



NSAI
Standards

Irish Standard
I.S. EN 287-6:2010

Qualification test of welders - Fusion welding - Part 6: Cast iron

I.S. EN 287-6:2010

Incorporating amendments/corrigenda issued since publication:

<i>This document replaces:</i>	<i>This document is based on:</i> EN 287-6:2010	<i>Published:</i> 13 January, 2010
This document was published under the authority of the NSAI and comes into effect on: 30 January, 2010		ICS number: 25.160.01
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Údarás um Chaighdeáin Náisiúnta na hÉireann		

ICS 25.160.01

English Version

Qualification test of welders - Fusion welding - Part 6: Cast iron

Epreuve de qualification des soudeurs - Soudage par
fusion - Partie 6 : Fontes

Prüfung von Schweißern - Schmelzschweißen - Teil 6:
Gusseisen

This European Standard was approved by CEN on 28 November 2009.

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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 Management Centre has the same status as the official versions.

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Foreword

This document (EN 287-6:2010) 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of an identical text or by endorsement, at the latest by July 2010, and conflicting national standards shall be withdrawn at the latest by July 2010.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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

EN 287-6, *Qualification test of welders — Fusion welding — Part 6: Cast iron.*

EN 287 consists of the following parts, under the general title *Qualification test of welders — Fusion welding*:

— *Part 1: Steels*

— *Part 6: Cast iron*

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

Introduction

The ability of a welder to follow verbal or written instructions and verification of a person's skills are important factors in ensuring the quality of the welded product.

The testing of a welder's skill in accordance with this standard depends on welding techniques and conditions used in which uniform rules are complied with, and standard test pieces are used.

The principle of this European Standard is that a qualification test qualifies the welder not only for the conditions used in the test, but also for all joints which are considered easier to weld on the presumption that the welder has received a specific training and/or has industrial practice within the range of qualification.

The qualification test can be used to qualify a welding procedure and a welder provided that all the relevant requirements, e.g. test piece dimensions, are satisfied.

1 Scope

This European Standard specifies main requirements, limits, inspection conditions and acceptance requirements as well as related inspection documents of welders for welded cast iron test pieces and workpieces.

It provides a set of technical rules for a systematic qualification test of a welder's skills, and enables such qualifications to be uniformly accepted independently of the type of product, location and examiner/examining body.

This European Standard specifies the testing of a welder's skill unless a higher level skill test is applicable.

The acceptance of a welder's skill according to this European Standard implies a practical experience and knowledge regarding the welding process, materials and safety requirements (see Annex C).

This European Standard has to be used when requirements on part of a customer, testing or monitoring body or other organisation are postulated.

This European Standard defines the qualification test of welders for the fusion welding of cast iron. The welding processes referred to in this standard include those fusion welding processes which are designated as manual or partly mechanized welding. It does not cover fully mechanized and automated welding processes (see EN 1418). Cast iron materials which are covered by this European Standard are mentioned in 5.4.

The inspection document and certification is made out in the name of the testing body's liability.

2 Normative references

The following referenced documents are indispensable for the application 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 287-1:2004, *Qualification test of welders — Fusion welding — Part 1: Steels*

EN 571-1, *Non destructive testing — Penetrant testing — Part 1: General principles*

EN 970, *Non-destructive examination of fusion welds — Visual examination*

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

EN 1290, *Non-destructive testing of welds — Magnetic particle testing of welds*

EN 1320, *Destructive tests on welds in metallic materials — Fracture test*

EN 1321, *Destructive tests on welds in metallic materials — Macroscopic and microscopic examination of welds*

EN ISO 1071, *Welding consumables — Covered electrodes, wires, rods and tubular cored electrodes for fusion welding of cast iron — Classification (ISO 1071:2003)*

EN ISO 4063, *Welding and allied processes — Nomenclature of processes and reference numbers (ISO 4063:2009)*

EN ISO 6520-1, *Welding and allied processes — Classification of geometric imperfections in metallic materials — Part 1: Fusion welding (ISO 6520-1:2007)*

EN ISO 6947, *Welds; working positions — Definitions of angles of slope and rotation (ISO 6947:1993)*

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