

American National Standard for Secondary Network Transformers Subway and Vault Types (Liquid Immersed)—Requirements

Approved 6/30/00

American National Standards Institute, Inc.

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3 Park Avenue, New York, NY 10016-5997, USA

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Print: ISBN 0-7381-3641-7 SH95117
PDF: ISBN 0-7381-3642-5 SS95117

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Foreword (This Foreword is not part of American National Standard C57.12.40-2000)

The Accredited Standards Committee on Transformers, Regulators, and Reactors, C57, has for a number of years been developing and correlating standards on transformers and regulators. The data used in this work has been gathered from many sources, including the standards of the Institute of Electrical and Electronics Engineers and the National Electrical Manufacturers Association, reports of committees of the Edison Electric Institute, and others.

The graphics and detailed work required to produce this standard were provided Mike Boulware of ABB Power T&D Company, Inc. of South Boston, Virginia.

Suggestions for improvement of this standard will be welcome. They should be sent to the National Electrical Manufacturers Association, 1300 N. 17th Street, Rosslyn, Virginia 22209.

This standard was processed and approved for submittal to ANSI by Accredited Standards Committee C57 on Transformers, Regulators, and Reactors. Committee approval of the standard does not necessarily imply that all committee members voted for its approval. At the time it approved this standard, the C57 Committee had the following members:

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for Secondary Network Transformers Subway and Vault Types (Liquid Immersed)—Requirements

1 Scope

1.1 This standard is intended for use as a basis for establishing the performance, interchangeability, and safety of the equipment covered and to assist in the proper selection of such equipment.

1.2 This standard covers certain electrical, dimensional, and mechanical characteristics and takes into consideration certain safety features of three-phase, 60Hz, liquid-immersed, secondary network transformers with a three position grounding switch, subway and vault types, rated 2500 KVA and smaller; primary 34 400 volts and below; secondary 216Y/125 volts and 480Y/277 volts.

A subway-type network transformer is one that is suitable for frequent or continuous submerged operation.

A vault-type network transformer is one that is suitable for occasional submerged operation.

2 Referenced and related American National Standards

This standard is intended to be used in conjunction with the following American National Standards.

2.1 Referenced American National Standards

When an American National Standard referred to in this document is superseded by a revision approved by the American National Standards Institute, Inc., the revision shall not apply. The referenced standard and the specific referenced edition shall be the applicable referenced standard until the new version of the referenced document is incorporated by formal action or appropriate revision of the citing standard. All characteristics, definitions, tests, and voltage designations, except as specifically covered in this standard, shall be in accordance with the American National Standards listed below.

ANSI/ASME B1.1-1989, *Unified Inch Screw Threads (UN and UNR Thread Form)*

ANSI/IEEE C17.12.00-1993, *General Requirements for Liquid-Immersed Distribution, Power and Regulating Transformers*

ANSI/IEEE C57.12.80-1978 (R 1992), *Terminology for Power and Distribution Transformers*

ANSI/IEEE C57.12.90-1999, *Liquid-Immersed Distribution, Power and Regulating Transformers, and Distribution and Power Transformer Shop-Circuit Test Guide*

ANSI/IEEE C57.91-1995, *Guide for Loading Mineral Oil-Immersed Power Transformers Up to and Including 100 MVA with 55°C or 65°C Winding Rise*

IEEE Standard 386, *IEEE Standard for Separable Insulated Connector Systems for Power Distribution Systems Above 600 V.*

ANSI C57.12.32-1994, *Submersible Equipment – Enclosure Integrity*

2.2 Related American National Standards

These standards are listed here for information only and are not essential for the completion of the requirements of this standard.

ANSI C57.12.70-1978 (R1993), *Terminal Markings and Connections for Distribution and Power Transformers*

ANSI/ASME B1.20.1-1983 (R1992), *Pipe Threads-General Purpose (Inch)*