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Analytical Study on Fibre Reinforced Geopolymer Concrete

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Abstract : This paper focuses on the Experimental and Analytical Investigation carried out on fibre reinforced Geopolymer concrete with Flyash and GGBS, glass fibre and steel fibre. Geopolymer concrete is proven to have excellent engineering properties with a reduced carbon footprint[1]. It not only reduces the greenhouse gas emissions (compared to Portland cement based concrete) but also utilizes a large amount of industrial waste materials such as fly ash and slag.In addition to geopolymer, fibre addition was seen to enhance the tensile strength. The experimental investigation of steel fibre reinforced concrete and glass fibre reinforced concrete was done by compression test and young's modulus was calculated. An Analytical study was done using ANSYS V12.0 with the modulus of elasticity found from the experimental result.

KeyWords : Analytical investigation, fibre reinforced Geopolymer Concrete, Flyash, GGBS, Glass and Steel Fibre, Greenhouse emissions, Tensile strength, ANSYS V12.0.

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