

## **Specimen dimensions and procedure for cross tension testing resistance spot and embossed projection welds**

Specimen dimensions and procedure for cross  
tension testing resistance spot and embossed  
projection welds

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 14272:2002 sisaldab Euroopa standardi EN ISO 14272:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 19.04.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 14272:2002 consists of the English text of the European standard EN ISO 14272:2001.</p> <p>This document is endorsed on 19.04.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This standard specifies specimen dimensions and a testing procedure for the cross tension testing of spot and projection welds in overlapping sheets in any metallic material of thickness 0,5 mm to 3 mm, where the welds have a maximum diameter of 7t (where t is the sheet thickness in mm). The object of cross tension testing is to determine the tensile force that the test specimen can sustain.</p>	<p><b>Scope:</b></p> <p>This standard specifies specimen dimensions and a testing procedure for the cross tension testing of spot and projection welds in overlapping sheets in any metallic material of thickness 0,5 mm to 3 mm, where the welds have a maximum diameter of 7t (where t is the sheet thickness in mm). The object of cross tension testing is to determine the tensile force that the test specimen can sustain.</p>
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**ICS** 25.160.40

**Võtmesõnad:** cross tension test, definition, definitions, dimensions, projection welding, resistance projection welds, resistance seam welds, resistance spot welds, resistance welding, tensile testing, test specimens, welded joints, welding

ICS 25.160.40

English version

Specimen dimensions and procedure for cross tension testing  
resistance spot and embossed projection welds (ISO  
14272:2000)

Dimensions des éprouvettes et mode opératoire pour  
l'essai de traction sur éprouvettes en croix des soudures  
par résistance par points et par bossages (ISO  
14272:2000)

Probenmaße und Verfahren für die Kopfzugprüfung and  
Widerstandspunkt- und Buckelschweißungen mit  
geprägten Buckeln (ISO 14272:2000)

This European Standard was approved by CEN on 5 October 2001.

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 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 Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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## Foreword

The text of the International Standard from Technical Committee IIW has been taken over as a European Standard 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 2002, and conflicting national standards shall be withdrawn at the latest by April 2002.

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

## Endorsement notice

The text of the International Standard ISO 14272:2000 has been approved by CEN as a European Standard without any modifications.

NOTE Normative references to International Standards are listed in annex ZA (normative).

**Annex ZA**  
(normative)**Normative references to international publications  
with their relevant European publications**

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 (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 7500-1	1999	Metallic materials - Verification of static uniaxial testing machines - Part 1: Tension/compression testing machines	EN ISO 7500-1	1999

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*Dimensions des éprouvettes et mode opératoire pour l'essai de traction sur  
éprouvettes en croix des soudures par résistance par points et par  
bossages*



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## Foreword

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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 14272 was prepared in collaboration with the International Institute of Welding, which has been approved by the ISO Council as an international standardizing body in the field of welding.





# Specimen dimensions and procedure for cross tension testing resistance spot and embossed projection welds

## 1 Scope

This International Standard specifies specimen dimensions and a testing procedure for the cross tension testing of spot and projection welds in overlapping sheets in any metallic material of thickness 0,5 mm to 3 mm, where the welds have a maximum diameter of  $7\sqrt{t}$  (where  $t$  is the sheet thickness in mm).

The object of cross tension testing is to determine the tensile force that the test specimen can sustain.

## 2 Normative reference

The following normative document contains 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 references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 7500-1, *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the force-measuring system.*

## 3 Terms and definitions

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

### 3.1

#### **cross tension force**

maximum force obtained from the test

### 3.2

#### **plug diameter**

$d_p$

⟨plug failure⟩ mean diameter of the plug

See Figure 1 a).

### 3.3

#### **weld diameter**

$d$

⟨partial plug failure⟩ mean diameter of the fused zone measured at the interface omitting the corona bond area and the maximum diameter of the plug component of the failure

See Figure 1 a).

NOTE Measurement of the minimum diameter of the plug component should be quoted separately.