

Railway accident investigation report

Railway operator: Tosakuroshio Railway Co., Ltd.
Accident type: Train derailment
Date and time: About 20:41, March 2, 2005
Location: In the premises of Sukumo station, Sukuko Line, Sukumo City, Kochi Prefecture

SUMMARY

The outbound limited express 47D train, named "Nanpu No.17" and composed of 3 vehicles of the 2000 series diesel railcars belonging to Shikoku Railway Company, starting from Kubokawa station of Nakamura Line bound for Sukumo station of Sukumo Line of Tosakuroshio Railway Co., Ltd., departed from Hirata station on schedule, 20:35 on March 2, 2005, and passed Higashi-Sukumo station. After that, the train ran over the car stop at the end of track of the No.1 track of Sukumo terminal, climbing up to the passage ahead and stopped after collided with the elevator. The front vehicle was totally wrecked and the all two axles of the front bogie, the all two axles in the rear bogie and the all two axles of the front bogie of the second vehicle were derailed.

There were 11 passengers and 3 crew members on board the train, among them 10 passengers and the conductor were injured and the train driver was dead.

In addition, a fire occurred just after accident outbreak, and the underfloor equipments of the front vehicle were damaged by the fire.

PROBABLE CAUSES

It is considered highly probable that the train had entered into the premises of Sukumo station at the speed largely exceeded the limited speed for the caution signal of the home signal of the Sukumo station, and ran over the car stop at the end of track and climbing the passage ahead and the all four axles of the front vehicle and the all two axles of the front bogie of the second vehicle derailed, because the proper deceleration by the brake handle operation was not performed when the train entered into Sukumo station.

It is considered probable that the reason, why the proper deceleration of the train by the brake handle operation was not performed when the train entered into Sukumo station, was not an intentional action such as suicide by the train driver, and also, it is considered probable that the possibility of mistake by the train driver to consider the station as non-stop station was low. It is considered probable that some abnormal situation, that the train driver could not operate the train properly after the train left Hirata station, except the outer factors, such as, medicines or poison, alcohol or the sleep apnea syndrome; SAS, had occurred for the train driver. But the possible factor could not be identified.

It is considered probable that deceleration by the emergency brake conducted by the automatic train stop device could not effective in this accident because the automatic train stop device was designed without considering the secure method for the case that the approaching train speed exceed the supposed speed at the planning.

REMARKS

It is important that the automatic train stop device should automatically decelerate or stop the train approaching to the end of the track in high speed, by the speed limit function etc., to prevent accidents or to contribute to reduce damages of passengers, when a train driver cannot operate to decelerate a train below the limited speed or misunderstands the terminal station as non-stop station.