**Analysis of Mechanism of Wind Load Reduction of the Developed Soundproof System**

Daigo SATO Masanori HANSAKA
Nozomu TANIGUCHI Shogo MAMADA

With respect to railway viaducts, raising a noise barrier has been desired to reduce the wayside noise. However, the higher the noise barrier is, the greater the load and moment by wind becomes, and it is hardly possible to install a very high noise barrier without reinforcing the viaduct drastically. Therefore we have developed a new type of soundproof system. In the developed system, the sides of soundproof panel are held by a magnetic attracting force, and the panel is fixed. Accordingly it has a high soundproof ability in the ordinary state, however, when the wind load amounts to a limit of keeping safety of the viaduct, the panel is opened and the wind load is reduced sufficiently.