

## **Improvement of Performance of Active Mass Damper for Reducing Car Body Elastic Vibration**

Yuki AKIYAMA    Tadao TAKIGAMI    Ken-ichiro AIDA

The elastic vibration of a railway vehicle car body tends to have an unfavourable influence on riding comfort. A vibration reduction method using active mass damper (AMD) to reduce such vibrations has been proposed by the authors. As a result of the running test on the actual track, it was confirmed that the vibration reduction effect can be obtained by this method. In this paper, the H-infinity control theory was used for the controller design in order to improve the control effect. An excitation test using the Shinkansen-type test vehicle was carried out and it was confirmed that multi-modal vibration reduction effect was obtained by the proposed method with the fewer acceleration sensors than those for the past method.