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Emission Monitoring System (EMS) Market Research Report – Forecast till 2030

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Description:

Global Emission Monitoring System (EMS) Market Overview:

The Emission Monitoring System (EMS) Market Size was valued at USD 2.94 Billion in 2021. The Emission Monitoring System (EMS) industry is projected to grow from USD 3.19 Billion in 2022 to USD 5.21 Billion by 2030, exhibiting a compound annual growth rate (CAGR) of 6.30% during the forecast period (2022 - 2030). The emission monitoring systems are deployed in industrial plants and intensively used for several industrial purposes to regulate the emission let out from those industries. The Emission monitoring systems comprise varied hardware components such as gas analyzers, filters, and software solutions to record the data generated. The stringent regulations imposed by the governments of several countries, conclaves, and awareness created by organizations in such countries regarding protecting the environment have propelled the Emission Monitoring System industry growth.

Global Emission Monitoring System (EMS) Market Overview

Source: Secondary Research, Primary Research, MRFR Database, and Analyst Review

Emission Monitoring System (EMS) Market Trends

Increasing dependency on coal-fired power plants to generate electricity

Numerous airborne pollutants, including sulfur dioxide, mercury, lead, nitrogen oxides, particulates, and other heavy metals, are released when coal is burned. Injurious health effects from prolonged exposure to these contaminants include breathing problems, brain damage, asthma, heart issues, cancer, and early demise. Since it measures the concentration of harmful gases or particulate matter generated from the plant and other industrial processes, the emission monitoring system is vital in lowering carbon emissions. In turn, this guarantees that emission is constrained to allowed norms. Strict emission regulations implemented in Europe and North America are anticipated to drive Emission Monitoring System (EMS) market growth. In industrialized regions like North America and Europe, several nations have put strict regulations and standards in place for carbon emissions. For instance, the government of India imposed the Bharat Stage VI guidelines in April 2020, which restricted the emission of dangerous gases including nitrous oxide and particulate matter. These requirements have raised a demand for pollution monitoring systems.

Emission Monitoring System (EMS) Market Segment Insights:

Emission Monitoring System (EMS) Component Insights

The market segmentation, based on Components, includes Hardware, Software, and Service. The Hardware segment holds the majority share in 2021 of the market. The fact that they are employed in both CEMS and PEMS to gather emissions data might be credited to the rise of the hardware EMS market. The PEMS is a software-powered system that leverages hardware components like sensors to forecast gas emissions, in contrast to the CEMS, which operates through its hardware components. Since the majority of facilities have installed hardware-based continuous emission monitoring systems, the need for hardware devices.

Emission Monitoring System (EMS) System Type Insights

Based on System Type, the market segmentation includes CEMS and PEMS. The CEMS segment is estimated to account for the largest share of the market. CEMS are used to gather information on gas emission levels from a variety of sectors, including waste incineration, electricity production, oil and gas, and chemicals. In addition, demand for CEMS is anticipated to rise as more rigorous laws and regulations surrounding pollution monitoring across sectors come into effect.

Emission Monitoring System (EMS) Vertical Insights

Based on Vertical, the market segmentation includes Oil & Gas, Chemicals & Petrochemicals, Metal & Mining, Pulp & Paper, and Energy & Power. The Oil & Gas segment dominated the market in 2021. To measure and reduce dangerous chemicals such as sulfur dioxide (SO2) and methane (CH4) and also to collect the data necessary for reporting emissions to governmental regulatory agencies, such as the Industrial Emissions Directive (IED) by the European Parliament and the Council on Industrial Emissions and the Clean Air Act by the EPA in the U.S., EMS is primarily used in the oil and gas industry.

Figure 2: Emission Monitoring System (EMS) Market, by System Type, 2021 & 2030 (USD Billion)

Emission Monitoring System (EMS) Market, by System Type, 2021 & 2030

Source: Secondary Research, Primary Research, MRFR Database, and Analyst Review

Emission Monitoring System (EMS) Regional Insights

By region, the study provides market insights into North America, Europe, Asia-Pacific, and the Rest of the World. The Coal-powered industries and power generation industries are numerously present in the Asian pacific regions. The countries such as China and India are abundantly generating power through coal-powered industries. The Coal-powered industries are the major end-users of the Emission Monitoring system, as those industries emit large amounts of substrate matter and dust into the environment. On the other hand, Europe is considered the biggest IT vendor and prime manufacturing hub for setting up factories and data center facilities. The growing construction activities and power consumption is providing lucrative opportunities for the growth of the Emission Monitoring System market in those countries.

