

AS/NZS 1554.5:1995

Australian/New Zealand Standard

Structural steel welding

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

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PREFACE

This edition of this Standard was prepared by the Joint Australian/New Zealand Committee WD/3 on Welding of Structures to supersede AS 1554.5—1989.

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

This edition incorporates the following changes to the 1989 edition:

- (a) The scope has been expanded to provide for steel structures complying with [AS 4100](#), *Steel Structures* and NZS 3404.1, *Steel Structures Standard*.
- (b) Requirements for safety precautions have been added (Clause 1.6).
- (c) Section 3 has been revised to rectify some anomalies in the previous edition.
- (d) Tables 4.5.1(B), 4.5.1(C) and 5.3.4 have been revised to reflect changes in standards for steels, and to accommodate new steel types and New Zealand steels.
- (e) Appendix B has been revised to align with [AS 4100](#), and NZS 3404.1.
- (f) Requirements for repair of stop/starts have been included (Clause 5.8.3).
- (g) Methods of radiographic examination have been revised.
- (h) Necessary changes were made throughout the Standard to accommodate New Zealand conditions.
- (e) Editorial changes and adjustments, including the following:
 - (i) Update of referenced Standards.
 - (ii) Alignment with current Standards Australia and Standards New Zealand policies.

The Standard is basically in line with [AS 1554.1](#), *Structural steel welding*, Part 1: *Welding of steel structures*; however, it specifically applies to welds subject to fatigue loading in excess of the range covered by [AS 1554.1](#) and hence it should not be specified where [AS 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 preparation, 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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