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Cisterne za prevoz nevarnega blaga - Terminologija

Tanks for the transport of dangerous goods - Terminology

Tanks für die Beförderung gefährlicher Güter - Begriffe

Citernes pour le transport des matières dangereuses - Terminologie

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ICS:

01.040.23	Tekočinski sistemi in sestavni deli za splošno rabo (Slovarji)	Fluid systems and components for general use (Vocabularies)
13.300	Varstvo pred nevarnimi izdelki	Protection against dangerous goods
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English Version

Tanks for transport of dangerous goods - Terminology

Citernes pour le transport des matières dangereuses -
Terminologie

Tanks für die Beförderung gefährlicher Güter - Begriffe

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 296.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European Foreword

This document (prEN 14564:2017) has been prepared by Technical Committee CEN/TC 296 “Tanks for the transport of dangerous goods”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 14564:2013.

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

This standard provides uniform terminology for technical terms which require definition in addition to regulatory definitions based in RID/ADR, and specific terms defined in other standards on tanks for transport of dangerous goods, prepared by CEN/TC 296.

Clause 3 defines general terms and Clause 4 defines specific terms.

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1 Scope

This European Standard gives the terminology for all tanks and does not cover carriage in bulk for the transport of dangerous goods. This document is part of the standards on tanks for transport of dangerous goods, prepared by CEN/TC 296 in application of the RID/ADR [2, 3]:

- Annex A gives some definitions taken from RID/ADR chapter 1.2 ; and
- Annex B gives some definitions taken from RID/ADR chapter 6.7.

NOTE Annexes A and B are based on the 2017 edition of RID/ADR which are updated every two years. This includes the potential of temporary inconsistencies with these annexes.

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*

3 Terms and definitions

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

3.1

accessory

equipment mounted to the tank which is not part of the shell or service equipment or structural equipment

3.2

adaptor

closure with a particular connection profile

3.3

baffle

any non-hermetically sealed structure other than a surge plate, intended to inhibit the movement of the shell contents

3.4

breathing

automatic and normal function to control pressure and vacuum between the inside and the outside of the shell

3.5

closure

device which closes an opening of a tank

Note 1 to entry: For position of closures see Annex F.

3.6**cold forming**

forming at temperatures not less than 25 °C below the maximum permissible temperature for stress relieving, in accordance with the applicable material specifications

3.7**concave**

shape that does not conform to the criterion defining a convex shape

3.8**convex**

shape having only two points of intersection with any crossing line

3.9**cover plate**

closure of an opening of the shell which is not service equipment

3.10**design stress**

stress value used for calculation

3.11**design temperature**

temperature chosen for the design of each part of the tank

3.12**elliptical cross section**

cross section that respects the following criteria:

- the cross section of the shape is contained into a circle;
- the elliptical cross section has the same width as the circle;
- the minimum radius of curvature accepted is not less than 250 mm;
- the maximum width of the circle is 2 550 mm;
- the maximum width of the elliptical cross section is no more than the maximum allowed width of the vehicle;
- the maximum radius of curvature accepted is no more than 2 000 mm;
- the cross section of the elliptical cross section is continuously convex

3.13**end head**

part of the shell shutting off the longitudinal section

3.14**fastenings**

structural equipment used for fixing the tank on the chassis, frame or auxiliary frame

prEN 14564:2017 (E)**3.15****flame arrester/ flame trap**

device fitted to the opening of an enclosure or to the connecting pipework of a system of enclosures and whose intended function is to allow flow but prevent the transmission of flame

3.16**hydraulic pressure test**

strength test carried out with liquid (generally water)

3.17**inspector**

individual of an inspection body approved by the competent authority

3.18**leak proof**

able to contain the fluid

Note 1 to entry: See Table A.5 of EN 12266-1:2012, Rate A

3.19**nominal capacity**

maximum volume intended to be carried

3.20**partition**

hermetically sealed dividing wall between adjacent compartments in compartmented tanks

3.21**pressure balanced**

equilibrium of substance pressure on both sides of the internal stop valve

3.22**product sensor**

device which detects the presence of product in liquid phase and whose output signal can be used to display whether liquid is present

3.23**protective lining or coating**

lining or coating protecting the metallic tank material against corrosion or reaction with the substances to be transported

3.24**repair**

correction of a defect which may have impaired the safety of the tank or where equipment that communes directly with the shells content or safety device is replaced

Note 1 to entry: It does not include normal service and maintenance operations of the shell or service equipment or replacement of gaskets or service equipment to the same specification

3.26**run off pipe**

pipe connecting a footvalve to the associated external stop-valve

3.27**self-actuating adaptor**

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

3.28**self-closing (valve)**

valve held in the closed position by means of stored energy (such as a spring) which opens only by application of external force and which closes when the external force is removed

3.29**surge plate**

non-hermetically sealed wall in tanks or compartments of shells intended to reduce the effect of surge, mounted at right angles to the direction of travel, having an area of at least 70 % of the cross-sectional area of the shells where the surge plate is located

3.30**test**

technical operation that consists of the determination of one or more characteristics of a given tank and/or service equipment, process or service according to a specified procedure

