



BSI Standards Publication

Unfired pressure vessels

Part 5: Inspection and testing

This is a preview of BS EN 13445-5:2021+A1:2024. [Click here to purchase the full version from the ANSI store.](#)

National foreword

This British Standard is the UK implementation of EN 13445-5:2021+A1:2024. It supersedes BS EN 13445-5:2021, which is withdrawn.

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The UK participation in its preparation was entrusted to Technical Committee PVE/1/17, Pressure Vessels - Inspection, Testing and Acceptance Criteria.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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English Version

Unfired pressure vessels - Part 5: Inspection and testing

Réceptifs sous pression non soumis à la flamme -
Partie 5: Inspection et contrôle

Unbefeuerte Druckbehälter - Teil 5: Inspektion und
Prüfung

This European Standard was approved by CEN on 24 February 2021 and includes Amendment approved by CEN on 30 June 2024.

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European foreword

This document (EN 13445-5:2021+A1:2024) has been prepared by Technical Committee CEN/TC 54 “Unfired pressure vessels”, the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by February 2025, and conflicting national standards shall be withdrawn at the latest by February 2025.

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 includes Amendment 1, approved by CEN on 30 June 2024.

This document supersedes ^{A1} EN 13445-5:2021 ^{A1}.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ^{A1} ^{A1}.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

This new edition incorporates the Amendments which have been approved previously by CEN members, and the corrected pages up to Issue 5 without any further technical change. Annex Y provides details of significant technical changes between this European Standard and the previous edition.

^{A1} *deleted text* ^{A1}

Corrections to the standard interpretations where several options seem possible are conducted through the Migration Help Desk (MHD). Information related to the Help Desk can be found at ^{A1} <https://unm.fr/en/maintenance-agencies/maintenance-agency-en-13445/> ^{A1}. A form for submitting questions can be downloaded from the link to the MHD website. After subject experts have agreed an answer, the answer will be communicated to the questioner. Corrected pages will be given specific issue number and issued by CEN according to CEN Rules. Interpretation sheets will be posted on the website of the MHD.

A list of all parts in the EN 13445 series can be found on the CEN website.

Although these Parts may be obtained separately, it should be recognized that the Parts are inter-dependant. As such the manufacture of unfired pressure vessels requires the application of all the relevant Parts in order for the requirements of the Standard to be satisfactorily fulfilled.

According to the CEN-CENELEC Internal Regulations, the national standards organizations 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.

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1 Scope

This Part of this document specifies the inspection and testing of individual and serially produced pressure vessels made of steels in accordance with EN 13445-2:2021.

Special provisions for cyclic operation are given in Annex G of this Part.

Special provisions for vessels or vessel parts working in the creep range are given in Annex F and Annex I of this Part.

NOTE The responsibilities of parties involved in the conformity assessment procedures are given in Directive 2014/68/EU. Guidance on this can be found in CR 13445-7.

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.

CEN/TR 764-6:2012, *Pressure equipment — Part 6: Structure and content of operating instructions*

EN 1779:1999, EN 1779:1999/A1:2003, *Non-destructive testing — Leak testing — Criteria for method and technique selection*

EN 13445-1:2021, *Unfired pressure vessels — Part 1: General*

EN 13445-2:2021, *Unfired pressure vessels — Part 2: Materials*

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

EN 13445-4:2021, *Unfired pressure vessels — Part 4: Fabrication*

EN ISO 5817:2014, *Welding — Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) – Quality levels for imperfections (ISO 5817:2014)*

EN ISO 6520-1:2007, *Welding and allied processes — Classification of geometric imperfections in metallic materials — Part 1: Fusion welding (ISO 6520-1:2007)*

EN ISO 9606-1:2017, *Qualification testing of welders - Fusion welding - Part 1: Steels (ISO 9606-1:2012 including Cor 1:2012 and Cor 2:2013)*

EN ISO 9712:2022, *Non-destructive testing — Qualification and certification of NDT personnel (ISO 9712:2021)*

EN ISO 14732:2013, *Welding personnel — Qualification testing of welding operators and weld setters for mechanized and automatic welding of metallic materials (ISO 14732:2013)*

EN ISO 17635:2016, *Non-destructive testing of welds — General rules for metallic materials (ISO 17635:2016)*