

Certificate of Acceptance

PA05/00051-2

Manufacturer:
Safetrack Baavhammar AB.

Issue : 2
Valid From : 20-Jan-16

Product: Safetrack Econect Pin Brazing systems

Product Description

Safetrack ECONECT electronically controlled pin brazing process.

Product Image



Scope of Acceptance

Full Acceptance

Attachment of Network Rail accepted cables to pearlitic rail steel grades 220, 260, 350 HT (otherwise known as normal grade, grade A and MHT respectively) and AMS crossings.

The ECONECT system and spares/consumables is granted full Acceptance. This product supersedes the S30/S30XC Products, which are still approved for use, but are not to be purchased (spares may still be procured as required)

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

Reviewed by:

Authorised by:

Steven Rennolds
Technology Introduction Co-ordinator

Jerry Morling BEng MSc CEng MIET MIRSE
Professional Head Signalling

9th Feb 2016

Rashid Wahidi CEng.
Head of Plant, Traction And Rolling Stock

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Specific Conditions

The following Conditions are specific to the approved product/s contained within this Certificate. These conditions must be adhered to in addition to the Network Rail General Conditions contained within the "General Terms and Conditions" section.

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 Econect system shall be supplied for all new purchases.
- 2) The S30XC products shall be supplied for spares purposes only for use with existing S30/S30XC systems.



User

- 1) Attachments shall only be made to the neutral axis of the rail web or the back edge of the rail head.
- 2) The process must not be used on LCAMS or HCAMS rail.
- 3) Use on cast AMS crossings must be restricted to attachments being made to the side of the wall of the casting and the apron. No attachments are to be permitted on the leg end of a monoblock crossing.
- 4) If the rail grades, types of crossing and positions on a cast crossing cannot be clearly identified by users of the process, the process shall not be used.
- 5) The return current rail clamp must be applied to the same rail as that brazed (failure to do so may drive the brazing current through the signalling Track Relay and cause equipment failure or fire some distance away).
 - This must be supplemented by shunting the track-circuit at the point of welding using a TCOB.
 - It must be emphasised that the use of the TCOB is for equipment immunisation purposes and DOES NOT FORM PART OF THE PERSONNEL PROTECTION SYSTEM.
- 6) The now obsolete S30/S30XC system may continue to be used under Acceptance Certificate PA05/00051 Issue 1. PA05/00051 Issue 2 defines the spares and related consumables. Advice should be taken from Park Signalling (UK Agent/Supplier) on the correct/compatible spares to use, before a purchase is made.
- 7) These products must only be operated, and maintained by trained and competent staff in accordance with the manufacturer's instructions, the relevant employer's Competency Management Systems and Network Rail policy
- 8) Unit weight: 9.8 Kg

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Product Configuration : Econect Pin Brazer

Econect Pin Brazer





Part No.	H/W Ver, Rev.	Description`	Image	Catalogue No.
SAFE 94350	-	Unit - Pin Brazing, electronic complete, supplied with items listed below:		094/016080
SAFE 94450	-	Unit - Pin Brazing		094/016081
SAFE 91015	-	Braze pistol S15 automatic		094/016082
SAFE 9211	-	Pin holder 8-9.5mm		094/016083
SAFE 9202	-	Ring holder 8-9.5mm		094/016084
SAFE 80982	-	Battery [1 off]		094/016085
SAFE 593070	-	Grinding machine		094/016086
SAFE 80730	-	Switchable ground magnet		094/016087
SAFE 9524	-	Tool case		094/016088
SAFE 9523	-	Shoulder strap		094/016089

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Part No.	H/W Ver, Rev.	Description`	Image	Catalogue No.
SAFE 91245	-	Lift Height tool		094/016090
SAFE 91250	-	Tool kit (needed to adjust the Lift Level)	-	094/016091

Econect accessories

Part No.	H/W Ver, Rev.	Description`	Image	Catalogue No.
SAFE 8048	-	Battery charger 230V		094/016092
SAFE 80481	-	Battery charger 110V		094/016093
SAFE 80561	-	Battery charger 12V		094/016094
SAFE 93690	-	Back carrying harness		094/016095

