

바닥 슬래브의 동특성 평가 및 구조-음향 연성해석 A Study on Dynamic Stiffness of Concrete Slab and Structural-acoustic Coupled Analysis

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Abstract : The floor impact noise radiated from upstairs has been great annoyance among occupants in Korean apartments. Since Korea government made the law of floor impact noise limits, a lots of studies have been carried out to develop applicable floor structures which insulate floor impact noise effectively. The purpose of this study is to show the possibility of floor stiffness reinforcement on heavy weight floor impact noise insulation. In this study, modal tests are carried out to estimate the dynamic stiffness of bare concrete slab and its variation after floor stiffness reinforcement. The heavy weight floor impact noise is predicted by structure-acoustic coupled analysis and the analyzed results are compared with the measured values.