

# SLOVENSKI STANDARD

## SIST EN ISO 148-3:2009

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Metallic materials - Charpy pendulum impact test - Part 3: Preparation and characterization of Charpy V-notch test pieces for indirect verification of pendulum impact machines (ISO 148-3:2008)

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Metallische Werkstoffe - Kerbschlagbiegeversuch nach Charpy - Teil 3: Vorbereitung und Charakterisierung von Charpy-V-Referenzproben für die Prüfung der Prüfmaschinen (Pendelschlagwerke) (ISO 148-3:2008)

Matériaux métalliques - Essai de flexion par choc sur éprouvette Charpy - Partie 3: Préparation et caractérisation des éprouvettes Charpy a entaille en V pour la vérification indirecte des machines d'essai (mouton-pendule) (ISO 148-3:2008)

**Ta slovenski standard je istoveten z: EN ISO 148-3:2008**

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**ICS:**

77.040.10 Mehansko preskušanje kovin Mechanical testing of metals

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
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**EN ISO 148-3**

December 2008

ICS 77.040.10

English Version

**Metallic materials - Charpy pendulum impact test - Part 3:  
Preparation and characterization of Charpy V-notch test pieces  
for indirect verification of pendulum impact machines (ISO 148-  
3:2008)**

Matériaux métalliques - Essai de flexion par choc sur éprouvette Charpy - Partie 3: Préparation et caractérisation des éprouvettes Charpy à entaille en V pour la vérification indirecte des machines d'essai mouton-pendule (ISO 148-3:2008)

Metallische Werkstoffe - Kerbschlagbiegeversuch nach Charpy - Teil 3: Vorbereitung und Charakterisierung von Charpy-V-Referenzproben für die indirekte Prüfung der Prüfmaschinen (Pendelschlagwerke) (ISO 148-3:2008)

This European Standard was approved by CEN on 19 November 2008.

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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 ISO 148-3:2008) 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 June 2009, and conflicting national standards shall be withdrawn at the latest by June 2009.

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.

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The text of ISO 148-3:2008 has been approved by CEN as a EN ISO 148-3:2008 without any modification.

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**Metallic materials — Charpy pendulum  
impact test —**

Part 3:

**Preparation and characterization of  
Charpy V-notch test pieces for indirect  
verification of pendulum impact  
machines****(standards.iteh.ai)***Matériaux métalliques — Essai de flexion par choc sur éprouvette  
Charpy —**SIST EN ISO 148-3:2009*

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*Partie 3: Préparation et caractérisation des éprouvettes Charpy à  
entaille en V pour la vérification indirecte des machines d'essai mouton-  
pendule*

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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 148-3 was prepared by Technical Committee ISO/TC 164, *Mechanical testing of metals*, Subcommittee SC 4, *Toughness testing — Fracture (F), Pendulum (P), Tear (T)*.

This second edition cancels and replaces the first edition (ISO 148-3:1998) which has been technically revised.

ISO 148 consists of the following parts, under the general title *Metallic materials — Charpy pendulum impact test*:

- iTeh STANDARD PREVIEW**  
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- SIST EN ISO 148-3:2009
- *Part 1: Test method* <https://standards.iteh.ai/catalog/standards/sist/4fa325e2-3871-415e-a074-d2c6504b629a/sist-en-iso-148-3-2009>
  - *Part 2: Verification of testing machines*
  - *Part 3: Preparation and characterization of Charpy V-notch test pieces for indirect verification of pendulum impact machines*

## Introduction

The suitability of a pendulum impact testing machine for acceptance testing of metallic materials has usually been based on a calibration of its scale and verification of compliance with specified dimensions, such as the shape and spacing of the anvils supporting the specimen. The scale calibration is commonly verified by measuring the mass of the pendulum and its elevation at various scale readings. This procedure for evaluation of machines had the distinct advantage of requiring only measurements of quantities that could be traced to national standards. The objective nature of these traceable measurements minimized the necessity for arbitration regarding the suitability of the machines for material acceptance tests.

However, sometimes two machines that had been evaluated by the direct-verification procedures described above, and which met all dimensional requirements, were found to give significantly different impact values when testing test pieces of the same material. This difference was commercially important when values obtained using one machine met the material specification, while the values obtained using the other machine did not. To avoid such disagreements, some purchasers of materials added the requirement that all pendulum impact testing machines used for acceptance testing of material sold to them must be indirectly verified by testing reference test pieces supplied by them. A machine was considered acceptable only if the values obtained using the machine agreed, within specified limits, with the value furnished with the reference test pieces.

Successful experience in the use of reference test pieces led to the requirement in ISO 148-2 that indirect verification must be performed using reference test pieces in addition to direct verification. National standards and codes also require indirect verification using reference test pieces; for example, EN 10045-2 and ASTM E 23 require the use of reference test pieces. The purpose of this part of ISO 148 is to specify the requirements, preparation and methods for qualifying test pieces used for the indirect verification of pendulum impact testing machines.

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