

TABLE OF CONTENTS

0.1 Circulation List

0.2 Amendment Record

FOREWORD

1. SCOPE
2. REFERENCES
3. TERMS AND DEFINITIONS
4. REQUIREMENTS
5. TESTS AND INSPECTION
6. MARKING AND PACKING

ANNEX A: *Guaranteed Technical Particulars (to be filled and signed by the Supplier and submitted together with copies of the manufacturer's catalogues, brochures, drawings, technical data, sales records and copies of certificates for tender evaluation)*

Issued by: Head of Section, Standards Development

Signed:



Date: 2015-02-05

Authorized by: Head of Department, Standards

Signed:



Date: 2015-02-05

TITLE:

**SPECIFICATION FOR
SWITCHING GLOVES**

Doc. No.

KP1/3CB/TSP09/075

Issue No.

1

Revision No.

0

Date of Issue

2015-02-05

Page 2 of 7

0.1 Circulation List

| COPY NO. | COPY HOLDER |
|--|-----------------------------------|
| 1 | Manager Standards |
| 2 | Supply Chain Manager, Procurement |
| Electronic copy (pdf) on KPLC server currently: http://172.16.1.40/dms/browse.php?fFolderId=23 | |

0.2 Amendment Record

| Rev No. | Date (YYYY-MM-DD) | Description of Change | Prepared by (Name & Signature) | Approved by (Name & Signature) |
|---------|----------------------|-----------------------|-----------------------------------|-----------------------------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Issued by: Head of Section, Standards Development

Authorized by: Head of Department, Standards

Signed:



Signed:



Date: 2015-02-05

Date: 2015-02-05

FOREWORD

This specification has been prepared by the Standards Department in collaboration with Transmission Department both of The Kenya Power and Lighting Company Limited (KPLC) and it lays down requirements for Switch Gloves for use in 245kV Substations. It is intended for use by KPLC in purchasing the items.

1. SCOPE

This specification is for Switching Gloves for use by the company's Network Maintenance Teams.

The specification stipulates the minimum requirements for Switching Gloves acceptable for use in the company and it shall be the responsibility of the Supplier to ensure adequacy of the design, good workmanship and good engineering practice in the manufacture of the products for KPLC.

The Switching Gloves shall be of proven design and it is the responsibility of the Supplier to ensure that the offered design is of the highest quality and guarantees excellent service to KPLC.

2. REFERENCES

Applicable ISO, IEC Standards and Kenya Standards.

References to brand names or catalogue numbers are intended to be descriptive only and not restrictive. The Tenderer may adopt higher standards, brand names, and or catalogue numbers in its Tender, provided that it demonstrates to KPLC's satisfaction that the substitutions ensure equivalence to all requirements of this specification.

3. TERMS AND DEFINITIONS

For the purpose of this specification the terms and definitions given in the reference standard shall apply.

4. REQUIREMENTS

4.1 SERVICE CONDITIONS

The Switching Gloves shall be suitable for use outdoors in 245kV substations in tropical areas and harsh climatic conditions including areas exposed to sea spray

Issued by: Head of Section, Standards Development

Authorized by: Head of Department, Standards

Signed:



Signed:



Date: 2015-02-05

Date: 2015-02-05

(along the coast), humidity of upto 90% and average ambient temperature of +30°C with a minimum of -1°C and a maximum of +40°C.

4.2. DESIGN AND CONSTRUCTION

4.2.1 The Switching Gloves shall be manufactured to IEC 60903, applicable ISO Standards, Kenya Standards and the requirements of this specification.

4.2.2 **Electrical requirements:** Class 4, max operating voltage 36000 volts, proof test voltage 40000, withstand voltage 50000 volts.

