

Resistance welding - Vickers hardness testing (low-force and microhardness) of resistance spot, projection, and seam welds (ISO 14271:2011)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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Inglisekeelsed võtmesõnad: definitions, hardening processes, hardness tests, hv, projection seam welds, projection welding, resistance projection welds, resistance seam welds, resistance spot welds, resistance welding, roller seam welding, welded joints, welding, vickers, vickers hardness,

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English Version

Resistance welding - Vickers hardness testing (low-force and microhardness) of resistance spot, projection, and seam welds
(ISO 14271:2011)

Soudage par résistance - Essais de dureté Vickers (force réduite et microdureté) sur soudures par résistance par points, par bossages et à la molette (ISO 14271:2011)

Widerstandsschweißen - Vickers-Härteprüfung (Kleinkraft- und Mikrohärtbereich) von Widerstandspunkt-, Buckel- und Rollennahtschweißverbindungen (ISO 14271:2011)

This European Standard was approved by CEN on 27 August 2011.

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Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

This document (EN ISO 14271:2011) has been prepared by Technical Committee ISO/TC 11W “International Institute of Welding” in collaboration with Technical Committee CEN/TC 121 “Welding” the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by March 2012, and conflicting national standards shall be withdrawn at the latest by March 2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 14271:2011 has been approved by CEN as a EN ISO 14271:2011 without any modification.

Resistance welding — Vickers hardness testing (low-force and microhardness) of resistance spot, projection, and seam welds

1 Scope

This International Standard specifies the procedures for the hardness testing of etched cross-sections of resistance spot, projection, and seam welds.

The aim of the hardness tests is to determine the Vickers hardness, in the low-force or microhardness range, of the weld nugget, the heat affected zone, and parent material in ferrous or non-ferrous metals for welds made in sheets of thickness 0,5 mm to 6 mm.

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 6507-1, *Metallic materials — Vickers hardness test — Part 1: Test method*

ISO 6507-2, *Metallic materials — Vickers hardness test — Part 2: Verification and calibration of testing machines*

ISO 6507-3, *Metallic materials — Vickers hardness test — Part 3: Calibration of reference blocks*

ISO 6507-4, *Metallic materials — Vickers hardness test — Part 4: Tables of hardness values*

ISO 17677-1, *Resistance welding — Vocabulary — Part 1: Spot, projection and seam welding*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 17677-1 and the following apply.

3.1

low-force hardness test

Vickers hardness test using an applied force greater than or equal to 1,961 N, but less than or equal to 9,807 N

3.2

microhardness test

Vickers hardness test using an applied force less than 1,961 N

NOTE Vickers hardness tests in the low-force range and Vickers microhardness tests give different results that are not easily correlated.