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STN	**Ropný, petrochemický a plynárenský priemysel Externá protikorózna ochrana potrubia povlakom a obkladom Časť 1: Elastomérové povlakové systémy - polychloroprénové alebo EPDM (ISO 18797-1: 2016)**	**STN EN ISO 18797-1** 45 0031

Petroleum, petrochemical and natural gas industries - External corrosion protection of risers by coatings and linings - Part 1: Elastomeric coating systems-polychloroprene or EPDM (ISO 18797-1:2016)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/18

Obsahuje: EN ISO 18797-1:2017, ISO 18797-1:2016

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 18797-1

September 2017

ICS 75.180.10

English Version

Petroleum, petrochemical and natural gas industries - External corrosion protection of risers by coatings and linings - Part 1: Elastomeric coating systems-polychloroprene or EPDM (ISO 18797-1:2016)

Industries du pétrole, de la pétrochimie et du gaz naturel - Protection de la corrosion externe des risers par revêtements et doublures - Partie 1: Systèmes de revêtement élastomère-polychloroprène ou EPDM (ISO 18797-1:2016)

Erdöl-, petrochemische und Erdgasindustrie - Äußerer Korrosionsschutz von Steilgeitungen durch Beschichtungen und Auskleidungen - Teil 1: Elastomerisches Beschichtungssystem - Polychloropren oder EPDM (ISO 18797-1:2016)

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

The text of ISO 18797-1:2016 has been prepared by Technical Committee ISO/TC 67 “Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 18797-1:2017 by Technical Committee CEN/TC 12 “Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries” the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2018, and conflicting national standards shall be withdrawn at the latest by March 2018.

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Endorsement notice

The text of ISO 18797-1:2016 has been approved by CEN as EN ISO 18797-1:2017 without any modification.

INTERNATIONAL STANDARD

ISO 18797-1

First edition
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Petroleum, petrochemical and natural gas industries — External corrosion protection of risers by coatings and linings —

Part 1: Elastomeric coating systems-polychloroprene or EPDM

Industries du pétrole, de la pétrochimie et du gaz naturel — Protection de la corrosion externe des risers par revêtements et doublures —

Partie 1: Systèmes de revêtement élastomère-polychloroprène ou EPDM

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Foreword

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The committee responsible for this document is ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*.

A list of all parts in the ISO 18797 series can be found on the ISO website.

Introduction

This document is based on GSO 2273. This document defines the minimum technical requirements for the external corrosion protection of risers by coatings and linings based on elastomeric coating systems-polychloroprene, EPDM or equivalent elastomeric coatings that are employed in the oil and gas industry and provides technical guidance for developing local standards and specifications in order to ensure compliance in coating and lining material selection and performance with contract requirements.

Users of this document need to be aware that further or differing requirements can be needed for individual applications. This document is not limiting the contractor and/or manufacturer from proposing or company from accepting alternative engineering solutions for the individual application. This can be particularly applicable where there is innovative or developing technology. Where an alternative is proposed, the specification issuer needs to identify any deviations from this document and provide details.

This document does not incorporate any form of passive fireproofing requirements or any related compatibility issues. Any requirements with regards to passive fireproofing are to be addressed separately.

INTERNATIONAL STANDARD **ISO 18797-1:2016(E)**

Petroleum, petrochemical and natural gas industries — External corrosion protection of risers by coatings and linings —

Part 1: Elastomeric coating systems-polychloroprene or EPDM

1 Scope

This document specifies the minimum requirements for materials selection, surface preparation, application, inspection, testing, qualification and acceptance criteria of external coating for steel risers pipes used in the splash zone, their field joints and clamps/guides, using an elastomeric protective coating based on polychloroprene, EPDM or equivalent. This is applicable for new construction and repair of applied pipes before installation. Maintenance requirements and field repairs are covered in ISO 18797-2.

This document also specifies the requirements for transportation, handling and storage of riser pipes before and after surface preparation and coating application.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 34 (all parts), *Rubber, vulcanized or thermoplastic — Determination of tear strength*

ISO 37, *Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties*

ISO 48, *Rubber, vulcanized or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD)*

ISO 813, *Rubber, vulcanized or thermoplastic — Determination of adhesion to rigid substrate — 90 degree peel method* [alternative to ISO 814]

ISO 814, *Rubber, vulcanized or thermoplastic — Determination of adhesion to metal — Two-plate method* [alternative to ISO 813]

ISO 815-1, *Rubber, vulcanized or thermoplastic — Determination of compression set — Part 1: At ambient or elevated temperatures*

ISO 815-2, *Rubber, vulcanized or thermoplastic — Determination of compression set — Part 2: At low temperatures*

ISO 1431-1, *Rubber, vulcanized or thermoplastic — Resistance to ozone cracking — Part 1: Static and dynamic strain testing*

