

# Global Duplex Stainless Steel Market Poised for Strong Growth Amid Rising Demand from Oil & Gas and Desalination Sectors

*The International Stainless Steel Forum (ISSF) reported a 12% increase in duplex stainless steel production in 2023, highlighting growing demand across sectors*

VANCOUVER, BC, CANADA, April 8, 2025 /EINPresswire.com/ -- The [duplex stainless steel market](#) is expected to grow from an estimated USD 3.8 billion in 2024 to USD 6.2 billion in 2033, at a CAGR of 5.50%. The latest report, titled 'Global Duplex Stainless Steel Market,' comprises a profound analysis of the

fundamental parameters contributing to the global Duplex Stainless Steel market scenario. The research report provides the reader with an in-depth interpretation of the Duplex Stainless Steel market dynamics, including the crucial drivers, opportunities, threats, and challenges. The report also describes the key business strategies, demand and supply ratios, leading regions, and the renowned market players, in a nutshell, offering a futuristic outlook of the overall Duplex Stainless Steel industry. The market intelligence report is a prototype of the 360° overview of the global Duplex Stainless Steel industry, shedding light on the estimated market value, share, growth trends, gross revenue, competitive overview, prominent manufacturers and buyers, available product types, and end-use applications.

The global duplex stainless steel (DSS) market is witnessing significant growth, driven by its high strength, corrosion resistance, and cost-effectiveness compared to traditional stainless steel grades. These advantages make DSS an ideal material for industries such as oil & gas, chemical processing, and desalination.

According to the International Stainless Steel Forum (ISSF), duplex stainless steel production increased by 12% in 2023, reflecting strong demand across various sectors. Major players are expanding their capabilities to meet this rising demand. In June 2023, Outokumpu introduced a new duplex grade tailored for desalination and chemical processing applications. Similarly, in



October 2024, Sandvik Materials Technology announced an expansion of its production facilities in Sweden to support growing offshore project requirements.

The market is also benefiting from the shift toward sustainability and energy efficiency. The International Desalination Association (IDA) reported that over 30% of newly installed desalination plants globally in 2023 opted for duplex stainless steel due to its durability and recyclability. With advancements in welding and manufacturing technologies, the affordability and application of DSS are expanding, particularly in emerging markets.

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#### Competitive Terrain:

The global Duplex Stainless Steel industry is highly consolidated owing to the presence of renowned companies operating across several international and local segments of the market. These players dominate the industry in terms of their strong geographical reach and a large number of production facilities. The companies are intensely competitive against one another and excel in their individual technological capabilities, as well as product development, innovation, and product pricing strategies.

The Leading Market Contenders Listed In The Report Are:

Outokumpu

Sandvik Materials Technology

Nippon Steel

Allegheny Technologies Incorporated

ArcelorMittal

Vallourec

TISCO

Baosteel

Jindal Stainless

Carpenter Technology

## Key Market Drivers

### Increasing Offshore Oil & Gas Exploration and Expanding Desalination Industry

The oil & gas sector remains a primary consumer of duplex stainless steel due to its superior resistance to corrosion and harsh environments. According to the International Energy Agency (IEA), offshore oil production accounted for 30% of global crude oil output in 2023, with significant investments in the North Sea, Gulf of Mexico, and Southeast Asia. In March 2024, Chevron announced plans to incorporate duplex stainless steel pipes in a new offshore platform to improve durability and efficiency.

The global desalination industry is also growing rapidly, with a 10% annual increase in desalination plant installations reported in 2023. In July 2024, the UAE announced the construction of the world's largest desalination plant, specifying the use of super duplex stainless steel in critical components. Given its resistance to chloride-induced corrosion and cost advantages over nickel-based alloys, DSS is increasingly the preferred choice for desalination projects.

## Market Challenges

### High Energy Consumption in Manufacturing

Despite its advantages, the production of duplex stainless steel remains energy-intensive, posing a challenge to market expansion. The World Steel Association reports that the global steel industry accounts for approximately 7% of total energy consumption, with DSS production requiring significant power input. As energy prices fluctuate, manufacturers face increased operational costs, which can be passed on to consumers, limiting broader market adoption.

However, efforts are underway to improve energy efficiency through technological innovations such as hydrogen-based steelmaking and energy recovery systems. These advancements could help offset high production costs and support sustainable market growth.

## Market Segmentation

### Duplex Stainless Steel Grades: Market Share and Growth Trends

The duplex stainless steel market is categorized into duplex, lean duplex, and super duplex grades. In 2024, standard duplex stainless steel led the market, accounting for over 60% of total demand. Its balanced composition offers superior strength and corrosion resistance at a cost-effective price, making it a preferred choice for applications such as pressure vessels, pipelines, and marine structures.

While duplex stainless steel holds the largest market share, super duplex is expected to

experience the fastest growth. With superior corrosion resistance and high strength, super duplex is gaining popularity in extreme conditions such as deep-sea oil exploration and high-chloride environments. Industry forecasts suggest the super duplex segment will grow at a rate of 6–7% annually, driven by increasing investments in energy and infrastructure projects.

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## Segmentation

### Grade Type Outlook (Revenue, USD Billion; 2020-2033)

#### Duplex

#### Lean Duplex

#### Super Duplex

### Product Form Type Outlook (Revenue, USD Billion; 2020-2033)

#### Tubes

#### Pumps & Valves

#### Fittings & Flanges

#### Welding Wires

#### Rebar & Mesh

#### Others

### End-Use Industry Type Outlook (Revenue, USD Billion; 2020-2033)

#### Oil & Gas Industry

#### Desalination Industry

#### Pulp & Paper Industry

#### Chemical Industry

#### Construction Industry

Others

Regional Segmentation:

North America

Latin America

Europe

Middle East & Africa

Asia Pacific

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Report Highlights:

Besides offering a vivid depiction of the global Duplex Stainless Steel business sphere and its fundamental operations, the latest report provides the industrial chain analysis and list down the current and future market trends and growth opportunities.

The report includes information on the present and historical market scenarios, which helps forecast the market conditions over the next eight years (2020-2027).

The report scrutinizes the salient factors influencing the growth of the market in the near future.

The strategic marketing recommendations, crucial information related to the new market entrants, and expansion plans of various businesses are poised to provide the reader with a competitive edge in the market.

Key Benefits of the Report:

Comprehensive analysis of the competitive scenario and its changing dynamics

Analytical data with detailed SWOT analysis and Porter's Five Forces analysis

In-depth 8 year analysis of the Global Duplex Stainless Steel Market

Critical assessment of the key market segments

Comprehensive analysis of the drivers, restraints, trends, and opportunities

Detailed regional analysis and extensive company profiling

Extensive assessment of current and emerging trends of the market

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