

NA Safety Instrumented Systems - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-04-28 | 120 pages | Mordor Intelligence

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Report description:

The NA Safety Instrumented Systems Market is expected to register a CAGR of 5.2% during the forecast period.

Key Highlights

- Therefore, companies must do a process hazard analysis to identify the actions necessary for the highest level of safety. In addition, as the process industry moves closer to adopting higher safety requirements, control systems that can accommodate changes, including steam turbines, compressors, and variable speed drives, could be required to retain profitability while accommodating changing demands.
- Chemical, petrochemical, mining, gas compression, and many other sorts of catastrophes can make chemical, petrochemical, and industrial facilities very dangerous places to work because of the potential for fire, explosion, tank overflow, gas release, or chemical exposure.
- The idea of defining risks as those associated with processing functions rather than isolated processing lines or tank risks has been adopted by the Occupational Safety and Health Administration (OSHA), several chemical companies, ISA, and other professional groups to reduce such risks.
- The ISA 84 and IEC 61508 standards were created using functional safety ideas. Later, the ISA-84/IEC-61511 standard, known as ISA in the United States and IEC in Europe, was created by combining the two standards. Functional safety would be managed at a facility by establishing a distinctive, well-designed safety instrumented system to avoid functional hazards.
- The COVID-19 pandemic also substantially influenced the development of several sectors as most businesses were forced to halt or curtail their operations due to several government-imposed regulations. The pandemic significantly impacted the adoption of safety instrumented systems.
- For instance, the COVID-19 pandemic-driven worldwide economic downturn and the collapse of the oil market, which temporarily brought the benchmark price for US crude oil to a record low, had unprecedented negative effects on the oil and gas industry, one

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of the main end users of SIS.

- The latest IEA analysis predicts that by 2026, oil consumption will rise by 104 million barrels per day or 4% more than it did in 2019, suggesting that the market for safety instrumented systems (SIS) will experience rapid expansion in the future.

North America Safety Instrumented Systems Market Trends

Chemical and Petrochemical Industry Expected to Hold Major Market Share

- A safety instrumented system comprises sensors, logic solvers, and final control components to bring the process to a safe state before violating specified conditions.
- The expanding advantages of safety instrumented systems over conventional systems stimulate market demand. The chemicals and petrochemicals sectors are recognized as constantly growing, making it crucial to expand and update old infrastructure and safety issues. Traditional safety measures are hardwired and deployed through an electrical control system, which can result in incidents that might harm people, property, and the environment.
- As a result, there may be a surge in demand for safety instrumented systems in the petrochemical industry, which will provide several benefits, including increased field life, decreased unplanned downtime, lower annual maintenance costs, elimination of unforeseen repair costs, and compliance with current codes and standards. The growing benefits of safety instrumented systems over conventional ones may fuel market expansion.
- Chemical industries have dangerous working conditions as gas, oil, or dust create an explosive atmosphere inside and around machinery. In addition, the sector has faced extra difficulties because of problems with regulations, geopolitical risks, legal restrictions on the use of natural resources, shareholder activism, and growing public scrutiny. Therefore, installing safety equipment like SCADA, HIPPS, and equipment for monitoring and detecting gas and fire is crucial.

The United States Expected to Hold Significant Market Share

- During the forecast period, the US market for safety instrumented systems is anticipated to expand quickly due to rising urbanization and industrialization, along with rising global energy consumption and industrial disaster risks. As a result, safety precautions are becoming increasingly necessary. Safety system user demands have evolved from a safety perspective and the ease of use in relation to other systems and system functions, including DCSs and operation and monitoring functions.
- Due to the COVID-19 pandemic, many industries, including consumer electronics, oil and gas, manufacturing, chemical and petrochemicals, and automotive, were adversely affected. However, the pharmaceutical, retail, food, and agricultural sectors expanded significantly.
- For instance, pipeline construction projects, including the Pecos Trail Pipeline Project, the Penn East Pipeline Project, and the Atlantic Coast Pipeline, are anticipated to be completed in the coming years. Over the next several years, these initiatives are anticipated to significantly increase demand in the nation for ultrasonic non-destructive testing equipment.
- The nation generates more than 30% of the world's nuclear electricity, making it the greatest nuclear power producer in the world. According to the World Nuclear Association, the United States has 92 active nuclear reactors with a total net capacity of 94,718 MWe. In 2021, nuclear power accounted for roughly 8% of the nation's total energy-producing capacity and about 19% of all utility-scale electricity production.

