Cryogenic Process Pumps - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-04-28 | 125 pages | Mordor Intelligence

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Report description:

The Cryogenic Process Pumps Market is expected to register a CAGR of greater than 6% during the forecast period.

In 2020, COVID-19 had a detrimental effect on the market. Presently, the market has reached pre-pandemic levels.

Key Highlights
- Over the medium term, the increasing demand for gases for power generation is expected to increase the demand for the cryogenic process pumps market.
- On the other hand, high investment costs are expected to hinder market growth.
- Nevertheless, the increasing technological investments in the market for efficient electrical device components, such as semiconductors, are expected to create huge opportunities for the Cryogenic Process Pumps market.
- Asia-Pacific is expected to dominate the market during the forecasted period due to the development of the power industry in the region.

Cryogenic Process Pumps Market Trends

Positive Displacement Pump Segment to Witness Significant Growth

- Positive displacement cryogenic pumps are a type of pump that is used in industries to transport low-temperature liquids and coolants. It is hermetically sealed and made of unique elastomers to endure low temperatures and prevent heat leakage. One or

more impellers and a diffuser are used in these pumps. The diffusion mechanism converts velocity inside a cryogenic pump to pressure.
- An increase in the demand for medical gases, the production of electricity using renewable sources, and increased infrastructure investments are driving the positive displacement cryogenic pump. In addition, the increased use of liquefied natural gas in the power generation industry is likely to drive market expansion.
- These pumps are highly efficient and have relatively low harmful environmental emissions as compared to other pump types, which makes them popular in the power generation and oil and gas industries as these industries are focusing on reducing their emissions and these pumps fall in line with their targets.
- The capacity of positive displacement pumps to produce the same flow rate regardless of discharge pressure level is a fundamental advantage over centrifugal pumps, which are designed to react to pressure variations. Positive displacement pumps, unlike centrifugal pumps, do not rely on certain pressure levels for efficiency and maximal operational success.
- Furthermore, the increased emphasis on solar-based power generation and the expansion of solar photovoltaic infrastructure are providing enormous potential opportunities for these sorts of pumps, which are primarily employed in the production of solar panels.
- According to the International Renewable Energy Agency (IRENA), the cumulative global installed solar PV capacity grew by 22.33%, i.e., from 855 GW in 2021 to 1046 GW in 2022.
- Therefore, based on the abovementioned factors, positive displacement pumps are expected to witness significant growth during the forecasted period.

Asia-Pacific to Dominate the Market

- The Asia-Pacific region would likely dominate the worldwide market. Due to dwindling energy resources and tight emissions rules, demand for these pumps is increasing at gas-fired power plants. Furthermore, expanding government regulations to enhance clean power generation from gas-fired power plants, as well as increased investment in healthcare, food and beverage, and steel, will push regional prosperity.
- Asia Pacific is witnessing a massive rise in the supply and demand of electricity owing to the rising population, growing urbanization, and infrastructure development activities in the region. The growth in electricity infrastructure is expected to increase the growth of cleaner energy sources, which consequently increases the use of cryogenic process pumps.
- The total electricity generation in 2021 was recorded at 13,994.4 TWh, compared to 8875.5 TWh as per the BP Statistical Review for World Energy 2022. The energy demand has increased on average by around 4.7% annually over the past decade. This trend is likely to continue in the future during the forecasted period.
- Due to stringent environmental rules and ambitious targets for reducing environmental emissions, various countries in the region have started integrating renewable energy to their power generation mix, which mostly involves solar and wind energy. These cryogenic process pumps are an essential part of producing solar panels and parts for wind energy structures.
- For instance, in September 2022, Amazon India unveiled its latest utility-scale renewable energy projects in India: three solar farms in Rajasthan totaling 420 megawatts of clean energy potential (MW). ReNew Power will create a 210 MW project, Amp Energy India will develop a 100 MW project, and Brookfield Renewable will develop a 110 MW project.
- Therefore, based on the abovementioned factors, the Asia-Pacific region is expected to dominate the cryogenic process pump market over the forecast period.

Cryogenic Process Pumps Industry Overview

The global market for cryogenic process pumps is moderately fragmented. Some of the key players in this market (in no particular order) are Atlas Copco AB, Sumitomo Heavy Industries, Ltd., Fives Group, Ebara Corporation, and Nikkiso Corporation Limited.

Additional Benefits:

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

Table of Contents:

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