The regulations imposed by the Chinese Government and the Indian government upon their respective industrial sectors are becoming stringent in recent times. Such factors have propelled the key market players in these countries to deploy Emission Monitoring systems in their plants. Additionally, the increasing environmental pollution and declining air quality in developing regions are fueling the overall growth of the Emission Monitoring System market.

Further, the major countries studied in the market report are The U.S., Canada, Germany, France, the UK, Italy, Spain, China, Japan, India, Australia, South Korea, and Brazil.

Figure 3: EMISSION MONITORING SYSTEM (EMS) MARKET SHARE BY REGION 2021 (%)

EMISSION MONITORING SYSTEM (EMS) MARKET SHARE BY REGION 2021

Source: Secondary Research, Primary Research, MRFR Database, and Analyst Review

Emission Monitoring System (EMS) Key Market Players & Competitive Insights

The major market players are investing a lot of money in R&D to expand their product lines, which will spur further market growth. With significant market development such as new product releases, increased investments, and collaboration with other organizations, market participants are also undertreking various strategic activities to expand their presence. To grow and thrive in a market climate that is becoming more competitive and growing, competitors in the Emission Monitoring System (EMS) industry must offer affordable products.

Manufacturing locally to cut operating costs is one of the main business tactics manufacturers use in the Emission Monitoring System (EMS) industry to benefit customers and expand the market sector. Major market players, including Emerson Electric Co, ABB Ltd, General Electric, Siemens, Rockwell Automation Inc, and others, are attempting to increase market demand by funding R&D initiatives.

A high-tech industrial business involved in energy, healthcare, and transportation is General Electric (GE). The company operates in the Aviation, Healthcare, Renewable Energy, and Power areas. Engines, parts, avionics, and systems for general aviation, business, and military aircraft are offered by the Aviation section. The Healthcare division provides medical imaging, digital solutions, patient monitoring and diagnostics, medication research, and performance improvement strategies in addition to healthcare systems and pharmaceutical diagnostics. Onshore and offshore wind, blades, hydro, storage, solar, and grid solutions, hybrid renewables, and digital services offerings, are the main topics of the Renewable Energy section. The Power section provides gas, steam, nuclear, and other power production equipment to clients in the power generation, industrial, government, and other sectors.

Emerson Electric is a technological and engineering solutions provider for the commercial, industrial, and residential industries. The company operates through three businesses: Automation Solutions, AspenTech, and Commercial & Residential Solutions. Automation Solutions provides measuring instruments, regulators, control and safety systems, asset management, electrical components and lighting, welding, assembly, and cleaning equipment. AspenTech's asset optimization software allows industrial producers to plan, manage, and maintain their processes. The Commercial & Residential Solutions division focuses on heating and air conditioning, refrigeration and cold chain systems, household items, professional equipment, and vacuums.

Key Companies in the Emission Monitoring System (EMS) market include

•	AMETEK Inc.
•	Emerson Electric Co.
•	GENERAL ELECTRIC
•	Siemens AG
•	Rockwell Automation Inc

ABB Ltd

- PARKER HANNIFIN CORP Thermo Fisher Scientific **CMC** Solutions Fuji Electric Co. Ltd. **Emission Monitoring System (EMS) Industry Development** In October 2021, ABB launched ABB Ability Genix Datalyzer, a cloud-based data analytics solution. Introduced for industries, such as cement, steel, chemicals, and power generation, it enables fleetwide management and optimization of emissions monitoring equipment. • In September 2021, Emerson launched the Rosemount X10 CEMS. It is designed to help industrial plants meet increasingly strict environmental regulations and evolving sustainability demands. • In January 2021, ABB introduced CEMcaptain, an emission monitoring system designed to help the maritime industry comply with regulations and become more sustainable. **Emission Monitoring System (EMS) Market Segmentation Emission Monitoring System (EMS) Component Outlook** Hardware Software Service **Emission Monitoring System (EMS) System Type Outlook** CEMS PEMS **Emission Monitoring System (EMS) Vertical Outlook** Oil & Gas
 - Pulp & Paper

 Energy & Power

Metal & Mining

Chemicals & Petrochemicals

Emission Monitoring System (EMS) Regional Outlook

North Americ	oa
•	
	US
•	Canada
Europe	
•	Germany
•	France
٠	UK
•	Italy
•	Spain
•	Rest of Europe
•	
Asia-Pacific	
•	China
•	Japan
•	India
٠	Australia
•	South Korea
•	Australia
•	Rest of Asia-Pacific
• Rest of the V	Vorld

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Middle East

Latin America

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