소음저감 장치에 의한 KTX 차량의 운행소음 저감량 분석

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An analysis of the pass-by noise reduction for KTX by noise reduction device

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Key Words : pass-by noise, noise barrier, noise reduction
Abstract : Reduction of the propagation noise generated during pass-by of KTX by noise barrier was measured and analysed for the two kinds of top-shaped noise reduction devices; one as a plywood board and the other as a PVC pipe were placed periodically. The height and length of reference noise barrier are 2.4 m and 50 m, respectively. The noise reduction with and without noise reduction devices was investigated. The additional noise reduction about 2-3 dB(A) was obtained by using them.

NFR 서스펜션의 동특성을 고려한 형상설계에 관한 연구

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Shape Design of the NFR Suspension Load Beam Considering Dynamic Characteristics

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Key Words : NFR, Suspension, Topology, Homogenization method
Abstract :　In this study, the shape of suspension load beam for NFR(Near Field Recording) was proposed, which was designed using Topology optimization based on Homogenization method. Lens and Micro-mirror are attached to the end of the suspension load beam for collection and control the light, which increasing the system mass. Increment of the system mass cause to decrease the tracking stiffness mode frequency. To prevent to decreasing frequency, the objective function was defined, which first bending mode and first lateral-bending mode frequency of the suspension load beam was maximized at the same time.