

AS/NZS 2205.5.1:2024  
ISO 17639:2022



Australian/New Zealand Standard™

# Methods for destructive testing of welds in metal

**Method 5.1: Macroscopic and microscopic examination of welds (ISO 17639:2022, IDT)**



AS/NZS 2205.5.1:2024

This Joint Australian/New Zealand Standard™ was prepared by Joint Technical Committee WD-003, Welding Of Structures. It was approved on behalf of Standards Australia's Standards Development and Accreditation Committee on 06 September 2024 and by the New Zealand Standards Approval Board on 04 September 2024.

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- Australian Industry Group
- Australian Manufacturing Workers Union
- Australian Steel Association
- Australian Steel Institute
- Australian Welding Institute
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## Method 5.1: Macroscopic and microscopic examination of welds (ISO 17639:2022, IDT)

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## Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee WD-003, Welding of Structures, to supersede AS/NZS 2205.5.1:2019.

The objective of this document is to specify recommendations for specimen preparation, test procedures and their main objectives for macroscopic and microscopic examination.

This document is identical with, and has been reproduced from, ISO 17639:2022, *Destructive tests on welds in metallic materials — Macroscopic and microscopic examination of welds*.

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## Foreword

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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](http://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](http://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](http://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 second edition cancels and replaces the first edition (ISO 17639:2003), which has been technically revised.

The main changes are as follows:

- [Clause 2](#) has been updated;
- the designations according to ISO/TR 15608 have been updated in [Clause 10](#).

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](http://www.iso.org/members.html).

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