



NECA 101-2020

AN AMERICAN NATIONAL STANDARD



Standard for

Standard for Installing Steel Conduits (RMC, IMC, EMT)

Published by
National Electrical
Contractors Association



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(This foreword is not a part of the standard)

Foreword

National Electrical Installation Standards (NEIS™) are designed to improve communication among specifiers, purchasers, and suppliers of electrical construction services. They define a minimum baseline of quality and workmanship for installing electrical products and systems. NEIS™ are intended to be referenced in contract documents for electrical construction projects. The following language is recommended:

Tubular steel raceways shall be installed in accordance with NECA 101, *Standard for Installing Steel Conduits (RMC, IMC, EMT)* (ANSI).

Use of NEIS is voluntary, and neither the National Electrical Contractors Association (NECA) nor the Steel Tube Institute of North America (STI) assumes any obligation or liability to users of this publication. Existence of a standard shall not preclude any member or non-member of NECA or STI from specifying or using alternate construction methods permitted by applicable regulations.

This publication is intended to comply with the National Electrical Code (NEC). Because they are quality standards, NEIS may in some instances go beyond the minimum safety requirements of the NEC. It is the responsibility of users of this publication to comply with state and local electrical codes and Federal and state OSHA safety regulations as well as follow manufacturer installation instructions when installing electrical products and systems.

Suggestions for revisions and improvements to this standard are welcome. They should be addressed to:

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To purchase *National Electrical Installation Standards*, contact the NECA Order Desk at (202) 991-6595 or orderdesk@necanet.org. NEIS can also be purchased in .pdf download format at www.necanet.org/standards.

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1. Scope

1.1 Products and Applications Included

This Standard describes installation procedures for steel rigid metal conduit (RMC), steel intermediate metal conduit (IMC), and steel electrical metallic tubing (EMT), including steel conduits with a supplementary PVC coating, used as raceway systems for electrical wiring in residential, commercial, and industrial occupancies. This Standard also includes information on fittings and other applicable accessories necessary for a quality installation of these raceways.

This document is intended to enhance electrical safety by aiding the installer in meeting the “neat and workmanlike” requirements in the NEC, reducing future repair needs, providing for future expansion to avoid electrical overload, creating an installation which will protect the wire conductors from mechanical abuse, and providing electrical continuity of the raceway system.

1.2 Products and Applications Not Included

This standard does not apply to:

- RMC manufactured from aluminum, stainless steel, red brass or other metals
- IMC manufactured from aluminum or stainless steel
- EMT manufactured from aluminum or stainless steel
- Special occupancies such as hazardous (classified) locations

1.3 Regulatory and Other Requirements

All information in this publication is intended to conform to the *National Electrical Code* (ANSI/NFPA 70). Installers shall follow the NEC, applicable state and local codes, manufacturer instructions, and contract documents when installing steel conduits (RMC, IMC, EMT), including steel conduits with a supplementary PVC coating.

Only qualified persons as defined in the National Electrical Code familiar with the construction and installation of steel conduits (RMC, IMC, EMT) shall perform the technical work described in this publication. Administrative functions such as receiving, handling, and storing of electrical equipment and components and other tasks shall be performed under the supervision of a qualified person. All work shall be performed in accordance with NFPA 70E, *Standard for Electrical Safety in the Workplace*.

General requirements for installing electrical products and systems are described in NECA 1, *Standard Practices for Good Workmanship in Electrical Construction* (ANSI). Other NEIS™ provide additional guidance for installing particular types of electrical products and systems. A complete list of NEIS is provided in Annex C.

1.4 Mandatory Requirements, Permissive Requirements, Quality and Performance Recommendations, Explanatory Material, and Informative Annexes

Mandatory requirements in manufacturer instructions, Codes or other mandatory Standards that may or may not be adopted into law, are those that identify actions that are specifically required or prohibited and are characterized by the use of the

terms “must” or “must not,” “shall” or “shall not,” or “may not,” or “are not permitted,” or “are required,” or by the use of positive phrasing of mandatory requirements. Examples of mandatory requirements may equally take the form of, “equipment must be protected . . .,” “equipment shall be protected . . .,” or “protect equipment . . .,” with the latter interpreted (understood) as “(it is necessary to) protect equipment . . .”

Permissive requirements of manufacturer instructions, Codes or other mandatory Standards that may or may not be adopted into law, are those that identify actions that are allowed but not required, or are normally used to describe options or alternative means and methods, and are characterized in this Standard by the use of the terms “may,” or “are permitted,” or “are not required.”

Quality and performance recommendations identify actions that are recommended or not recommended to improve the overall quality or performance of the installation and are characterized by the use of the terms “should” or “should not.”

Explanatory material, such as references to other Codes, Standards, documents, references to related sections of this Standard, information related to another Code, Standard, or document, and supplemental application and design information and data, is included throughout this Standard to expand the understanding of mandatory requirements, permissive requirements, and quality and performance recommendations. Such explanatory material is included for information only, and is identified by the use of the term “NOTE,” or by the use of italicized text.

Non-mandatory information and other reference standards or documents relative to the application and use of materials, equipment, and systems covered by this Standard are provided in informative annexes. Informative annexes are not part of the enforceable requirements of this Standard, but are included for information purposes only.