

Effect of High Temperature on Residual Mechanical and Physical Properties of Brick Aggregate Concrete

Authors : Samia Hachemi, Abdelhafid Ounis, W. Heriheri

Abstract : This paper presents an experimental investigation of high temperatures applied to normal and high performance concrete made with natural coarse aggregates. The experimental results of physical and mechanical properties were compared with those obtained with recycled brick aggregates produced by replacing 30% of natural coarse aggregates by recycled brick aggregates. The following parameters: compressive strength, concrete mass loss, apparent density and water porosity were examined in this experiment. The results show that concrete could be produced by using recycled brick aggregates and reveals that at high temperatures recycled aggregate concrete performed similar or even better than natural aggregate concrete.

Keywords : high temperature, compressive strength, mass loss, recycled brick aggregate

Conference Title : ICCEE 2015 : International Conference on Civil and Environmental Engineering

Conference Location : Istanbul, Türkiye

Conference Dates : October 26-27, 2015