

**Evaluation of Resistance at Supporting Pulley of Messenger Wire
and Its Influence on Current Collection Characteristics**

Takuya KURAOKA Shunichi KUSUMI Mizuki TSUNEMOTO
Takahiro HAMADA Michihito MINAMOTO

It is required that the tension of overhead contact line system should be constant to maintain acceptable current collection. However, it is considered that the tension is not exactly constant, because of the resistance at the supporting pulley of messenger wire. In this paper, we investigated the mechanism of the resistance, and carried out the measurement of tension fluctuation and moving situation of messenger wire as a part of investigation. Furthermore, in order to investigate the influence of the resistance at the supporting pulley on the current collection, we carried out the simulation to find out how the current collection characteristics will be influenced by the change of the tension of the messenger wire.