Irish Standard Recommendation
S.R. CEN/TR 13445-101:2015

Unfired pressure vessels - Example of application

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English Version

Unfired pressure vessels - Example of application

Récipients sous pression non soumis à la flamme - Partie 101 : Exemple d'application

Unbefeuerte Druckbehälter - Teil 101: Anwendungsbeispiel

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Contents

Page

Foreword

This document (CEN/TR 13445-101:2015) 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.

1 Scope

This Technical Report presents an application of EN 13445 through an example of design and fabrication of an unfired pressure vessel. Every step is described as far as possible:

— Material choice;

— Design and calculation;

— Fabrication;

— Inspection and testing;

using the following part of EN 13445:

— EN 13445-1:2009;

— EN 13445-2:2009;

— EN 13445-3:2009;

— EN 13445-4:2009;

— EN 13445-5:2009 .

As applicable, some choices for design or fabrication are made according to “the state of art” practice.

Some parts of EN 13445 are reproduced in order to show which requirements are relevant to the design and fabrication of the target vessel.

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 287-1:2004+A2:2006, *Approval testing of welders — Fusion welding — Part 1: Steels*

EN 473:2008, *Non-destructive testing — Qualification and certification of NDT personnel — General principles*

EN 764-5:2002, *Pressure Equipment — Part 5: Compliance and Inspection Documentation of Materials*

EN 1092-1:2007, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated*

EN 1418:1997, *Welding personnel — Approval testing of welding operators for fusion welding and resistance weld setters for fully mechanized and automatic welding of metallic materials*

EN 1515-3:2005, *Flanges and their joints — Bolting — Part 3: Classification of bolt materials for steel flanges, class designated*

EN 1515-4:2009, *Flanges and their joints — Bolting — Part 4: Selection of bolting for equipment subject to the Pressure Equipment Directive 97/23/EC*

EN 1759-1:2004, *Flanges and their joint — Circular flanges for pipes, valves, fittings and accessories, Class designated — Part 1: Steel flanges, NPS 1/2 to 24*