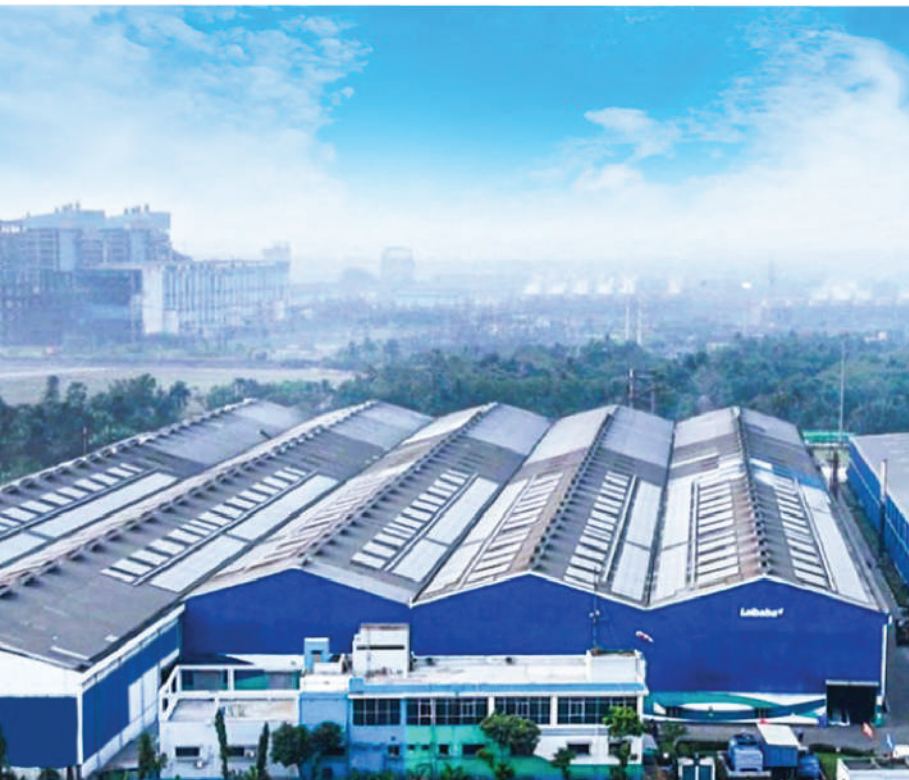


**SEAMLESS
SOLUTIONS
DELIVERED**



ABOUT LALBABA ENGINEERING LIMITED

Lalbaba Engineering Limited is one of India's leading engineering and manufacturing enterprises, with operations built around three integrated verticals Tubular Solutions, Forging Solutions, and Railway Systems. Each vertical serves distinct market needs while strengthening the others through shared expertise, advanced infrastructure, and a unified focus on performance-critical engineering. As one of India's few private players offering end-to-end solutions from tube and forging manufacture to component assembly, systems integration, and on-site execution, we deliver precision and reliability across industries. Our footprint spans four manufacturing facilities in Haldia, Uluberia, Ghosuri (West Bengal) and Pune (Maharashtra), along with a joint venture facility with Poppe + Potthoff (IDPT) at Badli, Haryana. Together, these facilities house advanced capabilities in Cold Finished Tube manufacturing, precision forging, component assembly, and integrated rail systems, including a cold finished seamless tube plant with an installed capacity of 85,000 Metric Tonnes per annum.

OUR VERTICALLY INTEGRATED BUSINESS SOLUTIONS:

▣ TUBULAR SOLUTIONS

The tubular solutions vertical forms the technological core of our business. We design and manufacture cold-finished seamless tubes in carbon, alloy, and stainless-steel grades, catering to diverse high-performance industry applications such as automotive, railways, energy, and infrastructure & industry.

▣ FORGING SOLUTIONS

Our forging division delivers precision-engineered components built for high-load, fatigue-resistant applications demanding consistent performance. We've been pivotal in transforming RDSO-approved cast railway parts into forged equivalents, enhancing reliability, accuracy, and lifecycle strength.

