Liquid Hydrogen Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The global liquid hydrogen market is projected to register a CAGR of over 5% during the forecast period.

The novel coronavirus outbreak has impacted most chemical industries worldwide, including the liquid hydrogen industry. During the pandemic, many industries were affected due to supply chain disruption. However, now the market is stable and growing steadily with the rising application of liquid hydrogen in the chemical industry.

Key Highlights
One of the major factors driving the liquid hydrogen market is the increasing demand from the automotive sector. Another major driving factor of the market study is the rising emphasis on reducing fossil fuel emissions.
But liquid hydrogen is very flammable and easy to let go of, which slows the growth of the market.
Increasing focus on the decarbonization of the global energy industry will offer new growth opportunities to the industry.
The Asia-Pacific region accounts for the highest market share due to increasing demand in countries like China, Japan, and South Korea.

Liquid Hydrogen Market Trends

Automotive Application to Dominate the Market

The global liquid hydrogen market is forecasted to grow substantially due to the rising demand for clean fuel in the automotive

industry. Liquid hydrogen offers greater advantages because of its storage and transportation qualities.
In an automotive application, liquid hydrogen can be used as a secondary energy source without emitting any CO2 using new technologies like proton exchange membrane fuel cells to produce electricity for an electric drive and a direct fuel for ICEs (internal combustion engines).
Furthermore, pollution all around the globe is increasing over time from vehicles and transportation. Pollution from fossil fuel-powered vehicles is emitted directly into the environment, which causes health risks.
According to a study, vehicles driven by diesel and gasoline account for around 30% of the carbon emissions globally, and 72% of the emissions come from road vehicles like cars, trucks, lorries, and other road vehicles.
Pollution is a major concern for governments in both developed and developing countries.To minimize this problem, many players in the market have invested in research and development activities and launched electronic and hydrogen-powered vehicles. Hydrogen-powered vehicles are as safe as conventional vehicles.
According to a study, the number of electric cars on the world's roads by the end of 2021 will be 16.5 million, almost triple the amount in 2018. In China, electric car sales nearly tripled in 2021 to 3.3 million.
Thus, players in the market were also expanding their production capacity and extending their penetration all around the globe. For instance, in 2021, Air Liquide and Faurecia signed a joint development agreement to design and produce onboard liquid hydrogen storage systems for the automotive industry. Also in the same year, Linde PLC started up its fifth liquid hydrogen plant in the U.S. The new plant in La Porte, Texas, will supply over 30 tons per day of high-purity liquid hydrogen to meet growing demand from Linde's customers.
Because of all of these factors, the automotive industry is likely to be the leader in the studied market.

Asia-Pacific Region to Dominate the Market

The Asia-Pacific region is dominating the liquid hydrogen market and is expected to continue this trend shortly. As their economies change quickly, countries like Japan, China, South Korea, and India are the biggest contributors to the Asia-Pacific region.
Liquid hydrogen is a power source; hydrogen fuels rockets and powers life-support systems and computers in aerospace environments. Liquid hydrogen is also used for metal sintering and annealing.
China is the world's second-largest national air travel market and a major aircraft manufacturer. Moreover, the aircraft parts and assembly manufacturing sector in China has been growing at a fast rate.
By 2040, the Chinese airline companies are planning to have 8,700 new airplanes, which would be worth USD 1.47 trillion. This is further expected to boost the market demand for liquid hydrogen.
According to the India Brand Equity Foundation, by 2024, India will be the third-largest aviation market in terms of passengers.Also, the country has become the third-largest domestic aviation market in the world.
Increasing the amount of liquid hydrogen that refineries make is also a key part of the growth of the market.Some of the major refineries in the region where the demand for liquid hydrogen is higher are China Petroleum & Chemical Corporation, Reliance Industries Limited, and Nayara Energy Limited.
In the refineries, liquid hydrogen is used in the hydrocracking and hydrotreating processes. Also, in refineries, demand for liquid hydrogen is increasing to lower the sulfur content of diesel fuel.
So, based on the above trends, Asia-Pacific is likely to lead the market being studied over the next few years.

Liquid Hydrogen Market Competitor Analysis

The liquid hydrogen market is highly consolidated in nature. Some of the major players in the market include Air Liquide S.A., Linde plc, Ballard Power Systems Inc., Universal Industrial Gases, Inc., and Air Products Inc., among other domestic and global

players (not in any particular order).

Additional Benefits:

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

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