AS 1538—1988

Australian Standard®

Cold–formed Steel Structures Code

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The following interests are represented on Committee BD/1:

Association of Consulting Engineers, Australia

Australian Institute of Steel Construction

Australian Road Research Board

Australian Welding Research Association

Bureau of Steel Manufacturers of Australia

Confederation of Australian Industry

CSIRO, Division of Building, Construction and Engineering

Department of Administrative Services–Construction Group (Commonwealth)

Institution of Engineers, Australia

National Association of Australian State Road Authorities

Public Works Department, New South Wales

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PREFACE

This Standard was prepared by the Association's Committee on Steel Structures to supersede AS 1538–1974.

It is intended that this Standard supplements AS 1250–1981, *SAA Steel Structures Code*.

This Standard is a working stress Standard and is based on permissible and working stress design.

The technical requirements of this Standard are essentially those of the 1974 edition but the opportunity has been taken to introduce a number of significant amendments which include the following:

(a) Unstiffened compression elements are now treated by effective area reduction, rather than by permissible stress reduction.

(b) The concept of sub–element is abolished.

(c) Provision is made for web stiffeners.

(d) The inelastic reserve capacity of flexural members is introduced.

(e) The determination of elastic critical stress of laterally unbraced beams has been refined and its scope enlarged. Allowance is made for beams restrained at one flange only.

(f) In computing the permissible bending stresses in web, the stiffened and unstiffened flanges are now distinguished.

(g) The web crippling of beams has undergone considerable modification by the introduction of new parameters and interaction with bending.

(h) The treatment of axially loaded compression members is somewhat simplified.

(i) Welded connections (treated in the previous edition in a cursory manner or by reference to other publications) are now provided and in line with modern welding practice.

(j) For some structural members, bracing requirements have been modified.

(k) A new Appendix provides equations for calculation of 'column properties' of certain sections (Appendix A) and another Appendix lists a large number of related references (Appendix D).

CONTENTS

Page