

JRTR

Japan Railway & Transport Review



FEATURE: 40 Years of High-speed Railways

JAPAN RAILWAY & TRANSPORT REVIEW

March 2005 No. 40

JAPAN RAILWAY & TRANSPORT REVIEW
published quarterly by **East Japan Railway Culture Foundation (EJRCF)**

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JRTR is printed in Japan.



Kyushu Shinkansen's Series 800 Tsubame (Swallow) running between Sendai and Izumi stations. Number of passengers exceeded 2 million, 224 days after the opening in 13 March 2004. (Transportation News)

URL <http://www.jrtr.net>

Editorial

Meter-gauge high-speed railways

Most passenger vehicles run at somewhere around 100 km/h, and high-speed railways have settled similarly on operations at around 350 km/h from the aspects of matching competition with other fast transport modes, protecting the environmental and reducing accidents risks, etc. Moreover, the spread of high-speed rail seems likely to stop at around some 20 countries that have both the required technological and economic power. Although countries using the meter gauge are seeing heightened need for high-speed rail, without rapid economic growth, they face severe difficulties in either changing their track gauge or building new lines to standard gauge due to the extremely high costs. As a consequence, there is a danger of the railway world becoming split in the long term into two groups composed of a few countries with high-speed railway networks and a large number of countries that are unable to support such networks. At this time, when oil reserves start to run out, countries without high-speed rail will become weakened by reduced transportation capacity. Preventing this gloomy outlook and escaping dependence on the automobile by relying on the merits of high-speed railways means adopting an urgent and lower-cost strategy to increase rail speeds in narrow-gauge countries. To maximize the utility of present day rail systems through increased speed, new solutions are required, starting with R&D into lighter rolling stock with a low centre of gravity and higher output power and extending to introduction of grade separation, strengthened track beds, better track geometry, more reliable safety systems, etc., with the aim of developing narrow-gauge networks operating at 200 km/h that can compete effectively with other transport modes over distances up to 500 km. There is no reason to believe that high speeds can only be achieved on standard gauge—the vision is to link the beautiful major cities of SE Asia using high-speed international trains running over narrow gauge.

K. AOKI

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