

Niobium Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The niobium market size is projected to register a CAGR of over 5% during the forecast period.

The market was negatively impacted by COVID-19 in 2020. Owing to the pandemic scenario, several countries across the world went into lockdown, which led to a decrease in the demand for niobium from various end-user industries, as all the manufacturing and construction activities were put on hold. This created a negative impact on the niobium market. The market condition recovered in 2021, thereby driving the market studied during the forecast period.

Key Highlights

Over the medium term, accelerating usage of structural steel and increased usage in aerospace applications are driving the market's growth.

On the flip side, limited supply sources and the impact of the COVID-19 pandemic are hindering the growth of the market studied. The construction industry dominated the market, and it is expected to grow at a healthy rate during the forecast period, as niobium-based alloys are exceptionally meeting the challenges regarding fire resistance and seismic requirement of modern artistic construction.

Increasing demand for high strength and lightweight steel in oil and gas pipelines is likely to act as an opportunity in the future. Asia-Pacific dominated the market with the largest consumption from countries, such as China and Japan.

Niobium Market Trends

Construction Sector to Dominate the Market

The construction industry is the largest consumer of niobium across the world. The major application of niobium is in the

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production of steel. About half of all steel produced worldwide goes to the construction industry. High-strength niobium microalloyed plate products are used in the construction of bridges, viaducts, high-rise buildings, etc. Heavy machinery, pressure vessels, etc., represent additional applications of microalloyed plates. Structural sections are widely used in civil construction, railway wagons, transmission towers, etc., where niobium competes with vanadium. Similarly, a steel reinforcing bar is used in large concrete structures to increase their resistance to tensile loads. Larger diameter, high-strength grades are produced via the addition of niobium and/or vanadium, although some modern steel mills also use water cooling, which negates the need for microalloying. Finally, niobium has also found application in high-strength and wear-resistant rails for railway tracks operating under high axle loads.

The building and construction industry is currently a thriving industry in several emerging economies of the Asia-Pacific and European regions, and this is going to drive the demand for HSLA steel, which provides cost savings through reduction of weight in buildings while also preventing infrastructure failures.

The Chinese government has rolled out massive construction plans, including making provisions for the movement of 250 million people to its new megacities over the next ten years, creating a major scope for the market studied.

The construction sector in North America has witnessed significant growth in the past few years. According to the United States Census Bureau, new construction exceeds USD 1 trillion every year. According to United States census data, there were 1,737,000 new residential housing permits issued in 2021, rising more than 18% from 2020.

The factors driving the building and construction industry are the ever-increasing populations, rapid urbanization, and the rise in purchasing power. As a result of which, investments in infrastructure are being made and are in the pipeline. Adding to these, several vanity projects in the Middle East and building of commercial constructions, such as airports, etc., are expected to drive the market in the future.

Therefore, such robust growth in construction across the world is likely to boost the demand for the consumption of niobium during the forecast period.

Asia-Pacific to Dominate the Market

Asia-Pacific dominated the global market. With accelerating usage in structural steel and growing usage in the automobile and aerospace industry in countries such as China, India, and Japan, the consumption of niobium is increasing in the region. The consumption of niobium is very high in steel manufacturing in the form of ferroniobium, and the construction industry is thriving in several emerging economies, such as China and India, among others.

The infrastructure sector is an important pillar of the Indian economy. The government is taking various initiatives to ensure the timely creation of excellent infrastructure in the country. The government is focusing on railways, road development, housing, urban development, and airport development.

India is likely to witness an investment of around USD 1.3 trillion in housing over the next seven years, where the country is likely to witness the construction of 60 million new homes. The availability of affordable housing is expected to rise around 70% over the next three years in India.

Currently, China is majorly focusing on increasing the production and sale of electric vehicles in the country. According to the China Association of Automobile Manufacturers (CAAM), 47 Chinese power battery companies produced 186.0 GWh in 2021, an increase of 182.3% year on year. The increase in production was primarily due to China's rapid growth in new energy vehicles (NEVs).

By the end of the third quarter of 2022, China had produced 4.71 million NEVs and domestic sales exceeded 1.5 million units in 2021, representing a year-on-year increase of more than 80%. This expansion was fueled by government policies and subsidies, as well as the consumer demand for NEVs.

China has been replacing the use of vanadium from niobium or a compound of both in the steel industry, especially to produce rebars. Thus, the demand for niobium is expected to increase in the future.

Japan's electrical and electronics industry is also one of the world's leading industries. The country is a world leader in the

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production of video cameras, compact discs, computers, photocopiers, fax machines, cell phones, and various other key computer components.

The Japanese electronics industry is one of the world's largest. According to the JEITA, Japan produced 10% of the world's electronics by 2021. Domestic production of electronics increased 11% year on year to more than USD 80 billion in 2021. Similarly, in Australia, the building and construction sector contributes around 8% of the GDP. The country is expected to recover, with non-residential building activity and engineering construction increasing in the next two years, owing to the upcoming major road and rail projects, which may further uplift the consumption of steel during the forecast period. Considering the aforementioned factors, the Asia-Pacific niobium market is anticipated to rise steadily over the forecast period.

Niobium Market Competitor Analysis

The niobium market is an oligopolistic market, with three major mining companies, including CBMM, China Molybdenum, and Niobec, contributing to around 98% of the global supply. The largest and currently operating niobium deposit is located at Araxa, and it is owned and explored by Companhia Brasileira de Metalurgia e Mineracao (CBMM).

Additional Benefits:

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

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