

☀️ *The right beginning is a blessing* 🌿



MEENAKSHI 550D TMT

MEENAKSHI 550D TMT

 **MEENAKSHI**<sup>®</sup>  
**TMT**





# For Blessed Beginnings



Meenakshi TMT is a reputed manufacturing company that spans decades of craftsmanship and knowledge in producing the most premium, reliable, high quality steel construction materials, especially in the form of structural steel and TMT bars. TMT bars support the very foundation of every home and building which we believe makes it one of the most essential components of a construction.

Meenakshi TMT bars are acclaimed for their affinity towards superior bonding with concrete, that ensures that the building is stronger and will last longer. They are durable, ductile, strong, reliable and seismic and corrosion resistant.

With Meenakshi TMT bars, we can assure you that your construction will result in

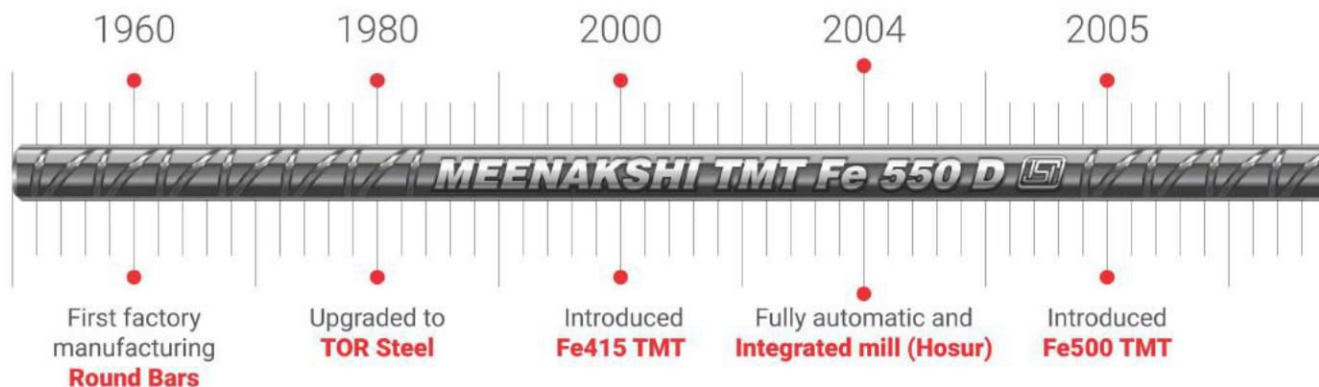


**→ Strong Bonds, Stronger Buildings. ←**



# A Blessed Heritage

With 3 generations of torch-bearers having 50+ years of experience in the business, the Meenakshi family has played an important part in the steel industry, where we play a crucial role in shaping the infrastructural growth and development of India. In tune with the dynamic industry, we have been learning, adapting, and pioneering change. It is our penchant to manufacture best-in-class TMT bars that lend stability to any building for years to come.



