

## **Evaluation Method of Performance of Brake Shoe under Simulating Running Environment in Winter**

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Such an accident occurred that the brakes of a train traveling at the time of snowfall did not work and the train collided with the preceding one. According to the review of the past researches, there are few studies reporting the brake shoe performance during snowfall. It is also known that the specifications of the brake shoe are different between Japan and Europe. For this reason, we examined a test method to reproduce the running environment of the vehicle in the winter season, devised an artificial snowfall device, and evaluated various brake control performances on the dynamo test bench. As a result of the evaluation, it was revealed that with respect to the brake force with various environmental conditions it increases in the order of being humid at the normal temperature, snowfall at the low temperature, water sprinkling at the low temperature, and the performance varies depending on various kinds of material of the brake shoe. Furthermore, a reasonable test method was proposed from the viewpoint of reproducibility of the test and implementation cost.