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Locomotive Market by Power Conversion Components (Rectifier, Inverter, Alternator, APU & Traction Motor), Technology (IGBT module, GTO Thyristor Module & SiC Module), Rolling Stock Type, and by Region - Global Trends and Forecast to 2021

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Abstracts

Increased rail infrastructure investment and technological advancement, are expected to fuel the demand for power conversion systems"

The Locomotive market for power conversion systems is projected to grow at a CAGR of 2.92%, to reach a market size of USD 4.27 billion by 2021. Major factor driving the growth of the locomotive market for power conversion systems is rapid urbanization in emerging economies. In view of the rapid growth in urbanization and industrialization, the need for power and conversion systems is anticipated to increase during the forecast period. Moreover, this will require a substantial increase in power generation capacity and in turn infrastructure investments in this segment.

"Increase in need for energy efficient technologies will give rise to demand for IGBT power modules"

The market for IGBT power modules is anticipated to gradually replace the market for GTO Thyristor modules, owing to the advantages offered in terms of efficiency and power density, and the ability to provide more power in a smaller space.

Traction motor is the fastest growing segment among locomotive power conversion components"

Due to increasing need for development of energy efficient solutions for power

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conversion systems, there have been advancements in traction motors, which is driving the demand for energy efficient traction motors. The increase in the demand for traction motors can be attributed to the benefits offered such as weight reduction and decreased fuel consumption.

"Asia-Pacific: Fastest-growing market for locomotive market for power conversion systems"

The Asia-Pacific is estimated to dominate the locomotive market for power conversion systems, and is projected to grow at the highest CAGR during the forecast period. This growth can be credited to the improving socio-economic conditions in emerging economies such as China, India, Indonesia, and Thailand. The sizeable populations in countries such as China and India have resulted in increase in need for public transport, which in turn has resulted in an increase in the number of government rail projects.

BREAKDOWN OF PRIMARIES

The study contains insights provided by various industry experts, ranging from component suppliers to Tier-1 companies and OEMs. The break-up of the primaries is as follows:

By Company Type – Tier-1 - 55 %, Tier-2 - 20%, and Tier 3 - 25%

By Designation - C level - 75%, Manager level – 25%

By Region - North America - 10%, Europe - 20%, Asia-Oceania - 40% and RoW -30%

With the advancement in technology and government norms, OEMs are investing heavily in R&D activities to provide better more fuel-efficient products. One such new technology is the SiC power module which is currently in the introduction phase. This technology offers better efficiency in terms of reduced power loss and overall weight reduction and is anticipated to grow in the near future.

The report provides detailed profiles of the following companies:

Siemens AG (Germany)

CRRC Corporation Limited (China)

Bombardier Inc. (Canada)

Alstom S.A. (France)

Wabtec Corporation (U.S.)

Hitachi Ltd. (Japan)

Toshiba Corporation (Japan)

Strukton (Netherlands)

AEG Power solutions (Germany)

Turbo Power Systems (England)

Study Objectives

To define, describe, and project the locomotive power conversion system market on the basis of rolling stock type, components, technology and region

To analyze the opportunities offered by various segments of the market to stakeholder

To analyze the regional markets for growth trends, future prospects, and their contribution to the overall market

To track and analyze competitive developments such as joint ventures, mergers and acquisitions, new product launches, expansions, and other industry activities carried out by key industry participants

The Key stakeholders for this study are:

Manufacturers of rolling stock

Manufacturers of rolling stock power conversion components

Raw material suppliers for rolling stock or their power conversion components

Transport authorities

Legal and regulatory authorities

Fleet operators

SCOPE OF THE REPORT

By Technology

IGBT Module

GTO Thyristor

SiC Module

By Power Conversion Components:

Rectifier

Inverter

Traction motor

Alternator

Auxiliary power conversion unit

By Locomotive type

Diesel Locomotive

Diesel Multiple Unit (DMU)

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Electric Locomotive

Electric Multiple Unit (EMU)

By Region

North America

Europe

Asia-Pacific

RoW

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