV6, 100Cr6, 52100

Because uniformity builds trust

Just like our facilities that churn out top-quality paragons



PLANT & MANUFACTURING FACILITIES (INFRASTRUCTURE)

1. Hot Finishing

- Rotary Hearth Furnace
- Conical Type Piercing Mill
- Premium Quality Finishing Mill
- Stretch Reducing Mill

2. 18" Mill to produce 8" - 18" OD

- Rotary Elongator Mill
- Reeling Mill
- Sizing Mill

3. API Finishing Line

- Upsetter
- Quench and Temper Furnace
- PMC Threading Machine
- Coupling Applicator
- In-house Coupling Manufacturing

4. OCTG Premium Connections

- Hunting Seal Lock XD Premium Connections for Casing, Tubing, PUP Joints and Accessories

5. Coating Plant

- Fusion Bonded Epoxy (FBE)
- 3 Layer Polyethylene (LPE)
- 3 Layer Poly Propylene Coating Line (3LPE)
- Internal Plastic Coating (IPC)

6. Cold Finishing/ Cold Drawn

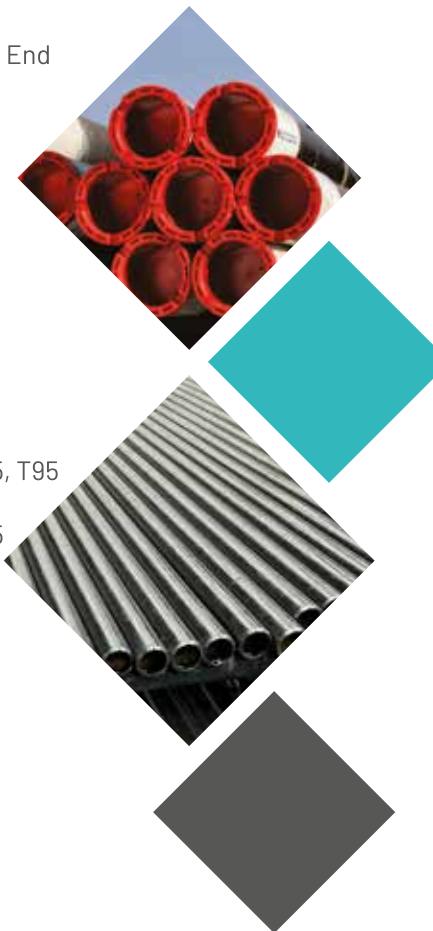
- Push Pointers
- Cold Draw Benches

7. Finishing Facilities

- MFL and Linsinger Cutting Machines
- Heat Treatment Furnaces: Normalising, Annealing, Stress Relieving, Spheroidising, Quench and Temper
- Beveling Machines
- Straightener
- Lacquer Coating Machines
- Automated Bundling Machine

8. Inspection and Testing Facilities

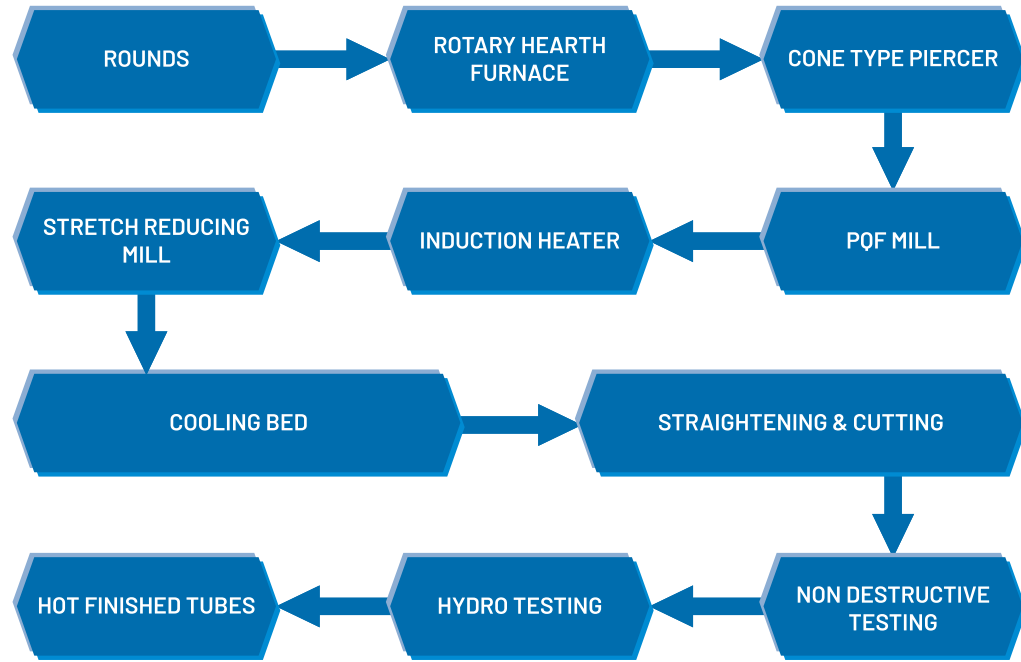
- EMI and UT System:
 - MAC and Tuboscope, USA
 - Eddy Current Testing
 - Leakage Flux Testing
 - Ultrasonic Testing
- Magnetic Particle Inspection
- SSC/ HIC Tests as per API 5L/ 5CT/ NACE Requirements
- Hydrostatic Testing as per API, ASTM, DIN, IS or Equivalent Standards
- Spectrometer for Chemical Testing
- Mechanical & Metallurgical Testing



