Condition Monitoring Equipment - 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 Condition Monitoring Equipment Market is expected to register a CAGR of 6.66% during the forecast period.

The market growth is driven by an increasing number of smart factories and growing usage of renewable energy. Further, vibration monitoring systems are gaining momentum owing to their support in enhancing production, reducing downtime due to greater analytics, and reducing human-mediated activities like manual inspections and unplanned corrections.

One of the primary goals for any business is to prolong an asset's lifecycle and ensure that the asset functions efficiently for a long period. This can be accomplished using condition monitoring. Maintenance is crucial to machines. Machine condition monitoring is an important part of maintenance, and thus, many companies have been focusing more on asset utilization and increasing productivity.

As operational equipment is responsive to many types of errors and faults, it is important to monitor minor/major changes in equipment by measuring parameters like vibration, temperature, voltage, current, pressure, flow, and several others. This significance has pushed various verticals to make extra efforts to protect their machinery. The main benefit of fault identification using condition monitoring includes allowing personnel to take remedial action to avoid or reduce repair costs and increase machinery safety, thus increasing human safety.

The advent of Industry 4.0 coupled with 5G and 3D printing technology is also expected to increase the demand for machine monitoring products connected to IoT devices through low latency signals. Industry 4.0 relies on automation, machine learning, and real-time data processing to automate manufacturing plant processes. This has expanded the use of automated manufacturing technologies such as automation, data analytics, and industrial IoT to improve operational efficiencies.

Furthermore, implementing predictive maintenance in Industry 4.0 offers substantial prospects for numerous industries. Monitoring machine data to detect and plan repairs and reduce downtime is part of the machine condition monitoring process. Such progress enables the analysis of equipment performance and the prediction of breakdown scenarios. As a result, rising awareness of machine status monitoring is projected to open up new business prospects.

The high costs of automated systems are concerned with effective and robust hardware and efficient software. Automation equipment requires high capital investment to invest in the smart factory (an automated system can cost millions of dollars to install, design, and fabricate).

Also, the need for the maintenance of automated machines is more than a manual system (even flexible automation is less flexible than humans, the most versatile machines of all). Further, the sluggish adoption of Industrial IoT technologies can be linked to the higher costs of maintaining their connections, considering that M2M connections were charged with heavy taxation, similar to mobile device subscriptions. Such factors are also linked to the factors hindering the growth of the studied market.

In the post-COVID-19 pandemic scenario, several firms are developing various products to capture the market share. For instance, in April 2021, ACOUS NAVI (FIELD System), a condition monitoring and diagnostic program compatible with FANUC Intelligent Edge Link & Drive system (FIELD system), an open software platform for the manufacturing industry, was to be sold by NSK Ltd. ACOUS NAVI is a comprehensive solution for monitoring the operation of machine components and detecting or predicting indicators of damage or deterioration.

Condition Monitoring Equipment Market Trends

Increasing Focus on the use of Renewable Energy Drives the Market

- The various regions are inclined toward renewable energy sources, which is further expected to drive the studied market. Several new projects have been initiated in renewable energy in the past few years. According to the IEA, renewable energy capacity is anticipated to expand by 43 percent or more than 920 gigawatts by 2022. Furthermore, solar energy is anticipated to dominate the renewables market, generating far more electricity in the next four years than wind and hydropower.
- The increasing technological advancements are resulting in lower renewable energy costs, and the increasing competitiveness of battery storage systems is favorably boosting the growth of the renewable energy market. The growing global concern about climate change and ESG issues is driving massive investments in the adoption of renewable energy sources.
- In order to promote sustainability and preserve the environment, governments in various developed and developing economies are providing subsidies to the corporate sector to shift toward clean and green energy. Several elements are important in the global expansion of the renewable energy sector.
- According to a recent study by the IFPRI, the population of the South-Saharan countries is expected to grow 2.5 times by 2050. This population growth, coupled with the rise in income levels, is expected to increase the demand for energy generation in the region. One such country is Morocco, which has pledged to increase the renewables in its electricity mix to 52 percent by 2030, made up of 20 percent solar, 20 percent wind, and 12 percent hydro.
- Further, in June 2021, Morocco updated its UN climate pledge with a promise to reduce its greenhouse gas emissions by 17-18 percent by 2030 compared with a business-as-usual scenario, with a stretch target of a 42-46 percent cut on the condition of receiving international support.
- The Union Cabinet, chaired by India's Prime Minister, has approved the introduction of the Production-Linked Incentive (PLI) Program in High-Efficiency Solar PV Modules for Boosting India's Manufacturing Capabilities and Exports - Atmanirbhar Bharat. The national high-efficiency solar PV modules' program: Tranche 1: INR 4500 Crore (USD 549.4 million) Tranche 2: INR 19,500 Crore (USD 2380.8 million). The second phase launched on September 21, 2022, and it is expected to build 65 GW of annual

