

Welding - Recommendations for welding of metallic materials - Part 8: Welding of cast irons

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Welding - Recommendations for welding of metallic materials - Part 8: Welding of cast irons

Soudage - Recommandations pour le soudage des matériaux métalliques - Partie 8 : Soudage des fontes

Schweißen - Empfehlungen zum Schweißen metallischer Werkstoffe - Teil 8: Schweißen von Gusseisen

This European Standard was approved by CEN on 22 January 2018.

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European foreword

This document (EN 1011-8:2018) has been prepared by Technical Committee CEN/TC 190 “Foundry Technology”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by November 2018 and conflicting national standards shall be withdrawn at the latest by November 2018.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 supersedes EN 1011-8:2004.

Within its programme of work, Technical Committee CEN/TC 190 requested CEN/TC 190/WG 13 “Welding of cast iron” to prepare the following revision of the standard:

EN 1011-8:2004, *Welding — Recommendations for welding of metallic materials — Part 8: Welding of cast irons*.

The following modifications were made:

- “Normative references”: revised;
- Clause 7: Process designations brought in accordance with EN ISO 4063 and reference number “143” added;
- Subclause 8.2: Title modified in “Storage and handling”;
- Title of Subclause 10.1 removed;
- Subclauses 10.2 and 10.3 removed;
- Title of Subclause 11.1 changed in “Assembly for welding” and Subclause revised;
- Title of Clause 12 changed in “Fabrication and inspection feasibility”;
- Title of Clause 17 changed in “Arc strikes” and clause revised;
- Title of Clause 18 changed in “Weld run sequence”;
- List in Clause 20 extended;
- Title of Clause 22 changed in “Elimination of distortion or inherent stresses” and clause revised;
- Title of Clause 25 changed in “Non-conformance and corrective actions”;
- Clause 27 revised;
- Title of Clause 28 changed in “Surface cleaning and treatment” and clause revised;
- Annex A, Table A.2, No. 7, 3rd column: standard text “Smooth edge rounding is not an undercut.” added as footnote c;

- Annex A, A.2.2, below 2nd paragraph: heading inserted "Numbers and types of external imperfections with reference to Table A.2" and the text "Types of imperfections 1, 2, 3, 4, 5 and 6 especially for joint welding." added as NOTE in Table A.2;
- Table B.1, "Column: Method", "row: Oxy acetylene welding (311)", last cell, entry changed in "Welding rods OII EN 12536";
- Bibliography revised.

This is one of a series of European Standards for requirements for fusion welding of metallic materials with the general title *Welding — Recommendations for welding of metallic materials*.

This series of European Standards is composed of the following parts:

- *Part 1: General guidance for arc welding;*
- *Part 2: Arc welding of ferritic steels;*
- *Part 3: Arc welding of stainless steels;*
- *Part 4: Arc welding of aluminium and aluminium alloys;*
- *Part 5: Welding of clad steel;*
- *Part 6: Laser beam welding;*
- *Part 7: Electron beam welding;*
- *Part 8: Welding of cast irons.*

According to the CEN-CENELEC Internal Regulations, the national standards organizations 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 Scope

This document specifies the requirements for fusion welding of unalloyed and low-alloy cast iron castings produced in accordance with:

- EN 1561, *Founding — Grey cast irons*;
- EN 1562, *Founding — Malleable cast irons*;
- EN 1563, *Founding — Spheroidal graphite cast irons*.

This document does not apply to the joint welding of cast iron castings to other materials.

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 1011-1:2009, *Welding - Recommendations for welding of metallic materials - Part 1: General guidance for arc welding*

EN ISO 4063, *Welding and allied processes - Nomenclature of processes and reference numbers (ISO 4063)*

EN ISO 15609-1, *Specification and qualification of welding procedures for metallic materials - Welding procedure specification - Part 1: Arc welding (ISO 15609-1)*

EN ISO 15609-2, *Specification and qualification of welding procedures for metallic materials - Welding procedure specification - Part 2: Gas welding (ISO 15609-2)*

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 <http://www.iso.org/obp>

3.1 production welding

welding carried out during manufacturing before final delivery to the end user

Note 1 to entry: It includes joint welding and finishing welding (see 3.2 and 3.3).

3.2 joint welding

production welding used to assemble components together to obtain an integral unit

3.3 finishing welding

production welding carried out in order to ensure the agreed quality of the casting