

## **Development of the Active Mass Dampers for Reduction of Flexural Vibration of Carbody**

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The vertical elastic vibrations of railway vehicle carbodies must be reduced from the viewpoint of riding comfort. In particular, more than one elastic vibrations having natural frequencies around 10Hz are known to have large impact on riding comfort. To reduce those elastic vibrations, this paper proposes a vibration control method of using active mass dampers (AMDs). The feasibility of the method was verified by the excitation test using a test vehicle with relatively large actuators on the rolling stock testing plant at RTRI. Further, a more practical AMD system with smaller and lighter actuators was examined by numerical analysis and excitation test. As a result, the effectiveness of the vibration control was confirmed.