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Level 3

Working On or About 25 kV A.C. Electrified Lines

Module 10 Use of Voltage Testing Devices, Portable Earthing Equipment and Temporary Continuity Jumpers

(This module is one of a suite of modules forming Network Rail standard NR/L3/ELP/29987 'Working On or About 25 kV A.C. Electrified Lines')

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1 Purpose

This module will produce a consistent approach to using voltage testing devices, portable earthing equipment and temporary continuity jumpers on 25 kV a.c. electrified lines. Further requirements for working on or about the electrified lines are contained in the Rule Book Module AC (GE/RT8000/AC).

2 Scope

This module states the requirements when using voltage testing devices, portable earthing equipment and temporary continuity jumpers on 25 kV a.c. electrified lines.

The requirements for assembly, maintenance and care of voltage testing devices, portable earthing equipment and temporary continuity jumpers are stated in Network Rail standard NR/L3/ELP/27237.

It is applicable to Network Rail personnel and to Network Rail's contractors.

To provide a consistent approach to working on or about 25 kV a.c. electrified lines, Train Operating Companies may, as best practice, apply this standard in full on infrastructure they control.

3 General

When overhead line equipment has been isolated but not earthed it can still be at a dangerously high voltage as a result of:

- a) re-energisation at 25 kV due to the inadvertent closure of a circuit breaker or an electric train running into the isolated overhead line section; **or**
- b) induction from adjacent live OLE or from nearby overhead transmission power lines.

When the isolated OLE is earthed, the voltage cannot rise to a dangerous value.

It is important, therefore, that the method of application and removal of portable earths and temporary continuity jumpers is carried out in accordance with this module.

Voltage testing devices, portable earthing equipment and temporary continuity jumpers shall be of approved design complying with Network Rail standards, and shall be used only by persons who have been specially trained, are competent and have been authorised in their use.

Voltage testing devices and insulated earthing poles shall not be used unless they have a current test certificate.

Before use, the user shall inspect any voltage testing device, portable earthing equipment and temporary continuity jumper intended to be used, to verify that they are suitable for use. Any defective, suspect or out-of-date item shall not be used. Portable earths or temporary continuity jumpers that have been subjected to short-circuit current shall not be used.

Care shall be taken during use to prevent earthing poles, portable earths and temporary continuity jumpers from coming into contact with adjacent live equipment.