Hydrogen Sensor Sales in East Asia to Reach US$ 121 Million by 2034, Growing at 6.8% CAGR

Electrochemical hydrogen sensors enhance safety and efficiency by detecting leaks, optimizing fuel use, and ensuring safe storage in various sectors.

ROCKVILLE, MD, UNITED STATES, February 4, 2025 /EINPresswire.com/ -- According to a new report by Fact.MR, the East Asia hydrogen sensor market will reach a value of US$62.6 million in 2024 and develop at a compound annual growth rate (CAGR) of 6.8% until 2034. This expansion is driven by the growing usage of hydrogen as a clean energy source in power production, automobiles, and industry. For a variety of applications, hydrogen sensors are crucial for spotting leaks and keeping an eye on hydrogen levels, which guarantees safety.

Hydrogen, being highly flammable, poses safety risks if leaked. As governments and industries push for hydrogen adoption, the demand for reliable sensors to ensure system safety is rising. The development of robust hydrogen infrastructure, including transportation, storage, and distribution networks, is driving the need for advanced monitoring systems. Hydrogen sensors play a vital role in detecting irregularities in storage and transport. East Asia's focus on reducing carbon emissions and transitioning to renewable energy is boosting hydrogen use, further increasing sensor demand.

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Hydrogen production in East Asia utilizes methods like biomass gasification, steam methane reforming, and electrolysis, all requiring effective monitoring for safety and efficiency. Hydrogen sensors play a crucial role in measuring gas concentrations, pressure, flow rates, and temperature during production, ensuring optimal conditions and detecting abnormalities. Stored hydrogen, whether in solid-state, liquid, or compressed gas form, demands reliable monitoring

systems to prevent failures that could compromise storage integrity. A robust monitoring and control system is essential for hydrogen infrastructure, with sensors enabling continuous tracking of critical parameters. These sensors enhance safety, minimize risks, and support hydrogen's widespread adoption as a clean energy source.

Key Takeaways from the Market Study:

The hydrogen sensor market in East Asia is projected to grow at a 6.8% CAGR, reaching US$ 121 million by 2034.

In China, the hydrogen sensor market is projected to reach US$ 35.1 million in 2024, with a growth rate of 7.2% CAGR from 2024 to 2034, ultimately reaching US$ 70.4 million by 2034. The country is heavily investing in hydrogen fuel cell vehicles (FCVs) to reduce air pollution and decrease its reliance on fossil fuels. As the adoption of hydrogen FCVs increases, the demand for hydrogen sensors rises. These sensors are essential for ensuring the safe storage and handling of hydrogen, particularly in vehicles. By facilitating proper fueling protocols and detecting leaks, hydrogen sensors are vital for maintaining safety during hydrogen refueling, which plays a key role in the broader transition to cleaner energy solutions in China.

Japan, with a projected hydrogen sensor market value of US$ 23.4 million in 2024 and a 6.4% CAGR, is also experiencing growing demand for these sensors. The government is focusing on promoting a "hydrogen society" to reduce greenhouse gas emissions and transition to renewable energy sources. Japan's strategy includes expanding hydrogen fuel cell adoption in residential, industrial, and transportation sectors. This push toward hydrogen integration has led to an increase in the need for hydrogen sensors to ensure the safe storage, production, and use of hydrogen. As a result, sensor suppliers are closely eyeing the Japanese market for growth opportunities.

Rising Demand for Electrochemical Hydrogen Sensors in Safety and Efficiency Applications:

Demand for electrochemical-based hydrogen sensors is on the rise due to their superior sensitivity and accuracy in detecting issues within hydrogen systems. These sensors provide precise measurements of hydrogen concentrations, even at low levels, which is crucial for safety in various applications, including industrial environments, laboratories, and transportation. Electrochemical technology-based sensors are also valued for their fast response times, offering real-time data to detect changes or leaks in hydrogen concentrations. This quick response time allows for early intervention, reducing the risk of potential hazards.

In the transportation sector, hydrogen sensors are integral for optimizing fuel efficiency and ensuring the appropriate amount of hydrogen is supplied to fuel cells for power generation. By accurately monitoring and controlling hydrogen quantities, these sensors contribute to the overall performance and efficiency of fuel cell vehicles. Additionally, given hydrogen's highly flammable nature, ensuring its safe storage, handling, and usage is critical. Hydrogen sensors act

as vital safety devices, detecting leaks and fluctuations in hydrogen levels, and thus preventing dangerous situations in transportation. Their role in leak detection and maintaining hydrogen levels ensures safer operations and supports the widespread adoption of hydrogen-powered vehicles.

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Competition Landscape:

Leading suppliers of hydrogen sensors are focusing on quality control, new product development, and efficient supply chain management. Prominent players in the East Asian market include Figaro Engineering Inc., RIKEN KEIKI Co., Ltd., FIS, NanoAndMore Asia, and City Technology.

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Hydrogen Sensor Market.: The global hydrogen sensor market size is poised to reach US$ 374.6 million in 2024 and climb to a value of US$ 716.5 million by the end of 2034. Worldwide sales of hydrogen sensors are evaluated to rise at a CAGR of 6.7% from 2024 to 2034.

Hydrogen Sensor Industry Analysis in South Asia & Oceania: Sales of hydrogen sensors in South Asia & Oceania are projected to reach US$ 28.4 million in 2024 and increase to US$ 55.3 million by the end of 2034, expanding at 6.9% CAGR over the next ten years (2024 to 2034).

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