

CODE

the total prestress force in prestressed concrete members, unless approved by the licensed design professional.

(h) If the transfer of force from the anchorages of the pretensioning bed to the concrete is accomplished by flame cutting prestressed reinforcement, the cutting locations and cutting sequence shall be selected to avoid undesired temporary stresses in pretensioned members.

(i) Long lengths of exposed pretensioned strand shall be cut near the member to minimize shock to the concrete.

(j) Prestressing reinforcement in post-tensioned construction shall not be stressed until the concrete compressive strength is at least 17 MPa for single-strand or bar tendons, 28 MPa for multistrand tendons, or a higher strength, if required. An exception to these strength requirements is provided in 26.10.2(k).

(k) Lower concrete compressive strength than required by 26.10.2(j) shall be permitted if (1) or (2) is satisfied:

(1) Oversized anchorage devices are used to compensate for a lower concrete compressive strength.

(2) Prestressing reinforcement is stressed to no more than 50 percent of the final prestressing force.

26.11—Formwork**26.11.1 Design of formwork****26.11.1.1 Design information:**

(a) Requirement for the contractor to design, fabricate, install, and remove formwork.

(b) Location of composite members requiring shoring.

(c) Requirements for removal of shoring of composite members.

COMMENTARY

systems, a member should be that portion considered as an element in the design, such as the joist and effective slab width in one-way joist systems, or the column strip or middle strip in two-way flat plate systems. Some members can be shown to accommodate more than 2 percent loss of prestress due to unreplaced broken prestressed reinforcement.

R26.10.2(k) To limit early shrinkage cracking, mono-strand tendons are sometimes stressed at concrete strengths less than 17 MPa. In such cases, either oversized monostrand anchorages are used, or the strands are stressed in stages, often to levels one-third to one-half the final prestressing force.

R26.11—Formwork**R26.11.1 Design of formwork**

Typically, the contractor is responsible for formwork design, and the Code provides the minimum formwork performance requirements necessary for public health and safety. Concrete formwork design, construction, and removal demands sound judgment and planning to achieve adequate safety. Detailed information on formwork for concrete is given in “Guide to Formwork for Concrete” (ACI 347). This guide is directed primarily to contractors for design, construction, materials for formwork, and forms for unusual structures, but it should aid the licensed design professional in preparing the construction documents.

Formwork for Concrete, ACI SP-4, is a practical handbook for contractors, engineers, and architects. It follows the guidelines established in ACI 347 and includes information on planning, building, and using formwork. It also includes tables, diagrams, and formulas for formwork design loads.

ACI 301M Section 2 provides specification requirements for design and construction of formwork.

R26.11.1.1 Section 24.2.5 covers the requirements pertaining to deflections of shored and unshored members.