

## Railway accident investigation report

Railway operator : Shikoku Railway Company

Accident type : Train derailment

Date and time : About 12:02, December 31, 2015

Location : In the premises of Orange-town station, single track, Kotoku Line, Sanuki City, Kagawa Prefecture

### SUMMARY

On December 31, 2015, the inbound local 4332D train, composed of one vehicle, started from Tokushima station bound for Takamatsu station, Kotoku Line of Shikoku Railway Company, arrived at Orange-town station behind the scheduled arrival time, 12:00.45, by one-man operation.

The train driver opened the passenger doors after the train arrived at Orange-Town station, while he was waiting passengers got on and off, he noticed that it was the time of scheduled departure, 12:01.30, and started the train.

While the train was running in powering operation at about 33 km/h in the premises of Orange-town station, the train driver noticed the sound of the ATS alarm of the train and operation of an emergency brake, as he reminded that he had started the train without confirming the signal indication, then he immediately set the brake handle to the emergency brake position. The train decelerated by the emergency brake, but entered into the safety siding from the main line in Orange-town station, and ran into the piled gravel as the buffer stop, and the first axle in the front bogie derailed from the end of rails in the piled gravel.

The opposite outbound train stopped urgently at around the entry signal as the signal turned red due to operation of the urgent protection device for safety siding according to the entrance of the car stop by the inbound train.

There were 45 passengers and the driver onboard the train, one of the passenger was injured.

### PROBABLE CAUSES

It is highly probable that the accident occurred as the train derailed from the end of rails under the piled gravel after entered into the safety siding, in spite of the operation of an emergency brake by the automatic train stop, ATS, because the driver started the train although the stop signal was indicated in the starting signal of Orange-town station.

It is probable that the driver started the train irrespective of the stop signal indication of the starting signal because the driver forgot confirming the starting signal after the powering operation because the driver missed to check the starting signal before the powering operation due to the lack of sense to obey the operation procedure, as the driver implemented the other action when he should check the starting signal, furthermore, the driver unconsciously implemented the operation procedures to start train, thinking about something else.