

PERFORMANCE OF THERMALLY ACTIVATED SUGARCANE BAGASSE ASH AS SUPPLEMENTARY CEMENTITIOUS MATERIAL

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Abstract:

The use of pozzolanic material has increased both in the production of clinker and as a supplementary cementing material in ordinary Portland cement (OPC) in order to improve specific properties of concrete. Sugarcane bagasse ash (SCBA) is a residue resulting from the burning of bagasse in boilers in the sugarcane industry. This experimental research programme investigates the effect of inclusion of SCBA on hydration temperature, autoclave expansion, and compressive and flexural tensile strength of bagasse ash mortar and concrete. Cement was replaced with bagasse ash in different proportion ranging 10-25 percent in increment of 5 percent. The experimental test results indicated that the use of bagasse ash improves compressive and tensile flexural strengths while autoclave expansion and hydration temperature were reduced.

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