



# भारतीय मानक ब्यूरो BUREAU OF INDIAN STANDARDS

रेन टेस्ट अप्पारेट्स,  
आपूर्ति, स्थापना और कमीशनिंग  
SUPPLY, INSTALLATION AND COMMISSIONING OF  
RAIN TEST APPARATUS

(EQUIPMENT FOR INGRESS PROTECTION AGAINST WATER - IPX1 to IPX8)

**Tender Ref. No. : BNBL/13/2/LED-15-16/2016**

द्वारा आमंत्रित:  
वैज्ञानिक ई एंड हेड  
भारतीय मानक ब्यूरो  
बेंगलुरु शाखा प्रयोगशाला (BNBOL)  
पीन्या औद्योगिक क्षेत्र, 1 चरण, तुमकुर रोड,  
बंगलौर - 560 058

INVITED BY:  
**Scientist E & Head**  
**BUREAU OF INDIAN STANDARDS**  
**Bengaluru Branch Laboratory (BNBOL)**  
Peenya Industrial Area, 1<sup>st</sup> Stage, Tumkur Road,  
**BENGALURU – 560 058**

Phone: 080-28392296, 23721442

E-mail: bnbol@bis.org.in

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भारतीय मानक ब्यूरो BUREAU OF INDIAN STANDARDS  
(बेंगलुरु शाखा प्रयोगशाला) (Bengaluru Branch Laboratory)

पीन्या औद्योगिक क्षेत्र, 1 चरण, तुमकुर रोड,  
Peenya Industrial Area, 1<sup>st</sup> Stage, Tumkur Road,  
बेंगलुरु - 560 058 Bengaluru – 560 058

फोन: 080-28392296, 23721442 Phone: 080-28392296, 23721442

ई-मेल: [bnbol@bis.org.in](mailto:bnbol@bis.org.in) E-mail: [bnbol@bis.org.in](mailto:bnbol@bis.org.in)

## निविदा सूचना TENDER NOTICE

(Tender Ref. No. : BNBL/13/2/LED-15-16/2016)

भारतीय मानक ब्यूरो, बेंगलुरु शाखा प्रयोगशाला (BNBOL), बंगलूर आइटम के बाद इस निविदा को कवर में परिभाषित नौकरी के लिए वास्तविक अनुभव निर्माताओं / आपूर्तिकर्ताओं से दो बोली प्रणाली (तकनीकी बोली और वित्तीय बोली) के तहत, बोलियां सील आमंत्रित करता है। निविदा का विवरण नीचे दिया गया है:

Bureau of Indian Standards, Bengaluru Branch Laboratory (BNBOL), Bangalore invites sealed bids, under two bid system (Technical bid and Financial bid) from bonafide experienced Manufacturers/Suppliers for the job defined in this tender covering following items. The details of the tender are given below:

विवरण Description	रेन टेस्ट अप्पारेट्स, आपूर्ति, स्थापना और कमीशनिंग Supply, Installation and Commissioning of <b>RAIN TEST APPARATUS</b> (EQUIPMENT FOR INGRESS PROTECTION AGAINST WATER - IPX1 to IPX8)
निविदा के प्रकार Type of Tender	सीमित निविदा पूछताछ Limited Tender Enquiry
निविदा शुल्क (रुपयों में) Tender Fee (in INR)	शून्य NIL
बयाना जमा राशि (रुपयों में) EMD Amount (in INR)	Rs.55,000.00 (रुपये पचपन हजार केवल) Rs.55,000.00 (Rupees Fifty Five Thousand Only)
<ol style="list-style-type: none"><li>1. ईएमडी डिमांड ड्राफ्ट या पे ऑर्डर के रूप में प्रस्तुत करें। 1. Please submit EMD in the form of Demand Draft or Pay Order.</li><li>2. ईएमडी छूट श्रेणियों: निर्माताओं / आपूर्तिकर्ताओं के पास केंद्रीय क्रय संगठन, राष्ट्रीय लघु उद्योग निगम (एनएसआईसी) या संबंधित मंत्रालय या विभाग द्वारा जारी छूट का वैध प्रमाण पत्र हो; 2. EMD exempted categories: Manufacturers/ Suppliers having valid certificate of exemption issued by the Central Purchase Organization, National Small Industries Corporation (NSIC) or the concerned Ministry or Department;</li><li>3. ईएमडी जमा करने एवं आगे की जानकारी के लिए कृपया "बोलीदाताओं के लिए निर्देश" भी देखें। 3. Please also refer "Instruction to Bidders" for further information on EMD submission.</li></ol>	

