

**Evaluation by Acoustic Analysis for Transmitted Sound from Additional Sound Insulating Panel  
Installed on Concrete Noise Barrier**

Daigo SATO    Tadashi TOYOHARA

In this study, the authors propose an acoustic analysis method to consider the sound insulation performance of noise barriers based on the sound transmission loss. A medium domain different from the air domain is set as a sound damping component, whose characteristics are represented by the complex wave number. This paper describes that the sound attenuation corresponding to the sound transmission loss of the noise barrier can appropriately be set in the plane wave propagating model. In addition, FEM analyses were conducted for railway viaducts by applying the proposed method. The distribution of sound pressure level indicates the differences caused by the sound insulation performance of the noise barrier.