

China High Alloy Duplex Stainless Steel Market assessment, By Composition [Chromium, Nickel, Copper, Tungsten, Molybdenum and Others], By Enduse Industry [Offshore & Near-shore Application (Oil Drilling, Desalination, Water Treatment and Others), Equipment (Pollution Control Equipment, Engineering Equipment and Fermentation Equipment), Processing Industry (Food Processing, Chemical Processing, Hot Water & Brewing Tanks), Pulp and Paper Industry, Construction, Transportation and Others], By Region, Opportunities, and Forecast, 2016-2030F

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# **Abstracts**

China high alloy duplex stainless steel market size was valued at USD 154.2 million in 2022, which is expected to grow to USD 342.8 million in 2030 at a CAGR of 10.5% during the forecast period between 2023 and 2030. A nexus of national priorities and global trends drive China's high-alloy stainless steel market. The nation's efforts to industrialize and build its infrastructure are expected to fuel the demand as stainless steel plays a vital role in the construction, transportation, and manufacturing sector. The country's high energy consumption and use of stainless steel in oil, gas, and renewable energy projects create significant demand for high-alloy stainless steel. Its corrosion resistance is also essential for the chemical and petrochemical industries, and water treatment and environmental initiatives encourage its use in purification systems. The demand for stainless steel is further boosted by China's role as a major exporter, which serves varied markets. Urbanization, automotive innovation, and sustainable practices foster additional requirements for this adaptable material.



Additionally, high-alloy stainless steel is increasingly used in energy projects due to the nation's rising energy consumption, which calls for materials that can withstand challenging environments. Its mechanical qualities and corrosion resistance make it indispensable for oil and gas exploration, power production, and the expanding field of renewable energy, underscoring its significance in advancing China's sustainability and energy security goals.

Rising Offshore Projects to Drive the Market in China

Duplex stainless steel is widely used in offshore and onshore oil & gas exploration, production, and transportation due to its high strength and corrosion resistance. The demand for duplex stainless steel for pipelines platforms and equipment will likely increase in China as it continues investing in offshore projects.

For instance, China's first offshore carbon storage project, constructed by the China National Offshore Oil Corporation (CNOOC) commenced its operations in June 2023. It aims to store more than 1.5 million tonnes of carbon dioxide (CO2), roughly equivalent to planting 14 million trees. The first significant offshore wind turbine project is in China, with 16 megawatts of capacity, which started construction in February 2023. Huge offshore construction like these projects in China are driving the country's requirement for high alloy duplex stainless steel.

#### Strong Export Opportunity in China

China is a significant high alloy duplex stainless steel exporter due to its strong manufacturing capabilities and cost-effective pricing. The material's strength, versatility, and resistance to corrosion help meet various international demands. Chinese duplex stainless steel is popular due to its quality and affordability in multiple industries, including oil and gas exploration, architectural applications, and infrastructure projects. Further, the nation enhances its appeal with extensive trade networks, customization options, and technical support.

For instance, China was responsible for 10% of the global iron and steel exports during 2020, which increased by 11.1% during 2021. Also, the demand for high alloy duplex stainless steel increases due to the expansion of chemical sector and rising infrastructure projects globally, increasing the demand for high alloy duplex stainless steel to be high in China.



Impact of COVID-19

The COVID-19 pandemic significantly impacted the high alloy stainless steel market in China. Lockdowns, decreased supply chain and industrial activities in China and importing countries, caused a decline in demand for stainless steel in various industries, including manufacturing, construction, and energy. Production slowdowns and labor shortages impacted the availability and distribution of stainless-steel products during the pandemic. However, in some ways, the pandemic contributed to the growth of the high alloy duplex stainless steel market, for instance, the demand for stainless steel in data centers and telecommunications infrastructure increased because of the boom in e-commerce and online services during the pandemic.

Impact of Russia-Ukraine War

The conflict between Russia and Ukraine has significant geopolitical and economic repercussions, with effects felt outside the immediate area. Global markets are experiencing uncertainty because of heightened tensions and military operations, which impact supply chains, investor sentiment, and trade dynamics. Since China greatly depends on nickel and chromium imports from Russia, the ongoing conflict has been severe in the stainless-steel market. However, the war affected the supply routes of crude oil globally, leading to new pipeline construction between these two countries and rising demand for high alloy duplex stainless steel.

Key Players Landscape and Outlook

Major Players in China are constantly making strenuous efforts to investigate and broaden the use of high alloy duplex stainless steel beyond its traditional applications. These major players are actively looking into novel ways to utilize the unique qualities of high-alloy stainless steel in industries such as energy, electronics, and aerospace.

For instance, TISCO introduced a new high alloy duplex stainless steel product that has received GTT approval and is intended for the membrane containment system of LNG ships and tanks of the MARK-III type in October 2022.

China's high alloy stainless steel market appears to have a promising outlook due to ongoing industrialization and significant infrastructure development. Furthermore, China's crucial position as a major exporter place it in a position to meet global demand. Additionally, increased environmental consciousness and sustainability initiatives will increase the appeal of stainless steel. Advanced stainless-steel grades may develop



ongoing research and development work, improving performance, and opening new application possibilities.



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\*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work.

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