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Product Configuration : S30 X/C Pin Brazer (For Spares Purposes Only)

S30 X/C Pin Brazer with 16Ah batteries

Part No.	H/W Ver, Rev.	Description`	Image	Catalogue No.
SAFE 9307	-	Unit Pin Brazing, electronic complete, supplied with items listed below:		094/016096
SAFE 9102	--	Braze pistol S4 automatic		094/016097
SAFE 9320	-	Battery case with cables 16Ah		094/016098
SAFE 8093	-	High power battery 16Ah (3 off required)		094/016099
SAFE 593070	-	Grinding machine		094/016086
SAFE 80730	-	Switchable ground magnet		094/016087
SAFE 9524	-	Tool case		094/016088
SAFE 9523	-	Shoulder strap		094/016089

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S30 X/C Pin Brazer with 13Ah batteries

Part No.	H/W Ver, Rev.	Description`	Image	Catalogue No.
SAFE 9308		Unit Pin Brazing, electronic complete, supplied with items listed below:		094/016100
SAFE 9102	--	Braze pistol S4 automatic		094/016097
SAFE 9321		Battery case with cables		094/016101
SAFE 8092		High power battery 13Ah (3 off required)		094/016102
SAFE 593070		Grinding machine		094/016086
SAFE 80730		Switchable ground magnet		094/016087
SAFE 9524		Tool case		094/016088
SAFE 9523		Shoulder strap		094/016089

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S30 X/C accessories

Part No.	H/W Ver, Rev.	Description`	Image	Catalogue No.
SAFE 8052		Battery charger 3A 230V/110V		094/016103
SAFE 8049		Battery charger 5A 230V/110V		094/016104
SAFE 8055		Battery charger 12V		094/016105
SAFE 8092		High power battery 13Ah (3 off required)		094/016102
SAFE 8093		High power battery 16Ah (3 off required)		094/016099

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Product Configuration : Accessories for S30 X/C or Econect Pin Brazers







Part No.	H/W Ver, Rev.	Description`	Image	Catalogue No.
SAFE 8071		Ground Grip		094/016106
SAFE 8025		Grinding wheel, silicon-free		094/016107
SAFE 9211		Pin holder 8-9.5 (A)		094/016083
SAFE 9213		Pin holder M8 (B)		094/016108
SAFE 9215		Pin holder M10 (C)		094/016109
SAFE 9217		Pin holder M12 (D)		094/016110
SAFE 9202		Ring holder 8-9.5 mm		094/016084
SAFE 9204		Ring holder M8/M10/M12		094/016111

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Product Configuration : Consumables


Brazing Pins

Part No.	H/W Ver, Rev.	Description`	Image	Catalogue No.
SAFE 10011		Brazing pin 8 mm, standard for 25 mm ²		094/016050
SAFE 10101		Brazing pin 8 mm, extra for 50 mm ²		094/016112
SAFE 10131		Brazing pin 9.5 mm, standard		094/016113
SAFE 10641		Brazing pin, threaded M8, 16 mm		094/016114
SAFE 10741		Brazing pin, threaded M10, 24 mm		094/016115
SAFE 10561		Brazing pin, threaded M12, 24 mm		094/016116

Ferrules





Part No.	H/W Ver, Rev.	Description`	Image	Catalogue No.
SAFE 2003		Ceramic Ferrule, 8 mm		094/006008
SAFE 2009		Ceramic Ferrule, 9.5 mm		094/016117
SAFE 2012		Ceramic Ferrule, 12 mm		094/016118

Bonds, Lugs and Connectors

Part No.	H/W Ver, Rev.	Description`	Image	Catalogue No.
SAFE 3059		Rail bond 25 mm ² , 145 mm, 10 degrees		094/002032
SAFE 3069		Rail bond 25 mm ² 145 mm, 40 degrees		094/016119
SAFE 3081		Rail bond 50 mm ² 185 mm, 60 degrees		094/016120

