



KESHREE TMT[®]



COMMITTED TO STRENGTH







A DRIVING LEGACY

Keshree Metalurgies Private Limited is a part of the Kishore Group of companies, whose legacy dates back up to four decades. Pioneering in the sectors of consumer goods like detergents and toiletries with the flagship brand "ETA", Kishore group of companies further diversified in steel making and construction.

We are one of the premier producers of quality steel in India. The company had its modest beginning in 1989 with a production capacity of 10,000 TPA of crude steel. Over the last two decades we have been constantly upgrading its capacity and has now reached a capacity of more than 100,000 TPA of rolled steel.

Inspired by the strength of a lion, we aim to provide top quality reinforcement bar to empower every home with pure strength. We firmly believe in benchmark product quality, customer centric approach, people focus, ethical business practices and good corporate citizenship.

India has seen a massive growth in the construction sector, fuelling the need for reinforced bars. With a vision to excel and innovate, We are committed to provide world class quality and serve the needs of emerging India.



SUPERIOR, RICHER & PUREST

SUPERIOR STRENGTH

The Finest Steel has to go through the Hottest Fire. Keshree Metallurgies Private Limited takes pride in its 550D TMT bars, a TMT bar with high yield and tensile strength. A unique steel making and cooling process makes them safer and more ductile.

RICH CHEMISTRY

Our TMT steel has low levels of Sulphur and Phosphorus as they lower the toughness of the steel. Our state of the art technology uses Induction furnace that ensures there is no compromise on the quality of steel.

High UTS and YS ratio and more percentage elongation signify that the steel is capable to strain harder, in the event of an earthquake.

PURE STEEL

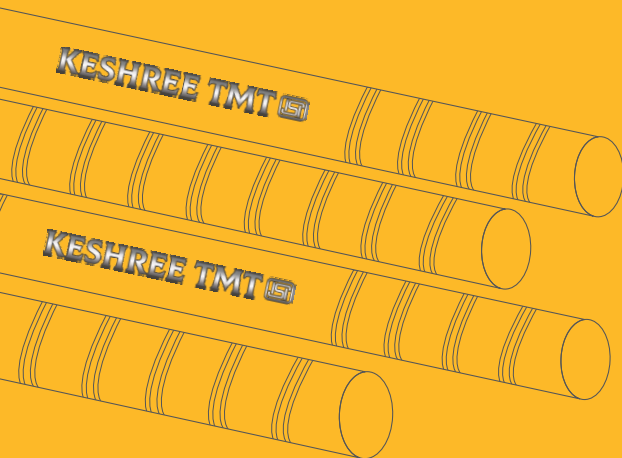
Due to the highly controlled process that ensures a microstructure with a soft Core, Keshree TMT Bars have excellent bendability, despite their strength, facilitating easy bending, making work easier and faster at the construction site.

The superior welding is done using the preheating method which reduces wastage. The low carbon equivalent means that the welding is easier yet stronger

TECHNOLOGY

By implementing the state of art German technology being used globally to manufacture high quality TMT bars, Keshree Metalurgies Private Limited. produces steel of higher strength, ductility, weldability, bonding and bendability, with the additional advantage of being anti-corrosive, earthquake & heat resistant.

The rolling mill at Keshree Metalurgies Private Limited. is equipped with automatic machinery for even spaced and precise depth rib cutting. It is capable of cutting ribs at any angle or even enlarging ribs. The uniformity and precision of ribs causes the anchorage between steel and concrete to be much stronger. The load distribution will be uniform across the entire length of TMT bar, thus making the structure stronger.





MANUFACTURING PROCESS

At Keshree Metalurgies Private Limited., we use a 3 step process for manufacturing the best quality steel bars.

Step-1 Iron Sourcing

At Keshree, the billets are made through Induction Furnace & DRI route. Iron sourcing is done from the manufacturers of best quality gas based sponge iron which ensures best quality finished product.

Step-2 Steel Making

State-of-the-art steel making technology using Induction Furnace, Direct-Reduced Iron, Continuous Casting Machine route producing clean steel billet, with very low levels of sulphur and phosphorus and very low levels of inclusion and tramp elements.

Step-2 Steel Rolling

The Rolling Mill at the manufacturing facility uses state of the art technology to produce TMT of consistently high quality monitored with stringent testing and quality control.

Quenching:

A hot rolled bar leaves the final mill stand and is instantaneously quenched using a specially designed water cooling system which renders the outer surface of the bars cold while retaining the heat within the core. This is done to harden the surface while the core still remains hot and soft.

Self-tempering:

After leaving the quenching box, the core continues to supply heat to the surface since it is relatively at a higher temperature. This causes the tempering of the outer martensitic layer into a structure called Tempered Martensite. The core stays austenitic at this stage also.

