Our Ref: EROL/Pur(Elec) 13-07- 2006

Subject: Tenders for supply of a) One no. Water absorption Test Apparatus and b) One no.D.C. High Voltage tester with Water bath.

Dear Sirs,

Tenders are invited for the supply of the above item(s) in the **SEPERATE sealed covers duly superscribed "QUOTATION FOR THE SUPPLY OF WATER ABSORPTION TEST APPARATUS**" and "**QUOTATION FOR THE SUPPLY OF D. C. HIGH VOLTAGE TESTER WITH WATER BATH",as applicable,** complying with the requirements of the enclosed **Annex-A (The Terms and conditions of supply)** and **Annex-B (The Technical Specification of the relevant Equipment)**, which should reach the undersigned **latest by 07-08-2006**. The Tenders shall be opened in this office **at 1100 hours in the next working day** in the presence of such tenderers or their duly authorized representatives, who may like to attend.

Thanking you,

Yours faithfully,

(D. Chakraborti)
Scientist-D

Encl: As above

e-mail: erol@bis.org.in Website: http//www.bis.org.in Fax: 033-23555300

ANNEX-A
(Terms and Conditions of Supply)

1. The BUREAU gives FIRST PREFERENCE in its purchase to goods bearing ISI CERTIFICATION MARK and second preference to those which conform to the relevant Indian Standard Specifications.
2. The delivery of the equipment shall preferably be made within 30 days of receipt of order. If, however, it is not possible to effect delivery during working hours by the date, the date by which the delivery of the equipment can be effected/guaranteed may be so stated.
3. QUOTATIONS shall be submitted by interested Manufacturer/Supplier in the form of two BIDS/PARTS – namely, "TECHNICAL BID & FINANCIAL BID."
4. **Both Technical Bid & Financial Bid shall be sealed by the bidder in SEPARATE ENVELOPE/COVER duly superscribed "TECHNICAL OR FINANCIAL BID" which shall finally be put in a bigger size envelope duly supercribed "QUOTATION FOR THE SUPPLY OF …….".**
5. The rates quoted should give break up of Cost, Excise Duty/ Sales Tax/VAT, P&F charges, Freight, Insurance etc (as applicable). If the rates quoted do not include sales tax/excise duty/ or any other taxes/charges, the same should be specifically stated.
6. Tenders qualified by such value and indefinite expressions as "Subject to immediate acceptance", "Subject to prior sale" etc., and incomplete quotation are liable to be summarily rejected.
7. All Tenders shall remain open for a period of 90 days from the date of opening.
8. **Please note that Tenderer shall have to deposit 3% of cost of equipment as EMD for bid security. The amount is to be deposited along with the tenders, in the form of demand draft drawn in favour of BUREAU OF INDIAN STANDARDS payable at Kolkata. Bid security, as deposited with tender, shall be returned to the unsuccessful bidder after the decision is made for purchase.**
9. Tenderer getting the order shall preferably deposit 10% of the ordered amount as contract **PERFORMANCE SECURITY** to BIS in the form of **demand draft** from any nationalized Bank Performance security should remain valid for a period of 60 days beyond the date of warranty /guarantee period, which shall be returned after satisfactory performance .However, other terms of payment, as cited at clause 10, may also be considered.
10. 90% payment may be made after satisfactory installation & commissioning of the equipment and **10% (contract performance security)** after expiry of guarantee/warranty period. The equipment should have **a guarantee/ warranty period of preferably 3 years & the period shall be mentioned by the Tenderer while submitting quotation.**
11. The Tenders/Suppliers of the equipment shall preferably have necessary infrastructure /capacity to provide a **comprehensive maintenance guarantee, preferably for three years** including replacement of spares, if any, position shall be clarified in this aspect while submitting quotation.
12. The Supplier/Manufacturer of the equipment shall ensure the **training of officials** of the laboratory during commissioning of equipment.
13. All goods shall be received subject to approval on inspection. The decision of our Inspecting Officers shall be binding. Rejected items/goods/stores shall be removed by the supplier at his own cost and risk, within 30days of receipt of notice for the removal of such goods, and thereafter no liability, whatsoever, on the Bureau shall be attached for the rejected/disapproved goods/items/stores.
14. The Bureau reserves the right to accept or reject summarily any or all tenders in whole or part without assigning any reason whatsoever.
15. The Bureau takes no responsibility for delay, loss or non-receipt of tenders after dispatch.
16. In case of non-compliance with the contract, the Bureau reserves its right to:
    a) Cancel/rescind/revoke the order if supply is not made in time and is not conforming to the required specification.
    b) Impose penalty up to 1% of the total value of the order for a delay of every seven days after the schedule date subject to the ceiling of a maximum of 10% of the total value of the order.
17. All question, disputes or difference arising under, out of or in connection with this tender enquiry shall be subject to the exclusive jurisdiction of the Kolkata Courts.

