

AS 4100:2020



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Steel structures



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- Australian Steel Institute
- Austroroads
- Bureau of Steel Manufacturers of Australia
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Preface

This Standard was prepared by the Standards Australia Committee BD-001, Steel Structures, to supersede AS 4100—1998.

The objective of this Standard is to provide designers of steel structures with specifications for steel structural members used for load-carrying purposes in buildings and other structures.

Major changes to the 1998 edition include the following:

- (a) Reference to the “construction specification” (as the document containing the particular design data and details to be provided) as one deliverable from the design process. A definition of the construction specification consistent with that in AS/NZS 5131 has also been provided ([Clauses 1.3.16](#) and [1.6.2](#)).
- (b) Introduction of the definition of “construction category” and an informative appendix providing guidance on selection of the appropriate construction category, both consistent with AS/NZS 5131 ([Clauses 1.3.15](#) and [1.7.2](#), and [Appendix L](#)).
- (c) Definition and description of “architecturally exposed structural steelwork” (AESS) ([Clauses 1.3.3](#) and [1.7.3](#)).
- (d) Definition and treatment of “lamellar tearing” consistent with AS/NZS 1554.1 ([Clauses 1.3.40](#) and [3.8](#), and [Appendix M](#)).
- (e) Alignment with AS/NZS 5100.6:2017 (various clauses).
- (f) Referencing of AS/NZS 5131:2016 for the majority of requirements in the fabrication and erection sections of this Standard ([Sections 14](#) and [15](#)).
- (g) Alignment with AS/NZS 1252.1:2016, which includes introduction of an “alternative bolt assembly type” to EN 14399-3 System HR for grade 8.8 bolts and an “additional bolt assembly type” to EN 14399-3 System HR for grade 10.9 bolts. The Australian Steel Institute (ASI), Technical Note TN-001, *High strength structural bolt assemblies to AS/NZS 1252:2016*, provides background and basis for the revision to AS/NZS 1252:1996 ([Clauses 9.1.6](#), [9.3](#), [15.2](#)).
- (h) New specification of geometrical tolerances for fabrication and erection aligned with AS/NZS 5131 ([Clauses 14.4](#) and [15.3](#)).
- (i) New [Appendix K](#) “Statistical data”, aligned with AS/NZS 5100.6.
- (j) Inclusion of shear modulus G at elevated temperature in [Clause 12.4.2](#) and a new [Clause 12.4.3](#), Slenderness at elevated temperature

[Table M.2](#), Criteria affecting the target value of Z_{Ed} , was adapted with permission from Table 3.2 of EN 1993-1-10. Copyright © 2005. CEN, Belgium. www.cen.eu

The terms “normative” and “informative” are used in Standards to define the application of the appendices 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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