"The accident that the train derailed because the gauge widened significantly while the train was running in the curved track"

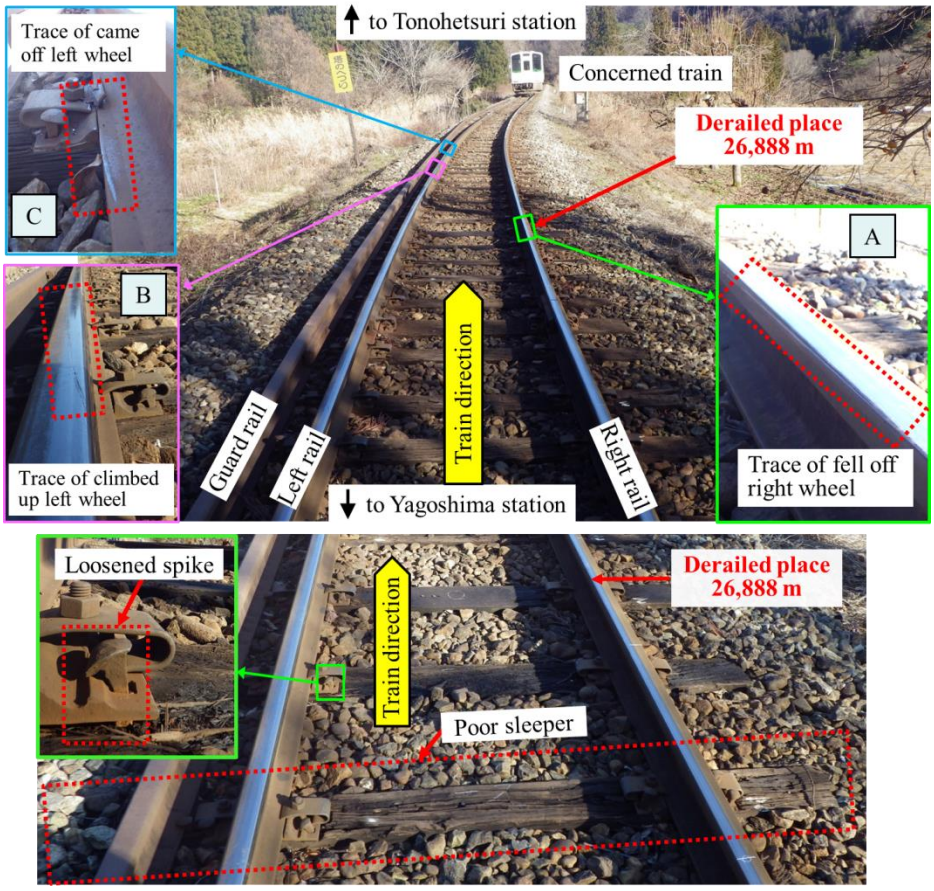
Railway operator : Aizu Railway Co. Ltd.
Accident type : Train derailment
Date and time : About 19:08, December 24, 2019
Location : Around 26,888 m from the origin in Nishi-Wakamatsu station, between Tonohetsuri station and Yagoshima station, single track, Aizu Line, Shimogo Town, Fukushima Prefecture

