

## **Difference of Sliding Surface of Contact Wire in the Shinkansen between High Speed Running Zone and Low Speed Zone**

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In the Shinkansen a contact wire shows different sliding surfaces under different running conditions. The sliding surface in low speed running zone is rough and metallic-colored. In middle or high speed zone, the sliding surface is smooth and dark-colored. In the past report, the dark sliding surface was considered as a transfer film from iron-based contact strips, but it has not been confirmed. We analyze the sliding surface of the contact wire to investigate the relationship between surface conditions of the contact wire and the amount of element contents.