

Sound Insulation between Buildings: The Impact Noise Transmission through Different Floor Configurations

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Abstract : The present paper examines the impact noise transmission through some floor building assemblies. The Acoubat software numerical simulation has been used to simulate the impact noise transmission through different floor configurations used in Algerian construction mode. The results are compared with the available measurements. We have developed two experimental methods, i) field method, and ii) laboratory method using Brüel and Kjær equipments. The results show that the different cases of floor configurations need some improvement to ensure the acoustic comfort in the receiving apartment. The recommended value of the impact sound level in the receiving room should not exceed 58 dB. The important results obtained in this paper can be used as platform to improve the Algerian building acoustic regulation aimed at the construction of the multi-storey residential building.

Keywords : impact noise, building acoustic, floor insulation, resilient material

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