



SLOVENSKI STANDARD
SIST EN ISO 22825:2007
01-januar-2007

Neporušitveno preskušanje zvarnih spojev iz avstenitnih jekel in nikeljevih zlitin z ultrazvokom (ISO 22825:2006)

Non-destructive testing of welds - Ultrasonic testing - Testing of welds in austenitic steels and nickel-based alloys (ISO 22825:2006)

Zerstörungsfreie Prüfung von Schweißverbindungen - Ultraschallprüfung - Prüfung von Schweißverbindungen in austenitischen Stählen und Nickellegierungen (ISO 22825:2006)

iTeh STANDARD PREVIEW

(standards.iteh.ai)

Essais non destructifs des assemblages soudés - Contrôle par ultrasons - Contrôle des soudures en aciers austénitiques et en alliages à base nickel (ISO 22825:2006)

<https://standards.iteh.ai/catalog/standards/sist/e66ba170-5c1a-4c7e-ad27-cc0677060e84/sist-en-iso-22825-2007>

Ta slovenski standard je istoveten z: EN ISO 22825:2006

ICS:

25.160.40 Varjeni spoji in vari Welded joints

SIST EN ISO 22825:2007 **en**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 22825:2007

<https://standards.iteh.ai/catalog/standards/sist/e66ba170-5c1a-4c7e-ad27-ec0677060e84/sist-en-iso-22825-2007>

ICS 25.160.40

English Version

Non-destructive testing of welds - Ultrasonic testing - Testing of
welds in austenitic steels and nickel-based alloys (ISO
22825:2006)

Essais non destructifs des assemblages soudés - Contrôle
par ultrasons - Contrôle des soudures en aciers
austénitiques et en alliages à base nickel (ISO 22825:2006)

Zerstörungsfreie Prüfung von Schweißverbindungen -
Ultraschallprüfung - Prüfung von Schweißverbindungen in
austenitischen Stählen und Nickellegierungen (ISO
22825:2006)

This European Standard was approved by CEN on 7 June 2006.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, 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 United Kingdom.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Foreword

This document (EN ISO 22825:2006) has been prepared by Technical Committee CEN/TC 121 "Welding", the secretariat of which is held by DIN, in collaboration with Technical Committee ISO/TC 44 "Welding and allied processes".

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.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, 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 United Kingdom.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 22825:2007](https://standards.iteh.ai/catalog/standards/sist/e66ba170-5c1a-4c7e-ad27-ec0677060e84/sist-en-iso-22825-2007)

<https://standards.iteh.ai/catalog/standards/sist/e66ba170-5c1a-4c7e-ad27-ec0677060e84/sist-en-iso-22825-2007>

**Non-destructive testing of welds —
Ultrasonic testing — Testing of welds in
austenitic steels and nickel-based alloys**

*Essais non destructifs des assemblages soudés — Contrôle par
ultrasons — Contrôle des soudures en aciers austénitiques et en
alliages à base nickel*

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 22825:2007](https://standards.iteh.ai/catalog/standards/sist/e66ba170-5c1a-4c7e-ad27-ec0677060e84/sist-en-iso-22825-2007)

[https://standards.iteh.ai/catalog/standards/sist/e66ba170-5c1a-4c7e-ad27-
ec0677060e84/sist-en-iso-22825-2007](https://standards.iteh.ai/catalog/standards/sist/e66ba170-5c1a-4c7e-ad27-ec0677060e84/sist-en-iso-22825-2007)



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 22825:2007](https://standards.iteh.ai/catalog/standards/sist/e66ba170-5c1a-4c7e-ad27-ec0677060e84/sist-en-iso-22825-2007)

<https://standards.iteh.ai/catalog/standards/sist/e66ba170-5c1a-4c7e-ad27-ec0677060e84/sist-en-iso-22825-2007>

© ISO 2006

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword.....	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions.....	2
4 Information required prior to testing	2
4.1 Items to be defined by specification.....	2
4.2 Specific information required by the operator prior to testing.....	2
5 Personnel.....	2
6 Equipment	3
7 Range and sensitivity setting	3
7.1 Range setting	3
7.2 Sensitivity setting	3
7.3 Transfer correction	4
8 Written testing procedure	5
9 Reference blocks	5
10 Surface condition.....	6
11 Parent metal testing.....	6
12 Testing of weld	6
12.1 General.....	6
12.2 Indication sizing	7
12.3 Evaluation of indications	7
13 Test report	7
13.1 General data	7
13.2 Information related to equipment.....	8
13.3 Information related to testing technique.....	8
13.4 Results of the testing	9
Annex A (informative) Development of a written procedure.....	10
Annex B (informative) Typical design of reference blocks	12
Bibliography	14

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 22825 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 121, *Welding*, in collaboration with Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 5, *Testing and inspection of welds*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

(standards.iteh.ai)

SIST EN ISO 22825:2007

<https://standards.iteh.ai/catalog/standards/sist/e66ba170-5c1a-4c7e-ad27-ec0677060e84/sist-en-iso-22825-2007>

Introduction

Austenitic steel and dissimilar metal welds are widely regarded as very difficult to inspect by ultrasonics. The problems are mainly associated with unfavourable microstructure and grain size, as well as with different material properties which result in inhomogeneous and anisotropic mechanical and acoustic properties that contrast with the relatively homogeneous and isotropic behaviour in low-alloy steel welds.

Because the austenitic weld metal affects ultrasound propagation, it is necessary to produce a reference block in order to develop a testing procedure, set a preliminary sensitivity level, assess the procedure and demonstrate effectiveness before a definitive procedure is written. Material, weld preparation and welding procedure, as well as the geometry and surface condition of reference blocks, are normally the same as for the component being tested.

Since austenitic and dissimilar metal welds present greater challenges for ultrasonic testing than do ferritic ones, ultrasonic testing in all its phases (planning, performance and data evaluation) requires more attention.

This International Standard specifies the approach to be followed when developing procedures for the ultrasonic testing of welds in austenitic steels and nickel-based alloys.

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 <http://www.iso.org>.

(standards.iteh.ai)

SIST EN ISO 22825:2007

<https://standards.iteh.ai/catalog/standards/sist/e66ba170-5c1a-4c7e-ad27-ec0677060e84/sist-en-iso-22825-2007>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 22825:2007

<https://standards.iteh.ai/catalog/standards/sist/e66ba170-5c1a-4c7e-ad27-ec0677060e84/sist-en-iso-22825-2007>

Non-destructive testing of welds — Ultrasonic testing — Testing of welds in austenitic steels and nickel-based alloys

1 Scope

This International Standard specifies the approach to be followed when developing procedures for the ultrasonic testing of the following welds:

- welds in austenitic stainless steels;
- welds in nickel-based alloys;
- welds in duplex steels;
- dissimilar metal welds.

The purposes of the testing can be very different, e.g.:

- for the assessment of quality level (manufacturing);
- for the detection of specific indications induced in service.

Acceptance levels are not included in this International Standard, but can be applied in accordance with the scope of the testing (see Clause 4).

The requirements of this International Standard are applicable to both manual and mechanized testing.

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.

ISO 9712, *Non-destructive testing — Qualification and certification of personnel*

EN 583-2, *Non-destructive testing — Ultrasonic examination — Part 2: Sensitivity and range setting*

EN 12668-1, *Non-destructive testing — Characterization and verification of ultrasonic examination equipment — Part 1: Instruments*

EN 12668-2, *Non-destructive testing — Characterization and verification of ultrasonic examination equipment — Part 2: Probes*

EN 12668-3, *Non-destructive testing — Characterization and verification of ultrasonic examination equipment — Part 3: Combined equipment*