जारी करने वाले प्राधिकारी का पता Address of the issuing authority	वैज्ञानिक ई एंड हेड भारतीय मानक ब्यूरो बैंगलुरु शाखा प्रयोगशाला (BNBOL) पीन्या औद्योगिक क्षेत्र, 1 चरण, तुमकुर रोड, बंगलौर - 560 058 Scientist E & Head BUREAU OF INDIAN STANDARDS (Bengaluru Branch Laboratory) Peenya Industrial Area, 1 <sup>st</sup> Stage, Tumkur Road, Bengaluru – 560 058 Phone: 080-28392296, 23721442 E-mail: bnbol@bis.org.in
डाउनलोड प्रारंभ और बोली प्रस्तुत प्रारंभ तिथि व समय Download Start & Bid Submission Start Date & Time	01 फ़रवरी 2016, 10.00 बजे  01 02 2016, 10.00hrs
डाउनलोड समाप्ति और बोली प्रस्तुत समाप्ति तिथि व समय Download End & Bid Submission End Date & Time	22 फ़रवरी 2016, 15.00 बजे  22 02 2016, 15.00hrs
तकनीकी बोली खुलने की तिथि व समय Technical Bid opening date & Time	23 फ़रवरी 2016, 10.00 बजे  23 02 2016, 10.00hrs

निविदा दस्तावेज (गैर हस्तांतरणीय) भारतीय मानक ब्यूरो वेब साइट: [www.bis.org.in](http://www.bis.org.in) से डाउनलोड किया जा सकता है: फैक्स / ई-मेल के माध्यम से भेजा भौतिक रूप में बोली को स्वीकार्य नहीं होगा। किसी भी शुद्धिपत्र / समय विस्तार / परिशिष्ट केवल हमारी वेबसाइट: [www.bis.org.in](http://www.bis.org.in) पर प्रकाशित किया जाएगा

Tender document (Non-Transferable) can be downloaded from **BIS web site: [www.bis.org.in](http://www.bis.org.in)**. Bids in physical form sent through fax/e-mail will not be acceptable. Any corrigendum/time extension/addendum shall be published on our **website: [www.bis.org.in](http://www.bis.org.in)** only.

# **TENDER DOCUMENT**

## **PART-1: TECHNICAL BID**

### **PRE-QUALIFICATION CRITERIA(PQC)**

1 **Financial Criteria:** Not applicable

2 **Experience Criteria**

For experience, the order(s) executed by the bidder, during the last three years ending on the last day of the month immediately preceding the month in which the last date of bid submission falls, should be considered as under:

**THREE COMPLETED ORDERS** OF THE EQUIPMENT LISTED ABOVE TO GOVERNMENT OR REPUTED R & D LABORATORIES IN INDIA WITH DOCUMENTARY EVIDENCE.

3 **Technical Pre-Qualification Criteria**

Vendor is to meet the technical pre-qualification criteria and have to enclose all necessary documents along with their technical (un-priced) bid. Technical evaluation of the vendor shall only be done if they are meeting the following technical prequalification criteria:

- a) Bidder must be the manufacturer/authorized dealer of the equipment. The bidder must have supplied three completed orders of the equipment to Government or reputed R & D laboratories in India during last three years. Copy of such purchase orders along with technical details must be submitted along with the bid as proof of their experience. Party, in case of dealer, has to attach valid dealership certificate (minimum validity one year at the time of bidding) along with the offer itself.
- b) The bidder has to enclose the list of purchase orders along with technical details, complete address of client, phone no., fax no., e-mail, name of contact persons, website etc., for whom they have executed purchase orders in support of their claims that they are meeting the technical pre-qualification criteria.
- c) The bidder, if OEM, has to provide support services for at least 5 years after supply of the offered instrument. In case, bidder is authorised dealer, they should furnish that support service shall be available for next 5 years after supply of the instrument.
- d) If the bidder is a foreign manufacturer, they must have appropriate after-sales service support facility (at least since last two years) at any nearby location in India. The bidder is to enclose the documentary evidence for the same.

