Advances in Materials Science and Engineering

Special Issue on

Concrete Durability and Steel Corrosion

CALL FOR PAPERS

For ages, concrete has been used as a primary construction material in civil, industrial, and residential facilities around the world. Embedded steel reinforcement in concrete can corrode damaging structural stability. The durability problems caused by corrosion usually cause structural degradation, which can be catastrophic on a large scale. Recently, many researchers have been focusing on durability in concrete by using various methods of evaluation such as physical-chemical modeling, simplistic techniques, stochastic/numerical approaches, and assessments with nondestructive testing (NDT). New materials are constantly invented to thwart corrosive effects on steel.

We are pleased to invite authors to contribute original articles that will provide valuable and informative information on concrete durability and methods to improve the service life of concrete structures. We also hope the submitted articles will allow the readers to share more dialogue about durability issues which cover material properties, science-based modeling, and engineering performance of concrete.

Potential topics include, but are not limited to:

- Steel corrosion behavior in concrete
- Identification of deterioration mechanisms: carbonation, chloride attack, and freezing and thawing action
- Structural behavior in deteriorated reinforced concrete structures
- NDT-based assessment for deterioration detection
- Numerical/stochastic modeling for deterioration analysis
- High durability concrete using new materials
- Diffusion and permeation in concrete as porous media
- Service life prediction in reinforced concrete structures exposed to harsh environments

Authors can submit their manuscripts via the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/amse/cdis/.

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