

Heavy Metal & Tubes: Indian qua

Heavy Metal & Tubes (India) Pvt. Ltd. excels in seamless carbon, alloy, and stainless steel tube manufacturing. Led by a forward-looking management team, including Mr. Sandeep Kumar Mathur, General Manager for Marketing, the company's vast product range spans from round bars to finished products. We explore the company's journey, production capabilities, and aspirations to make a substantial impact in the heat exchanger and boiler markets.



➤ Heavy Metal & Tubes (India) Pvt. Ltd. company headquarters in Gujarat.

By Ellie Pritchard, Heat Exchanger World

Working to a clear vision, Heavy Metal & Tubes invests in state-of-the-art technology and top-tier talent to consistently deliver high quality products exceeding customer expectations. Specialising in seamless carbon and alloy steel tubes/pipes, as well as stainless steel seamless and welded variants, the company's manufacturing journey begins with round bars. Offering tubes and pipes in both hot finish and cold finish conditions, HMT boasts a wide range of sizes in terms of outside diameter, wall thickness, and length. This capability positions it as a significant player in both the domestic market and overseas.

Brief history

"Heavy Metal & Tubes is a company with a considerable history and reputation," begins Mr. Sandeep Kumar Mathur. Founded in 1978, it can be considered one of the pioneers of cold drawn tube manufacturing in India for carbon steel and alloy steel. Nearly a decade later in 1991, after having firmly established as a reliable producer, Heavy Metal & Tubes "HMT" invested in two new manufacturing facilities at Chhatral in Gujarat, fully dedicated to the manufacture of seamless carbon and alloy steel tubes and stainless steel seamless and welded tubes. These investments helped the company to not only be fully geared to meet the exponential growth in demand post the liberalization of the Indian economy in 1991 but also garner a significant share of the ever-growing Indian market. Certainly one of the factors leading to the company's resounding success and helping it to differentiate itself from

the competition has been its ability to produce so many varieties of tubes and pipes in different grades, thicknesses, sizes, and lengths under one brand. "No one else does what we are doing in India," says Mr. Mathur. "Hence we tag ourselves as a perfect blend of Quality and Integrity."

Powering progress

In recent developments, Heavy Metal and Tubes has achieved a significant milestone with the successful manufacturing of arbor coil bends. These bends, made from ASTM A335 P9 grade steel, boast impressive specifications including a size of 101.4 mm OD x 5.74 mm WT and a bend diameter of 3000mm (with a radius of 1500mm). These arbor coil bends have been produced for a state-owned refinery.

Adding to the company's advancements, Heavy Metal has taken a stride towards enhancing product quality with the commissioning of a new state-of-the-art controlled atmosphere bright annealing furnace. This investment enables the supply of even higher quality products without the necessity of acid treatment, ensuring better mechanical properties and surface finishes. With precise temperature control, inert gas atmosphere regulation, and efficient cooling, this furnace is able to meet the stringent demands of environments such as refineries, petrochemical facilities, power plants, and more.

Heavy Metal is poised to further strengthen its technological capabilities by introducing cutting-edge machinery for seamless tube production by November 2023. This initiative includes the integration of a state-

lity, global success



of-the-art piercer machine and the expansion of its pilger machine fleet to 30 units for the Stainless Steel Division.



➤ Heavy Metal has successfully manufactured arbor coil bends for the first time in India.



➤ The company's new state-of-the-art heat treatment furnace

Accompanying these advancements is the incorporation of a heavy-duty draw bench for seamless carbon and alloy steel tubes with heavy wall thickness. This collective effort not only underscores Heavy Metal's commitment to excellence and innovation but also positions the company to efficiently cater to industry demands without compromising on quality. Through these measured steps, Heavy Metal is well-positioned to continue its journey as a frontrunner in the industry, providing reliable and high-quality solutions for a range of applications.

Focus on the heat exchanger & boiler market

Heavy Metal & Tubes seamless and welded tubes are largely used in shell & tube heat exchangers, but also find use in air-fin coolers, boilers, condensers, etc. Not

Milestones

Mr. Mathur stresses that Heavy Metal & Tubes were able to supply T-9/91 grade Alloy Steel Tubes & Pipes in recent past. Several orders were executed to domestic & overseas customers/projects, few of them are listed below.