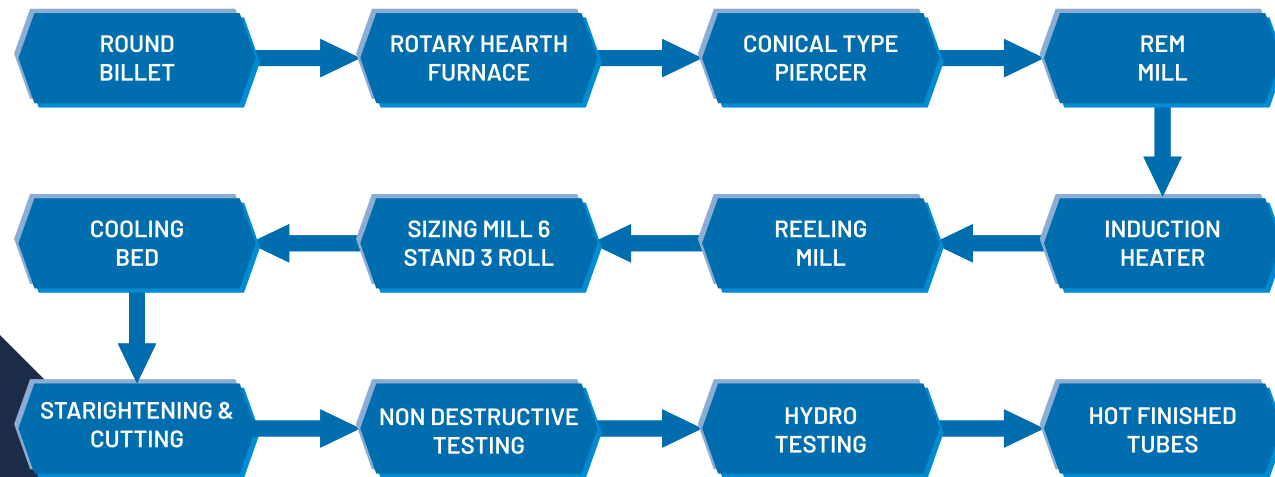
PRODUCT PROCESSES

1. Hot Finishing Process: OD 33.40 mm - 177.80 mm

The round billet is heated in a rotary hearth furnace and pierced by means of an internal piercing plug and a two-roll conical type piercer. The shell is then rolled in a PQF Mill for wall thickness reduction and shell elongation. It is reheated in an induction furnace and rolled in a stretch-reducing mill to decrease the outside diameter to the desired specifications. Finally, Pipe Finishing is carried out via several processes - air-cooling on a cooling bed, straightening, cutting and bevelling. Finished seamless pipes undergo Hydrostatic testing, Non-Destructive Testing, as well as inspection for dimensional irregularities.



