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A COMPREHENSIVE REVIEW OF EARLY STRENGTH GAIN OF CONCRETE

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Abstract

Determination of compressive strength of concrete is very important characteristic to assess the durability of structure. In general practice compressive strength can be known after 28 days of curing of concrete, which is too long period. After 28 days if compressive strength of concrete is found less i.e. weak concrete has been placed, then it would not be possible to repair losses or make construction strong to withstand future stresses. The objective of this research paper is two fold:

- To determine: (i) the early gain in compressive strength in cement concrete, (ii) optimum replacement level of coarse aggregate and (iii) to make use of demolished waste for overall economy in building works.
- To investigate the effects of thermal activation methods of curing on both the early and ultimate compressive strengths and also control strength-loss of concrete made with ordinary port-land cement.

Keywords : Compressive strength, durability, weak concrete, early gain, thermal activation.