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Influence of the conservation state of the facade elements as a variable of prediction of acoustic insulation to airborne sound

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The different prediction methods of acoustic insulation are based on the acoustic properties of the constituent materials of the buildings, however, they don't usually consider the conservation state as a variable within the prediction, ignoring the natural process of degradation that the material and the construction elements suffer which sometimes are increased by the deterioration due to the use of itself.

At this paper, the behavior of some construction elements is analyzed by means of acoustic insulation measurements in-situ, such as windows and its woodwork, which presents in many cases a diminish in the acoustic performance due to the damage and deterioration.

Finally, the incorporation of this variable is proposed in future prediction models of acoustic insulation.