SLOVENSKI STANDARD
SIST EN 14596:2018

01-november-2018

Nadomešča:
SIST EN 14596:2005

Cisterne za prevoz nevarnega blaga - Oprema za obratovanje cistern - Ventil za razbremenitev tlaka v sili

Tanks for transport of dangerous goods - Service equipment for tanks - Emergency pressure relief valve

Tanks für die Beförderung gefährlicher Güter - Bedienungsausrüstung von Tanks - Notentlastungsventil

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Citernes destinées au transport de matières dangereuses - Equipements de service pour citernes - Clapet de surpression accidentelle

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Ta slovenski standard je istoveten z: **EN 14596:2018**

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
23.060.40	Tlačni regulatorji	Pressure regulators

SIST EN 14596:2018 **en,fr,de**

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 14596

August 2018

ICS 13.300; 23.020.20; 23.060.40

Supersedes EN 14596:2005

English Version

Tanks for transport of dangerous goods - Service equipment for tanks - Emergency pressure relief valve

Citernes destinées au transport de matières dangereuses - Équipements de service pour citernes - Clapet de surpression accidentelle

Tanks für die Beförderung gefährlicher Güter - Bedienungsausrüstung von Tanks - Notentlastungsventil

This European Standard was approved by CEN on 23 April 2018.

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

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European foreword

This document (EN 14596:2018) 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 February 2019, and conflicting national standards shall be withdrawn at the latest by February 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 14596:2005.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This edition of EN 14596 has the following significant changes from the earlier standard:

— Introduction and relieving pressure changed to reflect the change in ADR tank classification from low pressure tanks to gravity discharge tanks;

— a note regarding weather protection;

— a vapour venting performance test has been added;

— the keeping period for test results clarified;

— drop test rig, (Annex A), dimensions of sand boxes improved;

— venting capacity table moved to new annex (Annex B) and made informative.

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This document forms part of a coherent standards programme (i.e. Tanks for transport of liquid dangerous goods with vapour pressure not exceeding 110 kPa (absolute pressure) at 50° C and petrol - Service equipment).

This standards programme comprises the following standards:

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.*

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

EN 13314, *Tanks for transport of dangerous goods - Service equipment for tanks - Fill hole cover.*

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

EN 13316, *Tanks for transport of dangerous goods - Service equipment for tanks - Pressure balanced footvalve*.

EN 13317, *Tanks for transport of dangerous goods - Service equipment for tanks - Manhole cover assembly*.

EN 14595, *Tanks for transport of dangerous goods - Service equipment – Breather device.*

EN 14596, *Tanks for transport of dangerous goods - Service equipment for tanks - Emergency pressure relief valve*

EN 16249, *Tanks for transport of dangerous goods – Service equipment – Cap for the adaptor for bottom loading and unloading*

EN 16257, *Tanks for transport of dangerous goods – Service equipment – Footvalve sizes other than 100 mm dia. (nom)*

EN 16522, *Tanks for transport of dangerous goods – Service equipment for tanks – Flame arresters for breather devices*

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

An emergency pressure relief valve allows venting from a tank compartment during excess pressure.

The emergency pressure relief valve may, in addition, perform the closing and opening functions of a fill hole cover, as specified in EN 13314 [1].

The emergency pressure relief valve is fitted to gravity discharge tanks and should not be considered as a pressure tank safety valve as defined in ADR [2].

The function of the emergency pressure relief valve may also be performed by the fill hole cover in accordance with EN 13314.

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1 Scope

This document covers the emergency pressure relief valve.

It specifies the performance requirements and the critical dimensions of the emergency pressure relief valve. It also specifies the tests necessary to verify the compliance of the equipment with this document.

The service equipment specified by this document is suitable for use with liquid petroleum products and other dangerous substances of Class 3 of ADR [2] 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

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12266-1:2012, *Industrial valves - Testing of metallic valves - Part 1: Pressure tests, test procedures and acceptance criteria - Mandatory requirements*

EN 12266-2:2012, *Industrial valves - Testing of metallic valves - Part 2: Tests, test procedures and acceptance criteria - Supplementary requirements*

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EN 14564, *Tanks for transport of dangerous goods - Terminology*

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

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 14564 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
relieving pressure
pressure at which the emergency pressure relief valve starts to open

4 Functions

When in any orientation, the emergency pressure relief valve shall function as follows:

— open, to relieve excess pressure within the tank compartment; and

— close, when the excess pressure has been relieved; and

— when closed, contain the substance within the tank compartment

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5 Design characteristics

5.1 Relieving pressure

The emergency pressure relief valve shall be vapour and liquid tight up to its relieving pressure.

The relieving pressure of the emergency pressure relief valve shall be specified by the manufacturer and shall exceed the pressure arising from 110 % of the sum of:

— the maximum static head of liquid which would be applied by the densest substance in the tank compartment to which the emergency pressure relief valve shall be fitted, and

— the specified relieving pressure of the breather device fitted to the same compartment.

5.2 Weather protection

The emergency pressure relief valve shall be designed, or provision made, to eliminate the accumulation of water, which could freeze and impair the operation of the valve.

If a cover is used to provide the weather protection, then the cover shall not affect the operation or performance of the valve.

5.3 Drop test

Each type of emergency pressure relief valve shall be structurally capable of withstanding, without leakage or permanent deformation that would affect its structural integrity, a drop test as described in 6.3.4.

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5.4 Vapour venting performance

The minimum vapour venting capacity of the valve shall be reached at a pressure less than the test pressure of the tank compartment to which it is attached.

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5.5 Temperature range

Unless otherwise specified, the design temperature range shall be −20 °C to +50 °C. Where the emergency pressure relief valve is subjected to more severe conditions, the design temperature range shall be extended to −40 °C or +70 °C as applicable.

5.6 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 described in Clause 1.

5.7 Dimensional characteristics

The height of any part of the emergency pressure relief valve shall not exceed 150 mm, above its mounting face, when in the fully open position.

5.8 Electrical resistance

The electrical resistance between any conductive part of the emergency pressure relief valve, which may come into contact with the dangerous substances, and the main body of the valve shall not exceed 1×10^6 Ω

Provision shall be made for bonding the main body of the valve to the tank such that the electrical resistance between the two shall not exceed 10 Ω