▣ RAILWAY SYSTEMS & COMPONENTS

Our Railway Systems vertical showcases the strength of our integration capabilities. We manufacture critical assemblies including bogies and brake systems, and have expanded into turnkey modernisation programs through our innovative Rail Solutions-as-a-Service model.

OUR CLIENTS



GLOBAL CLIENTS



LALBABA'S TUBING SOLUTIONS

We are the largest manufacturer of Cold Finished Seamless tubes and pipes in India with an installed annual production capacity of 85,000 Metric Tonnes per Annum (MTPA). Our tubing solutions are characterized by high dimensional accuracy, smooth surface finish, superior mechanical properties and suitability for secondary forming. We manufacture a wide range of: (i) carbon and alloy seamless tubes and (ii) stainless steel seamless tubes through our tubing solutions vertical.

KEY PRODUCTS FOR DIVERSE INDUSTRY SOLUTIONS:

■ AUTOMOTIVE

These tubes are engineered for fatigue resistance, weldability, and dimensional precision, our products ensure reliability across every segment of the automotive industry – from mobility to heavy-duty transport.



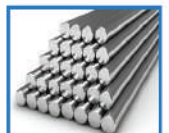
■ RAILWAYS

Built for precision and durability, our tubes support safety-critical railway applications powering reliable performance across rolling stock and fleet operations.



■ ENERGY

Our tubes find key applications in economizers, superheaters, reheaters, condensers, and feedwater heaters, serving a wide range of industries including refineries, fertilizer plants, petrochemical complexes, and power generation facilities. Designed to withstand high pressures and temperatures, these products have demonstrated proven reliability in critical process industry applications. We are also an ADNOC, KOC, and KNPC-approved and trusted boiler tube supplier across Gulf countries, further underscoring our global credibility.



■ INDUSTRIAL AND INFRASTRUCTURE APPLICATIONS:

We manufacture a wide range of tubes for industrial and infrastructure applications, where strength, machinability, and wear resistance are critical.

APPLICATIONS AND SPECIFICATIONS



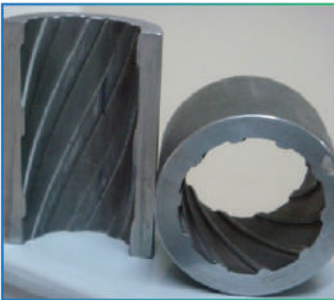
HEAT EXCHANGER/ DRYER TUBES & PIPES

ASTM : A-179,
A-192, A-334, A-213
EN : 10216
P235TR2



BOILER TUBES

ASTM : 213, 192, 210, 209
DIN : 17175, ST.35.8/45.8
BS : 3059-i & 3059-ii



RIFLE TUBE

ASTM : 210GRA1/C
8 RIBS/10 RIBS



MING DRILL ROD BAR & CASING PIPES

SAE : 1040, 1541, 4130
Conventional : AW - PW
Wire Line : AQ- PQ



HYDRAULIC CYLINDER TUBE

ASTM : A-519ST.52
DIN : 2391
EN : 10305-1, 10305-4
SAE : 1026, 1524



PRECISION TUBES

DIN : 2391, 17175
EN : 10305-1, 10305-4
SAE : 1524



MECHANICAL TUBING

ASTM : A-519, A-500
SAE : 1010, 1015, 1018,
1020, 1045



BEARING

SAE : 52100, SCM415,
100CR6, SUJ2, SUJ3



HYDRAULIC LINE PIPE

ASTM : A-106, A-333
IS : 1239
EN : 10210



AIR BRAKE PIPES

ASTM : A-106, A-312, A-269
DIN : 17456
IS : 1239-1, 1161
SAE : 1018

U TUBES



In addition to the production of Straight Stainless-Steel Tubes, Lalbaba also manufactures 'U' Tubes for use in heat exchanger, condensers, pre-heaters & various other equipment.

