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Summary

Concepts for the Development of the “Next-generation Railway Operation System in the Tokyo Metropolitan Area”

Mayumi KOREKODA  1
Kou TAKAMI
Hiroshi KAWASAKI
Tamotsu KATO

To enhance the satisfaction of passengers using the railway, JR East is taking various measures to improve transport services in accordance with the JR East 2020 Vision. In particular, we have launched a new research and development project aimed at revamping the transport services of the Tokyo metropolitan area and are focusing efforts on carrying out initiatives. This article introduces the concepts for the development of the “next-generation railway operation system in the Tokyo metropolitan area.”

Data Communication of Tokaido Shinkansen Train Radio

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The train radio facilities of the Tokaido Shinkansen replaced in 1989 with a LCX system were renewed in February 2009 owing to its aging. In order to enhance functions of business applications and passenger services, together with preparation of independent communication networks, data transmission functions were strengthened replacing train radio facilities with a digital LCX system which would increase transmission capacity and quality. This paper describes the process of the development of the new system and its characteristics.

Development process and future approach of DMV

Toshio NANBA  9
Akio NAGAI
Masahiro NAKATA

JR Hokkaido has been promoting research and development of “a new type Dual Mode Vehicle (DMV) which can run on both rail tracks and roads” to implement changes in railway systems for revitalizing local lines. JR Hokkaido is currently working on a project for its full-scale commercial operations. This paper introduces our approach and outlines this project.

Railway Electric Power Storage System (E’Solution System) Utilizing Lithium-Ion Batteries

Toshiro SAKUNO  14
Yoshiteru HOSHI

This paper introduces the electric power storage system for railway (E’Solution System) that functions as a battery post, paying attention to the secondary battery under remarkable development.

The electric power storage consists of the DC/DC converter manufactured by Toyo Denki Seizo and large-size lithium-ion batteries developed by GS Yuasa that are capable of charging/discharging large current rapidly and are compact and lightweight owing to the high energy density.

Program to Perform Experience-Based Safety Training Specialized for Railway Construction Works

Hiroichi NAKAMURA  18
Tekken Corporation has promoted making up a unique “safety system for railway construction works”. In November 2007, the company organized “practical experience-based outdoor training facilities for railway construction works” and an “exhibition hall of accident information”, as a first case among general construction companies in Japan. This paper introduces the facilities and the curriculums of the trainings.

Facts & Analysis

Transition of the number of the railway accidents

News

To the Readers