

Master's Dissertation at the Div. of Structural Mechanics



VIBRATION ANALYSES OF A WOODEN FLOOR-WALL STRUCTURE - Experimental and Finite Element Studies

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In modern building, wooden structures are more commonly used in multiple storey buildings. This results in light-weight structures, which often has a problem with acoustic transmission.

This master thesis will focus on the propagation of vibrations through a floor structure with a non supporting wall. The floor and wall will be built in an acoustic laboratory using wooden beams, particle and plaster boards and mineral wool insulation.

An exciting force will be applied to the structure and accelerometers used to register the responding vibrations.

The structure will be modeled using the finite element software Abaqus. The main objective of the thesis is to create a simulation model which resembles the experimental setup and results as good as possible.