**1,00,000 TONNES**  
STEEL MANUFACTURED  
P.M



OPERATING  
**9 FACTORIES**



EMPLOYING  
**2000+ PEOPLE**

# 50 years of experience & innovation



PRESENCE IN  
**6 STATES**



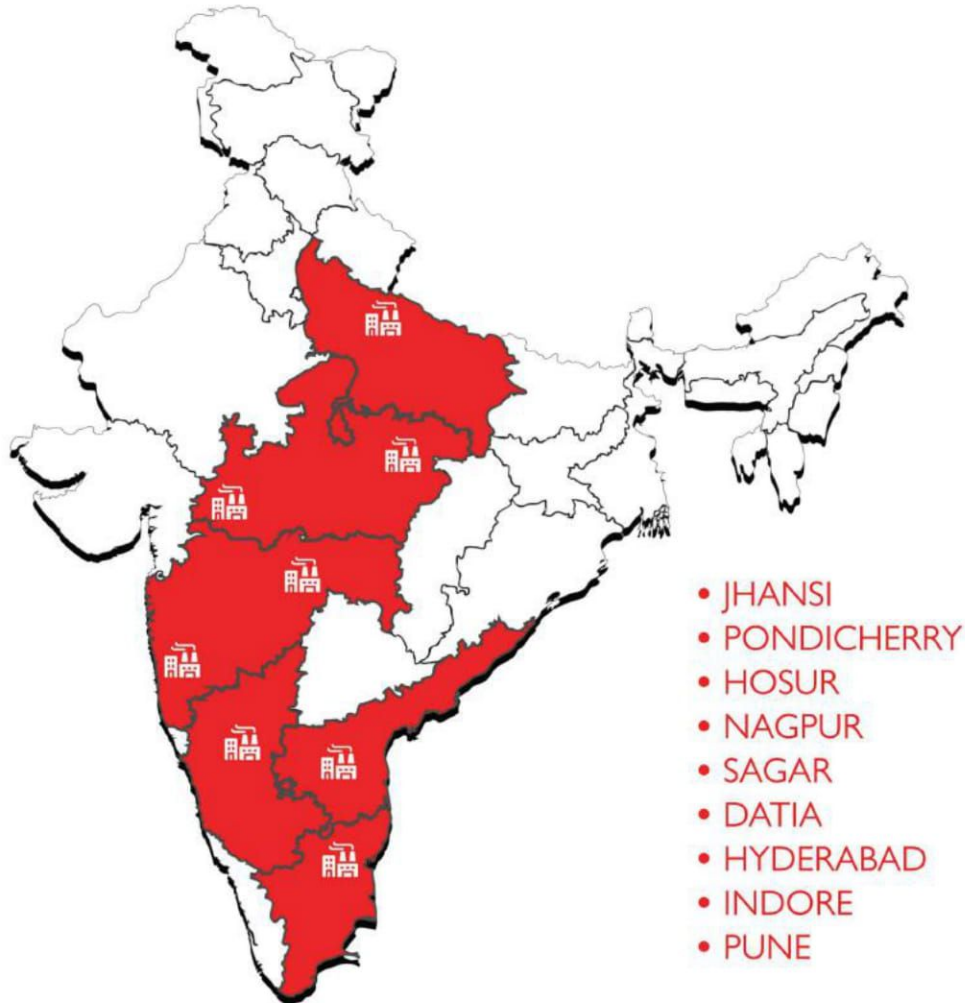
**LIGHTER WEIGHT**  
BUNDLES



**CLEAN ENERGY**  
COMPLIANT

# Our Factories Pan India

The Meenakshi Group now has its presence all over India covering over 6 states in different strategic locations. It has been serving the industrialists and construction companies across India with excellent quality TMT bars and Structural steel. It's factories are located in Hosur, Pondicherry, Sagar, Datia, Jhansi, Hyderabad and Pune to cater to all your Pan India requirements.







**MEENAKSHI FE 550D TMT** 



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# ***Strong Bonds, Stronger Buildings***



## **Z Rib Technology**

### **Innovation to secure your dreams.**

To make sure that every Meenakshi TMT bar offers unmatched bonding with concrete, we developed the revolutionary new Z Ribs Technology that is proven to give long-lasting strength to all construction projects. The unique Z pattern provides ultimate structural bonding, making it the perfect TMT bar for residential, commercial and industrial scale projects.



- **Z+ Bonding**
- **Z+ Quality**
- **Z+ Strength**



FERRITE PEARLITE  
CORE

TEMPERED  
MARTENSITE



# Earthquake Resistant : Ductility

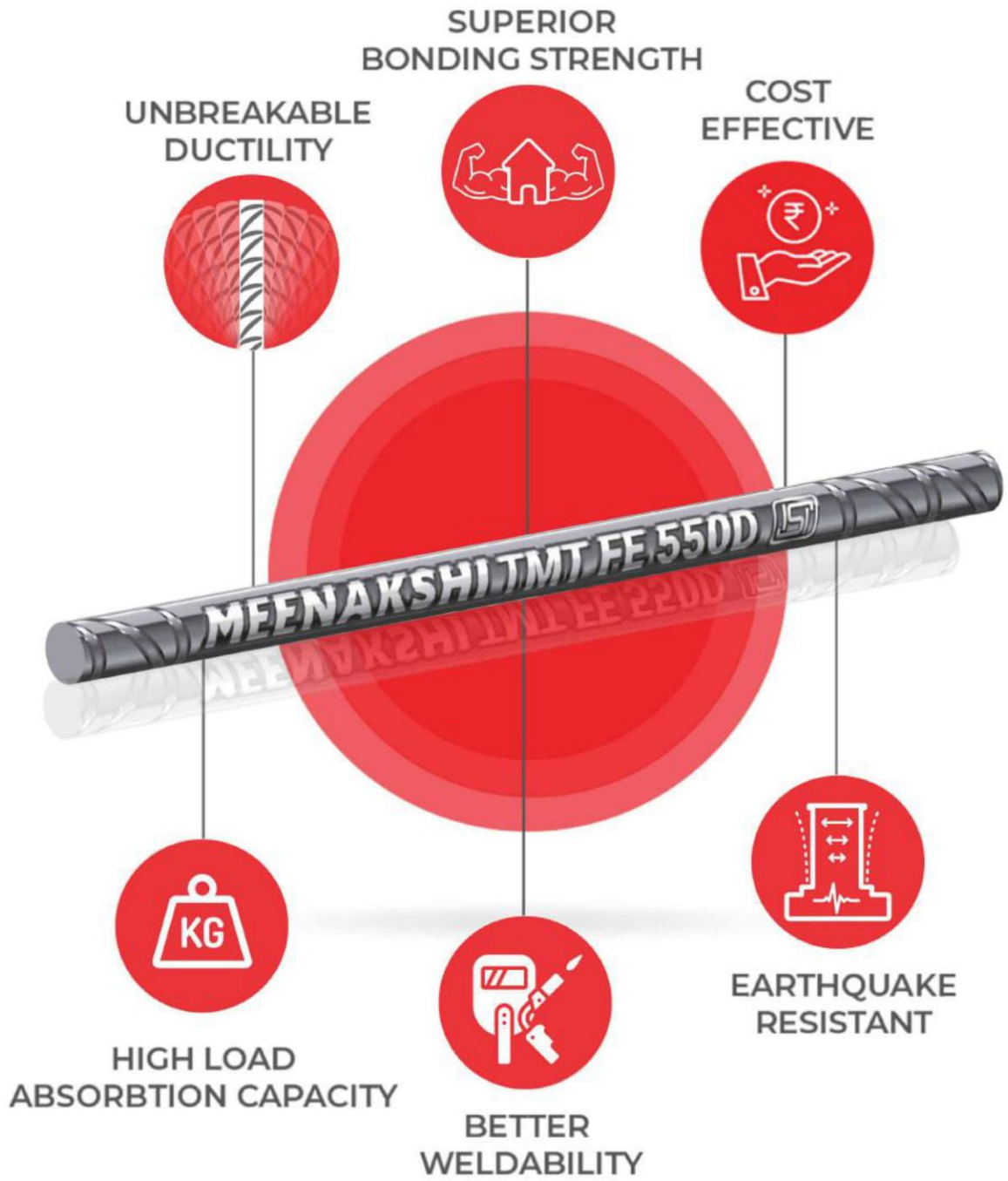
Meenakshi TMT steel bars have a premium quality grade of FE 550D and the **‘D’** stands for **Ductility**, which is one of the most important features to look for in a TMT bar.