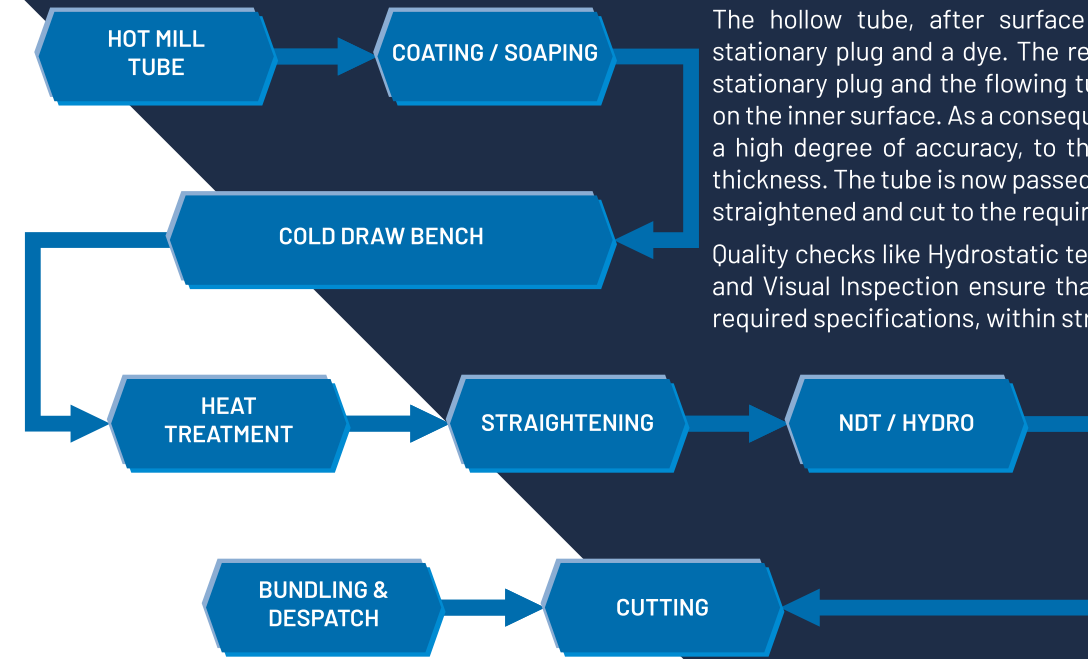
2. Hot Finishing Process: OD 219.08 mm - 457.20 mm



3. Cold Finishing Process: OD 19.00mm - 162.00mm

The hollow tube, after surface treatment, is drawn over a stationary plug and a die. The relative movement between the stationary plug and the flowing tube material results in friction on the inner surface. As a consequence, the tube is reduced with a high degree of accuracy, to the desired outer diameter and thickness. The tube is now passed through an annealing furnace, straightened and cut to the required length.

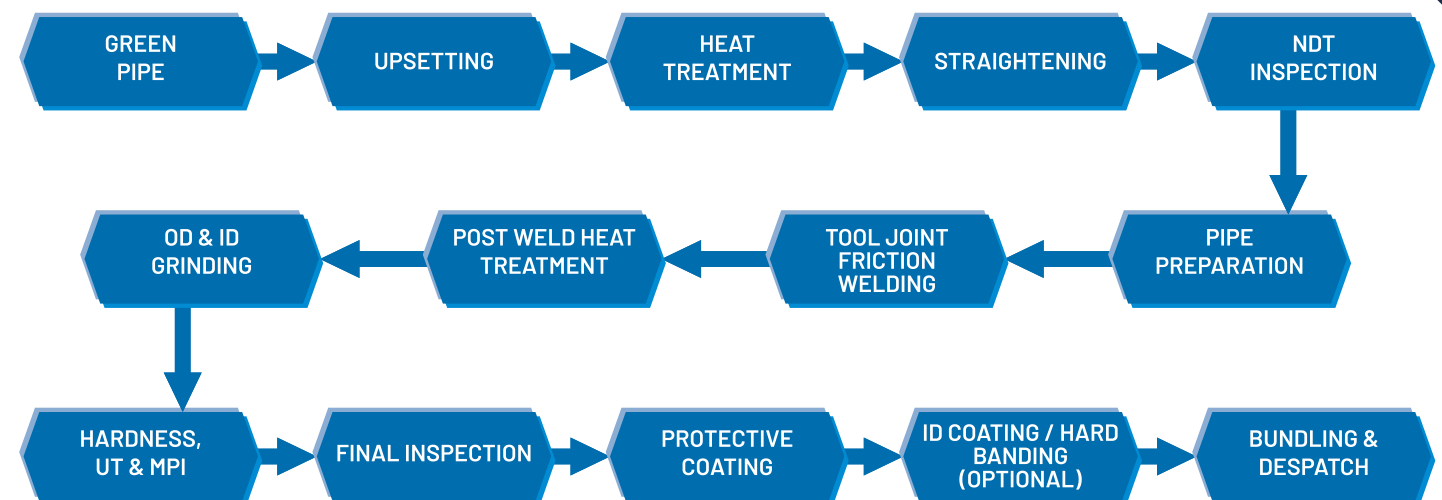
Quality checks like Hydrostatic testing, Non-Destructive testing and Visual Inspection ensure that the product meets with the required specifications, within strict tolerances.