manufacturing capacity.

North America is Expected to Hold the Largest Market Share

- The United States is one of the world's largest and most advanced markets for vibration monitoring solutions. The strong economy, with substantial port traffic, increased oil and gas output, and key manufacturing indices, results in significant growth in manufacturing and is poised to drive the demand for condition monitoring equipment in the country. Sectors, including automotive, food and beverage, pharmaceutical, aerospace, and defense, are the largest sources of demand for condition monitoring solutions in the country.
- New technologies such as 3D printing, the Internet of Things (IoT), and artificial intelligence (AI), among others, are rapidly transforming the country's manufacturing industry as part of the 4th Industrial Revolution. The COVID-19 pandemic and the country's commitment to net zero by 2050 have further accelerated this trend. Lower costs, increased productivity, and carbon emission reduction are some of the benefits manufacturers are reaping from the adoption of these technologies.
- Developing smart factories provides a significant opportunity for the manufacturing industry to enter the fourth industrial revolution. The analysis of large amounts of data collected from sensors on the factory floor enables real-time visibility of manufacturing assets. It can offer tools for predictive maintenance to minimize equipment downtime.
- Canada is one of the prominent economies in North America and is slowly adopting industrial automation to gain a considerable market share in the market studied, with multiple companies manufacturing automation systems to further the growth of the market.
- Canada's economy is reviving, with consistent growth over the last few years. With the strengthening of the American economy and the resurfacing of the European economy post-recession, the manufacturing sector is expected to perform better in the coming years.
- The manufacturing industry is one of the largest consumers of vibration monitoring equipment. Canada is home to eight large manufacturing plants operated by Ford, Chevrolet, Honda, and Toyota. Additionally, the country has 700 manufacturers that produce automotive parts. The automotive industry is the most significant industry in this region and contributes the most to the manufacturing sector. It is expected to positively impact the market studied.

Condition Monitoring Equipment Industry Overview

The condition monitoring equipment Market is moderately concentrated and growing with the presence of major players like Rockwell Automation Inc., Emerson Electric Co., Meggitt PLC, General Electric Company, and SKF. Players in the market are adopting strategies such as partnerships and acquisitions to enhance their product offerings and gain sustainable competitive advantage.

In August 2022, Perkin Elmer announced that it entered an agreement with New Mountain Capital to divest its Analytical and Enterprise Solutions businesses, which, upon completion, was to result in the creation of excellent opportunities for growth and strategic advancement.

In July 2022, General Electric Company announced plans to become three independent and publicly traded businesses focusing on healthcare, energy, and aviation, where new names also reflect a new beginning. GE's healthcare business will be called GE HealthCare. GE's existing portfolio of energy businesses, including Renewable Energy, Power, Digital, and Energy Financial Services, will sit together under the brand name GE Vernova. GE Aerospace will be the name of GE's aviation business.

In May 2022, SKF launched SKF Axios. This solution reinvented industrial machine reliability and predictive maintenance based on

a collaboration between SKF and Amazon Web Services Inc. In addition, SKF was to display SKF Axios at the AWS booth at Hannover Messe 2022.

Additional Benefits:

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

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