Meenakshi TMT bar’s ductility retains the structural integrity of a building in the event of an earthquake, by absorbing the shock which does not break the TMT rod in the process. Meenakshi TMT bars have a flexible ferrite-pearlite core and a robust martensite external surface. This process increases the tensile strength which makes the TMT Bar more weldable and ductile.

## Meenakshi TMT Ductile rebar properties

Properties	BIS 1786	United Kingdom B.S. 4449/2005		Australia / New Zealand AS NZS 4671/2001		Meenakshi Fe550D TMT
YS Min. MPa	Fe 500 500	500B *	500C *	500N 500	500E 500	Fe - 500SD *
YS Max. MPa	N.S.	650	650	650	600	640
UTS Min.	8% Higher than YS	8% Higher than YS	15% Higher than YS	8% Higher than YS	15% Higher than YS	15% Higher than YS
UTS Max.	N.S.	N.S.	N.S.	N.S.	40% Higher than YS	N.S.
UTS/YS Min.	1.08	1.08	1.15	1.08	1.15	1.15
% Total Elongation	12.0 Min.	N.S.	N.S.	N.S.	N.S.	18.0 Min
% Total Elongation upto UTS	N.S.	5.0 Min.	7.5 Min.	5.0 Min.	10.0 Min.	8.0 Min.
Application	General	General	E.Q. Zone	General	E.Q. Zone	General

E.Q. ZONE : Earthquake Zone N.S.: Not Specified \*N<sub>2</sub>: 120 PPM Max



# Meenakshi TMT FE 550D

Meenakshi's FE 550D TMT bars are acclaimed for their high quality, strength, corrosion and seismic resistance, and the foundational support they provide for constructions. Based on its levels of bendability, ductility, malleability and corrosion resistance, Meenakshi's FE 550D TMT bars are among the industry's highest quality standards for TMT bars.

## Applications

- High rise buildings
- Dams
- Residential buildings
- Industrial structures
- Underground structures
- Coastal bridges
- Nuclear Power Plants
- Defense projects
- Expressway
- Roads, bridges and flyovers
- Airports and Railways
- Ports and Metro



