
**Destructive tests on welds in metallic
materials — Hardness testing —**

**Part 2:
Microhardness testing of welded joints**

*Essais destructifs des soudures sur matériaux métalliques — Essais de
dureté —*

Partie 2: Essai de microdureté des assemblages soudés



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.

This document is a preview generated by EVS

© ISO 2003

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
1 Scope	1
2 Normative references	1
3 Principle	1
4 Symbols and abbreviated terms	2
5 Preparation of test specimens	2
6 Test procedure	2
6.1 Rows of indentations (R)	2
6.2 Individual indentations (E)	3
7 Test results	3
8 Test report	3
Annex A (informative) Example of a test report for rows of hardness tests (R) on welded joints	7
Annex B (informative) Example of a test report for individual hardness tests (E) on welded joints	8
Bibliography	9

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 9015-2 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 5, *Testing and inspection of welds*.

ISO 9015 consists of the following parts, under the general title *Destructive tests on welds in metallic materials — Hardness testing*:

- *Part 1: Hardness test on arc welded joints*
- *Part 2: Microhardness testing of welded joints*

Destructive tests on welds in metallic materials — Hardness testing —

Part 2: Microhardness testing of welded joints

1 Scope

This part of ISO 9015 specifies microhardness tests on transverse sections of welded joints of metallic materials with high hardness gradients. It covers Vickers hardness tests in accordance with ISO 6507-1, normally with test loads of 0,98 N to less than 49 N (HV 0,1 to less than HV 5).

NOTE Testing should be carried out to ensure that the highest and/or the lowest level of hardness of both parent materials (in the case of dissimilar materials, both parent materials) and weld metal is determined.

This part of ISO 9015 does not cover hardness testing of welds with loads of 49,03 N and above, covered by ISO 9015-1.

This part of ISO 9015 is not applicable to hardness testing of very narrow welds, e.g. those typically produced by laser and electron beam welding, covered by ISO 22826.

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*

3 Principle

Microhardness testing is carried out in accordance with ISO 6507-1.

The microhardness tests may be carried out in the form of rows of indentations, R, or as individual indentations, E.

When a type of weld is not shown in the examples, the test procedure shall be appropriate to the welded joint.

Unless otherwise specified, the test shall be carried out at ambient temperature (23 ± 5) °C.