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NECA 202-2013

Standard for

Installing and Maintaining Industrial Heat Tracing Systems

AN AMERICAN NATIONAL STANDARD



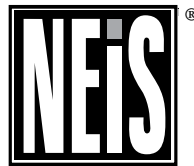
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National Electrical Contractors Association

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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:

Industrial heat tracing systems shall be installed in accordance with NECA 202-2013, *Standard for Installing and Maintaining Industrial Heat Tracing Systems* (ANSI).

Use of *NEIS* is voluntary, and the National Electrical Contractors Association (NECA) assumes no obligation or liability to users of this publication. Existence of a standard shall not preclude any member or non member of either organization from specifying or using alternate construction methods permitted by applicable regulations.

This publication is intended to comply with the edition of the National Electrical Code® (NEC) in effect at the time of publication. 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 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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NECA 202 Standard for Installing and Maintaining Industrial Heat Tracing Systems

1. Scope

1.1 Products and Applications Included

This standard describes procedures for the installation, testing, and documentation of electrical freeze protection and process heat tracing systems. Heat tracing cable types covered by this publication include: self-regulating, constant wattage, and zone heating cables and mineral insulated (MI) heating cables (see Figures 1.1(a)-1.1(e) below and on the following page).

System components used with these types of heat tracing cables included power transformers, control panels, temperature sensors, temperature controllers, contactors, circuit breakers, enclosures, conduit, wire, and all necessary auxiliary equipment and controls.

1.2 Products and Applications Excluded

The following types of heat tracing systems are specifically excluded from this publication:

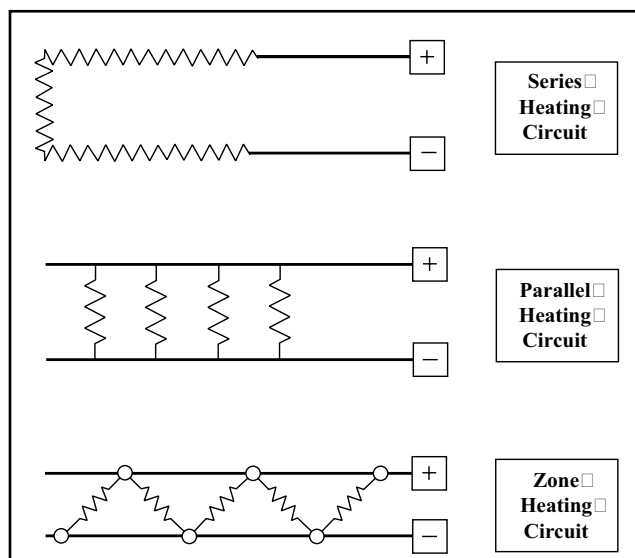


Figure 1.1(a)—Types of electrical heating

1. Skin effect heating systems
2. Impedance heating systems
3. Inductance heating systems

NOTE: ANSI/IEEE 844-2000, Recommended Practice for Electrical Impedance, Induction, and Skin Effect Heating of Pipelines and Vessels provides information about installing the above mentioned systems in list items 1, 2, and 3.

1.3 Related Construction Materials

In addition to the electrical heat tracing components described in 1.1, this publication includes related construction materials including labels, adhesive tapes, attachment wire and components, and thermal insulation and cladding.

1.4 Regulatory and Other Requirements

a) All information in this publication is intended to conform to the National Electrical Code (ANSI/NFPA 70), and, in general, the typical recommendations of electrical heat tracing manufacturers. All work shall be performed using safety-related work practices in accordance with NFPA 70E, *Standard for Electrical Safety in the Workplace*. Installers should always follow the NEC, applicable state and local codes, manufacturer's instructions when installing electrical heat tracing. Articles 427 (ordinary areas) and 500 through 516 (Classified areas) of the NEC govern the installation of electrical heat tracing systems. IEEE 515 and 515.1 are accepted industry standards that also contain useful information about installing electrical heat tracing systems.

b) Only qualified persons familiar with the construction and installation of electrical heat tracing systems should install heat-tracing systems.