# Corrosion Resistant Steel

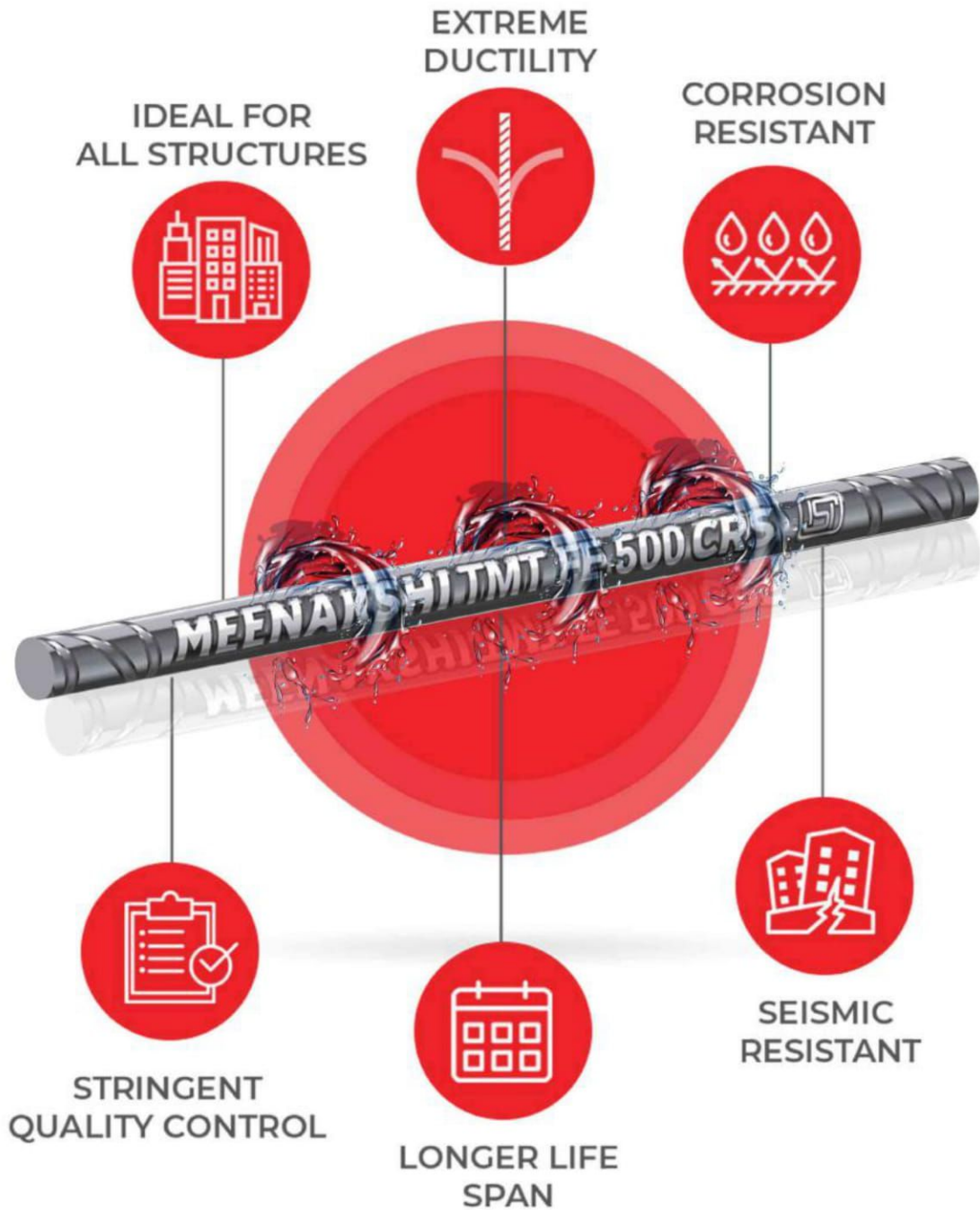
## Meenakshi TMT FE 500 CRS

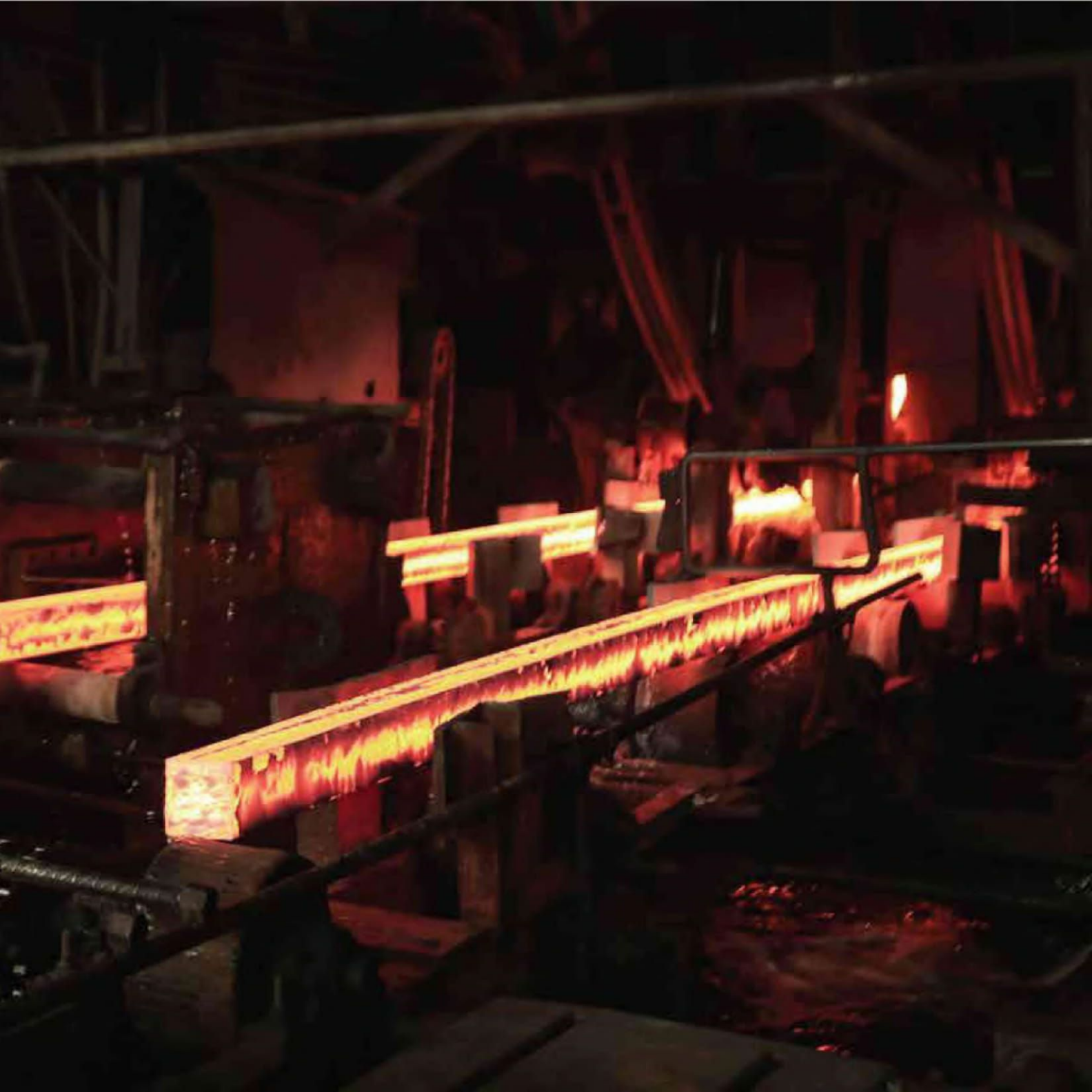
Meenakshi Corrosion Resistant Steel [CRS] FE 500 TMT bars are produced with corrosion resistance elements such as copper, chromium, and phosphorus. These TMT bars have proven to be more advanced than regular TMT bars in terms of durability, flexibility, strength and life span.

