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NR/L2/CTM/012/035 Competence & Training in Signal Engineering

Sig 35: Install and configure signalling power supply systems.

1 Purpose.

The purpose of this competence standard is to define the competence requirements for persons required to install and configure signalling power supplies.

2 Scope.

This competence standard applies in all circumstances where any person is required to install and configure signalling power supplies on Network Rail managed infrastructure.

The level and extent of responsibility will include their own safety and that of others who might be affected by their work. The person will be expected to refer to others for authorisation when required, will be responsible for the implementation of the instructions and will work within set procedures and specifications. The person is responsible for the quality of their completed work.

This competence standard shall be used to assess the competence of people installing any of the following types of power supply:

- Battery Chargers.
- Converters and Inverters
- Low voltage a.c & d.c. systems.
- Primary & Secondary batteries
- Power insulation monitors (i.e. Bender)
- Transformers & Transformer/Rectifiers
- Un-interruptible power supplies (UPS)

3 Competence Standard.

This Competence Standard comprises three elements.

Element 1 Install signalling power supply component parts.

Element 2 Configure signalling power supply to operate within design tolerances.

Element 3 Conduct specified testing of signalling power supplies, analyse and interpret the results.

Element 1 is concerned with the safe installation of equipment in accordance with design specifications. Elements 2 and 3 deal with the setting up and testing of the signalling power supply and ensuring that the signalling power supply is operating within design tolerances.

To prove competence in this unit, the person shall first hold competence in Sig 42 Work Safely on Signalling Power supplies, containing (Safety Procedures for Working on Electrical Equipment (SPWEE)) and demonstrate their ability to complete installation in accordance with instructions. The person will have to show they can follow recording procedures and can follow reporting and escalation procedures.

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4 Assessment.

4.1 Initial Assessment

Where the equipment is new to the person's area of responsibility evidence should be gathered of the person working on a range of signalling power supply types.

Performance evidence may come from a variety of sources and will include evidence derived from surveillance (direct observation) by an approved assessor. Evidence will also include detailed questioning and may additionally be supported by performance reports from the person's line manager.

4.2 Re-Assessment

Re-assessment shall be completed in accordance with the applicable requirements set out in **7.2** of NR/L2/CTM/012.

4.3 Knowledge Evidence that is common to the whole unit.

You shall have knowledge and understanding of:

a) How the installation activity may affect the safe operation of the railway.

b) What procedures need to be followed to demonstrate operational and personal safety is maintained during the work.

c) How to avoid personal injury during the work.

d) How the signalling power supplies are designed to function under normal operating conditions.

e) What each of the component parts contributes to the overall operation of the system.

f) What tools are required to complete the work and what equipment calibration is required.

g) What the limits of your responsibility and authority are.

h) Who is responsible for taking the equipment out of operational service and handing the equipment back the equipment to operational service.

i) Installation reporting documentation.

j) Reporting lines and escalation procedures.

k) Industry protocols relating to communication important safety information.

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