

Project Title Use of waste clear glass clue as coarse aggregate in concrete mixed with bagasse ash

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Abstract

Waste clear glass clue was used as coarse aggregate in concrete mixed with bagasse ash. It was replaced partially of Portland cement, Type I in proportion of 0, 15, 20 and 25%wt. Water/binder ratio of 0.4 was constant throughout the study and preparation of concrete cube test size of 10×10×10 cm. All specimens are uncured and cured in water for 7 and 28 days. Physico-mechanical properties of concrete were determined on water absorption, bulk density, rebound hardness, specific electrical resistance, compressive strength, volumetric drying shrinkage and magnesium sulfate durability. X-Ray diffraction and Scanning Electron Microscope was analysed on selected high strength specimens. The 28-day compressive strength of 15% BA displayed the highest value of 43.06 MPa.

Keywords : Bagasse ash, Coarse aggregate, Pozzolanic materials, Waste clear glass clue, Concrete