

Development of Prediction Tool for Sound Absorption and Sound Insulation for Sound Proof Properties

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Abstract : High frequency automotive interior noise above 500 Hz considerably affects automotive passenger comfort. To reduce this noise, sound insulation material is often laminated on body panels or interior trim panels. For a more effective noise reduction, the sound reduction properties of this laminated structure need to be estimated. We have developed a new calculate tool that can roughly calculate the sound absorption and insulation properties of laminate structure and handy for designers. In this report, the outline of this tool and an analysis example applied to floor mat are introduced.

Keywords : automobile, acoustics, porous material, transfer matrix method

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