## Applications

Meenakshi TMT FE 500 CRS bars are used in building constructions that have higher risk of corrosion due to exposure to coastal, marine or underground environments such as dams, bridges, public or private buildings and underwater and marine structures. etc.









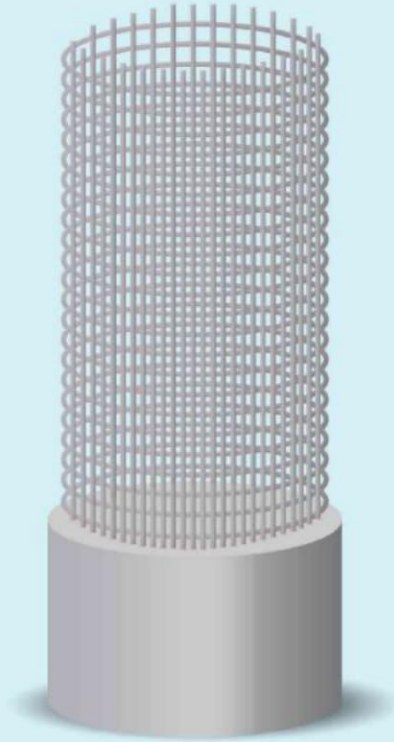


# Technical Specifications

Content	ISI Fe550D	Meenakshi TMT Fe550D	Meenakshi TMT Fe500 CRS
<b>Chemical Properties</b>			
Carbon (Max)	0.30	0.25	0.25
Sulphur (Max)	0.055	0.04	0.04
Phosphorous (Max)	0.05	0.04	0.1
Sulphur & Phosphorous	0.10	0.075	0.1
Carbon Equivalent	0.42	0.35 to 0.42	0.5
CRE Value (Cu+Cr+P)% (Min)	-	-	0.4
<b>Physical Properties</b>			
Yield Stress (N/mm <sup>2</sup> ) (Min)	550	560	530
Elongation % (Min)	14.5	16	14
UTS/YS Ratio	1.08	1.12	1.1
Tensile Strength (N/mm <sup>2</sup> )	600	620	565
<b>Bend test</b>			
	No traverse crack should form after bending through 180° and a mandrel of diameter specified below.		
Bars up to and including 20mm	<5d	<4d	<4d
Bars over 20mm	<6d	<5d	<5d
<b>Re-bend test</b>			
	No traverse crack should form after bending through 45° and reverse bending the same through 22.5 around the mandrel diameter specified below.		
Bars up to and including 10mm	<7d	<6d	<5d
Bars over 10mm	<8d	<7d	<7d

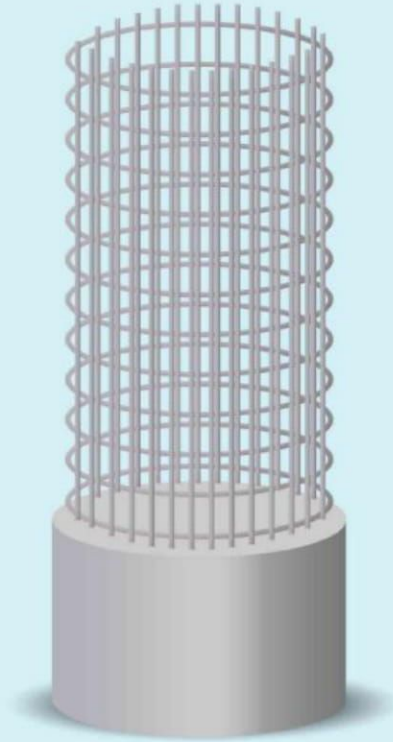
# Save using Meenakshi TMT

ISI Standard FE 500



High density of FE 500 grade TMT rebars

Meenakshi TMT FE 550D



Increased spacing due to lesser rebars of FE 550D Meenakshi TMT rebars



Reduced steel consumption



Better savings on site



Faster construction time



Reduced Transport Costs

Reduced labour costs

\* Actual steel savings will depend on the design, number of floors, seismic zone and other factors based on your construction requirements.

