

Legislation Governing Railway Safety in Japan

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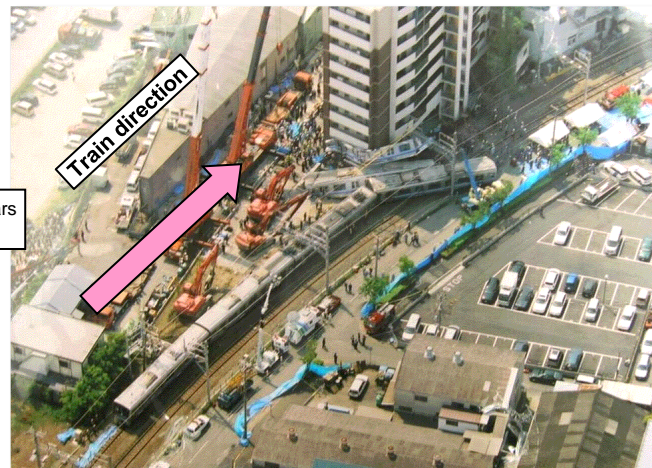
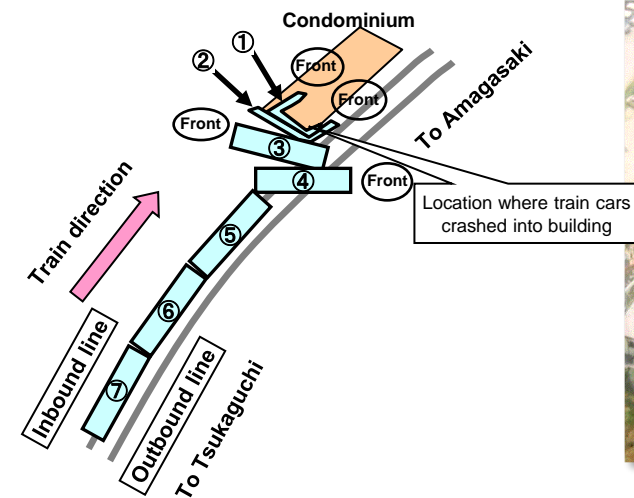
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Railway Bureau

Ministry of Land, Infrastructure, Transport and Tourism

Overview

- ◆ Date/Time: Monday, April 25, 2005 at approx. 9:18 am
- ◆ Operator: West Japan Railway Company
- ◆ Location: JR West Fukuchiyama Line between Tsukaguchi Station and Amagasaki Station
(Amagasaki City, Hyogo Prefecture)
- ◆ Casualties: 107 deaths (106 passengers & 1 driver) and 562 injured
- ◆ Overview: A seven-car train bound from Takarazuka Station for Doshishamae Station entered a curved section at a speed of approx. 116 km/h. The speed limit through the curve was 70 km/h. The high speed caused the train to derail outward along the curve. The first two cars collided into an apartment building on the left side of the tracks.



Cause

- ◆ It is speculated that the driver was late in applying the brakes, resulting in the train entering the curve at a speed significantly over the speed limit. This caused the first car to derail as it tipped over, followed by derailment of the number 2 through 5 cars.
- ◆ The delay is believed to have occurred because the driver's attention strayed from operating the train as he was paying particularly close attention to communications between the conductor and dispatcher in addition to thinking of excuses out of concern he might be subjected to day-shift retraining because of an earlier train delay.
- ◆ These factors may have been due to the way the company managed drivers, which included disciplinary actions and day-shift retraining, which drivers perceived as penalizing anyone who caused an incident.
- ◆ In addition, it is believed that the train operation schedule was tight, at the time of the accident.

MLIT Actions Based on Lessons Learned

- ◆ Mandating installation of ATS devices for curves (ATS reduces speed or stops trains when a certain speed is exceeded at designated points ahead of a curve)
※ ATS: Automatic Train Stop
- ◆ Revising the Railway Business Act to establish a safety management system for railway operators that mandates the drafting and submission of safety management regulations as well as appointment and notification of a chief safety management officer and other safety officials
- ◆ Implementing transport safety management evaluations

Assurance of Transport Safety

- Explicitly clarifies that "ensuring the safety of transportation" in the stated purpose of the Railway Business Act
- Mandates that railway operators constantly endeavor to improve transport safety

Establishment of Railway Operator Safety Management System

- Create and submit safety management regulations establishing a safety management system, methods, etc.
- Appoint and submit notification of the chief safety management officer (executive officer level) and train operations manager (department head or other management officer level)

Safety management regulations

- Safety initiative basic policy, organizational structure, information communication methods, and internal audit methods
- Implementation structure and methods for work pertaining to train operation, facilities, and rolling stock

