

Australian/New Zealand Standard™

Structural steel welding

Part 5: Welding of steel structures subject to high levels of fatigue loading



AS/NZS 1554.5:2011

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 18 May 2011 and on behalf of the Council of Standards New Zealand on 1 June 2011.

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The following are represented on Committee WD-003:

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Australian Industry Group
Australian Steel Institute
AUSTROADS
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PREFACE

This Standard was prepared by the Joint Australian/New Zealand Committee WD-003, Welding of Structures, to supersede AS/NZS 1554.5:2004.

The objective of this Standard is to provide rules for the welding of steel structures subject to high levels of fatigue loading.

The objective of this edition is to update the Standard and bring it in line with the latest edition of AS/NZS 1554.1, *Structural steel welding, Part 1: Welding of steel structures*.

This edition incorporates the following major changes to the 2004 edition:

(a) *Amendments to the following Clauses:*

1.2, 1.6 (new title), 1.6.1 (new), 2.1(c), 2.3.1, 3.2.5 (new paragraph), 4.1.2(d)(f)(h)(j)(k)(iii) (new sub clauses), 4.6.1.2 (d), 4.2 (b), 4.10 (new note), 4.12.2, 5.1.1 (new note), 5.1.2 (note added), 5.3.3 (second paragraph), 5.3.5 (new), 5.7.1 (note added), 6.3.3 (noted added), 7.2(a) (new), 7.3 (first paragraph – new), Appendix F (new).

(b) *Amendments to the following Tables:*

4.6.1(A), 4.6.1(B), 4.6.1(C), 4.6.2, 4.7.1 (new notes, notes 1 and 3 amended), 4.11(D) (new), 4.11(A) (items b, e, o, u), 4.11(C) item (d) (note added), 4.12.2.3(A), 4.12.2.3(B) (new), 5.3.4(A), B1 (new steel types added).

(c) *Amendments to the following Figure:*

3.2.5(c) (new).

This Standard specifically applies to welds subject to fatigue loading in excess of the range covered by AS/NZS 1554.1, *Structural steel welding, Part 1: Welding of steel structures* and hence, it should not be specified where AS/NZS 1554.1 is acceptable.

It is expected that welds covered by this Standard will not normally occur with structures such as buildings, tanks or silos, but only in certain classes of machinery and transport equipment.

The Standard requires that weld preparations, welding consumables and welding procedures be qualified before commencement of welding. Prequalified joint preparations, welding consumables and welding procedures are also given in the Standard.

Statements expressed in mandatory terms in notes to Tables and Figures are deemed to be requirements to this Standard.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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