Test Method for Simulating Current Collecting State in the Case of Frozen Contact Wires

Hirotsugu KUGA Takayuki USUDA Yasushi KAMATA

Authors have developed a way to simulate frost on contact wires. In this study, firstly we investigated the dynamic behavior of a contact strip sliding on the contact wire with frost. Secondly, we proposed a test method for simulating frost by using alum. Then we compared the sliding characteristics of the contact strip between alum and frost. Thirdly, we proposed a test method for estimating pantograph head damage due to arcing by using pantograph test equipment and a scale reduction model of the pantograph head. The feature of the simulated damage by this method is consistent with that observed on commercial lines. These test methods are useful for estimating the effect of countermeasures against various problems due to frost on contact wires.