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BS EN ISO 9016:2012



BSI Standards Publication

Destructive tests on welds in metallic materials — Impact tests — Test specimen location, notch orientation and examination (ISO 9016:2012)

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This British Standard is the UK implementation of EN ISO 9016:2012. It supersedes BS EN ISO 9016:2011 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee WEE/46, Non-destructive testing.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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English Version

Destructive tests on welds in metallic materials - Impact tests - Test specimen location, notch orientation and examination (ISO 9016:2012)

Essais destructifs des soudures sur matériaux métalliques -
Essai de flexion par choc - Position de l'éprouvette,
orientation de l'entaille et examen (ISO 9016:2012)

Zerstörende Prüfung von Schweißverbindungen an
metallischen Werkstoffen - Kerbschlagbiegeversuch -
Probenlage, Kerbrichtung und Beurteilung (ISO 9016:2012)

This European Standard was approved by CEN on 31 October 2012.

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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-CENELEC Management Centre has the same status as the official versions.

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Foreword

This document (EN ISO 9016:2012) has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" in collaboration with Technical Committee CEN/TC 121 "Welding" 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of an identical text or by endorsement, at the latest by May 2013, and conflicting national standards shall be withdrawn at the latest by May 2013.

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.

This document supersedes EN ISO 9016:2011.

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

Endorsement notice

The text of ISO 9016:2012 has been approved by CEN as a EN ISO 9016:2012 without any modification.

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Contents

	Page
Foreword	iv
1 Scope	1
2 Normative reference	1
3 Principle	1
4 Method of denomination	1
4.1 Lettering system	1
4.2 Characters	1
5 Examples of denomination	2
6 Examination	5
7 Test report	5
Annex A (informative) Example of a test report	6
Bibliography	7

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 9016 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 5, *Testing and inspection of welds*.

This second edition cancels and replaces the first edition (ISO 9016:2001), which has been technically revised.

Requests for official interpretations of any aspect of this International Standard should be directed to the Secretariat of ISO/TC 44/SC 5 via your national standards body. A complete listing of these bodies can be found at www.iso.org.

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Destructive tests on welds in metallic materials — Impact tests — Test specimen location, notch orientation and examination

1 Scope

This International Standard specifies mainly the method to be used when describing test specimen location and notch orientation for the testing and reporting of impact tests on welded butt joints.

This International Standard applies to impact tests on metallic materials in all forms of product made by any fusion welding process.

It is used in addition to ISO 148 (all parts) and includes test specimen denomination and additional reporting requirements.

2 Normative reference

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.

ISO 148-1, *Metallic materials — Charpy pendulum impact test — Part 1: Test method*

3 Principle

Impact testing shall be in accordance with ISO 148-1. The test temperature, location, type and size of test specimen, and notch orientation shall be in accordance with the relevant application standard.

In addition to the requirements of ISO 148-1, the notch position may be located by macroetching.

4 Method of denomination

4.1 Lettering system

The denomination is based on a lettering system to describe the type, location and notch orientation and a numbering system to show the distance (in millimetres) of the notch from reference lines (RL). The method of denomination is shown in Tables 1 and 2. The test specimen shall be taken from the welded joint such that its longitudinal axes are at right angles to the weld length.

4.2 Characters

The denomination comprises the following characters:

- 1st character U: Charpy U- notch.
 V: Charpy V-notch.
- 2nd character W: notch in the weld metal; the reference line is the centre line of the weld at the position of the test specimen.
 H: notch in the heat affected zone; the reference line is the fusion or the joint line (notch will include HAZ).