4. Drill Pipe Process

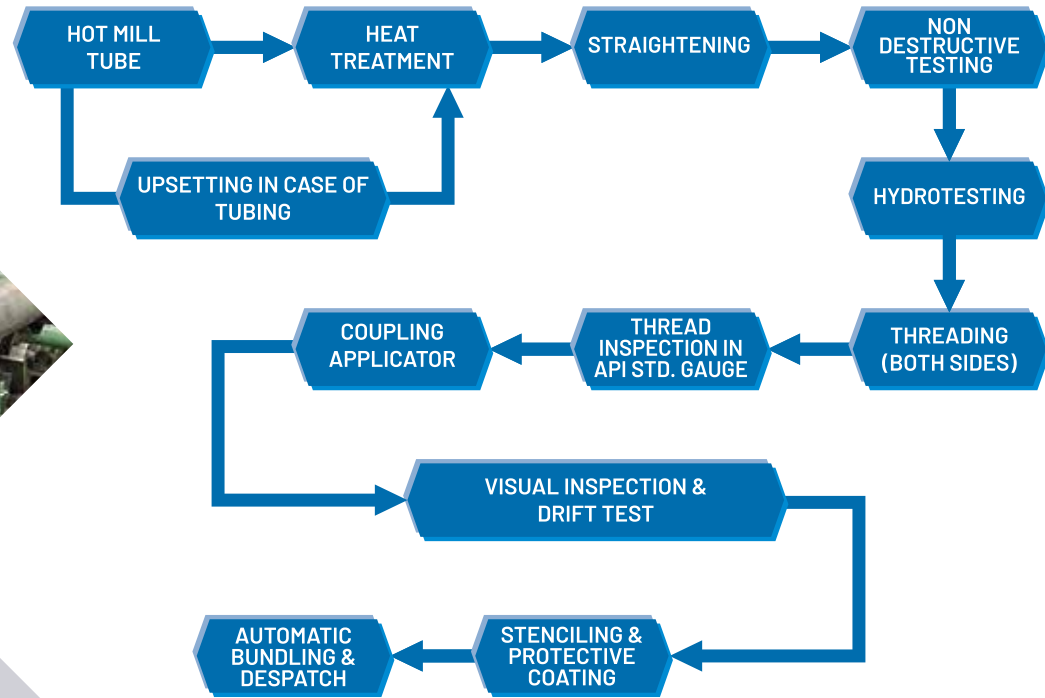
Rolled pipe ends are either External upset or Internal upset or Internal External upset and heat-treated full length by the Quench and Temper process to achieve uniform mechanical properties. The heat-treated pipes are 100% nondestructively inspected for possible longitudinal and transverse defects and wall thickness. Magnetic particle inspection of the upset ends is done to ensure that the upsets are free from defects. The OD and ID and face of the upsets are CNC machined for a clean surface as part of pipe preparation prior to welding.

Tools joints are attached to the drill pipe by friction welding to produce a high integrity solid state weld connection between the tool joint and the upset drill pipe tube. Hard Banding and ID coating facilities are also available on customer request.



