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HARDENED PROPERTIES OF POLYETHYLENE TEREPHTHALATE BASED CONCRETE

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ABSTRACT

Disposing of waste plastic materials has always been point of concern. As PET bottles are of non-biodegradable character, their decomposition is main concern regarding environmental perception. Recycling or reusing is only solution to their decomposition problem. This study deals with the experimental programme on mechanical properties of recycled polyethylene terephthalate based concrete. A Portland fly ash cement based concrete with a 0.43 water/cement ratio is used to cast cured and tested a cylindrical and cubic specimens for 7 days and 28 days strength. PET waste shredded to flakes and added with 0% to 5% with the increment of 1%, with 0% as reference concrete. Comparing with reference concrete observed an increase in compressive and tensile strength. The optimum dosage was 2% for compressive strength and 1% in split tensile strength.

KEYWORDS: PET Waste, Plastic Flakes, Compressive Strength & Tensile Strength

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