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LOW-FREQUENCY SOUND ABSORPTION 5

Abstract.

It is shown that the acoustic properties of the mineral wool layer are determined by the reflection from the front surface of the layer, and the sound-absorbing properties of the mineral wool are manifested only in the frequency region of the quarter-wave resonance. Calculated at quarter-wave resonance frequencies, the speed of sound in mineral wool is significantly lower than the speed of sound in air, especially at low frequencies; this made it possible to calculate low-frequency absorbers of shallow depth.

Keywords: speed of sound in mineral wool, quarter-wave resonance, plate resonance, air flow resistivity, absorption coefficient, reflection coefficient, low-frequency absorber, reverberation time