

Collaborative Research with DB Systemtechnik on Braking Systems

In order to implement a collaborative study titled "A Study on Simulations and Performance Evaluation Methods for Braking Systems," I was temporarily transferred to DB Systemtechnik GmbH (DBST) from April 1, 2016 to March 31, 2017. This was the second case for Railway Technical Research Institute (RTRI) to dispatch staff to DBST, following the implementation of a collaborative study named "Research on Prediction and Assessment of Micro-pressure wave."

In the present collaborative study, techniques used in the test, evaluation and simulation of braking systems in Japan and Germany have been compared, with the aim of acquiring new knowledge that will contribute to the advancement of braking systems.

In Europe, standards for brake performance evaluation exist, and DBST, which is approved as a standard certification body, has performed a number of tests and acquired a great deal of related know-how. On the other hand, RTRI has the advantage of having accumulated knowledge through continuous research and development of braking systems. Through exchanging such acquired information and complementing each other, we have been working hard to produce high-quality results.

In addition, while DBST places emphasis on certification business, RTRI places emphasis on research and development work. Thus,



At the report meeting held at the end of my stay, with members of the DBST brake department (the author is standing in the middle)

since these companies have different viewpoints, we have gained valuable experiences that broaden our horizons such as the promotion of test efficiency and the pursuit of standards for fair performance evaluation.

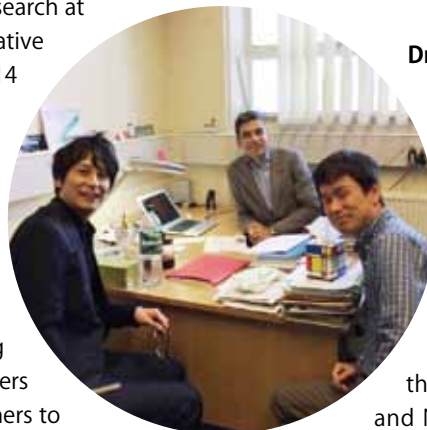
The present collaborative study will last until March 31, 2018. We will make further efforts to enhance research contents so as to create a lasting relationship that is beneficial for both companies.

(Daisuke Hijikata, Brake Control)

Collaborative Research with NewRail on Passenger Safety

RTRI and NewRail (The Center for Railway Research at Newcastle University, UK) conducted collaborative research for about three years from June 2014 to March 2017. NewRail served as Project Leader of "SAFEINTERIORS," which was the EU project of Train Interior passive safety research conducted from 2006 to 2010 that accumulated know-how on how to ensure safety in case of a railway collision accident.

This RTRI/NewRail collaborative research was conducted with the aim of promoting research on "Evaluation of Damage on Passengers in Train Collisions," in which RTRI sent researchers to the UK from the Ergonomics Laboratory and the Vehicle & Bogie Parts Strength Laboratory for two and a half years as visiting researchers.



Dr. Roberto Palacin (Senior Research Associate, Rail Systems Group Leader), Dr. Kazuma Nakai (Ergonomics Laboratory, Human Science Division), Mr. Tomohiro Okino (Vehicle & Bogie Parts Strength, Vehicle Structure Technology Division)

It was very helpful for us to learn about various initiatives on Passive Safety, which had long been implemented in Europe, including the "SAFEINTERIORS" project. We hope that RTRI and NewRail will continue to conduct research to achieve higher safety of railways, while maintaining a fruitful relationship between the organizations.

(Tomohiro Okino, Vehicle and Bogie Parts Strength)