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KEY WORDS: prestressed concrete, post-tensioning, specification, prestressing steel, grout, bonded tendons, unbonded tendons, tests.

ABSTRACT: This industry-developed specification is a guide to engineers designing and specifying post-tensioned concrete structures, and it will be the basis for establishing the acceptance testing phase of an industry certification program. Recognition is made of both bonded and unbonded construction.

REFERENCE: PCI Committee on Post-Tensioning, "Tentative Specification for Post-Tensioning Materials," *Journal of the Prestressed Concrete Institute*, Vol. 16, No. 1, January-February 1971, pp. 14-20.

KEY WORDS: prestressed concrete, seismic design, research, deflection, rotation, cracking, load reversals, partial prestressing, reinforced concrete, ductility, limit loads, damping.

ABSTRACT: This paper discusses how prestressed concrete members can be designed to maintain ductility and energy-absorbing capacity, necessary in seismic design. The comparative behavior of prestressed and reinforced concrete test beams under reversals of loading is given.

REFERENCE: Inomata, Shunji, "Comparative Study on Behavior of Prestressed and Reinforced Concrete Beams Subject to Loading Reversals," *Journal of the Prestressed Concrete Institute*, Vol. 16, No. 1, January-February 1971, pp. 21-37.

KEY WORDS: prestressed concrete, precast concrete, connections, design, shear friction theory, detailing, standards.

ABSTRACT: The paper describes a suggested standard beam-to-column connection for the industry. It is designed by a rational method based on the shear friction theory. The importance of well-designed connections is emphasized.

REFERENCE: Birkeland, Philip W., "A Proposed Industry-Standard Beam Connection," *Journal of the Prestressed Concrete Institute*, Vol. 16, No. 1, January-February 1971, pp. 38-47.

KEY WORDS: prestressed concrete, post-tensioning, circumferential prestressing, prestressing steel, nuclear containment vessels, model test, stress-strain curve, failure mode.

ABSTRACT: This paper describes a post-tensioning system which uses thin, high-strength steel strips as tendons. Tests to destruction of an 800-ton tendon are described in detail. The primary application to prestressed concrete pressure vessels is explained.

REFERENCE: Saglio, R., Puyo, A., and Picaut, J., "Prestressing with High-Tensile Steel Strips," *Journal of the Prestressed Concrete Institute*, Vol. 16, No. 1, January-February 1971, pp. 48-60.