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Durability Properties of Foamed Concrete with Fiber Inclusion

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Abstract : An experimental study was conducted on foamed concrete with synthetic and natural fibres consisting of AR-glass, polypropylene, steel, kenaf and oil palm fibre. The foamed concrete mixtures produced had a target density of 1000 kg/m3 and a mix ratio of (1:1.5:0.45). The fibres were used as additives. The inclusion of fibre was maintained at a volumetric fraction of 0.25 and 0.4 %. The water absorption, thermal and shrinkage were determined to study the effect of the fibre on the durability properties of foamed concrete. The results showed that AR-glass fibre has the lowest percentage value of drying shrinkage compared to others.

Keywords : foamed concrete, fibres, durability, construction, geological engineering
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