

### **Influence of Leaves on the Adhesion between Wheel and Rail**

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In the slope section of a train service line located in mountainous area, idling and sliding of the wheels caused by fallen leaves in autumn often occurs, which hinders the scheduled operation of the train. Although sand and ceramic particles are sprayed onto the contact zone of wheel/rail as its countermeasures, the effect is not sufficient. In order to find more effective countermeasures, it is necessary to clarify the mechanism of a decrease in adhesion between the wheel and the rail by fallen leaves. The authors conducted vehicle running tests on the test track and investigated the influence of leaves on the adhesion of wheel/rail for the purpose of acquiring knowledge useful for the practical use of countermeasures. This paper introduces the characteristics of adhesion during driving and braking as well as the reason for the decrease of adhesion by fallen leaves.