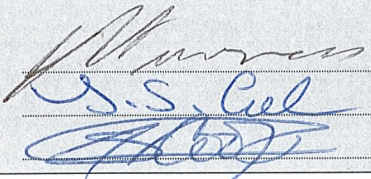


## NEW EQUIPMENT & SYSTEM APPROVAL PROFORMA

Ref: 08-08-11-126

Note: the prompts given below are only a guide to the information required for approval. Dependent on the type of equipment or system that requires approval delete any section that is not applicable or include additional information if necessary. **Mandatory** fields are marked with an asterisk (\*).

1	<b>Equipment or System to be approved *</b> VAE Railway Systems 1200m radius 1 in 18.5 Compound Dual Gauge Splitter(1600mm / 1435mm)
2	<b>Originator *</b> Name: Belinda Viavattene Company: SIA
3	<b>Introduction *</b> The gauge splitter is required at each end of Passing Lane 1 to separate BG from SG diverting SG traffic back onto the main line.
4	<b>Determination of Need *</b> ARTC has proposed a number of passing lanes within the Program of SIA which intends to facilitate improvements on the Sydney to Melbourne rail connection by: Providing increased capacity. Reducing travel time by minimising delays with regularly spaced passing lanes. The dual gauge splitter is a part of the turnouts required to establish the passing lane 1 in the Albion to Jacana section. The passing lane will allow SG trains to crossover onto the new passing lane, which consists of 7km of DG track, at speeds up to 80 km/h
5	<b>Significant Change or Not</b> This change in equipment or system is assessed as Minor The following Trackwork units utilised in the Gauge Splitter turnout are currently used on the 1200 m, 1 in 18.5 Standard Gauge turnout and therefore have ARTC Type Approval: ~ 1 in 18.5 compound V crossing. ~ UIC 33 guardrails. ~ Straight bladed half set of points. ~ CDP switch plate rollers.
6	<b>Review Panel *</b> <ul style="list-style-type: none"> <li>John Furness - Manager Standards</li> <li>Tim Calver, Standards and Technical Services Engineer</li> <li>Steve Cooper, Track Standards Consultant</li> </ul>
7	<b>Safety</b> The design of the turnouts comply with the following track geometry design standards regarding safety: ARTC Code of Practice, Section 5, Table 5.2B Design Parameters & Limits. (Track geometry limits including cant and cant deficiency.) ARTC mixed gauge Standard ETF-00-01 Concerns regarding the structural support blocks to the Inside stockrail of the dual gauge side of the switch have been replied to by VAE to the satisfaction of the Design Reviewer. See undated letter from VAE attached, GHD Revised Design Review dated 8 May 2009 (Items 6 & 7). GHD confirm within their design review that this gauge splitter conforms to the requirements of ARTC mixed gauge standards, is suitable for Type Approval and can be installed in track.
8	<b>Performance and Suitability</b> The turnout for which approval is being requested has the same angle as Vossloh Cogifer SG turnouts. Both turnouts have a 1in 18.5 angle and a 1200m radius tangential switch. The 1in18.5 Vossloh Cogifer turnouts were type approved in February 2008. It should also be noted that the diverge leg of the splitter is SG and therefore has no contact with the switch.
(i)	<b>Use in other rail networks</b> None known.
(ii)	<b>Use in the ARTC network</b> Dual Gauge Separation Turnouts (of smaller angle) have been type approved and are in use at Tottenham.
(iii)	<b>Issues arising from usage of the equipment/system</b> If the switch remains open during a BG facing movement a derailment could occur, however with signal interlocking this is virtually impossible. Signal and switch motor interlocking design are subject to a separate Type Approval.

(iv)	<b>Changes required to infrastructure or systems for use of the equipment</b> Additional Spares Inventory required to be held						
9	<b>Reliability</b> VAE have a good reputation as a proven manufacturer of turnouts.						
10	<b>Maintainability</b> The inspection & maintenance of the component will be carried out by the maintainer (contracted by ARTC). The maintainer will develop the inspection and maintenance procedures.						
11	<b>Approval *</b> VAE Railway Systems 1200m radius 1 in 18.5 Compound Dual Gauge Splitter(1600mm / 1435mm) to VAE Drawing VAM 14203 A						
12	<b>Conditions of Approval *</b> VAE to provide final drawings incorporating changes required in the revised GHD report dated 8 May 2009. QA certificates, maintenance manuals and lists of key spare parts. SIA to provide completion certificates for handover to the maintainer - Downer EDI. ARTC / Downer EDI Alliance sign acceptance into maintenance. ARTC / Downer EDI Alliance to incorporate appropriate maintenance regimes into their Maximo systems. Operational requirements to be met e.g. TAO2 Documentation, signage etc to enable 80 km/h diverging movement.						
13	<b>Does the Originator accept the additional Conditions of Approval as set by the Review Panel:</b>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	N/A	<input type="checkbox"/>
14	<div style="display: flex; justify-content: space-between;"> <div> <b>Sign off</b>  <b>Review Panel:</b>  John Furness  Tim Calver  Steve Cooper </div> <div style="text-align: center;">  </div> <div style="text-align: right;"> <b>ARTC office use only</b>  Date: 12/5/2009.  Date: 12/5/09  Date: 12/5/09. </div> </div>						

Attachments:

GHD Design Review Final Report 8 May 2009.

Letter from VAE confirming spacer blocks at 1200mm centres meet design requirements

VAE Drg VAM 14203 A :

1200m 1 in 18.5 Compound 60kg Gauge Splitter 1435 / 1600 Gauge General Arrangement