The manufacturing of 'U' Tubes takes place in a separate shop adjacent to the tube mill. This is done by utilizing Mandrel inserted bending equipment that is used exclusively for Carbon, Alloy & Stainless tube, ensuring Wall thinning & ovality of bend portion as per the drawings & specifications given by our customers. Furthermore, the U Bend portion of the U-Tube is Stress Relieved by resistance heating. To avoid oxidation in ID, argon gas is passed inside according to the required flow rate.

RIFLED TUBES

Rifled tubes are used in boilers to provide highly energy-efficient means of heat transfer. Rifled tubes are distinguished by their internal spiral grooves or rifling, which induce centrifugal forces within the mass flow. Our state-of-the-art manufacturing technique ensure high dimensional accuracy of rifled tubes, developed through experiments. We can manufacture industry-best 8 Ribs & 10 Ribs rifled tubes.



SPECIAL PRODUCTS



SHAPED TUBE

Lalbaba's R&D team has successfully developed the process to directly manufacture Rectangular & Hexagonal finished shapes with excellent surface finish to provide a cost-effective solution to end users. It also reduces the ultimate wastage of the steel raw material, contributing to reduction in carbon footprint.



SDA (SELF DRILL ANCHOR)

Lalbaba has a dedicated production system, where 'Self Drilling Anchor Bar' can be manufactured according to the customer's requirement. In this process, Seamless Tubes can be finished into the 'Self Drilling anchor bar', thus eliminating the requirement of one additional manufacturing process by the customer. Our SDA bar is available in steel grades 40CR, 41Cr, En8D manufactured in accordance with ISO 10208 Type R32 & R38.

Precision-engineered solutions for Boiler, Heat Exchanger & Line Pipes

Lalbaba is one of the leading manufacturers of Cold Drawn Seamless Tubes in India. We have an impressive installed output capacity of 72,000MT per annum. With an in-house NABL approved laboratory, we take pride in holding certifications such as ISO 9001, ISO 14001, ISO 45001, and IATF 16949. Additionally, we have approvals from IBR, BIS, EIL, PED, and RDSO,

Our specialized cold-drawn tubes and pipes find extensive applications across various industries, including Mining, Oil & Gas, Automobiles, Cranes, Hydraulics, Boilers, Heat Exchangers, Power Plants, Cooling Towers, Railways, Nuclear Power Stations, Chemicals, Petrochemicals, Refineries and many more.



BOILER TUBES

	Material Spec.	Size Range
Carbon Steel Boiler Tube	*ASME SA 210 Gr A1/C, SA 192 SA 209T1 BS 3059	31.8 – 88.9 mm
Alloy Steel	SA 213 Gr T5 T11 T12 T22 T91 AISI 602 EN 10216-2 16MO3	31.8 – 88.9 mm
Rifled Tube	BS 3059 ASME SA 210 Gr A1/C (8 RIBS/ 10 RIBS)	38.1 – 76.2 mm



Our supply can be made according to EN, DIN and BS Standard also.

Our Major Clients:



HEAT EXCHANGER TUBES / DRYER TUBES

Tube	MOC	Material Spec.
Heat Exchanger/ Dryer*	Carbon Steel 15.88 – 60.3	SA 179 SA 192 EN P235 TR-2
Heat Exchanger*	Alloy Steel 19.05 – 50.8	SA 213 T5 T11 T22
Heat Exchanger*	Low temperature Carbon steel	ASTM A334 Gr 1 GR 6

- Supply Heat Exchanger tubes for typical sour service condition in compliance to NACE MR0175 & NACE MR0103.
- HIC & Wet H₂S Service complied Heat Exchanger Tubes.
- Our supply can be made according to EN, DIN and BS Standard also.
- Supply of Dryer Tubes for Ethanol generation.



