



1 SCOPE

This Section of the Power Systems Live Working Manual details the procedures for inspection of hollow and foam-filled insulated rods. The test procedure is taken from –

BS EN 60855:1997 - Insulating Foam Filled Tubes and Solid Rods for Live Working,

and,

BS EN 61235:1995 - Insulating Hollow Tubes for Electrical Purposes.

2 ISSUE RECORD

This is a controlled maintained document.

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Issue Date	Issue No	Author	Amendment Details
May 2001	1	C Cameron	Initial Issue: 4 pages
Dec 2002	2	R W Nelson	Portable Earthing Rods – All Sections must be tested Test value reduced to 75kV/foot : 4 pages

3 ISSUE AUTHORITY

Author	Owner	Issue Authority
R W Nelson Operational Risk Manager	W. Cuthbert Health, Safety & Environment Manager	W. Cuthbert Health, Safety & Environment Manager <i>W. Cuthbert</i>



4 REVIEW

This document will be subject to review in line with operational requirements and in no case later than three years after the date of issue.

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6 DEFINITIONS

Terms printed in bold are as specified in the ScottishPower Safety Rules (Electrical and Mechanical) 4th Edition, or as specific definitions detailed within the text of this document.

Vicinity Zone - The **Vicinity Zone** that extends for a distance around exposed **Live** Conductors, which if maintained will ensure that the **Danger** of burn or electric shock is prevented because the **Live Zone** is not breached.
The **Vicinity Zone** distances, which depend on voltage, are detailed in OPSAF-12-018, Appendix 1.



7 RELATED DOCUMENTS

BS EN 60855:1997 Insulating Foam Filled Tubes and Solid Rods for Live Working
BS EN 61235:1995 Insulating Hollow Tubes for Electrical Purposes

8 POLICY

For the purposes of this test procedure the following describes the different uses of Insulated Rods:

8.1 Hot Sticks

8.1.1 Short Stick

A single foam filled Insulated Rod **Approved** for live line work up to 33kV.

8.1.2 Long Stick

A telescopic Insulated Rod* with a foam filled top section **Approved** for live line work up to 33kV.

** Individual sections of Telescopic Rods must be considered as non-interchangeable.*

8.2 Fuse/Switch Rods

A set of hollow Insulated Rods with a foam filled top section or a telescopic Insulated Rod with a foam filled top section used to insert and remove fuses, apply an **Approved** voltage indicator and to operate pole mounted switchgear.

8.3 Portable Earthing Rods

An Insulated Rod or series of Insulated Rods used for the application and removal of portable earthing devices.

8.4 General Purpose Operating Rod

An Insulated Rod or Series of Rods to be used for work outwith the *Vicinity Zone* but due to the nature of the work may inadvertently encroach the *Vicinity Zone*.



9 ANNUAL TEST PROCEDURE

9.1 Common Elements

All rods shall be visually inspected and cleaned (inside and out) prior to being presented to the Test Centre. The Test Centre will check the Rods for defective parts; contamination; scratches; abrasions or anything they consider will question the integrity of the Rod. The Rod may be failed at this stage.

An electrical test (75kV/foot for 1 minute) will be carried out on the appropriate parts or sections of Rods as detailed in Table 1 below.

TABLE 1: RODS TO BE TESTED

TYPE	SECTION TO BE TESTED
Short Stick	Complete Rod
Long Stick (telescopic)**	Top three sections
Fuse/Switch Rods	Top section only
Portable Earthing Rod	All sections
General Purpose Operating Rod (hollow)	All sections
General Purpose Operating Rod (telescopic)	Top three sections

** A Rod tested as a Long Stick can also be used as a Fuse/Switch Rod.

10 MARKING

On successful completion of the test procedure the bottom section of Telescopic Rods; the top section of Fuse Rods and Portable Earthing Rods and all sections of the General Purpose Operating Rod will be labelled with the following information:

- A 'validity' date
- The name of the test inspector
- The signed initials of the test inspector

Rods without a label or an invalid date must not be used and returned to the Test Centre.

11 RE-TEST

Rods that have been failed by the Test Centre should be returned to their owners complete with a description of the failure mode. The rods may be returned for re-test following remedial treatment.