



Technical Session TH27

Perspectives on Alkali-Silica Reaction (ASR) Effects on the Structural Capacity of Nuclear Concrete Structures

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Scope:

In this session, speakers will describe current research on the effects of Alkali-Silica Reaction (ASR) degradation on the structural capacity of nuclear concrete structures.

The speakers will present:

- Research to date on ASR effects on structural capacity being conducted at NIST
- The ODOBA concrete degradation research being conducted by IRSN, France
- Prediction of Concrete Aging and Deterioration by Accelerated Tests, Non-Destructive Evaluations (NDE) and Stochastic Computations, Northwestern University
- Summary on ASR research being conducted by the U.S. DOE, Oak Ridge National Laboratory (ORNL)
- Perspectives on ASR Aging and Degradation of Structures :Summary of findings at the International Workshop sponsored by OECD/NEA/CSNI



Speakers:

NIST Research on ASR Effects on Materials Properties and Structural Capacity of RC Structures - Long Phan, Leader, Structures Group, National Institute of Standards and Technology (NIST)

R&D on Concrete Pathologies - the ODOBA Project - Christophe Marquie, ODOBA Project Leader, Institut de Radioprotection et de Sûreté Nucléaire (IRSN)

Advanced Computational Tools for ASR Deterioration Assessment - Gianluca Cusatis, Northwestern University

Structural Significance of Alkali-Silica Reaction on Thick Reinforced Concrete Members - Yann LePape, Oak Ridge National Laboratory (ORNL)

The OECD/NEA/CSNI Benchmark ASCET Phase II - Summary, Conclusions and Recommendations - Nebojsa Orbovic, Technical Specialist, Canadian Nuclear Safety Commission (CNSC)
