

Anchorage to Concrete

ONE DAY, 7.5 HOURS

Design structural connections to concrete and use the anchor design provisions of ACI 318.

Program Content:

Basic ACI Design Framework for Anchorage to Concrete

- Designing cast-in and post-installed mechanical anchors by ACI 318, Appendix D
- Automatic qualification of most cast-in mechanical anchors
- Qualification of post-installed mechanical anchors by ACI 355.2
- Adhesive anchor provisions under development

Background of ACI 318, Appendix D

- Behavior of anchors in tension (yield and fracture, concrete breakout, pullout)
- Influence of adjacent edges and anchors
- Influence of cracking
- Behavior of anchors under combinations of tension and shear
- Behavior of complex connections (determination of anchor forces) seminar topics

Simple Example Problems by ACI 318, Appendix D

- Single anchors in tension
- Effects on tensile anchors of edge distance, adjacent anchors, and cracking
- Single anchors in shear
- Effects on shear anchors of edge distance, adjacent anchors, and cracking
- Single anchors under combined tension and shear

Background of ACI 355.2 (Qualification of Post-Installed Mechanical Anchors in Concrete)

More Complex Example Problems by ACI 318, Appendix D

- Multiple-anchor connections under eccentric shear
- Calculating anchor forces by elastic and plastic design approaches
- Designing and detailing

PCA is a co-sponsor and has contributed technical information.

Who should attend:

Engineers, architects, specifiers, and building officials.

Instructors:

Neal S. Anderson, Peter J. Carrato, Ronald A. Cook, Richard E. Klingner, Robert R. McGlohn, and Donald F. Meinheit. For more detailed information on the faculty, go to www.concreteseminars.com.

Seminar handouts:

Qualification of Post-Installed Mechanical Anchors in Concrete and Commentary (ACI 355.2)

Excerpts from ACI 318-05: Chapter 2 and Appendix D

Excerpt from PCA Notes on 318

Special handouts with notes and design examples authored by the instructors

