

Durability Aspects of Recycled Aggregate Concrete: An Experimental Study

Authors : Smitha Yadav, Snehal Pathak

Abstract : Aggregate compositions in the construction and demolition (C&D) waste have potential to replace normal aggregates. However, to re-utilise these aggregates, the concrete produced with these recycled aggregates needs to provide the desired compressive strength and durability. This paper examines the performance of recycled aggregate concrete made up of 60% recycled aggregates of 20 mm size in terms of durability tests namely rapid chloride permeability, drying shrinkage, water permeability, modulus of elasticity and creep without compromising the compressive strength. The experimental outcome indicates that recycled aggregate concrete provides strength and durability same as controlled concrete when processed for removal of adhered mortar.

Keywords : compressive strength, recycled aggregate, shrinkage, rapid chloride permeation test, modulus of elasticity, water permeability

Conference Title : ICCET 2018 : International Conference on Concrete Engineering and Technology

Conference Location : London, United Kingdom

Conference Dates : March 15-16, 2018