

Experimental Investigation and Comparative Study on Polymer Concrete and Fibre Reinforced Concrete with Conventional Concrete

B.Sriram prasad¹, A.Balaji²

¹Research Scholar, Department of Civil Engineering,

²Assistant Professor, Department of Mechanical Engineering,

^{1,2}AVC College of Engineering, Mannampandal, Mayiladuthurai, Tamil Nadu .

ABSTRACT

This project is an attempt made to compare two different High strength concrete with conventional concrete. One is made to polymer and another one is made up of steel fiber. In polymer concrete , unsaturated isophthalic polyester along with catalyst cobalt octate (2%) and accelerator methyl ethyl ketone peroxide was used. In fiber reinforced concrete, binding wire of 1cm long was used as steel fiber. steel fibers can be defined as discrete, short length crimped steel having ratio of its length to diameter in the range of 20 to 100mm with any several cross section and that are sufficiently small to be easily and randomly dispersed in fresh concrete. Using the above concrete, appreciable number cube, cylinder and prism were made and they were tested for compressive, tensile and flexural strength respectively. The test result were compared with conventional concrete from the comparisons the effectiveness of the high strength concrete made from different ingredients was evaluated.

Key words: isophthalic polyester, cobalt octate, methyl ethyl ketone peroxide, polymer concrete.