

Process Instrumentation - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The Process Instrumentation Market size is estimated at USD 18.46 billion in 2024, and is expected to reach USD 21.76 billion by 2029, growing at a CAGR of 3.35% during the forecast period (2024-2029).

The market is driven by technological innovations and increasing demands for process control systems. Moreover, cost efficiency, reduction in engineering time, asset utilization, and energy efficiency are some of the major factors driving the growth of the process instrumentation market.

Key Highlights

- Process instrumentation equipment is needed in a wide range of end-use industries. The use of process instrumentation equipment offers a host of benefits, including improvement in the quality of the product, emission reduction, reduction in human errors, and cost-savings. Significant parameters like recording, positioning, measuring, and controlling fuel the market's growth as they are essential for the smooth functioning of a manufacturing unit and are top priorities for process instruments for achieving significant levels of absolute reliability, accuracy, and precision.
- A long-term contract is a significant gain for process instrumentation solution suppliers because it ensures a steady stream of money. As a result, it is a critical technique for top companies to secure contracts, particularly from governments. Siemens, for example, revealed in September 2022 that it had been selected to modernize the distributing control network and enhanced metering network for Alexandria Electricity Distribution Company (AEDC), a part of the state-owned Egyptian Electrical Holding Company.
- The manufacturing business has seen an increase in data points created due to the widespread use of connected equipment and sensors and the enablement of M2M communication. According to Zebra's newest industrial vision research, intelligent asset tracking systems centered on IoT and RFID are predicted to outperform conventional spreadsheet-based approaches by 2022.

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- The recent surge in the adoption of automation in the manufacturing sector has contributed to market growth. This is due to a greater industrialist understanding of the several advantages of automation in respect of speed to market, investment outlay, and output quality. However, high initial and maintenance investment cost is expected to hamper the market growth over the forecast period.
- The COVID-19 pandemic boosted the demand for industrial automation due to labor shortages. Post Covid-19, companies are increasingly adopting intelligent robotics and technology across the production processes. Robotics are seen as critical instruments for increasing production. The majority of robotic acceptance has happened in the industrial sector, wherein machines do numerous manual jobs more effectively and reliably than humans.

Process Instrumentation Market Trends

Water and Wastewater Treatment is Expected to Witness the Highest Growth

- Process instrumentations are used to monitor various parameters in process plants, such as flow, pressure, temperature, pH, conductivity, level, turbidity, speed, force, humidity, and other factors in water & wastewater treatment.
- SCADA systems are widely employed in monitoring and regulating water and waste treatment processes. These enable operators to monitor the consumption, flows, and contents of water tanks, canals, reservoirs, and others. Furthermore, these give data on the condition of the water being handled. SCADA technologies are frequently utilized to manage stormwater draining infrastructure and regulate wastewater purification plants.
- The current challenges of water availability and sustainability are primarily attributed to an enormous increase in demand. However, as per U.S. EPA in May 2022, Household leaks waste around 900 billion gallons of water per year in the United States. That is equivalent to roughly 11 million households' annual water use. This necessitates the adoption of process instrumentation, such as flow control valves, fueling market growth.
- Moreover, the United States Environmental Protection Agency (EPA) has accelerated investment in the nation's aging water infrastructure. For instance, in November 2022, the U.S. The EPA approved a USD 52 million Water Infrastructure Finance and Innovation Act (WIFIA) grant to the City of Pflugerville, Texas, to support the Water Treatment Plant Modernization Project. With the WIFIA loan, the EPA is assisting the facility in increasing the amount of drinking water it can process while also keeping the water healthier to consume with modern treatment and filter equipment, which in turn is expected to propel the growth of the process instrumentation market in the industry.
- Increasing government initiatives in wastewater treatment are expected to contribute to segment growth over the coming years. For instance, in October 2022 New York Governor launched a USD 55 million wastewater upgrade initiative at Buffalo's Bird Island Wastewater Processing Facility.

Asia Pacific to Emerge as the Fastest Growing Market

- Asia Pacific is expected to have the fastest growth over the forecast due to rapidly increasing industrial activities, rising cost pressure and production rate, and favorable government policies in developing nations such as China and India in this region.
- The region's expanding industrial sector and increased oil & gas usage are propelling the industry ahead. For instance, China intends to increase its massive gas pipeline networks to 163,000 kilometers by 2025, requiring a USD 1.9 trillion investment.
- Increasing end-use developments in the region are expected to create lucrative opportunities for market participants to improve their footprints. In January 2022, Adani Total Gas Ltd (ATGL), a collaborative partnership among the Adani Group and TotalEnergies, secured licenses to develop its City Gas Distribution (CGD) infrastructure to 14 additional geographical regions with an INR 20,000-crore (~USD 200 Billion) investment.

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- The rising consumption of oil & gas will necessitate the establishment of new production facilities, boosting the requirement for process instrumentation. According to the IEA, daily oil output is expected to exceed 15 million barrels by 2040. Further, according to the IBEF, natural gas usage is expected to surpass 143.08 million tons by 2040. Thus, increasing demand for oil & gas is expected to contribute to regional market growth.
- The active role of governments in educating the masses regarding the benefits of technology and rising funds being diverted towards adopting technologically advanced machinery in industries has been of prime importance for market growth in the region. In the next few years, the market will be driven by the thriving growth of key end-use industries such as metal and mining, chemical, food and beverages, oil & gas, and others.

Process Instrumentation Industry Overview

The process instrumentation market is moderately fragmented, with the presence of both global and regional players such as Honeywell International Inc., Siemens AG, Omron Corporation, ABB Limited, and Emerson Electric Co., among others. These key players are adopting various strategies such as new product launches, expansions, agreements, joint ventures, partnerships, acquisitions, and others to increase their footprints in the market.

In November 2022, Equilibar launched a dedicated Single Use Technology Branch to address the pharmaceutical industry's ever-changing fluid management requirements. The SDO valves are Equilibar's first single-usage fluid control device, which precisely regulates back pressures and flow. "The SDO is the unique wetted per-use valve in the pharmaceutical production area," claims the company. In September 2022, OleumTech, a leading developer of industrial technology and Internet of Things (IoT) solutions, added a Smart Differential Pressure (DP) Transmitter to its rapidly expanding H Series range of hardwired processes instrumentation. The innovative DP Transmitter provides the superior performance, dependability, and precision required by industrial industries such as petrochemical, upstream oil and gas, electricity, chemical, and wastewater. In July 2022, Emerson introduced the TESCOM Anderson Greenwood Instrumentation H2 Valve Range for hydrogen operations with pressures up to 15,000 psi (103.4 MPa). The innovative technology reliably separates process pressures in high-pressure gas operations, including hydrogen filling facilities and tube trailers, lowering fugitive pollutants and increasing safety.

Additional Benefits:

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

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