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Part No.	H/W Ver, Rev.	Description`	Image	Catalogue No.
SAFE 3252		Rail bond 25 mm ² 1360 mm PVC coated		094/016121
SAFE 6064		Cable lug, 50 mm ²		094/012028
SAFE 5048		T-connector, 2 x M6, 32 mm		094/016122
SAFE 5005		T-connector, M8, 18 mm		094/016123
SAFE 5007		T-connector, M12, 35 mm		094/016124

Compatibility of consumables

Brazing Pin		Ferrule	Pin Holder	Ring Holder
SAFE 10011	8 mm standard	SAFE 2003	SAFE 9211	SAFE 9202
SAFE 10101	8 mm extra	SAFE 2003	SAFE 9211	SAFE 9202
SAFE 10131	9.5 mm	SAFE 2009	SAFE 9211	SAFE 9202
SAFE 10641	M8 threaded	SAFE 2012	SAFE 9213	SAFE 9204
SAFE 10741	M10 threaded	SAFE 2012	SAFE 9215	SAFE 9204
SAFE 10561	M12 threaded	SAFE 2012	SAFE 9217	SAFE 9204

Bonds, Lugs and Connectors	Description	Pin
SAFE 3059	Rail bond 25 mm ² , 145 mm, 10 degrees	SAFE 10011
SAFE 3069	Rail bond 25 mm ² , 145 mm, 40 degrees	SAFE 10011
SAFE 3081	Rail bond 50 mm ² , 185 mm, 60 degrees	SAFE 10131
SAFE 3252	Rail bond 25 mm ² , 1360 mm PVC coated	SAFE 10101
SAFE 6064	Cable lug, 50 mm ²	SAFE 10101
SAFE 5048	T-connector, 2 x M6, 32 mm	SAFE 10011
SAFE 5005	T-connector, M8, 18 mm	SAFE 10011
SAFE 5007	T-connector, M12, 35 mm	SAFE 10011

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Assessed Documentation

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
IN-021-05	Manual ECONECT GB IN-021-05	-		2
MM-014-03	Product Data Sheet - Brazing pins	03	-	2
MM-151-02	Product Data Sheet - Econect Pin Brazing Unit	02	-	2
-	Safetrack S30XC and Econect parts lists - revision2	2	05-07-13	2
PS/PSL-OH-002/RPT/023	Pin Brazing Trial Report Safetrack Econect Product	1	Jan 2015	2

Manuals and Training Material

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
Safetrack_Econect_Pinbrazing_Rev1-0p3	Safetrack Econect Pin Brazing Training Presentation	1	April 2014	2
NR/C&TM/PTMP 03.08	Safetrack Econect Pin Brazing Training Lesson Plan	1.0	June 2014	2

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Certificate History

Issue	Date	Issue History
1	19-Dec-2000	First accepted for use with S30 X/C pin brazer
2	20 Jan 2016	Acceptance updated to adopt Econect pin brazing system, associated consumables and updated Training Material. Constraint added to restrict S30X/C products for spares purposes only.

Key Contacts

Manufacturer

Safetrack Baavhammar AB.
Pl.319 L Molieberga.
S-24S 93 Staffanstorp.
Sweden.

Sponsor

David Bardwell
Senior Project Engineer (Product Acceptance)
Thameslink Programme
david.bardwell@networkrail.co.uk

Lead Product Reviewer

Chris Browne – Senior Engineer Plant and T&RS
Network Rail
Chris.browne@networkrail.co.uk

UK Agent / Supplier

Park Signalling Ltd.
Houldsworth Mill Business Centre
Houldsworth Street
Reddish
Stockport
SK5 6DA

Tel: +44 (0)161 975 6161
info@park-signalling.co.uk

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General Terms & Conditions

1) General

- 1) This certificate can only be amended by Network Rail Technology Introduction Group. Any alterations made by a different person will invalidate the entire certificate.
- 2) 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.
- 3) Upon the review date this certificate and the product it relates to is invalid and not accepted for use. Manufacturers are to make an application for a review prior to the review date.

2) 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.

3) 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.

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4) 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.

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.

5) 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 End -----