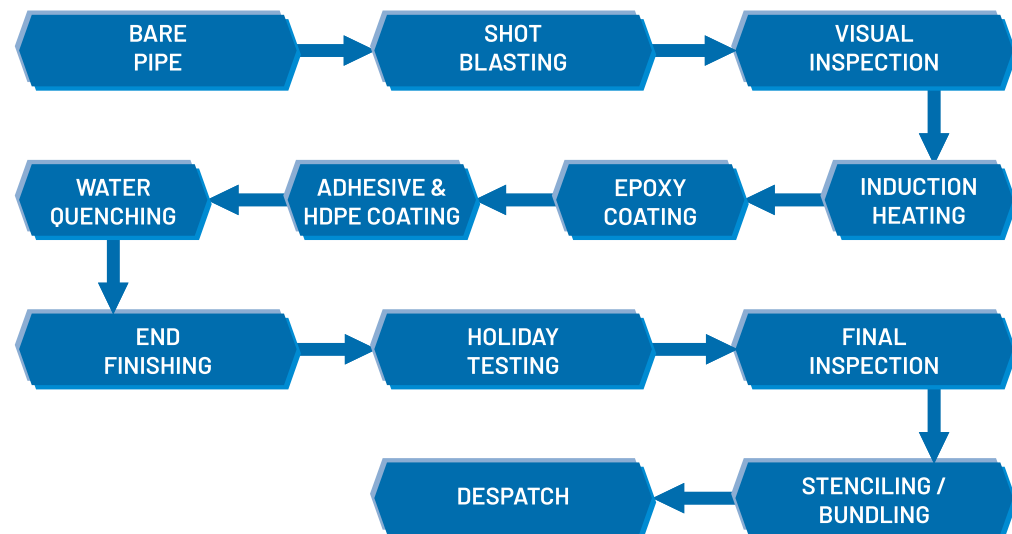
5. OCTG Manufacturing Process

Rolled pipes are heat treated in a Q&T furnace to achieve properties that conform to API grades. In the case of tubing, the ends are upsetted. The pipes are straightened and subjected to EMI and UT and Hydrostatic testing. Subsequently, threads are cut and couplers are power-tightened.

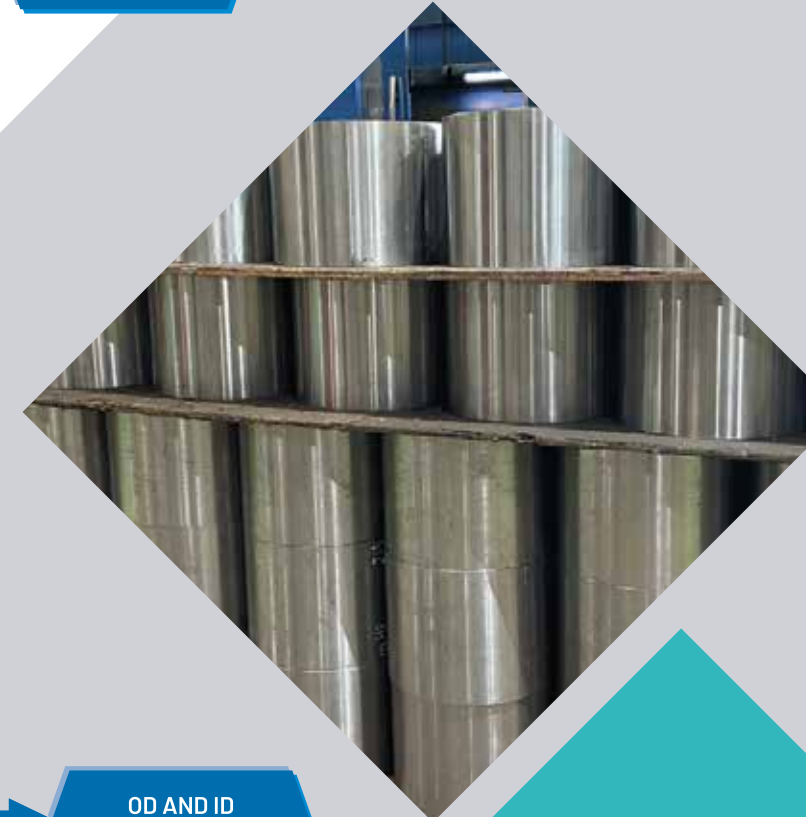
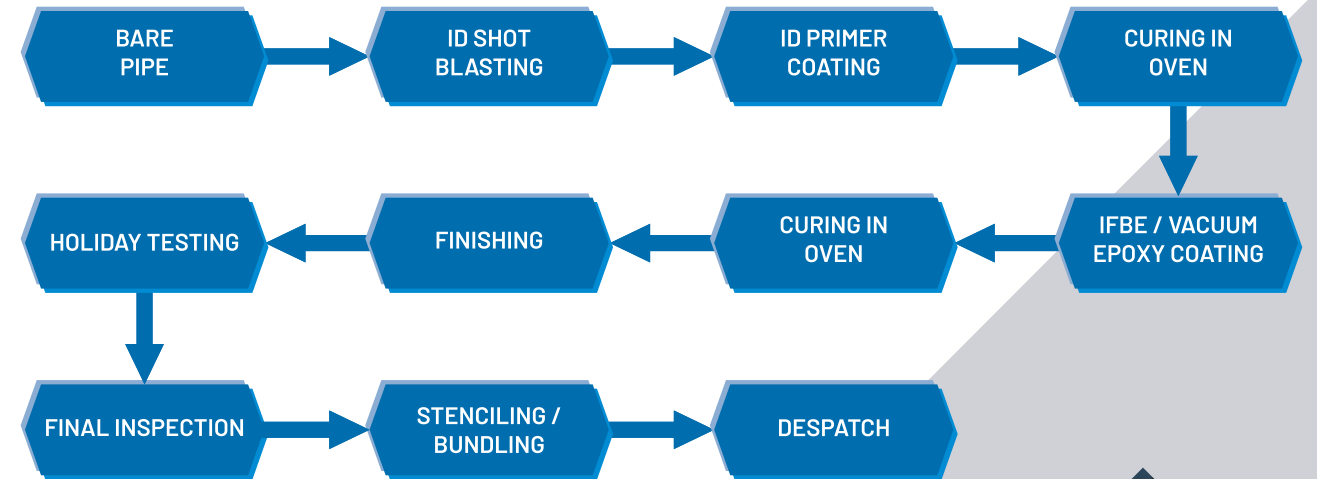


