



BRIDGE TECHNICAL DIRECTION BTD2008/05

SPLICING OF STEEL GIRDERS USING BOLTS

Background

It has been long standing RTA practice not to permit bolted connections for splicing of principal steel bridge members, so that the external faces of steel members are flat and smooth to maximise the life of the protective coating system.

Information

Experience with older steel bridges indicates that deterioration of the paint system at bolts occurs earlier than the deterioration of the paint system on the smooth surfaces away from the bolts. In order to extend the periods between re-painting of steel bridges, RTA did not permit bolted splices of principal steel members.

Welding of the segments that make up the principal members is the standard method of connection used by RTA although cast-in-place reinforced concrete connections have also been used, particularly for splicing of steel trough girders.

Bridge Technical Direction

Bolted splices of principal steel members on RTA bridges and on bridges that will become the property of RTA shall not be used except in locations with an exposure classification A as defined in Clause 4.3 of AS 5100.5.

RTA may consider bolting as means of connecting steel members in exceptional circumstances where welding on site cannot be carried out safely and/or where welding would require unacceptable restrictions to traffic, and there is no practical alternative. Any proposed use of bolted splices of principal steel bridge members shall be submitted in writing to RTA for consideration.

Effective date: 25/02/2008

Approved: Wije Ariyaratne
Principal Bridge Engineer

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