<SUMMARY>

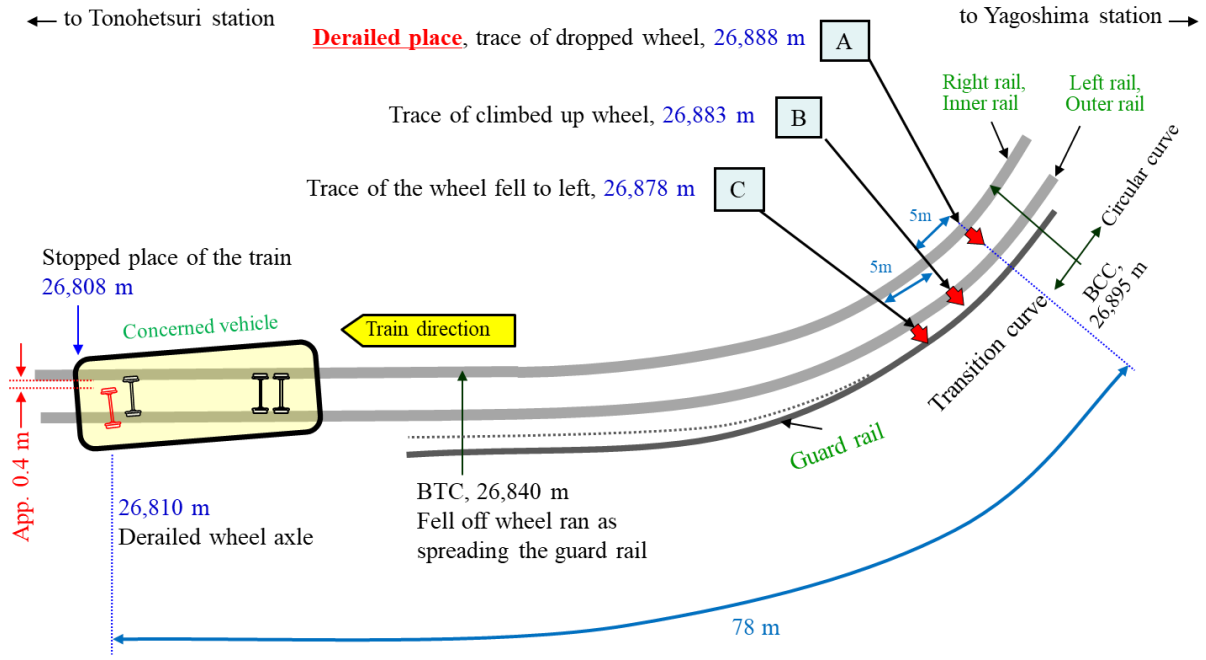
At about 19:08 on Tuesday, December 24, 2019, while the one-man operated inbound 3160D train, composed of one vehicle and started from Tobu-Nikko station bound for Aizuwakamatsu station, of Aizu Railway Co. Ltd., was passing the 200 m radius right curved track between Yagoshima station and Tonohetsuri station at the velocity of about 44 km/h, the driver of the train felt the impact, then operated the emergency brake to stop the train.

When inspected the vehicle after stopped, it was found that the 1st axle in the front bogie of the vehicle had been derailed to left.

There were 3 passengers and 2 train crews boarded on the train, but there was no injured person.



<STATUS OF THE DERAILMENT>



<PROBABLE CAUSES>

It is probable that the concerned accident was caused as that right wheel of the 1st axle in the front bogie fell to inside gauge because the gauge widened significantly while the train was passing through the 200 m radius right curve.

It is probable that the gauge widened significantly because the rail tilting and the lateral displacement of rails occurred due to the lateral force acted while the train was running caused by the continuously existed poor sleepers and the floating spikes in the rail fastening devices, in addition to the large track irregularity of gauge in the concerned curved track.

It is somewhat likely that the poor sleepers and the floating spikes of the rail fastening devices had been existed continuously, because the track maintenance responding to the status had not been implemented, as the status of the sleepers and the rail fastening devices, *i.e.*, the level and the continuity of the poor status, considering the risks against the wide gauge, were not comprehended well in the sleeper inspection, etc.

In addition, it is somewhat likely that the occurrence of the concerned accident was related by that the works to replace the wooden sleepers by the PC sleepers had not been completed before the occurrence of the concerned accident because the steep curved section where is dangerous for the wide gauge was not considered as higher priority, although there was the plan to replace the wooden sleepers by the PC sleepers.

<MEASURES TO PREVENT THE RECURRENCE>

(1) Steady implementation of the inspection of sleepers, etc., and the track maintenance.

(2) Change the material of the sleepers.

Here, the above described measures to prevent the recurrence were the items described in the opinion of the Japan Transport Safety Board, and the Tohoku District Transport Bureau had been made known well and had instructed the concerned company on these contents, therefore, it is necessary for the concerned company to reconsider on the prevention of the train derailment accident due to the wide gauge once again, and implement the required measures.

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