

~ Accident that the train derailed due to gauge widening by the decreased rail fastening force, because the sleepers, being judged as inferior, had not been treated as replaced, etc. ~

Railway operator : Keiyorinkai Co., Ltd.
 Accident type : Train derailment
 Date and time : At about 13:46, June 16, 2018
 Location : In the premises of Soga station, Rinkai Main Line, Chiba City, Chiba Prefecture

<SUMMARY>

After the 4095 Train, composed of 19 vehicles and started from Soga station bound for Chiba Freight station of Rinkai Main Line, Keiyorinkai Co., Ltd., departed from Soga station, the driver of the train felt as the train was dragged from backward. Therefore, the driver checked the backward and found that the wagon, the 4th vehicle from the front including the locomotive, had been tilted to left, then the driver operated an emergency brake and stopped the train.

After the train stopped, the driver checked the concerned wagon, the 4th vehicle, and found that all four axles of the concerned wagon had derailed to left.

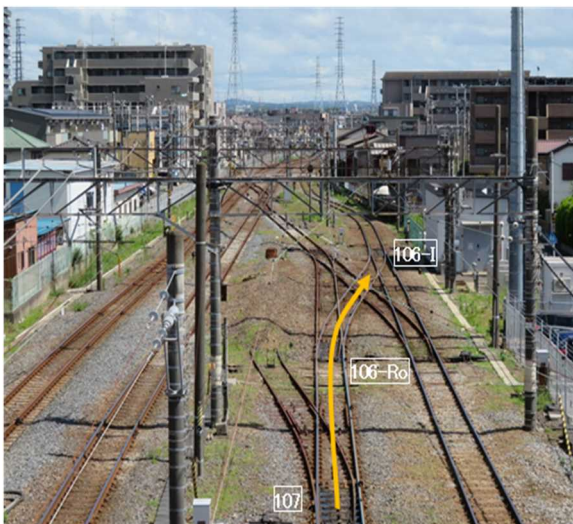
There was the driver onboard the train, but he was not injured.

<STATUS OF THE DERAILMENT>

The route of the concerned train after passing No.107 turnout was the route to pass No.106-B turnout and No.106-A turnout, in turns.

The 4th vehicle of the concerned train had derailed to left. All the right wheels of the 4th vehicle had derailed to inside gauge. All the left wheels of the 4th vehicle had derailed to left of the track, and the derailed left wheels were in the status as being buried partly in the crashed stones.

It is highly probable that the start point of the derailment of the concerned train was in around the center part of the lead area in the 106-B turnout.



<PROBABLE CAUSES>

It is probable that the accident occurred as all four axles of the wagon, the 4th vehicle from the front, derailed because the gauge widened while the freight train composed of 19 vehicles was running in around the 106-B turnout in the premises of Soga station.

It is probable that the gauge in around the 106-B turnout widened due to the decreased rail fastening force caused as the Japan Freight Railway Company, who was in charge of the management of track maintenance, had not implemented the measures such as the replacement of sleepers or the repairing work, etc., although the sleepers, which had been judged as inferior in the periodic inspection, existed continuously.

It is somewhat likely that Japan Freight Railway Company had not implement the measures such as the replacement of the sleepers or the repairing work, etc., because it had not recognized the dangerous situation against the gauge widening well, as the irregularity of gauge measured under unloaded condition in the periodic inspection was within the maintenance standard value.

<MEASURES CONSIDERED AS REQUIRED TO PREVENT THE RECURRENCE>

(1) It is desirable for Japan Freight Railway Company to enrich the contents of the education to improve the judging abilities for the place where the attention should be paid as the danger against the derailment to inside gauge caused by the gauge widening is specially increased, such as the place where corrosion of the sleepers, etc., exists continuously, in the educational training of the staffs engaged in the maintenance management and the repair planning of the track. In addition, the company should pay special attention to implement measures such as the replacement of the sleepers or the repair works in high priority in such places where special attention is required.

Furthermore, it is desirable for Japan Freight Railway Company to apply positively the measured results of the dynamic track irregularities obtained by the track inspection car provided from Keiyorinkai Co., Ltd., for the track management as to use for the judgement of the necessity and urgency for the repair works of the track, etc.

(2) As the four train derailment accidents caused by the gauge widening had occurred between October 2016 and May 2017, the Japan Transport Safety Board expressed its opinions to the Minister of Land, Infrastructure, Transport and Tourism by the "Opinions on the Prevention of the Train Derailment Accident Caused by Gauge Widening", issued on June 28, 2018. It is probable that these accidents occurred because the gauge had widened dynamically due to the rail tilting, etc., by the continuous existence of inferior sleepers and rail fastening devices, and it is certain that there was a resemblance between these accidents and the concerned accident.

Therefore, it is desirable to plan further improvement for the safety against the train derailment accident caused by gauge widening, by planning to improve the methods of maintenance management of the track and to promote the measures preventing the gauge widening, etc., considering the items to be regarded for the prevention of the similar accident described in the opinions.