

IN FOCUS Rolling Stock

Hauled stock market bounces back



Despite the increasing use of multiple-units, orders for loco-hauled passenger coaches have almost doubled in the past decade thanks to rapidly-growing demand in Asia. India has become the largest single market, but several other countries are expected to place significant orders in the coming years.

MARIA LEENEN and
HENRY KOPPERMANN
SCI Verkehr GmbH

The recent order from UK franchise operator TransPennine Express for CAF to supply 13 push-pull inter-city trainsets and a planned order for new sleeping cars from Austria's ÖBB are a notable break from the recent trend in Europe, which has seen many operators favouring multiple units and fixed-formation high speed trains for their passenger services.

Further afield, classic loco-hauled coaches are still being delivered in substantial numbers, according to our latest market study.

With around 235 000 vehicles in service across the world, loco-hauled coaches still represent the largest single category in the global fleet of passenger rail vehicles. China and India alone account for more than half of the total, followed by Russia, which is the only other country that has more than 10 000 coaches in service. The study notes that Asia now accounts for around 80% of all rail travel in passenger-km. Ridership has grown by more than 50% in the past decade and is forecast to continue rising by

Growing demand for long-distance travel in India is sustaining high volumes of new vehicle production.

around 3% per year.

The average age of the global fleet is 21 years, but this masks a wide variation between ageing fleets in some regions and large volumes of new stock elsewhere. The average age in Asia is just 15 years, whereas the 700 remaining coaches in Australasia now average 35 years.

Over the past decade, almost 73 000 new coaches were procured, which is almost as many as the total ordered in the preceding 20 years. China and India represented around 70% of the total market.

Between 2011 and 2015, orders were placed for 34 500 vehicles with a total value of €18bn. Of these, China and India accounted for 80% of the orders by volume and 53% by value. The CIS region accounted for 18%, which was barely half the level previously recorded. By contrast, orders from railway operators in the USA, Italy and Austria accounted for just 3-5% of the total number of vehicles delivered, but 12% of the worldwide market value (Fig 1).

The production of inter-city coaches for the Chinese domestic market has reduced significantly following the introduction of more than 1 500 high speed trains, and India has become the largest

single market by value as well as volume. The large-scale procurement of new coaches in Argentina and Brazil has been completed, and no further orders are in prospect for this region. However, the study suggests that there are good long-term perspectives for orders in North America, Africa/Middle East and Asia, driven by the strong demand in India. This is due in part to the higher level of operational flexibility offered by loco-hauled coaches.

Double-deck opportunities

Given the ongoing trend towards greater use of fixed-formation trainsets, the market volume for new coaches in Europe will continue to decrease, but a number of projects will drive further orders for loco-hauled stock, notably double-deck.

Our study suggests that double-deck coaches have moved from being a niche segment to offer a competitive alternative to multiple-units and high speed trains. In Germany, DB ordered its last double-deck coaches for regional and commuter operations in 2011, as part of a framework contract with Bombardier. Subsequent options in this contract were exercised as EMUs. However, DB Regio ordered 36 double-deck push-pull coaches from Skoda to operate 200 km/h regional services on the München – Ingolstadt – Nürnberg corridor, blurring the distinction between regional and inter-city services. Long-distance operator DB Fernverkehr is buying 44 double-deck push-pull trainsets for medium-distance inter-city services, and is planning to procure up to 80 more.

Belgian incumbent SNCB also favours the operational flexibility of loco-hauled coaches. Within a framework contract covering up to 1 362 Type M7 double-deck vehicles, SNCB has placed firm orders for 540 which will be delivered as intermediate coaches or unpowered driving trailers. These will initially operate as push-pull trainsets, as with the similar M6 vehicles, but could potentially be adapted in future to work with powered cars as multiple-units. A similar strategy has been adopted in Israel, in conjunction with ISR's network electrification programme. Italy's Trenitalia has adopted double-deck coaches for many regional services, with growing fleets of Vivalto and Vivalto 2 stock to work with its class E464 push-pull locomotives.

Another stronghold for loco-hauled coaches is central and eastern Europe. It is some years since ÖBB introduced its premium Railjet services using push-pull coaches and Taurus electric locomotives. More recently, Czech operator ČD introduced its own Railjet sets in

80
%

OF ALL RAIL TRAVEL
IN PASSENGER-KM
TAKES PLACE
IN ASIA

Rolling Stock **IN FOCUS**

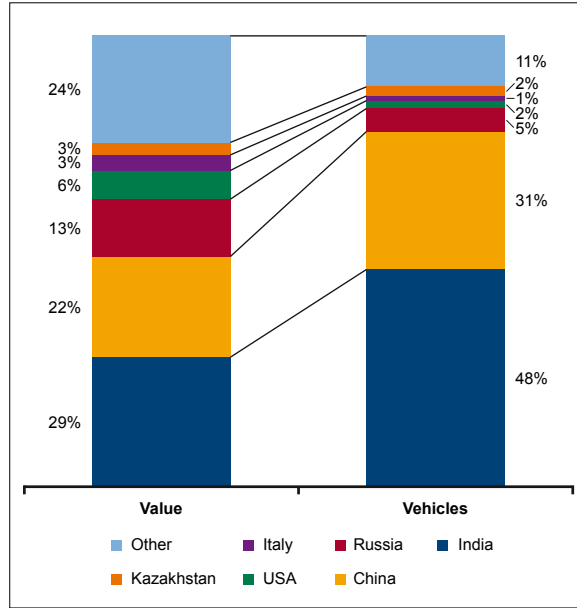
2014. Hungarian state-owned passenger operator MÁV-Start has announced its intention to introduce at least 100 inter-city coaches manufactured in its own workshops.

