

Care, Handling, and Installation of Internally Plastic-Coated Oilfield Tubular Goods and Accessories

©2023 Association for Materials Protection and Performance (AMPP). All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise) without the prior written permission of AMPP.

Care, Handling, and Installation of Internally Plastic-Coated Oilfield Tubular Goods and Accessories

This AMPP standard represents a consensus of those individual members who have reviewed this document, its scope, and provisions. Its acceptance does not in any respect preclude anyone, whether he or she has adopted the standard or not, from manufacturing, marketing purchasing, or using products, processes, or procedures not in conformance with this standard. Nothing contained in this AMPP standard is to be construed as granting any right, by implication or otherwise, to manufacture, sell, or use in connection with any method, apparatus, or product covered by Letters Patent, or as indemnifying or protection anyone against liability for infringement of Letters Patent. This standard represents minimum requirements and should in no way be interpreted as a restriction on the use of better procedures or materials. Neither is this standard intended to apply in all cases relating to the subject. Unpredictable circumstances may negate the usefulness of this standard in specific instances. AMPP assumes no responsibility for the interpretation or use of this standard by other parties and accepts responsibility for only those official AMPP interpretations issued by AMPP in accordance with its governing procedures and policies which preclude the issuance of interpretation by individual volunteers.

Users of this AMPP standard are responsible for reviewing appropriate health, safety, environmental, and regulatory documents and for determining their applicability in relation to this standard prior to its use. This AMPP standard may not necessarily address all potential health and safety problems, or environmental hazards associated with the use of materials, equipment, and/or operations detailed or referred to within this standard. Users of this AMPP standard are also responsible for establishing appropriate health, safety, and environmental protection practices, in consultation with appropriate regulatory authorities, if necessary, to achieve compliance with all existing applicable regulatory requirements prior to the use of this standard.

CAUTIONARY NOTICE: AMPP standards are subject to periodic review and may be revised or withdrawn at any time in accordance with AMPP technical committee procedures. AMPP requires that action be taken to reaffirm, revise, or withdraw this standard no later than five years from the date of initial publication and subsequently from the date of each reaffirmation or revision. The user is cautioned to obtain the latest edition. Purchasers of AMPP standards may receive current information on all standards and other AMPP/NACE/SSPC publications by contacting AMPP Customer Support, 15835 Park Ten Place, Houston, Texas 77084-1145. Tel: +1-281-228-6200, email: customersupport@ampp.org.

Document History

2023-05-26: Reaffirmed by AMPP Standards Committee (SC) 04, Coatings and Linings – Buried and Immersed

2017-10-11: Revised by NACE Task Group (TG) 486, "Review of NACE Standard RP0291-2005"

2005-06-20: Revised by NACE TG 087, "Reaffirmation, Revision, or Withdrawal of STG 33 Standards and Technical Committee Reports"

1996-09-23: Reaffirmed by NACE Unit Committee T-1G on Protective Coatings, Elastomers, and Other Nonmetallic Materials for Oilfield Use

1991-08: Approved by NACE Unit Committee T-1G

AMPP values your input. To provide feedback on this standard, please contact: standards@ampp.org

NACE SP0291-2023

©2023 Association for Materials Protection and Performance (AMPP). All rights reserved.

Care, Handling, and Installation of Internally Plastic-Coated Oilfield Tubular Goods and Accessories

Foreword	4
Section 1 General	4
Section 2 Definitions	4
Section 3 Preliminary Requirements	5
Section 4 Yard Storage	5
Section 5 Transportation	6
5.1 General	6
5.2 Onshore Transportation—Trucking	6
5.3 Onshore Transportation—Rail	6
5.4 Sea Transportation	6
Section 6 Well/Job Site Storage	7
Section 7 IPC Tubular Goods Installation	7
Section 8 IPC Accessory Installation	8
Section 9 Operation	8
Section 10 Special Handling—Internally Coated Corrosion-Resistant Alloys (CRAs)	9
Section 11 Inspection/Quality Control	10
References	10

Foreword

This standard practice covers the care, handling, transportation, and installation of internally plastic-coated (IPC) oilfield tubular goods and accessories (IPC material). Some internal plastic coatings are inherently brittle or may be incompatible with various chemicals used in oil and gas production operations and therefore are susceptible to damage from poor handling procedures, well operations, and chemical attack. Coating damage (e.g., cracks, chips, and disbondment) reduces coating effectiveness and results in premature coating failure. To minimize coating damage and prolong coating life, special handling, and operating procedures must be used with IPC material during all phases of storage, transport, installation, and operation. Following the guidelines presented in this standard helps users, oil and gas producers, transportation companies, workover companies, and well-servicing companies and personnel to ensure the most cost-effective use of IPC material.

In AMPP standards, the terms *shall* and *must* are used to state requirements and are considered mandatory. The term *should* is used to state something that is recommended, but is not considered mandatory. The term *may* is used to state something considered optional.

Section 1: General

- 1.1 This standard presents guidelines for the proper care, handling, and installation of IPC oilfield tubular goods and accessories.
- 1.2 The function of the internal coating system is to form a protective barrier between the metal surface and the environment to prolong the useful life of the tubular goods and accessories.
- 1.3 If the coating is damaged during storage, handling, transportation, or installation, the protective barrier may be broken. This reduces coating performance and may result in premature failure of the coating system and the steel substrate.
- 1.4 This standard addresses specific areas of concern to help prevent or minimize damage to IPC material. Topics covered are basic parameters for bending during handling, requirements for proper yard storage, requirements for various modes of transportation, the storage of internally coated tubular goods on-site, tubular and accessory installation requirements, in-service guidelines for intervention, special CRA requirements, and spot quality testing.
- 1.5 The care and handling procedures discussed herein are limited to specific topics discussed and are limited to the parameters discussed below.

Section 2: Definitions

Applicator: An individual or company who performs the coating application.

Corrosion-Resistant Alloy (CRA): Alloy material containing chrome, nickel, and other corrosion-resistant alloying elements. See Part 3 of ASTM A590/ASME MR0175/ISO⁽¹⁾ 15156.¹

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

Plastic Coating: A polymeric material applied to oilfield tubular goods (tubing, casing, drill pipe, etc.) and oilfield accessories (fittings, valves, packers, etc.) that forms a protective barrier between the metal and the environment to minimize corrosion attack, contamination, and/or deposit formation.

Transporter: An individual or company who transports the IPC material from one location to another.

User: An individual, company, or authorized representative who makes use of the IPC material.

⁽¹⁾ International Organization for Standardization (ISO), Chemin de Blandonnet 8, CP 401, 1214 Vernier, Geneva, Switzerland, www.iso.org.