Influences of Sun Position and Subject Blur
on Contact Wire Wear Measurement Using Light Section Method

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Current methods of measuring contact wire wear are unable to accurately measure the diameter of unevenly worn contact wires. To address this issue, we have developed a wear measurement method using a light section method for contact wires. We have also conducted basic studies on the fundamental configuration of cameras and laser light sources, as well as performance verification in limited environments. In order to apply this method to real vehicles, it is necessary to investigate how disturbances caused by the sun's position and subject blur due to high-speed running affect measurement performance in real-world environments. We have verified their performance of these factors in this study and report that the proposed measurement method has sufficient performance.