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

ISO 2781, *Rubber, vulcanized or thermoplastic — Determination of density*

ISO 2812-2, *Paints and varnishes — Determination of resistance to liquids — Part 2: Water immersion method*

ISO 4649, *Rubber, vulcanized or thermoplastic — Determination of abrasion resistance using a rotating cylindrical drum device*

ISO 6502, *Rubber — Guide to the use of curemeters*

ISO 7619-1, *Rubber, vulcanized or thermoplastic — Determination of indentation hardness — Part 1: Durometer method (Shore hardness)*

ISO 8501-1:2007,[1)]*Preparation of steel substrates before application of paints and related products — Visual assessment of surface cleanliness — Part 1: Rust grades and preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings*

ISO 8502-2, *Preparation of steel substrates before application of paints and related products — Tests for the assessment of surface cleanliness — Part 2: Laboratory determination of chloride on cleaned surfaces*

ISO 8502-3, *Preparation of steel substrates before application of paints and related products — Tests for the assessment of surface cleanliness — Part 3: Assessment of dust on steel surfaces prepared for painting (pressure-sensitive tape method)*

ISO 8502-4, *Preparation of steel substrates before application of paints and related products — Tests for the assessment of surface cleanliness — Part 4: Guidance on the estimation of the probability of condensation prior to paint application*

ISO 8502-5, *Preparation of steel substrates before application of paints and related products — Tests for the assessment of surface cleanliness — Part 5: Measurement of chloride on steel surfaces prepared for painting (ion detection tube method)*

ISO 8502-6, *Preparation of steel substrates before application of paints and related products — Tests for the assessment of surface cleanliness — Part 6: Extraction of soluble contaminants for analysis — The Bresle method*

ISO 8502-9, *Preparation of steel substrate before application of paints and related products — Tests for the assessment of surface cleanliness — Part 9: Field method for the conductometric determination of water-soluble salts*

ISO 8503-2, *Preparation of steel substrates before application of paints and related products — Surface roughness characteristics of blast-cleaned steel substrates — Part 2: Method for the grading of surface profile of abrasive blast-cleaned steel — Comparator procedure*

ISO 8503-4, *Preparation of steel substrates before application of paints and related products — Surface roughness characteristics of blast-cleaned steel substrates — Part 4: Method for the calibration of ISO surface profile comparators and for the determination of surface profile — Stylus instrument procedure* [alternative to ISO 8503-5]

ISO 8503-5, *Preparation of steel substrates before application of paints and related products — Surface roughness characteristics of blast-cleaned steel substrates — Part 5: Replica tape method for the determination of the surface profile* [alternative to ISO 8503-4]

ISO 10474:2013, *Steel and steel products — Inspection documents*

ISO 11126 (all parts), *Preparation of steel substrates before application of paints and related products — Specifications for non-metallic blast-cleaning abrasives*

ISO 21457, *Petroleum, petrochemical and natural gas industries — Materials selection and corrosion control for oil and gas production systems*

ISO 21809-3, *Petroleum and natural gas industries — External coatings for buried or submerged pipelines used in pipeline transportation systems — Part 3: Field joint coatings*

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1) SSPC SP10 is equivalent to ISO 8501-1.

ISO 29601, *Paints and varnishes — Corrosion protection by protective paint systems — Assessment of porosity in a dry film* [alternative to ASTM D5162]

EN 10204:2004, *Metallic products — Types of inspection documents*

EN 12664, *Thermal performance of building materials and products — Determination of thermal resistance by means of guarded hot plate and heat flow meter methods — Dry and moist products of medium and low thermal resistance* [alternative to ISO 29601]

EN 14879-4:2007, *Organic coating systems and linings of protection of industrial apparatus and plants against corrosion caused by aggressive media — Part 4: Linings on metallic components*

API RP 5LW, *Recommended Practice for Transportation of Line Pipe on Barges and Marine Vessels* [alternative to API RP 5L1]

API RP 5L1, *Recommended Practice for Railroad Transportation of Line Pipe* [alternative to API RP 5LW]

ASTM D2084, *Standard Test Method for Rubber Property — Vulcanization Using Oscillating Disc Cure Meter*

ASTM D4285, *Standard Test Method for Indicating Oil or Water in Compressed Air*

ASTM D5162, *Standard Practice for Discontinuity (Holiday) Testing of Nonconductive Protective Coating on Metallic Substrates* [alternative to ISO 29601]

ASTM D5894, *Standard Practice for Cyclic Salt Fog/UV Exposure of Painted Metal, (Alternating Exposures in a Fog/Dry Cabinet and a UV/Condensation Cabinet)*

SSPC-AB 2, *Cleanliness of Recycled Ferrous Metallic Abrasive*

SSPC-PA 2, *Procedure for Determining Conformance to Dry Coating Thickness Requirements*

SSPC-SP 1, *Solvent Cleaning*