FOR FULFILLING THE EXPERIENCE CRITERIA BIDDER SHALL SUBMIT ANY ONE OF THE FOLLOWING DOCUMENTS:

- 1) Purchase order (PO) copy along with invoice(s) with certification that supplies against the invoices has been executed.

- 2) Purchase order copy along with Bank Certificate indicating payment against the PO.
- 3) Certificate of satisfactory execution by client with order value.
- 4) Goods receipt note (GRN) in case where BIS is a client.
- 5) Or any other document is to be submitted by bidder in support of execution.

**NOTE:**

BIDDER TO SUBMIT COPY OF BOARD OF DIRECTOR DETAILS, CERTIFICATE OF INCORPORATION, AUDITED BALANCE SHEET FOR PREVIOUS THREE YEARS, COPY OF MEMORANDUM AND ARTICLE OF ASSOCIATION/COMPANY REGISTRATION, EXECUTED PO COPIES ETC SHOWING CONSTITUTION OF BIDDERS TOWARDS FULFILLMENT OF PQC ALONG WITH TECHNO COMMERCIAL BID COMING UNDER SAME MANAGEMENT. BIDDER SHALL FURNISH ALONG WITH THE TECHNICAL BID (UN-PRICED) THE NECESSARY DOCUMENTARY EVIDENCE/PROOF IN SUPPORT OF CLAIM FOR MEETING THE ABOVE PRE-QUALIFICATION REQUIREMENT.

ALL PQC DOCUMENTS TO BE SUBMITTED BY BIDDER ALONGWITH TECHNICAL (UN-PRICED) BID IN ONE ENVELOPE. THE FINANCIAL BID TO BE SUBMITTED IN SEPARATE ENVELOPE. THUS THERE WILL BE MAINLY TWO PARTS IN WHICH BID HAD TO BE SUBMITTED VIZ. TECHNICAL (UN-PRICED) BID & FINANCIAL BID.

IN CASE THE BIDDER FAILS TO SUBMIT ANY DOCUMENT OR SUBMITS INCOMPLETE DOCUMENTS WITH THE TECHNICAL BID, THE BIDDER'S TENDER IS LIABLE TO BE REJECTED.

## **SCHEDULE – 1: INSTRUCTIONS TO BIDDERS**

### **1 Notice Inviting Bids**

- 1.1 Sealed Bids, under two bid system (Technical bid and Financial bid), are invited by the Bureau of Indian Standards (BIS), from eligible Bidders for supply of **RAIN TEST APPARATUS** as specified in the **Schedule-3**.

### **2 Issue of Tender Document**

- 2.1 The blank Tender document free of cost will be available during the period **01 Feb 2016 to 22 Feb 2016** during the office hours **(0900 Hrs to 1730 Hrs)**.
- 2.2 The Tender document can also be downloaded from the website of the Bureau (**[www.bis.org.in](http://www.bis.org.in)**) free of cost.
- 2.3 The Bidder shall bear all costs associated with the preparation and submission of its Bid. The Bureau shall, in no case, be responsible or liable for these costs, regardless of the conduct or the outcome of the Bidding process.
- 2.4 No alterations and additions anywhere in the Bid Document are permitted.
- 2.5 Any change that will be made in the Tender documents by the Competent Authority after issue of the Tender will be intimated to the prospective Bidders in the form of Corrigendum/Addendum for incorporating the same in the Bid before submitting the Bid. Any addendum/corrigendum/bid submission date extension in respect of above tender shall be issued on our **website: [www.bis.org.in](http://www.bis.org.in)** only and no separate notification shall be published in the press. Bidders are, therefore, requested to regularly visit our website to keep themselves updated.
- 2.6 Tender issuing authority is not responsible for the delay/non-downloading of tender documents by the recipient due to any problem in accessing the tender website. The tender issuing authority is also not responsible for delay in uploading bids due to any problem in the tender website.

### **3 Language of Bid/Contract**

- 3.1 The language of the Bid shall be in English and all correspondence, etc. shall conform to English language.

