



SLOVENSKI STANDARD
SIST EN 13317:2003+A1:2007
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Nadomešča:
SIST EN 13317:2003

Cisterne za prevoz nevarnega blaga - Oprema za obratovanje cistern - Sklop pokrova vstopne odprtine

Tanks for transport of dangerous goods - Service equipment for tanks - Manhole cover assembly

Tanks für die Beförderung gefährlicher Güter - Bedienungsausrüstung von Tanks - Baugruppe Deckel für Einsteigeöffnungen

Citernes destinées au transport de matières dangereuses - Équipements de service pour citernes - Couverture de trou d'homme

Ta slovenski standard je istoveten z: EN 13317:2002+A1:2006

ICS:

13.300	Varstvo pred nevarnimi izdelki	Protection against dangerous goods
23.020.20	Posode in vsebniki, montirani na vozila	Vessels and containers mounted on vehicles

SIST EN 13317:2003+A1:2007 en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 13317:2002+A1

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ICS 13.300; 23.020.10; 23.020.20

English Version

Tanks for transport of dangerous goods - Service equipment for tanks - Manhole cover assembly

Citernes destinées au transport de matières dangereuses -
Équipements de service pour citernes - Couverture de trou
d'homme

Tanks für die Beförderung gefährlicher Güter -
Bedienungsausrüstung von Tanks - Baugruppe Deckel für
Einsteigeöffnungen

This European Standard was approved by CEN on 4 October 2006.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

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

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Foreword

This document (EN 13317:2002+A1:2006) has been prepared by Technical Committee CEN /TC 296, "Tanks for transport of dangerous goods", 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 May 2007 and conflicting national standards shall be withdrawn at the latest by May 2007.

This document includes Amendment 1, approved by CEN on 2006-10-04.

This document supersedes EN 13317:2002.

The start and finish of text introduced or altered by amendment is indicated in the text by tags $\boxed{A_1}$ $\boxed{A_1}$.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports the objectives of the framework Directives on Transport of Dangerous Goods.

This European Standard has been submitted for reference into the RID and/or in the technical annexes of the ADR. Therefore in this context the standards listed in the normative references and covering basic requirements of the RID/ADR not addressed within the present standard are normative only when the standards themselves are referred to in the RID and/or in the technical annexes of the ADR.

This European Standard forms part of a coherent standards programme comprising the following standards:

Tanks for transport of dangerous goods - Service equipment for tanks
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EN 13081, *Vapour collection* $\boxed{A_1}$ ~~deleted text~~ $\boxed{A_1}$ $\boxed{A_1}$ *adaptor* $\boxed{A_1}$ *and coupler*.

EN 13082, *Vapour transfer valve*.

EN 13083, $\boxed{A_1}$ ~~deleted text~~ $\boxed{A_1}$ $\boxed{A_1}$ *Adaptor* $\boxed{A_1}$ *for bottom loading and unloading*.

$\boxed{A_1}$ ~~deleted text~~ $\boxed{A_1}$ EN 13308, *Non-pressure balanced footvalve*.

EN 13314, *Fill hole cover*.

EN 13315, *Gravity discharge coupler*.

$\boxed{A_1}$ ~~deleted text~~ $\boxed{A_1}$ EN 13316, *Pressure balanced footvalve*.

EN 13317, *Manhole cover assembly*.

$\boxed{A_1}$ ~~deleted text~~ $\boxed{A_1}$ $\boxed{A_1}$ EN 14595 $\boxed{A_1}$, *Pressure and vacuum breather vent*.

$\boxed{A_1}$ ~~deleted text~~ $\boxed{A_1}$ $\boxed{A_1}$ EN 14596 $\boxed{A_1}$ *Emergency pressure relief valve*.

Annexes A and B are both normative.

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

EN 13317:2002+A1:2006 (E)**Introduction**

The manhole cover assembly, the subject of this standard, seals the manhole which gives access to the inside of the tank compartment for manufacturing, cleaning, and inspection, and forms an integral part of a loading, unloading or venting function.

NOTE Cover plates used to seal manholes are not the subject of this standard.

The manhole cover assembly, which comprises the manhole cover and gaskets and may include devices to secure it to the tank shell neckring, may also provide the mounting points for equipment such as:

- fill hole cover;
- pressure limiting device(s);
- level detection equipment;
- vapour transfer valve;
- pressure and vacuum breather vent.

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1 Scope

This European Standard covers the manhole cover assembly and specifies the performance requirements, dimensions and tests necessary to verify the compliance of the equipment to this standard.

The equipment specified by this standard is suitable for use with liquid petroleum products and other dangerous substances of Class 3 of ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road – (flammable liquids) which have a vapour pressure not exceeding 110 kPa at 50 °C including petrol, and which have no-sub-classification as toxic or corrosive.

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).

