

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.

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

