

Lekkedetektorsüsteemid. Osa 3: Vedelikusüsteemid tsisternidele

Leak detection systems - Part 3: Liquid systems for tanks

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13160-3:2003 sisaldab Euroopa standardi EN 13160-3:2003 ingliskeelset teksti.	This Estonian standard EVS-EN 13160-3:2003 consists of the English text of the European standard EN 13160-3:2003.
Käesolev dokument on jõustatud 14.08.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.	This document is endorsed on 14.08.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard specifies the requirements for leak detection systems class II for use with double-skin tanks designed for water polluting fluids	Scope: This European Standard specifies the requirements for leak detection systems class II for use with double-skin tanks designed for water polluting fluids
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Võtmesõnad: containers, I, leak detectors, liquids dangerous to water, pipelines, pressure vessels, sample surveys, specification (approval), specifications, surveillance (approval), tank installations, tanks, tanks (containers), test equipment, water- polluting substances

ICS 23.020.01; 23.040.99; 29.060.20

English version

Leak detection systems - Part 3: Liquid systems for tanks

Systèmes indicateurs de fuites - Partie 3: Systèmes à
liquide pour des citernes

Leckanzeigesysteme - Teil 3: Flüssigkeitssysteme für
Tanks

This European Standard was approved by CEN on 10 March 2003.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



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Contents

	page
Foreword.....	3
1 Scope	3
2 Normative references	3
3 Terms and definitions.....	4
4 General.....	4
5 Interstitial space.....	4
6 Leak detector for liquid systems.....	4
6.1 Leak detector liquid tanks.....	4
6.2 Leak detection liquids	5
6.3 Liquid sensors.....	6
6.4 Connection lines between leak detectors liquid tanks and interstitial space	6
7 Type test	7
7.1 Test of components.....	7
7.2 Test equipment	7
7.3 Function test.....	7
7.4 Type test of leak detection liquids for use in class II leak detection systems	9
8 Marking	10
Annex A (normative) Test of the fungicidal properties of leak detection liquids.....	11
A.1 Test equipment	11
A.2 Test method.....	11
A.3 Test results	11
A.4 Evaluation of the test result.....	12
Annex B (normative) Test of the compatibility of leak detection liquids with metals.....	13
B.1 Test equipment	13
B.2 Test specimen	13
B.3 Preparation of the test liquid	14
B.4 Test method.....	14
B.5 Test results	15
Bibliography	17

Foreword

This document (EN 13160-3:2003) has been prepared by Technical Committee CEN /TC 221, "Shop fabricated metallic tanks and equipment for storage tanks and for service 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 November 2003, and conflicting national standards shall be withdrawn at the latest by November 2003.

This European Standard consists of 7 parts:

Leak detection systems;

Part 1: General principles

Part 2: Pressure and vacuum systems

Part 3: Liquid systems for tanks

Part 4: Liquid and/or vapour sensor systems for use in leakage containments or interstitial spaces

Part 5: Tank gauge leak detection systems

Part 6: Sensors in monitoring wells

Part 7: General requirements and test methods for interstitial spaces, leak protecting linings and leak protecting 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies the requirements for leak detection systems – class II for use with double-skin tanks designed for water polluting fluids.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 1412, *Copper and copper alloys - European numbering system*

EN 1652, *Copper and copper alloys - Plate, sheet, strip and circles for general purposes*

EN 10027-1, *Designation systems for steel — Part 1: Steel names, principal symbols.*

EN 13160-1:2003, *Leak detection systems — Part 1: General principles.*

EN 13160-7, *Leak detection systems — Part 7: General requirements and test methods for interstitial spaces, leak protecting linings and leak protecting jackets.*

EN 50014, *Electrical apparatus for potentially explosive atmospheres — General requirements.*

EN ISO 2719, - *Determination of flash point - Pensky-Martens closed cup method (ISO 2719:2002).*

EN ISO 3104, *Petroleum products - Transparent and opaque liquids - Determination of kinematic viscosity and calculation of dynamic viscosity (ISO 3104:1994).*

EN ISO 12185, *Crude petroleum and petroleum products - Determination of density - Oscillating U-tube method (ISO 12185:1996).*

ISO 431, *Copper refinery shapes.*

ISO 3013, *Petroleum products - Determination of the freezing point of aviation fuels.*

ISO 11266, *Soil quality Guidance on laboratory testing for biodegradation of organic chemicals in soil under aerobic conditions.*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 13160-1:2003 apply.

4 General

General principles according to EN 13160-1.

Additionally the type of leak detection liquid shall be given.

Where the requirement is for low temperature performance the alternative test temperature is shown in brackets [...].

5 Interstitial space

General requirements concerning the interstitial space according to EN 13160-7.

The interstitial space shall be constructed such that the entire volume can be filled with the leak detection liquid and it shall be liquid tight.

The walls of the interstitial space shall withstand the pressure due to the head of liquid in the system.

For a tank the system shall be designed so that there are no connections to the inner tank through the interstitial space below the maximum filling level.

Access into the interstitial space of tanks shall only be allowed through the outer skin above the maximum filling level.

6 Leak detector for liquid systems

6.1 Leak detector liquid tanks

The leak detector liquid tanks - being expansion tanks - shall have a useable volume of:

- at least 1 l/100 l of leak detector liquid in the interstitial space of tanks with at least 0,3 m earth cover;