
**Destructive tests on welds in metallic
materials — Longitudinal tensile test on
weld metal in fusion welded joints**

*Essais destructifs des soudures sur matériaux métalliques — Essai de
traction longitudinale du métal fondu des assemblages soudés par fusion*



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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.ch
Web www.iso.ch

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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 3.

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 5178 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 5, *Testing and inspection of welds*.

Annex A of this International Standard is for information only.

Destructive tests on welds in metallic materials — Longitudinal tensile test on weld metal in fusion welded joints

1 Scope

This International Standard specifies the sizes of test specimens and the test procedure for carrying out longitudinal tensile tests on cylindrical test specimens in order to determine the mechanical properties of weld metal in a fusion welded joint.

This International Standard applies to metallic materials in all forms of product with joints made by any fusion welding process, having joint sizes that are sufficient to obtain cylindrical test specimens with dimensions in accordance with ISO 6892.

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

2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, this publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 6892, *Metallic materials — Tensile testing at ambient temperature*.

3 Principle

An increasing tensile load is continuously applied until rupture occurs in a cylindrical test specimen taken longitudinally from the weld metal in a welded joint.

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

4 Symbols and abbreviated terms

The symbols and abbreviated terms to be used for the longitudinal tensile tests are specified in ISO 6892.