Atmospheric cooling:

There are special cooling beds where the austenitic core gets transformed into a ductile ferrite-pearlite structure. Keshree TMT 550D Steel bars, thus is a perfect combination of a strong outside layer (tempered martensite) with a ductile core [ferrite and pearlite).



WHY KESHREE TMT?

Stronger

Keshree's 550D TMT is much stronger than yesteryears' conventional Bars and give upto 20% stronger concrete structure with same quantity of steel. The raw materials used are of superior quality, which results in enhanced quality of steel.

Weldability

Keshree's TMT Steel with low carbon equivalent content can be used for weld joints without reduction in strength at the weld joints.

Corrosion Resistant

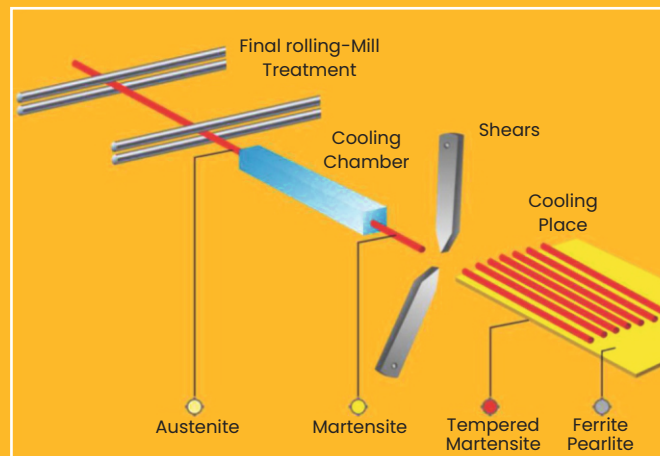
TMT Bars by Keshree TMT provides very good corrosion resistance due to it's controlled chemistry of raw material inputs, which provides a longer life concrete structure.

Fatigue Resistant

The unique feature of Keshree TMT Bar is its high Fatigue Resistance on dynamic loading on account of the high strength of the surface layer.

Elongation

More strength with higher elongation is one of the unique features of Keshree TMT Bars. It makes a concrete structure not only sound but safe also from earthquake related natural calamities.



MECHANICAL PROPERTIES OF TMT BAR AS PER IS 1786:2008

Grade	Fe-550	Keshree Fe-550	Keshree Fe-550D
Yield Stress (N/mm ²)	>550	>570	>550
Tensile Strength (N/mm ²)	>585	>640	>600
Elongation %	>10%	>16%	>14.5%

SAVINGS IN WEIGHT AND COST OF CONSTRUCTION BY KESHREE TMT FE-550 BARS

Grade	Keshree TMT Fe-550	Keshree TMT Fe-550D
Design Strength	550 N/mm ²	550D N/mm ²
Quantity Required	0.754 mt	0.754 mt
% of saving in weight	upto 24.60%	upto 24.60%

CHEMICAL PROPERTIES OF TMT BAR AS PER IS 1786:2008

Grade	Fe-550	Keshree Fe-550	Keshree Fe-550D
Carbon %	<0.30%	<0.25%	<0.25%
Sulphar %	<0.055%	<0.050%	<0.040%
Phosphorus	<0.050%	<0.050%	<0.040%
Sulphar + Phosphorus %	<0.100%	<0.100%	<0.075%
Carbon Equivalent %	<0.42%	<0.40%	<0.40%

WEIGHT TOLERANCE IN NOMINAL SIZE

Size	Standard wt.Kg./mtr. as per IS 1786:2008	Wt. Tolerance Kg/mtr. as per IS 1786:2008		Wt. Tolerance Kg/mtr. as per Keshree Fe-550D	
8MM	0.395	0.367-0.423	±7%	0.383-0.407	±7%
10MM	0.617	0.574-0.660	±7%	0.598-0.636	±3%
12MM	0.888	0.844-0.932	±5%	0.861-0.915	±3%
16MM	1.580	1.501-1.659	±5%	1.533-1.627	±3%
20MM	2.468	2.394-2.542	±3%	2.443-2.493	±1%
25MM	3.856	3.740-3.972	±3%	3.817-3.895	±1%
32MM	6.318	6.128-6.507	±3%	6.254-6.381	±1%

MANDREL DIAMETER FOR BEND TEST

Grade	Fe-550	Keshree Fe-550D
Up to and including 20mm	5D	4D
Over 20mm	6D	5D

MANDREL DIAMETER FOR RE-BEND TEST

Grade	Fe-550	Keshree Fe-550D
Up to and including 10mm	7D	6D
Over 10mm	8D	7D

Note: where "D" is the nominal size of the test piece in MM



OUR CLIENTS



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