

# Induction Furnace Market Forecasts to 2032 – Global Analysis By Type (Coreless Induction Furnace, Channel Induction Furnace and Other Types), Capacity (Up to 1 Ton, 1–5 Tons, 6–20 Tons and Above 20 Tons), Application, End User, and By Geography

<https://marketpublishers.com/r/IF311C4991D3EN.html>

Date: August 2025

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: IF311C4991D3EN

## Abstracts

According to Statistics MRC, the Global Induction Furnace Market is accounted for \$1.5 billion in 2025 and is expected to reach \$2.3 billion by 2032 growing at a CAGR of 6.1% during the forecast period. An induction furnace is an advanced electric melting system that uses electromagnetic induction to heat and melt metals efficiently without direct contact. Commonly utilized in foundries and metal industries, it offers precise temperature control, reduced emissions, and high energy efficiency. Its coreless or channel designs accommodate various capacities, making it suitable for processing steel, copper, aluminum, and other alloys with consistent quality and minimal material loss during the melting process.

According to the World Steel Association, global steel production in 2023 was nearly 1.9 billion tons, with China producing 54% of the world's steel.

Market Dynamics:

Driver:

Growth of the steel and foundry industry

Increasing demand for steel and non-ferrous metals has catalyzed the widespread adoption of induction furnaces. Their ability to provide efficient, high-quality, and environmentally sustainable metal production meets the evolving requirements of

modern industries. Furthermore, as global industrialization intensifies, foundries and steel producers are continually upgrading to energy-efficient and flexible melting technologies, positioning induction furnaces as a preferred solution for high-volume, precise metal processing.

#### Restraint:

##### Limited use in certain alloy types

Induction furnaces lack refining capacity, meaning the input charge must be of high purity and have a known composition prior to melting. Any impurities or deviations in material composition will remain in the final output, impacting quality. It is challenging for applications requiring stringent alloy specifications. Additionally, oxidation losses during melting can necessitate the re-addition of valuable alloying elements, thereby increasing costs and operational complexity.

#### Opportunity:

##### Integration of IOT and automation in furnaces

With the advent of Industry 4.0, manufacturers are increasingly leveraging IoT-enabled sensors, big data, and real-time monitoring systems to optimize furnace operations. These technologies facilitate predictive maintenance, enhance energy efficiency, and improve production traceability. Moreover, automation and digital controls enable remote operation, advanced quality monitoring, and adaptive process management. As industries pursue smarter manufacturing methodologies, the adoption of these digital technologies in induction furnaces unlocks further efficiency, safety, and cost advantages.

#### Threat:

##### Fluctuating raw material and energy prices

Volatility in the cost or availability of essential materials such as metals and alloys can disrupt profit margins and hinder operational planning for manufacturers. Additionally, since induction furnaces are large energy consumers, variability in energy costs directly affects overall production expenses. This susceptibility to market fluctuations forces producers to implement robust supply chain strategies and may limit growth prospects in regions where resource or energy volatility is pronounced.

### Covid-19 Impact:

The onset of the Covid-19 pandemic adversely impacted the induction furnace market, with disruptions in supply chains, workforce limitations, and delays in industrial projects worldwide. Lockdowns and mobility restrictions led to a slowdown in steel and metal production activities, resulting in reduced demand for new furnaces and spare parts. However, as economies gradually reopened, the market began recovering, supported by stimulus-driven infrastructure projects and the resumption of manufacturing operations.

The coreless induction furnace segment is expected to be the largest during the forecast period

The coreless induction furnace segment is expected to account for the largest market share during the forecast period due to its versatility, high energy efficiency, and wide applicability in melting both ferrous and non-ferrous metals. These furnaces support rapid heating cycles, precise temperature control, and environmentally friendly operations, making them highly favored in steel, foundry, and recycling sectors. Additionally, advancements in automation and digital connectivity further enhance their appeal by improving productivity and operational oversight. The adaptability of coreless furnaces to various batch sizes and alloys positions them as the backbone of modern, flexible foundry operations, sustaining their market leadership.

The hardening segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the hardening segment is predicted to witness the highest growth rate owing to the growing demand for enhanced wear resistance in industrial and automotive components. Induction hardening offers precise, energy-efficient heat treatment with minimal distortion, catering to industries that require durable and reliable metal parts. This method's advantages, such as rapid processing, improved mechanical properties, and compatibility with automation, drive its accelerated adoption. The trend toward lightweight, high-performance materials in automotive and aerospace manufacturing further propels the growth of this segment.

### Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market

share, attributed to its robust industrial base. The rapid expansion of steel, automotive, and metalworking industries, particularly in China, India, and Southeast Asia, fuels significant demand for modern melting and manufacturing equipment. Moreover, supportive government policies and ongoing urbanization strengthen the region's metal consumption, thereby reinforcing the deployment of induction furnaces in various industrial sectors.

#### Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, propelled by rapid industrialization, large-scale infrastructure projects, and the booming automotive sector. Emerging economies within the region are continuously upgrading their manufacturing ecosystems, adopting energy-efficient and automated solutions like induction furnaces. The progressive penetration of Industry 4.0 technologies further accelerates the shift towards advanced metal processing, ensuring that Asia Pacific remains at the forefront of market expansion.

#### Key players in the market

Some of the key players in Induction Furnace Market include Saint Gobain, Tenova S.p.A., Inductotherm Corporation, Ajax TOCCO Magnethermic Corporation, HarbisonWalker International, Electrotherm (India) Limited, Danieli Group, SMS Elotherm GmbH, Meltech Ltd, STEEL EXCHANGE INDIA LTD., Inductoheat Europe GmbH, GH Electrotermia S.A., Nordson Industrial Coating Systems, PVA TePla Group, ABP Induction Systems, Otto Junker GmbH, and ECM Technologies.

#### Key Developments:

In May 2023, Chiyoda Steel, a long steel product producer in Japan, placed an order to purchase Danieli Automation's Q-Heat induction heater, which will be installed at the Ayase plant in Tokyo. With the new equipment, Chiyoda Steel will become the first company in Japan to reheat billets with induction heating. The new Q-Heat induction heater will completely replace the existing gas reheating furnace, raising plant efficiency and flexibility, and limiting CO2 emissions from the billet gas-reheating process, a major step for Chiyoda Steel moving toward green steel production and decarbonization.

In March 2023, Inductotherm Heating and Welding Ltd upgraded several induction furnaces for TATA Steel's location in Corby, England. The result is a drastic reduction in TATA's reliance on gas-fired furnaces, cutting emissions and improving energy

efficiency. This is a shining example of cooperation among two companies with shared values. Tata Steel's declared environmental stance includes a goal of becoming net zero by 2045.

In February 2023, Saint Gobain new Induction Melting Technology Centre at our Saint-Gobain Performance Ceramics & Refractories plant in Bangalore, India. This center will enable us to reinforce our services to customers, to customize our solutions and to accelerate our developments and R&D projects.

#### Types Covered:

Coreless Induction Furnace

Channel Induction Furnace

Other Types

#### Capacities:

Up to 1 Ton

1–5 Tons

6–20 Tons

Above 20 Tons

#### Applications Covered:

Melting

Heating

Annealing

Hardening

Sintering

Other Applications

End Users Covered:

Steel Industry

Copper Industry

Aluminum Industry

Zinc Industry

Automotive

Aerospace

Power Generation

Electronics

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

#### Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

#### Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

## Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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