North America Safety Instrumented Systems Industry Overview

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The North American safety instrumented systems market is moderately competitive with several major players like Rockwell Automation Inc., Honeywell International Inc., Emerson Electric Company, etc. A few significant players currently dominate in terms of market share. With a prominent share in the market, these major players are focusing on expanding their customer base across other countries. These companies leverage strategic collaborative initiatives to increase their market share and profitability. The competition, rapid technological advancements, and frequent changes in consumer preferences are expected to threaten the market's growth during the forecast period.

- January 2023 - Rockwell Automation Inc., the largest company in the world specializing in industrial automation and digital transformation, announced that it had been selected to provide the automation and Integrated Control and Safety Systems (ICSS) systems for P-79, an FPSO vessel in the Petrobras fleet. Rockwell Automation Technology and Sensia Solutions were chosen for their well-established histories in the oil and gas industry and their robust interconnectivity.

Additional Benefits:

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

Table of Contents:

1 INTRODUCTION

- 1.1 Study Assumptions and Market Definition
- 1.2 Scope of the Study

2 RESEARCH METHODOLOGY

3 EXECUTIVE SUMMARY

4 MARKET DYNAMICS

- 4.1 Market Overview
- 4.2 Industry Value Chain Analysis
- 4.3 Industry Attractiveness - Porter's Five Forces Analysis
 - 4.3.1 Threat of New Entrants
 - 4.3.2 Bargaining Power of Buyers
 - 4.3.3 Bargaining Power of Suppliers
 - 4.3.4 Threat of Substitute Products
 - 4.3.5 Intensity of Competitive Rivalry
- 4.4 Assessment of COVID-19 Impact on the Industry
- 4.5 Market Drivers
 - 4.5.1 Growing Regulatory Environment in the Industry
 - 4.5.2 Presence of Robust SIS Service Ecosystem
- 4.6 Market Restraints
 - 4.6.1 Operational Complexity and High Maintenance Costs

5 MARKET SEGMENTATION

- 5.1 Application
 - 5.1.1 Emergency Shutdown Systems (ESD)

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- 5.1.2 Fire and Gas Monitoring and Control (F&GC)
- 5.1.3 High Integrity Pressure Protection Systems (HIPPS)
- 5.1.4 Burner Management Systems (BMS)
- 5.1.5 Turbo Machinery Control
- 5.1.6 Other Applications
- 5.2 End User
 - 5.2.1 Chemicals and Petrochemicals
 - 5.2.2 Power Generation
 - 5.2.3 Pharmaceutical
 - 5.2.4 Food and Beverage
 - 5.2.5 Oil and Gas (with a Percentage Breakdown by Upstream, Downstream, and Midstream)
 - 5.2.6 Other End Users
- 5.3 Country
 - 5.3.1 United States
 - 5.3.2 Canada

6 COMPETITIVE LANDSCAPE

- 6.1 Company Profiles
 - 6.1.1 Rockwell Automation Inc.
 - 6.1.2 Emerson Electric Company
 - 6.1.3 Honeywell International Inc.
 - 6.1.4 SIS-TECH Solutions LP
 - 6.1.5 Schlumberger Limited
 - 6.1.6 INTECH Process Automation
 - 6.1.7 Yokogawa Electric Corporation
 - 6.1.8 ABB Ltd

7 INVESTMENT ANALYSIS

8 FUTURE OF THE MARKET

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