Our Ref:CL/DCLE/10:7/BID-01(08-09)

Subject: SUPPLY OF TEST EQUIPMENT FOR END OF LIFE TEST ON GLS LAMPS

Dear Sirs,

Technical & Commercial Bids are invited for the supply of - **TEST EQUIPMENT FOR END OF LIFE TEST ON GLS LAMPS**, in separate SEALED covers, which should reach the undersigned latest by **1700 h**, on **05 August 2008**, at the following address.

Director & Head (Electrical) BUREAU OF INDIAN STANDARDS Central Laboratory Plot No.20/9, Site-IV, Sahibabad Industrial Area, Sahibabad, Distt. Ghaziabad-201010 (U.P.)

- 2. The detailed specification(s) of the above mentioned equipment(s)/item(s) are given in **Annex-I**
- 3. Terms and conditions of supply are given in **Annex-II**
- 4. The technical Bids shall be opened in the **Conference Hall**, of the Central Lab, at the address mentioned above at **1500 h on <u>06 August 2008</u>** and in the presence of such tenderers or their duly authorized representatives, who may like to attend.
- 5. Please note that the envelopes containing Technical & Commercials Bids are sealed properly i.e. either wax sealed or with adhesive cello tape on both ends. **Unsigned Bids**, **Unsealed /stapled envelopes** and bids **without EMD** shall be summarily rejected. **No exemption** whatsoever for payment of EMD shall be accorded.
- 6. The specification and terms & conditions can also be downloaded from BIS Website www.bis.org.in

Thanking you,

Yours faithfully,

Encls: as above

(K.K. Chaudhary)
Scientist-'E' & Head (Electrical)

Ph: 0120-2770599

Date: 15 July 2008

**ANNEX-1** 

## BUREAU OF INDIAN STANDARDS CENTRAL LABRATORY EQUIPMENT SPECIFICATION

NAME OF THE EQUIPMENT : **EQUIPMENT FOR END OF LIFE TEST ON** 

**GLS LAMPS** 

PROPOSED FOR BIS LABS : CL ELECTRICAL

TOTAL QUANTITY REQUIRED : 1 No.

ISS & CLAUSE REFERENCE: As per Clause 4.9 and Annex E of IS 15518(Part

1):2004

## **SPECIFIC REQUIREMENTS:**

1. The equipment shall be capable to test 210 lamps.

**2.** The particulars of GLS lamps to be tested in the proposed test systems are:

i. Rating: 230, 240 250 Volts and 15 to 100 watts

ii. Cap size: B-22d

iii. Finish: Clear, Frosted or equivalently coated finish, or white finishes

iv. Shapes: A, K M & PS shapes as per IS 418:2004.

- **3.** The test equipment shall consist of 3 Test racks, 3 Auto transformers and 1 Control Panel.
- **4.** The equipment shall be designed and constructed to operate 210 lamps with B22d caps (up to 100 W rating) mounted and wired parallel configured in to a three phase four wire balanced system with each phase supporting 70 lamps in bayonet lamp holders.
- 5. The mechanical structure of the test racks shall be sturdy having adequate mechanical strength and stability and shall be suitably painted to make durable and free from rusting.
- **6.** The bayonet lamp holders shall be **contact type** with copper strip contacts (not plunger type, non spring loaded).
- **7.** The lamp holders on the test racks shall be of sturdy construction and shall be so designed to ensure adequate electrical contact and to prevent overheating.
- **8.** The lamp holder's axis on the test racks shall not deviate from the specified operating position by more than 5° with cap up position.
- **9.** The equipment shall be capable to operate the lamps at test voltage up to 300V.

