

Electrical Steel Market Is Estimated To Grow At A CAGR Of 8.5% By 2032

Energy & Power Industry's Strong Influence on Electrical Steel Market Growth: Vital Material for Power Generation, Transmission & Distribution.

ROCKVILLE, MD, UNITED STATES, October 5, 2023 /EINPresswire.com/ -- Europe led by Germany has a high demand for the electrical steel market as increased demand for electric vehicles. Germany has a deeply rooted and evolving market for electric vehicles, and data centers also increase the demand for the market. As for the production of electric vehicle components and motors, electrical steel is preferred due to its specific properties.

In 2022, the worldwide [electrical steel market size](#) reached a valuation of US\$ 25.9 billion, and it is projected to exhibit a compound annual growth rate (CAGR) of 8.5%, ultimately reaching US\$ 55.1 billion by the conclusion of 2032.

By the close of 2021, sales of electrical steel constituted approximately 12.3% of the global specialty steel sector. The market's expansion in the foreseeable future is heavily reliant on industrial growth.

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Electric steel, also known as transformer steel, lamination steel, or silicon steel, is a versatile soft magnetic material with improved electrical properties. It finds widespread applications in small relays, electric motors, and generator devices, primarily within electrical and power distribution

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Market Research that Inspires Growth

systems.

One of its notable features is its high permeability, which enhances its suitability for magnetic applications. Additionally, electric steel is favored for its elevated electrical resistivity and reduced hysteresis loss, making it a preferred choice in various applications.

Key Companies Profiled

- Novolipetsk Steel
- Voestalpine Stahl GmbH
- POSCO
- Nippon Steel
- Sumitomo Metal Corporation
- ThyssenKrupp AG
- JFE Steel Corporation
- Cogent Power
- ArcelorMittal SA
- Aperam SA
- Baosteel Group
- AK Steel Holding Corp
- Allegheny Technologies Inc.
- Phoenix Mecano AG
- Leicong Industrial Co., Ltd.
- Nicore Electrical Manufactory Co. LTD.
- Steel Authority of India Limited

Analysis of the Past and Future Trajectory: Electrical Steel Market

Electrical steel possesses superior malleability and boasts a lightweight characteristic when compared to traditional steel. Consequently, it has found increased utilization within electronic systems within the automotive industry. Manufacturers are increasingly focused on enhancing vehicle features while simultaneously reducing overall vehicle weight.

Furthermore, the burgeoning sales of automobiles play a pivotal role in driving the growth of the electrical steel market. Hybrid and electric vehicles, in particular, rely on high-powered electrical steel core motors, necessitating a robust supply of Non-Grain Oriented Electrical Steel (NGOES) for efficient and seamless operation.

Additionally, the automotive sector features numerous small transformers and inductors that rely on electrical steel, further fueling market demand. Thus, the confluence of increased automobile demand and a myriad of applications is expected to propel the market's expansion throughout the projected period.

- Short-Term Growth Influencers: The production of electrical steel (ES) involves the addition of silicon to raw steel in precise proportions. Consequently, the rapid increase in the consumption of raw steel is poised to propel the electrical steel market's short-term expansion.
- Medium-Term Growth Approaches: The escalating global demand for energy and power generation is driving the necessity for distribution and power transformers, which are essential for power generation and distribution. This growing demand for transformers is expected to drive market sales in the medium term.
- Long-Term Growth Strategies: Long-term growth prospects for the market are anticipated to be driven by investments in research and development, combined with the implementation of successful marketing strategies. These initiatives are expected to create significant growth opportunities for the market over the projected period.

During the historical period spanning from 2017 to 2021, the global electrical steel market demonstrated a Compound Annual Growth Rate (CAGR) of 5.9%. According to Fact.MR, a renowned market research and competitive intelligence provider, this market is anticipated to witness even stronger growth with an expected CAGR of 8.5% between 2022 and 2032.

The provided image succinctly presents a market share analysis of electrical steel, categorized by end-use industry and region. Within the end-use industry segment, the energy sub-sector takes the lead, commanding a substantial 40.7% share of the electrical steel market in 2022.

