## **Report on InnoTrans 2016**

Masaru Muramatsu

Keywords InnoTrans, Berlin, International Railway Technology Trade Fair, OCS inspection, VI, VCB, Overseas railways

Abstract

InnoTrans is the world's largest International Railway Technology Trade Fair held once every two years in Berlin, Germany. New railway construction projects are still actively promoted worldwide - mostly in emerging nations.

The world railway markets are maintaining at the momentum of growth as the scale of InnoTrans exhibition is consistently growing.

Since first joining this exhibition in 2012, we have been promoting our unique railway-related products through our own booth. InnoTrans 2016 was our third occasion for exhibition with our booth. It was held from September 20 to 23, 2016. In 2018, it was held from September 18 to 21.

#### **Preface**

InnoTrans 2016 was the eleventh event since the first InnoTrans was held in 1996. A total of 2955 enterprises from 60 countries worldwide joined this event and visitors numbered about 145,000 (preliminary figures announced by the organizer). Both the number of exhibitors and visitors set a new highest record. There was an increase of more than ten thousand visitors, compared with the previous year's number of visitors of 133,595.

In an outdoor exhibition yard neighboring the exhibition hall, actual trains and cars were exhibited by using freight traffic lines of 3500 meters long. Including the first release railroad cars, these exhibits were a nice attractive addition to the overall Fair in terms of quality and quantity. Fig. 1 shows a view of outdoor exhibits. This paper introduces an outline of our booth for InnoTrans 2016.

View of Outdoor Exhibition

Even the indoor exhibition site has a vast event space, as numbers of new model railway cars exhibited in the outdoor space are a great event attraction.

#### Outline of Our Booth

Fig. 2 shows an external appearance of our booth. We secured an exhibition booth with 36m<sup>2</sup> space in HALL52 Stand413. This includes a product exhibition space with a backyard, a meeting space, and a receptionist desk. Fig. 3 shows where our booth was situated and Fig. 4 shows the meeting space.

In the product exhibition space, two 50-inch monitors were arranged so that video programs for the introduction of our products and company profile could be shown on demand. Three exhibition panels were shown on the wall. There were introductions shown on our two (2) unique products: the Overhead Catenary System (OCS) inspection system and the Vacuum Interrupters (VIs). We presented many of our rich railway project experiences abroad. Regarding the VIs, we displayed actual products. The OCS inspection system was also exhibited. The visitors could freely operate the PC for demonstrations.



Fig. 2 External Appearance of Our Booth

Large-scale monitors were installed on both sides of our booth. On the external side of the booth partition wall, we arranged the demonstration panels, real VI models, and a demonstration unit of the OCS inspection system.

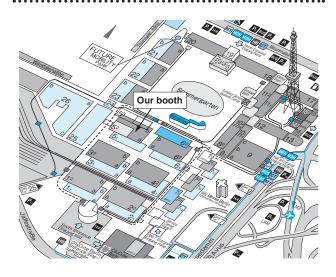


Fig. 3 Location of Our Booth

An exhibition booth area of 36m² was secured in HALL52 Stand413.

#### 2.1 OCS Inspection System

The OCS inspection system is a set measuring system for the purpose of facility management and diagnostic services for OCS facilities. The overhead catenary is an electrical facility that feeds power to electric train via contact between the pantograph and catenary. This electrical contact is effected by many factors of working conditions.

The measured data show such points in the numeric values. Since the measured results are influenced by the running conditions of railway cars and environmental conditions, it is necessary to confirm the obtained data in light of the running on-site conditions. Our OCS inspection system is based on image processing technology and it offers the following features:

(1) Preliminary confirmation is possible based



Fig. 4 Meeting Space

Two tables were provided. Each table space was located near a monitor.

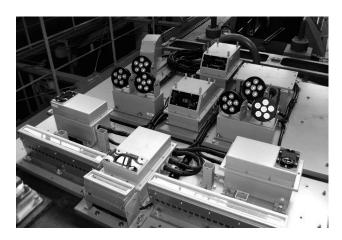


Fig. 5 Rooftop Equipment

The OCS inspection system is composed of rooftop equipment, interior equipment, and analyzing equipment.

on video images before an actual field survey by a service engineer.

- (2) Since it adopts a compact energy-saving system, this equipment can be loaded on an Electric Multiple-Unit (EMU).
- (3) A variety of measuring items are available to meet the requirements of customers.

At the time of InnoTrans 2016, based on the promotion concept "From Inspection Measurements to Diagnostic Services," we showed and promoted past track records and new features. Fig. 5 shows an example of the related rooftop equipment.

#### 2.2 VIs

The actual VIs were on display. This is an interrupting device for Vacuum Circuit-Breaker (VCB). The VCB is an environmental-conscious product and it does not use  $SF_6$  gas for insulation.  $SF_6$  gas



Fig. 6 View of Real VIs in Display

We commercialized various VIs meeting the needs of applications.

is a greenhouse gas. The VCB is an energy-saving and eco-friendly resource product. Fig. 6 shows a view of the authentic products on display.

In 1965, we started an R&D on VIs. After five years in 1970, we succeeded in the development of VCBs up to 24kV class. We then developed VCB products in the ultra-high voltage class and this was the first achievement of its kind in the world. In 1975, porcelain type VCBs (2-point break) of 168kV class were developed. Renowned in the world, they are our unique products. Since then, we released a variety of VI products applicable to a variety of purposes, ranging from vacuum magnetic contactors of 7.2kV class to VIs applicable to ultra-high voltage VCBs of the world-highest 145kV class. Using demonstration panels, explanations about the features and construction of equipment were presented. For some examples of applications in the field of railways, one-point break type porcelain VCB of the world-highest voltage class, eco-tank type VCB (dry air insulation), and VCBs to be loaded on railway cars were introduced.

# 3 Japan-Germany Railway Business Forum

Prior to the event of InnoTrans 2016, "Japan-Germany Railway Business Forum" was held under the sponsorship of the Japanese Embassy in Germany. Japanese and German railways services operation firms and their key products suppliers made presentations on past equipment procure-



Fig. 7 View of the Japan-Germany Railway Business Forum

Following the opening greetings, there were several presentations by railway services operators and key products suppliers. This forum was supported by the Japanese Embassy in Germany. After this Forum, there was a networking session among participants to deepen mutual understanding.

ment systems and business achievements for the purposes of mutual understanding and business promotion (A total of 192 people joined from Japan and Germany.) Fig. 7 shows a view of the Japan-Germany Railway Business Forum.

### 4 Postscript

As the world railway-markets show growing trends, the significance of the InnoTrans, a world largest railway technology trade fair, is very big as it offers a great opportunity for railway services operation firms to gather. The fact that we could show our own products at our own booth for such event greatly helps improve our market recognition and presence in the world railway market. We detected improved recognition from meeting with our customers and our related suppliers at home and abroad at various meeting occasions in the InnoTrans.

By joining this kind of exhibition in the long preparation and briefing experiences with visitors at our booth offered integral experiences for the HR development. Looking ahead to this year's exhibition of InnoTrans, we would like to work on improving our competitive and unique products for railway systems. Since railways are a key social infrastructure, we would like to contribute to the progress of railway development at home and abroad. The InnoTrans 2018 was held in September.

• All product and company names mentioned in this paper are the trademarks and/or service marks of their respective owners.