Designation: C 1089 – 97

Standard Specification for Spun Cast Prestressed Concrete Poles[1]

This standard is issued under the fixed designation C 1089; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers spun cast prestressed concrete poles for use as structural supports for streetlights; traffic signals; and transmission, distribution, and communication lines.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

2. Referenced Documents

2.1 *ASTM Standards:*

A 82 Specification for Steel Wire, Plain, for Concrete Reinforcement[2]

A 416/A 416M Specification for Steel Strand, Uncoated Seven-Wire for Prestressed Concrete[2]

A 421 Specification for Uncoated Stress-Relieved Wire for Prestressed Concrete[2]

A 496 Specification for Steel Wire, Deformed, for Concrete Reinforcement[2]

A 615/A 615M Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement[2]

A 617/A 617M Specification for Axle-Steel Deformed and Plain Bars for Concrete Reinforcement[2]

A 641 Specification for Zinc-Coated (Galvanized) Carbon Steel Wire[3]

A 706/A 706M Specification for Low-Alloy Steel Deformed Bars for Concrete Reinforcement[2]

A 722/A 722M Specification for Uncoated High-Strength Steel Bar for Prestressing Concrete[2]

C 31/C 31M Practice of Making and Curing Concrete Test Specimens in the Field[4]

C 33 Specification for Concrete Aggregates[5]

C 39 Test Method for Compressive Strength of Cylindrical Concrete Specimens[6]

C 42 Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete[5]

C 150 Specification for Portland Cement[7]

C 172 Practice for Sampling Freshly Mixed Concrete[5]

C 260 Specification for Air-Entraining Admixtures for Concrete[5]

C 330 Specification for Lightweight Aggregates for Structural Concrete[5]

C 494 Specification for Chemical Admixtures for Concrete[5]

C 595M Specification for Blended Hydraulic Cements[7]

C 618 Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolans for Use as a Mineral Admixture in Concrete[5]

2.2 *AASHTO Standard:*

Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals (LTS-2)[8]

2.3 *ANSI Standard:*

National Electrical Safety Code[9]

2.4 *PCI Guides:*

Guide for Design of Prestressed Concrete Poles[10]

Guide Specification for Prestressed Concrete Poles[10]

3. Terminology

3.1 *Definitions:*

3.1.1 *cracking load*—a load which creates a bending moment of enough magnitude to produce a tensile stress greater than the sum of induced compression plus the tensile strength of the concrete resulting in tensile cracks on the tension face of the pole.

[1] This test method is under the jurisdiction of ASTM Committee C-27 on Precast Concrete Products and is the direct responsibility of Subcommittee C27.20 on Architectural and Structural Products.

Current edition approved Jan. 10, 1997. Published February 1997. Originally published as C 1089 – 88. Last previous edition C 1089 – 88.

[2] *Annual Book of ASTM Standards*, Vol 01.04.

[3] *Annual Book of ASTM Standards*, Vol 01.06.

[4] *Annual Book of ASTM Standards*, Vol 04.10.

[5] *Annual Book of ASTM Standards*, Vol 04.02.

[6] *Annual Book of ASTM Standards*, Vol 04.07.

[7] *Annual Book of ASTM Standards*, Vol 04.01.

[8] Available from American Association of State Highway and Transportation Officials, 444 N. Capitol Street, NW, Washington, DC 20001.

[9] Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.

[10] Available from Prestressed Concrete Institute, 201 North Wells Street, Chicago, IL 60606.