Non-destructive testing of welded joints in thermoplastics semi- finished products - Part 2: X-ray radiographic testing

EESTI STANDARDIKESKUS
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NATIONAL FOREWORD

See Eesti standard EVS-EN 13100-2:2019 sisaldab Euroopa standardi EN 13100-2:2019 ingliskeelset teksti.	This Estonian standard EVS-EN 13100-2:2019 consists of the English text of the European standard EN 13100-2:2019.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 04.09.2019.	Date of Availability of the European standard is 04.09.2019.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EUROPEAN STANDARD

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English Version

Non-destructive testing of welded joints in thermoplastics semi- finished products - Part 2: X-ray radiographic testing

Essais non destructifs des assemblages soudés sur produits semi-finis en thermoplastiques - Partie 2: Contrôle radiographique par rayons X

Zerstörungsfreie Prüfung von Schweißverbindungen thermoplastischer Kunststoffe - Teil 2: Röntgenprüfung

This European Standard was approved by CEN on 21 July 2019.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a 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 European Standard 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.

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

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

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European foreword

This document (EN 13100-2:2019) has been prepared by Technical Committee CEN/TC 249 “Plastics”, the secretariat of which is held by NBN.

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 March 2020, and conflicting national standards shall be withdrawn at the latest by March 2020.

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 supersedes EN 13100-2:2004.

In comparison with the previous edition, the following technical modifications have been made:

— updating of the normative references;

— definitions added and consequently editorial modifications in the text and in the figures.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This document specifies fundamental radiographic techniques with film, which enable repeatable results to be obtained economically.

This document applies to the X-ray radiographic examination of heated tool, electrofusion, extrusion and hot gas joints in plastics materials.

It applies to joints in solid wall pipes and plates with a range of thicknesses from 5 mm to 100 mm. It only applies to pipes containing air or other gases at the time of X-ray testing.

This document does not specify acceptance levels of the indications.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 25580, *Non-destructive testing - Industrial radiographic illuminators - Minimum requirements (ISO 5580)*

EN ISO 11699-1, *Non-destructive testing - Industrial radiographic film - Part 1: Classification of film systems for industrial radiography (ISO 11699-1)*

EN ISO 11699-2, *Non-destructive testing - Industrial radiographic films - Part 2: Control of film processing by means of reference values (ISO 11699-2)*

EN ISO 19232-1, *Non-destructive testing - Image quality of radiographs - Part 1: Determination of the image quality value using wire-type image quality indicators (ISO 19232-1)*

EN ISO 19232-2, *Non-destructive testing - Image quality of radiographs - Part 2: Determination of the image quality value using step/hole-type image quality indicators (ISO 19232-2)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

3.1
nominal thickness
t
nominal thickness of the parent material

Note 1 to entry: Manufacturing tolerances are not taken into account.

3.2
penetrated thickness
w
thickness of material in the direction of the radiation beam including the thickness of the weld beads on butt fusion joints (if appropriate), or the additional thickness of the socket for electrofusion joints, or the combined thickness of the top and bottom half of the joint for multiple wall techniques