

# Electric Arc Furnace Market is estimated to reach US\$1,684.849 billion by 2029 at a CAGR of 5.64%

*The electric arc furnace market is anticipated to grow at a CAGR of 5.64% from US\$1,147.214 million in 2022 to US\$1,684.849 billion by 2029.*



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/EINPresswire.com/ -- According to a new study

published by Knowledge Sourcing Intelligence, the [electric arc furnace market](#) is projected to grow at a CAGR of 5.64% between 2022 and 2029 to reach US\$1,684.849 billion by 2029.

An electric arc furnace (EAF) is a mechanical furnace for industries that utilizes electricity to

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produce a strong electric arc for softening and refining metals, especially steel, basically from scrap materials. This high-powered furnace depends on the intense heat energy delivered by an electric arc to convert scrap metal into molten steel. It has become a cornerstone of present-day steel manufacturing with its capacity to quickly and effectively melt and refine metal. EAFs come in different sizes, extending from small units with a capacity of roughly one ton (utilized in foundries for producing cast iron items) to around 400-ton units utilized for auxiliary steelmaking.

The market for EAF is gaining force due to variables like increasing steel demand, investment in power framework, environmental standard directions, and an inclination for energy-efficient arrangements. Steel is vital in construction, [infrastructure](#), car, and manufacturing businesses, and as urbanization and industrialization advance universally, steel request is anticipated to rise. EAFs, which depend on electricity for metal melting, are becoming more reasonable alternatives for steel production. Environmental regulations and the utilization of recycled scrap metal are moreover driving the adoption of EAFs. Technological progressions in EAF design and operation are advancing proficiency and efficiency, making them more appealing for steel makers.

The market of electric arc furnaces is expanding with the launch of new products and inventive technological progressions around the world, for instance, in April 2024, Tata Steel planned to

invest £1.25 billion in a state-of-the-art Electric Arc Furnace in Port Talbot after seven months of discussions with UK trade unions and will start closing existing heavy end assets in coming months.

Access sample report or view details: <https://www.knowledge-sourcing.com/report/electric-arc-furnace-market>

Based on the type, the market of electric arc furnace market is divided into DC arc furnace and AC arc furnace. DC arc furnaces currently hold a dominant market share due to their even [temperature](#) distribution, stable arc, reduced furnace lining corrosion, and potential for lower production costs. However, they have higher upfront investment compared to AC furnaces. AC arc furnaces are anticipated to serve as a great opportunity in the expansion of the market as well as assist in lowering operational costs, driving higher electrical effectiveness. Besides these focal points, DC arc furnaces are anticipated to hold the major hold in the market, with AC arc furnaces possibly encountering faster development due to lower operational costs.

Based on application, the electric arc furnace market is separated into non-ferrous metal and ferrous metal. The market is anticipated to develop essentially due to the significant part of ferrous metal, especially steel, in construction and other industry businesses. The requirement for steel is predicted to rise due to a rapid increase in urbanization, industrialization, and development of infrastructure. The steel industry contains a well-established framework for EAF production, including a skilled workforce and a promptly accessible supply chain for scrap steel. Even though non-ferrous metals like aluminum and copper are liquefied in EAFs, their demand is anticipated to be lower compared to steel.

Based on capacity, the market of electric arc furnaces is classified into up to 100 tons, 100-200 tons, 200-300 tons, 300-400 tons, and more than 400 tons. The ideal capacity of an EAF depends on a few variables, such as production volume, product blend, and raw material accessibility. Large steel mills may prefer more than 300 tons EAFs for bulk steel production, while smaller EAFs offer more flexibility for specialty steel production. Foundries often use smaller capacities due to their production processes. EAFs up to 100 tons balance production capacity and operational flexibility, making them suitable for various applications. 100-300 tons EAFs can handle larger production volumes while maintaining operational efficiency and cost-effectiveness.

Based on geography, North America is anticipated to have a major share of the market of electric arc furnaces amid the expected period owing to a number of major variables. North America's steel industry is flourishing with robust infrastructure development for electric arc furnace operation, a skilled workforce, and an excess of scrap metal. Environmental sustainability directions are driving steel producers towards cleaner innovations like electric arc furnaces due to lower emissions. Growing investments in infrastructure and government regulation will fuel the expansion of the electric arc furnace industry in the region, with rising demand for steel and potential motivating forces or subsidies for steel makers to adopt EAF innovation.

As a part of the report, the major players operating in the electric arc furnace market that have been covered are Danieli & C. S.p.A., SMS group GmbH, TENOVA, JP Steel Plantech Co., A Universe of Engineering, ArcelorMittal, ABB, Nippon Steel Corporation, Algoma Steel, and Sinosteel India.

This analytics report segments the electric arc furnace market on the following basis:

- BY TYPE
  - o DC Arc Furnace
  - o AC Arc Furnace
  
- BY APPLICATION
  - o Non – Ferrous Metal
  - o Ferrous Metal
  
- BY CAPACITY
  - o Up to 100 Tons
  - o 100-200 Tons
  - o 200 – 300 Tons
  - o 300 – 400 Tons
  - o More than 400 Tons
  
- BY GEOGRAPHY
  - o North America
    - United States
    - Canada
    - Mexico
  - o South America
    - Brazil
    - Argentina
    - Others
  - o Europe
    - United Kingdom

- Germany
- France
- Italy
- Spain
- Others

o Middle East and Africa

- Saudi Arabia
- UAE
- Others

o Asia Pacific

- Japan
- China
- India
- South Korea
- Taiwan
- Thailand
- Indonesia
- Others

Companies Profiled:

- Danieli & C. S.p.A.
- SMS group GmbH
- TENOVA
- JP Steel Plantech Co.
- A Universe of Engineering
- ArcelorMittal
- ABB
- Nippon Steel Corporation
- Algoma Steel
- Sinosteel India

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