# Savings

Using Meenakshi Fe550D TMT bars leads upto 20% savings on construction costs. High Density of ISI Fe 500 requires more pieces for foundational support of concrete structures. However, with Meenakshi FE 550D TMT bars, there is increased spacing due to lesser rebars required.

Sizes	Section weight/meter	Number of rod peices in 1 ton (Length 12.192m)	Number of rod peices in 1 ton (Length 12.192m)
Standard Diameter (mm)	Meenakshi	Meenakshi FE 550D TMT Bar	ISI nominal other brands 550 or 500
8mm	0.377	217	207
10mm	0.574	142	132
12mm	0.853	98	92
16mm	1.501	54	52
20mm	2.371	34	33
25mm	3.751	22	21

Beam design with M30	
230x450 beam Reinforcement saving : 415/550D - 55% 500/550D - 9%	800x1800 beam Reinforcement saving: 415/550D - 57% 500/550D - 18%
Column Design with M40	
00x750 column Reinforcement saving : 415/550D - 17% 500/550D - 7%	600x750 column Reinforcement saving: 415/550D - 20% 500/550D - 7%

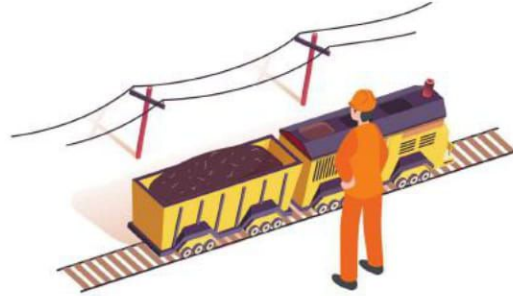
**USE  
MEENAKSHI TMT  
FE550D AND  
SAVE  
UPTO 20%  
ON TMT BARS**

# Manufacturing Process

At Meenakshi, we have implemented a systematic approach from sourcing the highest quality raw materials to dispatch, to manufacturing the country's best TMT bars, so you can rest assured about the quality and strength.

## Sourcing

Virgin and high grade Direct Reduced Iron is procured for manufacturing.



## Melting Process

Pure metal is melted at 1600 °C. The pre-melted liquid metal is poured into the ladle after multiple quality checks to create the required grade of steel.

## Continuous Casting Process

The liquid metal is poured into the continuous casting machine which is then cooled and cast into billets.



## 100% Automatic Rolling Mill

Hot billets received from the Casting Machine via the hot charging process are directly rolled in the Automatic Rolling Mill.

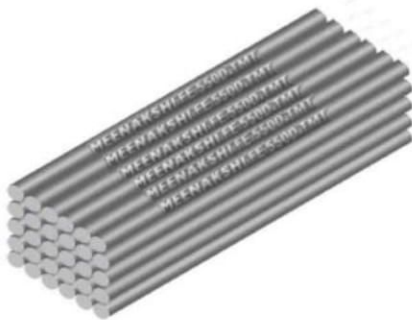


### Thermo Mechanical Treatment

Controlled Thermax Quenching Process, Self Tempering & Normalising Process.

### Quality Testing

We have a stringent multi-point quality control system in place to identify sub-standard bars and make sure that only the best products enter the market.



### Bundling & Indoor Storage

Our all-weather secure storage facilities prevent the bars from damage and corrosion, to retain the same quality for a long time. We also maintain stock-wise inventory round the clock.

### Packaging & Dispatch

The TMT rods are strapped, bundled and tagged together as per the size and lot number to ensure convenient transportation, storage and tracking of the order.





TRENKAMATI

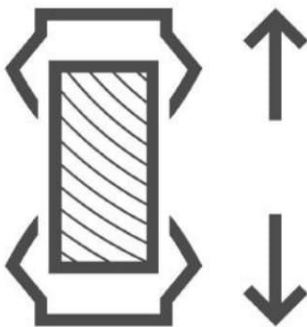
# Quality

Meenakshi TMT is a reputed manufacturing company that spans decades of craftsmanship and knowledge in producing the most premium, reliable, high TQM, we have put in place the following processes to ensure that Meenakshi products have the highest quality.

