

TMT Steel



Structural Guide

What is TMT Steel

TMT stands for Thermo Mechanically Treated.

TMT steel bars are produced to have higher strength than the other type of steel

When the characteristic strength of the Tor Steel 460 N/mm^2 , TMT bars increase it to 500 N/mm^2 .

Can produce characteristic strength of 550 N/mm^2 and 600 N/mm^2 yield strengths.

Out core is harder and the inner core is softer, it generates high strength and high ductility

Properties such as weldability, elongation, etc. are also enhanced.

These properties are achieved through the manufacturing process.

Manufacturing Process

Quenching
Self tempering
Atmospherics cooling



Manufacturing Process

Quenching

In this process, the water will be sprayed into the bar in a controlled manner. It is a specially designed system that allows the water to reach the surface of the steel bar and to make rapid cooling of the outer surface. This process is done to harden the surface and to maintain the core soft and heated.

Self Tempering

After the quenching process, the bar will be subjected to self-tempering. Since the core temperature is higher, it will transfer the heat to the surface. This causes the tempering of the hardened outer surface and it forms the tempered martensite structure.

Atmospheric Cooling

Then the bars will be kept on special beds that allowed the cool the bars slowly. This makes the core more ductile. Finally, the structure of the steel becomes a strong outside layer and ductile core.

Special Properties

- High corrosive resist
- High tensile strength
- Durability and almost zero defect in the surface
- Weldability
- Ductility and bending ability
- Fire resistance
- High bonding ability
- Cost-effectiveness



Thank you



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