Duties of the chief safety management officer

- Reliably direct implementation of safety-related matters in operational divisions
- Thoroughly instill an awareness of safety first within the organization

Duties of the train operations manager

- Manage and supervise services related to train operation, including managing train operation and maintaining drivers' capabilities

Monitoring by Users

• Government releases safety information

- Status of accident and safety initiatives
- Description of orders for improving business activities and recommendations based on safety audits

• Railway operators publicly releases safety reports

- Basic policy and organizational structure related to safety initiatives
- Status of safety initiatives and such future plans

Government Guidance & Oversight

- Orders to revise safety management regulations / • Orders to appoint or dismiss chief safety management officer and/or train operations manager

- Mandatory corrective actions when there is concern transport safety may be compromised

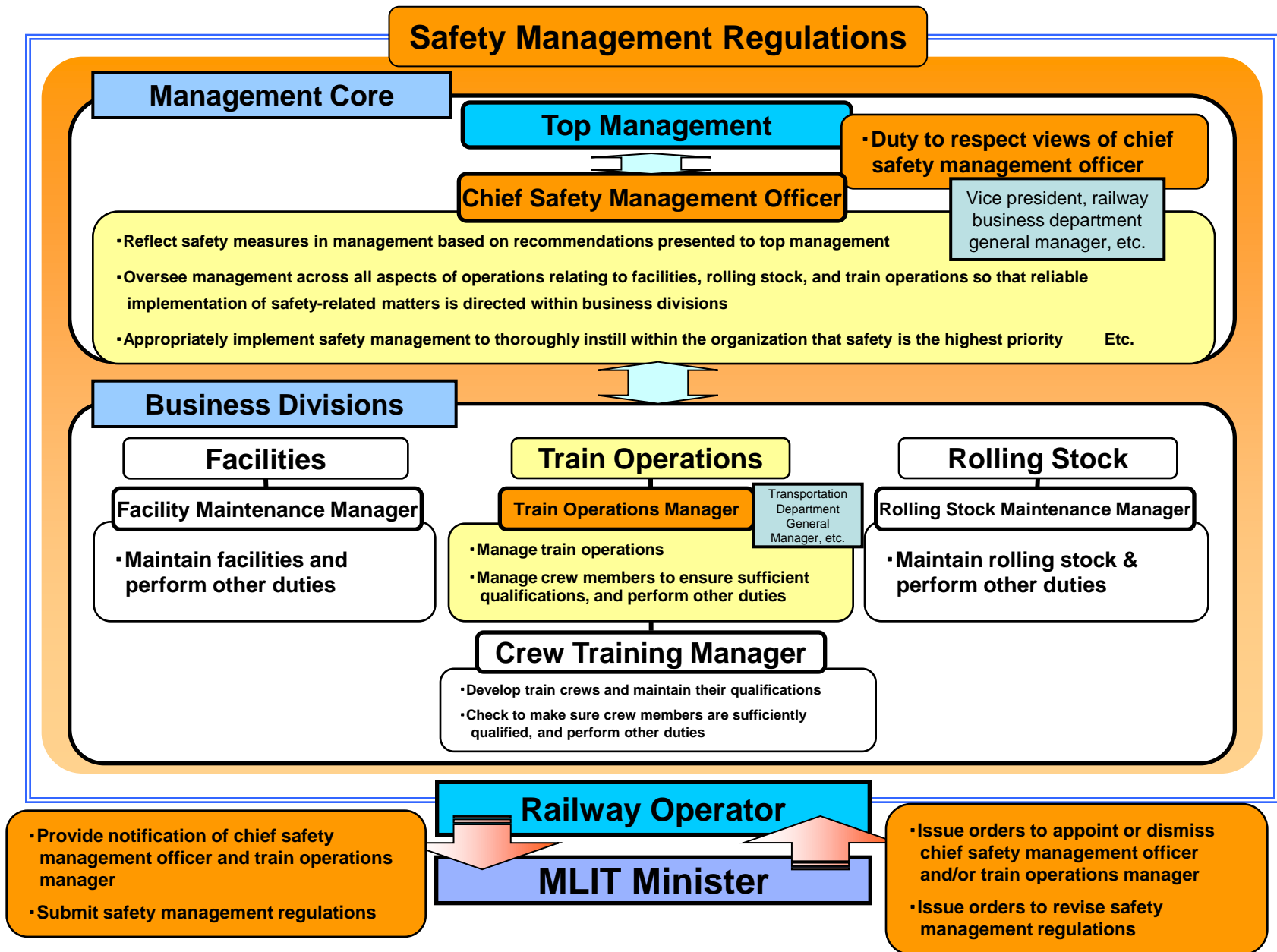
- Revocation of permits entrusting management of train operations, and improvement orders issued to such individuals

