



**NACE SP0191-2008  
(formerly RP0191)  
Item No. 21048**

## **Standard Practice**

# **Application of Internal Plastic Coatings for Oilfield Tubular Goods and Accessories**

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### Foreword

This standard practice was prepared to serve as an industry guideline for the proper application of internal plastic coatings on oilfield tubular goods and accessories. This standard is intended for users, applicators, and manufacturers.

Premature failures of coatings on oilfield tubular goods and accessories often occur when the surface has not been properly prepared or the coating has not been properly applied. This standard presents proper procedures to be followed to ensure appropriate application of the coating to give the anticipated extended life to oilfield tubular goods and accessories.

This standard was originally prepared in 1991 by NACE Task Group T-1G-4, a component of Unit Committee T-1G on Protective Coatings, Elastomers, and Other Nonmetallic Materials for Oilfield Use. This standard was reviewed by T-1G and reaffirmed in 1996. It was reaffirmed in 2002 and 2008 by Specific Technology Group (STG) 33—Oil and Gas Production: Nonmetallics and Wear Coatings (Metallics). This STG is comprised of representatives from the oil and gas industry including consumers, producers, and interested individuals. This standard is issued by NACE International under the auspices of STG 33.

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*. The terms *shall* and *must* are used to state a requirement, and are considered mandatory. The term *should* is used to state something good and is recommended, but is not considered mandatory. The term *may* is used to state something considered optional.

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## NACE International Standard Practice

### Application of Internal Plastic Coatings for Oilfield Tubular Goods and Accessories

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### Section 1: General

1.1 This standard presents guidelines for the proper application of plastic coatings to the internal surfaces of oilfield tubular goods and accessories.

1.2 The function of the internal plastic coating system is to provide a protective barrier between the metal surface and the environment.

1.3 By preventing or minimizing corrosion with protective coatings, the service life of the tubular goods and

accessories is extended. Proper coating application prevents premature failure.

1.4 This standard addresses initial inspection of the tubular goods and accessories prior to coating, surface preparation, coating application, coating inspection, coupling/connection make-up, quality control, handling, storage, shipping, and marking.

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### Section 2: Definitions

**Applicator:** An individual or company that performs the plastic coating application.

**User:** An individual or company, or its authorized representative(s), who makes use of the internally plastic-coated (IPC) tubular goods and accessories.

**IPC material:** Internally plastic-coated tubular goods (tubing, casing, line pipe, or drill pipe) and accessories (couplings, fittings, valves, mandrels, packers, etc.)

**Manufacturer:** An individual or company that manufactures the plastic coating.

**Plastic coating:** A polymeric film applied to oilfield tubular goods (tubing, casing, line pipe, or drill pipe) and accessories (couplings, fittings, valves, mandrels, packers, etc.) to form a protective barrier between the metal surface and the environment to minimize corrosion, contamination, and/or deposit formation.

**Thick-film coating:** A plastic coating that has a final dry film thickness of 250 to 760  $\mu\text{m}$  (10 to 30 mil).

**Thin-film coating:** A plastic coating that has a final dry film thickness of less than 250  $\mu\text{m}$  (10 mil).

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### Section 3: Preliminary Requirements

3.1 The applicator shall furnish all labor, coating, and equipment to coat tubular goods and accessories internally in accordance with this standard.

3.2 In cases in which this standard is in conflict with the coating applicator's specifications, the applicator must review conflicts with the user prior to the job startup.

3.3 The user reserves the right to inspect all IPC material and activities at any time and to reject any work that does not meet the requirements of this standard.

3.4 The applicator shall notify the user a minimum of 72 hours prior to the startup of coating operations, unless otherwise agreed between the user and applicator.

3.5 The user shall ensure that all tubular goods and accessories supplied by the user meet applicable API,<sup>(1)</sup> ANSI,<sup>(2)</sup> ASTM,<sup>(3)</sup> and NACE standards.

3.6 The applicator shall provide the user with specifications addressing the application procedures for the coating being applied.

3.7 The user shall specify the level of holiday inspection of IPC tubular goods to be performed on all specified coated surfaces in accordance with one of the following levels:

- |            |   |
|------------|---|
| Level I:   | The tube body                                 |
| Level II:  | The tube body and pin-end chamfer             |
| Level III: | The tube body, pin-end chamfer, and couplings |

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<sup>(1)</sup>American Petroleum Institute (API), 1220 L St. NW, Washington, DC 20005-4070.

<sup>(2)</sup>American National Standards Institute (ANSI), 25 West 43rd St., 4th Floor, New York, NY 10036.

<sup>(3)</sup>ASTM International (ASTM), 100 Barr Harbor Dr., West Conshohocken, PA 19428-2959.