

Zirconium - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The Zirconium Market size is estimated at 1.69 Million tons in 2024, and is expected to reach 2.09 Million tons by 2029, growing at a CAGR of 4.30% during the forecast period (2024-2029).

A sharp increase in the number of COVID-19 cases led to numerous countries resorting to lockdowns, which significantly affected the global economy. The economic and industrial activities came to a temporary halt, which led the zirconium market to witness repercussions in terms of both production and demand from end-user industries, such as iron and steel, cement, energy and chemicals, and ceramics. However, the increasing focus on developing nuclear power resources is expected to help the market achieve positive growth during the forecast period.

Key Highlights

- Over the medium term, the major factors driving the market's growth are the growth in foundries and refractories, the increasing number of nuclear power stations in Asia-Pacific, and the accelerating usage of surface coatings.
- On the other hand, the reducing dependence on zircon is likely to hinder the growth of market significantly.
- The rising demand for zirconium in the healthcare sector for orthopedics and stringent emission standards pertaining to the automotive industry are expected to create the opportunities for the market studied.
- China dominated the market studied, accounting for a major share of the total revenue, and it is expected to witness the fastest CAGR over the forecast period.

Zirconium Market Trends

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Increasing Demand from Zircon Flour/Sand

- Zircon is widely used in ceramics and foundry, mostly in the form of sand and flour (milled sand), due to its various properties, such as the ability to bind with all organic and inorganic sand binders, low acidity, low thermal expansion coefficient, and high spatial stability at increased temperatures, chemical stability at high temperatures, and good recyclability.
- In ceramics, zircon sand is used for its highly valuable properties, such as its high refractive index for opacification. Its ancillary benefits, including its ability to impart greater mechanical strength, toughness, and durability to ceramic bodies and glass matrices, are established attributes and enable it to find applications in specific segments of the ceramic industry, thereby catering to markets with a preference for these attributes.
- In foundry applications, it is used widely as a molding base material for sand casting, investment casting, and Cosworth casting (aluminum). It is also used as a mold coating in die casting and refractory paints and washes, as it reduces the wettability of other foundry sands.
- Zircon sand is used for mold and core manufacturing, where its refractoriness, low expansion, reduced wettability by molten steel, and high thermal conductivity offer significant advantages over silica sand.
- Zircon foundry sands produce a better metal finish, a lesser likelihood of 'burn-on,' and improved metal solidification. It increases the resistance to metal penetration and imparts a uniform finish to the casting.
- Owing to the aforementioned factors, the demand for zircon flour/sand is expected to grow over the forecast period.

China to Dominate the Market

- China dominated the global market share for zirconium, and it is gaining popularity as the fastest-growing consumer of nuclear energy in the present scenario. The increasing focus on developing nuclear power resources is expected to increase the demand for zirconium.
- China is the largest steel producer in the world. According to the report published by World Steel Association, China accounted for 53% of the overall production of steel in the world, which is 1950.5 metric tons. Additionally, in 2021, the Chinese government approved the construction of 43 new EAFs with a total crude steel capacity of 29.33 million mt/year. Thus, the construction of new steel plants is likely to drive the market for refractories, thereby increasing the consumption of zirconium in the country.
- The increased pace of infrastructural activities has led to an increase in residential and commercial buildings in China. This is expected to drive the demand for refractories in the cement and iron steel industries, thereby driving the market studied.
- China is currently gaining popularity as the fastest-growing consumer of nuclear energy. The country has 50 operable nuclear reactors, with a combined net capacity of 47,518 MW. The increasing focus on the development of nuclear power resources is expected to increase the demand for zirconium.
- According to China's Atomic Energy Research Initiative, by 2035, nuclear plants operation should reach around 180 GW. Thus, increasing nuclear power production capacities is likely to increase the consumption of zirconium in the country.
- The growth in industries, such as refractories and ceramics, is expected to drive the market studied in the forecast period.

Zirconium Industry Overview

The global zirconium market is consolidated, with the top five companies accounting for major shares of global consumption. Most of the consumption of zirconium is in the Asia-Pacific region and Europe. The major players in the market include Iluka Resources Limited, Rio Tinto, Tronox Holdings PLC, Kenmare Resources PLC, and Eramet.

Additional Benefits:

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

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