SCOTTS INTERNATIONAL

Railway Pantograph Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 90 pages | Mordor Intelligence

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Report description:

The Railway Pantograph market was valued at USD 417 million in 2021 and is expected to reach USD 609 million in 2027 by registering a CAGR of around 4% during the forecast period (2023 - 2028).

The COVID-19 pandemic hindered the growth of market as shutdown of manufacturing units and lockdowns resulted in supply chain disruptions and reduced demand for rolling stock for the year 2020. However, post-pandemic as restrictions eased market anticipated to pick up pace during the forecast period.

Over the medium term, factors like rising urbanization and growing demand for electric locomotives coupled with ongoing rail infrastructure projects for effective short-distance commuting in congested and traffic roadways are anticipated to contribute to the overall development of the market over the forecast period. For instance,? China plans to invest around CNY 2.2. trillion in its express and urban railway infrastructure by 2025 and has furthermore reported progress made in both investments and the overall expansion of its national rail infrastructure. ?

Further, with growing key players focus on designing new strategies especially by investing into latest technology and launching new products to increase their presence in the market. In addition, railway electrification likely to offer new opportunities for players operating in rail pantograph market over the forecast period as governments across the globe are pushing for more rail electrification to improve their energy security and clamp down on harmful emissions by Diesel engines.

Asia-Pacific region expected to hold significant share in the market owing to its vast railway network and favorable government initiatives to promote continuous upgradation of railinfrastructure across the country. Europe also likely to have notable growth during forecast period and its growth is expected to be supported by EU railway electrification targets and wider customer base ranging from intercity trains to freight trains.

Railway Pantograph Market Trends

Growing Rail Electrification to Drive Demand in the Market

Major countries across the world are emphasising that faster decision-making regarding electrification projects is crucial to achieving environmental goals and with growing focus of governments towards electrification the demand for railway pantographs also expected to rise over period of time as they play crucial role in collecting power through contact with an overhead line.

In 2022, The EU-funded FUNDRES project proposed a challenging approach to the future of railways based on a new unified electrification system of 9 kvDC that can consolidate the existing lines during the period of transition. The project's ambition is to significantly enhance energy technology for the future unified system.
The California commuter rail line (CalTrain) is being upgraded to very high speed rail service and will be electric-powered. The system is scheduled to be operational by 2022-23 and at an initial cost of USD 5 billion.

Besides these factors, several governments are also making heavy investments to improve railway infrastructure and are focused on updating their rail fleet and associated infrastructure for improving efficiency of their services. For example,

In 2021, Government of Canada announced their plans of investments of around USD 79.77 million to improve the safety and security of the country's railway system. The funding will be allocated over five years, 2022-2027, to Transport Canada to support safe passenger and freight transportation by rail.
In 2022, Turkey stated that it is expected to receive fundind of around EUR 2.1 billion as part of green financing initiative from the UK Government for a new high-speed electric railway project in the country. Through this Buyer Credit Scheme, the UK Export Finance (UKEF) will provide the funding for the new 503km electric-powered railway line between Turkey's capital city Ankara and the port-side city of Izmir.

Moreover, rising urbanization and growing population are encouraging countries across the world to take advantage of benefits offered by the electric rails especially light rails, and electric tramways which serves the main purpose of local transportation in metropolitan areas. For instance,? Urbanization has been steadily increasing in Europe, from approximately 64 percent to 75 percent over the past 50 years. Several countries, including Sweden, Switzerland, France, Spain, and the Netherlands, are showing positive population growth.?

In wake of such developments, the demand for railway pantographs expected to see positive results with growing investments and rail eletrification projects during the forecast period.

Asia-Pacific Region Anticipated to Grow at Significant Level During the Forecast Period

Asia-pacific region expected to grow significanlty during the forecast period owing to presence of several major countries where railways are one of the prominent mode of transportation. Asia dominates the list of ongoing rail construction projects, with China featuring most prominently with 58 projects in total in 2021. For instance, China, which has the world's largest high-speed railway network, plans to expand its length to 50,000km by 2025, 12,000km longer than 38,000km that was operational at the end of 2020. China aims to double the high-speed network to 100,000km by 2031.

Further, with surplus trade, the need for continuous upgradation of railway network gets elevated encouraging governments across region to focus on the rail infrastructure and upgradation. In addition, increasing rail electrification network as well as government railway projects is anticipated to drive demand in the market. For instance,

In FY 21, the Indian railways had the highest planned capital expenditure of INR. 215,058 crores. In Budget 2022-23, the Railway Ministry was allocated INR. 140,367 crores, a 16.9% growth over the previous year. Indian Railways has logged the highest ever electrification of sections covering 6,015 Route Kilometre (RKM) in a single year during 2020-21. More than 5 times electrification was achieved during (2014-21) last seven years as compared to during 2007-14.

Besides these, increasing metro trains and tram projects, particularly in developing countries like India, etc. are also boosting the asia-pacific regional market during the forecast period. Of the top ten most expensive rail construction projects of 2021, eight are located in Asia - showing the continent's hunger for rail megaprojects. Half of the top ten most expensive rail construction projects in 2021 involve high-speed rail, all of them located in Asia.

The Government of Thailand, through the State Railway of Thailand, is constructing a high-speed rail line between Bangkok and Rayong in Thailand. This project involves the construction of a 220km high-speed rail line from Bangkok to Rayong. In April 2021, construction activities commenced on the project with scheduled completion in August 2025.
Chongqing Rail Transit Co. is constructing a 71.53 Km Metro rail line from Cengjia Station West to Liangjiang Film and Television City Station in Chongqing, China. The project plans to expand the existing urban rail systems and reduce the travel time in the region.

Therefore, such active rail penetration across region coupled with favorable government policies expected to enhance demand for railway pantographs across the region.

Railway Pantograph Market Competitor Analysis

The Railway pantograph market is a moderately consolidated one owing to the presence of global players and their strong hold on majority of the key regions like Asia-Paicific, Europe, and North America. Key players operating in the market are also focusing on designing new strategies especially by investing into latest technology and launching new products to increase their presence in the market. For instance, ?

In November 2020, PantoInspect, the market-leading manufacturer and supplier of 3D automated and real-time wayside pantograph monitoring systems, has launched its new digital twin platform for pantograph condition monitoring. The new digital twin platform of the PantoSystem is now capable of automatically identifying each type of train pantograph, which provides a more accurate measurement. ?
In August 2020, Ricardo Rail has launched a new service to simulate the dynamic interaction between pantograph units and catenary systems, with the aim of helping to optimize the design of future electrification products while also reducing

development costs. Ricardo Rail has launched a new service to simulate the dynamic interaction between pantograph units and catenary systems, with the aim of helping to optimize the design of future electrification products while also reducing development costs.?

Additional Benefits:

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

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