

Australian/New Zealand Standard™

Cold-formed stainless steel structures



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STANDARDS
NEW ZEALAND
Te Kaitiaki Take Kōwhiri

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Australian Stainless Steel Development Association
Bureau of Steel Manufacturers of Australia
Institution of Engineers Australia
New Zealand Stainless Steel Development Association
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee BD-086, Stainless Steel Structures.

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

Sections 1, 2, 3, 4 and 5 of this Standard are based on ANSI/ASCE-8-90 Specification for the Design of Cold-formed Stainless Steel Structural Members. Section 6 is based on AS/NZS 4600 and AS/NZS 1664.1.

Statements expressed in mandatory terms in notes to tables 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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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out minimum requirements for the design of stainless steel structural members cold-formed to shape from annealed or temper-rolled sheet, strip, plate or flat bar stainless steels used for load-carrying purposes in buildings. It may also be used for structures other than buildings provided appropriate allowances are made for dynamic effects.

For the purpose of this Standard, steels with at least 10.5% chromium and up to 1.2% carbon are considered as stainless steels.

1.2 REFERENCED DOCUMENTS

The documents referred to in this Standard are listed in Appendix A.

1.3 DEFINITIONS

For the purpose of this Standard, the definitions below apply. Definitions peculiar to a particular clause or section are also given in that clause or section.

NOTE: In this Standard, terms in square brackets relate to New Zealand use.

1.3.1 Action [Effect]

The cause of stress, dimensional change, or displacement in a structure or a component of a structure.

1.3.2 Action effect [Action] or load effect [action]

The internal force, moment, deformation, crack, or like effect caused by one or more actions [effects].

1.3.3 Arched compression element

A circular or parabolic arch-shaped compression element having an inside radius-to-thickness ratio greater than 8, stiffened at both ends by edge stiffeners. (See Figure 1.3(d).)

1.3.4 Bend

Portion adjacent to flat elements and having a maximum inside radius-to-thickness ratio (r_i/t) of 8. (See Figure 1.1.)

1.3.5 Braced member

One for which the transverse displacement of one end of the member relative to the other is effectively prevented.

1.3.6 Can

Implies a capability or possibility and refers to the ability of the user of the Standard, or to a possibility that is available or that might occur.