ACI Committee Document
Abstracts

The following ACI documents are, or will soon be, available:

"Selecting Proportions for Normal-Density and High-Density Concrete—Guide (ACI PRC-211.1-22)"

Reported by ACI Committee 211, Proportioning Concrete Mixtures

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Abstract: This guide to concrete proportioning provides background information on, and a procedure for, selecting and adjusting concrete mixture proportions. It applies to normal-density concrete, both with and without chemical admixtures, supplementary cementitious materials, or both. The procedure uses calculations based on the absolute volumes occupied by the mixture constituents. The procedure incorporates consideration of requirements for aggregate gradation, workability, strength, and durability. Example calculations are provided, including adjustments based on the results of the first trial batch. Appendixes cover laboratory tests and proportioning of high-density concretes.

"Post-Installed Mechanical Anchors in Concrete—Qualification Requirements and Commentary (ACI CODE-355.2-22)"

Reported by ACI Committee 355, Anchorage to Concrete

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Abstract: ACI CODE-355.2 prescribes testing programs and evaluation requirements for post-installed mechanical anchors intended for use in structural applications addressed by ACI 318 and subjected to static or seismic loads in tension, shear, or combined tension and shear. Criteria are prescribed for determining whether anchors are acceptable for use in uncracked concrete only, or in cracked as well as uncracked concrete. Performance categories for anchors are established, as are the criteria for assigning anchors to each category. The anchor performance categories are used by ACI 318 to assign capacity reduction factors and other design parameters.

"Externally Bonded Fiber-Reinforced Polymer Systems Design and Construction for Strengthening Masonry Structures—Guide (ACI PRC-440.7-22)"

Reported by ACI Committee 440, Fiber-Reinforced Polymer Reinforcement

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Abstract: Fiber-reinforced polymer (FRP) systems can be used for strengthening masonry structures and masonry

elements among other options such as external steel plates, section enlargement with reinforced concrete (RC) overlays or shotcrete, steel bracing, and internal steel reinforcement. FRP systems offer advantages over traditional strengthening techniques: they are lightweight, relatively easy to install, and are corrosion resistant. Due to the characteristics of FRP materials as well as the behavior of masonry members strengthened with FRP, specific guidance on the use of these systems is needed. This document offers a description of the unique material properties of FRP and committee recommendations on the engineering, construction, and inspection of FRP systems used to strengthen masonry. These guidelines are based on the knowledge gained from experimental research, analytical work, and field applications of FRP systems used to strengthen masonry structures.

"Specifying Underground Shotcrete—Guide (ACI PRC-506.5-22)"

Reported by ACI Committee 506, Shotcreting

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The Committee acknowledges B. Edgerton, J. Lindell, J. O'Donnel Sr., and F. Sherrill for their contributions to this report.

Abstract: This document provides a guide for owners; contractors; designers; and testing, specifying, and inspection organizations engaged in the application of shotcrete for underground support. The guide provides general information for the selection of constituent materials and methods to proportion shotcrete. Typical methods of batching, mixing, and handling of proportioned shotcrete materials are detailed along with shotcrete placement methods and equipment.

"Glass Fiber-Reinforced Concrete Premix—Report (ACI PRC-549.3-22)"

Reported by ACI Committee 549, Thin Reinforced Cementitious Products and Ferrocement

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Abstract: Alkali-resistant (AR) glass fiber-reinforced concrete premix technology has become increasingly popular worldwide for the manufacture of precast concrete products used in industrial, architectural, civil engineering, and construction applications. AR glass fiber-reinforced concrete premix products provide a useful balance of properties such as strength, toughness, durability, moisture resistance, dimensional stability, fire resistance, and aesthetics. This report summarizes the current knowledge of materials, manufacturing methods, engineering properties, and applications of AR glass fiber-reinforced concrete premix.