



BSI Standards Publication

Unfired pressure vessels

Part 102: Example of application of vertical vessel with bracket supports

National foreword

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

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English Version

**Unfired pressure vessels - Part 102: Example of application of
vertical vessel with bracket supports**Unbefeuerte Druckbehälter - Beispiel 2: Stehende Behälter
mit Tragpratzen

This Technical Report was approved by CEN on 10 February 2015. It has been drawn up by the Technical Committee CEN/TC 54.

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Contents

Page

Foreword.....	3
Introduction	4
3.1 Drawing of the vessel.....	5
3.2 Calculation model.....	6
3.3 Operating conditions.....	7
3.4 Comments on the operating conditions provided by the User.....	7
4.1 General.....	8
4.2 Is EN13445 applicable to the vessel?	8
4.3 Warning of Annex A of reference [1]	8
4.4 Prerequisites of Annex A of reference [1]	8
5.1 Permitted materials.....	10
5.2 Requirements given in 4.2 of reference [2]	11
5.3 Requirements given in 4.3 of reference [2]	11
5.4 Requirements given in 4.4 of reference [2]	11
5.5 Materials selected for the vessel example 2	12
6.1 General.....	15
6.2 Basic design.....	15
6.3 Fatigue calculations	15
6.4 Determination of test pressures of the vessel in Annex C.....	17
6.5 Determination of the deformation according to EN 13445-4 reference [4], Clause 9 in Annex C	19
6.6 Data used in example 2	19
6.7 Conditions of applicability of calculations	20
7.1 General.....	20
7.2 Material traceability	20
7.3 Manufacturing tolerances	20
7.5 Welding, as in 8 of reference [4].....	26
7.6 Manufacture and testing of welds – Production test, as in 8 of reference [4].....	26
7.7 Forming of pressure parts, as in 9 of reference [4].....	27
7.8 Post weld heat treatment (PWHT), as in 10 of reference [4].....	27
8.1 Generality	27
8.2 Non destructive testing, as in 4.3 of reference [5]	27
8.3 Determination of extent of non-destructive testing, as in 6.6.2 of reference [5].....	28
Annex A (informative) Drawing of example 2	29
Annex B (informative) Nameplate of example 2	30
Annex C (informative) Design calculation of example 2.....	31

Foreword

This document (CEN/TR 13445-102:2015) has been prepared by Technical Committee CEN/TC 54 “Unfired pressure vessels”, the secretariat of which is held by BSI.

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Introduction

Harmonized standards under Pressure Equipment Directive (97/23/EC) have been adopted over the past few years on the basis of mandate M 071. These standards give appropriate solutions for designing and building safe pressure equipment complying with the pressure equipment directives.

Although the main standards for the major product groups are now available, further action is needed to ensure a take-up by industry of these standards.

A recent public consultation on the use of EN Standards in the field of pressure equipment has shown that better knowledge of content and better usability are the more substantial aspects to encourage the use of the harmonized European standards (document CEN/PE/AN N 220).

The Pressure equipment Migration Help Desk, EN 13445/MHD, was created in August 2002 to give to the standard users a central point where raising questions and obtaining authorized answers. From the questions it received, the help desk has identified the publication of examples of application as a key issue and has developed rules of procedure for their publication as CEN deliverables (document CEN/PE/AN N 128).

Examples of application is an efficient way to help the standard user to correctly understand and apply the requirements of the standard and to be aware of the permissible deviations, possible alternatives, use of normative reference documents, etc. It can also assist training organization and software developers.

The project, in its efforts to broaden the application of the European Standards harmonized for PED, will support the actions of the European Commission in the field of safety of pressure equipment.

It will also promote the use of these European Standards on the global market.

1 Scope

This Technical Report details the design, manufacturing, inspection and testing of a steel vessel submitted to pressure cycles, using the EN 13445 series for "Unfired pressure vessels", to guide the user of these standards in sequential decision making, together with some alternative choices.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 13445-1:2009_Issue 5, *Unfired pressure vessels – Part 1: General* [1]

EN 13445-2:2009_Issue 5, *Unfired pressure vessels – Part 2: Materials* [2]

EN 13445-3:2009_Issue 5, *Unfired pressure vessels – Part 3: Design* [3]

EN 13445-4:2009_Issue 5, *Unfired pressure vessels – Part 4: Fabrication* [4]

EN 13445-5:2009_Issue 5, *Unfired pressure vessels – Part 5: Inspection and testing* [5]

EN 10028-2:2003, *Flat products made of steels for pressure purposes – Part 2: Non-alloy and alloy steels with specified elevated temperature properties* [6]

3 The vessel and its operating conditions

3.1 Drawing of the vessel

The technical drawing of the vessel and vessel details is represented in Annex A:

A note in the introduction of EN 13445-1, clearly says that "In EN 13445 the term pressure vessel includes the welded attachments up to and including the nozzle flanges, screwed or welded connections".

The briefed lay-out is given as in Figure 1.