Overview of Osaka Station Redevelopment Project and its Strategies

Hiroshi MIYAZAKI

The “Osaka Station Redevelopment Project” was an urban redevelopment project for the greater Osaka Station area undertaken jointly by the City of Osaka, other government agencies, local businesses, and developers. The project aimed at drastically enhancing the functionality of the Osaka station area as a central hub by improving the station’s original function, which was to provide access from the Kyoto, Osaka, and Kobe areas to Osaka station. This article describes how Osaka station, a major hub in the railway network, has been connected to the streets of Osaka to give rise to a new “city.”

Outline of Series E5 and Series E6 Prototype for Tohoku Shinkansen

Tomoyuki ENDO Hitoshi SHIRAISHI

JR East produced the Series E5 train with the maximum speed of 320km/h for the Tohoku Shinkansen, into which Gran Class to be a new higher in rank was introduced. Then, JR East developed the Series E6 Prototype because it was required to produce the train having a capability able to run on both Shinkansen and conventional lines. We report in this paper the outline of Gran Class accommodation of the Series E5 and the Series E6 Prototype.

Current Disaster Prevention Project of the Seikan Tunnel

Kazuhiko MATSUMOTO Ayumu ITAGAKI

The Seikan Tunnel, since its opening on March 13, 1988, has served as the main artery railway facility linking the main island of Honshu and Hokkaido. With the total operating length of 53.850km, the Seikan Tunnel is provided with numerous disaster prevention facilities to ensure the safety of our passengers. This paper describes the current Disaster Prevention Project of the Seikan Tunnel including the construction of a shared section with the Hokkaido Shinkansen.

Train Protection System to Prevent Secondary Accident

Ken MURAYAMA Tetsuo ISHIGE

When an accident such as derailment occurred, a protection radio has been introduced to prevent a secondary accident. We developed a train protection system to prevent a secondary accident, even in the instance that crews couldn’t be able to take immediate protective measures against an oncoming train, by detecting an accident through an acceleration sensor and triggering an alarm automatically when a serious accident such as head-on collision, derailment and overturning occurred. We report the development of the system.

ENGINEER TRAINING

Efforts of Technical Education in JR Central

Naofumi ARIMOTO

Development of Bridge Girder Impact Detector

Norikazu MISAKI Yasuhiko SAKAMOTO

When there was information on a vehicle collision accident to steel-made bridge girder, it was necessary to confirm the situation and the damage degree. However, it took time in order to verify safety and there was a problem in the train operation. Then, we developed a method detecting and reporting only a harmful impact to the bridge girder, such as deformation, damage and movement, which influence the operation security of a train. We depict the development