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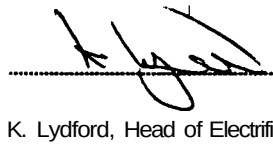
Issue	2
Date	April 2006

Business Process Document

Bolted running rail connections for traction bonding on ax. and d.c. electrified lines

Endorsement & Authorisation

Endorsed by:



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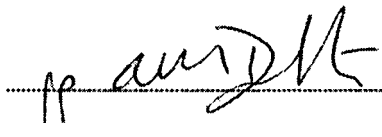

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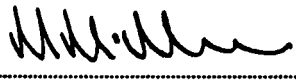

M. McManus, National Standards Manager

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Issue record

Issue	Date	Comments
2	April 2006	Re-issued as a SAF3 Business Process Document *(formerly RT/E/S/21107)*

Implementation

1 April 2006

Compliance

This Network Rail specification is mandatory and must be complied with by Network Rail and its contractors from 1 April 2006

When this specification is implemented, it is permissible for all projects, which have formally completed GRIP Level 4 to continue to comply with the Issue of any relevant Network Rail standards current when GRIP Level 4 was reached and not to comply with requirements contained herein unless the head of electrification and plant has stipulated otherwise in the accompanying briefing note.

Where the head of electrification and plant has specified that all projects will comply with the requirements, specific authority not to comply can be sought in the usual manner using the appropriate non-compliance authority processes described in Network Rail standard, NR/SP/STP/045 *Managing the process for non-compliance authority* (formerly RT/LS/P/045).

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Contents

1		Purpose	5
2		Scope	5
3		Reference documentation	5
4		Definitions	5
5		General clauses	6
	5.1	Safety, legislation and regulations etc	6
	5.2	Design, manufacture and workmanship	6
6		Compliance with standards	7
	6.1	European, International and British Standards etc	7
7		Performance requirements	7
	7.1	General	7
	7.2	Environmental conditions	7
	7.3	Suitability for use with running rails	8
	7.3.1	Rail profiles	8
	7.3.2	Rail steels	8
	7.4	Current ratings (for traction purposes)	9
	7.5	Reliability and availability	9
	7.6	Service life	10
	7.7	Interchangeability	10
	7.8	Finish and resistance to corrosion	10
8		Verification of performance and quality	10
	8.1	Quality assurance	10
	8.2	Inspection and testing	10
	8.3	Drawings	12

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9	Technical and construction requirements	12
9.1	Installation of the bolted connections	12
9.2	Resistance	12
9.3	Holes in running rails	12
9.4	Security of connections	12
9.5	Connections to cable(s)	12
Appendix A	Tests at works	13

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1 Purpose

This specification states the requirements for the design, manufacture and testing of bolted electrical connections for attachment to running rails. The connections are used for:

a) traction bonding;
b) signal track circuit connections.

2 Scope

This specification applies to all new bolted rail connections for bonds which carry traction current installed on the A.C. and D.C. Electrified Lines.

Welded or brazed connections are excluded from this specification.

3 Reference documentation

NR/GN/ELP/27233	Network Rail Business Process Document – Characteristics of Railway Electrification Traction Power Supplies
NR/SP/TRK/008	Network Rail Business Process Document - Saw and disc cutting and drilling of rails
EN ISO 9001	Model for quality assurance in design, development, production, installation and servicing
BS 4579	The performance of mechanical and compression joints in electric cable and wire connectors

4 Definitions

For the purpose of this specification the following definitions shall apply:

Bolted connection	A mechanical attachment system which utilises a fixing screw, rail/cable lug interface bush, and associated locking arrangement components, to achieve an electrically and mechanically sound connection.
Bond	Electrically conductive connection of low resistance.
Continuity Bond	Connection intended to carry traction return currents.
British Standard	A standard published by the British Standards Institution. Its alphanumeric identity is prefixed by BS.
Equipment	Equipment including all component parts and accessories.

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