

## **Resistance welding - Procedures for determining the weldability lobe for resistance spot, projection and seam welding**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 14327:2004 sisaldab Euroopa standardi EN ISO 14327:2004 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 27.07.2004 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 14327:2004 consists of the English text of the European standard EN ISO 14327:2004.</p> <p>This document is endorsed on 27.07.2004 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 European Standard specifies procedures for determining the weldability lobe for producing quality welds. The tests are used in particular to determine the weldability lobe for coated/uncoated steels, stainless steels and aluminium and its alloys but may also be used for other metallic materials.</p>	<p><b>Scope:</b></p> <p>This European Standard specifies procedures for determining the weldability lobe for producing quality welds. The tests are used in particular to determine the weldability lobe for coated/uncoated steels, stainless steels and aluminium and its alloys but may also be used for other metallic materials.</p>
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Võtmesõnad:

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English version

Resistance welding - Procedures for determining the weldability  
lobe for resistance spot, projection and seam welding (ISO  
14327:2004)

Soudage par résistance - Modes opératoires pour la  
détermination du domaine de soudabilité pour le soudage  
par résistance par points, par bossages et à la molette  
(ISO 14327:2004)

Widerstandsschweißen - Verfahren für das Bestimmen des  
Schweißbereichsdiagramms für das Widerstandspunkt-,  
Buckel- und Rollennahtschweißen (ISO 14327:2004)

This European Standard was approved by CEN on 17 December 2003.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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## Foreword

This document (EN ISO 14327:2004) 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 October 2004, and conflicting national standards shall be withdrawn at the latest by October 2004.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## Introduction

This European Standard enables the weldability lobe to be determined for resistance spot, projection and seam welding. This standard does not invalidate procedures for the determination of the weldability lobe or their approval documents in current use which complied with the national or International Standards or regulations existing at that time, provided the intent of the technical requirement is satisfied and the specified application, its performance and equipment with which it is performed remain unchanged.

When this standard is referenced for contractual purposes, all questions relating to the specification and implementation of welding procedures should be agreed between the contacting parties at the time of enquiry or at the contract stage.

It has been assumed in this standard that the execution of its provisions is entrusted to appropriately trained, skilled and experienced personnel.

For the quality of welded structures the relevant part of EN ISO 14554 should be applicable. The specification of procedures should follow guidelines as in EN ISO 15609-5.

## 1 Scope

This European Standard specifies procedures for determining the weldability lobe for producing quality welds. The tests are used in particular to determine the weldability lobe for coated/uncoated steels, stainless steels and aluminium and its alloys but may also be used for other metallic materials.

The aim of this procedure is to allow determination of the range of welding parameters which give rise to an acceptable weld quality as defined within precise limits. The procedure can be used to determine:

- a) The influence of electrode material, electrode shape and dimensions on the available welding range for a particular material and welding machine.
- b) The influence of material type and thickness on the available welding range when using a particular combination of welding electrodes and welding machine.
- c) The influence of welding machine type, or electrode cooling on the available welding range for a particular material using a particular electrode shape.
- d) The available welding range in a production situation.

## 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 (including amendments).

EN ISO 14329:2003, *Resistance welding — Destructive tests of welds — Failure types and geometric measurements for resistance spot, seam and projection welds (ISO 14329:2003).*

EN ISO 15609-5:2004, *Specification and qualification of welding procedures for metallic materials — Welding procedure specification — Part 5: Resistance welding (ISO 15609-5:2004).*

ISO 669:2000, *Resistance welding — Resistance welding equipment — Mechanical and electrical requirements.*

ISO 693, *Dimensions of seam welding wheel blanks.*

ISO 5182, *Welding — Materials for resistance welding electrodes and ancillary equipment.*

EN 25184, *Straight resistance spot welding electrodes (ISO 5184:1979).*

EN 25821, *Resistance spot welding electrode caps (ISO 5821:1979).*

ISO 5830, *Resistance spot welding — Male electrode caps.*

EN 28167, *Projections for resistance welding (ISO 8167:1989).*

ISO/DIS 14373, *Resistance welding — Procedure for spot welding of uncoated and coated low carbon steels.*