**Section II: Schedule of Requirements**

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| --- | --- | --- | --- | --- |
| **IUS-AF2-UWS-HSWN-003: Supply and Delivery of Spare Parts and Consumables for the purpose of maintaining and operating mechanical and electrical units in the water network system.** | | | | |
| No. | Description | Specification | Unit | Qty. |
| **ITEM # 1: Spare Parts for Mechanical and Electrical Units, according to the Technical Specifications** | | | | |
| 1.1 | Diesel Filter | Perkins Engine 150 KVA  Model: PR83526  Serial Number: U062478C | No. | 10 |
| 1.2 | Oil Filter | No. | 10 |
| 1.3 | Air filter | No. | 10 |
| **ITEM # 2: Consumables for Mechanical and Electrical Units, according to the Technical Specifications** | | | | |
| 2.1 | **Oil** |  |  |  |
| 2.1.1 | Diesel Engine oil,  (200 Ltr. Barrel.) | sae 50 | Barrel | 1 |
| 2.1.2 | Hydraulic oil, (200 Ltr. Barrel.) | Size AW 68 | Barrel | 1 |
| 2.2 | **Batteries** |  |  |  |
| 2.2.1 | 200 A, 12 V | Acid type | No. | 2 |
| 2.2.2 | 200 A, 12 V | Gel type for solar | No. | 2 |
| 2.3 | **Water for radiator** |  |  |  |
| 2.31 | Water for radiator, (5 Ltr. Galon) | Coolant | Galon | 20 |

**SCOPE OF WORK**

**The sub-project is to Providing Spare Parts for The Maintenance of Water Transmission Pipelines and Distribution Networks That Were Damaged by Hurricane Tej in** **HASWIN City with All Accessories for NWSA – HASWIN Branch.**

1. **GENERAL**
2. The goods to be supplied must be new and unused.
3. Delivery and Test of supplied goods will be made for National Water & Sanitation Authority – HASWIN Branch- NWSA- HASWIN’s Warehouses, HASWIN District - Al Maharah Governorate
4. The material to be supplied shall be new, unused and of the latest design (refurbished, used Material or the stock for more than 3 years will not be considered)
5. Documentary evidence to prove that the material offered comply with the Technical Specifications given in (Section II and Section III Form C) must be provided.
6. The supplied goods and materials shall conform to the authoritative standards appropriate to the Goods country of origin. Such standards shall be the latest issued by the institution concerned.
7. Technical Data/Brochures: bidders Must provide relevant technical data detailing the technical data of the material and original manufacturer brochures, where there is more than one model on a brochure, the bidder, must highlight which they are quoting for in this tender.
8. All materials shall be complying with specified International Standards and shall be supplied from reputable and approved manufactures and country of origin.
9. Markings: Unless otherwise specified in the relevant standard, products are to have the following legible marks as appropriate, cast, stamped or indelibly painted:

- Manufacturer’s name, initials and identification mark.

- Class designation.

- Date of manufacture.

- Initials and number of relevant standards.

1. Transport, handle and store all products and materials in accordance with the manufacturer’s recommendations and in a manner that prevents damage or deterioration or excessive distortion.
2. The employer UNOPS, UWSSP / NWSA- HASWIN Branch shall have the right to reject any damaged or defective product material.
3. **Warranty**

* Recommended Preventive Maintenance Schedule for the equipment shall be included.
* Final test and Inspection of supplied goods shall be carried out including: (Visual Inspection, Load test, testing, Material test certificate, field testing, etc) shall be done in the destination place (HASWIN city/ Al-Mahara Government).
* One-year warranty for the whole unit. Warranty must be approved from the Bidder and the Manufacturer.
* Warranty of after sell service support for the unit shall be available through authorized services centre in the Yemen.

1. **Climate:**

* All materials and equipment incorporated in the work shall be capable of withstanding shade temperatures of 45°C and if exposed to direct sunlight shall be capable of withstanding the additional heat gain up to 70°C , approx. 90% humidity and attitude 300 m above sea level. All materials and equipment shall take into account the generally tropical conditions with occasional dust storms, intense rain storms.

**Technical specifications:**

**ITEM # 1: Spare Parts for Mechanical and Electrical Units, according to the Technical Specifications**

**Product Description (*The type, purpose, serial number and manufacturer of the spare part is specified in the BoQ.)***

Maintenance of generators is critical to ensuring they perform reliably and efficiently. Replacing filters is one of the most important aspects of this maintenance, for the following reasons:

* ***Oil Filters:***
  + It plays a vital role in ensuring the engine is properly lubricated, which helps reduce wear and increase engine life.
  + Spent filters may allow impurities to pass into the engine, leading to long-term damage.
  + Replacing filters regularly helps maintain clean oil levels and prevent filter clogging.
* ***Air filters:***
  + Air filters purify the air entering the engine, protecting it from dust and impurities that may lead to its corrosion.
  + Spent filters may allow contaminants to pass into the engine, leading to increased wear and decreased performance.
  + Regularly replacing air filters ensures clean air for combustion, which improves engine efficiency.
* ***Diesel filters:***
  + Fuel filters help remove impurities and water from diesel fuel before it enters the engine.
  + Spent filters may allow contaminants to pass into the engine, leading to fuel injection blockage and damage.
  + Regularly replacing diesel filters ensures that the engine is supplied with clean fuel, which improves performance and extends the life of the generator.