### **4 Pre-bid Conference**

- 4.1 Pre-bid conference is not applicable in this case.

### **5 Validity of Bids**

- 5.1 The Bids will be valid for a period of 120 days from the date of its opening.
- 6 **Earnest Money/ Bid Security**
- 6.1 The Bidder shall deposit with the Bureau the specified sum of money by **DD/Pay Order in favour of Bureau of Indian Standards, Bangalore**, as an interest free Earnest Money Deposit (EMD). The Earnest Money shall be deposited in the form of Demand Draft/Pay Order in favour of **Bureau of Indian Standards, Bangalore**.
- 6.2 The failure or omission to deposit the Earnest shall disqualify the Bid and the Bureau shall exclude from its consideration such disqualified Bid(s).
- 6.3 Bidder shall not revoke his Bid or vary its terms and conditions without the consent of the Bureau during the validity period of the Bid. If the bidder revokes the bid or varies its terms or conditions, the Earnest Money deposited by it shall stand forfeited to the Bureau without prejudice to its other rights and remedies and the Bidder shall be disentitled to submit a Bid to the Bureau for supply of goods during the next twenty-four (24) months effective from the date of such revocation.
- 6.4 If the successful Bidder does not pay the Performance Security in the prescribed time limit or fails to sign the Agreement/ Contract, its Earnest Money Deposit will be forfeited by the Bureau.
- 6.5 **Release of EMD**
- 6.5.1 EMD of bidders disqualified during technical bid evaluation shall be released immediately after approval of financial bid opening.
- 6.5.2 EMD of bidders qualified in the technical bid but unsuccessful in the financial bid stage shall be released immediately after final approval of the ordering proposal by the competent authority.
- 6.5.3 EMD of the successful bidder shall be released after receipt of an acceptable performance security and execution of the contract.
- 6.6 **Forfeiture of EMD:** EMD shall be forfeited in the following circumstances:
- 6.6.1 In case the bidder alters / modifies / withdraws the bid suo-moto after opening the bids (technical bids in case of two bid system) within the validity period. In such a case, the tender submitted by the bidder shall be liable for rejection.
- 6.6.2 In case the tender is accepted and the bidder fails to deposit the Performance Security or to execute the contract within the stipulated period.
- 7 **Invalid tenders and tenders liable for rejection:** A tender is liable for rejection in the following circumstances:
- 7.1 Doesn't pay the EMD along with technical bid.



- 7.2 Doesn't fulfil minimum pre-qualification criteria as per tender documents.
- 7.3 Stipulates the validity period less than what is stated in the tender documents.
- 7.4 Stipulates his own conditions and doesn't agree to withdraw the deviations rendering his bid unacceptable.
- 7.5 Doesn't disclose the full names & addresses of all his partners or directors as applicable wherever called for in the tender.
- 7.6 Doesn't fill in and sign all pages of tender document and the required schedule, annexure, specifications etc. as specified in the tender.
- 7.7 Doesn't submit bid in the prescribed format making it impossible to evaluate the bid.
- 7.8 Indulges in tampering of tender documents.
- 7.9 Doesn't conform to any other condition which stipulates non-conformance of tender conditions as a rejection criterion.
- 7.10 Use of white/erasing fluid for correcting the rates.

## **8 Rates how to be quoted**

- 8.1 Cost of the items should be mentioned clearly in the Financial Bid only. The following details need to be included:
  - a) Price break-up of main equipment and accessories and consumables to be supplied by the party. Please quote unit rate for each item in the currency specified in financial bid. The rates quoted should be on CIP, Destination (CIP stands for carriage and Insurance paid) basis and should separately indicate Basic Cost, Excise Duty, Customs Duty, Sales Tax, VAT etc.
  - b) 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.
  - c) Please quote your rates, other charges and applicable taxes and duties strictly in the space provided in the prescribed financial bid part.
  - d) Prices shall be quoted in Indian Rupees (INR) for offers received for supply within India and in INR/ US\$/EURO in case of offers received for supply from foreign countries.
  - e) The Bureau pays full CST and neither Form C nor Form D is provided.
  - f) The Comprehensive Annual Maintenance Contract charges for **three years** following

the expiry of warranty period. If the warranty period is less than three years, the Comprehensive Annual Maintenance Contract Charges for the remaining period (three years – the actual warranty period quoted) shall be added to the cost of equipment for the purpose of evaluation of the financial bid.

