

# Measuring low frequencies parameters of porous materials having a rigid frame

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**Oral presentation by M. Sadouki**

An acoustic method based on sound transmission is proposed for measuring the static thermal permeability and the inertial factor of porous materials having a rigid frame at low frequencies. The proposed method is based on a temporal model of the direct and inverse scattering problems for the propagation of transient audible frequency waves in a homogeneous isotropic slab of porous material having a rigid frame. The static thermal permeability and the inertial factor are determined from the solution of the inverse problem. The minimization between experiment and theory is made in the time domain. Tests are performed using industrial plastic foams.