



Newsletter on the
Latest Technologies
Developed by RTRI

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RTRI Celebrates the 25th Anniversary of its Foundation

Hideyuki TAKAI
Executive Director

Research and development on railways in Japan have a 105-year long history as they started in 1907 when a railway survey office was organized as a division of the national railway. Nearly 80 years later, in December 1986 the Railway Technical Research Institute (RTRI) was incorporated just before the division and privatization of Japanese National Railways. On the occasion of the 25th anniversary of the founding of RTRI in December 2011, an organization-wide commemorative symposium "RTRI - Foreseeing the Coming 25 Years" was held with all employees present. The event is described in a separate article.

RTRI, an organization for comprehensive research and development of railway technologies, has contributed in conjunction with Japan Railway companies to the improvement of railway functions. Examples include the development of Shinkansen railways, a harbinger of high-speed railways in the world, increasing the curve-negotiating speed of rolling stock having tilting bodies, speedup of Shinkansen trains by using lightweight bolster-less trucks and the development of a magnetically levitated railway system aiming at having a maximum speed of 500km/h.

In Japan, a country frequently hit by natural disasters, it has



been an important mission as well for RTRI to promote research and development to minimize the damage on railway assets by earthquakes, heavy rains and strong winds, with the outcomes applied to railways as disaster preventive measures in various forms. As a matter of fact, it is thought that such efforts led to the minimization of the damage on railways at the Great East Japan Earthquake (Tohoku Region Pacific Coast Earthquake) in March 2011.

The operation of RTRI is based on the five-year "Master Plan – RESEARCH 2020 – Toward the Sustainable Development of Railways," in which RTRI is making its utmost effort to upgrade simulation technologies aiming at developing "virtual test tracks" in several years to implement tests on a supercomputer instead of operating under impractical conditions on actual lines. Constructing a "railway simulator" to simulate the running conditions of rolling stock along with peripheral circumstances is planned for several years thereafter.

Note: "Tohoku Region Pacific Coast Earthquake" is the official naming by the government of Japan.



高井秀之
Hideyuki Takai