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Läckageövervakningssystem – Del 7: Krav samt provnings- och utvärderingsmetoder för mellanrumstrymmen, läckageövervakningsbeklädnader och -skal

Leak detection systems – Part 7: Requirements and test/assessment methods for interstitial spaces, leak detection linings and leak detection jackets

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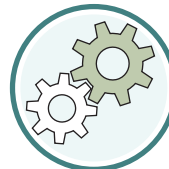
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Europastandarden EN 13160-7:2016 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 13160-7:2016.

Denna standard ersätter SS-EN 13160-7, utgåva 1.

The European Standard EN 13160-7:2016 has the status of a Swedish Standard. This document contains the official English version of EN 13160-7:2016.

This standard supersedes the Swedish Standard SS-EN 13160-7, edition 1.

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EUROPEAN STANDARD

EN 13160-7

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2016

ICS 23.020.01; 23.040.99; 29.260.20

Supersedes EN 13160-7:2003

English Version

Leak detection systems - Part 7: Requirements and test/assessment methods for interstitial spaces, leak detection linings and leak detection jackets

Systèmes de détection de fuites - Partie 7: Exigences et méthodes d'essai/d'évaluation pour les espaces interstitiels, les détecteurs de fuite des revêtements et les détecteurs de fuite d'enveloppes

Leckanzeigesysteme - Teil 7: Anforderungen und Prüf-/Bewertungsverfahren für Überwachungsräume, Leckschutzauskleidungen und Leckschutzummantelungen

This European Standard was approved by CEN on 8 April 2016.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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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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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European foreword

This document (EN 13160-7:2016) has been prepared by Technical Committee CEN/TC 393 “Equipment for storage tanks and for filling stations”, the secretariat of which is held by DIN.

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 December 2016, and conflicting national standards shall be withdrawn at the latest by March 2018.

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.

This document supersedes EN 13160-7:2003.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

According to edition 2003 the following fundamental changes are given:

- requirements and tests for permeation added;
- material properties revised;
- requirements from EN 13160-1:2003 included, which are no longer contained in EN 13160-1:2016.

This European Standard *Leak detection systems* consists of 7 parts:

- *Part 1: General principles*
- *Part 2: Requirements and test/assessment methods for pressure and vacuum systems*
- *Part 3: Requirements and test/assessment methods for liquid systems for tanks*
- *Part 4: Requirements and test/assessment methods for sensor based leak detection systems*
- *Part 5: Requirements and test/assessment methods for in-tank gauge systems and pressurized pipework systems*
- *Part 6: Sensors in monitoring wells*
- *Part 7: Requirements and test/assessment methods for interstitial spaces, leak detection linings and leak detection jackets*

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.

1 Scope

This European Standard gives requirements and the corresponding test/assessment methods applicable to leak detection lining kits and leak detection jacket kits. Leak detection lining kits and leak detection jackets kits intended to be used to create an interstitial space or leakage containment in single skin underground or above ground, non-pressurized, tanks designed for water polluting liquids. The kit has to be used only in conjunction with leak detection kits covered by EN 13160-2 to EN 13160-4.

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.

EN 228, *Automotive fuels — Unleaded petrol — Requirements and test methods*

EN 495-5, *Flexible sheets for waterproofing — Determination of foldability at low temperature — Part 5: Plastic and rubber sheets for roof waterproofing*

EN 1107-2, *Flexible sheets for waterproofing — Determination of dimensional stability — Part 2: Plastic and rubber sheets for roof waterproofing*

EN 1849-2, *Flexible sheets for waterproofing — Determination of thickness and mass per unit area — Part 2: Plastic and rubber sheets*

EN 10300:2005, *Steel tubes and fittings for onshore and offshore pipelines — Bituminous hot applied materials for external coating*

EN 13121-1, *GRP tanks and vessels for use above ground — Part 1: Raw materials — Specification conditions and acceptance conditions*

EN 13121-2:2003, *GRP tanks and vessels for use above ground — Part 2: Composite materials — Chemical resistance*

EN 13160-1:2016, *Leak detection systems — Part 1: General principles*

EN 13160-2:2016, *Leak detection systems — Part 2: Requirements and test/assessment methods for pressure and vacuum systems*

EN 13160-3:2016, *Leak detection systems — Part 3: Requirements and test/assessment methods for liquid systems for tanks*

EN 13160-4:2016, *Leak detection systems — Part 4: Requirements and test/assessment methods for sensor based leak detection systems*

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

EN ISO 62, *Plastics — Determination of water absorption (ISO 62)*

EN ISO 75-1, *Plastics — Determination of temperature of deflection under load — Part 1: General test method (ISO 75-1)*

EN ISO 75-2, *Plastics — Determination of temperature of deflection under load — Part 2: Plastics and ebonite (ISO 75-2)*

EN ISO 75-3, *Plastics — Determination of temperature of deflection under load — Part 3: High-strength thermosetting laminates and long-fibre-reinforced plastics (ISO 75-3)*

EN ISO 175, *Plastics — Methods of test for the determination of the effects of immersion in liquid chemicals (ISO 175)*

EN ISO 178, *Plastics — Determination of flexural properties (ISO 178)*

EN ISO 179-1, *Plastics — Determination of Charpy impact properties — Part 1: Non-instrumented impact test (ISO 179-1)*

EN ISO 179-2, *Plastics — Determination of Charpy impact properties — Part 2: Instrumented impact test (ISO 179-2)*

EN ISO 527-1, *Plastics — Determination of tensile properties — Part 1: General principles (ISO 527-1)*

EN ISO 527-3, *Plastics — Determination of tensile properties — Part 3: Test conditions for films and sheets (ISO 527-3)*

EN ISO 604, *Plastics — Determination of compressive properties (ISO 604)*

EN ISO 1183-1, *Plastics — Methods for determining the density of non-cellular plastics — Part 1: Immersion method, liquid pycnometer method and titration method (ISO 1183-1)*

EN ISO 24345, *Resilient floor coverings — Determination of peel resistance (ISO 24345)*

ISO 2528, *Sheet materials — Determination of water vapour transmission rate — Gravimetric (dish) method*

ISO 6133, *Rubber and plastics — Analysis of multi-peak traces obtained in determinations of tear strength and adhesion strength*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13160-1:2016 apply.

4 Requirements

4.1 Effectiveness of leak detection lining kits and leak detection jacket kits

4.1.1 Tightness against liquid and vapour

The integrity of the leak detection linings and leak detection jackets shall be maintained under all operating pressures.

4.1.2 Permeability of leak detection linings and leak detection jackets

The permeation shall be according to Table 1 and Table 2.

No condensation of vapour of the stored product in the interstitial space should occur.