Investing in replacing filters regularly is essential to ensure generators operate at peak efficiency and reduce the potential for costly breakdowns. We hope these materials will help us keep our generators performing optimally.

**Quality Standards**

When choosing maintenance materials for electric generators, such as oil, air and diesel filters, there are a set of quality standards that should be paid attention to:

* ***Compliance with specifications:***
* Filters must be compatible with factory specifications and suitable for the specific generator model.
* Ensure that filters are made of high-quality materials and can withstand harsh conditions.
* ***Filtration efficiency:***
* The ability of the filter to remove impurities and contaminants from fluids (oil or fuel) with high efficiency.
* There is a filter blockage indicator to warn the user when it needs to be replaced.
* ***Flow rate:***
* Ensure that the flow rate of the filter is appropriate for the generator application.
* Proper flow rate helps maintain desired operating pressure.
* ***Endurance and life span:***
* The filter’s durability to the pressures and vibrations it is exposed to during operation.
* The expected lifespan of the filter to suit scheduled maintenance periods.
* ***Conformity to standards and specifications:***
* Ensure that filters are manufactured in accordance with approved standards and specifications.
* This ensures quality, expected performance and compliance with regulations and laws.
* ***Easy installation and replacement:***
* Filters are designed so that their installation and removal are easy and quick.
* This helps reduce maintenance time and costs.

Adhering to these standards when choosing electrical generator maintenance materials will ensure obtaining high-quality products that maintain the performance of the generators and extend their lifespan.

**ITEM # 2: Consumables for Mechanical and Electrical Units, according to the Technical Specifications**

**Product Description**

There are important justifications for requesting and providing consumables such as oils, batteries and grease for electric generators and machines, which are as follows:

* + - 1. ***Maintaining performance and efficiency:***
* The use of high-quality consumable materials contributes to maintaining the performance of generators and machines with high efficiency.
* This ensures higher productivity and reduces unplanned downtime.
  + - 1. ***Extend life span:***
* Timely replacement of consumables extends the life of the equipment.
* This contributes to reducing maintenance and replacement costs in the long term.
  + - 1. ***Maintain safety:***
* The use of safe and reliable consumables reduces the risk of sudden malfunctions.
* This protects personnel operators and equipment from potential damage.
  + - 1. ***Compliance with warranty requirements:***
* The use of consumables approved by the manufacturer maintains the warranty.
* This ensures that any potential malfunctions or malfunctions are covered under warranty.
  + - 1. ***Compatibility:***
* Selection of consumables compatible with the equipment model ensures proper and reliable operation.
* This avoids any problems caused by incompatibility.
  + - 1. ***Preserving the environment:***
* Using environmentally friendly consumables contributes to reducing the environmental impact.
* This enhances environmental responsibility and adherence to environmental standards.

These main justifications emphasize the importance of providing appropriate consumables to ensure the long-term performance, efficiency and durability of generators and machines.

**Quality Standards**

There are several important criteria that must be considered when choosing high-quality consumables for electric generators and machines, which are:

* + - 1. ***Technical specifications:***

Ensure that the technical specifications of the consumable materials match the equipment requirements. This includes the viscosity of the oils, the capacity of the batteries, and the degree of softness of the greases.

* + - 1. ***Manufacturer approval:***

Ensure that consumable materials are approved by the equipment manufacturer and this ensures compatibility and compatibility with the equipment.

* + - 1. ***Standard standards:***

Verifying that consumable materials conform to internationally approved standards such as ISO or API quality standards for oils and greases.

* + - 1. ***Content and composition:***

Ensure the composition of the consumable materials and that they are free of harmful or contaminated substances. This ensures reliable performance and safety of the equipment.

* + - 1. ***Environmental compatibility:***

Preferring environmentally friendly consumables with low environmental impact, such as biodegradable oils and batteries free of heavy metals.

* + - 1. ***Availability and reliability:***

Ensuring the availability of consumables on a continuous and reliable basis. This ensures that they can be obtained when needed.

Considering these criteria when selecting consumables helps ensure reliable and long-term performance of generators and machines.

**Delivery requirements and Comparative Data Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **UNOPS Requirements** | | **Is quotation compliant?**  **Bidder to complete** | **Details**  **Bidder to complete** |
| **Delivery time** | The Bidder shall deliver the goods within **6 months** after the Contract signature. | ☐ Yes ☐ No | Insert details |
| **Delivery place and Incoterms rules** | DAP as per Incoterms 2020 at National Water & Sanitation Authority – HASWIN Branch - NWSA- HASWIN’s Warehouses, HASWIN District - Al Maharah Governorate. | ☐ Yes ☐ No | Insert details |
| **UNOPS Right to vary requirements** | At the time the Contract is awarded, UNOPS reserves the right to vary the quantity of the goods and associated services specified above, provided this does not exceed +/- [20%] , without any change in the unit prices or other terms and conditions of the RFQ. | ☐ Yes ☐ No | Insert details of goods offered, including specifications, picture, and brand/model offered if applicable |