

Shear Strength of Masonry Bed Joints

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Abstract:

A triplet test without precompression is being proposed by CEN (Common European de Normalisation) that was drafted to support Eurocode No. 6 (EC6): Common Unified Rules for Masonry Structures. This test is intended to be a standard test for the determination of the bond shear strength of masonry joints. The testing of triplet specimens simultaneously in two directions without precompression required careful set-up of a heavy specimen and shearing of two mortar joints. In this paper, a new test method is proposed which allows the determination of the bond shear strength by test on a smaller specimen with a single mortar joint. Test results are presented for 185 specimens with five types of brick, three types of mortar, and four levels of precompression. The objectives of this experimental investigation were to compare results, study the variance in shear strength caused by using different brick and mortar types, and investigate the effects on shear strength when applying different levels of precompression stress.

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