

The Mechanical Strength and Durability of High Performance Concrete Using Local Materials

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Abstract : In this work, an experimental investigation was carried out to evaluate the mechanical and durability properties of high performance concretes (HPC) containing local southwest Algerian materials. The mechanical properties were assessed from the compressive strength and the flexural strength, whilst the durability characteristics were investigated in terms of sulphate attack. The results obtained allow us to conclude that it is possible to make a high performance concrete (HPC) based on existing materials in the local market, if these are carefully selected and properly mixed in such way to optimize grain size distribution.

Keywords : durability, high performance concrete, high strength, local materials, Southwest Algerian, sulphate attack

Conference Title : ICCEAM 2016 : International Conference on Civil Engineering and Applied Mechanics

Conference Location : Istanbul, Türkiye

Conference Dates : February 15-16, 2016