

Finite Element Analysis of a Panelized Brick Veneer Wall System and Comparison with Wind Load Testing Results

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Abstract:

In order to potentially overcome the disadvantages of conventional brick veneer over steel stud walls, a new panelized brick veneer with steel frame backup wall system is introduced. Evaluation of the performance of this wall system under out-of-plane wind load using a 3-D finite element model is presented. The details of the model are introduced and the results from the finite element analysis are discussed. The analytical results are then compared with those obtained from a full-scale simulated wind load test of the same wall system.

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