

A REVIEW ON EFFECT OF MINERAL ADMIXTURE ON SELF COMPACTING CONCRETE

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ABSTRACT

Self compacting concrete (SCC) flows into place Fresh self-compacting concrete and around obstructions under its own weight. Self-compacting concrete decreases construction time, labour and equipment uses on construction,, and helps in achieving use without applying vibration in congested reinforced concrete structures characterized by difficult casting conditions. However, because it usually requires a larger content of binder and chemical admixtures compared to ordinary concrete, its material cost is generally 20–50% higher, which has been a major hindrance to a wider implementation of its use. The fresh concrete properties and compressive strength at 1, 7 and 28 days of such SCC mixtures were measured. The parameters considered in the study were the contents of cement, water- cement ratio (0.35 to 0.45), water-to-powder)ratio (W/P), fly ash and dosage of SP (super plastizers). The responses of concrete are recorded from slump flow, fluidity loss, Orimet time, V-funnel time, L-box, J Ring, rheological parameters, segregation and compressive strength at 7and 28 days. Lastly, both carbonation and chloride penetration tests were carried out to assess durability behaviour of this concrete mixture.

KEYWORDS: Self Compacting Concrete, Rheological Parameters, Fly Ash, Workability, Strength Properties