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Impact of Masonry Joints on Detection of Humidity Distribution in Aerated Concrete Masonry Constructions by Electric Impedance Spectrometry Measurements

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Abstract : Aerated concrete is a load bearing construction material, which has high heat insulation parameters. Walls can be erected from aerated concrete masonry constructions and in perfect circumstances additional heat insulation is not required. The most common problem in aerated concrete heat insulation properties is the humidity distribution throughout the cross section of the masonry elements as well as proper and conducted drying process of the aerated concrete construction because only dry aerated concrete masonry constructions can reach high heat insulation parameters. In order to monitor drying process of the masonry and detect humidity distribution throughout the cross section of aerated concrete masonry construction application of electrical impedance spectrometry is applied. Further test results and methodology of this non-destructive testing method is described in this paper.

Keywords : aerated concrete, electrical impedance spectrometry, humidity distribution, non-destructive testing
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