

AUSTRALIAN RAIL TRACK CORPORATION LTD

Engineering (Track & Civil) Instruction

Manganese Steel Fixed Nose Crossings

Applicability

	ARTC Network Wide	~	Western Jurisdiction		New South Wales		Victoria	
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Audience			Main Points			Change History		
Corric	lor / Delivery Managers		Non explosive hardened c	rossii	ngs and inserts will	Firs	t issue	
Team	Managers		work harden during initial	train	operations			
Work	Group Leaders		Any sign of metal flow will	neec	l to removed			
Projec	ct / Delivery Engineers							
Engin	eering Compliance Manage	ers						

This instruction applies to all fixed nose cast manganese crossings which have not been explosive hardened. These are:

- The Fixed Nose Crossings being provided under the Vossloh Cogifer Contract. These fixed nose crossings are the Rail Bound Manganese (RBM) Type and come with both the 500:12 and 1200:18.5 Turnouts.
- Other Fixed Nose Cast Manganese Crossings (including dual gauge) currently being provided.

BACKGROUND

Due to time constraints in getting manganese castings explosive (head) hardened during the manufacturing process, the manganese inserts being supplied with the Vossloh RBM crossings and other cast manganese crossings have not been explosive hardened. They will work harden during the initial stage of trains operating in both the main line and turnout directions. During this period there will be some visible metal flow on the head of the castings through the wheel contact area. This flow will occur on both the crossing nose and wing rails.



Issued by

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Date

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PROCESS

During the work hardening period these crossings must be inspected on a regular basis. Following the commencement of train operations, through the turnouts, the maintenance regime should be:-

- A first inspection should occur after a maximum period of one week.
- If there is any sign of metal flow, indicated by a burr or lip on the gauge corner of the casting, then this needs to be removed as soon as practicable, but not exceeding four working days.



- These inspections, and any associated remedial grinding, should be repeated until the work hardening process is completed, at which time the metal flow would have stopped.
- Ongoing maintenance in accordance with ARTC NSW Standard TMP 05 in all jurisdictions.

This Instruction is to be read in conjunction with:

- ARTC Standard TMP 05 (Grinding of Crossings)
- Vossloh Cogifer Maintenance Recommendations Manual, Sheet No. 170-020.

Note: An updated version of TMP 05 for use system wide is currently under preparation.