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EXPERIMENTING RIGID AND ELASTIC CLAMPING METHODS OF ACOUSTIC SCREENS

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Abstract

The following paper studies a series of acoustic waves propagation modes in closed environments. Thus, a series of experiments have been conducted in order to reduce noise with the help of acoustic screens. Screening a source of noise in an industrial enclosure has revealed a series of results which are presented in our research. There have been used two methods of clamping the acoustic screens walls on a metal frame: rigid and elastic. The acoustic screens used in the experiments were made of Oriented Strand Boards. The experiments were carried out for two variants of walls positioning: a three-walled variant and cover and a five walls variant (a cabin). The number of walls is important in determining the differences between sound pressure level values for the two types of experiments. The experiments have revealed that the rigid clamping is more suitable while the noise attenuation can be more efficiently achieved when using acoustic screens composed of several walls.

Key words: acoustic screen, elastic clamping, industrial noise, rigid clamping

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