



# SLOVENSKI STANDARD SIST EN ISO 3785:2023

01-oktober-2023

---

**Kovinski materiali - Označevanje osi preskusnih vzorcev glede na teksturo snovi vzorca (ISO 3785:2023)**

Metallic materials - Designation of test specimen axes in relation to product texture (ISO 3785:2023)

Metallische Werkstoffe - Kennzeichnung von Probenachsen in Bezug zur Halbzeuggefügetextur (ISO 3785:2023)

Matériaux métalliques Désignation des axes des éprouvettes en relation avec la texture du produit (ISO 3785:2023)

<https://standards.iteh.ai/catalog/standards/sist/4e07ecc8-0e9b-43cf-9bf4-7a4a6cf6feff/sist-en-iso-3785-2023>

**Ta slovenski standard je istoveten z: EN ISO 3785:2023**

---

**ICS:**

77.040.10 Mehansko preskušanje kovin Mechanical testing of metals

**SIST EN ISO 3785:2023**

**en,fr,de**



EUROPEAN STANDARD

EN ISO 3785

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2023

ICS 77.040.10

Supersedes EN ISO 3785:2006

English Version

## Metallic materials - Designation of test specimen axes in relation to product texture (ISO 3785:2023)

Matériaux métalliques - Désignation des axes des éprouvettes en relation avec la texture du produit (ISO 3785:2023)

Metallische Werkstoffe - Kennzeichnung von Probenachsen in Bezug zur Halbzeuggefügetextur (ISO 3785:2023)

This European Standard was approved by CEN on 2 April 2023.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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.

CEN members are the national standards bodies of 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

<https://standards.iteh.ai/catalog/standards/sist/4e07ecc8-0e9b-43cf-9bf4-7a4a6cf6feff/sist-en-iso-3785-2023>



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword.....	3

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 3785:2023](https://standards.iteh.ai/catalog/standards/sist/4e07eec8-0e9b-43cf-9bf4-7a4a6cf6feff/sist-en-iso-3785-2023)

<https://standards.iteh.ai/catalog/standards/sist/4e07eec8-0e9b-43cf-9bf4-7a4a6cf6feff/sist-en-iso-3785-2023>

## European foreword

This document (EN ISO 3785:2023) has been prepared by Technical Committee ISO/TC 164 "Mechanical testing of metals" in collaboration with Technical Committee CEN/TC 459/SC 1 "Test methods for steel (other than chemical analysis)" 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 2023, and conflicting national standards shall be withdrawn at the latest by November 2023.

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 ISO 3785:2006.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

(standards.iteh.ai)

### Endorsement notice

SIST EN ISO 3785:2023

The text of ISO 3785:2023 has been approved by CEN as EN ISO 3785:2023 without any modification.

<https://standards.iteh.ai/catalog/standards/sist/4a07eac8-0e9b-43cf-9bf4-7a4a6cf6feff/sist-en-iso-3785-2023>



INTERNATIONAL  
STANDARD

ISO  
3785

Third edition  
2023-05

---

---

**Metallic materials — Designation  
of test specimen axes in relation to  
product texture**

*Matériaux métalliques — Désignation des axes des éprouvettes en  
relation avec la texture du produit*

iTeh STANDARD PREVIEW  
(standards.iteh.ai)

[SIST EN ISO 3785:2023](https://standards.iteh.ai/catalog/standards/sist/4e07ecc8-0e9b-43cf-9bf4-7a4a6cf6feff/sist-en-iso-3785-2023)

<https://standards.iteh.ai/catalog/standards/sist/4e07ecc8-0e9b-43cf-9bf4-7a4a6cf6feff/sist-en-iso-3785-2023>



Reference number  
ISO 3785:2023(E)

© ISO 2023

# iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 3785:2023

<https://standards.iteh.ai/catalog/standards/sist/4e07ecc8-0e9b-43cf-9bf4-7a4a6cf6feff/sist-en-iso-3785-2023>



## **COPYRIGHT PROTECTED DOCUMENT**

© ISO 2023

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland



# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Designation system</b> .....	<b>1</b>
4.1 General.....	1
4.2 Exception — not aligned.....	1
4.3 Exception — no grain flow.....	2
<b>5 Designation of unnotched specimens</b> .....	<b>2</b>
5.1 General.....	2
5.2 Sheet, plate, bar (flat rolled products).....	2
5.2.1 Aligned, grain flow different in all three orthogonal directions.....	2
5.2.2 Not aligned, grain flow different in all three orthogonal directions.....	2
5.2.3 Aligned, equal cross-sectional grain flow.....	2
5.2.4 Not aligned, equal cross-sectional grain flow.....	2
5.3 Cylinders and thick-walled tubes.....	3
5.4 Thin-walled tubes, helical grain flow.....	3
5.5 Castings.....	3
<b>6 Designation of notched (or precracked) specimens</b> .....	<b>3</b>
6.1 General.....	3
6.2 Aligned.....	3
6.3 Not aligned.....	3
6.4 No grain flow.....	3
6.5 Welds.....	3
6.6 Additive manufacturing.....	4
<b>7 Application of designation system in material specification</b> .....	<b>4</b>
7.1 General.....	4
7.2 Non-uniform grain flow.....	4
7.3 Specifications.....	4
7.4 Comparisons.....	4
<b>Annex A (informative) Influence of mechanical working on material structure and properties</b> .....	<b>8</b>
<b>Bibliography</b> .....	<b>9</b>

## ISO 3785:2023(E)

## 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 164, *Mechanical testing of metals*, Subcommittee SC 4, *Fatigue, fracture and toughness testing*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 459/SC 1, *Test methods for steel (other than chemical analysis)*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 3785:2006), which has been technically revised.

The main changes are as follows:

- a reference to [Annex A](#) was added in the Introduction;
- in [6.5](#) a reference to ISO 15653 was added;
- a new [Subclause 6.6](#) (Additive manufacturing) was added.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

The measured mechanical properties of a metallic product, especially those characterizing ductility and toughness, such as elongation, reduction of area, fracture toughness and impact resistance, are dependent on the test specimen location within the product and orientation with respect to the product's principal directions of metal working, grain flow or otherwise-produced texture. This document specifies a method for designating specimen orientation in relation to product texture.

Additional information on the influence of mechanical working on material structure and properties is provided in [Annex A](#).

iTeh STANDARD PREVIEW  
(standards.iteh.ai)

[SIST EN ISO 3785:2023](#)

<https://standards.iteh.ai/catalog/standards/sist/4e07eec8-0e9b-43cf-9bf4-7a4a6cf6feff/sist-en-iso-3785-2023>