**Measures for Reducing Damage to Overhead Contact Line System due to Bridge Oscillations Caused by Passing Trains**

Mizuki TSUNEMOTO　Kodai MATSUOKA　Keiichi GOTO
Hiromu SUSUKI　Kyoko IKURA

In some sections of simple-support bridges, fatigue failures of wire in overhead contact line systems might occur due to large bridge oscillations caused by passing trains. In this study, a computation method is developed to analyze coupled oscillation between bridges and catenary poles caused by passing trains, and the condition under which the amplitude of overhead contact line system oscillation is largest is also revealed. As a means to prevent the fatigue failures of wire in overhead contact line systems due to large bridge oscillations caused by passing trains, a new metal fitting is designed and a decision-making flowchart is proposed to determine the necessity of measures for the fatigue failures of wire.