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BSI Standards Publication

Unfired pressure vessels

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

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National foreword

This Published Document is the UK implementation of CEN/TR 13445-102:2015.

The UK participation in its preparation was entrusted to Technical Committee PVE/1, Pressure Vessels.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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English Version

Unfired pressure vessels - Part 102: Example of application of vertical vessel with bracket supports

Unbefeuerte Druckbehälter - Beispiel 2... tehende Behälter mit Trag...atze...

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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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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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 13445-3 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.