

Utilization of Discarded PET and Concrete Aggregates in Construction Causes: A Green Approach

Authors : Arjun, A. D. Singh

Abstract : The purpose of this study is to resolve the solid waste problems caused by plastics and concrete demolition as well. In order to that mechanical properties of polymer concrete; in particular, polymer concrete made of unsaturated polyester resins from recycled polyethylene terephthalate (PET) plastic waste and recycled concrete aggregates is carried out. Properly formulated unsaturated polyester based on recycled PET is mixed with inorganic aggregates to produce polymer concrete. Apart from low manufacturing cost, polymer concrete blend has acceptable properties, to go through it. The prior objectives of the paper is to investigate the mechanical properties, i.e. compressive strength, splitting tensile strength, and the flexural strength of polymer concrete blend using an unsaturated polyester resin based on recycled PET. The relationships between the mechanical properties are also analyzed.

Keywords : polyethylene terephthalate (PET), concrete aggregates, compressive strength, splitting tensile strength