

Railway accident investigation report

Railway operator: Kyushu Railway Co., Ltd.

Accident type: Train derailment.

Date and time: About 20:20, February 13, 2014.

Location: Around 60,753m from the origin in Kurume station, between Amagase station and Sugikawachi station, single track, Kyudai Line, Hita City, Oita Prefecture.

SUMMARY

The outbound 1879D train, composed of one vehicle, starting from Hita Station bound for Bungomori station of Kyushu Railway Co., Ltd., departed from Amagase Station about ten minutes behind schedule by the effect of the delayed inbound train, on February 13, 2014.

The train driver found the fallen tree about 50m ahead on the track while the train was in powering operation at about 70 km/h, and immediately applied an emergency brake, however, the train collided with the fallen tree and stopped after running about 60m. The train driver checked the train after it stopped, he found that all axles of the vehicle derailed and the vehicle leaned into the right. There were two passengers and a train driver on board the train, one passenger was injured.

PROBABLE CAUSES

It is considered probable that because a cedar tree had fallen as to cross the track, the running train ran onto it and moved to the right and derailed, in this accident.

It is considered probable that the cedar tree had fallen by the root considering the followings.

- (1) The position of the gravity center of the cedar tree became higher than as usual because the wet and adhesive snow stacked on the crown of the tree fallen on the accident day.
- (2) The suspension force of the root was considered weak compared to the relatively strong strength of the trunk, because the fallen cedar tree was the tree in its prime and its trunk had sufficient diameter against its height.

In addition, it is considered somewhat likely that the tree had fallen by a little snowfall because the slope around the root of the tree had been in the water-rich state, because the landform of the slope around the fallen tree are ravine that the rainwater fell in the surrounded area will be concentrated, in addition, the water was leaking from the damaged sewerage system of the hot spring facility in the upper part of the slope.