

**Wear Modes of Contact Wire and Contact Strip  
under Electric Current Condition**

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It is necessary to understand actual phenomena generated at the electric contacts between contact wire and contact strip to suggest the measures for reducing wear. For our study on classification of the wear modes and the transition conditions between hard-drawn copper contact wire and iron-based sintered alloy contact strip, a linear wear testing method has been newly introduced. As a result, we found that the contact temperature which was estimated from contact voltage depended on electric current and load, and then friction and wear properties of the current collectors under electric current condition could be classified into three types by the maximum contact temperature.