- g) The rates quoted shall be valid for a period of 120 days from the date of opening of the financial bid of the tender. In case the rates are quoted in the foreign currency, the conversion rate to INR (Reserve Bank of India rate) shall be applicable as on the last date of submission of tender. Evaluation of the financial bid shall be done on the basis of price in INR.
- h) The successful bidder is responsible for Packing, Forwarding, Freight & Insurance, Customs Clearance, Delivery at site and Commissioning and Training in a satisfactory manner without undue delay.
- i) The Agency Commission to the Indian Clearing Agent will not be paid by the Bureau and the same would be borne by the supplier. BUREAU shall provide Custom Duty Exemption Certificate at the time of Custom Clearance.
- j) In case of imported items customs Duty Exemption Certificate as applicable will be submitted by BUREAU. The successful bidder has to obtain customs clearance and deliver the goods at our site.

8.2 The bidder is expected to work out his rates keeping in view the technical specifications as per **Annexure-6** & conditions mentioned clearly and arrive at the amount to be quoted. The Bidder shall be deemed to have satisfied itself before Bidding as to the correctness and sufficiency of its Bid and of the rates and prices quoted in the attached schedules, which rates and prices shall, except as otherwise provided, cover all its obligations under the Tender and all matters and things necessary for proper fulfilling his obligations under the Tender. The Financial Bid shall clearly indicate all taxes including Local taxes, etc. to be paid by the Bidder for the Goods to be supplied at specified places and claim for extra payment on any such account shall not be entertained.

### 8.3 **Payment Terms**

#### **A) Payment to foreign suppliers:**

(i) **Payment for imported items:** 80% payment shall be made by an Irrevocable Letter of Credit established in favour of the supplier at BIS HQ/ by concerned BIS laboratory, for the order value against the presentation of original Shipping documents provided that the Performance Security for 10% of the order value, within 15 days of placement of the order is given to us. 20% of the order value of goods received shall be paid within 30 days of receipt of the goods and successful installation & commissioning upon submission of claim supported by the acceptance certificate issued by the BIS along with the Performance Security.

ii) **Payment for indigenous items:** 100% payment shall be made against delivery, installation, commissioning, training at site and on acceptance as per Purchase Order provided that the Performance Security for 10% of the order value within 15 days of

placement of the order is given to us.

**B) Payment to Indian Suppliers:**100% payment shall be made against delivery, installation, commissioning, training at site and on acceptance as per Purchase Order provided, that the Performance Security for 10% of the order value, within 15 days of placement of the order is given to us.

**8.4 Consignment Destination:**

SCIENTIST E & HEAD  
**BUREAU OF INDIAN STANDARDS**  
BENGALURU BRANCH LABORATORY  
PEENYA INDUSTRIAL AREA,  
1<sup>ST</sup> STAGE, TUMKUR ROAD,  
**BENGALURU – 560 058**

**9 Manner of Submission of Bid**

9.1 The complete Bid will be received by depositing the same through the Bid Box or by courier/post which reaches the specified place before the specified time. Post includes Speed Post, Registered Post.

9.2 E-mail or fax offers will be rejected.

**10 Last Date for Submission: 15.00 hrs on 22 Feb 2016**

10.1 Sealed Bids shall be received at the address specified above not later than the time and date specified in the Tender Notice. Bids received after the specified date and time for receipt of bids shall not be considered. Hence, such bids shall be rejected and returned unopened to the Bidder.

10.2 In the event that the specified date for the submission of Bid offers is declared a holiday, the offers will be received up to the appointed time on the next working day.

**11 Modification and Withdrawal of Offer**

11.1 The Bidder may withdraw its offer after its submission, provided that written notice of withdrawal is received by the BUREAU prior to the closing date and time prescribed for submission of offer.

**12 Contents of Bid Document**

12.1 Bids are invited in two-bid system (Technical bid and Financial bid). The completed Bid shall be submitted in sealed envelope, super-scribing the name of goods to be supplied as mentioned in **Schedule-3**.