OUR MAJOR CLIENTS:



LINE PIPES

	Material Spec.	Size Range
Carbon	ASTM A 106 GR. A / B / C, ASTM A 334 Gr. 6, DIN 2391, EN 10210	21.3 mm OD to 114.3 mm OD
Alloy	ASTM A 335 Gr. P11 / P12 / P22	21.3 mm OD to 114.3 mm OD

- Our supply can be made according to EN, DIN and BS Standard also.

Our Major Clients:





What is the Exploration & its Purpose?

Mineral exploration involves drilling beneath the surface to uncover the geological secrets below. This process utilizes a combination of pressure and high-speed rotation to penetrate rock formations. As the drill delves deeper, new drill pipes are attached to extend its length, a procedure that's repeated until the desired depth is reached. A method known as exploration diamond drilling is employed in the

mining sector to investigate known ore deposits and prospective sites. This technique retrieves a slender core of rock, which geologists meticulously analyse. Through chemical assays and studies focused on petrology, structure, and mineralogy, these professionals can garner intricate details about the rock's type, mineral composition, and structural fabric.

Why Lalbaba as first Choice for Exploration drill rods?

At Lalbaba, we take pride in possessing one of the most advanced drill rod manufacturing setups in India, distinctly setting us apart from other mills. Our dedication to precision is evident as we offer an impressive straightness ratio of 1:3000, a benchmark that few can match. Staying ahead of the curve, we have invested in the latest and most efficient TIR setup in the country. While many abide by the BS4019 standards demanding 75% eccentricity, we go a step further, each of our tubes boasts less than 5% eccentricity. This reduced eccentricity translates to superior rod rotational functionality, ensuring optimal performance. Many of our valued customers consistently praise the aesthetic quality of our tube surfaces. We are pleased to present an extensive range that includes drill rods, casing tubes, and couplings of various sizes.



S.No	Item Description	OD(MM)	ID(mm)	Thickness(mm)
1	AQ ROD	44.58	34.95	4.82
2	BQ ROD	55.68	46.08	4.80
3	NQ ROD	69.98	60.20	4.89
4	HQ ROD	89.09	77.81	5.64
5	PQ ROD	101.41	102.98	6.54
6	BX Casing	73.16	64.95	4.11
7	BX Coupling	73.16	60.46	6.35
8	NX Casing	89.09	80.76	4.17
9	NX Coupling	89.09	76.39	6.35
10	RW Casing	36.57	30.36	3.11
11	EW Casing	46.15	38.30	3.92
12	AW Casing	57.28	48.55	4.37
13	BW Casing	73.16	60.46	6.35
14	NW Casing	89.09	76.25	6.42
15	HW Casing	114.49	100.2	7.15
16	NW L/H Rod	66.75	51.70	7.53
17	HQ Core Barrel	95.00	78.00	8.50
18	NQ Core Barel	75.00	60.50	7.25
19	NQ Oversize /Outer Tube	73.15	60.45	6.35
20	NQ Inner Tube	55.66	49.92	2.87
21	HQ Oversize / Outer tube	92.00	78.00	7.00
22	HQ Inner ROD	73.00	66.00	3.50
23	HX casing (Length 2950)	114.49	104.6	4.95

TESTING FACILITIES

We at Lalbaba Engineering Ltd. are committed to uphold our reputation for providing quality seamless tubes at a competitive price by incorporating the latest technology. Our In-house NABL-accredited testing laboratory is equipped with-



