SLOVENSKI STANDARD
SIST EN ISO 12736:2015

01-marec-2015

Industrija za predelavo nafte in zemeljskega plina - Mokre toplotne izolacijske prevleke za naftovode, dovodne cevi, opremo in podvodne konstrukcije (ISO 12736:2014)

Petroleum and natural gas industries - Wet thermal insulation coatings for pipelines, flow lines, equipment and subsea structures (ISO 12736:2014)

Erdöl- und Erdgasindustrie - Unterwasser-Wärmedämmungsschicht für Rohrleitungen, Vorlauf, Zubehör und Unterwasserkonstruktionen (ISO 12736:2014)

Industries du pétrole et du gaz naturel - Revêtements pour isolation thermique de canalisations et équipements sous marins (ISO 12736:2014)

Ta slovenski standard je istoveten z: **EN ISO 12736:2014**

ICS:

25.220.99	Druge obdelave in prevleke	Other treatments and coatings
75.200	Oprema za skladiščenje nafte, naftnih proizvodov in zemeljskega plina	Petroleum products and natural gas handling equipment

SIST EN ISO 12736:2015 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 12736

December 2014

ICS 25.220.20; 75.180.10

English Version

Petroleum and natural gas industries - Wet thermal insulation coatings for pipelines, flow lines, equipment and subsea structures (ISO 12736:2014)

Industries du pétrole et du gaz naturel - Revêtements pour isolation thermique humide de canalisations, lignes d'écoulement et structures sous-marines (ISO 12736:2014)

Erdöl- und Erdgasindustrie- Wärmedämmschicht für Rohrleitungen, Vorlauf, Zubehör und Unterwasserkonstruktionen (ISO 12736:2014)

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN ISO 12736:2014) has been prepared by Technical Committee ISO/TC 67 "Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries" in collaboration with Technical Committee CEN/TC 12 “Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries” the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by June 2015, and conflicting national standards shall be withdrawn at the latest by June 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 12736:2014 has been approved by CEN as EN ISO 12736:2014 without any modification.

INTERNATIONAL STANDARD

ISO 12736

First edition
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Petroleum and natural gas industries — Wet thermal insulation coatings for pipelines, flow lines, equipment and subsea structures

Industries du pétrole et du gaz naturel — Revêtements pour isolation thermique humide de canalisations, lignes d'écoulement et structures sous-marines

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 2, *Pipeline transportation systems*.

Introduction

Users of this International Standard are advised that further or differing requirements can be required for individual applications.

Petroleum and natural gas industries — Wet thermal insulation coatings for pipelines, flow lines, equipment and subsea structures

1 Scope

This International Standard defines the minimum requirements for qualification, application, testing, handling, storage and transportation of new and existing wet thermal insulation systems for pipelines, flowlines, equipment and subsea structures in the petroleum and natural gas industries. The purpose of these systems is to provide external corrosion protection and thermal insulation.

This International Standard is applicable to wet thermal insulation systems submerged in seawater.

This International Standard is not applicable to thermal insulation in the annulus of a steel pipe-in-pipe system.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 62, *Plastics — Determination of water absorption*

ISO 178, *Plastics — Determination of flexural properties*

ISO 527 (all parts), *Plastics — Determination of tensile properties*

ISO 813, *Rubber, vulcanized or thermoplastic — Determination of adhesion to a rigid substrate — 90 degree peel method*

ISO 844, *Rigid cellular plastics — Determination of compression properties*

ISO 868, *Plastics and ebonite — Determination of indentation hardness by means of a durometer (Shore hardness)*

ISO 1133 (all parts), *Plastics — Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics*

ISO 1172:1996, *Textile-glass-reinforced plastics — Prepregs, moulding compounds and laminates — Determination of the textile-glass and mineral-filler content — Calcination methods*

ISO 1183 (all parts), *Plastics — Methods for determining the density of non-cellular plastics*

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

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

ISO 2808:2007, *Paints and varnishes — Determination of film thickness*

ISO 2811-1, *Paints and varnishes — Determination of density — Part 1: Pyknometer method*

ISO 2884 (all parts), *Paints and varnishes — Determination of viscosity using rotary viscometers*

ISO 3104, *Petroleum products — Transparent and opaque liquids — Determination of kinematic viscosity and calculation of dynamic viscosity*

ISO 3219, *Plastics — Polymers/resins in the liquid state or as emulsions or dispersions — Determination of viscosity using a rotational viscometer with defined shear rate*

ISO 4590, *Rigid cellular plastics — Determination of the volume percentage of open cells and of closed cells*

ISO 4624, *Paint and varnishes — Pull-off test for adhesion*

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

ISO 4897, *Cellular plastics — Determination of the coefficient of linear thermal expansion of rigid materials at sub-ambient temperatures*

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 7822:1990, *Textile glass reinforced plastics — Determination of void content — Loss on ignition, mechanical disintegration and statistical counting methods*

ISO 8301, *Thermal insulation — Determination of steady-state thermal resistance and related properties — Heat flow meter apparatus*

ISO 8501-1, *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 8502-3, *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 8503-1, *Preparation of steel substrates before application of paints and related products — Surface roughness characteristics of blast-cleaned steel substrates — Part 1: Specifications and definitions for ISO surface profile comparators for the assessment of abrasive blast-cleaned surfaces*

ISO 11357 (all parts), *Plastics — Differential scanning calorimetry (DSC)*

ISO 14896, *Plastics — Polyurethane raw materials — Determination of isocyanate content*

ISO 15711, *Paints and varnishes — Determination of resistance to cathodic disbonding of coatings exposed to sea water*

ISO 21809-1:2011, *Petroleum and natural gas industries — External coatings for buried or submerged pipelines used in pipeline transportation systems — Part 1: Polyolefin coatings (3-layer PE and 3-layer PP)*

ISO 21809-3:2008, *Petroleum and natural gas industries — External coatings for buried or submerged pipelines used in pipeline transportation systems — Part 3: Field joint coatings*

EN 253, *District heating pipes — Preinsulated bonded pipe systems for directly buried hot water networks — Pipe assembly of steel service pipe*

ASTM D4060, *Standard test method for abrasion resistance of organic coatings by the taber abraser*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
applicator
company which undertakes the coating application in accordance with the provisions of this International Standard

3.2
certificate of analysis
batch certificate issued by the manufacturer

Note 1 to entry: It is a document that contains the results of tests performed by the manufacturer.

3.3
conformity certificate
certificate of conformity issued by the manufacturer

3.4
cool down time
time taken for a fluid contained within a pipeline to reach a pre-determined temperature from specific start temperatures (internal and external) when fluid flow is stopped

3.5
cutback
uncoated area defined in terms of length at the ends of each pipe which is required to prevent damage to the coating system when the pipe sections are welded together

3.6
end of life
condition of parameter of interest at the end of the service life

3.7
end user
company that owns and/or operates the production system

3.8
equipment
components other than pipelines and flowlines through which fluid flows from the well to the processing facility

EXAMPLE Valve, manifold, christmas tree.

3.9
field joint
uncoated area that results when two pipe sections, or a pipe section and a fitting with coating cutbacks, are assembled by welding

3.10
field joint coating
coating applied after two pipe sections with coating cutbacks have been assembled, by welding, in the field or a fabrication site

3.11
field joint designer
company that proposes the field joint system for qualification in accordance with this International Standard

3.12
flowline
pipe that transfers fluid from an oil or gas well to the riser foot of a processing facility