A1 deleted text **A1**

A1 EN 12266-1:2003, *Industrial valves - Testing of valves - Part 1: Pressure tests, test procedures and acceptance criteria - Mandatory requirements* **A1**

EN 12266-2, *Industrial valves - Testing of valves - Part 2: Tests, test procedures and acceptance criteria. - Supplementary requirements.*

A1 deleted text **A1**

A1 EN 13094:2004, *Tanks for the transport of dangerous goods - Metallic tanks with a working pressure not exceeding 0,5 bar - Design and construction.* **A1**

A1 deleted text **A1**

A1 EN 14025, *Tanks for the transport of dangerous goods - Metallic pressure tanks - Design and construction* **A1**

ISO 2859-1, *Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection.*

3 Terms and definitions

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

3.1

manhole

opening in a tank to allow internal inspection by a person passing through

3.2

manhole cover

A1 deleted text **A1** cover of the manhole which forms an integral part of a loading, unloading or venting function and which may include auxiliary equipment such as vapour transfer valve, emergency pressure relief valve and sensors

3.3

manhole cover neckring

A1 deleted text **A1** shell ring permanently joined to the tank in accordance with **A1** deleted text **A1** **A1** EN 13094 **A1** or **A1** deleted text **A1** **A1** EN 14025 **A1**, that provides the attachment point for the manhole cover

EN 13317:2002+A1:2006 (E)**3.4****fill hole cover**

operating device on top of a transportable tank to allow the opening and closing of the fill hole

3.5**manhole cover gasket**

~~device~~ device which ensures the seal between manhole cover neckring and the manhole cover

3.6**maximum allowable working pressure (MAWP)**

~~maximum pressure to which the equipment is designed to operate~~

3.7**cover plate**

~~plate which does not form an integral part of a loading, unloading or venting function and is used to provide a leak-tight cover for a manhole~~

4 Functions

The manhole cover assembly seals the manhole that gives access to the inside of the tank or compartment.

The manhole cover assembly may provide aperture(s) to allow the installation of other equipment.

5 Design characteristics

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5.1 Leak tightness

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5.1.1 Pressure tightness

When closed, the manhole cover assembly shall be designed to be vapour and liquid tight in any orientation, at any positive or negative pressure within the maximum allowable working pressure range of the tank compartment to which it shall be fitted.

5.1.2 Drop test

Each type of manhole cover assembly shall be structurally capable of withstanding, without leakage or permanent deformation that would affect its structural integrity, a drop test as described in 6.3.3.

5.2 Temperature range

Unless otherwise specified, the design temperature range shall be – 20 °C to 50 °C.

Where the manhole cover assembly is subjected to more severe conditions, the design temperature range shall be extended to –40 °C or +70 °C as applicable.

5.3 Materials of construction

Metallic materials shall meet the requirements of EN 13094:2004, 5.2.

The manufacturer shall provide with the equipment a full material specification for those parts that may come into contact with the dangerous substances specified in the scope.

5.4 Dimensional characteristics

The nominal diameter of the manhole shall be 500 mm.

The critical dimensions for the mounting face attachment are specified in annex B.

The height of any part of the manhole cover assembly, including auxiliary equipment, must not exceed 150 mm above the mounting face. Examples of auxiliary equipment include:

- fill hole cover (in the closed position);
- pressure and vacuum breather vent;
- vapour transfer valve;
- emergency pressure relief valve (in open position);
- level detection equipment.

5.5 Electrical resistance

The electrical resistance between any conductive part of the manhole cover assembly which may come into contact with the dangerous substances and the manhole cover neckring shall not exceed $10^6 \Omega$.

Provision shall be made for the bonding of the manhole cover neckring to the tank such that the electrical resistance between the two shall not exceed 10Ω .

6 Tests

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6.1 General

Two classes of tests are required, production tests and type tests.

Testing methods and procedures shall comply with the requirements of A1 *deleted text* A1 A1 EN 12266-1 A1 and EN 12266-2 except as specified or amended within this standard.

6.2 Production tests

6.2.1 General

The number, frequency and sampling methods of production test samples shall not be less than those specified within ISO 2859-1, (AQL of 2,5).

Production tests shall comprise:

- seat tightness test (see A.4 of A1 *deleted text* A1 A1 EN 12266-1:2003 A1).

6.2.2 Seat tightness test

6.2.2.1 Valve classification type (for test method selection only): diaphragm valve (see Table A.3 of A1 *deleted text* A1 A1 EN 12266-1:2003 A1).

6.2.2.2 Test pressure: shall be the greater of 65 kPa or 1,3 times the MAWP of the manhole cover assembly.

6.2.2.3 Test duration: as Table A.4 of A1 *deleted text* A1 A1 EN 12266-1:2003 A1.

6.2.2.4 Acceptance criteria: rate A (see Table A.5 of A1 *deleted text* A1 A1 EN 12266-1:2003 A1).