

Properties of concrete containing bamboo waste as cement replacement

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ABSTRACT

The application of copious and low-cost waste items, mainly from neat resources, has developed extra demanding than always. This paper debates the utilization of bamboo waste as original and new things in the building industry. The study comprises rudimentary characteristics, containing the morphology of the ingredients in terms of variations in the composition procedure. The bamboo ash was recycled as cement respect to with 10%, 20% and 30% replacement. The materials characteristic of bamboo ash, strength activity index, fresh state properties and strength properties of concrete were examined too. The concrete was cast in 100×100×100 mm cube size and compared with conventional concrete. The result how that bamboo ash show pozzolanic properties and 20% cement replacement by bamboo ash give comparable strength with control specimens at 28 days, which achieved the target design strength. The total outcomes have exposed that the addition of bamboo ash can produce concrete with more power, higher class and sustainability.

KEYWORDS

Bamboo Waste; Cement Replacement; Compressive Strength; Pozzolanic Materials