

Railway accident investigation report

Railway operator : Tokyu Corporation.

Accident type : Train collision.

Date and time : About 00:30, February 15, 2014

Location : In the premises of Motosumiyoshi station, Toyoko Line, Kawasaki City, Kanagawa Prefecture.

SUMMARY

On February 15, 2014, the 01 Operation 231 train, composed of 8 vehicles, starting from Shibuya station bound for Motomachi-Chukagaki station of Tokyu Corporation, was running between Musashi-Kosugi station and Motosumiyoshi station, where snow were stacked on the track. The driver of the train received the instruction from the train dispatcher, to stop the train immediately to keep an interval with the 23 Operation 221 train, composed of 8 vehicles, starting from Shibuya station bound for Motomachi-Chukagai station, which was preparing backward operation to correct the stopped position at Motosumiyoshi station. The driver of the 231 train applied an emergency brake to stop the train but the train collided with the rear end of the 221 train, stopped in No. 2 track of Motosumiyoshi station, at about 00:30.

There were about 140 passengers and 4 train crews onboard the both trains and 72 passengers were injured.

PROBABLE CAUSES

It is probable that the accident occurred as the train running on the track in the snow fall collided with the rear end of another train which stopped ahead, because the required brake force could not be obtained when the train driver applied an emergency brake to stop the train according to the instruction from the train dispatcher to manage the overrun at the station of another train which operated ahead of the accident train.

It is probable that the reasons why the required brake force could not be obtained in the approaching train, was the significant reduction of the coefficient of friction between the surface of the brake shoe lining and tread of the wheel, when the brake shoes of the air brake were pressed to the tread of wheels according to the operation of the emergency brake. It is somewhat likely that the reduction of the coefficient of friction was related with that the snow stacked in the track, the oils adhered to the wheel flange and the dusts adhered to the brake shoes were mixed in the liquid state and supplied into the gap between the wheel and the brake shoes.