

Basic Research of Profile Measurement of Contact Wire with Light Section Method

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A wear measurement of the contact wire is one of the most important tasks of maintenance operation of the contact line for the electric railways, because the excessively worn contact wire has a risk of breakage. The contact wire wear is managed by the measurement of its residual diameter. The diameter is generally calculated from the measured width of the sliding surface in the case of use of an electric inspection car. However there are raised problems of measurement error in the case where the sliding surface is not flat or there are scratches around the surface. We proposed a method to measure the profile of the contact wire with the light section method. The effectiveness of the proposed method was confirmed by the field tests.