

High-Pressure Die Casting - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The High-Pressure Die Casting Market size is estimated at USD 38.66 billion in 2024, and is expected to reach USD 52.14 billion by 2029, growing at a CAGR of 6.16% during the forecast period (2024-2029).

Key Highlights

- Due to supply chain disruptions and trade restrictions across the world, COVID-19 had a significant influence on manufacturing operations, and the market experienced a slowdown. However, as economic activity resumed across the world, the global market is expected to develop steadily over the forecast period.
- Over the long term, expanding the automotive market, increasing penetration of die-casting parts in automotive components and industrial machinery, growing the construction sector, and increasing the use of aluminum die-casting parts in the automotive and electrical, and electronics industries are anticipated to drive the market.
- Die casting has proven to be the most feasible option for producing these engine castings, offering higher output and immense flexibility in component design. The approach may grow even more attractive following the development of a new die-casting machine design and changes in the die-making process. Die casters have been employing advanced die design and utilizing simulation techniques and power venting systems. These, coupled with thermal analysis of the die casting, produce clutch pistons catering to specific concerns of piston use and assembly.
- Further, the growing preference for aluminum products, as well as the ongoing trend of increased aluminum usage, are expected to drive significant market growth.
- For instance, in April 2022: Ford Motor Company presented the ARBOMEX plant in Apaseo elGrande, Mexico, with the prestigious Q1 designation. ARBOMEX manufactures balance shafts for Ford's Chihuahua engine plant's 1.5-liter 12V DOHC L3 Dragon engine, which is used in the Hermosillo-assembled Bronco Sport, the Escape crossover, and other models. ARBOMEX supplies iron, steel, and aluminum components to other original equipment manufacturers (OEMs), including Stellantis and Mazda, in addition to being

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a priority supplier to Ford.

-Moreover, Corporate Average Fuel Efficiency (CAFE) regulations and Environmental Protection Agency (EPA) initiatives to reduce automobile emissions and improve fuel efficiency are prompting automakers to use lightweight non-ferrous metals to reduce vehicle weight. As a result, the use of high-pressure die casting is likely to enhance the growth of the market during the forecast period.

-Asia-Pacific is expected to dominate high pressure die casting market due to a rise in the demand for automobiles in China and India, a rise in technological advancements and innovation, and a rise in the use of aluminum die casting for various applications in this region, further augmenting the market. North America also is expected to play a key role in terms of growth in the high-pressure die-casting market due to growing output from lightweight vehicles.

High Pressure Die Casting Market Trends

Automotive Segment Expected to Gain Prominence During the Forecast Period

- "The global automotive industry has witnessed notable and steady growth in recent years, owing to increasing sales of passenger and commercial vehicles across developing countries like India, China, etc. Additionally, technological advancements, such as electric vehicles and autonomous vehicles, are driving the market across Europe and North America, contributing to overall market stability.

- Automobile parts manufactured by the high-pressure die-casting method include engine blocks, gearbox housing, crankcases, clutch shoes, valve bodies, alloy wheels, and others. To meet the rising demands of the automotive industry, several die-cast machine manufacturers are also upgrading their offerings.

- Die casting finds potential use cases in automotive applications. Key components, including gearbox cases, structural components, electronic components, engine components, and componentry for cylinders, remain the most important casting products. Furthermore, an increasing number of EV producers are showing interest in integrating large castings, or mega-castings, into their vehicle structures to address challenges like repairability, life cycle, and aging.

- For instance, in September 2022, Alcoa Corporation announced new innovations in alloy development and deployment, further strengthening its position as a supplier of advanced aluminum alloys. The company's innovations include the introduction of a new high-strength, 6000 series alloy, A210 ExtrusStrong™, which delivers benefits across a wide range of extruded applications, including transport, construction, industrial, and consumer goods.

- Moreover, factors such as reducing carbon emissions, increased government initiatives to promote the usage of lighter vehicles and rapid development of technology in automotive die-casting machines are anticipated to boost demand in the market.

Additionally, the expanding middle classes in emerging economies and the associated growth in automobile ownership raise concerns about greenhouse gas emissions and the scarcity of natural resources to meet the demands of an increasing number.

- Subsequent vehicles and their associated component production are anticipated to drive the demand for various die-casting methods, including high-pressure die-casting. Manufacturers are focusing on improving their market presence by adopting the latest production techniques, such as automation, etc., to further stabilize demand during the forecast period. Considering the aforementioned factors, the growing automotive industry is likely to play a key role in the overall development of the high-pressure die-casting market."

- In the revised version, I've made adjustments to punctuation, rephrased some sentences for clarity, and added missing words for coherence. However, it is still a long and dense paragraph. Consider breaking it down into smaller paragraphs to enhance readability and organization, if possible.

Asia-Pacific Region Expected to Witness the Highest Growth During the Forecast Period

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- The Asia-Pacific region is expected to dominate the global high-pressure die-casting market, and it is also expected to witness the fastest growth rate during the forecast period. In the Asia-Pacific region, countries like China, India, Japan, etc., are likely to play a key role in the market.
- For instance, China is one of the major producers of die-casting parts and accounts for the majority of the regional (Asia-Pacific) die-casting market share. The metal casting industry in China has more than 26,000 facilities, out of which 8,000 facilities produce non-ferrous castings. China produces over 49.3 million metric tons of castings.
- The increasing popularity of fuel-efficient vehicles and the latest advancements in die-casting techniques are expected to further contribute to the market's development. Thus, due to such benefits, automakers in the region are entering long-term deals for uninterrupted supply of raw materials, expansion of plants, etc.
- The growing focus of foundries on improving innovation to produce products that meet consumer preferences and international standards is offering new opportunities for players in the market. Foundries are focusing on technical quality and brand orientation, which are considered major growth drivers for the Asia-Pacific high-pressure die-casting market. Such developments and instances are likely to contribute to the overall development of the market across the Asia-Pacific region.

High Pressure Die Casting Industry Overview

The high-pressure die-casting market is highly fragmented, with the presence of many regional and international players across the globe. The competition in the market has increased, as many small and medium-scale players from developing countries entered and expanded their business in the market over recent years. These players are adopting various growth strategies to gain a competitive edge over other players in the market.

For instance, in September 2022, DGS Druckguss Systeme s.r.o. announced that it had begun operations at the Frdlant plant and produces die castings made of aluminum and magnesium alloy for the automotive industry.

Some of the major recognized players in the market are Nemak, Georg Fischer Automotive, Ryobi Die Casting, Rheinmetall AG, Form Technologies Inc. (Dynacast), and Shiloh Industries. Some other notable players include Koch Enterprise, Linamar Corporation, and Bocar Group.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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