

Our Ref : Ref : WROL/ 3 :29

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Subject : Tender enquiry for Air Ovens for Thermal Ageing Test
of PVC Insulation Sheath & XLPE Insulation used
in the manufacture of Electric Cables

12 March 2007

To,

Manufacturers & Suppliers of **“AIR OVENS FOR THERMAL AGEING TEST”**

Subject : Inviting Sealed Quotation for supply of
“AIR OVEN FOR THERMAL AGEING TEST”

Dear Sir/s,

Technical & Commercial Bids separately are invited by Bureau of Indian Standards from the interested parties for the supply of **“AIR OVENS FOR THERMAL AGEING TEST”** used for Thermal Ageing of PVC insulation & sheath (Type A/B/C/ST1/ST2) / XLPE insulation used in the manufacture of Electric Cables as per IS 694/1554 Pt1 / 7098 Pt1 and as per test method given in IS 10810 Pt 7 & 11. Both the bids shall be in **SEPARATE SEALED** covers, which should reach the undersigned latest by **17 00 h**, on **17 April 2007**, at the following address.

Scientist F & Head
WRO Laboratory, “Manakalaya”
Bureau of Indian Standards
E-9, M.I.D.C., Behind Marol Telephone Exchange.
Andheri (East), Mumbai 400 093

1. The detailed specification(s) of the above mentioned equipment(s)/item(s) are given in **Annex-I**.
2. General Terms and Conditions of Supply are given in **Annex-II**.
3. The sealed envelope containing EMD should be superscribed **“EMD”** and stapled separately with the envelope containing the Technical Bid or shall be put in the technical bid document.
4. First, only the Technical Bids shall be opened in the chamber of Sc. F & Head, WRO Laboratory at the address mentioned above at **15 00 h on 18 April 2007** and in the presence of such tenderer/s or their duly authorized representatives, who may like to attend.
5. Please note that the envelopes containing **Technical & Commercial Bids are sealed separately and properly i.e. either wax sealed or with adhesive cello tape on both ends. Unsealed and stapled envelopes shall not be accepted.**
6. The specification and terms & conditions can also be downloaded from BIS Website at www.bis.org.in

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7. The bidder should submit alongwith his offer, the tender document enclosed with his/her signature on each page of the same as token of acceptance of the terms & conditions.
8. It may please be noted that non-fulfillment of any of the requirement of this tender document shall result in rejection of the submitted quotation.

Thanking you,

Yours faithfully,

(B.R. Kulkarni)
Sc.E & OIC Purchase

Encls: as above

ANNEX-I

**BUREAU OF INDIAN STANDARDS
(WRO Laboratory - Purchase Cell)**

Our Fax No. 022 - 2826 2057

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Subject : Sealed Quotation for supply of

“AIR OVENS FOR THERMAL AGEING TEST”

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EQUIPMENT/SPECIFICATION

NAME OF THE EQUIPMENT : AIR OVEN FOR THERMAL AGEING TEST

WHERE REQUIRED : ELECTRICAL LAB, BIS WESTERN REGIONAL OFFICE

TOTAL QUANTITY REQUIRED : Two Nos

PURPOSE : Used for Thermal Ageing Test of PVC insulation & sheath (Type A/B/C/ST1/ST2) / XLPE insulation used in the manufacture of Electric Cables as per IS 694/1554 Pt1 / 7098 Pt1 and as per test method given in IS 10810 Pt 10 & 11

2. Technical Requirements :

2.1 Chamber : 8 chamber ageing oven having double walled chambers stuffed with suitable insulating material like Mineral Wool/Glass Wool. The 8 inside chambers shall be circular in size and shall of thick aluminium sheet having size 100 mm diameter X 300 mm height. The insulation provided shall be such that the outside surface at any place shall not have temperature of more than 40 - 45° C.

2.2 Heaters : Jacket type electric heaters shall be provided surrounding the chambers to have uniform heating at all places of the chambers.

2.3 Temperature Measuring, Indicating & Controlling Device : Digital temperature indicator - cum- controllers with appropriate sensors for individual chambers shall be provided. Temperature range required for each chamber is ambient to 250° C \pm 2° C or better. Additionally suitable thermometer having temp range upto 200° C with least count of 1° C shall also be supplied.

2.4 Air circulation : The air shall enter the chambers of the ageing ovens in such a way that it flows over the surface of test pieces and leaves near the top of the chambers. The ovens shall have a rate of flow of air such that it ensures **8 to 20 air changes per hour** (volume of air required per chamber is **315 to 790 cc per hour**) at specified ageing temperature. The equipment shall be fitted with air flow meter-cum- controllers to control the volume of air passing through the chambers. An air inlet nozzle for airline/air compressor shall be made/provided in the equipment.

contd.....2

(M.D.Chilakwad)
Sc.E & OIC, Electrical

ANNEXE I (Contd...)

