TRANSFORMER AND SWITCHGEAR SERVICES

Scope of work – Pressure Relief Devices used in Power Transformers

There are a number of components that are fitted to a power transformer as part of the electrical and mechanical system. These components have various functions related to the measurement and control of flow, pressure and temperature. Some also have of protecting the system against environmental factors and fault conditions. The various components, comprised of valves, temperature, oil level and flow indicators, etc. are installed throughout the system, in various strategic locations, and are mostly connected to the marshalling panel of the transformer, where information is forwarded to the protection equipment in the substation control room. The life expectancy of these components must match the life expectancy of the transformer unit in service, which is 35-40 years. The components must operate reliably over this lifespan, as failure of a component can result in the catastrophic failure of the whole transformer unit.

This scope of work covers the supply and delivery of Pressure Relief Devices (PRV) to the Purchaser's premises in Rosherville for a period of four years. The contract does not guarantee that any specific quantity of components will be bought over the period of the contract. The PRV 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

The pressure relief device protects the transformer from overpressure in the tank. When the device operates under stress conditions, oil is vented to release internal pressure in the transformer tank. Signals are also sent to the transformer protection system so that automated action can be performed.

Performance specification

The supplier must indicate for each item offered, whether stock is kept locally, and 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 damage, moisture and dirt

- 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 components 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". Components must have standard mountings and dimensions as indicated in the descriptions.

Item	Description	Unique identifier
1	PRV to latest revision of the Eskom standard	240-56063871
2	SPECIFICATION FOR POWER TRANSFORMERS RATED FOR 1.25MVA AND ABOVE AND WITH HIGHEST VOLTAGE OF 2.2KV OR ABOVE	240-68973110

Number	Description	Quantity	Material Number	Unit Price	Total Price
1	T50	10	681560		
2	T80	20	681561		
3	T125	10	681562		
4	LPRD, 55 kPa	50	683858		
5	LPRD, 69 kPa	10	681563		
6	LPRD, 83 kPa	10	681564		
7	LMPRD 55 kPa	10	722517		
8	LMPRD 80 kPa	10	722516		
9	LPT NV 353, 70 kPa	10	722515		
10	XPRD, 55 kPa	10	683860		
11	XPRD, 69 kPa	10	681565		
12	XPRD, 83 kPa	10	681566		
13	RPRR 47890	10	713476		
14	Pressure relay 50 kPa T/C	20	572887		
15	Pressure relay 100 kPa T/C	40	575885		
				Grand Total	

Tshepiso Nonyane 29 May 2023