SIST

SLOVENSKI STANDARD
SIST EN ISO 23936-1:2009

01-junij-2009

Petrokemiļ na industrija ter industrija za predelavo nafte in zemeljskega plina - Nekovinski materiali v stiku z mediji v povezavi s proizvodnjo nafte in plina - 1. del: Plastomeri (ISO 23936-1:2009)

Petroleum, petrochemical and natural gas industries - Nonmetallic materials in contact with media related to oil and gas production - Part 1: Thermoplastics (ISO 23936-1:2009)

Erdöl-, petrochemische und Erdgasindustrie - Nichtmetallische Werkstoffe mit Medienkontakt bei der Ölund Gasproduktion - Teil 1: Thermoplaste (ISO 23936-1:2009)

Industries du pétrole, de la pétrochimie et du gaz naturel - Matériaux non-métalliques en contact avec les fluides relatifs à la production d'huile et de gaz - Partie 1: Matières thermoplastiques (ISO 23936-1:2009)

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75.180.01	Oprema za industrijo nafte in zemeljskega plina na splošno	Equipment for petroleum and natural gas industries in general

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EUROPEAN STANDARD

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EUROPÄISCHE NORM

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Petroleum, petrochemical and natural gas industries - Non-metallic materials in contact with media related to oil and gas production - Part 1: Thermoplastics (ISO 23936-1:2009)

Industries du pétrole, de la pétrochimie et du gaz naturel - Matériaux non-métalliques en contact avec les fluides relatifs à la production d'huile et de gaz - Partie 1: Matières thermoplastiques (ISO 23936-1:2009)

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN ISO 23936-1:2009) has been prepared by Technical Committee ISO/TC 67 "Materials, equipment and offshore structures for petroleum 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of an identical text or by endorsement, at the latest by October 2009, and conflicting national standards shall be withdrawn at the latest by October 2009.

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Endorsement notice

The text of ISO 23936-1:2009 has been approved by CEN as a EN ISO 23936-1:2009 without any modification.

INTERNATIONAL STANDARD

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Petroleum, petrochemical and natural gas industries — Non-metallic materials in contact with media related to oil and gas production —

Part 1: Thermoplastics

Industries du pétrole, de la pétrochimie et du gaz naturel — Matériaux non-métalliques en contact avec les fluides relatifs à la production d'huile et de gaz —

Partie 1: Matières thermoplastiques

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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.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 23936-1 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*.

ISO 23936 consists of the following parts, under the general title *Petroleum, petrochemical and natural gas industries — Non-metallic materials in contact with media related to oil and gas production*:

— *Part 1: Thermoplastics*

Elastomers, thermosets, fibre-reinforced composites, and other non-metallic materials are to form the subjects of future parts 2, 3, 4 and 5.

Introduction

Non-metallic materials are used in the petroleum and natural gas industries for pipelines, piping, liners, seals, gaskets and washers, among others. Specifically, the use of piping and liners will considerably increase in the future. The purpose of ISO 23936 is to establish requirements and guidelines for systematic and effective planning, for the reliable use of non-metallic materials to achieve cost effective technical solutions, taking into account possible constraints due to safety and/or environmental issues.

ISO 23936 will be of benefit to a broad industry group ranging from operators and suppliers to engineers and authorities. It covers relevant generic types of non-metallic material (thermoplastics, elastomers, thermosetting plastics) and includes the widest range of existing technical experience. This is particularly important because the subject has not been summarized before in a technical standard. Coatings are excluded from the scope of ISO 23936.

ISO 23936 was initiated during work on ISO 15156-1, ISO 15156-2 and ISO 15156-3, which give the requirements and recommendations for the selection and qualification of low-alloy steels, corrosion-resistant alloys and other alloys for service in equipment used in environments containing H_2S in oil and natural gas production and natural gas treatment plants, where failure of such materials could pose a risk to the health and safety of the public and personnel or to the environment. A fourth part of ISO 15156 was originally envisaged to cover, likewise, the selection and qualification of non-metallic materials in the same environment. However, at a later stage it was decided that due to the differences in the corrosion mechanisms of metallic and non-metallic materials it would be too limiting to solely consider hydrogen sulfide as the corrosive component for non-metallic materials, because in oil and gas production services other systems parameters must also be considered as being corrosive and deteriorating for non-metallic materials.

It was therefore decided to produce a stand-alone International Standard, covering all systems parameters that are considered relevant in the petroleum and natural gas industries to the avoidance of corrosion damages to non-metallic equipment. ISO 23936 supplements, but does not replace, the materials requirements of the appropriate design codes, standards or regulations.

ISO 23936 applies to the qualification and selection of materials for equipment designed and constructed using conventional design criteria for technical application of non-metallic materials. Designs utilizing other criteria are excluded from its scope. ISO 23936 is not necessarily suitable for application to equipment used in refining or downstream processes and equipment.

