

Railway accident investigation report

Railway operator : Japan Freight Railway Company.

Accident type : Train derailment.

Date and time : About 04:12, June 22, 2014

Location : At around 33,179 m from the origin at Goryokaku station, between Izumisawa station and Satsukari station, single track, Esashi Line, Kikonai Town, Kami Iso District, Hokkaido.

SUMMARY

On June 22, 2014, the High Speed Freight 7066 train, composed of 21 vehicles, starting from Sapporo Freight Terminal station bound for Utsunomiya Freight Terminal station of Japan Freight Railway Company, departed from Goryokaku station at 03:38, on schedule.

The train, while running at about 69 km/h in the premises of Satsukari station, the brake pipe pressure decreased suddenly and, at the same time, an emergency brake acted automatically, and stopped.

After the train stopped, the driver checked the train and found that the all two axles in the rear bogie of the 20th vehicle, freight wagon, derailed to right. Furthermore, the 21th vehicle, freight wagon, decoupled from the 20th vehicle and stopped at about 17 m behind the 20th vehicle.

There was the train driver onboard the train, but he was not injured.

PROBABLE CAUSES

It is somewhat likely that the accident occurred as the wheel in the outer rail side of the Ko-Ki 107 type freight wagon, climbed up the rail and derailed to right because the derailment coefficient increased due to the decrease of the wheel load and increase of the lateral force for the outer rail side wheel, as the body of the freight wagon was excited to vibrate in rolling mode significantly while the train was running in the 350 m radius left curved track.

It is probable that the significant roll vibration were excited to the vehicle body due to the existence of the large combination of alignment and cross-level which should be maintained, in the track before the point where the wheel started climbing up the rail.

It is somewhat likely that the existence of the large alignment to shorten the radius of curvature effected to increase the lateral force in the outer rail side wheels.

It is somewhat likely that the large combination of alignment and cross-level which should be maintained had existed because the on-site track maintenance section could not understand the existence of the plural kinds of the combination of alignment and cross-level measured by the high speed track inspection car, and these situation was caused in relation with the improper method to decide the necessity of the maintenance work by communication of the inspected results to the on-site track maintenance section, and a lack of the knowledge about the combination of alignment and cross-level in the on-site track maintenance section.

Although it could not be determined whether the unbalanced loading actually related to the

occurrence of derailment, it is somewhat likely that the status of loading just before the accident became to a factor to promote derailment.