

Chapter 2 Overview of Current Railway Traffic Safety Measures

1 Improvement of Railway Environment

● Improving Operational Safety Devices

Based on the technical criteria amended with regard to the JR West Fukuchiyama Line train derailment accident, improvement such as ATS is being promoted for curves, turnouts, feed lines, and others that have the risks of causing a serious accident.

● Strengthening of the Earthquake Resistance of Railway Structures

Seismic strengthening of the elevated bridges of the Shinkansen and conventional lines were promoted. Furthermore, in preparation for the next expected large scale earthquake, the emergency implementation of seismic strengthening was also carried out in primary stations that function as bases for emergency personnel transportation.

2 Ensuring the Safe Operation of Railways

● Improvement of Educational Programs for Train Crews and Safety Specialists; Enhancing the Basic Competence of Personnel

In order to ensure the quality of power car operators (hereafter referred to as "conductors"), a power car operator license examination has been carried out. Also, in order to improve the quality of conductors, railroad operators have offered guidance regarding how officer education should function and policies for the improvement of workplace environment. Furthermore, in order to ensure the aptitude of the crew, it has been instructed that aptitude tests should be properly implemented.

● Improvement of the Management of Train Operations and Crews, etc.

In order for the crew to grasp the situation swiftly and act accordingly where an accident occurs, they have been instructed of the improvement of recovery systems, proper information provision for the crew, and ensuring alternative transport methods. Furthermore, railroad operators have given guidance to exert themselves in safety management and grasping of psychosomatic state of crew members of work so that the crew will fulfill their duties and ensure safe operation, while also raising the safety consciousness of the crew.

● Implementation of Operating Safety Auditing of Railway Companies, etc.

For the purpose of ensuring safe railway operation, security auditing has been implemented for railway operators based on railway operation laws. Audits were carried out 75 times in 2008 for 56 operators, and governmental guidance through documents requesting improvement was carried out in 33 cases for 32 operators regarding initiatives for the safety and security of transport, management of facilities and vehicles, operation handling, and education training for crew members.

Based on the "Transport Safety Management System" introduced in October 2006, a safety management system was established by the operators which was taken action by management executives to on-the-site workers as a whole. The country carried out the evaluation for transport safety management to 453 companies by the end of December 2009 to confirm the status of implementation.

Safety Measures on Train Platforms

- In order to prevent disabled persons, the elderly and other users from falling from the platform, the establishment of platform doors (including mobile platform fences) is promoted.
- As of March 31st 2009, platform doors have been set up nationwide on 12 routes and 141 stations, and mobile platform fence have been set up on 25 routes and 291 stations.



Platform Door



Mobile Platform Fence

- As a safety measure for preventing accidents of people falling from the platform, governmental guidance has been given for establishing emergency stop buttons or fall detection mats, and setting up shelter spaces beneath platforms for platforms where the speed of passing trains is high, and with heavy operation schedules every hour*.
- As of March 31st, 2009, 1,828 (88%) of the targeted 2,074 stations have been installed with emergency stop buttons or fall detection mats, and shelter spaces beneath the platform have been set up in all of the targeted 2,074 stations.



Emergency Stop Button



Fall Detection Mat



Steps for Going Up the Platform



Shelter Space Beneath the Platform

* Platforms with trains entering generally at 60km/h, and where 12 trains pass through or stop every hour are targeted.