
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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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 4136 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 5, *Testing and inspection of welds*.

This third edition cancels and replaces the second edition (ISO 4136:2001), which has been technically revised.

Destructive tests on welds in metallic materials — Transverse tensile test

1 Scope

This International Standard 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 International Standard applies to metallic materials in all forms of product with joints made by any fusion welding process.

Unless otherwise specified for specific points in this International Standard, the general principles of ISO 6892-1 and ISO 6892-2 apply.

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 4063:2009, *Welding and allied processes — Nomenclature of processes and reference numbers*

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

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

3 Principle

An increasing tensile load is continuously applied until rupture occurs in a test specimen taken transversely from a welded joint.

Unless otherwise specified, the test shall be carried out at ambient temperature $(23 \pm 5) ^\circ\text{C}$.

4 Symbols and abbreviated terms

The symbols and abbreviated terms to be used for the transverse tensile tests are specified in Table 1 and represented in Figures 1 to 3.