Government Efforts to Improve Power Distribution Centers

Government efforts aimed at bolstering power generation and renewable energy production, while simultaneously enhancing the efficiency of electricity transmission and distribution, are projected to be key drivers of market growth in the foreseeable future.

The global shift towards clean energy sources has compelled governments across various economies to invest in cutting-edge, zero-emission energy generation facilities. Numerous companies are actively engaged in the development of such facilities, which, in turn, necessitate a significant increase in the demand for electrical steel, including transformers and other critical electrical components.

Typically designed with a 30-year operational lifespan, transformers are poised to see heightened demand due to various initiatives geared towards improving the performance of electricity distribution networks. This surge in demand is expected to exert a substantial impact on the electrical steel market.

Diverse Applications and Multiple Properties: Fueling Market Expansion for Electrical Steel

Electrical steel serves a crucial role in the development of electric vehicles (EVs) and hybrid electric vehicles (HEVs), where it acts as the core material for traction motors. This application contributes to the reduction of eddy current losses and enhances the overall efficiency of HEVs

and EVs. In addition, the aerospace industry relies on high-speed electric motors operating at frequencies exceeding 400Hz, for which the Hi-Lite grade of electrical steel is the core material of choice to ensure their safe and efficient operation.

The growth of the electrical steel market is primarily propelled by the energy and power sector. This versatile material finds widespread usage in various electronic and electrical components essential for power generation, transmission, and distribution. Cold rolled electrical steel (CRGO) is specifically employed in the production of transformer cores, effectively minimizing core losses and resulting in more compact transformers that are indispensable for efficient power transmission and distribution.

The Rising Significance of Nickel-Iron Alloys Due to Their Multiple Advantages

While electrical steel (ES) improves efficiency and prevents losses in various applications, its magnetic properties may not always meet the intricate requirements for precision and efficiency.

Nickel-iron alloys emerge as a highly innovative and intelligent alternative in comparison, offering viable options for the market. These alloys play a crucial role in the production of sensors, relays, motor laminations, and more.

Moreover, nickel-iron alloys provide superior magnetic induction and permeability when compared to electrical steel. Consequently, the growing adoption of nickel-iron alloys in electro-technical applications is expected to curtail the expansion of the global electrical steel market during the study period.

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Strategies for Manufacturer Growth in the Electrical Steel Market

Prominent players in the electrical steel market are increasingly prioritizing the use of safe and eco-friendly materials. Their emphasis lies in crafting products that align with local safety regulations. Through robust research, development, and innovation efforts, global manufacturers are actively engaged in creating new product offerings.

Furthermore, these companies are dedicating their efforts to cost reduction, enhancing existing product lines, process optimization, pioneering new manufacturing techniques, ensuring quality assurance, and refining current manufacturing methods to secure substantial profit margins.

- In April 2022, POSCO embarked on the construction of a state-of-the-art electrical steel production facility in South Korea, earmarking a whopping \$805 million for the project. The plant is poised to have an annual production capacity of 300,000 tons of NOES.

- In May 2021, JSW Steel and JFE Steel Corporation signed a memorandum of understanding (MoU) to explore the feasibility of establishing a joint-venture company in India for manufacturing and selling GOES sheets.

Fact.MR's recently published report offers comprehensive insights into the pricing strategies of key electrical steel manufacturers across different regions, their sales growth trajectories, production capacities, and their potential for technological expansion.

Check out more related studies published by Fact.MR Research:

[Europe Electrical Steel Market](#): European sales of electrical steel are estimated at around US\$ 6.3 billion in 2022. The European electrical steel market is projected to register an impressive CAGR of 10.3% during 2022-2032 and generate US\$ 10.6 billion in absolute dollar opportunity over the assessment period.

[High-Speed Steel Market](#): The High-Speed Steel market size was valued at US\$2.6 billion in 2022 & is expected to expand at a compound annual growth rate (CAGR) of 6.7% from 2023 to 2033

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