**Compliance Technical Sheet for**

**Full Rehabilitation of Baiji directorate Combat Desertification building in Baiji / Salahadien governorate**

**The following Technical data shall be furnished and filled by the bidders:**

**Split Air-Conditioning (Cool & heat) Units 2 Ton**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Description** | **UNDP Requested**  **specifications** | **Bidder offer** |
| 1 | **Type** | Wall mounted split air-conditioning unit 24,000 BTU (2 Ton) |  |
| 2 | **System** | Cooling & Heating |  |
| **3** | **Cooling Capacity** | 2 Ton |  |
| **4** | * **Compressor Type:** | * Twin – Rotary (DC Inverter / T3) |  |
| **5** | * **Refrigerant gas** | * R 410A |  |
| **6** | * **Coverage Area:** | * 30-50 m² |  |
| **7** | **Operation options** | Air Swing & Remote Control |  |
| **8** | **Voltage** | 220V-50Hz |  |
| **9** | **Max ambient temp.** | T3 55C |  |
| **10** | **Operation Range** | (17 - 30) C |  |
| **11** | **Cooling Capacity** | 24000 BTUH |  |
| **12** | **Filter Type** | Micro dust protection filter washable |  |
| **13** | **Submit Detail drawing brochure catalogue:** |  |  |

**Electrical Water Pump 1 Hp**

| **No.** | **Description** | **UNDP Requested**  **specifications** | **Bidder offer** |
| --- | --- | --- | --- |
| **1** | **Type** | Electrical Centrifugal Clear Water Pump |  |
| **2** | **Motor** | 1 HP, 220-volt, 750-watt, 50 Hz, 2850 RPM |  |
| **3** | **Capacity** | 36 liters per minute |  |
| **4** | **Maximum Suction Lift** | 8 meters |  |
| **5** | **Maximum head:** | 40 meters |  |
| **6** | **Pump inlet and outlet:** | 1.5" Inlet 1" Outlet |  |
| **7** | **Overall unit measurement:** | 11 1/2" x 7 " x 5 1/4" |  |
| **8** | **Body** | Heavy Duty Steel and Aluminum Construction |  |

**Electrical boiler 120 Liter**

|  |  |  |  |
| --- | --- | --- | --- |
| No. | **Description** | **UNDP Requested**  **specifications** | **Bidder offer** |
| 1 | **Type** | Electrical water boiler 120 liter with heater 3000Wat |  |
| 2 | **Installation** | Vertical+ all necessary accessories |  |
| **3** | **Capacity range** | 120 liters |  |
| **4** | **Water tank** | Enameled, with foam isolation |  |
| **5** | **Nominal power (kW)** | 3KW, Single Phase |  |
| **6** | **Nominal pressure [MPa]** | 0.8 |  |
| **7** | **Type of electric heating element** | Immersion heating element |  |
| **8** | **Water heating energy efficiency class** | C |  |
| **9** | **Height x Width х Depth [mm]** | 1165 x 460 x 460 |  |
| **10** | **Weight [kg]** | 60 |  |
| **11** | **Submit Detail drawing brochure catalogue:** |  |  |

**Refrigerator 12 cubic feet**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Description** | **UNDP Requested**  **specifications** | **Bidder offer** |
| **1** | **Type** | **Refrigerator 12 cubic feet** |  |
| **2** | **Size** | **12 Cu. Ft.** |  |
| **3** | **Fresh Food Capacity** | **(Cu. Ft.): 8.4** |  |
| **4** | **Freezer Capacity** | **(Cu. Ft.): 3.1** |  |
| **5** | **Voltage** | **220V-50Hz** |  |
| **6** | **Condenser Type** | **Static** |  |
| **7** | **Leveling Legs:** | **2 Adjustable** |  |
| **8** | **Installation Type:** | **Free-Standing** |  |
| **9** | **Submit Manufacturer certification:** |  |  |
| **10** | **Submit Detail drawing brochure catalogue:** |  |  |

