AS/NZS ISO 17637:2019
ISO 17637:2016

AS/NZS ISO 17637:2019

Australian/New Zealand Standard™

Non-destructive testing of welds—Visual testing of fusion-welded joints

AS/NZS ISO 17637:2019

This Joint Australian/New Zealand Standard™ was prepared by Joint Technical Committee WD-003, Welding Of Structures. It was approved on behalf of the Council of Standards Australia on 11 January 2019 and by the New Zealand Standards Approval Board on 20 January 2019.

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The following are represented on Committee WD-003:

Australasian Corrosion Association
Australian Chamber of Commerce and Industry
Australian Industry Group
Australian Steel Association
Australian Steel Institute
Australian Welding Institute
Austroads
Bureau of Steel Manufacturers of Australia
Energy Networks Australia
New Zealand Heavy Engineering Research Association
New Zealand Non-Destructive Testing Association
Steel Reinforcement Institute of Australia
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Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee WD-003, Welding of Structures.

The objective of this Standard is to specify the visual testing of fusion welds in metallic materials. It may also be applied to visual testing of the joint prior to welding.

This Standard is identical with, and has been reproduced from, ISO 17637:2016, *Non-destructive testing of welds — Visual testing of fusion-welded joints.*

As this document has been reproduced from an International Standard, a full point substitutes for a comma when referring to a decimal marker.

The terms “normative” and “informative” are used in Standards to define the application of the annexes to which they apply. A “normative” annex is an integral part of a Standard, whereas an ”informative” annex is only for information and guidance.

Contents

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).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 44, *Welding and allied processes*, Subcommittee SC 5, *Testing and inspection of welds*.

This second edition cancels and replaces the first edition (ISO 17637:2003), which has been technically revised.

Requests for official interpretations of any aspect of this International Standard should be directed to the Secretariat of ISO/TC 44/SC 5 via your national standards body. A complete listing of these bodies can be found at www.iso.org.

Australian/New Zealand Standard

Non-destructive testing of welds—Visual testing of fusion-welded joints

1 Scope

This document specifies the visual testing of fusion welds in metallic materials. It may also be applied to visual testing of the joint prior to welding.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

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

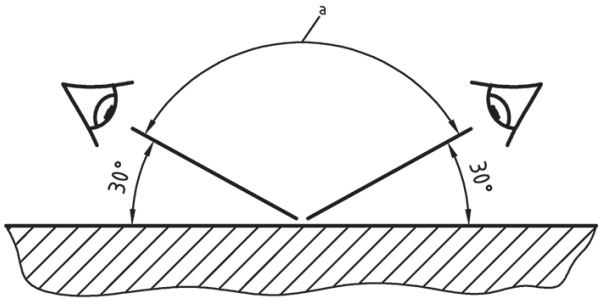
— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

4 Test conditions and equipment

The illuminance at the surface with white light shall be a minimum of 350 lx; wearing of tinted goggles (e.g. protective sunglasses) increases the minimum illuminance. However, 500 lx is recommended.

For direct inspection, the access shall be sufficient to place the eye within 600 mm of the surface to be examined and at an angle not less than 30° (see Figure 1).



a Range.

Figure 1 — Access for testing

Remote inspection using mirrors, boroscopes, fibre optic cables or cameras shall be considered when the access for testing in accordance with Figure 1 is not possible or when specified by an application standard.

An additional light source can be used to increase the contrast and relief between imperfections and the background.

Where the result of visual testing is inconclusive, the visual test should be supplemented by other non-destructive testing methods for surface inspections.

Examples of equipment used for visual testing are given in Annex A.