

# **TMT steel Bar Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Grade (Fe 415, Fe 500, Fe 550, Fe 600 and above), By Diameter (8 mm, 10 mm, 12 mm, 16 mm, above 16 mm), By Application (Residential Construction, Commercial Construction, Industrial Construction, Infrastructure), By Region, and By Competition, 2020-2030F**

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## **Abstracts**

### **Market Overview**

The Global TMT steel Bar Market was valued at USD 11.58 Billion in 2024 and is expected to reach USD 20.06 Billion by 2030 with a CAGR of 9.43% during the forecast period.

The global TMT (Thermo-Mechanically Treated) steel bar market is witnessing substantial growth, driven by rising construction activities, rapid urbanization, and increased infrastructure development across emerging and developed economies. TMT steel bars are essential in reinforcing concrete structures due to their superior tensile strength, flexibility, corrosion resistance, and weldability, making them ideal for residential, commercial, industrial, and infrastructure applications. One of the primary drivers of market expansion is the strong demand from the construction sector, especially in Asia-Pacific countries such as India, China, and Southeast Asian nations. These regions are undergoing significant urban expansion, smart city initiatives, and government-funded housing and transportation projects, all of which fuel demand for high-quality construction materials like TMT bars.

In developed markets such as North America and Europe, the focus on sustainable building practices, green construction, and renovation of aging infrastructure has also led to a surge in the adoption of advanced TMT bars with improved seismic resistance and thermal stability. Innovations in metallurgical processes, such as the introduction of high-strength grades like Fe500D, Fe550D, and Fe600, and the use of HYQST (High Yield Quenching and Self Tempering) and Tempcore technologies, have further enhanced product performance, broadening their application in earthquake-prone and coastal regions.

## **Key Market Drivers**

### **Rising Construction and Infrastructure Development**

Global urbanization and large-scale infrastructure projects are significantly driving the demand for TMT steel bars. As governments prioritize economic growth through infrastructure spending, TMT bars have become essential in modern construction due to their strength, flexibility, and resistance to corrosion and earthquakes. In Asia, over 50% of the global urban population resides, and by 2030, more than 60% of Asia's population is expected to live in cities, pushing up construction activity. India alone has initiated over 7,000 smart city projects, while China adds around 1.5 billion square meters of new construction each year. Africa is investing over USD200 billion annually in urban infrastructure, further escalating TMT bar demand. Globally, more than 2 million kilometers of roads and highways are under development or planning, much of which require reinforced concrete that uses TMT bars. In Latin America, infrastructure investments in railways and airports have grown by 18% annually over the last five years. The robustness and load-bearing capability of TMT bars make them indispensable for high-rise buildings, bridges, tunnels, and dams. Furthermore, stringent government safety norms in seismic zones now mandate the use of high-ductility TMT bars, especially grades Fe 500D and Fe 550D, which have seen over 30% annual growth in usage across disaster-prone regions. As infrastructure becomes the foundation for economic expansion in both emerging and developed nations, TMT steel bars will continue to be a vital material in global development.

## **Key Market Challenges**

### **Raw Material Price Volatility**

Price fluctuations remain a critical challenge: iron ore prices have oscillated by  $\pm 30\%$

within six months, forcing producers to adjust margins. Thermal coal prices spiked 25% in one quarter, increasing energy costs for integrated mills. Scrap steel availability has varied by 20% seasonally, affecting EAF-based fabrication. Energy costs—natural gas, electricity—have risen by 18–22% annually in several countries, squeezing profits. Some plants have faced input cost increases of up to 35% year-on-year. This volatility complicates pricing contracts, making profit forecasting uncertain and leading to periodic steel price surges affecting TMT bar affordability.

## **Key Market Trends**

### Expansion of Electric Arc Furnace (EAF) Production

Globally, EAF-based steelmaking now contributes 30% of output, up from 25% five years ago. In India, this share is nearly 60%. Each new EAF mill adds about 1 million tonnes/year capacity. Scrap consumption rises by 500,000 tonnes per new EAF facility. Volume growth in EAF production supports localized TMT manufacturing closer to urban centers. Efficiency gains reduce CO<sub>2</sub> intensity by 20–30%, aligning with green construction goals and reducing carbon penalty exposure.

## **Key Market Players**

Tata Steel

JSW Steel

Jindal Steel & Power

Steel Authority of India Limited

SRMB Steel

Kamdhenu Group

Shyam Steel

Rashtriya Ispat Nigam Limited

Jai Balaji Group

Jumbo TMX

### **Report Scope:**

In this report, the Global TMT steel Bar Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

#### TMT steel Bar Market, By Grade:

Fe 415

Fe 500

Fe 550

Fe 600 and above

#### TMT steel Bar Market, By Diameter:

8 mm

10 mm

12 mm

16 mm

above 16 mm

#### TMT steel Bar Market, By Application:

Residential Construction

Commercial Construction

Industrial Construction

Infrastructure

## TMT steel Bar Market, By Region:

### North America

United States

Canada

Mexico

### Europe

Germany

France

United Kingdom

Italy

Spain

### South America

Brazil

Argentina

Colombia

### Asia-Pacific

China

India

Japan

South Korea

Australia

Middle East & Africa

Saudi Arabia

UAE

South Africa

## **Competitive Landscape**

Company Profiles: Detailed analysis of the major companies present in the Global TMT steel Bar Market.

Available Customizations:

Global TMT steel Bar Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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