



SLOVENSKI STANDARD
SIST EN 286-1:1998/A2:2006
01-marec-2006

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Simple unfired pressure vessels designed to contain air or nitrogen - Part 1: Pressure vessels for general purposes

Einfache unbefeuerte Druckbehälter für Luft oder Stickstoff - Teil 1: Druckbehälter für allgemeine Zwecke

iTeh STANDARD PREVIEW

Réipients a pression simples, non soumis a la flamme, destinés a contenir de l'air ou de l'azote - Partie 1: Réipients pour usage général

[SIST EN 286-1:1998/A2:2006](https://standards.iteh.ai/catalog/standards/sist/80e27a3a-8dfe-4a9d-a528-1b691d7a1cc/sist-en-286-1-1998-a2-2006)

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Ta slovenski standard je istoveten z: EN 286-1:1998/A2:2005

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ICS 23.020.30

English Version

Simple unfired pressure vessels designed to contain air or nitrogen - Part 1: Pressure vessels for general purposes

Réipients à pression simples, non soumis à la flamme,
destinés à contenir de l'air ou de l'azote - Partie 1:
Réipients pour usage général

Einfache unbefeuerte Druckbehälter für Luft oder Stickstoff
- Teil 1: Druckbehälter für allgemeine Zwecke

This amendment A2 modifies the European Standard EN 286-1:1998; it was approved by CEN on 26 August 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Foreword

This European Standard (EN 286-1:1998/A2:2005) has been prepared by Technical Committee CEN/TC 54 “Unfired pressure vessels”, the secretariat of which is held by BSI.

This Amendment to the European Standard EN 286-1:1998 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2006, and conflicting national standards shall be withdrawn at the latest by April 2006.

This amendment incorporates requirements for peaking in a new Annex H.

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

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6 Design

6.1 General

Add the following text after the final sentence:

Requirements for peaking (out-of-roundness caused by misalignment of (welded) joints or local irregularities in vessel profile) are given in Annex H.

Add annex H as follows:

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Annex H (normative)

Requirements for peaking

H.1 Local irregularities in vessel profile

Irregularities in profile (e.g. dents, buckling, flats on nozzle positions) shall be smooth and the depth shall be checked by a 20° gauge and shall not exceed the following values:

- a) 2 % of the gauge length; or
- b) 2,5 % of the gauge length provided that the length of the irregularities does not exceed one quarter of the length (with a maximum of 1 m) of the shell part between two circumferential joints.

Greater irregularities require proof by calculation or strain gauge measurement that the stresses are permissible.

H.2 Peaking on longitudinal butt welds

When irregularity in the profile occurs at the welded joint and is associated with "flats" adjacent to the weld, the irregularity in profile or (peaking) shall not exceed the values given in Tables H.1 and H.2.

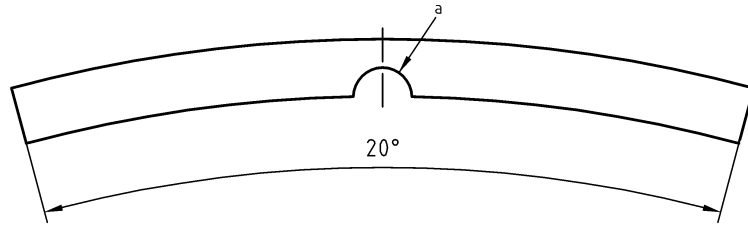
Measurement for peaking shall be made by means of a 20° profile gauge (or template), see Figure H.1, or other types of gauge such as a bridge gauges or needle gauges.

For outwards peaking two readings shall be taken, P_1 and P_2 on each side of the joint, at any particular location, the maximum peaking is determined using Equation (H.1)

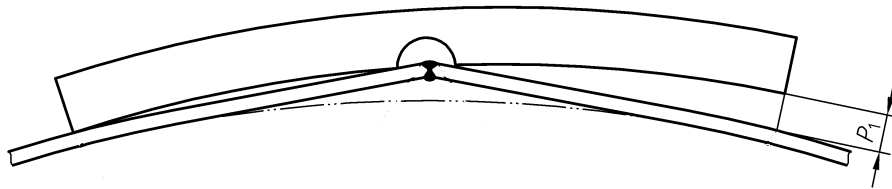
$$P = 0,25 \cdot (P_1 + P_2) \quad (H.1)$$

The inwards peaking P shall be measured.

The inside radius of the gauge shall be equal to the nominal outside radius of the vessel.



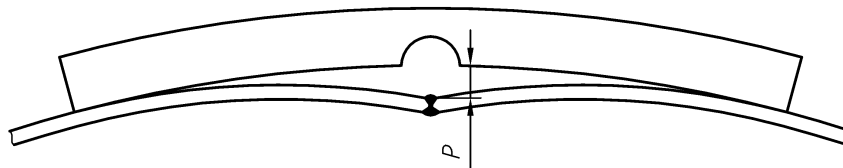
a) Sufficient cut-out to adequately keep clear off the weld reinforcement



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b) For outwards peaking two readings P_1 and P_2 shall be taken



c) For inwards peaking P shall be measured

Figure H.1 — Gauge details, measurement of peaking

Measurements shall be taken at approximately 250 mm intervals on longitudinal seams to determine the location with the maximum peaking value. The maximum peaking value for dynamic and cyclic loads shall be in accordance with Table H.1 and for static loads in accordance with Table H.2.

Table H.1 — Maximum permitted peaking P in longitudinal welds for dynamic and cyclic loads

Dimensions in millimetres

Vessel wall thickness e	Maximum permitted peaking P
$e \leq 3$	1,5
$3 \leq e < 6$	2,5
$6 \leq e < 9$	3,0
$9 \leq e$	the lesser of $e/3$, or 10 mm

NOTE 1 For cyclic loaded pressure vessels see also EN 13445-3:2002 and EN 13445-5:2002, Annex G in respect of peaking requirements.

Peaking values in excess of the above are only permitted when supported by special analysis but in any case must not exceed the values in Table H.2.

Table H.2 — Maximum permitted peaking P in longitudinal welds for pressure vessels subject of non cyclic loads

Dimensions in millimetres

Vessel ratio wall thickness e to diameter D	Maximum permitted peaking P
$e/D \leq 0,025$	5
$e/D > 0,025$	10

NOTE 2 See also EN 13445-5:2002 for testing group 4 vessels for additional limits on peaking.