

Troubleshooting Concrete Forming and Shoring

In-House Seminar

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

Minimize problems during construction process

Who should attend: Contractors and engineers

Program Content:

Forming systems

Wood wall forms; Panel forms; Gang forms; Column forms; Column-hung forms; Flying table forms; Tunnel forms; Shoring and scaffolding; Specialty systems

Forming economics

Design repetition; Dimensional standards; Dimensional consistency; Slopes for drains; Beam sizes, spandrel beams, beam-column intersections; Column shapes and sizes; PCA preliminary design guides

Loads and pressures

Lateral pressures; Vertical loads; Lateral loads; Shoring loads

Form removal and reshoring

Form removal specifications and requirements; Calculation techniques; Stripping and reshoring techniques; Reshoring example problem

Tolerances and finishes

Wall finishes (smooth form, rough form, rubbed finishes); Vertical alignment and relative alignment; Balcony drainage issues; Tolerance compatibility issues

Formed surface defects

Definitions and specifications; Honeycomb; Air voids in formed surfaces; Form streaking; Aggregate transparency; Subsidence cracking; Color variation; Sand streaking; Layer lines; Form offsets; Cold joints

Advanced topics

(some of the following topics will be included)

One-sided forming; Bracing to slabs on grade and elevated slabs; Forming overhangs (balconies); Overhanging access forms for materials and equipment; Strength rating of used materials; Wall pour size and joint location; Shrinkage trips; SCC formwork basics; Mudsill settlement; Formwork failures; Form liners; Free fall and concrete splatter on reinforcing steel

Questions and answers

Learning Objectives:

- Learn how to economically design formwork to meet dimensional standards and consistency, and how to utilize design repetition for beams and columns.
- Recognize formed surface defects and methods to prevent surface defects.
- Identify available forming systems, including wood wall, panel, gang, column forms, and which types of systems are more suitable for various construction processes.
- Understand the loads and pressures on formwork.

Instructors:

Two industry experts will present this seminar.

Related Documents:

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

- Guide to Formwork for Concrete (Reapproved 2021) (ACI PRC-347-14(21))
- Guide for Shoring/Reshoring of Concrete Multistory Buildings (ACI PRC-347.2-17)
- Specifications for Tolerances for Concrete Construction and Materials and Commentary (ACI 117)
- Identification and Control of Visible Surface Effects of Consolidation on Formed Concrete Surfaces (ACI 309.2R)
- Guide to Cast-in-Place Architectural Concrete Practice (ACI 303R)

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

ACI is an approved education provider for AIA and ICC.



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