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This document supersedes EN 13445-1:2002. This new edition incorporates the Amendments which have been approved previously by CEN members, and the corrected pages up to Issue 36 without any further technical change. Annex Y provides details of significant technical changes between this European Standard and the previous edition.

Amendments to this new edition may be issued from time to time and then used immediately as alternatives to rules contained herein. It is intended to deliver a new Issue of EN 13445:2009 each year, consolidating these Amendments and including other identified corrections. Issue 2 (2010-07) includes the corrected pages listed in Annex Y.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.
1 Scope

This part of this European Standard defines the terms, definitions, quantities, symbols and units that are used throughout the EN 13445. It also contains instructions on how to use the standard (Annex A) as well as an index which covers the whole standard (Annex B). This information is aimed to aid the user of the EN 13445.

This European Standard applies to unfired pressure vessels with a maximum allowable pressure greater than 0,5 bar gauge but may be used for vessels operating at lower pressures, including vacuum.

NOTE The selection, application and installation of safety related accessories intended to protect pressure vessels during operation are covered in EN 764-7.

This European Standard is not applicable to pressure vessels of the following types:
— vessels of riveted construction;
— vessels of lamellar cast iron or any other materials not included in parts 2, 6, or 8 of the standard;
— multilayered, autofrettaged or pre-stressed vessels;

This European standard may be applied to the following vessels, provided that account is taken of additional and/or alternative requirements resulting from the hazard analysis:
— transportable vessels;
— items specifically designed for nuclear use;
— pressure vessels with a risk of overheating

Other European standards apply to industrial piping (EN 13480) and to water tube and shell boilers (EN 12952 and 12953).

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)


Annex Y
(informative)

History of EN 13445-1

Y.1 Differences between EN 13445:2002 and EN 13445:2009


Significant technical changes include:

— Addition of rules covering pressure vessels and parts operating in the creep area. The design rules are covered in clause 19 of Part 3, but rules have also been added elsewhere in Parts 1-5 of the standard.

— Addition of rules for pressure vessels and parts constructed of aluminium and its alloys. This amendment is embodied in Part 8.

— Addition of rules for experimental design. These rules are contained in Annex T of Part 3.

NOTE When these rules were introduced in Amendments of EN 13445-3:2002, they were located in clause 20.

— Addition of rules for flat walls. These rules are included in clauses 20 and 21 of Part 3.

NOTE When these rules were introduced in Amendments of EN 13445-3:2002, they were located in clause 21 and 22.

— Addition of rules for increased design stresses for certain austenitic steels under certain conditions (the Alternative Route). These rules are included in subclause 6.3 of Part 3.

— Enlargement of Parts 2, 4 and 5 to accommodate pressure vessels and parts designed according to Annex B of Part 3 (DBA-Direct Route).

— Addition of two annexes of Part 1 (Using the standard and Index).

— Addition of a third set of flange design rules allowing consideration of leak rates. These rules are contained in Annex GA of Part 3.

— Addition of fatigue rules enlarging scope and materials for pressure vessels and parts made from spheroidal graphite cast iron. These rules are contained in Annex D of Part 6.

Y.2 List of corrected pages of Issue 2 (2010-07)

Pages 2, 4, 7, 37.