- 1300 M Ton supplied to BHEL for Yadadri power plant.
- 25 M ton supplied tubes to Nayara Energy. Repeat order also received.
- 50 M ton supplied to HE Fabricator in UAE for Emirates Steel, Dubai project.
- 10 M ton supplied to Sugar Mill in India in 2 weeks' time.
- 26 M ton supplied to Petrobras, Brazil through local supplier.



❖ One of the factors that differentiates it from the competition is Heavy Metal & Tubes' ability to produce so many tubes and pipes in different grades, thicknesses, sizes, and lengths in the highest qualities.

surprisingly, the selection of tubes play a significant role in such equipment as they are used in such vital industrial segments as oil & gas, refineries, chemical & petrochemical, pharmaceutical, power plant, sugar, and fertilizer plants around the world.

The company is also capable of producing tubing up to 34 meters long, which is a significant factor that differentiates it from competition. Very few companies can do this in India. In addition to the above segments, Heavy Metal & Tubes also supplies tubes for the automobile industry, locomotives, defence sector, hydraulic and pneumatic systems, instrumentation and many more.

Quality assurance

"As is known," says Mr. Mathur "we have been specialised in the manufacture of heat exchanger & boiler tubing for several years now. As these tubes play a very critical part and are at the heart of heat exchangers / boilers for heat transfer operations, it is not surprising that such tubes have to pass through a series of very stringent quality checks during the entire production process."



Heavy Metal & Tubes recent achievements:

- 20 M ton of CS boiler tubes produced from round bars to finished tubes in 4 days' time for HMEL.
- Executed Alloy Steel tubes order @ 75 M ton for Heat Exchanger for PEMEX Refinery.
- Executed @ 500 M ton of SS tubes order required for 56 nos Heat Exchangers for PEMEX Refinery.
- Executed @ 135 M ton of CS St. & "U" Tubes for 53 nos Heat Exchangers for Qatar Petroleum Project.
- Executed @ 75 M ton of CS Boiler Tubes to OEM in Columbia in 21 days.
- Supplied HP Heater Tubes to BHEL, TOSHIBA & L and T with tubes are hydro tested above @600 kg pressure.



❖ The accuracy of the U-bend in tubes is ensured by precisely prepared jigs and fixtures.

Building a pathway towards success therefore necessitates that Heavy Metal & Tubes places great emphasis on the quality aspects of its work. It has therefore attained ISO 9001:2015 and PED accreditation. Moreover, the company has implemented a quality assurance system that covers all production stages from raw materials, cold working, and heat treatment, right through to packing and dispatch. All components of this system correspond to the requirements of national and international codes, as well as, where needed, to individual customer's quality and technical requirements.

The company's quality control department works independently of the manufacturing shop. Quality is further guaranteed by a wide range of testing facilities, as per code requirement, mandatory & supplementary test including: air-under-water, eddy current, flaring, flattening, hardness, hydro, reverse bend, tensile, ultrasonic, as well as laboratory tests with spectrometers, metallurgical investigations by metallurgical microscope and to determine grain size, corrosion, and microstructure. Both the plants have their own separate laboratory set-up with testing equipment. All tubes undergo hydro testing. Testing is carried out by trained, qualified personnel in compliance with the company's strict 'Quality Assurance Manual'. The tests help to safeguard that the highest quality manufacturing standards can be maintained according to the intended application, technical delivery conditions and customer's specifications. In addition, the production sites have also been equipped with reliable testing and measuring equipment for destructive and non-destructive testing such as Inter-granular corrosion testing, Eddy Current testing & Ultrasonic testing.



❖ Staff feel involved, challenged, and proud of the company's success and the company has the advantage of having a great deal of skill and experience to fall back on in-house.

Product range

Hot and Cold Finished Carbon & Alloy tubes and pipes:

Tube grades produced in carbon steel include:

ASTM A-106 Gr. A/B/C, A-179, A-192, A-210 Gr. A1/C, A-334 Gr.1/3/6, A-556 Gr. A2/B2/C2, ST 52, 4130, 4140, 6620, 8630 and their equivalents in ASME, DIN, EN, GOST, JIS, BS, etc.

Alloy steel grades produced include:

ASTM A209 T1, A-213 Gr. T2/T5/T9/T11/T12/T22/T91, A-335 Gr. P1/P2/P5/P9/P11/P12/P22/P91 and their equivalents in ASME, DIN, EN, GOST, BS, etc...

