

Railway accident investigation report

Railway operator: East Japan Railway Company
Accident type: Train derailment
Date and time: About 19:14, on December 25, 2005
Location: Around 158,158m from the origin in Niitsu station, between Sagoshi station and Kita-Amarume station, Uetsu Line, Shonai Town, Higashi-Tagawa County, Yamagata Prefecture

SUMMARY

The inbound limited express 2014M train, named "Inaho No.14" composed of 6 vehicles, starting from Akita station bound for Niigata station of East Japan Railway Company, departed from Sakata station about 68 minutes behind schedule, i.e., 18:00, on Sunday, December 25, 2005.

The all vehicles of the train, while running straight track on the embankment after passed the Mogamigawa N.2 Bridge, derailed and the front to the third vehicles fell from the embankment and turned over on their side, and the front and the third vehicles collided with the buildings in the left side of the track.

There were 43 passengers, 2 train crews and a cabin attendant on board the train, among them, 5 passengers were dead and 31 passengers, a train crew and a cabin attendant, total 33 people, were injured.

PROBABLE CAUSES

It is considered probable that the train, running the straight track on the embankment after passed the bridge over the river, exposed to the local gust as strong as over the critical wind speed of overturning from the right, and the vehicles tilted to the left and the first to the third vehicles derailed and turned over on their side after fell from the embankment, and the fourth to sixth vehicles derailed in succession.

REMARKS

1. Examination about measures against strong wind

"The meeting to discuss measures for strong wind in railway system", consist of Ministry of Land, Infrastructure and Transport, the Meteorological Agency, the railway operators, has examined the measures for strong wind, and each railway operator has strengthened the actions such as introduction of the anemometer since this accident occurred. However, railway operator should plan more enhancement of the monitoring and grasping system for the strong wind situation around the track, by the effective utilization of the weather information such as the warnings announced by the Meteorological Agency, as well as an observed data of the anemometers installed by the operator. In addition, the railway operator should examine about proper measures for strong wind, totally considering various factors, that will effect the safe railway operation in the strong wind, such as speed up of the train, a change of vehicle structures or installation of the wind break fence, etc.

2. Research of measures for gust of wind

Hazardous Wind Watch, that the Meteorological Agency started in public from March, 2008, should be examined to utilize when some measures for the local gust of wind like this accident, even though there is still a technical limit on the accuracy of the prediction. However, the railway operator should make efforts sincerely to realize the effective measures for gust of wind, by being interest in the new trends in the meteorology such as the Hazardous Wind Watch, watching advances in the weather observation technology and the data processing technology.

In addition, it is expected the Meteorological Agency to improve the accuracy of prediction and the regional precision, such as a lattice information, of the Hazardous Wind Watch, etc., and make efforts to respond the social needs pertinently, because railway system is the public transportation facility that the safe and the steady operation is required.