12.2 The envelopes shall contain the following:

**Envelope No.1 (Technical Bid):**

- i) This Envelope shall be super-scribed “**Envelope-1 – Technical Bid**”.
- ii) This should contain all technical details along with commercial terms and conditions such as:
  - a) List of all the documents enclosed.
  - b) Documents towards fulfilment of pre-qualification criteria of the tender.
  - c) The EMD as indicated in clause 6.1 above or valid certificate of exemption issued by the Central Purchase Organization, National Small Industries Corporation (NSIC) or the concerned Ministry or Department.
  - d) Attested copy of the valid registration document if any.
  - e) Details of the firm(s) including details of the proprietor/partner/director with regard to name, address for communication, telephone number, e-mail, etc. (**Annexure 2**). In case of a firm, partner or power of attorney holder shall sign the Bid. The attested copies of power of attorney of person signing the Bid shall be enclosed with the Bid. The power of attorney shall be signed by partners. In case of private limited/public limited companies, the power of attorney shall be supported by appropriate authentication and adequate evidence in support of the same shall be provided.
  - f) All pages of the Tender Document and pasted slips should be signed by the Bidder and no page shall be added or removed from the set of Bid Document. Duly signed Bid document is to be returned as a token of its acceptance.
  - g) A statement showing the minimum three Sale and installations of **RAIN TEST APPARATUS** to Govt or reputed R&D Laboratory in India in the last three (3) years (**Annexure-3**) supported by Documentary Evidence.
  - h) Compliance statement to Technical specification duly filled as per Checklist given in **Annexure-7** shall be submitted by indicating Yes / No as relevant for all clauses. The Bidder shall submit the Bid which satisfies each and every condition laid down in Technical specification and Deviation with respect to the Technical Specification of the **RAIN TEST APPARATUS** if any shall be indicated in Deviation Statement Declaration as per **Annexure-5** duly signed.
  - i) Complete specifications for the items offered together with description, literature and samples called for and makers name, brand, etc. must be furnished.
  - j) A declaration regarding black-listing and/ or litigations (**Annexure-4**)
  - k) Agreed terms and conditions (indigenous or import) duly filled, signed & stamped.

**Envelope No.2 (Financial Bid):**

- i) This Envelope shall be super-scribed "Envelope-2 – Financial Bid".
- ii) This envelope shall contain item-wise price for the goods to be procured at specified places as per PART II: Financial Bid, duly filled in and initialled on each page and signed by the Bidder at prescribed places of the Bid. The instructions contained in clause 8 may please be noted.

**Covering Envelope:** Both the envelopes 1 and 2 shall be put together in a common sealed envelope **super-scribing the name of goods to be supplied as mentioned in Schedule-3** and the name and address of the Bidder at the bottom left.

### 13 **Other Important Points to be noted by the Bidder**

- 13.1 The Financial Bid should be written both in words and figures at appropriate places and the details of currency shall be clearly indicated.
- 13.2 The Bidder shall submit the Bid which satisfies each and every condition laid down in the Technical Specification.
- 13.3 Bidder may please note that cutting and corrections in the bid document should be avoided and if it is unavoidable, it should be kept at the bare minimum and it should be neatly cut and re-written without over-writing and use of erasing fluid. All corrections should be duly signed by the bidder. Use of white/erasing fluid for correcting the rates is banned. Bureau reserves the right to accept or reject the offer either in part or full wherever white/erasing fluid is used.
- 13.4 The dealers who are submitting offers on behalf of their principals must attach the valid authorization letter of their manufacturers along with the bid.
- 13.5 Bidder to confirm acceptance of repeat purchase order within 6 months of the original order with same rate, terms & conditions & with same specifications.
- 13.6 In case a foreign bidder submits any of the pre-qualification support documents in any language other than English, then it will be the responsibility of such foreign bidder to also provide the English translation copy of the same duly certified, stamped and signed by their local chamber of commerce.
- 13.7 In case the rates are quoted in the foreign currency, the conversion rate to INR (Reserve Bank of India rate) shall be applicable as on the last date of submission of tender. Evaluation of the financial bid shall be done on the basis of price in INR.
- 13.8 In case of imported items customs duty exemption certificate as applicable will be submitted by Bureau. The successful bidder has to obtain customs clearance and deliver the goods at our site.

