

BRIDGE POLICY CIRCULAR

BPC2005/08

SUBJECT: Welding of Bridges

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Background

For some time now, there have been significant quantities of unauthorised welding on steel bridge structures, causing unplanned stress concentrations and potentially introducing brittle regions in the steel. The stress concentrations may reduce the fatigue life of the structure by many decades. The introduction of brittle zones in critical areas can lead to sudden collapse.

Weld repairs can also reduce the inherent redundancy of other joint types such as bolting or riveting.

Policy

Welding is not to be carried out on steel bridges without:

1. A full investigation of the structural materials
2. A detailed assessment of the risks of using welded repairs and attachments
3. The approval of the Manager, Bridge Engineering.

Assistance is available from Bridge Engineering in performing the necessary investigations, preparing and approving weld procedures and training and qualifying welders.

Weld procedures must be prepared and qualification of the procedure and the welder must be carried out in accordance with ASI554.

Application

This Policy applies to all welds (including fit-up and temporary attachment welds) on RTA bridges from the date of signature.

File: 04M1835;3


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Action Required

Project Managers, Bridge Designers, Design Reviewers, Project Verifiers and Principal's Representatives must make sure that any welding on steel bridges is approved by the Manager, Bridge Engineering prior to any welding operation.



Gordon Chirgwin
Manager Bridge Policies, Standards &
Records
Date 18/11/2005

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