

"The accident that the train derailed by running onto the set-off rail because the confirmation of the put back works of the set-back rail after finished the periodic inspection of the electric devices of the set-off device"

Railway operator : Transportation Bureau, City of Yokohama
Accident type : Train derailment
Date and time : About 05:23, June 6, 2019
Location : Around 17,889 m from the origin in Kannai station, between Shimoiiida station and Tateba station, double track, Yokohama Municipal Subway No.1 Line, City of Yokohama, Kanagawa Prefecture

<SUMMARY>

At about 05:22, Thursday, June 6, 2019, the inbound Local 532 train, composed of 6 vehicles and started from Shonandai station bound for Azamino station, No.1 Line of the Transportation Bureau, City of Yokohama, departed from Shimoiiida station on schedule, after that the driver of the train received the shock as being thrust from the floor.

Therefore, the driver applied the emergency brake, and reported to the operation dispatcher that he felt the shock as being thrust from the floor together with the extraordinary large sound then he applied the emergency brake and stopped the train. After that, obeying the instruction from the operation dispatcher, the driver implemented the measure to prevent wheel rolling of the train and let the passengers get off the train and guided to Shimoiiida station in cooperation with the staffs rushed from Shimoiiida station.

When the driver implemented the measure to prevent wheel rolling of the concerned train, he found that the right wheel of the train ran onto the set-off device, *i.e.*, the set-off rail, and had been derailed to left of the rail.

There were 121 passengers and the driver onboard the train, and the driver was slightly injured.

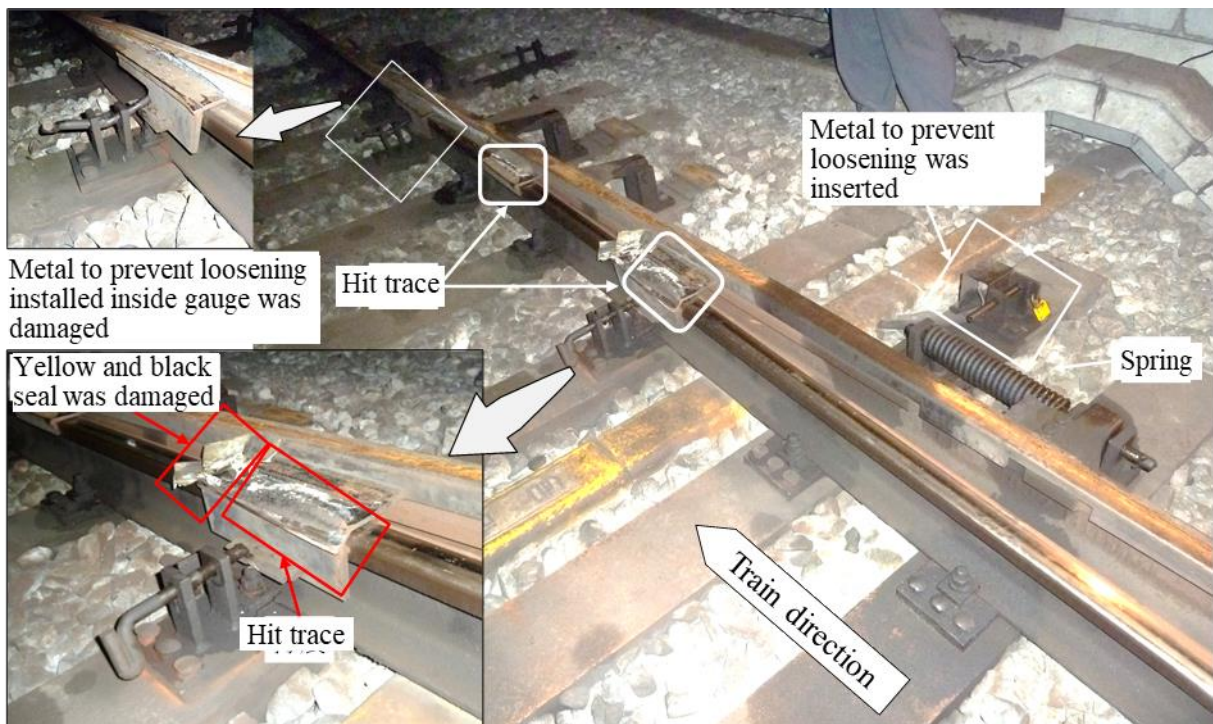
<PROBABLE CAUSES>

It is highly probable that the concerned accident was caused by that the plural right wheels of the concerned train ran onto the set-off rail and derailed to left, because the the concerned train moved to the place where the works had finished as the set-off rail was covering right rail of the main track due to forget the put back procedure to put-back the set-off rail for the right rail of the main track, in the periodic inspection of the movable set-off device.

It is highly probable that the set-off rail for right rail of the main track was forgotten to be put back, because the confirmation of the put back status of the set-off rail for right rail of the main track, which should be implemented when finished the works, was not implemented.

