

Chloride Transport in Ultra High Performance Concrete

Authors : Radka Pernicova

Abstract : Chloride resistance in Ultra High Performance Concrete (UHPC) is determined in this paper. This work deals with the one dimension chloride transport, which can be potentially dangerous particularly for the durability of concrete structures. Risk of reinforcement corrosion due to exposure to the concrete surface to direct the action of chloride ions (mainly in the form de-icing salts or groundwater) is dangerously increases. The measured data are investigated depending on the depth of penetration of chloride ions into the concrete structure. Comparative measurements with normal strength concrete are done as well. The experimental results showed that UHCP have improved resistance of chlorides penetration than NSC and also chloride diffusion depth is significantly lower in UHCP.

Keywords : chloride, one dimensional diffusion, transport, salinity, UHPC

Conference Title : ICAAPMS 2014 : International Conference on Advances in Applied Physics and Materials Science

Conference Location : Madrid, Spain

Conference Dates : November 10-11, 2014