



SLOVENSKI STANDARD
SIST EN 12814-3:2000/A1:2005

01-oktober-2005

Preskus zvarjenih spojev plastomernih polizdelkov - 3. del: Preskus lezenja pri natezni obremenitvi

Testing of welded joints of thermoplastics semi-finished products - Part 3: Tensile creep test

Prüfen von Schweißverbindungen aus thermoplastischen Kunststoffen - Teil 3: Zeitstand -Zugversuch

Essai des assemblages soudés sur produits semi-finis en thermoplastiques - Partie 3: Essai de fluage

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Ta slovenski standard je istoveten z: EN 12814-3:2000/A1:2005

ICS:

25.160.40 Varjeni spoji in vari Welded joints

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12814-3:2000/A1

July 2005

ICS 25.160.40

English version

**Testing of welded joints of thermoplastics semi-finished products
- Part 3: Tensile creep test**

Essai des assemblages soudés sur produits semi-finis en
thermoplastiques - Partie 3: Essai de fluage

Prüfen von Schweißverbindungen aus thermoplastischen
Kunststoffen - Teil 3: Zeitstand-Zugversuch

This amendment A1 modifies the European Standard EN 12814-3:2000; it was approved by CEN on 19 May 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

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Foreword

This European Standard (EN 12814-3:2000/A1:2005) has been prepared by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN/BIN.

This Amendment to the European Standard EN 12814-3:2000 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2006, and conflicting national standards shall be withdrawn at the latest by January 2006.

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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EN 12814-3:2000/A1:2005 (E)

1 Modification in clause 6

After the first paragraph, add the following Note:

NOTE In the case of socket joints, see Annex C.

2 Modification of Annex A

The actual Annex A shall be split in two parts and renamed: Notch Creep Test (NCT):

Annex A.1 Full notch creep test (FNCT) corresponding to the actual Annex A

Annex A.2 Two notch creep test (2NCT)

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Annex A.2 (informative)

Two notch creep test (2NCT)

A.2-1 Principle

The resistance to slow crack growth of parent material with a wall thickness of less than 10 mm can be determined using the Two Notch Creep Test.

The applied stress chosen should be such that it induces a brittle fracture surface. The minimum thickness of the test specimens should be 1,7 mm. Values for test stress and test temperature are given in Table B.1. For thermoplastics, lower temperatures will increase the time to failure of the test piece.

A.2-2 Preparation of the test specimens

The test specimens for the 2NCT shall be cut from the parent material perpendicular to the welded joint from the same test piece used for the tensile creep test.

The test specimens for the 2NCT shall be cut with parallel sides as shown in Figure A2-1.

The minimum distance between the clamps and the notch shall be $2x_n$.

A.2-3 Test specimen notching

The test specimen shall be notched on two sides in the same plane. The depth of the notch, c , shall be $17\% \pm 2\%$ of the measured width, b . A notch is produced by pressing a razor blade or a similar tool, which gives an identical result, into the test specimen. It is important to make both notches coplanar. Test specimens shall be notched at a room temperature of $23\text{ °C} \pm 2\text{ °C}$.

To ensure consistency of results, the razor blade shall be periodically changed.

A.2-4 Mounting and conditioning

The test specimen shall be loaded free from external torsion and bendings effects. The whole test specimen shall be immersed in the test medium.

The test specimen shall be conditioned to the test temperature before loading.

A.2-5 Calculation of the test load (F_t)

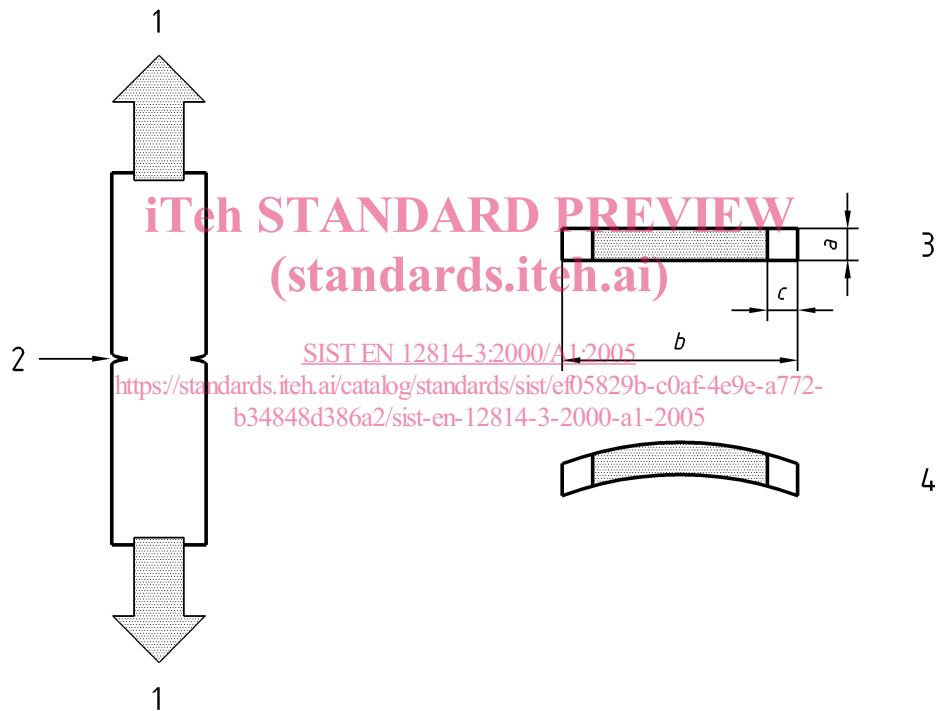
$$F_t = A\sigma \quad (\text{A.2.1})$$

where

F_t is the test load (N)

A is the ligament area of the test specimen after notching (mm^2)

σ is the tensile stress according to Table B.1 (N/mm^2)



Key

- | | | | |
|---|-------|---|---|
| 1 | Load | a | Measured thickness of test specimen |
| 2 | Notch | b | Width of test specimen |
| 3 | Sheet | c | Depth of the notch with $a \geq 1.7 \text{ mm}$ |
| 4 | Pipe | | |

Figure A.2-1 — 2NCT test specimen

3 Modification of Annex B

Delete the fourth line of Table B.1 (the line for PE with temperature of 95 °C)

4 Introduction of a new annex: Annex C

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