
Welding consumables — Test methods —
Part 1:
Test methods for all-weld metal test
specimens in steel, nickel and nickel alloys

Produits consommables pour le soudage — Méthodes d'essai —

Partie 1: Méthodes d'essai pour les éprouvettes de métal fondu hors dilution pour le soudage de l'acier, du nickel et des alliages de nickel



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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 part of ISO 15792 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 15792-1 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 3, *Welding consumables*.

ISO 15792 consists of the following parts, under the general title *Welding consumables — Test methods*:

- *Part 1: Test methods for all-weld metal test specimens in steel, nickel and nickel alloys*
- *Part 2: Preparation of single-run and two-run technique test specimens in steel*
- *Part 3: Classification testing of positional capacity and root penetration of welding consumables in a fillet weld*

Introduction

It should be noted that the mechanical properties of all-weld metal test specimens used to classify welding consumables could vary from those obtained in production joints because of differences in welding procedure such as electrode diameter, width of weave, welding position and material composition.

Test conditions prescribed and results required should not be considered to be requirements or expectations for a procedure qualification.

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Welding consumables — Test methods —

Part 1:

Test methods for all-weld metal test specimens in steel, nickel and nickel alloys

1 Scope

This part of ISO 15792 specifies the preparation of test piece and specimens. The purpose is to determine mechanical properties of all-weld metal where required by the consumable classification standard or for other purposes, in arc welding of steel, nickel and nickel alloys.

This part of ISO 15792 is not applicable to single- or two-pass welding or fillet welding. For these cases, ISO 15792-2 and ISO 15792-3 apply.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 15792. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 15792 are encouraged to investigate the possibility of applying the most recent editions of the normative documents 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 5178, *Destructive tests on welds in metallic materials — Longitudinal tensile test on weld metal in fusion welded joints*.

ISO 9016:2000, *Destructive tests on welds in metallic materials — Impact tests — Test specimen location, notch orientation and examination*.

ISO 13916:1996, *Welding — Guidance on the measurement of preheating temperature, interpass temperature and preheat maintenance temperature*.

3 General requirements

Welding consumables to be tested shall be representative of the manufacturer's products to be classified or tested. Test pieces shall be prepared as described below.

4 Test plate material

The material to be used for the test piece shall be compatible with the weld metal provided by the welding consumable tested. Alternatively, the groove edges and the backing strip shall be built up with at least two layers using the welding consumable being tested.