
Destructive tests on welds in metallic materials — Transverse tensile test

*Essais destructifs des soudures sur matériaux métalliques — Essai de
traction transversale*



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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols and abbreviated terms	1
5 Principle	2
6 Preparation of test specimens	2
6.1 Location	2
6.2 Marking	2
6.3 Heat treatment and/or ageing	3
6.4 Extraction	3
6.4.1 General	3
6.4.2 Steel	3
6.4.3 Other metallic materials	3
6.5 Machining	3
6.5.1 General	3
6.5.2 Location	3
6.5.3 Dimensions	4
6.5.4 Surface preparation	7
7 Test procedure	7
8 Test results	7
8.1 General	7
8.2 Location of fracture	7
8.3 Examination of fracture surfaces	7
9 Test report	8
Annex A (informative) Example of a test report	9
Bibliography	10

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 5, *Testing and inspection of welds*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 121, *Welding and allied processes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 4136:2012), which has been technically revised.

The main changes are as follows:

- the prescription of the ambient temperature has been updated to conform with ISO 6892-1;
- [Table 1](#) has been updated and figures have been changed accordingly;
- the diameter of pipes has been clarified;
- the determination of section S_0 has been clarified;
- a Bibliography has been created.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Destructive tests on welds in metallic materials — Transverse tensile test

1 Scope

This document specifies the sizes of test specimen and the procedure for carrying out transverse tensile tests in order to determine the tensile strength and the location of fracture of a welded butt joint.

This document applies to metallic materials in all forms of product with joints made by any welded butt joint.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 4063, *Welding and allied processes — Nomenclature of processes and reference numbers*

ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

ISO 6892-2, *Metallic materials — Tensile testing — Part 2: Method of test at elevated temperature*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

4 Symbols and abbreviated terms

[Table 1](#) specifies the symbols to be used for the transverse tensile tests. These symbols are used in [Figures 1](#) to [4](#).