Spectrometer for Chemical Analysis



Brinell Hardness Tester



Universal Tensile Testing Machine



Hydro Tester



Impact Tester



Ultrasonic Tester



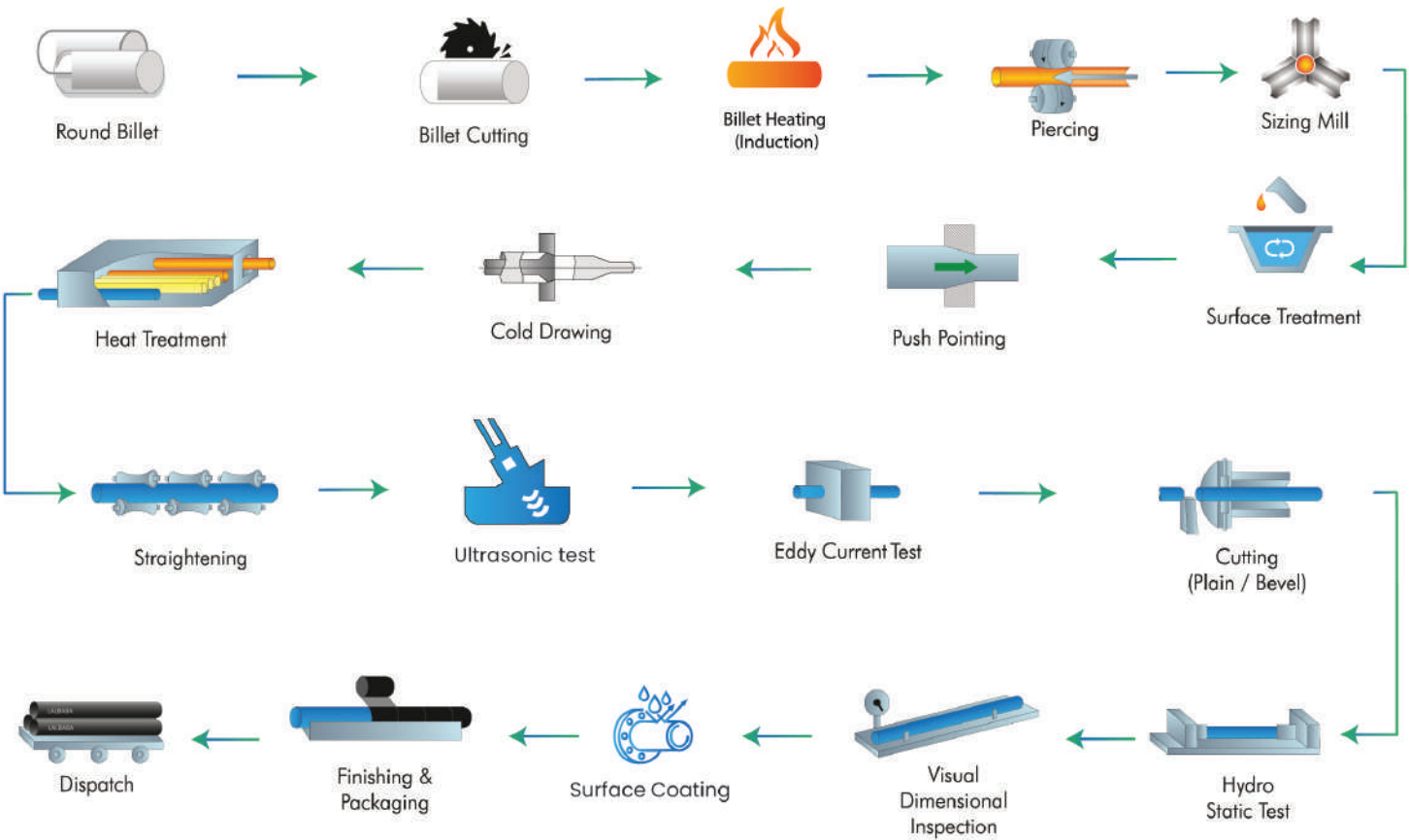
Eddy Current Tester

TESTING FACILITIES

Destructive Testing Facilities	Non-Destructive Facilities
Chemical Spectrometer	Positive Material Identification (PMI) Test
Tensile Test	Online Eddy Current Test
Hardness Test (Rockwell/Brinell/Vickers)	Ultrasonic Test for Flaw Detection
Flattening Testing	Portable Ultrasonic Machine
Flaring Test	Surface Roughness
Flange Test	Microscope with photograph facility
Bend Test	Hydro Test Straight Tubes & Pipes & U Bend Tubes
Impact Test at Controlled Temperature	Die Penetrant Test
Microstructure Examination Test / Analysis	Magnetic Particle Testing