6. Anti-Corrosion Coating Process

The external coating 3LPE, 3LPP and FBE is a multilayer anti-corrosion coating comprising a high-performance fusion bonded epoxy (FBE) layer, followed by a copolymer adhesive and an outer layer of polyethylene. This coating ensures that our tubes are tough and durable, especially in sour conditions.



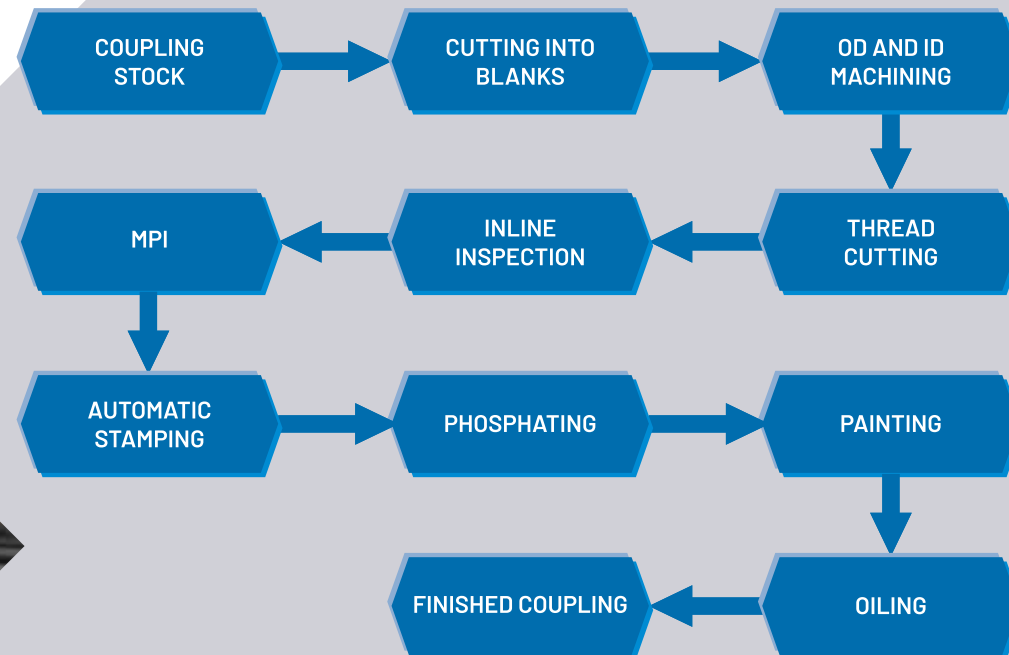
7. Internal Coating



8. Coupling Manufacturing Process

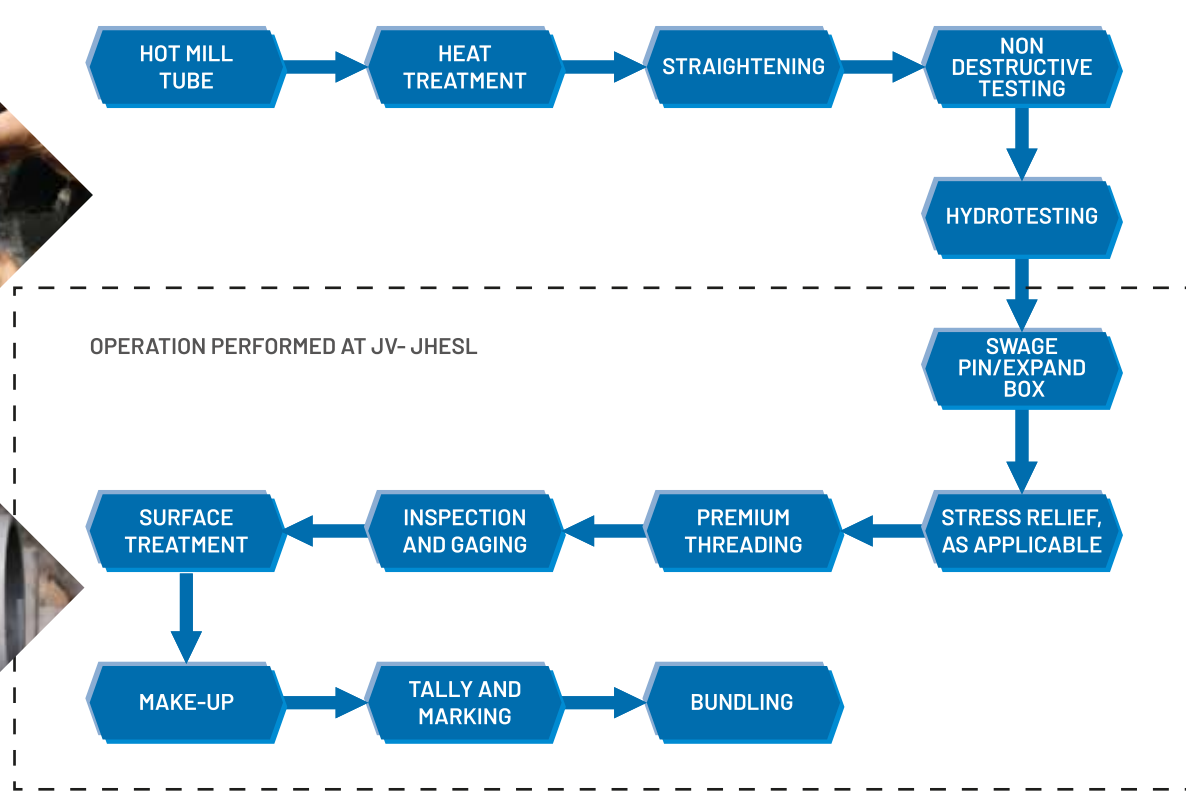
Tubes referred to as coupling stock are cut into blanks by Automated Band Saws. The blanks are transported to the CNC machines, where OD and ID machining and threads are cut to API thread specification with stringent tolerances and meticulous precision. The couplings are subjected to visual inspections under UV light for longitudinal and transverse flaws.

Subsequently, the couplings are phosphated with Manganese Phosphate layer which provides protection against corrosion and improves galling resistance. Finally, the couplings are colour-coded as per the specification and oiled on the inside surface.



9. OCTG Premium Connections Manufacturing Process

Premium connection OCTGs with cutting edge of tubular technology to cater to critical oil exploration operations. The proprietary designs having CAL-IV qualifications 100% tensile and compressive efficiency delivers gas-tight, pipe-strength joints for deepwater or sour wells. Premium connection manufacturing includes pipe body manufacturing in compliance with API specifications followed by OD verification and swagging/ expanding with stress relief (if required), premium thread cutting, gauging, surface treatment and make-up process.



QUALITY STANDARDS, CERTIFICATIONS AND ACCREDITATIONS

Commitment to Customers, Flexibility in Manufacturing and Total Quality Management are principles that have enabled Jindal SAW Ltd. to deliver value to our customers. Stringent system-based quality control is implemented at each stage of production. Our service standards focus on customer requirements and we strive for the highest user satisfaction.

