



## Certificate of Acceptance

Certificate No: PA05/04447

Issue: 3

Valid from: 29/01/2013

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<b>Product</b>	Head Wash Repair (HWR) technique for the removal of rail head defects in flat bottomed rails.
<b>Manufacturer</b>	Railtech International

**Network Rail Acceptance Panel (NRAP) hereby authorises the product above for use on railway infrastructure for which Network Rail is the Infrastructure Manager under the ROGS regulations.**

**Failure to abide by the requirements in this Certificate of Acceptance may invalidate the certificate, thereby restricting the right to operate the product and / or limiting the future supply and deployment of the product on the infrastructure.**

**This certificate can only be amended by Network Rail Asset Management Services. Any alterations made by a different person will invalidate the entire certificate.**

### Scope of Acceptance

Welding of CEN60 rail profiles are to be conducted in conjunction with All Routes under the control of the Senior Asset Engineers (Support) [Track].

Railtech Head Wash Repair (HWR) process for the removal of railhead defects in the following profiles and grades:

110/113A (56E1) rail profiles in R220 and R260 grades without the need to replace rail. Repairs to be carried out using the Railtech PLA process, pre-heating methods oxy-propane and oxy-acetylene fuel gases.

60E1/E2 rail profiles in R260 grade without the need to replace rail. Repairs to be carried out using the Railtech PLA process, with oxy-propane and oxy-acetylene fuel gases.

Repairs to the 60E1/E2 rail profile are only authorised with prior permission from the Senior Asset Engineer (Support) [Track].

**The following type, size and location of defects can be removed by the HWR method:**

#### Squat type defects<sup>1</sup>:

- Maximum excavation size (finish ground) - 95mm long, full railhead width, 8mm remaining above the lower edge of the head

#### Wheelburns<sup>1</sup>:

- Maximum number of 2 overlapping repairs (2<sup>nd</sup> repair shall overlap the 1<sup>st</sup> by a minimum distance of 30mm measured from the edge of the fusion line).
- Maximum length of visibly damaged area - 160mm.
- Depth - as for squat type defects (standard depth excavation).

#### Defect location:



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- In plain line (not currently permitted above fishbolt holes >15mm diameter).
- Where repairs are to be carried out near a fishbolt hole, the edge of the excavation shall be a minimum distance of 125mm from the edge of the nearest bolthole measured vertically through the railhead.
- Repairs can be installed into light or moderate RCF, but are not permitted where heavy or severe RCF is present unless there is a minimum of 100mm of clean rail either side of the proposed repair.
- Above flash butt welds<sup>2</sup> (Mould adjustment may be required to accommodate the trimmed upset).
- Above defective arc weld repairs.
- Where multiple defects are to be removed, a minimum distance of 100mm shall be observed between repairs, however, a minimum time of 2 hours shall be observed between finish profile grinding and commencement of the next repair.

**Notes:**

<sup>1</sup> defects repaired using the HWR method subsequently found to be defective following NDT, may be re-repaired using the same method.

<sup>2</sup> subject to weld straightness check before repair (no dipped joints).

**Authorised by**

Andy Jones CEng, MICE  
Head of Track Engineering

28/1/13.

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## 1. SPECIFIC CONDITIONS

*The following Conditions are specific to the approved product/s contained within Section 2 and Appendix B of this certificate. These conditions must be adhered to in addition to the Network Rail General Conditions contained within Appendix A 'Certificate Of Acceptance – General Conditions'. Failure to adhere to these conditions may result in the withdrawal or suspension of Acceptance of some, or all of the items contained within the accepted configuration.*

### Manufacturer

- 1) The process supplier shall provide a manual for all uses of the process.

### User

- 1) Only those operators trained, deemed to be competent and in possession of a current Sentinel competency card with the relevant RT3 competency displayed, shall be permitted to install the above welds into Network Rail's infrastructure.
- 2) Welders shall also be in possession of the appropriate preheating equipment as supplied by Railtech (UK) Ltd for this process.
- 3) Welding to be conducted in accordance with the procedures specified in the process suppliers manuals.
- 4) Final Non Destructive Testing (NDT) shall be conducted in accordance with Letter of Instruction 127<sup>1</sup>.
- 5) All weld installation records to be kept and entered into the National Welding database.

### Notes:

<sup>1</sup> Letter of Instruction 127 applies to both Railtech and Thermit rail head repair processes.

## 2. PRODUCT CONFIGURATION

### System or Complete Assembly

Part No.	Description	PADS No.
79900002	Kit for 110A/113A HWR CJ 260	0046/035060
S0000344	HWR Cutting Tool	0046/035062
S0000353	HWR Cutting Guide (Part of S0000344)	0046/035067
S0000347	HWR Preheater Holder for RT22	0046/035061
H3084	Propane Nozzle 4NFF	0046/035064
S0000361	Pair of mould shoes for Head Wash Repair process	046/035065
79900005	KIT FOR UIC60 HWR CJ 260	046/035066

Note: For complex products and systems, sponsors and manufacturers may be requested to submit a more detailed configuration report to be appended to this certificate.

