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The following are represented on Committee BD-023:

- Australian Chamber of Commerce and Industry
- Australian Industry Group
- Australian Steel Association
- Australian Steel Institute
- Austroads
- Bureau of Steel Manufacturers of Australia
- Business New Zealand
- New Zealand Heavy Engineering Research Association
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This standard was issued in draft form for comment as DR AS/NZS 3678.
Australian/New Zealand Standard

Structural steel—Hot-rolled plates, floorplates and slabs

 Originated in Australia as part of AS A1—1925.
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee BD-023, Structural Steel, to supersede AS/NZS 3678:2011.

This Standard incorporates Amendment No. 1 (December 2017). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of this Standard is to specify requirements for manufacturers and suppliers of hot-rolled plates, floorplates and slabs for general structural and engineering applications.

This edition includes the following major changes from the previous edition.

(a) Requirements for type testing and minimum production testing and inspections have been included in the normative appendix on product conformity.

(b) Test certificates are required to be available for all products produced to this Standard.

(c) Labelling requirements have been added to enable products compliant with this Standard to be traceable back to their corresponding test certificate.

(e) Definitions, clause numbering and layout across the four steel-product Standards AS/NZS 1163, AS/NZS 3678, AS/NZS 3679.1 and AS/NZS 3679.2 are consistent, wherever practicable.

(f) Additional definitions in Clause 3.

(g) Notation clause removed as duplicated in document. All notation defined in line.

(h) Sulfur limits for some Z grades.

(i) Internal soundness clause added.

(j) Tensile test dimensions defined.

(k) Through thickness tested grades down to 12 mm thickness.

(l) Mechanically tested grades up to 200 mm thickness.

(m) L0 impact tested grades have been reintroduced.

(n) ‘None’ impact designation has been removed.

(o) Option for zinc coating classification referring to AS/NZS 2312.2, Clause 9.1.

A statement expressed in mandatory terms in a note to a table is deemed to be a requirement 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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1 SCOPE

This Standard specifies requirements for the production and supply of hot-rolled structural steel plates and floorplates for mechanically-tested steels, analysis-only steels, and mechanically-tested weathering steels. This Standard also specifies requirements for the production and supply of wide slabs as fully-killed analysis-only steel.

This Standard is intended for general structural and engineering applications. All grades specified in this Standard are suitable for—

(a) welding in accordance with AS/NZS 1554, Parts 1, 2, 5 and 7; and
(b) fastening as specified in AS 3990, AS 4100, AS/NZS 4600, AS 5100.6 and NZS 3404.1.

This Standard does not cover the following:

(i) Steel plates for pressure equipment.
(ii) Hot-rolled steel flat products.
(iii) Quenched and tempered plate – structural and pressure vessel steel.

Requirements for product conformity to this Standard are given in Appendix B.

NOTES:
1 Guidelines to purchasers on requirements that should be specified by the purchaser and those that should or may be agreed on at the time of enquiry and order are given in Appendix A.
2 Guidelines on cold-bending and hot-forming of plate during fabrication are given in Appendix C.

2 NORMATIVE REFERENCES

The following normative documents are referenced in this Standard.

NOTE: Documents referenced for informative purposes are listed in the Bibliography.

AS
1391 Metallic materials—Tensile testing at ambient temperature
1544 Methods for impact tests on metals
1544.2 Part 2: Charpy V-notch
1733 Methods for the determination of grain size in metals
2706 Numerical values—Rounding and interpretation of limiting values
3990 Mechanical equipment—Steelwork
4100 Steel structures
5100 Bridge design
5100.6 Part 6: Steel and composite construction

AS/NZS
1050 Methods for the analysis of iron and steel (series)
1050.1 Part 1: Sampling iron and steel for chemical analysis
1365 Tolerances for flat-rolled steel products
AS/NZS 3678:2016 Structural steel - Hot-rolled plates, floorplates and slabs

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