3.31**venting**

function allowing passage of gas during loading and unloading

3.32**weld joint factor**

stress reduction factor applied because of the welding manufacturing process

4 Specific terms**4.1****bottom loading**

filling of a tank through the tank's piping system which enables substances to enter the tank compartments from the bottom

4.2**demountable**

any part of service equipment which is not permanently attached (welded) or demountable with a special tool

4.3**fill hole**

opening in a tank or in a manhole cover assembly to allow top filling of a tank compartment

4.4**fill hole cover**

operating device on top of a tank or part of manhole cover to enable top loading and closing the fill hole

4.5**interlock**

device which can be used to permit or prevent an action

prEN 14564:2017 (E)**4.6****load plan**

plan that identifies the different substances and volumes to be loaded into each tank compartment

4.7**manhole**

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

4.8**manhole cover plate**

plate covering the manhole which may include auxiliary equipment such as fill hole cover assembly, vapour transfer valve, sensors, etc.

4.9**neck ring**

ring joined to the shell that provides the attachment for a cover plate

4.10**overflow prevention system**

sensor or sensor circuits, interface plug/socket, overflow prevention controller and all connecting wiring and cables

4.11**plug and ball valve**

valve in which the obturator rotates about an axis at right angle to the direction of flow and, in the open position, the flow passes through the obturator

4.12**relief pressure**

pressure at which the safety valve starts to open

4.13**vapour collection manifold**

pipework system into which each vapour transfer valve from each compartment is connected and which connects to the vapour recovery adaptor

Annex A (informative)

RID/ADR 2017 definitions

A.1 battery-vehicle/battery-wagon

A vehicle/wagon containing elements which are linked to each other by a manifold and permanently fixed to a transport unit.

The following elements are considered to be elements of a battery-vehicle/wagon: cylinders, tubes, bundles of cylinders (also known as frames), pressure drums as well as tanks destined for the carriage of gases of Class 2 with a capacity of more than 450 l.

A.2 calculation pressure

Theoretical pressure at least equal to the test pressure which, according to the degree of danger exhibited by the substance being carried, may to a greater or lesser degree exceed the working pressure

It is used solely to determine the thickness of the walls of the shell, independently of any external or internal reinforcing device (See also "Discharge pressure", "Filling pressure", "Maximum working pressure (gauge pressure)" and "Test pressure").

A.3 Capacity of shell or shell compartment

For tanks, means the total inner volume of the shell or shell compartments expressed in litres or cubic metres. When it is impossible to completely fill the shell or the shell compartment because of its shape or construction, this reduced capacity shall be used for the determination of the degree of filling and for the marking of the tank.

NOTE This capacity does not include the loading pipework from the first to the 2nd closure.

A.4 Carriage in bulk

Carriage of unpackaged solids or articles in vehicles/wagons or bulk containers. The term does not apply to packaged goods nor to substances carried in tanks.

A.5 Competent authority

Authority or authorities or any other body or bodies designated as such in each State and in each specific case in accordance with domestic law.

A.6 Conformity assessment

The process of verifying the conformity of a product according to the provisions of sections 1.8.6 and 1.8.7 (of RID/ADR) related to type approval, supervision of manufacture and initial inspection and testing.

A.7 Control temperature

The maximum temperature at which the organic peroxide or the self-reactive substance can be safely carried.

A.8 Critical temperature

The temperature above which the substance cannot exist in the liquid state.

prEN 14564:2017 (E)**A.9 Dangerous goods**

Those substances and articles, the carriage of which is prohibited by RID/ADR, or authorized only under the conditions prescribed therein

A.10 Tank types**A.10.1 Demountable tank (ADR)**

A tank, other than a fixed tank, a portable tank, a tank-container or an element of a battery-vehicle or a MEGC which has a capacity of more than 450 l, is not designed for the carriage of goods without breakage of load, and normally can only be handled when it is empty

A.10.2 Demountable tank (RID)

A tank designed to fit the special apparatus of the wagon but which can only be removed from it after dismantling their means of attachment

A.11 Discharge pressure

Maximum pressure built up in the tank when it is being discharged under pressure (see also "Calculation pressure", "Filling pressure", "Maximum working pressure (gauge pressure)" and "Test pressure")

A.12 Emergency temperature

Means the temperature at which emergency procedures shall be implemented in the event of loss of temperature control

A.13 Filling pressure

Maximum pressure built up in the tank when it is being filled under pressure (see also "Calculation pressure", "Discharge pressure", "Maximum working pressure (gauge pressure)" and "Test pressure")

A.15 Fixed tank

Tank having a capacity of more than 1 000 l which is permanently attached to a vehicle or a wagon (which then becomes a tank-vehicle/tank wagon) or is an integral part of the frame of such vehicle or wagon

A.16 Flash-point

The lowest temperature of a liquid at which its vapours form a flammable mixture with air

A.17 Gas

Substance which:

- a) at 50 °C has a vapour pressure greater than 300 kPa (3 bar); or
- b) is completely gaseous at 20 °C under standard pressure of 101,3 kPa.

A.18 Hermetically closed tank

A tank intended for the carriage of liquid substances with a calculation pressure of at least 4 bar or intended for the carriage of solid substances (powdery or granular) regardless of its calculation pressure, the openings of which are hermetically closed and which:

- is not equipped with safety valves, bursting discs, other similar safety devices or vacuum valves; or