

Aerodynamic Noise Reduction of Pantograph Head Support by Applying Flow Bypass Technique

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Reduction of aerodynamic noise emitted by a pantograph is an important challenge to reduce environmental impact and increase the speed of high-speed trains. In previous studies, a method for reducing aerodynamic noise has been proposed by applying porous material to pantograph head support covers. In this study, a new practical method is proposed to achieve the same aerodynamic noise reduction effect as using porous material. On the basis of a wind tunnel test result, it is clarified that the new method can reduce aerodynamic noise to almost the same extent as using porous material.