MANUFACTURING PROCESS

Process flow chart:



**TOTAL MANUFACTURING CAPACITY:
85,000 METRIC TON / ANNUM**

SIZE RANGE

CARBON AND ALLOY STEEL

CDS

OD : 8.0 – 114.3 mm
WT : 0.9 – 15.0 mm

STAINLESS STEEL

CDS

OD : 8.0 – 114.3 mm
WT : 0.9 – 15.0 mm

CERTIFICATIONS:



ISO 9001 : 2015



ISO 14001 : 2015



ISO 45001 : 2018



BIS LICENCE



EIL CERTIFICATE



IATF 16949



RDSO APPROVAL



PED CERTIFICATE



NABL CERTIFICATE



Well known
IBR



INFRASTRUCTURE

BARREL TYPE CROSS ROLL PIERCING PROCESS

This is a modified version of the Original Mannesmann's Cross Rolling Process and is implemented at Lalbaba's tubular division.



SIZING MILL

An addition to the Induction Heating Furnace, The Sizing mill is installed to get better and accurate dimension of a HFS product.

PILGER FACILITY

A cold-rolling process is used in the shaping of metal tubes and pipes. By pilgering process, we can achieve precise OD and wall thicknesses. The roughness value of the finished tube is usually less than any other drawn process.

Cold pilgering helps to achieve a good surface finish for stainless steel tubes. After pilgering of Stainless Steel tubes and pipe when followed by the solution annealing heat treatment process, it forms a uniform austenite microstructure.



COLD DRAW BENCH

We have achieved closer wall thickness and diameter tolerance, improved surface finish and enhanced serviceability, all while preventing premature failure. These advancements ensure greater suitability for critical forming applications, such as 180° bends and result in enhanced mechanical properties of the tube. Additionally, we have successfully expanded our product mix to include smaller outer diameters and thinner wall thicknesses.



BRIGHT ANNEALING FURNACE

This superior process eliminates the pickling cleaning process required to remove the scale from Heat Treated tubes. This also ensures that the tubes supplied by us are free from exposure to any acids or harmful chemicals thereby increasing the life of the tubes considerably. It increases the shelf life of the tubes and enhances aesthetics.