4.2.3 Mechanical requirements:

- a) Average tensile strength : ≥ 16 MPa
- b) Average elongation at break : $\geq 600\%$
- c) Puncture resistance : ≥ 18 N/mm
- d) Tension set : $\leq 15\%$

4.2.4 Additional Properties required:

- a) Resistance to acid: conditioning of gloves by immersion for 8 hours at 23 ± 2 °C in sulphuric acid solution at 32° Ba
- b) Resistance to oil: conditioning by immersion in oil (Liquid 102) for 24hr at 70 ± 2 °C
- c) Resistance to ozone: conditioning of gloves in a chamber for 3 hours at 40 ± 2 °C and in a 1 mg/m³ ozone concentration, the gloves must not present any cracking
- d) Resistance to very low temperatures: conditioning of gloves for 24 hours at -40 ± 3 °C

4.2.5 The Switching Gloves shall be of the general arrangement shown in Figure 1:

Issued by: Head of Section, Standards Development

Authorized by: Head of Department, Standards

Signed:



Signed:



Date: 2015-02-05

Date: 2015-02-05



Fig 1: General Arrangement of Switching Gloves

5. TESTS AND INSPECTION

- 5.1 The Switching Gloves shall be inspected and tested in accordance with the requirements of this specification. It shall be the responsibility of the supplier to test or to have tested all the relevant tests.
- 5.2 Copies of previous test certificates by a third party testing laboratory accredited to ISO/IEC 17025 shall be submitted with the offer for evaluation. A copy of the accreditation certificate for the testing laboratory shall also be submitted with the tender (all in English Language). Any translations of certificates and test reports into English language shall be signed and stamped by the Testing Authority.
- 5.3 Test Certificates for the Switching Gloves to be supplied shall be submitted to KPLC for approval before shipment/delivery of the goods.

Issued by: Head of Section, Standards Development

Authorized by: Head of Department, Standards

Signed:



Signed:



Date: 2015-02-05

Date: 2015-02-05



Kenya Power

TITLE:

**SPECIFICATION FOR
SWITCHING GLOVES**

Doc. No.

KP1/3CB/TSP09/075

Issue No.

1

Revision No.

0

Date of Issue

2015-02-05

Page 6 of 7

- 5.4 On receipt of the Switching Gloves, KPLC will inspect them and may perform or have performed any of the relevant tests in order to verify compliance with the specification. The supplier shall replace without charge to KPLC, Switching Gloves which upon examination/inspection, test or use fail to meet any or all of the requirements in the specification.

6. MARKING AND PACKING

- 6.1 The following information shall be marked legibly and in a permanent manner on each Switching Glove:

- a) The manufacturer's identity;
- b) Model/Type Reference Number;
- c) Applicable standard and marking requirements of the standard;
- d) The words "Property of KPLC".

- 6.2 Each Switching Glove shall be packed in a manner so as to protect it from damage during transportation and storage.

.....THIS SPACE LEFT BLANK.....

Issued by: Head of Section, Standards Development

Authorized by: Head of Department, Standards

Signed:

Signed:

Date: 2015-02-05

Date: 2015-02-05

ANNEX A:Guaranteed Technical Particulars *(to be filled and signed by the Supplier and submitted together with copies of the manufacturer's catalogues, brochures, drawings, technical data, sales records and copies of test certificates for tender evaluation)*

Tender No.

| Clause number | Bidder's offer (indicate full details of the offered SWITCHING GLOVE for each requirement of the specification) |
|---------------------------|---|
| Manufacturer & country | |
| 1 Scope | |
| 2 Applicable Standards | |
| 3 Terms & Definitions | |
| 4.1 Service Conditions | |
| 4.2 Design & Construction | |
| 4.2.1 | |
| 4.2.2 | |
| 4.2.3 | |
| 4.2.4 | |
| 4.2.5 | |
| 5 Tests & Inspection | |
| 5.1 | |
| 5.2 | |
| 5.3 | |
| 5.4 | |
| 6 Marking and Packaging | |
| 6.1 | |
| 6.2 | |

.....
Supplier's Name, Signature, Stamp and Date

Issued by: Head of Section, Standards Development

Authorized by: Head of Department, Standards

Signed:



Signed:



Date: 2015-02-05

Date: 2015-02-05

