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**Flexural Performance of Self Consolidating, Self-Cured Concrete Beams -Incorporating SAP**

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**Abstract**

Self- Compacting Concrete (SCC) is a sort of Concrete that possesses high flowing, passing ability, which can be placed and compacted due to its own weight without any peripheral compaction effort, at the same time it is cohesive enough to be handled without any segregation or bleeding distinctiveness. This Research Study presents an experimental exploration Flexural behavior of Internal cured Self Compacting Concrete (ICSCC) with fine aggregate substitution by Crushed Rock Fines (CRF) at 0%& 30%, with silica fume as supplementary for cementitious material. Mix Proportions for ICSCC, controlled specimens SCC and Normal Conventional Concrete (NCC) M40 grade is arrived. For each concrete mixes 150mm X 150mm x150mm cubes and 100 X230 X 1500mm beams were casted and exposed to internal curing at ambient temperatures for 7 and 28 days. The results arrived for ICSCC mixes were paralleled with controlled specimens of SCC and NCC. Appropriate materials were selected to have a better performance to ensure efficient internal curing in the concrete mass. The Flow Properties of SCC, ICSCC mixes have been performed as per EFNARC Stds and results of flow properties were within limits. Analysis made from the experimental exploration is accomplished that the Flexural characteristics for ICSCC mixes curried at ambient temperature found acceptable.

**Keywords:**

Self-Curing, Silica Fume, Self-Compacting Concrete, Workability, Compressive Strength and Flexural Strength Characteristics.

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