THE STUDY OF SOUND ABSORPTION RELATED TO HOLE PERCENTAGES IN A PANEL

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Abstract

It is frequent that absorption materials are used to coat room walls. One of them is plywood. To increase the power of absorption, the plywood is usually perforated. At this last term task, an experiment to plywood with the thickness 6 mm in variety of perforation percentages is carried out. The first experiment was conducted to the plywood without perforation in the distance 4 cm from the floor. The plywood is perforated at 1% with the perforation diameter 5 mm and 10 mm. Then it is perforated at 3% with the perforation diameter 10 mm. The next step is to put rockwool between the perforated plywood and the floor. The result of measuring shows that the value of plywood absorption coefficient increased when the plywood is perforated. Also when the percentage of plywood perforation is increased, the value of plywood absorption coefficient will increase. In addition, it is proved that not only perforation percentage influence the value of plywood absorption coefficient but also perforation diameter does.

Keywords: Absorption coefficient, Perforation, Multiplex, Reverberation time, Sabine, Eyring