What's New from aci

TECHNICAL DOCUMENTS

ACI 211.9R-18: Guide to Selecting Proportions for Pumpable Concrete

This guide addresses methods for selecting proportions for hydraulic-cement concrete placed by pumping. Specific numerical guidelines are given as applicable to mixture component proportions that lead to the most efficient concrete pumping results.

ACI 239R-18: Ultra-High Performance Concrete: An Emerging Technology Report

This emerging technology report gives an overview of ultra-high-performance concrete. It briefly introduces the production of these concretes, their properties, design principles for their use, and example applications.

ACI 311.6-18: Specification for Testing Ready-Mixed Concrete

This Reference Specification covers Testing Agency requirements for field and laboratory testing of ready mixed concrete delivered to the project. It is intended for use by specifiers, Architects, Engineers, Owners, and other groups interested in monitoring the quality of concrete used in project construction.

ACI 447.1R-18: Report on the Modeling Techniques Used in Finite Element Simulations of Concrete Structures Strengthened Using Fiber-Reinforced Polymer (FRP) Materials

This report provides a state-of-the-art review in the area of modeling of FRP-strengthened RC members and provides general guidelines on the best modeling practices that capture the complex phenomenon of concrete cracking and crushing, concrete shear retention, concrete fracture energy, steel-to-concrete bond behavior, FRP-to-concrete interface, FRP debonding failure modes, and FE mesh dependency.

ACI 550.4-18: Qualification of Precast Concrete Diaphragm Connections and Reinforcement at Joints for Earthquake Loading (ACI 550.4-18) and Commentary (550.4R-18)

ACI 550.4 prescribes the experimental procedures needed to assess the stiffness, strength, and deformation capacity of mechanical connections and reinforcement at joints for diaphragm flange-to-flange connections, including chord connections, of double-tee (DT) beams for earthquake loadings and evaluation procedures.

ITG-10.1R-18: Report on Alternative Cements

This report addresses available and emerging alternative cements with the intent to facilitate the adoption of these new materials.

Superplasticizers and Other Chemical Admixtures in Concrete—Proceedings, Twelfth International Conference, Beijing, China (SP-329)

On October 28-31, 2018, the Chinese Ceramic Society and the China Academy of Building Research (CABR), Beijing China, in association with ACI, sponsored the Twelfth International Conference on Superplasticizers and other Chemical Admixtures in Concrete in Beijing China.

Recent Advances in Concrete Technology and Sustainability Issues—Proceedings, Fourteenth International Conference Beijing, China (SP-330)

On October 30 to November 2, 2018, the CCS and the China Academy of Building Research (CABR), Beijing China, in association with the COIC sponsored the Fourteenth International Conference on Recent Advances in Concrete Technology and Sustainable Issues in Beijing, China.

ACI UNIVERSITY ONLINE COURSES

On-Demand Course: Strut-and-Tie Method for Analysis and Design of Concrete Members

Learning Objectives:

1. Summarize the background for the development of the strut-and-tie method.
2. Explain design rules and geometric restraints for development of strut-and-tie models.
3. Describe the Code-defined nominal strengths of struts, ties, and nodes.
4. Review how to finalize and check the design of either a whole member or a critical region within a member.

Continuing Education Credit: 0.1 CEU (1.0 PDH)