

Summary of design checks

DESIGN CHECK NO. 1 — Design capacity of bolts at bolted flange

DESIGN CHECK NO. 2 — Design capacity of weld at welded flange

DESIGN CHECK NO. 3 — Design capacity of flange cover plates

DESIGN CHECK NO. 4 — Design capacity of bolts in web cover plates

DESIGN CHECK NO. 5 — Design capacity of welds around web cover plates

DESIGN CHECK NO. 6 — Design capacity of web cover plates

DESIGN CHECK NO. 7 — Design capacity of flanges of spliced member

DESIGN CHECK NO. 8 — Design capacity of spliced member at splice

NOTES:

- 1 The spliced member is assumed to have already been designed using Sections 5 to 8 of AS 4100 (Ref. 1) for both section capacity and member capacity.
- 2 DESIGN CHECK NO. 8 is a section capacity check at the splice for the section with holes. If this DESIGN CHECK has already been undertaken during member design, it may be omitted in the design of the connection.
- 3 Either the SIMPLIFIED METHOD or the ALTERNATIVE METHOD may be used to derive design actions—see Table B1.
- 4 Reference 4 contains a design check for the case of minor axis bending moment where the splice is located away from a point of lateral support. This is not included in the recommended design model as the preferred location is near a point of lateral support (see Figure 7). In Reference 4, the flange plate and flange bolts are assessed for their capacity to resist an in-plane shear force generated by a design moment acting about the section minor axis.

**TABLE B1
SUMMARY OF DESIGN ACTIONS
FROM SECTION 3**

Design element	Simplified method	Alternative method
Flange splice		
—compression, N_{fc}^*	Eqns 3.8 to 3.11	Eqns 3.19 to 3.22
—tension, N_{ft}^*	Eqns 3.5 to 3.7	Eqns 3.16 to 3.18
Web splice		
—shear force, V_w^*	Eqn 3.12	Eqn 3.23
—axial force, N_w^*	Eqn 3.13 or 3.14	Eqn 3.24 or 3.25
—moment, M_w^*	Eqn 3.15	Eqn 3.26



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Splice connections

by

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Splice connections

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Design Guide 2: Welding in structural steel connections

Design Guide 3: Web side plate connections

Design Guide 4: Flexible end plate connections

Design Guide 5: Angle cleat connections

Design Guide 6: Seated connections

Design Guide 10: Bolted end plate beam splice connections

Design Guide 11: Welded beam to column moment connections

Design Guide 12: Bolted end plate to column moment connections

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