

Possibilities of Utilization Zeolite in Concrete

Authors : M. Sedlmajer, J. Zach, J. Hroudova, P. Rovnaníková

Abstract : There are several possibilities of reducing the required amount of cement in concrete production. Natural zeolite is one of the raw materials which can partly substitute Portland cement. The effort to reduce the amount of Portland cement used in concrete production is brings both economical as well as ecological benefits. The paper presents the properties of concrete containing natural zeolite as an active admixture in the concrete which partly substitutes Portland cement. The properties discussed here bring information about the basic mechanical properties and frost resistance of concrete containing zeolite. The properties of concretes with the admixture of zeolite are compared with a reference concrete with no content of zeolite. The properties of the individual concretes are observed for 360 days.

Keywords : concrete, zeolite, compressive strength, modulus of elasticity, durability

Conference Title : ICCSCE 2015 : International Conference on Civil, Structural and Construction Engineering

Conference Location : Rome, Italy

Conference Dates : May 05-06, 2015