

Standardised Structural Connections

fourth edition - 2020

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(ABN)/ACN (94) 000 973 839

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Published by: AUSTRALIAN STEEL INSTITUTE

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FOURTH EDITION 2020

ISBN 978 1 921476 43 3 (pbk.)



A catalogue record for this book is available from the National Library of Australia

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CONTENTS

<p>PREFACE 1</p> <p>1 INTRODUCTION 2</p> <p> 1.1 Engineering context 2</p> <p> 1.2 Connection terminology 3</p> <p> 1.3 Connection behaviour 4</p> <p> 1.4 Standardised connections 5</p> <p>2 STANDARD PARAMETERS 6</p> <p> 2.1 Summary 6</p> <p> 2.2 Standard strips 7</p> <p> 2.3 Standard angles 9</p> <p> 2.4 Gauge lines 10</p> <p> 2.5 Coping 14</p> <p> 2.5.1 Web copes 14</p> <p> 2.5.2 Flange copes 17</p> <p> 2.6 Bolting layout 20</p> <p> 2.7 Bolt types and bolting categories 22</p> <p> 2.8 Weld types 23</p> <p> 2.9 Welding consumable classification 25</p> <p> 2.10 Properties of plate materials 27</p> <p> 2.10.1 Plate material 27</p> <p> 2.10.2 Flat bar material 28</p> <p> 2.10.3 Design yield stress for Australian produced plate material 28</p> <p> 2.11 Properties of sections 29</p> <p>3 STANDARD CONNECTION TYPES – OPEN SECTIONS 30</p> <p> 3.1 General 30</p> <p> 3.2 Web side plate 31</p> <p> 3.3 Flexible end plate 37</p> <p> 3.4 Angle cleat 43</p> <p> 3.5 Angle seat 49</p> <p> 3.6 Bearing pad 53</p> <p> 3.7 Fully welded beam to column moment connection 57</p> <p> 3.8 Bolted moment end plate 61</p> <p> 3.9 Welded splice 75</p> <p> 3.10 Bolted splice 78</p> <p> 3.11 Purlin and girt cleats 84</p> <p> 3.11.1 General description 84</p> <p> 3.11.2 3D View 84</p> <p> 3.11.3 Detailed configuration 84</p> <p> 3.11.4 Detailing requirements 85</p> <p> 3.12 Column base plates 86</p> <p>4 RATIONALISED CONNECTION TYPES – HOLLOW SECTIONS 93</p> <p> 4.1 General 93</p> <p> 4.2 Advantages of hollow section construction 94</p> <p> 4.3 Properties of Australian SSHS 95</p> <p> 4.3.1 Applicable standards 95</p> <p> 4.3.2 Material properties 95</p> <p> 4.3.3 Section sizes 96</p> <p> 4.4 Detailing of SSHS connections 97</p>	<p> 4.4.1 Drainage and corrosion 97</p> <p> 4.4.2 Galvanizing 97</p> <p> 4.4.3 Recommended weld details 98</p> <p> 4.4.4 General design considerations 99</p> <p> 4.5 Standardisation and rationalisation 101</p> <p> 4.6 Slotted SSHS end connection 104</p> <p> 4.7 Welded T end connection 109</p> <p> 4.8 Flattened end CHS 115</p> <p> 4.9 Bracing cleat 120</p> <p> 4.10 Gusset plate 125</p> <p> 4.11 Bolted flange plate 130</p> <p> 4.12 Mitred knee 136</p> <p> 4.13 T, Y and X connections 139</p> <p> 4.14 K & N gap connections 142</p> <p> 4.15 K & N overlap connections 145</p> <p>5 REFERENCES 150</p>
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PREFACE

The ASI was formed in 2002 through the merger of Australian Institute of Steel Construction (AISC) and Steel Institute of Australia (SIA). The former AISC first published the original 'Standardized Structural Connections' in 1978, with the third edition published in 1985. The ready acceptance of these standardised connections since that time has confirmed the benefits that flow to all members of the steel supply chain.

The third edition has been out of print for a number of years. However, in the interim ASI has published two related series of publications:

- The 'Structural Steel Connection Series Parts 1 and 2' (Refs. 1,2) published by ASI commencing 2007. The Structural Steel Connection Series details the method of design and provides design capacity tables and detailing parameters for a range of both flexible and rigid connections between predominantly open section members;
- The Structural Steel Tubular Connection Series: 1st edition, 2013 ('Tubular Connection Series') (Ref. 3). The Tubular Connection Series details the method of design and provides design capacity tables and detailing parameters for a range of tubular connections commonly used in Australia.

These series provide some guidance on standardised connections as applied to common connection models. However, these series are significant and extensive and aimed primarily at practising structural engineers. ASI has identified the need to provide a more concise reference to good practice and standardisation in connection configuration, applicable to a number of other stakeholders in the supply chain, including students, steel detailers and suppliers of components associated with steel connections.

Accordingly, ASI has published this new fourth edition of the 'Standardised Structural Connections', taking the opportunity to review current standard practice and also to provide material additional to the previous third edition, including:

- extended explanatory material specifically aimed at both engineering and steel detailing students;
- new material discussing rationalised connections and configuration guidance for hollow section connections. Since hollow sections are often profile cut and fully welded to form connections (and hence do not contain ancillary components like cleat plates), the focus with these types of connections is ensuring 'good practice' with configuration of the connection to meet structural and detailing requirements, rather than the standardisation of components that is a feature of the open section connections.

Since the previously mentioned connection series already contain design capacity tables intended for practising engineers, this current publication has removed the design capacity tables that were in previous editions of this publication. The reader should consult Refs. 1,2 and 3 for engineering behavioural models and design capacity tables.

