India EV Steel Market, By Type (Non-Grain Oriented, Grain- Oriented) By Application (Entry Level Vehicles, Mid-Level Vehicles, Luxury Class Vehicles, Commercial Class Vehicles) By Location (Motor, Car Body, Battery, Others) By Region, Competition, Forecast & Opportunities, 2021-2031F

Market Report | 2025-05-16 | 86 pages | TechSci Research

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Report description:

Market Overview
The India EV Steel Market was valued at USD 24 billion in 2025 and is projected to reach USD 36 billion by 2031, growing at a CAGR of 7.09% during the forecast period. Electrical steel, commonly known as EV steel, is a critical material used in the manufacturing of electric motors, transformers, and generators due to its superior magnetic properties and energy efficiency. Comprised primarily of iron with alloying elements such as silicon, electrical steel offers high magnetic permeability and low core loss, making it ideal for minimizing energy loss in electrical systems. It is broadly classified into two types: grain-oriented (GOES), optimized for transformers, and non-grain-oriented (NGOES), used in electric motors and applications requiring uniform magnetic properties. With India's accelerating transition toward electric mobility, energy-efficient technologies, and renewable energy integration, the demand for electrical steel is rising rapidly. Its role in enhancing motor efficiency, reducing power loss, and supporting clean energy applications makes it a cornerstone material in India's evolving electric vehicle and power infrastructure ecosystem.
Key Market Drivers
Growth in Electric Vehicle (EV) Adoption
The rapid acceleration in electric vehicle (EV) adoption in India is a primary driver of demand in the EV steel market. Driven by national sustainability goals, favorable government incentives, and rising environmental consciousness, the Indian EV sector is witnessing significant growth. EVs rely heavily on electric motors that utilize electrical steel for efficient energy conversion and reduced power loss. Government programs like the FAME (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) Scheme have incentivized EV production and consumer adoption, boosting demand for high-quality EV components, including

electrical steel. The government's ambition to have 30% of all vehicles electric by 2030 further supports this trend. As India's middle class grows and urbanization continues, the demand for cleaner transport alternatives is expanding, creating a larger addressable market for electrical steel. With EV sales surpassing 1.5 million units in FY 2023-24-a 40% increase over the previous year-steel producers are witnessing sustained demand for advanced grades suitable for efficient, lightweight motor designs.

Key Market Challenges

Supply Chain and Raw Material Constraints

A critical challenge confronting the India EV steel market is the limited availability of essential raw materials and supply chain inefficiencies. Electrical steel production requires specific high-purity inputs such as silicon and iron, many of which are not readily available in India. As a result, manufacturers rely heavily on imports from countries such as China, Japan, and the U.S., leading to exposure to geopolitical risk, import tariffs, and price volatility. The dependency on foreign suppliers increases procurement costs and can disrupt production schedules due to shipping delays and regulatory bottlenecks. Additionally, inadequate domestic infrastructure for transporting raw materials from ports to manufacturing hubs exacerbates logistical costs and lead times. Compounding these issues is the energy-intensive nature of electrical steel manufacturing, which faces challenges from fluctuating electricity prices and inconsistent energy supply. These factors contribute to higher production costs, limiting the competitiveness of Indian manufacturers in both domestic and export markets, especially as demand intensifies across the EV value chain.

Key Market Trends

Shift Toward High-Performance Electrical Steel

An emerging trend in the India EV steel market is the growing emphasis on high-performance electrical steel, particularly grain-oriented electrical steel (GOES). As electric vehicle manufacturers seek to improve energy efficiency, motor performance, and driving range, the demand for superior-quality steel that minimizes core losses is increasing. GOES offers optimized magnetic properties that reduce energy dissipation, making it indispensable for applications in EV motors and power electronics. Likewise, in renewable energy systems such as wind turbines and grid transformers, high-performance electrical steel contributes to more efficient energy transmission. Automotive OEMs are investing in R&D and collaborating with material suppliers to integrate advanced steel grades that meet global performance standards. With India positioning itself as a manufacturing hub for electric mobility and power components, this shift toward advanced electrical steel aligns with broader industry goals for sustainability and energy optimization. Domestic steel manufacturers are also scaling up their capabilities to meet this demand, signaling a move toward localized, high-efficiency production in the coming years.

Key Market Players

- Steel Authority of India Limited
- MI Electrical Steel Processing India Pvt. Ltd.
- JSW MI Steel
- NLMK India
- Shanxi Honglu Sanli
- JFE Steel Corporation
- Bao Steel India
- POSCO Electrical Steel India

Report Scope:

In this report, the India EV Steel Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

- India EV Steel Market, By Type:
o Non-Grain Oriented
o Grain-Oriented
- India EV Steel Market, By Application:
o Entry Level Vehicles
o Mid-Level Vehicles
o Luxury Class Vehicles

o Commercial Class Vehicles
- India EV Steel Market, By Location:
o Motor
o Car Body
o Battery
o Others
- India EV Steel Market, By Region:
o South India
o North India
o West India
o East India
Competitive Landscape
Company Profiles: Detailed analysis of the major companies present in the India EV Steel Market.
Available Customizations:
India EV Steel 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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