

Mix Design Curves for High Volume Fly Ash Concrete

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Abstract : Concrete construction in future has to be environmental friendly apart from being safe so that society at large is benefited by the huge investments made in the infrastructure projects. To achieve this, component materials of the concrete system have to be optimized with reference to sustainability. This paper presents a study on development of mix proportions of high volume fly ash concrete (HFC). A series of HFC mixtures with cement replacement levels varying between 50% and 65% were prepared with water/binder ratios of 0.3 and 0.35. Compressive strength values were obtained at different ages. From the experimental results, pozzolanic efficiency ratios and mix design curves for HFC were established.

Keywords : age factor, compressive strength, high volume fly ash concrete, pozzolanic efficiency ratio

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