Special Issue on New Solutions for Railway Services

PREFACE

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SINCE the opening of Japan's first railway in 1872, the Japanese railway industry has come to be one of the world's finest with a reputation for safety, punctuality (accurate operation), and reliability. These features have helped make railway passenger transport volume in Japan the largest in the world at 1.1 billion person km per day, which is 7 times that of France, 11 times that of the United Kingdom, and 18 times that of the United States.

In terms of accurate operation, delay per train is 0.3 minute on average for bullet trains (the Shinkansen line) and 1.0 minute on average for conventional trains, both of which are exceptional figures compared to those of railways in Europe and the United States. The Shinkansen, moreover, boasts an outstanding safety record with no fatal accident during more than 30 years of operation since its opening in 1964.

These achievements have been attributed to the great efforts of Japan Railways (JR) and private railway companies. The result is trains that have found much favour with many Japanese people, who have much trust in the railway system that they expect much of.

Since its founding, Hitachi, Ltd. has played a major role in support of Japan's railway system as a railway manufacturer. Today, Hitachi is providing total solutions for an even higher level of railway systems and services as Japan's only one total system integrator for railway systems. These solutions cover a broad range of areas, from rolling stocks, traffic management systems, signaling systems, communications, and power stations and maintenance facilities.

As we enter the 21st century, however, the world is reevaluating the quality of railway systems from the viewpoint of environmental problems, while railway companies are demanding even greater operational efficiencies and higher levels of maintainability. From this perspective, we can expect the railway industry to undergo a new stage of development not only in Japan but also throughout the world.

In response to these needs, Hitachi is working to provide the world with total solutions, including the following.

* Recyclable rolling stock system that adopts an aluminum structure and modularized interior components to suppress noise and vibration and achieve a railway in harmony with society and the environment
* Train traction system that provides comfortable moving space for passengers and reduces maintenance work
* Traffic management system for achieving high-density railway traffic operation
* Signaling system that makes field operations more efficient
* Compact monorail system ideal for small-scale urban transport
* Platform gate system that ensures passenger safety on a crowded platform and an associated one-man drive-support system
* Information service system for the provision of high-level services to railway users

This issue introduces some of these solutions.

As a total solution partner, Hitachi aims for the "construction of even better railway systems" to support ongoing progress in the world railway industry.