**Distribution Transformer 11/0.416 kV 250 KVA**

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Description** | **UNDP required specifications** | **Offered specification** |
| 1 | Make/Brand/Model: |  |  |
| 2 | Name of manufacturer |  |  |
| 3 | Type: | Oil-immersed hermetically sealed - bolted type |  |
| 4 | Country of origin |  |  |
| 5 | Reference standard | IEC 60076-1, 2,3,5,8,  IEC 60214, IEC 60137 |  |
| 6 | Ambient temperature: | Maximum:55/C  Minimum: -10/C |  |
| 7 | Air humidity: | 92% maximum |  |
| 8 | Altitude: | 1000M above MSL |  |
| 9 | Number of poles | 3 |  |
| 10 | Indoor or outdoor | Outdoor |  |
| 11 | Highest system voltage | 12 kV |  |
| 12 | Short circuit current on 11 kV side | 25 KA |  |
| 13 | Short circuit current on LV side | KA |  |
| 14 | 11 kV system Earthing | Neutral isolated / earthed through a resistor |  |
| 15 | Low voltage side Earthing | Neutral solidly earthed |  |
| 16 | Voltage Ratio | 11/0.416 KV |  |
| 17 | Type of cooling | ONAN |  |
| 18 | Rated power  - Continuous | 250 kVA |  |
| 19 | Rated Frequency | 50Hz |  |
| 20 | Altitude: | 1000M above MSL |  |
| 21 | Impedance voltage at 75 deg at nominal tap | 4% |  |
| 22 | Nominal Voltage of winding  a) H.V. | 11 kV |  |
| b) L.V | 0.416 kV |  |
| 23 | Insulation level 11 kV   1. Lightning Impulse 2. AC power frequency | 75 kV  28 kV |  |
| 24 | Insulation level LV -phases/neutral  AC power frequency | 3 V |  |
| 25 | Short circuit withstand capacity of transformer | …..KA for …….seconds |  |
| 26 | Winding temperature rise at rated power | 50 C |  |
| 27 | Top oil temperature rise at rated power | 45 C |  |
| 28 | No load loss in | ……..KW |  |
| 29 | Load loss at full load at 75 deg temperature | ……..KW |  |
| 30 | Guaranteed magnetizing current | ……….A |  |
| 31 | Maximum flux density in iron at rated frequency and at rated voltage ratio at nominal voltage | ≤ 1.65 Tesla |  |
| 32 | Maximum current density in windings at  rated power  a) H.V. winding  b) L.V. winding |  |  |
| 33 | Zero sequence impedance |  |  |
| 34 | No load current at rated voltage | …A |  |
| 35 | Material of windings | Copper |  |
| 36 | Type of winding  a) H.V.  b) L.V. |  |  |
| 37 | Type of insulation of winding  a) H.V.  b) L.V. |  |  |
| 38 | Type of insulation of  a) Core assembly  b) Core laminations |  |  |
| 39 | Thickness of transformer  a) tank  b) sides  c) bottom | Minimum 3 mm  Minimum 3 mm  Minimum 3 mm |  |
| 40 | Thickness of radiator plates and for cooling tube | ….. mm |  |
| 41 | Winding connection  a) H.V.  b) L.V. | Delta  Star (Neutral brought out) |  |
| 42 | Vector group symbol | Dyn11 |  |
| 43 | Type of core |  |  |
| 44 | Core sheet materials |  |  |
| 45 | Tap changer | Off-load tap changer with 5 positions in the HV winding giving ± 2 x 2.5 %. |  |
| 46 | 11 kV side terminal arrangement | Clamp type for terminating up to 150 mm2 copper conductor |  |
| 47 | Low voltage terminal arrangement | Suitable for terminating copper cables of cross section area 6x1x95+1x70 mm2( 1 hole per phase ) |  |
| 48 | Test pressure of oil leak test of tank |  |  |
| 49 | Noise level at 0.3 m distance |  |  |
| 50 | Transformer oil |  |  |
| 1 | Type of oil | IEC60296 class 1 |  |
| 2 | Manufacturer |  |  |
| 3 | Place of manufacture |  |  |
| 4 | Manufacturer’s type designation |  |  |
| 5 | Applied IEC standard | IEC 60296 |  |
| 6 | Kinematic viscosity mm2/s |  |  |
|  | At 40 deg | ≤ 16.5 |  |
|  | At -15deg | ≤ 800 |  |
| 7 | Flash point | ≥ 140 C |  |
| 8 | Pour point | ≤ - 30 C |  |
| 9 | Density at 20 deg C – kg/dm3 | ≤ 0.895 |  |
| 10 | Breakdown strength | kV |  |
| 11 | Dielectric dissipation factor |  |  |
| 51 | Dimensions of transformer | L 1230 ( mm) x W 700.(mm) x H 1300.(mm) |  |
| 52 | Weight of transformer | kg |  |
| 53 | Type of corrosion protection on steel parts  a) Inside tank  b) Outside tank | Oil resistant paint  Metalized, aluminum paint or equivalent |  |
| 54 | 11 kV bushings |  |  |
| 54-1 | Name of manufacturer |  |  |
| 54-2 | Make/Brand/Model: |  |  |
| 54-3 | Reference standard | IEC 60137 |  |
| 54-4 | Type of bushing |  |  |
| 54-5 | Rated current | A |  |
| 54-6 | Rated voltage | KV |  |
| 54-7 | Material | Porcelain |  |
| 54-8 | Color | Brown |  |
| 54-9 | Creepage distance |  |  |
| 55 | L V bushings |  |  |
| 55-1 | Name of manufacturer |  |  |
| 55-2 | Make/Brand/Model: |  |  |
| 55-3 | Reference standard | IEC 60137 |  |
| 55-4 | Type of bushing |  |  |
| 55-5 | Rated current | A |  |
| 55-6 | Rated voltage | KV |  |
| 55-7 | Material | Porcelain |  |
| 55-8 | Color | Brown |  |
| 55-9 | Creepage distance |  |  |
| 56 | Warranty period | One year |  |
| **57** | **Submit Manufacturer certification:** |  |  |
| **58** | **Submit type test certificates or**  **reports :** |  |  |
| **59** | **Submit Detail drawings, brochures and catalogues:** |  |  |