### 14 **Corrupt or Fraudulent Practices**

- 14.1 The BUREAU requires that the Bidders under this Bid observe the highest standards of

ethics during the procurement and execution of such Contracts. Accordingly, the BUREAU defines the terms set forth as follows:

- a) "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of the public official in the procurement process or in contract execution; and
- b) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or an execution of a contract to the detriment of the BUREAU and includes collusive practice among Bidders (prior to or after Bid submission) designed to establish Contract Prices at artificial non-competitive levels and to deprive the BUREAU of the benefits of the free and open competition.

14.2 The BUREAU shall reject a proposal for award, if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the Contract in question. The BUREAU shall deem a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has engaged in corrupt and fraudulent practices in competing for, or in executing, a contract.

15 All goods shall be inspected by BUREAU preferably in the presence of supplier or his authorized representative, when the packages are opened in Labs on delivery and prior to installation. The decision of BUREAU 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.

16 **Opening of Technical Bid**

The Technical Bid of those bids received before the time and date specified in Tender Notice, will be opened on as per the specified program in the office as mentioned in the Tender Enquiry, in the presence of Bidders or their authorized representatives who choose to remain present on the opening day, at the scheduled time.

17 **Shortlisting of Bidders**

The BUREAU will short-list technically qualifying Bidders and Financial Bids of only those Bidders, who qualify in technical bids, will be opened at a date and time to be intimated.

18 **Opening of Financial Bids**

The BUREAU shall open Envelope No.2, at a later date, and the rates quoted by the bidder in price schedule (PART II Financial Bid) shall then be read out.

19 **Evaluation Criteria**

19.1 Lowest overall cost to Bureau for operation of the equipment for **six years** after successful commissioning shall be considered for evaluation of the financial bid. For this purpose, the Comprehensive Annual Maintenance Charges for 4<sup>th</sup>, 5<sup>th</sup> & 6<sup>th</sup> year shall be added to the cost

- of equipment to arrive at lowest overall cost.
- 19.2 If the warranty period is less than three years, the comprehensive annual maintenance contract charges for the remaining period (three years – the actual warranty period quoted) shall be added to the cost of equipment for the purpose of evaluation of the financial bid.
- 19.3 In case the rates are quoted in the foreign currency, the conversion rate to INR (Reserve Bank of India rate) shall be applicable as on the last date of submission of tender. Evaluation of the financial bid shall be done on the basis of price in INR.
- 19.4 The manufacturer/ supplier declaration that they shall provide after sales service of annual maintenance contract for 3 years after completion of warranty period, at the location where instrument has been installed.
- 19.5 **Component/Spares/Accessories**
- If bidder doesn't quote for some component/spares/accessories specifically indicated in the tender for consideration along with the main equipment, the same shall be considered as "free supply".
- 19.6 Bidders have to quote for all the items and quantities as per tender as the job is of comprehensive nature. The job is to be awarded on over all lowest basis. Part quoted bid shall out rightly be rejected.
- 20 **Acceptance of Bid**
- 20.1 Acceptance of Bid shall be done by the Competent Authority of the BUREAU. The BUREAU is not bound to accept the lowest or any Bid. The BUREAU reserves the right to reject any or all Bids received without assigning any reason whatsoever. The acceptance of Bid will be communicated to the successful Bidder in writing by the authorized officer of the BUREAU.
- 21 **Time for Completion**
- 21.1 The time allowed for successful installation and commissioning from the date of delivery shall be **four weeks**.
- 21.2 Unless otherwise specified one set of goods should be supplied in one lot well within the contractual delivery period.
- 21.3 Time and date of delivery of goods as stipulated in the order shall be deemed to be the essence of the contract. In case of delay in execution of the order beyond the date of delivery as stipulated in the order or any extensions sanctioned, Bureau may at his option either:
- 21.3.1 Accept delayed delivery at prices reduced by a sum equivalent to one percent (1%) of the value of any goods not delivered for every week of delay or part thereof limited to a maximum of 10% of the total order value.

