

Steel — Charpy V-notch pendulum impact test — Instrumented test method

The European Standard EN ISO 14556:2000, with the incorporation of amendment A1:2006, has the status of a British Standard

ICS 77.040.10

National foreword

This British Standard is the official English language version of EN ISO 14556:2000, including amendment A1:2006. It is identical with ISO 14556:2000, including amendment 1:2006.

The start and finish of text introduced or altered by ISO amendment is indicated in the text by tags [A1] <A1>. Tags indicating changes to ISO text carry the number of the ISO amendment. For example, text altered by ISO amendment 1 is indicated by [A1] <A1>.

The UK participation in its preparation was entrusted by Technical Committee ISE/NFE/4, Mechanical testing of metals, to Subcommittee ISE/NFE/4/4, Toughness testing, which has the responsibility to:

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Summary of pages

This document comprises a front cover, an inside front cover, the EN ISO title page, the EN ISO foreword page, the ISO title page, pages ii to iv, pages 1 to 21 and a back cover.

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English version

Steel - Charpy V-notch pendulum impact test - Instrumented test method (ISO 14556:2000)

Aciers - Essai de flexion par choc sur éprouvette Charpy à entaille en V - Méthode d'essai instrumenté (ISO 14556:2000)

Stahl - Kerbschlagbiegeversuch nach Charpy (V-Kerb) - Instrumentiertes Prüfverfahren (ISO 14556:2000)

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of the International Standard ISO 14556:2000 has been prepared by Technical Committee ISO/TC 164 "Mechanical testing of metals" in collaboration with Technical Committee ECISS/TC 1 "Steel - Mechanical testing", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by November 2000, and conflicting national standards shall be withdrawn at the latest by November 2000.

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NOTE FROM CEN/CS: The foreword is susceptible to be amended on reception of the German language version. The confirmed or amended foreword, and when appropriate, the normative annex ZA for the references to international publications with their relevant European publications will be circulated with the German version.

Endorsement notice

The text of the International Standard ISO 14556:2000 was approved by CEN as a European Standard without any modification.

Foreword to amendment A1

This document (EN ISO 14556:2000/A1:2006) has been prepared by Technical Committee ISO/TC 164 "Mechanical testing of metals" in collaboration with Technical Committee ECISS/TC 1 "Steel - Mechanical testing", the secretariat of which is held by AFNOR.

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 January 2007, and conflicting national standards shall be withdrawn at the latest by January 2007.

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Endorsement notice

The text of ISO 14556:2000/Amd 1:2006 has been approved by CEN as EN ISO 14556:2000/A1:2006 without any modifications.

INTERNATIONAL STANDARD

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Steel — Charpy V-notch pendulum impact test — Instrumented test method

*Aciers — Essai de flexion par choc sur éprouvette Charpy à entaille en
V — Méthode d'essai instrumenté*



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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 3.

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 14556 was prepared by Technical Committee ISO/TC 164, *Mechanical testing of metals*, Subcommittee SC 4, *Toughness testing*.

Annexes A to D of this International Standard are for information only.

Steel — Charpy V-notch pendulum impact test — Instrumented test method

1 Scope

This International Standard specifies a method of instrumented Charpy V-notch pendulum impact testing on steel products and the requirements concerning the measurement and recording equipment.

This International Standard can be applied to other metallic materials by agreement.

This test provides further information on the fracture behaviour of the tested product.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated reference, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

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

ISO 148-2, *Metallic materials — Charpy pendulum impact test — Part 2: Verification of test machines*.

3 Terms and definitions

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

3.1 Characteristic values of force

NOTE Characteristic values of force are expressed in newtons.

3.1.1 general yield force

F_{gy}

force at the transition point from the linearly increasing part to the curved increasing part of the force-displacement curve

NOTE It represents a first approximation of the force at which yielding has occurred across the entire uncracked-test-piece ligament (see 9.3).

3.1.2 maximum force

F_m

maximum force in the course of the force-displacement curve