Title: Calibration Of Edgcumbe 11kv Live Conductor Tester

Scope

Work Instruction for the internal calibration of Edgcumbe 11kV live conductor testers. To be used in the absence of a manufacturers calibration instruction.

Preparation

Calibration must be carried out using the HV test enclosure and its associated instruments and equipment.

For safety tests 6 – 11 digital kV meter must be set on 30kV AC range.

Voltage calibration must be referenced to the HV test enclosure digital kV meter on range 0 – 15kV AC.

Current readings must be taken referenced to the DMM set to ranges as specified below.

Method

3.1 All calibration results must be entered on the results sheets (see appendix A)

3.2 Carry out tests 1 and 2.

3.3 Carry out tests 3 and 4 using the live conductor testers dedicated proving unit (if supplied) or test section proving unit.

3.4 Carry out test 5 using the DMM set on 200 ohm range and note result.

3.5 Select 30kV range on digital kV meter and select 2mA AC range on DMM. Carry out tests 6 – 11, as applicable using HV test enclosure instruments and equipment and note results.

3.6 Select 15kV range on digital kV meter and carry out tests 12 to 20 using HV test enclosure instruments and equipment. Note results.

3.7 Carry out test 21(a), (b) or 22(a), (b) as applicable, calculate impedance and note result.

3.8 If phasing stick is included with the tester carry out test 23 and note result.

3.9 Complete results sheet header and enter Pass / Fail.

- All records must be kept for audit purposes

References

Appendix A Calibration Results for Edgcumbe 11kV Live Conductor Tester

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Appendix A

Calibration Results for Edgcumbe 11kV Live Conductor Tester

Model ……Serial No ……..

Date ……..Result ……

Lab Temp / RH ……Operator ……

User Location ……Certificate No ……

Accuracies quoted are from manufacturer's specifications or relevant British Standard.

Safety tests numbers 5 to 11 and tests 21 and 22 are to manufacturer's recommendations.

Test 1	Is pointer on zero?	Pass / Fail
Test 2	Instrument balance Does the pointer remain within ± 1% FSD at 45^0 all planes?	Pass / Fail
Test 3	Using proving unit, check free movement of pointer both up and down scale	Pass / Fail
Test 4	Using proving unit, check instrument deflects to approximately 5kV using HV test output.	Pass / Fail
Test 5	Is continuity of each lead, handle extension rod and bent end adaptor less than 1.5 ohm?	Pass / Fail

Note: Visually check for breakdown of the insulation after each test numbers 6 to 11.

Test 6	Radial voltage test – tester resistor pole Apply 20kV for one minute Leakage current = Is leakage current less than 1.2mA	Pass / Fail
Test 7	Radial voltage test – phasing rod Apply 20kV for one minute Leakage current = Is leakage current less than 1.2mA	Pass / Fail
Test 8	Radial voltage test – extension rod Apply 20kV for one minute Leakage current = Is leakage current less than 1.5mA	Pass / Fail
Test 9	Radial voltage test – bent end adaptor Apply 20kV for one minute Leakage current = Is leakage current less than 300uA	Pass / Fail

Appendix A (continued)

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