SLOVENSKI STANDARD
SIST EN 13315:2002

01-november-2002

Cisterne za prevoz nevarnega blaga - Oprema za obratovanje cistern - Spojka za težnostno praznjenje

Tanks for transport of dangerous goods - Service equipment for tanks - Gravity discharge coupler

Tanks für die Beförderung gefährlicher Güter - Bedienungsausrüstung von Tanks - Entladekupplung für Schwerkraftabgabe

Citernes de transport de matieres dangereuses - Equipements de service pour citernes - Coupleur de vidange gravitaire

Ta slovenski standard je istoveten z: **EN 13315:2002**

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

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EUROPEAN STANDARD

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Tanks for transport of dangerous goods - Service equipment for tanks - Gravity discharge coupler

Citernes de transport de matières dangereuses - Equipements de service pour citernes - Coupleur de vidange gravitaire

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This European Standard was approved by CEN on 4 January 2002.

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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 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, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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Foreword

This document EN 13315:2002 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of an identical text or by endorsement, at the latest by November 2002, and conflicting national standards shall be withdrawn at the latest by November 2002.

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

Tanks for transport of liquid dangerous goods with vapour pressure not exceeding 110 kPa (absolute pressure) at 50 °C and petrol - Service Equipment

EN 13081, *Tanks for transport of dangerous goods - Service equipment for tanks - Vapour collection adaptor and coupler.*

EN 13082, *Tanks for transport of dangerous goods - Service equipment for tanks - Vapour transfer valve.*

EN 13083, *Tanks for transport of dangerous goods - Service equipment for tanks - Adaptor for bottom loading and unloading.*

prEN 13308, *Tanks for transport of dangerous goods – Service equipment for tanks - Non-pressure balanced footvalve.*

prEN 13314, *Tanks for transporting dangerous goods - Service equipment - Fill hole cover.*

EN 13315, *Tanks for transport of dangerous goods – Service equipment for tanks - Gravity discharge coupler.*

prEN 13316, *Tanks for transporting dangerous goods - Service equipment - Pressure balanced footvalve.*

prEN 13317, *Tanks for transporting dangerous goods - Service equipment - Manhole cover assembly*

WI 296009, *Pressure and vacuum breather vent*

WI 296010, *Emergency pressure relief valve*

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.

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, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

The gravity discharge coupler, the subject of this standard, allows the transfer of dangerous substances from a tank to the receiving storage tank by mating with the adaptor for bottom loading and unloading, and providing the means of connection to a discharge hose.

1 Scope

This European Standard applies to gravity discharge coupler and specifies the performance requirements, critical 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 and 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).

prEN 12266-1:1999, *Industrial valves – Testing of valves – Part 1: Tests, test procedures and acceptance criteria to be fulfilled by every valve.*

prEN 12266-2:1999, *Industrial valves – Testing of valves – Part 2: Supplementary tests, test procedures and acceptance criteria.*

EN 13083, *Tanks for transport of dangerous goods - Service equipment for tanks - Adaptator for bottom loading and unloading.*

ISO 2859-1, *Sampling procedures for inspection by attributes – Part 1: Sampling plans indexed by acceptable quality level (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
product sensor
device which detects the presence of liquid petroleum and whose output signal can be used to display whether liquid is present

3.2
interlock
device which can be used to initiate or prevent an action

3.3
bottom loading
term used to describe the filling of a tank through the tank's piping system which enables substances to enter the tank compartment from the bottom

3.4
adaptor (externally openable only)
adaptor which is only capable of being opened by external means

3.5
self actuating adaptor
adaptor capable of being opened by built-in and external means

3.6
maximum allowable working pressure (MAWP)
maximum pressure to which the equipment is designed to operate

4 Function

To provide the connection, without leakage, between the bottom loading and unloading adaptor (as specified in EN 13083) and the discharge hose.

5 Design characteristics

5.1 General

5.1.1 The gravity discharge coupler inlet shall be designed in such a way that it mates and clamps with the adaptor nose.

5.1.2 The gravity discharge coupler shall be configured such that leakage is prevented when in operation.

5.1.3 The gravity discharge coupler outlet shall be designed to incorporate or to be fitted with a connection mating with the discharge hose coupling.

5.1.4 The gravity discharge coupler clamping action shall permit mating of the coupler to the adaptor in any orientation about their common axis.

5.2 Pressure rating

The coupler shall be designed for a working pressure of at least 100 kPa.

5.3 Materials of construction

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

5.4 Temperature range

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

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

5.5 Dimensional characteristics

The overall size of the gravity discharge coupler, including space for the operation of any handles or controls, shall permit the operation of adjacent couplers connected to adjacent adaptors spaced at, a minimum of, 250 mm centres.

5.6 Electrical resistance

The electrical resistance between any conductive part of the coupler which can come into contact with the dangerous substances and the main body of the coupler shall not exceed 10^6 Ω.

The design of the coupler shall be such as to ensure that when in operation, the electrical resistance across the coupler, measured between the adaptor and discharge hose, shall not exceed 10 Ω.

6 Optional features

6.1 Visual and flow controls

The gravity discharge coupler may incorporate sight glass and/or flow indicator.

6.2 Adaptor actuation

The gravity discharge coupler may be provided with a means of actuating the adaptor to which it is mated. The open and closed position shall be indicated.

6.3 Interlock operation

The gravity discharge coupler may, when mated with the adaptor, operate the interlock controls if fitted.

7 Tests

7.1 General

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

Testing methods and procedures shall comply with the requirements of prEN 12266-1 and prEN 12266-2 except as specified or amended within this standard.

7.2 Production tests

7.2.1 General

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

Production tests shall comprise:

— shell tightness test (see A.3 of prEN 12266-1:1999);

— operability test (see B.1 of prEN 12266-2:1999).

7.2.2 Shell tightness test

7.2.2.1 Test pressure : 150 kPa or 1,5 times equipment's MAWP, whichever is the highest.

7.2.2.2 Test duration : As Table A.2 of prEN 12266-1:1999.

7.2.2.3 Acceptance criteria : In accordance with A.3.4 of prEN 12266-1:1999.

7.2.3 Operability test

7.2.3.1 Test scope : To confirm the ability of the discharge coupler to clamp and un-clamp to the specified adaptor nose.

7.2.3.2 Test method : In accordance with B.1 of prEN 12266-2:1999.

7.2.4 Test results

The test results shall be recorded and maintained in accordance with the manufacturer's procedures.