- **10.** The voltage drop between the point of measurement on the supply line and the cap contacts shall not exceed 0.1 percent of the test voltage.
- **11.** For bayonet lamp holders the cap of lamp shall be substantially at the same potential as the contact which is not connected to the fused main supply lead.
- **12.** The temperature in operation at the junction between the cap and the bulb shall not exceed the maximum cap operating temperature 210°C when measured as per Cl. 4.11 of IS 15518 (part-1):2004.
- **13.** Lamps shall not be operated at excessive temperature nor there be undue heating of a lamp by others.
- **14.** Lamps shall operate free from noticeable vibration. No vibration or shocks shall be perceptible when touching the lamp holders, either during operation or switching ON or OFF.
- **15.** Lamps shall be switched off twice daily for period of not less than 15 minutes.
- **16.** The parameters to be monitored by the equipment are as follows:
  - Burning time of each lamp
  - Mean effective value of test voltage during the life test
- **17.** A TPN isolator of adequate current rating shall be provided with each unit for connecting and disconnecting the main supply to the control panel.
- **18.** Test rack circuit of each row shall be controlled by a MCB of reputed make of adequate rating.
- **19.** Test rack circuit for 230V to 250V lamps shall have the characteristics as given below:

Parameter	230V to 250V
Resistance (ohms)	0.5 ± 0.1
Inductance (micro Henries)	500 ± 100 **
Individual external lamp fuse (Ampere)	10 slow- acting
Surge limit(Volts)	600 #

<sup>\*\* :</sup> The maximum lamp current loading that may be switched on simultaneously is 16A, for 230 V to 250 V test racks.

# : This information is given for surge operating means, of correct rating, to be selected. A 600 V average value is chosen to take into account practical tolerances on surge limiting means to ensure that incidental peaks greater than 900 V are suppressed.

For method of measuring mains impedance, kindly refer Annex-H of IS 15518(part-I):2004.

- 20. Each lamp circuit shall be connected with glass fuse of adequate rating.
- **21.** The life test racks shall be protected from the bugs & flies.
- 22. Indicator lamps (R Y B) shall be provided on the panels to indicate main supply.
- **23.** Each test rack shall be provided with a digital voltmeter (0-300V, class 0.5,) for measuring input voltage to lamps, a time totalizer (0-99999.9 hrs) to measure burn time of lamps on the control panel.
- **24.** A user programmable electronic timer along with power tripping devices shall be provided on each panel for setting the cyclic ON and OFF time of lamps and date & time of completion of test, so that after completion of the set conditioning time, the power supply to the lamps shall be cut off automatically.
- **25.** The Voltmeters, Time totalizers and the Timers shall be detachable / portable to facilitate its calibration & replacement / repairs.
- **26.** The Voltmeters, Time totalizers and the Timers shall be supplied with calibration certificates with NABL logo.
- **27.** The supplier shall provide validation certificate of each test rack circuit characteristics conforming Table E-1 of IS 15518(part-I):2004 preferably from NABL approved lab.
- **28.** The equipment shall be supplied with operation manual, circuit diagram.
- **29.** Service of the life test system should be available in / around Delhi.
- **30.** The system shall be designed to withstand the temperature & humid conditions of Delhi.
- **31.** The supplier of this system shall give warranty of at least one year from the date of commissioning.

## **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 stores 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 stores.
- 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 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. Form C/D shall not be provided by BIS.
- 6. Each tender document shall be accompanied with EMD of 3% of cost of the equipment. The demand draft for the EMD amount shall be drawn in favour of BUREAU OF INDIAN STANDARDS payable at Sahibabad/Ghaziabad. The sealed envelope containing EMD should be superscribed "EMD" and stapled separately with the envelope containing the commercial Bids.
- 7. 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.
- 8. The warranty period of the equipments should be 1 year and be stated in the Technical Bids.
- **9.** Please mention clearly in the Technical Bids regarding address of **arrangements for service/repair** of the equipments are available. Suppliers having such arrangements near Delhi/Ghaziabad would be preferred.
- **10.** All goods received would be subjected to inspection, by BIS before or after receipt or commissioning (as applicable) and the decision of BIS shall be 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.
- **11.** The Bureau reserves the right to accept or reject summarily and or all tenders in whole or part without assigning any reason whatsoever.
- 12. The Bureau takes no responsibility for delay, loss or non-receipt of tenders after dispatch.
- 13. In case of <u>non compliance with the Terms & Conditions of the contract,</u> 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.
- **14.** All questions, disputes or differences arriving under, out of or in connection with this tender enquiry shall be subject to the exclusive jurisdiction of Delhi/ Ghaziabad Courts.

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