



## Standard Recommended Practice

# Field-Applied Heat-Shrinkable Sleeves for Pipelines: Application, Performance, and Quality Control

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### Foreword

This NACE standard recommended practice provides the most current technology and industry practices for the use of field-applied heat-shrinkable sleeve systems. This standard is intended for use by corrosion control personnel, design engineers, project managers, purchasers, and construction engineers and managers. It is applicable to underground steel pipelines in the oil and gas gathering, distribution, and transmission industries.

This standard was prepared by NACE Task Group 248 on Heat-Shrinkable Sleeve Coatings for External Repair, Rehabilitation, and Weld Joints on Pipelines. This Task Group is administered by Specific Technology Group (STG) 03 on Protective Coatings and Linings—Immersion/Buried. It is also sponsored by STG 04 on Protective Coatings and Linings—Surface Preparation, and STG 35 on Pipelines, Tanks, and Well Casings. This standard is issued by NACE International under the auspices of STG 03.

In NACE standards, the terms *shall*, *must*, *should*, and *may* are used in accordance with the definitions of these terms in the *NACE Publications Style Manual*, 4th ed., Paragraph 7.4.1.9. *Shall* and *must* are used to state mandatory requirements. The term *should* is used to state something considered good and is recommended but is not mandatory. The term *may* is used to state something considered optional.

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### Section 1: General

1.1 This standard presents guidelines for establishing minimum requirements to ensure proper application and performance of field-applied, heat-shrinkable sleeves to the external surfaces of coated pipe. Included are methods for qualifying and controlling the quality of a heat-shrinkable sleeve, guidelines for proper application, and inspection and repair techniques to ensure its long-term performance.

1.2 This standard is applicable to coating systems used to prevent corrosion in conjunction with cathodic protection.

1.3 This standard is applicable to heat-shrinkable wrap-around or tubular-type sleeve systems.

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### Section 2: Definitions

**Applicator:** The organization responsible to the purchaser for the coating application.

**Coating Materials:** Pre-manufactured heat-shrinkable sleeves and associated accessory products, e.g., primer, filler materials, coating repair materials, etc.

**Coating Repair Materials:** Pre-manufactured patches, fillers, etc., compatible with and made from similar materials as the heat-shrinkable sleeves.

**Coating System:** The complete number and types of coats applied to a substrate in a predetermined order.

**Filler Material:** Compatible material used under a heat-shrinkable sleeve to fill voids or bridge transitions.

**Holiday:** A discontinuity in a protective coating that exposes unprotected surface to the environment.

**Inspector:** The authorized agent of the purchaser.

**Mainline Coating:** The plant-applied pipeline coating to which the heat-shrinkable sleeve girth weld joint-protection system must adhere and be compatible.

**Purchaser:** The owner company or the authorized agency that has the authority for the pipe to which the coating is to be applied.

**Repair Area:** Area of original coating system that has been damaged and is being repaired using the coating materials.

**Shelf Life:** The maximum allowable storage time for a coating material prior to its use.

**Supplier:** The manufacturer and/or distributor of the coating material.

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### Section 3: Coating Systems

3.1 The standard for heat-shrinkable sleeves required for normal conditions contains the following components:

- (a) Primer (if specified)
- (b) Pre-manufactured heat-shrinkable sleeve (wrap-around or tubular-type). The heat-shrinkable sleeve

shall consist of a heat-recoverable polyolefin backing coated with a mastic or hot-melt type adhesive layer.

- (c) Coating repair materials (if required).

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### Section 4: Coating Material

4.1 Coating Material Supplier Information

4.1.1 The coating material supplier shall furnish the following information in writing to the purchaser and/or applicator:

- (a) Directions for handling and storing the coating material;
- (b) Laboratory performance test results of the basic physical properties of the coating materials; and;