

TRANSFORMER AND SWITCHGEAR SERVICES

Scope of work – Capacitive Dry Bushings and Insulators used in Power Transformers

This scope of work covers the supply and delivery of oil to air Capacitive Bushings fitted to Power Transformers and Shunt Reactors to the Purchaser's premises in Rosherville for a period of four years. The life expectancy of these components must match the life expectancy of the transformer unit in service, which is 35-40 years. The contract does not guarantee that any specific quantity of components will be bought over the period of the contract. The Bushings will be purchased for transformer repair and rewind projects on an "as-and-when-required" basis. The scope includes the making available and providing of technical expertise and support with regards to the installation and use of the components that are supplied to the Purchaser under this contract. The general use of such expertise will be deemed to be included in the prices quoted for the items in the schedule.

Functional specification

Supply oil to air dry type transformer bushings in accordance with Eskom specifications 240-56062799 rev.4 for various voltage and current ratings with optimal dissipation factor, comprising a dedicated Test tap with self-earthing cap, environmentally friendly, suitable for coastal and chemical environments. The bushings should be suitable for installation at an angle, horizontal and vertical positions with Cantilever forces and dielectric withstand capabilities.

2.2 NORMATIVE/INFORMATIVE REFERENCES

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.2.1 Normative

- [1] IEC 60137 Insulated Bushings for alternating voltage above 1000V
- [2] IEC 60076-7 Loading guide for oil-immersed Power Transformers
- [3] IEC 60076-18 Measurement of frequency response.
- [4] IEC 61463 Seismic Qualification of Transformer High Voltage Bushings
- [5] IEC 60815 Guide for Selection of Insulators in Respect of Polluted Conditions.
- [6] BS EN 13601:2002 Copper and copper alloys. Copper rod, bar and wire for general electrical purpose

Performance specification

The supplier must indicate for each item offered, the delivery period between receiving a task order and delivery to the Purchaser's premises.

Delivery requirements


- Materials must be delivered to the T&SS Receipt and Dispatch premises in Lower Germiston Road, Rosherville
- All costs for delivery must be included in the quoted price for the material
- All vehicles must comply to the relevant Eskom Rotek Industries safety policies and procedures when entering the premises
- All vehicles entering and leaving the premises are subject to, and must comply with a security search
- Materials must be suitably protected against mechanical damage, moisture, and dirt
- Oil side to be protected against mechanical damage and moisture ingress by fitting an oil side storage container
- Bushing is to be delivered with the following documentation included
 - FAT results
 - Dimensional drawings

- Installation and maintenance manuals
- Special lifting equipment if applicable
- T&SS reserve the right to inspect materials at the premises of the supplier before deliveries are affected by the supplier. Such inspections will not relegate any of the supplier's responsibilities to perform in terms of this contract.
- Offloading facilities and labour will be provided by the Purchaser

Technical specification

All Bushings to be supplied under this contract must be fit for purpose and match the operational life expectancy of the transformer, which is 35 - 40 years. Components must meet the minimum standards stipulated in the relevant and latest Eskom standard for each component, as well as the "SPECIFICATION FOR POWER TRANSFORMERS RATED FOR 1.25MVA AND ABOVE AND WITH HIGHEST VOLTAGE OF 2.2KV OR ABOVE".

Item	Description	Unique identifier
1	Bushings to latest revision of the Eskom standard	240-56062799 rev.4
2	SPECIFICATION FOR POWER TRANSFORMERS RATED FOR 1.25MVA AND ABOVE AND WITH HIGHEST VOLTAGE OF 2.2KV OR ABOVE	240-68973110 rev.4

Actions	Designation	Name	Signature	Date
Compiled by	Project Manager.	T. Nonyane		19/05/2026