What's New from aci

TECHNICAL DOCUMENTS

ACI 228.1R-19: Report on Methods for Estimating In-Place Concrete Strength

This report provides methods for estimating the in-place strength of concrete in new and existing construction. These methods include: rebound number, penetration resistance, pullout, pull-off, ultrasonic pulse velocity, maturity, and cast-in-place cylinders.

ACI 548.6R-19: Polymer Concrete: Guidelines for Structural Applications

Polymer concrete (PC) can be used in the construction of structural elements with applications including wall panels withstanding wind and seismic loads, underground vaults resisting lateral earth pressure, vault and utility box covers resisting vehicle loads, and railroad ties resisting static and dynamic rail loads.

The Contractor's Guide to Quality Concrete Construction, 4th Edition

This document is intended for the use of individuals who are competent to evaluate the significance and limitations of its content and recommendations and who will accept responsibility for the application of the material it contains.

ACI UNIVERSITY ONLINE COURSES

On-Demand Course: Load Testing of Existing Concrete Structures (Part 1)

Learning Objectives:
1. Describe how to administer the monotonic load test to evaluate strength of existing concrete structures.
2. Explain how to perform cyclic load test to evaluate strength of existing concrete structures.
3. Describe how to apply the acceptance criteria to monotonic load test and cyclic load tests to assess existing concrete structures.
4. Assess capacities of deteriorated concrete structures understanding reliability and variability of applied design loads and as-built member properties.

Continuing Education Credit: 0.1 CEU (1.0 PDH)

On-Demand Course: Load Testing of Existing Concrete Structures (Part 2)

Learning Objectives:
1. Explain how concrete core tests are planned, administered, interpreted, and measured against acceptance criteria to qualify strength of placed concrete that previously showed low-strength results from laboratory tests.
2. Describe the process of carrying out and monitoring cyclic load tests to slabs, beams, girders, and how to assess test results
3. Explain the negative effect of results of load tests on existing members due to differential temperatures on interior and exterior sides of members during the load testing.
4. Identify several potential mistakes that can happen when performing load tests on existing members.

Continuing Education Credit: 0.1 CEU (1.0 PDH)

On-Demand Course: Freeze-Resistant Concrete: Is It Possible, and if so, Is It Affordable?

Learning Objectives:
1. Summarize the changes in workability of concrete in cold weather and how this may impact finishing operations.
2. How to develop 'freeze-resistant concrete' mixtures
3. How 'freeze-resistant concrete' acts differently than normal concrete.
4. Discuss curing techniques for normal cold weather concreting versus concrete that utilizes 'freeze resistant concrete'.

Continuing Education Credit: 0.1 CEU (1.0 PDH)