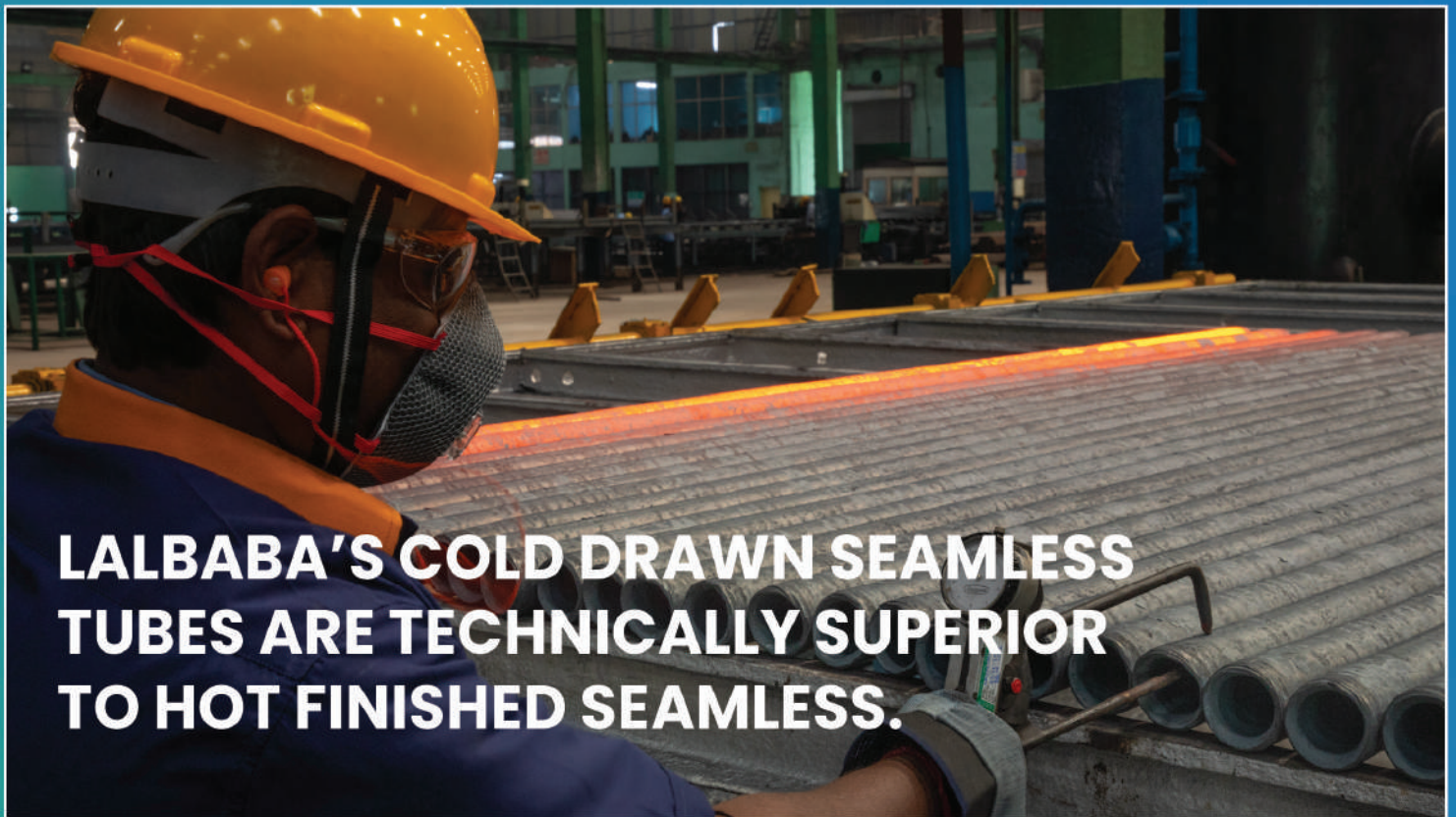


THE NEW FACILITY AT HALDIA

With the addition of a new manufacturing capacity at our Seamless Tubes Plant in Haldia, we have tried to overcome the conventional barriers of productivity & quality in carbon steel pipe manufacturing. This is a first-of-its-kind fully automated manufacturing facility which will allow Lalbaba's Tubular Division to double its capacity and achieve new standards in productivity and quality in the pipe-making industry of India.

The expansion has enhanced our annual production capacity to **85,000 METRIC TON** / Annum, making us one of the leading producers of Seamless Tubes in India.





LALBABA'S COLD DRAWN SEAMLESS TUBES ARE TECHNICALLY SUPERIOR TO HOT FINISHED SEAMLESS.



APPEARANCE

- Superior surface finish



TOLERANCE

- Higher Dimensional Accuracy
- Wall Thickness Uniformity



PROPERTIES

- Consistent and reliable mechanical properties
- High yield strength
- An ordered and consistent microstructure.
- Improved and consistent toughness
- Improved structural integrity and ductility
- Higher pressure integrity.



CORROSION

- Improved performance against corrosion.



APPLICATION

- Ability to be bent to tight radii without splitting, creasing or collapsing.
- Tight tolerances, resulting in reduced machine time.
- Enhanced machinability



NORTH AMERICA

Canada | Mexico
USA



SOUTH AMERICA:

Brazil



EUROPE

Belgium | Czech Republic | France
Germany | Italy | Poland | UK



MIDDLE EAST

Oman | Qatar
Turkey | UAE



ASIA

India | Bangladesh
China | Myanmar
Sri Lanka



AFRICA

Ghana | South Africa
Tanzania



AUSTRALIA

Australia



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