



Newsletter on the
Latest Technologies
Developed by RTRI

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Railway Technology Avalanche

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Why Not Share the Outcomes of R&D Activities across the World for the Safety of Railways?

Norimichi KUMAGAI
President

In June 2013, I took office as President, Railway Technical Research Institute (RTRI), Japan.

While featuring massive volumes, rapidity and punctuality in transporting people, freight and goods, railways are now considered an indispensable mode of transport in the life of people and in the economic activity of most societies. Furthermore, in the case of electric railways, power generation technology in braking remarkably enhances the efficiency of energy utilization.

Although railways have many such a number of excellent features, we sometimes come across news reports of serious railway accidents in recent years and they can hardly be overlooked. These accidents are mostly caused by natural disasters, human mishandling and misunderstanding, computer software errors, material breaks due to insufficient strength and other miscellaneous abnormalities. It is also the case that multiple factors synergistically damage redundancy or fail-safe features, which are part of an essential mission in designing a system to guarantee safety. Different countries have painfully experienced such accidents as derailments on curves and turnouts, train collisions, crossing accidents and disastrous occurrences due to earthquakes, strong winds and heavy rains. In Japan as well, the existing railway systems have been constructed based on the experience of a number of unforgettably chaotic accidents caused by different human errors and natural phenomena.

For whom are we promoting research and development on railways? ISO defines that "safety is non-existence of unallowable risks." The more railways contribute to social development or the more chances there are for people to use railways, railways must attain higher levels of safety or, in other words, railways must have less unallowable risks. It is also essential for railways to develop into more convenient and comfortable transport facilities. As railways shall be safe for the users, so research and development on railways shall

be undertaken for the customers.

To respond to the requirements by the government of Japan, JR companies and other railway operators, RTRI is now promoting approximately 280 R&D themes, of which about half are on safety issues. RTRI is eager to share problems related to the safety of railways in Japan and abroad and attain success in solving them in conjunction with the governments, universities, railway operators and research institutes all over the world.

As an ideal venue where we can raise and discuss various research themes including those on safety, the World Congress on Railway Research (WCRR) is organized by the organizing committee representation from many countries. The 10th WCRR 2013 will be held in Sydney in November 2013 under the greatest cooperation of Australian railway authorities. In addition, UIC is going to have many characteristic conferences and symposiums. It is also possible to promote joint research between research organizations in different countries. I wish that a chain of cooperation to share the results of research and development on the safety of railways be extended on a global scale from now on, and that such cooperation extends beyond the boundaries of cultures, climates and rules in different countries.



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