

Unevenness of Sliding Surface of Overhead Rigid Conductor Line and its Reduction Method

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Rigid conductor lines are used in many subways, because there is little accident and the space required for installation is small. However, as the unevenness of sliding surface of the rigid conductor lines is very influential in the contact force fluctuation between a pantograph and a contact line, it is necessary to decrease the unevenness in both the construction and the maintenance stage. In order to investigate the installation accuracy of overhead rigid conductor lines, we have developed a device to measure the unevenness of the sliding surface accurately and continuously. Using this measuring device, we have confirmed that the unevenness of the sliding surface comes from various elements such as the sag between the support points, the curve of the aluminum-base or the conductive-rail with long wave length, the fine unevenness between the bolts of the long ear, and the undulating wear. This paper describes the actual conditions of the unevenness and the technical methods to decrease the unevenness of overhead rigid conductor lines.