

A Study on the Use of GFRP as an External Reinforcement for Autoclaved Aerated Concrete

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Abstract:

In an effort to investigate potential alternate reinforcement options for Autoclaved Aerated Concrete (AAC), Glass Fiber Reinforced Polymer (GFRP) strips were applied to AAC blocks to characterize the bond between the two materials. The study, which is based on testing 48 bond strength specimens, showed that the ultimate load is sensitive to the bond length and width and also the compressive strength of AAC. The study identified several possible failure modes including diagonal compression and debonding.

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