Effect of Masonry Units Type and Concrete Grouting on Compressive Strength of Prisms

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Abstract
Masonry is a well proven building material possessing excellent properties in terms of appearance, durability and cost in comparison with alternatives. However, the quality of the masonry in a building depends on the materials used, and hence all masonry materials must conform to certain minimum standards. The basic components of masonry are block, brick and mortar, the latter being in itself a composite of cement, lime and sand.

Two types of masonry units (brick and concrete block) were used to construct the prism and some of them were grouted by concrete. The uniaxial compressive strength test was done and stress-strain behavior has been obtained. Using linear regression analysis, a simple empirical equation has been proposed for obtaining the compressive strength for masonry that can be used in the analysis and design procedures.

Keywords: Brick, concrete block, mortar, grout, masonry prism