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ANSI/NEMA C29.5-2015

American National Standard for Wet-Process Porcelain Insulators - Low- and Medium-Voltage Types

National Electrical Manufacturers Association



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American National Standard for Wet-Process Porcelain Insulators— Low- and Medium-Voltage Types

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FOREWORD

(This Foreword is not part of American National Standard C29.5-2015)

The first edition of this standard was based essentially on the EEI–NEMA (Edison Electric Institute-National Electrical Manufacturers Association) standards for Wet-Process Porcelain Insulators (Low- and Medium-Voltage Pin Type), EEI TDJ-55, NEMA 143-1952. Subsequent revisions have been developed by the Standards Committee on Insulators for Electric Power Lines, C29.

The principal differences between this edition and the previous (1984) edition are revisions to the color and marking requirements, addition of more specific requirements for conductor groove dimensions, and a change in the acceptance criteria for the cantilever strength test.

Suggestions for improvement of this standard are welcomed. They should be sent by the date of its next scheduled revision (December 31, 2020) to:

Senior Technical Director, Operations
National Electrical Manufacturers Association
1300 North 17th Street, Suite 900
Rosslyn, VA 22209

This standard was processed and approved for submittal to ANSI by Accredited Standards Committee (ASC) on Insulators for Electric Power Lines, C29. Committee approval of the standard does not necessarily imply that all committee members voted for approval. At the time it approved this standard, the ASC C29 Committee had the following members:

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G. Winstanley, Secretary

Organization Represented:	*Name of Representative:*
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1 Scope

This standard covers low- and medium-voltage–type insulators made of wet-process porcelain and used in the transmission and distribution of electric energy.

2 Referenced Standards

This standard is intended for use in conjunction with the latest approved revisions of the following American National Standards:

ANSI C29.1 *Test Methods for Electrical Power Insulators*

ANSI C29.6 *Wet-Process Porcelain Insulators—High-Voltage Pin Types*

ASTM D 1535 *Standard Practice for Specifying Color by the Munsell System*

3 Definitions

See Section 2 of ANSI C29.1 for definitions of terms.

4 General

4.1 Insulators shall conform in all respects to the requirements of this standard. The text and figures supplement each other and shall be considered part of this standard.

4.2 Manufacturer's drawings, if furnished, shall show the outline of the insulators, together with all pertinent dimensions. Any variations in these dimensions due to manufacturing tolerances shall be indicated.

4.3 When specified in the clauses below, the following re-test procedure applies:

If only one insulator fails to comply with the applicable test, a new sample equal to twice the quantity originally submitted to that test shall be subjected to retesting. If two or more insulators fail to comply, or if any failure occurs during the retesting, the complete lot is considered as not complying with the requirements of this standard.

5 Material

5.1 The insulators shall be made of commercial-grade wet-process porcelain that meets the mechanical and electrical requirements of this standard.

5.2 The surface of the shells exposed after the assembly shall be glazed for porcelain insulators.

Note: The most commonly requested color for porcelain is gray. If gray is required, it shall be in accordance with ASTM D 1535, *Standard Practice for Specifying Color by the Munsell System,* and shall conform to Munsell notation 5BG 7.0/0.4 with the following tolerances:

a) Hue: ±12(3G to 7B)
b) Value: ±0.5
c) Chroma: -0.2 to +0.6

Other colors are available and can be negotiated between purchaser and supplier.

6 Dimensions and Characteristics

6.1 Figures 1-7 are drawings of insulator types. Dimensions and characteristics of the insulators shall be in accordance with these figures.

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