Study The Characteristic on Polymer Concrete with Waste Materials

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ABSTRACT

To counteract the environmental problem, industrial waste materials is used in the field of construction which is also economical. Ground granulated blast furnace slag (GGBS) and fly ashes are examples of industrial by-products that can be used to partly substitute cement in concrete and are environmentally friendly. This paper describes an experiment that was conducted to explore the properties of polymer concrete with waste materials. Highly desirable mechanical is mostly on the out performs of polymer concrete. The compressive strength, tensile strength, curing period, these materials improve impact resistance, chemical resistance, and freeze-thaw toughness. To make polymer concrete, two types of resins (unsaturated polyester and epoxy resin) were mixed with fly ash, GGBS, and sand. The aim of this study is to use M20 grade concrete to investigate the flexural behaviour of beams containing GGBS and FA.Polymer concrete specimens by using industrial wastes with monomers are prepared with various proportions like 30 and 35% GGBS and 35 and 40% Fly ash. To determine the optimal waste dosage of materials, these test results were compared to ordinary concrete specimens.

Keywords- *Fly Ash, GGBS (Ground Granulated Blast Furnace Slag),Flexural behaviour, unsaturated polyester Resin, Epoxy Resin.*