

Classification of Mechanical Wear Modes of Contact Wire and Contact Strip caused by Frictional Heat

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In order to reduce the wear of the contact wire of OHL and the contact strip of a pantograph, it is necessary to clarify the wear mechanism, especially the mechanical wear mechanism that has not been clarified. In this study, a rotary wear tester which can measure the contact temperature caused by frictional heat is newly developed and wear tests were carried out. According to test results, wear modes were classified into four types on the basis of the friction coefficient and the wear condition of test specimens. In addition, it is clarified that the softening of material is an important factor for the transition phenomena of the wear mode.