

# SVENSK STANDARD

## SS-EN ISO 16961:2015



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**Petroleum-, petrokemiska- och naturgasindustrier – Invändig beläggning och foder av lagringsstältankar (ISO 16961:2015)**

**Petroleum, petrochemical and natural gas industries – Internal coating and lining of steel storage tanks (ISO 16961:2015)**

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EUROPEAN STANDARD

**EN ISO 16961**

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2015

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ICS 75.200

English Version

## Petroleum, petrochemical and natural gas industries - Internal coating and lining of steel storage tanks (ISO 16961:2015)

Industries du pétrole, de la pétrochimie et du gaz naturel -  
Revêtement de protection interne et doublure des  
réservoirs de stockage en acier (ISO 16961:2015)

Erdöl-, petrochemische und Erdgasindustrie - Innere  
Schutzbeschichtungen und Auskleidungen für überirdische  
Stahltanklager (ISO 16961:2015)

This European Standard was approved by CEN on 20 May 2015.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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



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## **European foreword**

This document (EN ISO 16961:2015) 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of an identical text or by endorsement, at the latest by February 2016, and conflicting national standards shall be withdrawn at the latest by February 2016.

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.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### **Endorsement notice**

The text of ISO 16961:2015 has been approved by CEN as EN ISO 16961:2015 without any modification.

## Introduction

This International Standard is based on GSO 2057 – 2010 (E). The objectives of this International Standard are to define minimum technical requirements for the corrosion protection by coating and lining of internal surfaces of steel storage tanks, to provide technical guidance for developing local standards and specifications, and to ensure compliance in coating and lining material selection and performance with contract requirements.

Users of this International Standard should be aware that further or differing requirements can be needed for individual applications. This International Standard is not limiting the contractor and/or manufacturer from proposing or the 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 should identify any deviations from this International Standard and provide details.

[Annexes A, B, C](#) and [D](#) of this International Standard are informative only.

# Petroleum, petrochemical and natural gas industries — Internal coating and lining of steel storage tanks

## 1 Scope

This International Standard specifies the minimum requirements for surface preparation, materials, application, inspection and testing of internal coating lining systems that are intended to be applied on internal surfaces of steel storage tanks of crude oil, hydrocarbons and water for corrosion protection.

It covers both new construction and maintenance works of tank internal coating and lining as well as the repair of defective and deteriorated systems.

This International Standard also provides the minimum requirements for shop performance testing of the coated/lined samples and the criteria for their approval.

## 2 Conformance

### 2.1 Rounding

Unless otherwise stated in this International Standard, to determine conformance with the specified requirements, observed or calculated values shall be rounded to the nearest unit in the last right-hand place of figures used in expressing the limiting value, in accordance with ISO 80000-1:2009, Annex B, Rule A.

NOTE For the purpose of this provision, the rounding method of ASTM E29-08 is equivalent to ISO 80000-1:2009, Annex B, Rule A.

### 2.2 Compliance to this International Standard

A quality system should be applied to assist compliance with the requirements of this International Standard. ISO/TS 29001 gives sector-specific guidance on quality management systems.

The applicator shall comply with all of the applicable requirements of this International Standard. It shall be permissible for the client to make any investigations necessary in order to be ensured of compliance by the applicator and to reject any material that does not comply.

## 3 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.

API RP 652, *Lining of Aboveground Petroleum Storage Tank Bottoms*

API STD 653, *Tank Inspection, Repair, Alteration and Reconstruction*

API STD 2015, *Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks*

ASTM C868-02 (2012), *Standard Test Method for Chemical Resistance of Protective Linings*

ASTM D412, *Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers — Tension*

ASTM D522, *Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings*