

TESTS OF JOINTS IN AAC MASONRY WALLS

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Abstract

The paper presents the results of the Authors' tests on the joints in AAC masonry walls. The shape of the tested element and the test stand were fitted innovatively based on the Authors' own experience as well as on the literature overview and numerical analysis. Cracking morphology and mode of failure were investigated. The relationship between the load and displacement for different types of joints was compared. The obtained results were also compared to the results obtained on the reference model, which was a model with a traditional masonry bond. In the remaining testing elements, the connection was realized with the use of steel connectors. Various mechanisms of cracking and failure have been observed as well as the behaviour and load-bearing capacity of joints were different. The obtained results encourage to further analyses focused on detailing the joints and application of new methods in the construction of the joints.

Keywords: Masonry structures; Stiffening walls; Wall joints; Connectors; Bed joint reinforcement.