

Compressive Strength Development of Normal Concrete and Self-Consolidating Concrete Incorporated with GGBS

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Abstract : In this paper, an experimental investigation on the effect of Isfahan Ground Granulate Blast Furnace Slag (GGBS) on the compressive strength development of self-consolidating concrete (SCC) and normal concrete (NC) was performed. For this purpose, Portland cement type I was replaced with GGBS in various Portions. For NC and SCC Mixes, 10*10*10 cubic cm specimens were tested in 7, 28 and 91 days. It must be stated that in this research water to cement ratio was 0.44, cement used in cubic meter was 418 Kg/m³; and Superplasticizer (SP) Type III used in SCC based on Poly-Carboxylic acid. The results of experiments have shown that increasing GGBS Percentages in both types of concrete reduce Compressive strength in early ages.

Keywords : compressive strength, GGBS, normal concrete, self-consolidating concrete

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