- Obtaining reports from the person so entrusted and on-site inspections

- Extension of government guidance and oversight authority to person entrusted with management of train operations

- Strengthened penal provisions for corporations

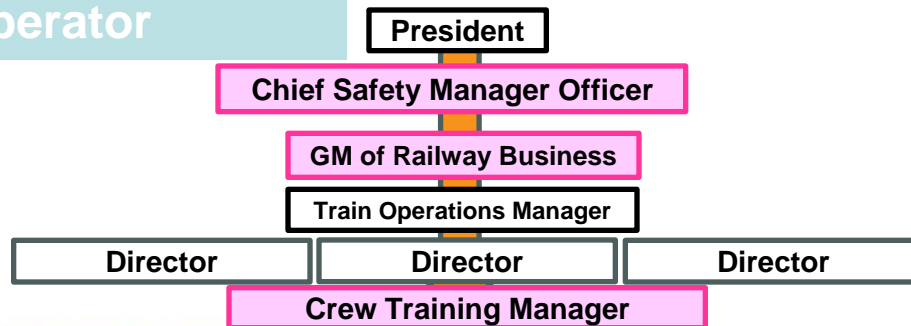
- Substantial increase in fines for violations of orders to improve business activities related to transport safety



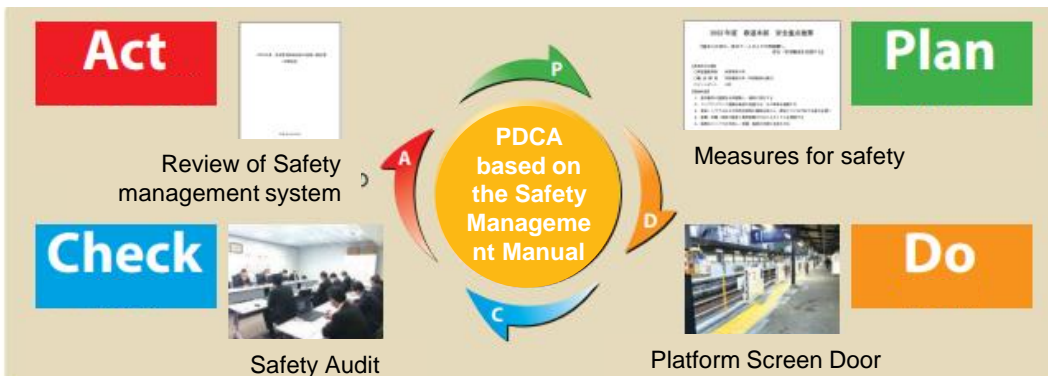
- Railway operator establishes internal safety management system and all personnel work together from top management to the frontlines to ensure safety management.
- MLIT assess current status and recommends improvement measures after interviewing top management and chief safety manager officer and verifying railway operator's documents and records.
- MLIT conducts safety audits to verify efforts to ensure railway safety.

Railway
operator

Safety Management System



Safety Management Manual-Based PDCA



Safety audits



Assessment of safety management



Railway Business Act:

Provisions concerning business operation requirements and procedures for facility construction, train operation planning, etc.

- **Railway Business Act Enforcement Regulations:** Provisions concerning particulars of procedures stipulated in the Railway Business Act
- **Railway Facility Inspection Regulations:** Provisions concerning procedures for facility construction completion inspections
- **Railway Accident Reporting Regulations:** Provisions concerning procedures for reporting to the government operational and other accidents when such occur
- **Railway Business Reporting Regulations:** Provisions concerning periodic reporting on railway operations
- **Railway Business Audit Regulations:** Provisions concerning methods for auditing railway operations

Railway Operation Act:

Provisions concerning matters related to the obligations and rights of railway operators, personnel, and passengers

- **Ministerial Ordinance Establishing Technical Standards for Railways:**
Provisions concerning technical standards for facility and rolling stock structure and operation procedures
- **Ministerial Ordinance on Ensuring Safety of Train Operations:**
Provisions concerning codes that must be followed by personnel engaged in train operations
- **Ministerial Ordinance on Powered Vehicle Operator Licenses:**
Provisions concerning types of operating licenses, examinations, and procedures for acquiring licenses

- Japanese government issues ministerial ordinances to establish technical standards for railways based on performance provisions specifying functional requirements necessary for ensuring safe and reliable transportation
- Railway operators develop implementation standards reflecting the reality of individual lines, referencing interpretation guidelines, and other sources that concretely specify and quantitatively represent interpretations of ministerial ordinances, and other directives in a non-binding manner yet within the scope of compliance with technical standard ordinances, and submit these standards to the Japanese government
- Japanese government directs changes be made when implementation standards are found not to comply with provisions specified in ministerial ordinances
- Railway operators comply with implementation standards to ensure safe and reliable transportation