- ISO 9001-2015, ISO 14001-2015, ISO 45001:2018 Certification
- API 5L, 5CT and 5DP Certification
- PED and AD 2000-Merkblatt 2000 W0 Certification
- CPR Certification
- Well known Tube / Pipe Manufacturer under Indian Boiler Regulation
- NABL certified Testing Laboratory as per ISO/IEC 17025:2017
- Committed to deliver quality assurance at par with stringent International standards, both in terms of product quality as well as customer service

CUSTOMER PROFILE

DOMESTIC MARKET

UPSTREAM-OCTG	DOWNSTREAM REFINERY/ PETROCHEMICAL/ LINE PIPE	AUTOMOBILE, AUTO ANCILLARIES, BEARING, HYDRAULIC CYLINDER, CNG CYLINDER	POWER & PROCESSING BOILER & HE, FOOD PROCESSING, PHARMA	TRADERS/ GENERAL ENGINEERING
ONGC	EIL	TATA MOTORS LTD.	BHEL	TUBES INDIA
OIL INDIA	IOCL	BAJAJ LTD.	ISGEC	MANHAR TRADING
CAIRN VEDANTA	L & T - HYDRO CARBON	SUNDRAM FASTENERS LTD.	CHEEMA BOILERS	DUGAR TUBES
RELIANCE INDUSTRIES LTD.	BPCL	WHEELS INDIA	L & T HEAVY ENGINEERING	MOKSHI INDUSTRY
	HPCL - MITTAL	WIPRO	L & T - MHI	SHIB DASS
	MRPL	MAHINDRA & MAHINDRA LTD.	TATA PROJECTS	DRILLTEC METAL TUBES
	CPCL	INTERPUMP HYDRAULICS	TEMA INDIA LTD.	RASI TRADERS
	TECHNIP	SKF INDIA LTD.	GODREJ	EVERGREEN SEAMLESS TUBES PVT. LTD.
	GAIL	SCHAEFFLER INDIA LTD.	THERMAX	
	RELIANCE INDUSTRIES LTD.	NATIONAL ENGINEERING INDUSTRIES LTD.		

OVERSEAS CUSTOMER APPROVALS

CUSTOMERS	
ADCO	MAADEN
ADNOC	Occidental (OXY)
Airproduct	PDO
Egas	Petrojet
EGPC (Public sector)	Qatar Petroleum (QP)
ENI	Samsung C&T
ENPPI	Shell
KNPC	South Oil Compant (SOC)
KOC	



KEY MANAGEMENT

The Management at Jindal SAW Ltd. continues to focus and dominate its leadership position in the entire range of the pipes and tubes market made out of iron and steel. We believe in a culture build up with open and fair communication, sense of belongingness for both employee and organisation, integration of individual and organization's goals and high level of integrity. CSR development activities continue to be a focus so that benefits percolate down to every strata of society that we inhabit.

MARKETING ORGANISATION

We are a customer-focused organisation and our endeavour is to meet every expectation of our customer by working on the philosophy of creating value-added products, providing end-to-end solutions, continuous innovation and delivering timely quality products.

CUSTOMER RELATIONSHIP MANAGEMENT

Our dedicated team of Customer Relationship Managers backed by Product/Industry specialists and supported by robust supply chain and commercial teams is relentlessly working towards creating the value.

STRATEGIC PARTNERSHIP

Jindal SAW Ltd. is having strategic partnership with Hunting Energy Services to manufacture Premium casing and Tubing with Hunting Seal Lock XD Cal-IV tested Premium connections to Cater to Indian and overseas Market.

Premium casing and Tubing in sizes 2.7/8" to 13.3/8" for carbon steel and 13 Cr grades for Oil and Gas sector are manufactured in Nashik unit in technical collaboration with Hunting Energy Services.

USP

- One of the Largest Pipe Manufacturing Companies: A strong international presence
- Established track record and necessary accreditations
- State-of-the-art manufacturing facilities and testing equipment. Technologically at par with the best mills, internationally.
- Billets sourced from group companies: Advantage of assured delivery as well as high quality due to Vacuum Degassing facilities available at Billet manufacturing Mill
- Skilled and experienced manpower
- Long term relationships forged with leading world class customers





JINDAL SAW LTD.
TOTAL PIPE SOLUTIONS

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