

題名	Calculation for normal sound absorption coefficient of porous media using FE model for impedance tube
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著者	黒沢良夫
概要	<p>The impedance tube is used for measuring the normal sound absorption coefficient of a sound absorbing material such as an automobile. Such as urethane foam and felt with high density, the sound absorption coefficient measurement result may be different depending on the contact situation between the cut sample and the impedance tube wall. In order to elucidate this phenomenon, the impedance tube was modeled with finite elements and modeled the contact condition by placing a spring between the cut sample and the impedance tube wall. By changing the spring coefficient, it was tried to reproduce the way of vibration of the cut sample occurring at the time of actual sound absorption, to elucidate the influence of improvement of prediction accuracy and the contact condition of cut sample and impedance tube wall on sound absorption coefficient. It was introduced calculation result by transfer matrix method and calculation result using finite element model by Biot-Allard theory, comparison of experiment result. In addition, the results of comparing the results of FEM and TMM by changing the Young's modulus and flow resistance of the sample are introduced.</p>