Manufacturing size range:

- OD: 4 mm to 220 mm
- Thickness 0.5 to 25 mm

Stainless steel seamless and welded tubes and pipes:

In stainless steel the range includes:

ASTM A-249/268/269/213/312/554/688

Grades TP304, 304L, 304H, 304LN, 310, 310H, 316, 316L, 316H, 316Ti, 316N, 316LN, 317, 317L, 321, 321H, 347, 347H, 405, 410,

Duplex 31803/32205, Super Duplex 32750/32760 and their equivalents in ASME, DIN, EN, GOST, JIS, etc.

Manufacturing size range:

- OD: 4 mm to 220 mm
- Thickness 0.5 to 25 mm

Max up to 34mtrs long tubes can be produced in all grades.

Products are also produced to the specific requirements of individual clients.

It goes without saying that the mill and its products has been approved by significant inspection agencies including: ABS, Bureau Veritas, DNV, EIL, IBR, LRIS, Intertek, PDIL, SGS, and TÜV, among numerable others. Additionally, the company is approved by a large number of major customers and end users to whom it regularly supplies products such as PEMEX, QP, SABIC, BHGE, Alfa Laval, BHEL, BPCL, CPCL, FACT, HPCL, IOCL, KFL, L&T, NFL, NPCIL, NTPC, TECHNIP, Reliance, SAIL, and many others.

Quality staffing

"Another factor that particularly stands out in our company is the high standard of technical competence of our staff," says Mr. Mathur. "They are not only knowledgeable and skilled, having relevant technical degrees where appropriate, but are also loyal and committed. Some of our employees have worked with us for anything from fifteen to thirty years. It says a lot about the culture that we have been able to hold on to



Special shape critical U-tubes of T11 grade (88.9 mm x 4 mm) WT x 15 meters in length.



Specialization in heat exchanger & boiler tubes.

them and this ensures that we have a great deal of skill and experience in-house to fall back on. Certainly at a time when many companies find it difficult to fill technical vacancies, we do not experience this type of trouble. Young engineers clammer to join us and build their careers under our guidance. They feel involved and challenged in contributing to our success and we likewise take a great interest in helping them shape their careers."

Management is equally concerned for all employee's health & safety along with environment hence been accredited with certification ISO 14001: 2015 and OHSAS 18001: 2007 & 45001.

HMT global presence

Roughly 60% of the Heavy Metal & Tubes products are sold within India. The remaining 40% is exported around the world. Today the company's products reach as far as the Americas - Argentina, Canada, Brazil, Chile, Mexico, USA - and Europe - Belgium, France, Germany, Greece, Italy, the Netherlands, Spain, Turkey, and the United Kingdom, whilst in the Middle East their products are exported to Bahrain, Kuwait, Oman, Saudi Arabia, Qatar, UAE. In addition, they also have clients in South Korea, Japan, Singapore, Australia and several other countries. "The quality and services that we provide are very much appreciated by our clients," says Mr. Mathur "as is seen by the large numbers of repeat orders we receive on a regular basis."

With regards to the tubing market for heat exchangers, Heavy Metal & Tubes tend to concentrate its sales to four major regions of the world: India, South Korea in Asia, Italy in Europe, and North America, though manufacturers of heat exchanger equipment in the former Eastern Block countries of Europe and Russia as well as the Gulf nations are also equally important. Certainly not much has changed in the past ten years with regards to this market situation.

Strategy for the future

Heavy Metal & Tubes understands that enlarging a product range is a simple way to grow and better serve a customer base. The company is now entering the fittings and flanges market and very shortly will define the entire product range. "Our strategy for the future will be to continue to service the domestic and global markets to the highest possible quality standards with fully Indian origin material right from basic raw materials," says Mr. Mathur. "As such, we expect our business to continue to expand as the demand for tubes and pipes in demanding applications continues to grow. In particular, we intend to concentrate increasingly on serving the manufacturers of heat exchangers / boilers. To this effect we have expanded our marketing team to aggressively cover this market. We intend to be there for our customers to ensure that their future is also a great success." ■

Contact Heavy Metal & Tubes at:

Email: info@hmtl.in

Mobile No. : +91 90165 49266

Webpage: www.hmtl.in