

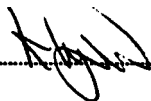
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| Ref   | NR/SP/ELP/27183 |
| Issue | 2               |
| Date  | April 2006      |

# Business Process Document

## 50 cycle single phase a.c. electrification overhead line equipment

### Endorsement & Authorisation

Endorsed by:

  
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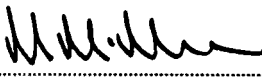
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## Issue record

| Issue | Date       | Comments                                                                       |
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| 2     | April 2006 | Re-issued as a SAF3 Business Process Document ( <i>formerly RT/E/S/27183</i> ) |

## 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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## Section 1

Drawings, descriptions, loading diagrams, calculations and instructions appertaining to the equipment shall be provided in sufficient detail to permit efficient manufacture, erection and maintenance in "polluted" and "clean" areas, of a nominal 25kV, 50 cycles, single phase A.C. overhead system of railway electrification.

These voltages may rise under light load conditions by up to 10%. The maximum fault current will be 6000 amps for 25kV systems and the protection equipment will affect the clearance of faults in the following times:

- 6000 amps for not more than 0.2 secs.
- reducing to -
- 2000 amps for not more than a further 0.2 secs.
- After one minute -
- 6000 amps for not more than 0.2 secs.

## Section 2

The drawings, descriptions, loading diagrams, calculations and instructions shall be in accordance with best modern practice and the most economic and efficient for their purpose, due regard being paid to the quantities required or to the necessity for standardisation to permit bulk ordering.

## Section 3

The return of electric current to the supply points will be by means of the running rails (which, although not deliberately connected to earth except at the supply points, will not be insulated from earth or necessarily continuously bonded) return conductors and booster transformers.

Section 4 deleted, subsequent numbers changed

## Section 4

The equipment shall be designed:

- 4.1. To be of such strength and of such clearance from existing and projected structures adjacent to the line as specified by the Engineer.