
**Porušitveno preskušanje zvarnih spojev na kovinskih materialih -
Makroskopske in mikroskopske preiskave zvarov (prevzet standard
EN 1321:1996 z metodo platnice)**

Destructive tests on welds in metallic materials - Macroscopic and
microscopic examination of welds

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Essais destructifs des soudures sur matériaux métalliques - Examen
macroscopique et microscopique des assemblages soudés

Zerstörende Prüfung von Schweißverbindungen an metallischen
Werkstoffen - Makroskopische und mikroskopische Untersuchungen von
Schweißnähten

Deskriptorji: zvarni spoj, porušitvena preiskava, mikroskopska preiskava, makroskopska
preiskava, napaka v zvaru, priprava vzorca, način dela, označevanje

ICS 25.160.40

Referenčna številka
SIST EN 1321:1998 ((sl),de)

Nadaljevanje na straneh od II do III in od 1 do 10

SIST EN 1321 : 1998

NACIONALNI UVOD

Standarda SIST EN 1321 ((sl),de), Porušitveno preskušanje zvarnih spojev na kovinskih materialih - Makroskopske in mikroskopske preiskave zvarov, prva izdaja, 1998, ima status slovenskega standarda in je z metodo platnice prevzet evropski standard EN 1321 (de), Zerstörende Prüfung von Schweißverbindungen an metallischen Werkstoffen - Makroskopische und mikroskopische Untersuchungen von Schweißnähten, 1996-10-00.

NACIONALNI PREGOVOR

Evropski standard EN 1321:1996 je pripravil tehnični odbor Evropskega komiteja za standardizacijo CEN/TC 121 Varjenje.

Pripravo tega standarda sta CEN poverila Evropska komisija in Evropsko združenje za prosto trgovino. Ta evropski standard ustreza bistvenim zahtevam evropske direktive 97/23/EEC.

Odločitev za prevzem tega standarda po metodi platnice je dne 1997-05-14 sprejel tehnični odbor USM/TC VAR Varjenje.

Ta slovenski standard je dne 1998-03-03 odobril direktor USM.

ZVEZE S STANDARDI

S prevzemom tega evropskega standarda veljajo poleg standardov, navedenih v izvorniku, še naslednje zveze:

- iTeh STANDARD PREVIEW**
(standards.gate.ac)
- SIST EN 288-3:1996 ((sl),de) Zahteve in priznavanje varilnih postopkov za kovinske materiale - 3. del: Zahteve in priznavanje varilnih postopkov za obločno varjenje jekel
[SIST EN 1321:1998](http://www.standards.gate.ac.uk/servlet/Standards?_action=FileServlet&file=EN1321-1998)
- SIST EN 288-4:1996 ((sl),de) Zahteve in priznavanje varilnih postopkov za kovinske materiale - 4. del: Preskušanje varilnih postopkov za obločno varjenje aluminija in njegovih zlitin
[SIST EN 1321:1998](http://www.standards.gate.ac.uk/servlet/Standards?_action=FileServlet&file=EN1321-1998)
- SIST EN 26520:1995 ((sl),de) Klasifikacija in razlaga napak pri talilnem varjenju kovin (ISO 6520:1982)
- SIST CR 12187:1998 ((sl),de) Varjenje - Smernice za delitev materialov za varjenje

OSNOVA ZA IZDAJO STANDARDA

- Prevzem evropskega standarda EN 1321:1996

OPOMBI

- Powsod, kjer se v besedilu standarda uporablja izraz evropski standard, v SIST EN 1321:1998 to pomeni slovenski standard.
- Nacionalni uvod in nacionalni predgovor nista sestavni del standarda.

VSEBINA	Stran
Predgovor	3
1 Področje uporabe	4
2 Zveza s standardi	4
3 Definicije	4
4 Načelo	4
5 Okrajšave	4
6 Namen preskusa	5
7 Odvzem vzorca	6
8 Postopek	6
8.1 Splošno	6
8.2 Priprava vzorca	6
8.3 Stanje površine	6
8.4 Metode jedkanja	6
8.5 Jedkala	6
8.6 Varnostni ukrepi	7
9 Preiskava	7
10 Oznaka	7
11 Poročilo o preiskavi	9
Dodatek A: Primer značilne oblike poročila o preiskavi	10

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EUROPEAN STANDARD

EN 1321

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 1996

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Descriptors: welded joints, destructive tests, microscopic analysis, macroscopic analysis, weld defects, specimen preparation, procedures, designation

English version

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This European Standard was approved by CEN on 1996-09-27. 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.

The European Standards exist 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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

Contents

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Definitions	4
4 Principle	5
5 Abbreviations	5
6 Purpose of the test	5
7 Removal of test specimens	6
8 Test procedure	7
8.1 General	7
8.2 Test specimen preparation	7
8.3 Surface finish	7
8.4 Etching methods	8
8.5 Etchants	8
8.6 Safety measures	8
9 Examination	8
10 Designation	9
11 Test report.....	13
Annex A (informative) Test report	14

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 121 "Welding", the secretariat of which is held by DS.

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 April 1997, and conflicting national standards shall be withdrawn at the latest by April 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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1 Scope

This standard specifies the methods of specimen preparation, test procedures and their main objectives for the macroscopic and microscopic examination.

2 Normative references

This European standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- | | |
|----------|---|
| EN 288-3 | Specification and approval of welding procedures for metallic materials - Part 3 : Welding procedure tests for the arc welding of steels |
| EN 288-4 | Specification and approval of welding procedures for metallic materials - Part 4 : Welding procedure tests for the arc welding of aluminium and its alloys |
| EN 26520 | Classification of imperfections in metallic fusion welds, with explanations (ISO 6520:1982) |
| CR 12187 | Welding - Guidelines for a grouping system of materials for welding purposes
<small>SIST EN 1321:1998</small> |
| CR 12361 | Destructive test on welds in metallic materials - Etchants for macroscopic and microscopic examination
<small>https://standards.iteh.ai/catalog/standards/sist/94f7c9f7-3e02-4adc-8d04-c2b2e07e814/sist-en-1321-1998</small> |

3 Definitions

For the purposes of this standard, the following definitions apply :

3.1 macroscopic examination : the examination of a test specimen by the naked eye, or under low magnification, with or without etching.

3.2 microscopic examination : the examination by microscope with a magnification normally within 50 to 500 times, with or without etching.

3.3 operator: the person who performs the macroscopic and/or microscopic examination.

4 Principle

Macroscopic and microscopic examination is used to reveal the macroscopic and microscopic features of a welded joint, usually by the examination of transverse sections.

This is done by visual and/or optical examination of the prepared surface before or after etching.

In the case of microscopic examination higher magnifications are required in comparison with the visual examination.

5 Abbreviations

For the purpose of this standard, the following abbreviations apply:

A Macroscopic examination

I Microscopic examination

E Etched

U Unetched

Abbreviations for parent metals shall be in accordance with the grouping systems in EN 288-3 for steels and EN 288-4 for aluminium and its alloys.

Grouping systems for other materials are given in CR 12187.

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The same grouping systems shall also be used for weld metal.

The abbreviations for etchants should be taken from CR 12361 whenever applicable.

NOTE: A trade mark can be used if CR 12361 is not applicable.

6 Purpose of the test

The purpose of macroscopic and microscopic examinations shall be to assess features as described in table 1. The features to be examined shall be given in the application standard.