

Repair of Concrete

TWO DAYS, 15 HOURS

In-depth strategies and techniques for reliable concrete repairs

Program Content:

Day One

- **Condition Survey**
 - Assessing damage and deterioration
 - Load testing
 - Identifying the causes
 - Developing reports
 - Nondestructive testing techniques
- **Repair Materials**
 - Polymer-modified cements
 - Cementitious material selection process
 - Polymers
- **Surface Preparation**
 - Equipment
 - Methods
- **Placement Methods**
 - Concrete placement
 - Polymer placement
 - Other techniques
- **Crack and Joint Repairs**
 - Identifying cracks and causes
 - Expansion joints
 - Contraction joints
 - Techniques
- **Questions and Answers**

Day Two

- **Repair of Corrosion-Damaged Structures**
 - Bridge and transportation structures
 - Façade and balcony
 - Parking garages and plazas
 - Civil structures
- **Protective Systems for Concrete Structures**
 - Membranes and waterproofing
 - Sealers and coatings
- **Structural Repair and Strengthening of Concrete Elements**
 - Post-tensioning repair
 - Shear collars
 - External post-tensioning
 - Other techniques
 - Carbon and glass fiber reinforcement
- **Specifications and Contract Documents**
 - General conditions
 - Bidding strategies
 - Technical sections
- **Group Exercise**

An actual case study will be presented and based on what was learned at the seminar. Participants will break into small discussion groups to review the projects and recommend an appropriate repair system

Who should attend:

Owners and facility managers, concrete specialists and general contractors, civil and structural engineers, material suppliers, and architects

Instructors:

James P. Barlow, Bruce A. Collins, James P. Donnelly, Paul E. Gaudette, Myles A. Murray, Randall W. Poston, and Michael M. Sprinkel

Seminar handouts:

- Guide for Conducting a Visual Inspection of Concrete in Service (ACI 201.1R)
- Causes, Evaluation, and Repair of Cracks in Concrete Structures (ACI 224.1R)
- Four Epoxy Standards (ACI 503.1 to 503.4)
- Concrete Repair Guide (ACI 546R)
- Course Notes authored by the instructors