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### 3. ASSESSED DOCUMENTATION

Reference	Title	Date and Applies to Cert.	Issue No.
	Railtech HWR trial welds KN 2010	April 2010	1
	Process Manual Issue 5 2 January 2009	May 2010	
	NDT Services	May 2010	
	HWR Manual	May 2010	
TR/UK/HWR/60E1-113A R260-OA/00/SB	Test 60E1 – 113A HWR	November 2012	

### 4. CERTIFICATE HISTORY

Issue Number	Date	Issue History
1	27/01/2012	First accepted for use.
2	18/06/2012	Re-issued to include S0000361 , and to include 60E1/E2 rail profiles in R260 grade without the need to replace rail within the scope.
3	29/01/2013	Re-issued for addition of <u>All Routes</u> for section 60E1/E2. Also for the addition of repairs using Oxygen and Acetylene fuel gas in 110/113A (56E1) and 60E1/2 rail profiles.

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### 5. DISTRIBUTION

#### **Manufacturer**

Frederic Delcroix /  
Baptiste Destailleurs (UK)  
Railtech International  
Zone Industriel Du Bas Pre  
59 590 Raismes  
France  
[fdelcroix@railtech.fr](mailto:fdelcroix@railtech.fr)

#### **Sponsor**

John Hempshall  
Network Rail  
[John.hempshall@networkrail.co.uk](mailto:John.hempshall@networkrail.co.uk)

#### **Agent**

Baptiste Destailleurs  
Catesby Park  
Kings Norton  
Birmingham  
B38 8SE  
[baptiste.destailleurs@railtech-uk.com](mailto:baptiste.destailleurs@railtech-uk.com)

#### **Project Manager**

Jeremy Jackson  
Network Rail  
[jeremy.jackson@networkrail.co.uk](mailto:jeremy.jackson@networkrail.co.uk)

Simon Pears  
Network Rail  
[simon.pears@networkrail.co.uk](mailto:simon.pears@networkrail.co.uk)

Orry King  
Network Rail  
[Orry.king@networkrail.co.uk](mailto:Orry.king@networkrail.co.uk)

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#### **For Network Rail Controlled**

##### **Catalogue records**

Faith Ajidahun  
Product Data Management Specialist  
Network Rail  
[faith.ajidahun@networkrail.co.uk](mailto:faith.ajidahun@networkrail.co.uk)

#### **For PADS records**

Nigel Draper  
Serco Raildata Ltd,  
[nigel.draper@serco.com](mailto:nigel.draper@serco.com)

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#### **For Information/briefing**

Nigel Beecroft  
Network Rail  
[nigel.beecroft@networkrail.co.uk](mailto:nigel.beecroft@networkrail.co.uk)

Mick Turner  
Network Rail  
[Mick.turner2@networkrail.co.uk](mailto:Mick.turner2@networkrail.co.uk)

DHL Ltd,  
Blackpole Trading Estate  
Worcester WR3 8SG  
[transport.inventory@dhl.com](mailto:transport.inventory@dhl.com)

URL Sourcing  
[acceptancecert@unipartrail.com](mailto:acceptancecert@unipartrail.com)

Geoff South  
Network Rail  
[geoff.south@networkrail.co.uk](mailto:geoff.south@networkrail.co.uk)

DHL Customer Services Helpdesk  
[customerservicesderby@dhl.com](mailto:customerservicesderby@dhl.com)

Ian Barber  
Network Rail  
[ian.barber@networkrail.co.uk](mailto:ian.barber@networkrail.co.uk)

Charlton Hawley  
Network Rail  
[charlton.hawley@networkrail.co.uk](mailto:charlton.hawley@networkrail.co.uk)

Ricky Hodges  
Training Delivery Specialist [Track  
Engineering]  
Network Rail  
[Ricky.Hodges@networkrail.co.uk](mailto:Ricky.Hodges@networkrail.co.uk)

# Certificate of Acceptance

## Appendix A – General Conditions

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### 1) Manufacturer

The Manufacturer shall:

- 1) Ensure that all products supplied comply with the standards defined in the Acceptance Requirements or otherwise documented as part of the assessment, including meeting the reliability requirements included in the Acceptance Requirements and in any deed of warranty for the relevant certificate number.
- 2) Notify Network Rail Technology Introduction Group:
  - a. Within 48 hours, of any deficiencies affecting the quality, functionality or safety integrity of the product (including corrective action undertaken or proposed).
  - b. Of any intended change to the accepted product; changes include:
    - i. a change to the product configuration (to the actual product or its application);
    - ii. a variation to or addition of manufacturing locations or processes;
    - iii. a change in the name or ownership of the manufacturing company;
    - iv. any changes to the ability or intention to support with technical services, spares or repairs.
- 3) The Manufacturer shall provide Network Rail Technology Introduction Group at least 12 (twelve) months notice of its intention to discontinue supply or to provide such notice as is reasonable if such discontinuance is outside its control and will offer the opportunity of a Last Time Buy to Network Rail together with date for last order placement and supply of the parts affected. The introduction of proposed alternative products shall be communicated to the Network Rail Technology Introduction Group.
- 4) Provide further copies of operating and maintenance manuals to purchasers / users of the product as necessary (including certificates of conformance, calibration etc).
- 5) Provide further copies of training manuals and an appropriate level of training to purchasers or users of the product as necessary.
- 6) Where applicable, specialist technical support, repairs and servicing of the product shall be carried out by the Original Equipment Manufacturer (OEM) or authorised agent only.
- 7) Network Rail may request information from the manufacturer to prove product compliance with clauses 1 and 2 above and reserve the right to suspend and/or withdraw any application where information is not forthcoming within a reasonable timeframe.
- 8) In accordance with Network Rail's Quality Assurance Policy Statement 2011, where the specification and/or Product Acceptance Certificates specify quality assurance classifications (QA1 to QA5) for the products, the manufacturer shall comply with the specified level of quality assurance for each product and allow Network Rail access to carry out its quality assurance checks.
- 9) The manufacturer shall give Network Rail's representatives access at all reasonable times to its premises and allow them to inspect its quality systems and production methods and, if requested, to inspect, examine and test the products both during and after their manufacture and the materials being used in their manufacture.

### 2) Conditions of Use

Specifiers, installers, operators, maintainers, etc. using the product shall:

- 1) Comply with the certificate conditions. If a condition is not understood guidance must be sought from Network Rail Technology Introduction Group.
- 2) Check that the application of use complies with the relevant certificate's scope of acceptance.
- 3) Report any defect if it is a design or manufacturing fault likely to affect performance and/or the safe operation of the railway in writing to Network Rail Technology Introduction Group.
- 4) Inform Network Rail Technology Introduction Group in writing of a change to the product configuration (or to the actual product or its application).
- 5) Operate, maintain and service the product in accordance with Network Rail standards and Operation and Maintenance manuals as appropriate.
- 6) Be appropriately trained and authorised for the installation, maintenance and use of the product.
- 7) Only send products for repair or reconditioning to the Original Equipment Manufacturer (OEM) or authorised agent.
- 8) Users are to be aware that Product Acceptance is not a substitute for design approval.

### 3) Compliance

Railways and Other Guided Systems (ROGS) Regulations

- 1) Where the product is to be used in areas where Network Rail is not the Infrastructure Manager (e.g. leased stations), the sponsor shall additionally obtain formal consent from the Infrastructure Manager for the locality where the equipment is to be installed. This may include a requirement for additional safety verification. The decision of that Infrastructure Manager is binding, and cannot be overridden by Network Rail except by the escalation processes established in the ROGS regulations
- 2) As required in Railway Group Standard GE/RT8270, at each use of this product the project or group responsible for installation and commissioning shall be required to demonstrate compatibility with:
  - a. All rail vehicle types that have access rights over the area affected by the change
  - b. Infrastructure managed by others
  - c. Neighbours.

# Certificate of Acceptance

## Appendix A – General Conditions

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### Railway Interoperability Regulations

- 3) For interoperable constituents of systems the project or group responsible for installation and commissioning shall be required to demonstrate compliance with the relevant Technical Specifications for Interoperability (TSI) where appropriate.
- 4) An authorisation from the national safety authority (i.e. the Railway Safety Directorate of the Office of Rail Regulation) is required before the equipment is to be used in revenue earning service.

### 4) Supply Chain Arrangements

- 1) Certificates of acceptance do not imply any particular quantity of supply nor any exclusivity of supply.
- 2) Products may be purchased by Network Rail or its agents, suppliers or contractors.
- 3) Manufacturers should note that it is not necessary to enter into any exclusive supply arrangements with resellers or other suppliers.



## Certificate of Acceptance Appendix B – Configuration Change Log

### System or Complete Assembly

Manufacturers Part No.	Description	CAT No.	CAT No. Requested By	CAT No. Authorised By	Date Allocated	PA Cert Issue No.	CCMS Version No.

### Maintenance Spares and Line Replaceable Units

Manufacturers Part No.	Description	Hardware Version/ Revision	CAT No.	CAT No. Requested By	CAT No. Authorised By	Date Allocated	PA Cert Issue No.	CCMS Version No.