**Tubular Steel Poles 11 m for 11 kV**

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Description** | **UNDP specifications** | **Offered specification** |
| 1 | Make: | Original manufacturer  (locally assembled not  acceptable) |  |
| 2 | Name of manufacturer |  |  |
| 3 | Country of origin |  |  |
| 4 | Ambient temperature: | Maximum:55/C  Minimum: -10/C |  |
| 5 | Air humidity: | 92% maximum |  |
| 6 | Altitude: | 1000M above MSL |  |
| 7 | Nominal voltage: | 11 KV |  |
| 8 | Reference standard | BS, JIS, DIN or equivalent standard |  |
| 9 | Properties of steel | | |
| 9-1 | Type of steel used |  |  |
| 9-2 | Tensile strength -min | Kgf/mm2 |  |
| 9-3 | Yield strength -min | Kgf/mm2 |  |
| 9-4 | Design bending stress- min | Kgf/mm2 |  |
| 10 | Effective length of pole | 11m |  |
| 11 | Weight | Kg |  |
| 12 | Wall thickness | | |
| 12-1 | Bottom section | mm |  |
| 12-2 | Middle section | mm |  |
| 12-3 | Top section | mm |  |
| 13 | Lengths of sections | | |
| 13-1 | Bottom section | 5500 mm |  |
| 13-2 | Middle section | 3000 mm |  |
| 13-3 | Top section | 2500 mm |  |
| 14 | Outside diameter of sections | | |
| 14-1 | Bottom section | 165 mm |  |
| 14-2 | Middle section | 139 mm |  |
| 14-3 | Top section | 114 mm |  |
| 15 | Manufacturing method (swaged/welded) |  |  |
| 16-1 | Working load ( Ps) | Kgf 285 |  |
| 16-2 | Deflection at (Pp ) |  |  |
| 16-3 | Breaking load ( Pb) | kgf |  |
| 16-4 | Factor of safety |  |  |
| 17 | Type of corrosion prevention system used | Hot dip galvanized |  |
| **18** | **Submit Manufacturer certification:** |  |  |
| **19** | **Submit type test certificates or**  **reports :** |  |  |
| **20** | **Submit Detail drawings, brochures and catalogues:** |  |  |

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| Name of Bidder: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
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| Authorized signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
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| Functional Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
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| Company: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
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