

A study of self-compacting concrete made with marginal aggregates

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Abstract:

In this paper, an exploratory work on producing self-compacting concrete (SCC) using local marginal aggregates has been presented with an objective of providing basic information on SCC that may encourage its adoption in regions where availability of good quality of aggregates is scarce. A suitable mix of SCC, satisfying the requirements of compactibility and flowability and having a reasonably good strength, was developed by considering a number of trial mixes. In order to observe the short-term effect of aggressive exposures on hardened properties of the SCC, specimens were exposed to wet-dry and heat-cool cycles for a limited period of about four months and then tested for compressive strength, water permeability, and chloride permeability. The short-term exposure tests show no detrimental findings.