

Summary of design checks

DESIGN CHECK NO. 1 — Design capacity of bolts at flanges

DESIGN CHECK NO. 2 — Design capacity of flange cover plates

DESIGN CHECK NO. 3 — Design capacity of bolts in web

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

DESIGN CHECK NO. 5 — Design capacity of flanges of spliced member

DESIGN CHECK NO. 6 — 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. 6 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 A1.
- 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 A1
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



Design Guide 13
Splice connections

by

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