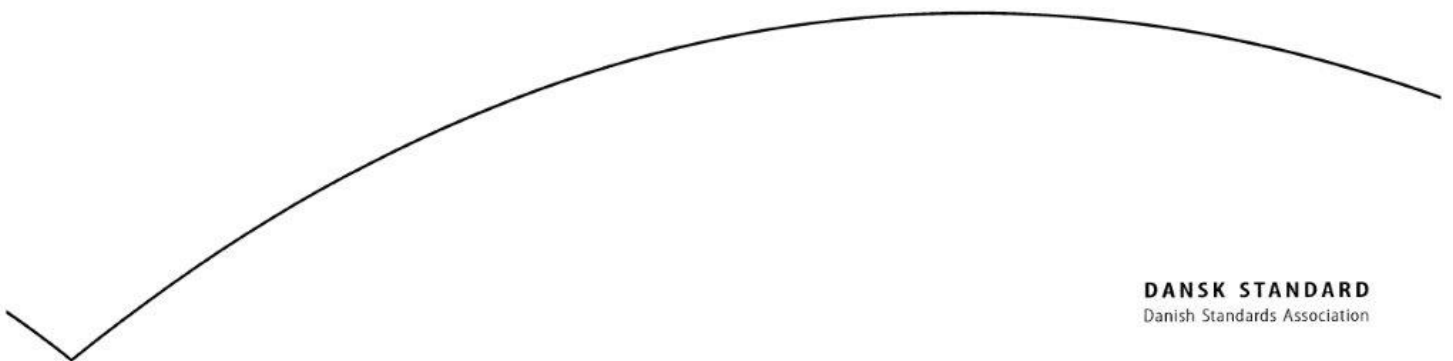


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# Ufyrede trykbeholdere – Del 3: Konstruktion

Unfired pressure vessels – Part 3: Design



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**Denne publikations overensstemmelse er:**

**IDT med: EN 13445-3:2014/A3:2017.**

**DS-publikationen er på engelsk.**

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## EUROPÄISCHE NORM

August 2017

ICS 23.020.30

English Version

## Unfired pressure vessels - Part 3: Design

Réceptifs sous pression non soumis à la flamme -  
Partie 3 : Conception

Unbefeuerte Druckbehälter - Teil 3: Konstruktion

This amendment A3 modifies the European Standard EN 13445-3:2014; it was approved by CEN on 2 July 2017.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## European foreword

This document (EN 13445-3:2014/A3:2017) 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of an identical text or by endorsement, at the latest by February 2018, and conflicting national standards shall be withdrawn at the latest by February 2018.

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 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of EN 13445-3:2014.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## 1 Modification to Clause 15

Replace Clause 15 by the following:

### 15 Pressure vessels of rectangular section

#### 15.1 Purpose

This clause specifies requirements for the design of unreinforced and reinforced pressure vessels of rectangular cross-section. For fatigue, designs shall be checked against Clause 18. Thermal loads or effects are not considered in this clause.

#### 15.2 Specific definitions

The following terms and definitions apply in addition to those in Clause 3. The governing stresses in this clause are not structural stress within the meaning of Clause 18.

##### 15.2.1

##### **membrane stress**

equivalent uniform stress through the wall of the vessel, see also C.4.4.2

##### 15.2.2

##### **bending stress**

equivalent linear distributed stress through the wall of the vessel, see also C.4.4.3

#### 15.3 Specific symbols and abbreviations

The following symbols and abbreviations apply in addition to those in Clause 4:

- $a$  is the inside corner radius;
- $A$  is the area in vessel's longitudinal direction without hole between stiffeners or between stiffener walls;
- $A_h$  is the area  $A$  reduced by hole;
- $A_{rf}$  is the required reinforcing area;
- $A_1$  is the cross-sectional area of a reinforcing member which is attached to the short side of a vessel;
- $A_2$  is the cross-sectional area of a reinforcing member which is attached to the long side of the vessel;
- $A_{w1}$  is cross sectional area of short side stiffener webs at corner;
- $A_{w2}$  is cross sectional area of long side stiffener webs at corner;
- $A'$  is the area of that part of the composite section above or below the calculation point;
- $A'_{web}$  is the area of the reinforcement web;
- $b$  is the unsupported width of a flat plate between reinforcing elements, see Figure 15.6–1;
- $b_{cw}$  is the weld throat dimension of the continuous weld;
- $b_e$  is the effective width of a plate in combination with a reinforcing member, see Figure 15.6–1;
- $b_R$  is the pitch between centrelines of reinforcing members on a vessel;
- $b_v$  is the length of side wall (either  $h$  or  $H$ );
- $b_w$  is the weld throat dimension of the intermittent weld;
- $C$  is a shape factor determined from the long and short sides of an unsupported plate between