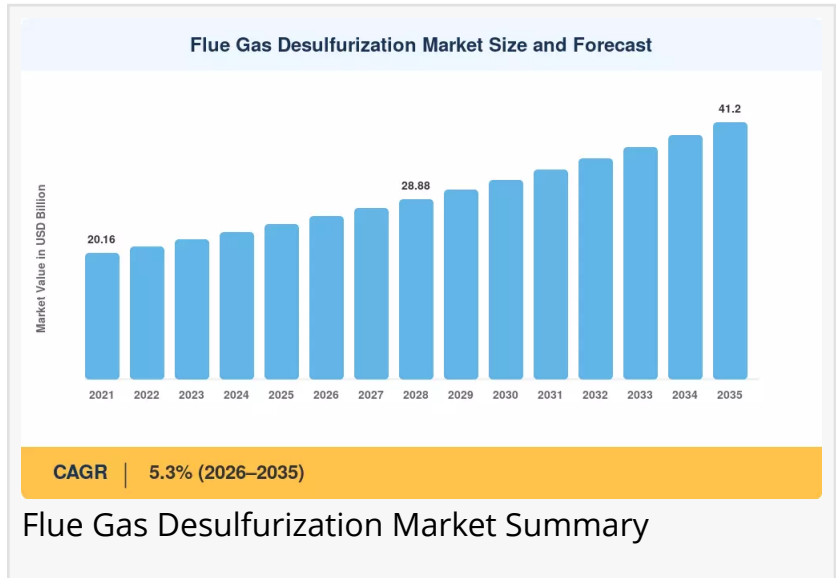


Flue Gas Desulfurization Market Trends and Growth Reach USD 41.2 billion by 2035, Registering a CAGR of 5.3%

Spray dry absorber SDA FGD system installations are expanding at a CAGR of 6.8%, the fastest among all technology segments

NY, CA, UNITED STATES, July 7, 2026

/EINPresswire.com/ -- The Flue Gas Desulfurization Market is positioned for steady growth as industries and power producers continue investing in advanced emission control technologies to meet stringent environmental regulations and sustainability goals. Rising industrial activity, ongoing modernization of fossil fuel power plants, and increasing awareness of air pollution are creating strong demand for highly efficient FGD systems.



Technological advancements in wet and dry desulfurization processes, digital monitoring, artificial intelligence, advanced materials, and byproduct utilization are improving operational performance while reducing lifecycle costs. As governments worldwide continue to strengthen environmental policies and industries prioritize cleaner production processes, the Flue Gas Desulfurization Market is expected to remain a critical component of global air pollution control strategies throughout the forecast period.

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Wet limestone FGD scrubber technology commands roughly 58% of global revenue, underpinned by its proven >97% SO₂ removal rate in utility-scale power plants”

Arti Dhapte

The [Flue Gas Desulfurization \(FGD\) Market share](#) is witnessing steady growth as governments and industries

worldwide strengthen efforts to reduce air pollution and comply with stringent environmental regulations. According to Market Research Future analysis, the Flue Gas Desulfurization Market reached an estimated value of USD 24.8 billion in 2025 and is projected to grow from USD 26.1

billion in 2026 to USD 41.2 billion by 2035. The market is expanding due to increasing investments in emission control technologies, rising electricity generation from fossil fuel-based power plants, growing industrialization, and stricter sulfur dioxide (SO₂) emission standards across developed and emerging economies.

Flue gas desulfurization is an air pollution control technology designed to remove sulfur dioxide emissions from exhaust gases generated by coal-fired power plants, industrial boilers, cement manufacturing facilities, refineries, steel plants, and various other industrial operations. As countries continue to prioritize cleaner industrial production and environmental sustainability, FGD systems have become essential components of modern emission control infrastructure.

Flue Gas Desulfurization Market Overview

The Flue Gas Desulfurization Market has gained significant importance as industries seek effective solutions to reduce sulfur dioxide emissions that contribute to acid rain, respiratory illnesses, and environmental degradation. Governments worldwide are enforcing stricter air quality standards, compelling power producers and industrial operators to install advanced desulfurization systems.

Coal remains an important source of electricity generation in several countries, particularly across Asia-Pacific. Consequently, demand for efficient FGD systems continues to rise to ensure regulatory compliance while maintaining reliable energy production.

In addition to power generation, industries such as cement, chemicals, oil & gas, mining, marine transportation, and metallurgy are increasingly adopting flue gas treatment technologies to reduce emissions and improve environmental performance.

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Market Drivers

One of the primary drivers of the Flue Gas Desulfurization Market is the implementation of stringent environmental regulations aimed at reducing sulfur dioxide emissions. Regulatory agencies across North America, Europe, and Asia have introduced strict emission limits that require industrial facilities and power plants to adopt advanced pollution control technologies.

