



Newsletter on the
Latest Technologies
Developed by RTRI

Railway Technical Research Institute
2-8-38 Hikari-cho, Kokubunji-shi
Tokyo 185-8540, JAPAN
URL: <http://www.rtri.or.jp>

Editorial Office: Ken-yusha, Inc.
URL: <http://www.kenf.or.jp/en/>

Copyright © 2008 Railway Technical Research Institute.
All rights reserved.
Reproduction in whole or part without permission is
prohibited. Printed in Japan.

Railway Technology Avalanche

December 22, 2008 No.25

GENERAL INFORMATION

- The Progress of the RTRI's Five-Year Master Plan
Yuji NISHIE..... 143
- UIC Panel of Structural Experts Meeting and Exchange Seminar in Japan
Nobuyuki MATSUMOTO..... 144

ARTICLES

- A Study of Evaluation Methods for Railway Signalling Systems from the Viewpoint of Availability
Koji IWATA..... 145
- A Method for Failure Detection Based on Monitoring Data from Existing Facilities
Naoya OZAKI..... 146
- Long-Term Field Durability Testing and Practical Application of Shelling Damage-Resistant Bainite Rail
Yukio SATOH..... 147
- Measurement and Discrete Three-Dimensional Modeling Techniques of Dynamic Behavior of Ballasted Track
Akira AIKAWA..... 148

The Progress of the RTRI's Five-Year Master Plan

Yuji NISHIE

Director, Planning Division

The Railway Technical Research Institute (RTRI) is currently promoting a variety of projects based on the RESEARCH 2005 Five-Year Master Plan launched in 2005.

As basic policies, the Master Plan manifests such subjects as the creation of railway technologies in the 21st century, maximization of the integrated power of the RTRI as a group of railway engineers, quick response to the needs of railways, inheritance and dissemination of railway technologies, accumulation of basic technologies, and transmission of information on developmental activities.

In line with these policies, the RTRI has four targets: realizing a highly reliable system of railways, providing passengers with convenient travel, establishing railways with low construction and operation costs, and achieving harmony between railways and the environment.

To attain these targets, the RTRI currently implements activities in three areas: research for the future of railways, technological development for practical purposes, and research to solidify the basis of railway technologies.

The RTRI has promoted research and development quite successfully in the past during the period of this Master Plan. In the meantime, however, the social and economic environment surrounding railways has started to undergo rapid change.

On the Joetsu Shinkansen line, a train derailed in the Mid Niigata Pref. Earthquake of 2004. In 2005, a derailment/overturning accident involving a commuter transport train occurred on the Fukuchiyama line, and another derailment/overturning caused by gusting winds also happened with an express train on the Uetsu line in the same year. In the wake of these successive accidents, concern among the Japanese public about the safety and reliability of railways has increased considerably. In administrative terms, on the other hand, the Ministry of Land, Infrastructure, Transport

and Tourism (MLITT) integrated the Aircraft and Railway Accidents Investigation Commission (ARAIC) and the Investigation Division at the Marine Accident Inquiry Agency (MAIA) in October

2008 to create the Japan Transport Safety Board (JTSB) and bolster the structure that supports accident surveys and investigations. Furthermore, the global economy is becoming increasingly chaotic, with the problems of resources and energy - including global warming, soaring crude oil prices and the exhaustion of rare metals - becoming ever more serious. In December 2008, the government enacted three laws to restructure corporations in the public interest; the RTRI will also be required to respond appropriately to these laws.

Amid these ever-changing circumstances, the RTRI is preparing the Master Plan for 2010 and thereafter. As part of this process, the RTRI will discuss measures to maximize the potential of railways and meet the requirements of a globalized society and a nation in which the effects of falling birth rates and longer life expectancy are becoming increasingly evident.

