

Business Opportunities for Railway Fasteners Suppliers in China

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Fasteners in the Railway Industry

Mankind has been fascinated by the history of rail technology for centuries. The railway is one of the most important inventions of all time. Even 200 years after the development of the first locomotives, railway technology has still not reached its limits. Today, the tracks across the world carry more transport services than ever before. The demands placed on railcar manufacturers by railway operators and, in turn on the suppliers, are challenging. Increasingly shorter product cycles, the use of new, lighter and more environmentally-friendly materials and an ever changing division of labour, requires strength of purpose, innovation and adaptability. The railway industry may not always be perceived as “innovative”. But this industry can claim a high degree of technical competence in finding solutions.

Faced with lengthy development stages, large-volume investment projects, with considerable public and political influence, railway operators always expect safe, functioning and innovative systems from day-one onwards. More than ever before, research and development forms the cornerstone for major market success at low cost. In particular, this requires a high degree of flexibility and extensive know-how from suppliers. Flexible responses to changing market conditions – this is one of the greatest challenges for the railway industry. The growing range of customer-specific requirements and the ever more sophisticated equipment in new and modernised railcars, increase the individuality of production, modernisation and maintenance. This requires optimised material and information flows. Procurement and delivery systems simplify processes, minimise stocks, prevent supply bottlenecks and reduce costs. There must, of course, be an uninterrupted supply to the assembly and maintenance lines. Even just a missing or faulty fastener risks bring production to a standstill.

Despite high technological and, for the most part, individual customer requirements, systems manufacturers are trying to increase flexibility by developing more and more platform and modular concepts. One-time parts suppliers are now establishing themselves as specialists in partnerships or are going on to become systems suppliers. The complexity of railcars today means that companies have to work together. Efficient and effective cooperation between manufacturers, system and component suppliers is constantly under review.

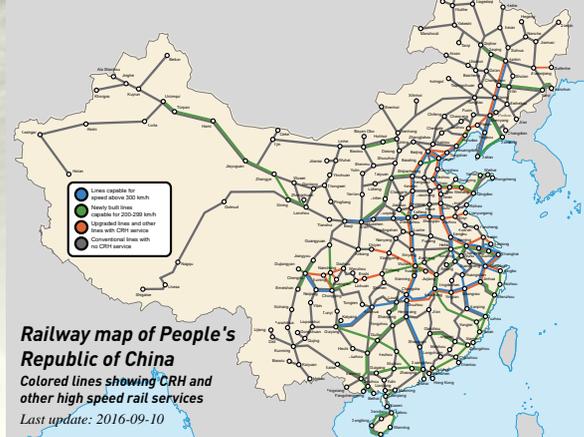
The railway industry is a market with the highest technical demands based on high safety specifications and complex regulations. As a result, rail transport is also one of the safest modes of transport. If a fastener producer wants to work in this sector, he should adopt these challenging guidelines and make their systematic quality management programs¹.

Therefore, added demand to improve safety and operations in the rail industry is a must for the fastener providing companies that want to work in this sector. As the rail industry becomes more compliant with these demands, another challenge in this field for fastener producers is the experience and capability to provide supply chain support for both critical and industrial standard fasteners. Success of these efforts is more than having the ability to get product from one place to another. It requires specific industry knowledge and expertise. Active companies and new entrance in this field should understand the unique attributes and specific requirements of the rail industry².

China's Railway

The following map shows that China has a very long railway (recording 124,000 Km in 2016). These route lengths were increased by average approx. 6,100 km (3,800 miles) annually between 2010-2016.

Most part of a rail wagon use fasteners, for example, self-piercing riveting



system can be a good replacement in the roof system and bogie of a wagon. And/or thread inserts and semi hollow tubular rivets are used in railcar bodies, bogies, interiors of wagons and traction systems.

Future of the Railway Industry in China

According to the Medium- and Long-term Railway Network Plan issued by the State Council, China will invest more than RMB2.8 trillion to build over 23,000km new railways during 2016-2020, upsizing its railway network to 150,000km (30,000km high-speed railway) and covering more than 80% of large cities by 2020. Moreover, major cities scale up their investment in urban rail transit, adding an estimated traffic mileage of 900km annually during 2016-2020³, thus contributing an upsurge in rail transit vehicles delivered to newly-opened lines. With mushrooming subway and light rail lines, China is expected to account for more than half of the global rail equipment expenditures in coming years. Stiff local-content rules stipulate that 70–90 percent of rail equipment be manufactured domestically. Technology-transfer agreements with foreign suppliers have permitted Chinese manufacturers to reproduce vehicle designs in local factories. The country's two dominant rail manufacturing companies, CSR (China South Locomotive and Rolling Stock) and CNR (China Northern Locomotive and Rolling Stock) together employ more than 200,000 people directly.

Last Word

Fasteners can be found anywhere in the railway industry, such as inside, outside, under and above the railcars, rail tracks, etc. Therefore, we believe years ahead will be strong years for the fastening market and fastener suppliers. On the other hand, railroads continue to show high demand for rail fasteners and related components that are rugged enough to provide a long service life even when faced with today's challenging operating conditions. In addition, they are looking for fastening systems that offer lower installation and maintenance costs.

Railway fastener suppliers should notice that this industry is moving toward high speed trains. It means suppliers should make effort to boost production and at the same time develop products that can keep track components fastened for the long haul. □

1. <http://www.bollhoff-usa.com/static/pdf/downloadcenter/EN/Railway-Industry-EN-0960.pdf>

2. http://www.wuerth-industrie.com/web/en/wurthus/industries/rail_industry/rail.php

3. <http://www.prnewswire.com/news-releases/china-rail-transit-air-conditioner-industry-report-2016-2020-300407499.html>