In addition, it is somewhat likely that above situation was related with that the worker was convinced to confirm the put back status of the set-off rail by checking the turned off warning light, etc., because the concerned set-off device was composed as that the operation of the alarm lights, etc., could be stopped even in the status that the set-off rail had not been put back.

Here, it is somewhat likely that the insufficient study and training to enforce the observance of the regulations, and the inadequate education etc., for the staffs who had not been charged in the periodic inspection for several years, were related to forget the confirmation procedure that should be implemented when finished the works.



<MEASURES TO PREVENT THE RECURRENCE CONSIDERED AS NECESSARY>

(1) Review of the inspection method and standardization of the checking methods

To make the check sheets which can check the inspection items and the working procedures when implemented the inspection works, or to add the descriptions in the existing inspection record book.

(2) Education to the staffs

To study on the preparation of the periodic educating system incorporated with the head office of the transportation bureau and the division of work site operation, such as to provide the chances for the extra training on the equipment that was inspected in a few frequencies, in addition to implement the training to enforce the observance of the regulations and the training to clarify the division of roles.

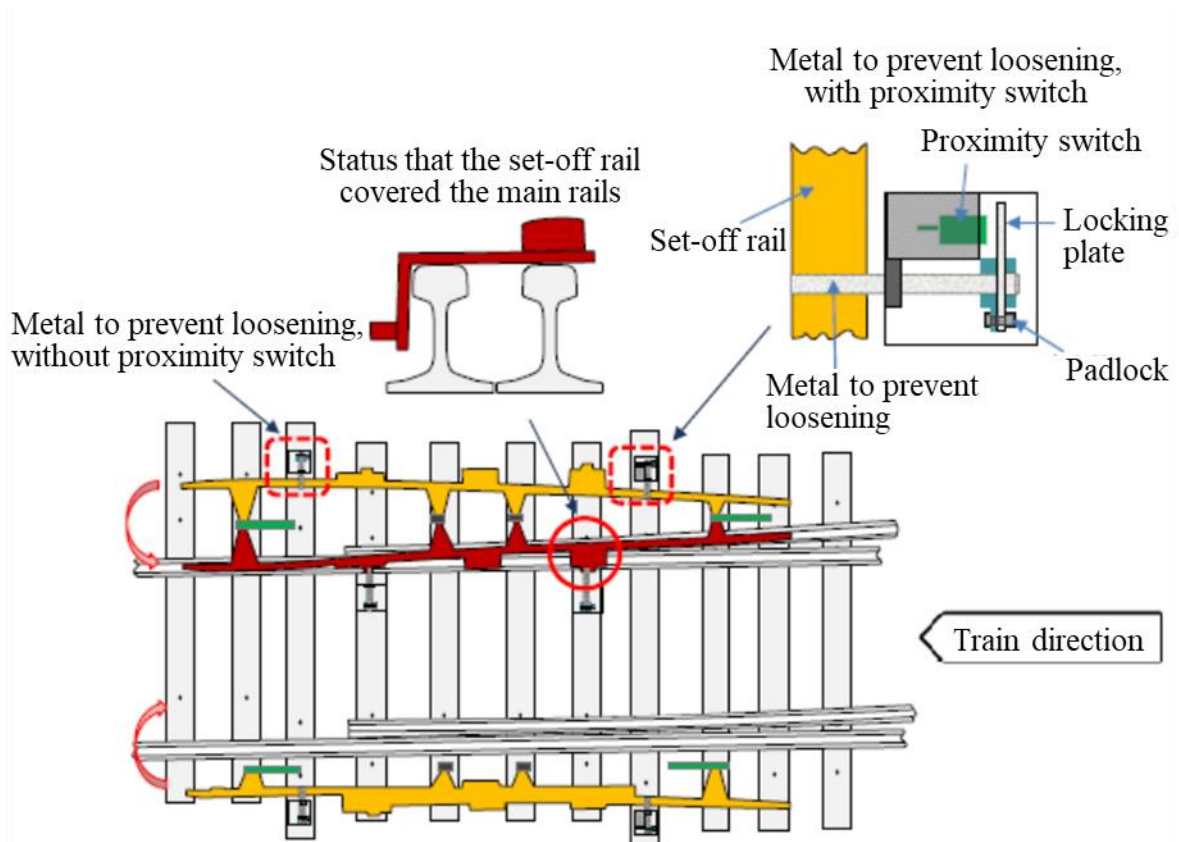
(3) Improvement of the set-off device

To study the improvement such as to add the function to prevent the failure in the put back operation as that the rotating warning lamp equipped with the built-in buzzer, the warning lamp, etc., did not stop its operation unless the set-off rail had been put back, because the set-off device that the wheel of the concerned train had run onto, was in the structure that the metal to prevent loosening could be inserted regardless of the put back status of the set-off rail.

<<Reference>>

The set-off device

* Brown colored part is the set-off rail for right rail that caused the derailment.



Details can be obtained by the railway accident investigation report in the home page of the Japan Transport Safety Board, *i.e.*, <http://www.mlit.go.jp/jtsb>