

Compressive Behavior of Insulated Concrete Masonry Prisms

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Abstract:

Insulated concrete masonry is a relatively new type of concrete masonry that incorporates a layer of insulation inside each masonry unit. To accommodate this insulation, the units have special shapes which cause their structural behavior to differ from that of standard concrete masonry units. A total of fifty prism tests were performed, divided into ten series of five prisms. Six of the prism series were made up of units that were modified to determine the effects of varying prism height and shape on compressive strength. UngROUTED and grouted series of both insulated unit types were tested. Results indicated that the special unit shapes affect both prism failure modes and strengths. By saw-cutting the units to eliminate irregularities, prism strengths increased, test variability decreased, and strength was shown to be relatively independent of the number of units per prism.

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