ANNEX-B

TECHNICAL SPECIFICATION FOR THE WATER ABSORPTION TEST APPARATUS
(Gravimetric Method)

Name of the Equipment: Electrically operated oven required for Water Absorption test (Gravimetric Method)
{**Ref. IS 10810(Part-33):1984;** }

Purpose : For Water Absorption Test on the insulation/sheath of Electric cables.

Requirements : One electrically operated Oven (Air circulating) capable of maintaining uniform temperature at test temperature 70 ^{0}C +/- 2 ^{0}C and 85 ^{0}C +/- 2 ^{0}C .
The apparatus shall have a provision for test at 70 ^{0}C +/- 2 ^{0}C **under** vacuum **(residual pressure close to 1 mbar)**.
Control of temperature: Electrically operated with PID control.
Inner dimension: Length = 600mm
Breadth = 600mm
Depth = 600mm.
Range of indicator: 0-200 ^{0}C.
Test Temperature: 70 ^{0}C +/- 2 ^{0}C **under vacuum**.
Accuracy: **+/-** 1 ^{0}C or better

- Digital display of temperature.
- The air shall enter the oven in such a way that it flows over the surface of the test pieces and leaves near or through the top of the oven.
- Front door with transparent glass.
- Six numbers of suitable containers for hanging cable specimen in water kept in it and maintained in oven at specified temperature in such a way to prevent test specimen from making contact with one another or with the container as per Clause 8 of IS 10810(Part-33):1984 is to be provided.
- Suitable **desiccators** for drying as per Cl.4.3 of IS 10810(Part-33):1984 is to be provided.
- The equipment shall be supplied alongwith the Calibration certificates of the display meters from NABL Accrediated Calibration Laboratories.

ANNEX-B

TECHNICAL SPECIFICATION FOR D. C. HV TESTER WITH WATER BATH

Name of the Equipment: DC High Voltage Tester with Water Bath

{Ref. IS 10810(Part-45)-1984; IS: 694-1990 & IS: 1554(Part-1)-1988}

Purpose : To carry out DC High Voltage Test on Electric cables.

Requirements :

- dc HV Test Unit shall have H V Tester and water bath (**Refer Annexure -1 for detailed specification of Waterbath**).
- Shall have arrangement for testing of 24 samples at a time. It shall be capable of running for 240 Hrs. without interruption.
- Shall be able to detect and isolate the failure sample without affecting the other samples under test with suitable microprocessor based programme.
- Microprocessor based system to indicate and record temperature of water bath, DC voltage, total running time and individual sample failure time.
- **Input:** 1 ph, 230 V, 50 Hz with provision for three core sheathed cable and of at least 03 meter length for input connection of the set.

- **Output:** 0- 2 KV DC (LC = 0.01 KV or better) with H.T. (- ve) Pole, L.T. (+ve) Earth with **Accuracy +/- 1% or better** with external cord length of at least 1.5 meter and fixed with arrangements for holding cable ends.
- Measurement of DC:
  a) On Secondary side across the output terminals (Instrumentation).
  b) Digital Display (Preferred)/ Analog Display
- Output voltage shall be maintained constant free from switching transients and fluctuations.
- Shall be provided with UPS with half hour backup and adequate capacity with maintenance free storage batteries for DC High Voltage unit excluding water bath.
- Indicators for "Mains on" and "HT on" and "HT off".
- Proper arrangements for earthing.
- Dimension of the dc HV set should be such that the testing person can work/test by standing.
- There shall not be any external sharp edge in any part of the equipment and the said set should be decently/suitably painted or otherwise protected externally and internally **to avoid corrosion** and with suitable wheels for moving the set. Provision for due ventilation is to be provided.
- Service/repair backup of the test system shall be available in / around Kolkata
- The equipment shall be supplied alongwith the Calibration certificates of the display meters from NABL Accrediated Calibration Laboratories.

ANNEX-I

TECHNICAL SPECIFICATION FOR WATER BATH

Type : Electrically operated thermostatically controlled Water Bath

Purpose : To immerse cable sample specimen for carrying out DC HV Test on PVC Insulated Cables.

Nominal Dimensions: Length = 1500 mm.
Breadth = 600 mm and Depth = 1000 mm.

Temp. range of indicator : 0 -100 °C

Least Count : 01°C or better

Test temperature : 60°C

Requirements :

- It shall be PID controlled.
- It shall be provided with **digital temperature indicator** to indicate the temp of water inside the water bath.
- It shall be attached with water float valve with appropriate drainage system.
- Inner tank of the water bath shall be made of stainless steel. Body of water bath shall be of powder coated steel plate with resin baking finish or with suitable finish to prevent corrosion.
- Sufficient number of heating element of suitable wattage shall be fitted for quick attainment and maintenance of the required temperature.
- Shall have suitable provision to maintain uniform temperature of water inside the water bath.
- Water bath shall have proper earthing to bypass the fault current in case of internal short -circuit.
- Suitable wheels shall be provided to make the waterbath movable.
- Service of the test system shall be available in /around Kolkata.
- The equipment shall be supplied along with Calibration certificates from NABL Accredited Laboratory for temperature measuring meter.