- Fully equipped optical emission spectrometer
- Quality control lab
- Universal testing machine (FIE)
- Facilities for monitoring raw materials, consumables and stores
- Independent quality checks at each stage of production

## Physical & Chemical Testing

- |                              |                            |
|------------------------------|----------------------------|
| ● Tensile Test               | ● Alternate Immersion Test |
| ● Yield Stress Test          | ● Salt Spray Test          |
| ● Percentage Elongation Test | ● Sulphur Dioxide Test     |
| ● Bend Test                  | ● Potentio Dynamic Test    |
| ● Rebend Test                | ● Chemical Analysis Test   |

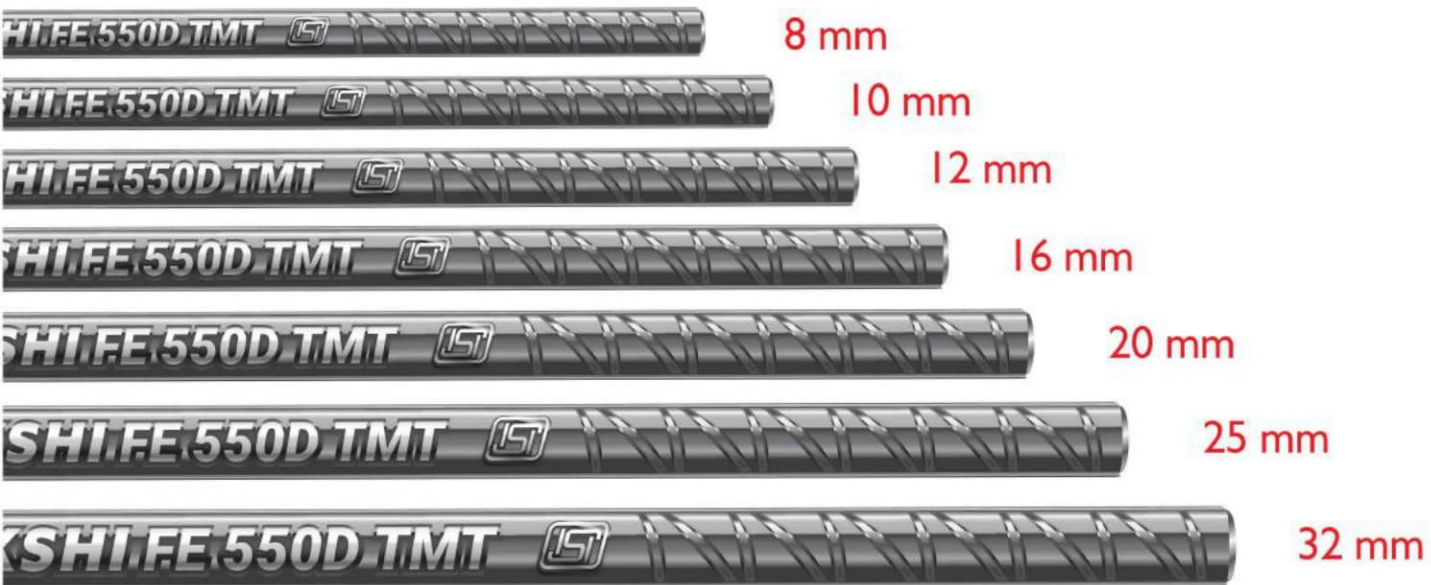


# Sizes

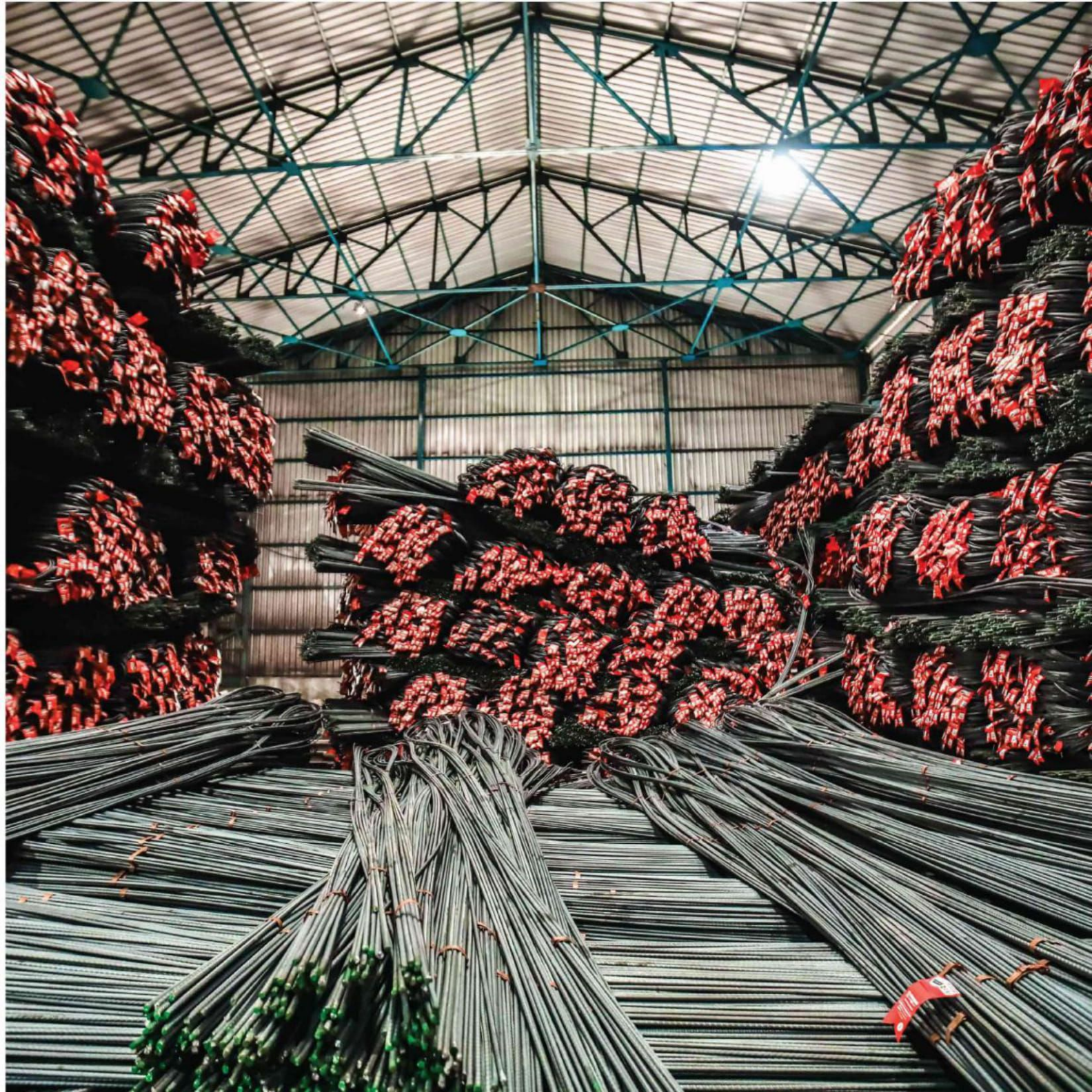
Applicable to all grades as per BIS 1786:2008. Length 40 feet or 12.19 meter.

