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WELDING OF SKIDDED WHEELS IN SITU

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About This Standard

This standard is based on TRS Standard 1435 Specification for welding of skidded wheels in situ.

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1 Scope

This Standard/Instruction outlines the requirements that are to be incorporated in the welding procedure to ensure the welded area is sound to allow the locomotive or vehicle to return immediately for wheel replacement or turning. Turning is to be carried out to remove the weld metal (HAZ) subject to Metallurgist requirements. Welding operators shall meet the requirements of **TRS 1554**

2 Build Up Of Skidded Wheels

2.1 Preparation Prior to Welding

Thoroughly clean the surface to be rebuilt by grinding until all grease, oil and scale have been removed. The surface to be welded shall be checked for any evidence of cracks using Magnetic Particle Testing; if cracks are found they are to be reported to the supervising officer before welding is commenced (See **RSS 0030**).

2.2 Preheat Requirements

The area to be built up shall be heated to 200° C. The heating shall be slow and uniform. Measurements shall be made by a suitable touch type pyrometer or temperature sensitive crayon NOTE: Cover any electrical or heat sensitive parts of the locomotive or vehicle with a heat blanket so as to prevent those parts being damaged.

2.3 Welding Consumables

Welding Consumables shall comply to the relevant Australian Standard as nominated in section 9 of **TRS 1554**.

Hydrogen Control Process shall be used.

2.4 Welding

Following cleaning and preheating, welding is to commence using the qualified welding procedure. Stringer beads in pad formation are required to cover the extent of the worn area. Peening of each run is required.

Welding shall be carried out circumferentially not transversely across the tread. Allow weld area to cool to ambient temperature before locomotive is moved.

2.5 INSPECTION AND FINISH

All surface irregularities and deposited weld metal shall be ground smooth to the contour of the wheel after welded area has cooled to ambient temperature. The surface of the weld and adjacent area shall be visually inspected for flaws and if necessary Magnetic Particle tested to verify no problems exist.

2.6 Welding Procedure

A qualified weld Procedure No. GEWUPOO5 shall be issued

3 Referenced Documents

3.1 RIC Standards

RSS 0030 Wheel Defect Manual

3.2 Australian Standards

AS 1554 Structural Steel Welding Code