What's **New**

Specification for Environmental Concrete Structures—ACI 350.5-12

This document covers materials and proportioning of concrete; reinforcement and prestressing reinforcement; production, placing, finishing, and curing of concrete; formwork design and construction; and shotcrete. Methods of treatment of joints and embedded items, repair of surface defects, and finishing of formed and unformed surfaces are specified. Separate sections are devoted to architectural concrete, mass concrete, and internal and external post-tensioned prestressed concrete. Provisions governing testing, evaluation, and acceptance of concrete as well as acceptance of the structure are included. This specification is available in hard copy or electronic format in inch-pound units, and a metric version is available in electronic format (metric version order code 3505M12).

Order Code:	350512.CI
Pages:	55
Price:	\$87.50 (ACI members \$53.00)

Design Guide for Connections in Precast Jointed Systems—ACI 550.2R-13

This guide provides information on the characteristics and design of connections between precast concrete components and between precast components and cast-inplace construction. The proper detailing and design of precast concrete connections are essential to the performance of a precast concrete structure. This guide describes typical precast jointed systems and their connection types, performance, and characteristics, and provides recommendations for design and construction. Three classes of connections are identified and their characteristic and key design considerations given. Also included are guidelines for designing connections and their anchorage; a description of precast systems; typical lateral-load-resisting systems; key design considerations; and erection requirements, including special welding considerations. Available in hard copy or electronic format.

Order Code:	550213.CI
Pages:	16
Price:	\$54.50 (ACI members \$33.00)

Report on Torsion in Structural Concrete—ACI 445.1R-12

This report emphasizes that it is essential to the analysis of torsion in reinforced concrete that members should:

- 1. Satisfy the equilibrium condition (Mohr's stress circle);
- 2. Obey the compatibility condition (Mohr's strain circle); and
- 3. Establish the constitutive relationships of materials such as the "softened" stress-strain relationship of concrete and "smeared" stress-strain relationship of steel bars.

The behavior of members subjected to torsion combined with bending moment, axial load, and shear is discussed. This report deals with design issues, including compatibility torsion, spandrel beams, torsional limit design, open sections, and size effects. The final two chapters are devoted to the detailing requirements of transverse and longitudinal reinforcement in torsional members with detailed, step-bystep design examples for two beams under torsion using ACI (ACI 318-11), European (EC2-04), and Canadian (CSA A23.3-04) standards. Two design examples are given to illustrate the steps involved in torsion design. Design Example 1 is a rectangular reinforced concrete beam under pure torsion, and Design Example 2 is a prestressed concrete girder under combined torsion, shear, and flexure. Available in hard copy or electronic format.

Order Code:	445112.CI
Pages:	92
Price:	\$106.50 (ACI members \$64.00)



Report on Nondestructive Test Methods for Evaluation of Concrete in Structures—ACI 228.2R-13

Report on Controlled Low-Strength Materials—ACI 229R-13

Code Requirements for Design and Construction of Concrete Structures for the Containment of Refrigerated Liquefied Gases and Commentary—ACI 376-11