

An Experimental Investigation on Partial Replacement of Cement by PET Fibre in Cement Concrete

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Abstract: *Despite efforts to curb its usage, plastic is being used more and more frequently. Here, the benefits of using plastic pet bottle fibre instead of sand in concrete are examined. Solid waste management is severely hampered by plastic bottle disposal. Due to faulty waste management practises, several inventions that were made to make our lives more convenient have contributed to environmental pollution. Water bottles and bottles for carbonated beverages are made of polyethylene terephthalate (PET). This is a problem for the environment because used plastic bottles can't easily biodegrade and need to be recycled or reused. The building industry is looking for low-cost materials to increase the strength of concrete structures in the modern world. The purpose of this study is to determine whether trash PET bottles may substitute some of the fine aggregate in regular Portland cement. For determining the other qualities, such as flexural strength test, the percentage substitution that yields better compressive strength was used.*

Keywords: Concrete, Cement, Fine Aggregates, Coarse Aggregates, Plastic Pet Bottle Fiber

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