Standard Diameter (mm)	ISI Nominal Wt / meter Kg	ISI Range of wt for each batch wt. /meter Kg		Meenakshi TMT Wt./meter Kg	Bundle wt (+ or - 1 Kg.)	Pcs / Bundle
8	0.395	0.367	0.423	0.377	46 Kgs	10 Pcs
10	0.617	0.574	0.660	0.574	49 Kgs	7 Pcs
12	0.888	0.843	0.932	0.853	52 Kgs	5 Pcs
16	1.579	1.500	1.658	1.503	55 kgs	3 Pcs
20	2.467	2.393	2.541	2.378	58 Kgs	2 Pcs
25	3.855	3.739	3.971	3.773	46 Kgs	1 Pc
32	6.316	6.127	6.506	6.310		

Grades	Fe550D & Fe 500 CRS
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# Packaging

## Quality and Safety:

All Meenakshi TMT bars are stored in an indoor shed to prevent any external damage due to natural causes and to maintain the premium quality of our steel. All Meenakshi TMT shipments are gate and wire sealed to ensure there are no pilferages on transport. This reduces weight and transport costs. Every shipment comes with a test certificate to ensure standard quality.

## Tagging:

Every batch of Meenakshi TMT bars has a tagging system, with a QR code which leads to information regarding the rod sizes, lot number and chemical composition of that specific batch of TMT bars. This makes it much easier to deliver instant test reports and certificates so our dealers can remain assured that we only deliver the highest quality products.

## Strapping:

Meenakshi TMT has a new strapping and bundling system that assures safety of delivery and lighter weight shipments. This system ensures each batch gets the standard number of pieces as per the factory order with zero chance of pilferage during transit as well as quicken inventory management process by staff.



# Environmental Responsibility

Meenakshi Steel strives to follow a zero-wastage, non-pollution system to ensure that our production process is more environment conscious. It is our responsibility to take steps to protect our environment to the best of our capabilities and Meenakshi Steel does extensive research and development to find the best, environmentally friendly technologies and methods to carry out. our

## Recycling Slag Waste :

We crush and reuse all slag waste generated from our factories ensuring a sustainable, zero wastage policy.

## Reusing Water Waste :

We filter and reuse all waste water discharge in our factories to ensure zero wastage of water for all our factories around India.

## State of the Art Pollution Systems:

We have installed revolutionary pollution technology in our Hosur plant - a fully enclosed hood for our induction furnaces to prevent air pollution in the environment.

## Zero Coal Usage Policy:

Our coal usage level is zero in our Hosur, Sagar and Datia plants.

We conduct drives to plant trees in and around our factory regions in Hosur, Datia and Sagar to improve the declining forest rate in these regions.

# Our Clients

Meenakshi TMT is a reputed brand that has constantly raised the bar in terms of quality of TMT bars and structural steel for over 50+ years and has worked with several prestigious partners towards building the future of our nation. Would you like to be next on our list? Reach out to us.





**Mahindra**  
LIFESPACES



**PURAVANKARA®**





Scan for Meenakshi TMT Certificates



**Meenakshi Udyog (India) Pvt. Ltd.**

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Hosur | Puducherry | Hyderabad | Pune | Nagpur | Indore | Jhansi | Sagar | Datia

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