Growing electricity demand continues to support market growth. Despite increasing renewable energy adoption, coal and fossil fuel-based power plants remain critical components of the global energy mix, particularly in developing economies. These facilities require efficient FGD systems to comply with environmental standards.

Rapid industrialization in emerging economies is another major growth driver. Expanding steel production, cement manufacturing, petrochemical operations, and industrial processing activities are increasing demand for emission control equipment.

Rising public awareness regarding air pollution and its impact on human health is encouraging governments to strengthen environmental legislation, leading to increased installation of flue gas treatment systems.

Additionally, growing investments in modernization and retrofitting of existing power plants are creating substantial opportunities for FGD technology providers.

Emerging Market Trends

Several important trends are shaping the Flue Gas Desulfurization Market. One of the most significant is the increasing adoption of wet FGD systems due to their high sulfur dioxide removal efficiency and ability to handle large flue gas volumes.

Another notable trend is the integration of digital monitoring and automation technologies into emission control systems. Smart sensors, IoT-enabled equipment, and predictive maintenance platforms improve operational efficiency while reducing maintenance costs.

Industries are also focusing on byproduct utilization. Gypsum generated from wet FGD systems is increasingly being used in cement manufacturing, construction materials, and agriculture, supporting circular economy initiatives.

The development of compact and modular FGD systems is gaining traction, particularly for smaller industrial facilities seeking cost-effective emission control solutions.

Energy-efficient desulfurization technologies are becoming increasingly important as operators aim to minimize operating costs while achieving higher pollutant removal efficiency.

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Technology Advancement Driving Market Growth

Technological innovation continues to strengthen the Flue Gas Desulfurization Market. Modern wet limestone FGD systems now achieve sulfur dioxide removal efficiencies exceeding 95%, making them the preferred choice for large-scale power generation facilities.

Dry and semi-dry FGD technologies have also advanced considerably, offering lower water consumption and simplified operation for industrial applications where water availability is

limited.

Artificial intelligence and machine learning are increasingly being incorporated into FGD operations. AI-powered control systems optimize reagent consumption, improve process efficiency, and enable predictive maintenance to reduce downtime.

Advanced corrosion-resistant materials are extending equipment lifespan while lowering maintenance requirements, particularly in harsh industrial environments.

Real-time emission monitoring systems provide continuous measurement of sulfur dioxide concentrations, ensuring regulatory compliance and enabling proactive process adjustments.

Research is also focused on developing next-generation sorbents and absorbents that enhance sulfur removal efficiency while reducing operational costs and waste generation.

Flue Gas Desulfurization Market Regional Insights

Asia-Pacific dominates the Flue Gas Desulfurization Market due to rapid industrialization, expanding coal-fired power generation capacity, and increasingly stringent environmental regulations. China remains the largest market, supported by large-scale investments in emission control technologies, while India continues to strengthen air quality standards across its power sector.

North America represents a mature market with widespread deployment of FGD systems across coal-fired power plants. The United States continues to invest in retrofitting existing facilities and upgrading emission control equipment to meet evolving environmental requirements.

Europe remains a significant market driven by strict emission regulations under the European Union's environmental directives. Countries such as Germany, Poland, the United Kingdom, and Italy continue to modernize industrial facilities with advanced desulfurization technologies.

Latin America is witnessing gradual market expansion as governments implement stronger environmental policies and invest in cleaner industrial infrastructure, particularly in Brazil, Chile, and Mexico.

The Middle East & Africa are emerging markets where growing industrialization, expanding power generation capacity, and increasing environmental awareness are creating opportunities for FGD system deployment.

Major Key Players

The Flue Gas Desulfurization Market is highly competitive, with major companies focusing on technological innovation, strategic partnerships, engineering expertise, and expansion of global

service capabilities.

Some of the leading market participants include:

General Electric (GE Vernova)
Mitsubishi Heavy Industries Ltd.
Babcock & Wilcox Enterprises, Inc.
Ducon Technologies Inc.
Andritz AG
Thermax Limited
Hamon Group
Valmet Corporation
Doosan Enerbility
Hitachi Zosen Corporation
Chiyoda Corporation
FLSmidth & Co. A/S
Marsulex Environmental Technologies
KC Cottrell Co., Ltd.
CECO Environmental Corp.
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Flue Gas Desulfurization Market Segmentation

The Flue Gas Desulfurization Market can be segmented based on technology, installation type, application, and end-use industry.

By Technology

Wet Flue Gas Desulfurization
Dry Flue Gas Desulfurization
Semi-Dry Flue Gas Desulfurization
By Installation Type

New Installation
Retrofit Installation
By Application

Power Plants
Industrial Boilers
Cement Manufacturing
Steel Plants

Chemical Processing
Oil & Gas Refineries
Marine Applications
Waste Incineration
Other Industrial Facilities
By End-Use Industry

Power Generation
Cement
Iron & Steel
Chemicals
Oil & Gas
Mining
Marine
Pulp & Paper
Manufacturing

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