

**Influence of Arc Discharge on Mass and Surface Condition
of Current-Collecting Materials**

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Examination methods that involve a slide between contact wires and contact strips are ones that simulate the actual current-collecting phenomena arising in the railway field. However, the influence of a breaking arc on the mass and surface of contact materials cannot be clarified by these methods, because of the mass change due to the wear and arc erosion that occur during the examination by these methods. This paper tries to clarify these problems by using a breaking arc that is generated without using a wire to generate an arc discharge. The breaking arc generated in this way is similar to the arc generated in the railway field.