Market development

Looking ahead, ongoing and planned fleet renewal programmes should help to sustain the market volume at current levels. Substantial orders are anticipated in India, the USA and Kazakhstan, where many vehicles are becoming life-expired.

As China switches from hauled stock to multiple-units, India is increasingly seen as the engine of growth for this market. IR is looking to satisfy the increasing travel demands of the country's growing population by deploying large numbers of comparatively cheap coaches. Production volumes in India are predicted to reach up to 5000 coaches per year over the longer term, potentially providing work for new plants as well as IR's existing subsidiaries ICF in Chennai and RCF in Kapurthala.

While the total number of vehicles ordered is expected to remain high, prices will rise as the specifications improve. IR is focusing on higher speeds, more passenger amenities, better



crashworthiness and improved construction standards for a longer service life. The more modern Indian vehicle types are up to twice the price of a standard coach.

In the USA, Amtrak has announced plans to procure around 1200 new single-deck and double-deck coaches between 2019 and 2026; these would replace its ageing Amfleet and

Fig 1. India and China dominated the coach market for 2011-15 in terms of vehicle numbers, but represented a smaller proportion by value.

Superliner vehicles dating from the 1970s and 1980s.

In conjunction with its fleet renewal programme, Kazakh state railway KTZ has established the Tulpar Talgo joint venture with Spanish supplier Talgo. This is manufacturing new vehicles to Spanish designs in Astana. Talgo has also shipped a demonstrator trainset to India (RG 7.16 p40), but it remains to be seen whether the company will be able to secure orders in the Indian rolling stock market.

Other CIS countries planning to procure new coaches by 2020 include Tajikistan, Uzbekistan and Azerbaijan, although the order volumes are likely to be relatively small. The demand for new coaches in Russia has been falling following the delivery of several new builds for RZD's inter-city subsidiary Federal Passenger Co.

Several countries in the Middle East have begun procuring new coaches, but proposed orders in Africa have yet to be confirmed. In any case, these two regions account for barely 5% of the global fleet. ■

The market study *Passenger Coaches – Global Market Trends* can be ordered from SCI Verkehr GmbH.

www.sci.de

Print • Digital • Online

Reach senior rail professionals to fill your next vacancy!

100's of international rail jobs online - add yours today!

Place your next vacancy with Railway Gazette International and gain exposure to:

- An international readership of 30,000+ rail professionals
- 118,000+ rail professionals who use our website every month
- More than 47,000 subscribers to our weekly e-newsletters

For more information about the different recruitment packages we can offer please contact **Andrew Walker**.

email: andrew.walker@railwaygazette.com
 telephone: **+44 (0) 208 652 5214**

20% OFF QUOTE "RGIREC" AND RECEIVE 20% OFF YOUR NEXT ONLINE LISTING

www.railwaygazette.com/jobs

Expression of Interest (EOI)

Resourcing of the 10 Year National Rail Grinding Program

The Australian Rail Track Corporation (ARTC) plays a critical role in the transport supply chain and in the overall economic development of Australia. We manage and operate over 8,500 km of track in New South Wales, Victoria, South Australia, Western Australia and Queensland, making us Australia's largest rail network maintainer.

ARTC invites suppliers to formally submit an expression of interest to tender for the supply of equipment and/or services to provide production plain line rail grinding on our national Interstate and Hunter Valley heavy-haul rail networks, commencing in **July 2019**.

The program involves completing on average 4,500 pass km per annum, utilising a large production grinder capable of removing a minimum of 18 mm² at 15 km/hr in a single pass with full head coverage including sustainable grinding uphill on grades of up to 1:30.

ARTC will be seeking options from prospective tenderers in the following manner:

Option 1 – Supply Only

The tenderer is to supply to ARTC a plain line, high production grinder which meets or exceeds the technical specifications to be provided.

The grinder may be operated by ARTC or a third party. ARTC may decide to investigate the option of tendering the operation and maintenance of its purchased grinder separately.

Option 2 – Supply, Operate and Maintain

The tenderer is to supply to ARTC a plain line, high production grinder which meets or exceeds the technical specifications to be provided. ARTC at all times retains ownership of the grinder.

The tenderer is to operate and maintain the ARTC owned grinder to manufacturer's specifications in a safe and efficient manner for a **10 year period**.

Option 3 – Fully Contracted Service

The tenderer is to supply its own, new build grinder, which meets or exceeds the specifications to be provided. This grinder will be the property of the tenderer.

The contracted rail grinding services will be for a **10 year period** commencing 1 July 2019.

The tenderer is to operate and maintain their rail grinder according to the manufacturer's specifications.

All plant, equipment and services to be provided by the tenderer must meet the safety, technical and commercial requirements nominated by ARTC including relevant Australian Standards for the railway operating environment which will be detailed in the final tender documents.

Interested parties are invited to contact David Knee, Contracts Manager Enterprise Services via email at: dknee@artc.com.au for further information and access to the full EOI documentation.

ARTC will, at its sole discretion, invite formal documented Expressions of Interest and subsequent tenders from selected contractors.