

Tanks for the transport of dangerous goods - Metallic
pressure tanks - Design and construction

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 14025:2023 sisaldab Euroopa standardi EN 14025:2023 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 20.12.2023.</p> <p>Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 14025:2023 consists of the English text of the European standard EN 14025:2023.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 20.12.2023.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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English Version

Tanks for the transport of dangerous goods - Metallic pressure tanks - Design and construction

Citernes pour le transport de matières dangereuses -
Citernes métalliques sous pression - Conception et
construction

Tanks für die Beförderung gefährlicher Güter -
Metallische Drucktanks - Auslegung und Bau

This European Standard was approved by CEN on 4 September 2023.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 14025:2023) 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 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of an identical text or by endorsement, at the latest by May 2024, and conflicting national standards shall be withdrawn at the latest by May 2024.

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 14025:2018.

This document will be submitted for reference in:

- the RID and
- the technical annexes of the ADR

NOTE These regulations take precedence over any clause of this standard. It is emphasized that RID/ADR are being revised regularly at intervals of two years which may lead to temporary non-compliances with the clauses of this document.

Compared with EN 14025:2018 the following significant changes apply:

- a) change of the Scope;
- b) Normative references were updated;
- c) references regarding RID/ADR were updated according to the drafting rules for standard candidates;
- d) 3.2 was updated and P has been replaced by p in the whole document;
- e) a paragraph regarding material characteristics was added to 4.1;
- f) Notes have been added to 5.3;
- g) a paragraph regarding coatings was added to 6.1.1;
- h) a note regarding liquefied and compressed gases was added to 6.1.2;
- i) a note was added to 6.3.3.4.2;
- j) Figure 8 and corresponding subfigures were changed;
- k) 6.3.5.2.6 has been revised;
- l) 6.3.5.2.7 has been updated;
- m) the value of the diameter of openings was changed in 6.3.5.3.3;
- n) 6.5 was updated;
- o) a new paragraph was added to 7.4.1.2;
- p) Annex A have been revised;
- q) Figure A.1 was changed according to the new calculations with the changed value of E ;

- r) the value of E was changed in A.2;
- s) B.3 was updated

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

1 Scope

This document specifies the minimum requirements for the design and construction of metallic pressure tanks for the transport of dangerous goods by road and rail and sea. This document includes requirements for openings, closures and structural equipment; it does not cover requirements of service equipment. For tanks for the transport of cryogenic liquids, EN 13530-1 and EN 13530-2 apply.

This document is applicable to liquefied gases including LPG; however for a dedicated LPG standard see EN 12493.

NOTE 1 The Design and construction of pressure tanks according to the Scope of this document are primarily subject to the requirements of RID/ADR see Subsections 6.8.2.1, 6.8.3.1 and 6.8.5, as well as Chapter 3.2, Table A, columns 12 and 13, to Chapter 4.3 and Subsection 6.8.2.4 of ADR, as relevant. For the structural equipment conforming to the requirements of RID/ADR see Subsections 6.8.2.2 and 6.8.3.2, as relevant. The definitions of RID/ADR, Subsection 1.2.1, are referred to. For portable tanks see also RID/ADR, Chapter 4.2 and Sections 6.7.2 and 6.7.3, as well as Chapter 3.2, Table A, Columns 10 and 11.

NOTE 2 This document is not applicable to gravity-discharge tanks according to RID/ADR 6.8.2.1.14 (a).

If not otherwise specified, provisions which take up the whole width of the page apply to all kind of tanks. Provisions contained in a single column apply only to:

tanks according to RID/ADR Chapter 6.8 (left-hand column);	portable tanks according to RID/ADR Chapter 6.7 (right-hand column).
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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 1591-1, *Flanges and their joints - Design rules for gasketed circular flange connections - Part 1: Calculation*

EN 12972, *Tanks for transport of dangerous goods - Testing, inspection and marking of metallic tanks*

EN 13094:2020+A1:2022, *Tanks for the transport of dangerous goods - Metallic gravity-discharge tanks - Design and construction*

EN 13445-2, *Unfired pressure vessels - Part 2: Materials*

EN 13445-3:2021, *Unfired pressure vessels - Part 3: Design*

EN 13445-4, *Unfired pressure vessels - Part 4: Fabrication*

EN 13445-8, *Unfired pressure vessels - Part 8: Additional requirements for pressure vessels of aluminium and aluminium alloys*

EN ISO 3834-1, *Quality requirements for fusion welding of metallic materials - Part 1: Criteria for the selection of the appropriate level of quality requirements (ISO 3834-1)*

EN ISO 3834-2, *Quality requirements for fusion welding of metallic materials - Part 2: Comprehensive quality requirements (ISO 3834-2)*

EN ISO 9606-1, *Qualification testing of welders - Fusion welding - Part 1: Steels (ISO 9606-1)*

EN ISO 9606-2, *Qualification test of welders - Fusion welding - Part 2: Aluminium and aluminium alloys (ISO 9606-2)*

EN ISO 14732, *Welding personnel - Qualification testing of welding operators and weld setters for mechanized and automatic welding of metallic materials (ISO 14732)*

EN ISO 15607, *Specification and qualification of welding procedures for metallic materials - General rules (ISO 15607)*

EN ISO 15609-1, *Specification and qualification of welding procedures for metallic materials - Welding procedure specification - Part 1: Arc welding (ISO 15609-1)*

EN ISO 15609-3, *Specification and qualification of welding procedures for metallic materials - Welding procedures specification - Part 3: Electron beam welding (ISO 15609-3)*

EN ISO 15609-4, *Specification and qualification of welding procedures for metallic materials - Welding procedure specification - Part 4: Laser beam welding (ISO 15609-4)*

EN ISO 15613, *Specification and qualification of welding procedures for metallic materials - Qualification based on pre-production welding test (ISO 15613)*

EN ISO 15614-1, *Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 1: Arc and gas welding of steels and arc welding of nickel and nickel alloys (ISO 15614-1)*

EN ISO 15614-2, *Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 2: Arc welding of aluminium and its alloys (ISO 15614-2:2005)*

ISO 1496-3, *Series 1 freight containers — Specification and testing — Part 3: Tank containers for liquids, gases and pressurized dry bulk*

ISO 7005-1, *Pipe flanges — Part 1: Steel flanges for industrial and general service piping systems*

ISO 9016:2022, *Destructive tests on welds in metallic materials — Impact tests — Test specimen location, notch orientation and examination*

3 Terms, definitions and symbols

3.1 Terms and definitions

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

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

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

3.1.1

pressure tank

tank as defined in the international regulations for the transport of dangerous goods by road or rail having a maximum working pressure exceeding 50 kPa (0,5 bar)