AS/NZS 1554.4:1995

Australian/New Zealand Standard®

Structural steel welding

Part 4: Welding of high strength quenched and tempered steels

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Association of Consulting Engineers, Australia
Australian Chamber of Commerce and Industry
Australian Institute of Steel Construction
AUSTROADS
Bureau of Steel Manufacturers of Australia
Electricity Supply Association of Australia
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PREFACE

This edition of this Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee WD/3 on Welding of Structures to supersede AS 1554.4—1989.

The objective of this Standard is to provide rules for the welding of a wide range of steel constructions, using high strength quenched and tempered steel parent material.

This edition incorporates the following major changes to the 1989 edition:

(a) The scope has been expanded and revised to provide for steel structures complying with AS 4100, *Steel structures* and NZS 3404.1:Part 1, *Steel structures Standard.*

(b) Requirements for safety precautions have been added (Clause 1.7).

(c) Clause 3.2.5, Figure 3.2.5 and Tables 4.4(A) and (B) have been amended to rectify some anomalies concerning requirements of FP weld category.

(d) Clause 3.6 has been revised to restrict the use of plug and slot welds to non-structural applications.

(e) Section 3 has been reviewed and updated.

(f) Table 4.5.1(B) has been revised to accommodate steels to AS 3597, *Structural and pressure vessel steel—Quenched and tempered plate.*

(g) Requirements for repair of stop/starts have been added (Clause 5.8.3).

(h) Requirements for radiographic examination have been revised.

(i) Necessary changes have been made throughout the Standard to accommodate New Zealand conditions.

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.

The Standard, in catering for structures subject to fatigue conditions as well as statically loaded structures, provides three categories of welds with three differing levels of weld quality assurance, associated with the different types of service to which the welds are subjected. The intention is that the designer should select the category suited to the severity of the service and nominate this on the drawings; where a structure contains more than one category, this will ensure that appropriate levels of supervision and inspection will be applied to the relevant parts of the structure.

Statements expressed in mandatory terms in notes to tables and figures are deemed to be requirements of 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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