

Basics of Concrete Materials and Testing

In-House Seminar

ONE DAY, 7.5 HOURS (7.5 PDHs/0.75 CEUs)

Economy, constructibility, and long-term performance of concrete

Who should attend: Anyone new to the industry or anyone desiring a refresher or update

Program Content:

Attendees will learn the fundamentals of quality concrete materials and testing that should have a positive impact on the economy, constructability, and durability of concrete and testing programs.

Fundamental Concrete Concepts

- Understanding the concrete needs for your project
- Matching materials to project requirements
- Moving from materials to completed project

Selection and Use of Materials

- Cementitious materials
- Chemical admixtures
- Water • Fibers
- Aggregates

Codes and Specifications

- What's a Code and what's a Specification?
- Requirements of ACI 318
- Requirements of ACI 301

Concrete Production

- Ordering and basis of sale • Production facility
- Delivery issues • Resolving disputes
- Inspection and certification

Sampling and Control Tests for Concrete

- Why do we test concrete?
- When do we test concrete?
- How do we test concrete?

Evaluation of Test Results

- General review of a test report
- Evaluating cylinder data
- Identifying trends in the test data

In-Place Evaluation of Strength

- Evaluation process • Testing methods

Learning Objectives:

- Explain the fundamentals of concrete production methods and construction practices.
- Explain the difference between a code and a specification.
- Describe the process for selecting concrete materials and proportioning to ensure desirable concrete properties.
- Recognize the reasons for and importance of sampling and control tests for concrete.

Instructors:

Presented by an industry expert.

Related Documents:

To expand attendees knowledge, ACI In-House Seminar customers may purchase multiple copies of related documents at 50% off the regular price.

- ACI 301, Specifications for Structural Concrete
- CCS-0, Concrete Fundamentals
- Excerpts from ACI 318-19, Building Code Requirements for Structural Concrete and Commentary
- E-1(16), Aggregates for Concrete—free download
- E2-00, Reinforcement for Concrete—free download
- E3-13, Cementitious Materials for Concrete—free download
- E4-12, Chemical Admixtures for Concrete—free download
- Seminar lecture notes

Up to 40 copies of the presentation slides included. Additional copies can be purchased.

ACI is an approved education provider for AIA and ICC.



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