

"The accident that train collided with earth and sand flowed into railway track and derailed"

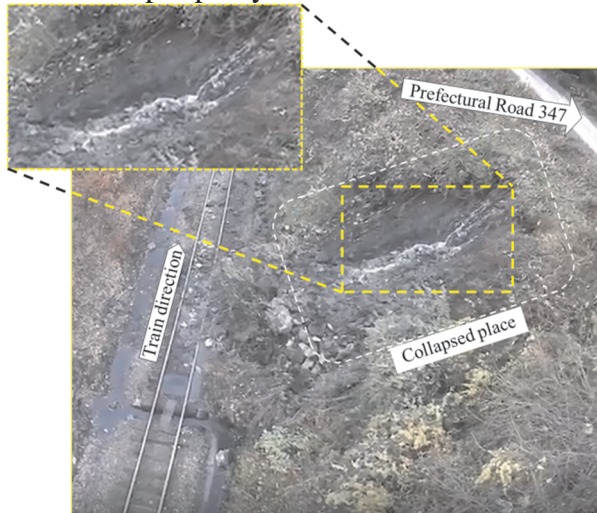
Railway operator : Aizu Railway Co. Ltd.
 Accident type : Train derailment
 Date and time : About 05:50, November 27, 2019
 Location : Around 24,556 m from Nishi-Wakamatsu station, between Tonohetsuri station and Yunokami Onsen station, single track, Aizu Line, Shimogo Town, Fukushima Prefecture

<SUMMARY>

At about 05:50, on Wednesday, November 27, 2019, while the one-man operated inbound 2302D train, composed of two vehicles and started from Aizu-Tajima station of Aizu Railway Co., Ltd., bound for Aizu-Wakamatsu station was in the left curved track between Tonohetsuri station and Yunokami Onsen station at the velocity of about 60 km/h, the driver of the train noticed the earth and sand flowed into the track in ahead, and applied the emergency brake but the train ran onto the earth and sand, and all four axles of the front vehicle derailed.

There were 11 passengers and the train crew onboard the train, but no one was injured.

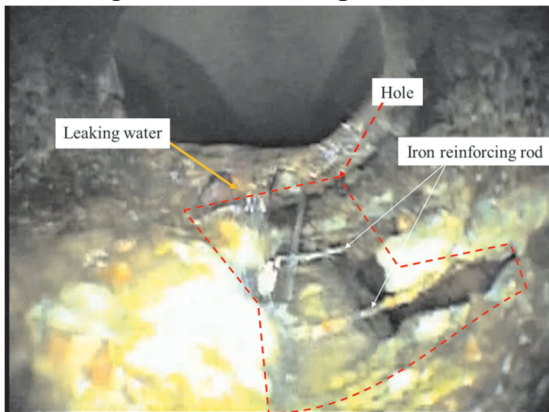
<Status of periphery of the accident site>



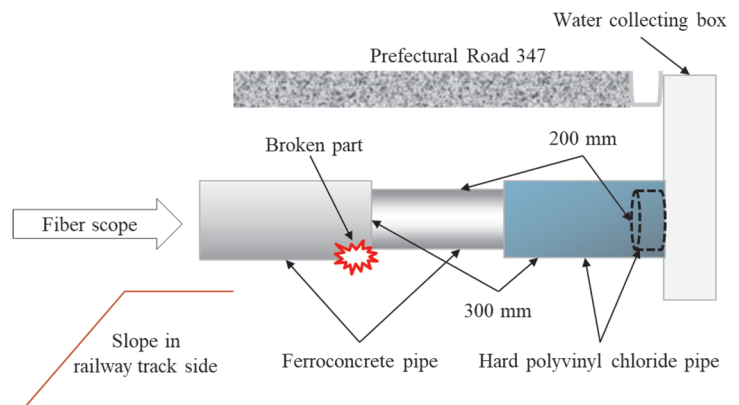
<Status of derailment>



<Image of the fiber scope>



<Status of upper part of collapsed slope>



<PROBABLE CAUSES>

The JTTSB concludes that the probable cause of this accident was that the slope in the railway track side collapsed, and the train ran onto the earth and sand flowed into the railway track and derailed in the accident.

It is probable that the slope collapsed and earth and sand flowed into the railway track because the strength of the waterway, which had been laid underground of the Fukushima Prefectural Road 347 located in upper part of the collapsed slope, deteriorated over the years, and broken caused the leaking water, that soaked into the collapsed slope, composed of the colluvium layer, and made unstable status due to the increased water content.

It is likely that the waterway broke as deteriorated strength due to the deterioration over the years, related by that the management of the waterway had not been conducted properly.

<SAFETY ACTIONS>

In order to prevent the similar accident in the accident site, it is necessary for the manager of the waterway to manage the waterway properly such as to repair the waterway installed in upper part of the slope in order to keep in the healthy status.

In addition, it is desirable to take measures to install the sensors detecting abnormality of the slope and carry out the construction of the slope protection work, etc., preparing the damages due to the collapsed slope caused by the water leaked from the waterway, etc. Besides, when it is necessary to measure in the land out of the jurisdiction of the company, it is desirable to discuss in the relevant parties to prevent the collapse of the slope such as to provide information to the concerned manager, etc., and ask the measurement, etc.

Furthermore, it is necessary for the company to try to prevent accident from happening such as to extract the places where the waterway is installed in upper part of the slope same as in the accident site, and conduct the focused track patrol and monitoring responding to the status of the facilities and the status of the peripheries of the similar places, based on the accident.

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