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# SPECIFICATION FOR OIL PUMP.

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**MAY 1, 2023**  
**KENYA POWER AND LIGHTING CO,LTD**  
**P O BOX 30099**

	<b>SPECIFICATION FOR OIL PUMP</b>	Doc.No.	
		Issue No.	1
		Revision No.	0
		Date of Issue	2023-05-01

**FOREWARD**

This specification has been prepared by the technical services department of Kenya power and lays down minimum requirements for Oil pump. It is intended for use in the purchase of oil pump.

Supplier shall submit information which demonstrates satisfactory service experience of the manufacturer with the products which fall within the scope of this specification.

**1 Scope.**

- 1.1 This specification is for single phase oil pump and covers type, constructional and operational features of the pump.
- 1.2 The specification also covers inspection and test of oil pump and guaranteed technical Particulars to be filled, signed by the manufacturer and submitted for tender evaluation.
- 1.3 The specification stipulates the minimum requirements for the Oil pump acceptable for use within KPLC system and it shall be the responsibility of the manufacturer to ensure adequacy of the design, good workmanship and good engineering practice in the manufacture of the oil pump.

**2 REFERENCES.**

The following documents were referred to during the preparation of the specification, in case of conflict, the requirements of this specification shall take precedence.

**3 TERMS AND TERMINATIONS.**

- KVA: Kilovolts Amperes
- V: Voltage
- ASL: Above Sea Level
- AC: Alternating current

**4 REQUIREMENTS.**


**4.1 Service conditions**

- The portable generator shall be used under the following environmental conditions.
- Operating temperature range -1°C to 40°C with average temperature of 30°C.
- Humidity: Upto 95%
- Altitude: 2200m asl

**4.2 The Oil Pump.**

- 4.2.1 The oil pump shall be single phase 220-240V AC, 50HZ

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- 4.2.2 The design of the pump shall be centrifugal, monoblock (pump and motor combined to form a single unit) type pump fitted with single stage closed impeller in volute casing having axial end suction and vertical Centre line delivery.
- 4.2.3 The Oil pump will have the suction hose placed in oil drum and the delivery hose in the machine reservoir and vice versa.
- 4.2.4 The unit shall be plugged in to the electric outlet. By use of switch provided on the unit, the pump is operated.
- 4.2.5 The Oil pump shall be able to pump at least 1000 litres per hour.
- 4.2.6 The oil pump shall have pump and motor mounted on a hand trolley.
- 4.2.7 The material for the pump body shall be homogeneous free from manufacturing defects and of robust construction for rugged handling.
- 4.2.8 The seals shall be adequate design and compatible with mineral transformer oil.
- 4.2.9 The oil pump shall have a suction hose of 4M and delivery hose of 10M long together with hose quick connect couplers for connecting the pipes to the pump.
- 4.2.10 The Suction and delivery hose shall be braided PVC and transparent with smooth interior wall, fabric reinforced, smooth PVC exterior wall, 1 inch diameter and temperature operating range of -10°C to 90°C.
- 4.2.11 The Motor for motorized oil transfer pump shall be 0.5KW, 240V, single phase, ac squirrel cage induction motor type with IP 54 degree of protection.
- 4.2.12 The Oil pump shall have a head range of 10M
- 4.2.13 The oil pump shall have wheels for ease of movement.
- 4.2.14 The pump shall be capable of pumping liquid with a maximum viscosity of 17mm<sup>2</sup>/s at 40°C.

**ANNEXES**


A1. The bidder shall indicate the delivery time of the pumps and manufacturers experience in the production of the pumps.

**B TESTS AND INSPECTION.**

B1. The Oil pump shall be able to deliver oil at discharge pressure and discharge rate continuously without leakage at any sealing points till the drum is emptied.

B2. On receipt of the portable generator, KPLC shall undertake a comprehensive inspection of the pump in order to verify compliance with the specification. The equipment stands rejected if any of the requirement is not met and the supplier shall be asked to supply a pump.

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**C MARKING AND PARKING.**

**C1. MARKING**

The oil pump shall be marked with direction of rotation and provided with nameplate. The following information shall be legibly and indelibly marked in the nameplate

- a Serial Number and batch number
- b Manufacturers name
- c Type and Model
- d Power capacity
- e Motor voltage voltage

**D Documentations.**

D1. The bidder shall submit its tender complete with technical documents required by annex A (Guaranteed technical particulars) for evaluation. The technical documents to be submitted (all in English) for tender evaluation shall include the following.

- Guaranteed technical particulars signed and stamped by the manufacturer.
- Manufacturers catalogues, brochures and technical data sheets for Oil pump and accessories.

**5 GUARANTEED TECHNICAL PARTICULAR.**

Clause Number	KPLC requirement	Bidders offer
Manufacturers name and address	Specify	
Country of manufacture	Specify	
Bidders name and address	Specify	
Scope		
1.1-1.3	Specify	

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2 Applicable standards	Specify		
3 Terms and definition	Specify		
4 Requirements			
4.1 Service condition	Minimum temperature	State	
	Maximum temperature	state	
	Average temperature	state	
	Humidity	state	
	Altitude	state	
4.2 Oil pump requirements			
4.2.1 Motor Supply	State		
4.2.2 Design of the pump	state		
4.2.3 Operation of suction and delivery hose pipes	state		
4.2.4 Switching of supply to the motor	State		
4.2.5 Capacity rate	state		
4.2.6 Mounting of pump and motor	State		
4.2.7 Pump body material	state		
4.2.8 Design of seals	State		
4.2.9 Dimensions of suction and delivery hose pipes	State		
4.2.10 Design and diameter of suction and delivery hose	State		
4.2.11 Motor rating	state		
4.2.12 Oil pump head range	State		
4.2.13 Movement wheels	state		
4.2.14 Maximum liquid viscosity	State		
A			
A1 Delivery time, manufacturers' experience.	State		
B Test and inspection			
B1 Inspection and testing	State		
B2 Inspection at KPLCs stores	State		
A. PARKING AND MARKING			
C1 Marking	State		
D DOCUMENTATION			
D1 List of required documents for evaluation	State		

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