

Influence of Humic acid as an admixture in concrete

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Abstract

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as a fuel. For the research work humic acid was obtained from Neyveli Lignite Corporation (NLC), Tamil Nadu, India. Humic acid is insoluble in water thus manufactured in the commercial form of potassium humate. This research seeks to optimize the benefits of using humic acid as admixture in plain cement concrete and fly ash concrete. In this study humic acid of 0.7%, 0.8% and 1% are used as admixture in plain cement concrete and fly ash concrete, where 15%,20%,25%30% of cement replaced with fly ash. In this experimental investigation standard mixes of fly ash concrete and plain cement concrete with water cement ratio 0.5 were designed for a 28-day strength of 35N/mm². Mixes of fly ash concrete and plain cement concrete with 0.7%, 0.8% and 1% humic acid as admixture were designed with 0.42 water cement ratio for 28-day strength of 35N/mm². The cubes were casted and cured properly the casted cube specimens was tested at 7,14 and 28 days. The results were analysed and compared with standard concrete. The following conclusions are drawn on the effect of humic acid on plain cement concrete and fly ash concrete. The results obtained shows improved workability and compressive strength by addition of humic acid as admixture in plain cement concrete and fly ash concrete