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EQUIPMENT/SPECIFICATION

2.5 Test Specimen Holding Device : Specially designed split top covers to hold three to five test specimen at a time in each chamber shall be supplied with the equipment.

2.6 Chronometer : An Hour Meter to record the total time shall be provided

2.7 Accuracy of measurement-cum- controlling devices : $\pm 2^{\circ}\text{C}$ or better & of class 1

2.8 Service & Calibration Requirements : The equipment may preferably be purchased through a local agency who would be able to provide after sales service including calibration of the equipment from NABL accredited agency.

3. Reference Standards to be used for supply / manufacture of equipment :

IS 10810 Pt 10 & 11 : 1984 and IS 6365 : 1971

Note:-

- a. As far as possible, the service/repair back up of the equipment should be available in and around Mumbai
- b. The supplier shall give comprehensive warranty of one year from the date of supply/ satisfactory commissioning of the equipment
- c. The supply of material should accompany operational manual and valid calibration certificates traceable to National Standards in respect of all the measuring devices installed on the equipment which give numerical output, e.g. Voltmeter, Ammeter, Timer, Digital Counter, power factor meter, etc.,
- d. Buy back arrangements offer, if any
- e. Applicable taxes, if any, must be quoted separately

(M.D.Chilakwad)
Sc.E & OIC, Electrical

ANNEX-II

Our Fax No. 022 - 2826 2057

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Mumbai,

**Subject : Inviting Sealed Quotation for supply of
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GENERAL TERMS & CONDITIONS

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 equipments is required to be made within 30 days of receipt of order. If, it is not possible for you to effect delivery within the period, you are required to specify the date by which you can guarantee delivery of the equipment.
3. **The Technical & Commercial Bids should be sealed and sent separately in sealed envelopes. Such bids shall remain valid for a period of 90 days from the date of opening.**
4. Quotations/Bids, qualified by indefinite expressions as “Subject to immediate acceptance, Subject to prior sale” etc. and incomplete quotations are liable to be summarily rejected.
5. The Bids should clearly give break-up of cost of each equipment. The rates quoted should separately indicate Basic Cost, Excise Duty, Sales Tax, P&F charges, Freight, Insurance, VAT and also installation, commissioning & training of our operational staff etc. Rates quoted should specifically state Sales Tax, Excise Duty or any other taxes/charges. In absence of any such stipulation, it will be presumed that the prices include all such charges and no claim for the same shall be entertained.
6. Each tender document shall be accompanied with **EMD amount of Rs. 5,000/-**. The EMD amount shall be remitted through **Demand Draft** drawn in favour of **BUREAU OF INDIAN STANDARDS** payable at Mumbai. The sealed envelope containing EMD should be superscribed “EMD” and stapled separately with the envelope containing the **Technical Bid or shall be put in the technical bid document.**
7. Bid security (EMD) of unsuccessful bidders shall be returned to them at the earliest after expiry of the final bid validity and latest on or before the 30th day after award of the contract.
8. Bid security (EMD) of the successful bidder shall be refunded on satisfactory installation and commissioning of the equipment.
9. BIS shall pay 90% of the cost after satisfactory installation & commissioning and the Balance of **10%** as **contract performance security** would be paid after expiry of warranty period. However other terms of payment for contract performance security can also be considered, if so stated clearly.
10. The warranty period of the equipments may be stated clearly in the Technical Bids. In case the same is not found stated, it will be presumed that warranty period as mentioned in their respective specifications of the quotation document (if specified), is applicable

contd.....2

(B.R.Kulkarni)
Sc.E & OIC, Purchase

ANNEX-II (contd....)

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GENERAL TERMS & CONDITIONS (Contd..)

11. Please mention clearly in the Technical Bids regarding address of **arrangements for service/repair** of the equipments. Suppliers/Manufacturer/s having such arrangements near Mumbai would be preferred

12. All goods received would be subjected to inspection, by BIS before or after receipt and successful commissioning (as applicable) and the decision of BIS shall be final & binding. Rejected items/goods/stores shall be removed by the supplier at his own cost and risk, within 30 days of receipt of notice for the removal of such goods, and no liability, whatsoever, on the Bureau shall be attached for the rejected/disapproved goods/items/stores.

13. The Bureau reserves the right to accept or reject summarily and/or all quotations/s in whole or part without assigning any reason whatsoever.

14. The Bureau takes no responsibility for delay, loss or non-receipt of quotations after despatch.

15. In case of non compliance with the Terms & Conditions of 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 specifications.
- 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.

16. All questions, disputes or differences arising under, out of or in connection with this tender enquiry shall be subject to the exclusive jurisdiction of Mumbai Courts.

17. The bidder shall submit along with his offer, the tender document enclosed with his/her signature on each page of the same as token of acceptance of the terms & conditions.

(B.R.Kulkarni)
Sc.E & OIC, Purchase