

An Experimental Investigation on Properties of Concrete by Partial Replacement of Cement with Ggbs and Tio₂

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Abstract: Concrete is most suitable construction material. And it will adapt very well with the situations in the site. This concrete is considered as a homogeneous material but it is mixture of cement and fine aggregate and coarse aggregate and water. There are various methods in-order for concrete to gain strength, replacing the contents of concrete is also a way but partially is considered optimum. Now main binding agent in the concrete is the cement content so by partially replacing the cement by various cementitious materials like GGBS and tio₂ will give optimum results in raised strength values of concrete. In this study a small trial is done to modify the properties of concrete by partial replacement of cement with GGBS of a percentage 10%, 20%, 30% and 40% and TIO₂ of percentages of 0.6%, 0.8%, 1.0% and 1.25%. Different tests are done to determine Compressive Strength and split tensile strength All the cubes are used for 7 & 28 days.

Keywords: Ground Granulated Blast Furnace Slag, Titanium Dioxide, Compressive Strength, Split Tensile Strength.

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