



Laboratory test of sound insulation of doors with evaluation of the influence of the frame, leaf and other elements of the test object on the final R_w value

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Maintaining the acoustic comfort of building residents is an issue of great importance today. The acoustic insulation of the building envelope, including doors, is a very important factor influencing noise levels inside buildings located in cities, near roads, airports or industrial plants. The design of building elements with high insulation values is a challenge for their manufacturers and requires the determination of the influence of individual elements on the overall value of the single number parameter R_w . This paper will present the results of laboratory tests on the sound insulation of doors using the pressure method in accordance with PN-EN ISO 10140-2:2021 and a method based on vibration measurement using a laser vibrometer. The aim is to determine the influence of the frame, leaf and other elements of the test object on the final R_w value.