- 21.3.2 Cancel the order in part or full and purchase such cancelled quantities from elsewhere on account and at the risk of the bidder, without prejudice to its rights in respect of goods delivered.
- 21.4 In case of delay in installation and commissioning beyond the period stipulated in 21.1 above or any extensions sanctioned, Bureau may at his option either:
- 21.4.1 Accept delayed installation and commissioning at prices reduced by a sum equivalent to one percent (1%) of the value of any goods not installation and commissioned for every week of delay or part thereof limited to a maximum of 10% of the total order value.
- 21.4.2 Cancel the order in part or full and purchase such cancelled quantities from elsewhere on account and at the risk of the bidder, without prejudice to its rights in respect of goods delivered.
- 21.5 Subsequent to an order being placed against your quotation received in response to this enquiry if it is found that the goods supplied are not of the right quality or not according to specifications required by the Bureau or received in damaged or broken condition or otherwise not satisfactory owing to any reason of which Bureau shall be the sole judge, the Bureau shall be entitled to reject the goods, cancel the contract and buy its requirements in the open market and recover the loss, if any from supplier reserving to itself the right to forfeit the security deposit, if any, furnished by the supplier against the contract. The supplier will make his own arrangements to remove the rejected goods within 30 days of instruction to do so. Thereafter, they will lie entirely at the supplier's risk and responsibilities and storage charges along with any other charges applicable will be recoverable from the supplier.

## 22 **Process to be Confidential**

Information relating to the examination, evaluation and comparison of Bids and the award of a Contract shall not be disclosed to Bidders or any other person not officially concerned with such process until the award to the successful Bidder has been announced.

## 23 **Performance Security**

To ensure due performance of the Tender, an interest-free Performance Security, for an amount as indicated in below, will be obtained from the successful bidder awarded the contract, irrespective of its registration status, etc.

- 23.1 **For Foreign Supplier:** The successful bidder shall furnish within 15 days of placement of the order an unconditional Performance Bank Guarantee valid till 60 days after the warranty period from a Nationalized Bank for 10% of the order value. If the firm fails to submit the same, the Contract shall be deemed as terminated and the firm's EMD will be forfeited. Performance Security will be furnished in the form of a Performance Bank Guarantee as per format indicated in **Annexure-1**.
- 23.2 **For Indian Supplier:** The successful bidder shall submit, within 15 days of the placement of the order, an unconditional Performance Bank Guarantee from a Nationalized Bank for



10% of the order value, as per format indicated in Annexure-1, to be valid till 60 days after the warranty period.

24      **Execution of Agreement**

- 24.1      It shall be incumbent on the successful Bidder to execute the Agreement, as per **Annexure 8**, on a non-judicial stamp paper of **Rs. 100.00** at the time of award of contract and pay stamp duty, legal and statutory charges for the Agreement, if any, as applicable on the date of the execution.

25      **Rights of the BUREAU**

- 25.1      The BUREAU reserves the right to suitably increase/reduce the scope of work put to this Bid. The right to split up the supply of the Goods in two or more parts is reserved by the BUREAU and also the right to award contract to more than one agency is reserved. The Supplier will supply the consignment of Goods at **Electrical Laboratory, BUREAU OF INDIAN STANDARDS, Bengaluru Branch Laboratory, 1<sup>st</sup> Stage, Tumkur Road, Bengaluru-560 058.**
- 25.2      In case of any ambiguity in the interpretation of any of the clauses in Tender Document or the conditions of the Contract, interpretation of the clauses by the Bureau shall be final and binding on all Parties.

26      **Notice to form Part of Contract**

Tender Notice and these instructions shall form part of the Contract.

27      **Address of Correspondence**

All correspondence shall be addressed to:

**Scientist-E & Head,  
BUREAU OF INDIAN STANDARDS,  
Bengaluru Branch Laboratory,  
1<sup>st</sup> Stage, Tumkur Road,  
Bengaluru - 560 058.**

## **SCHEDULE - 2: CONDITIONS OF CONTRACT**

### **1 DEFINITIONS**

- i) 'Contractor' shall mean the individual or firm or company whether incorporated or not, undertaking the Contract and shall include legal representatives of such individual or persons composing such firm or unincorporated company or successors of such firm or company as the case may be and permitted assigns of such individual or firm or company.
- ii) 'Goods' shall mean the items to be supplied to the Bureau by the Contractor as stated in the Tender and shall include installation and other services that are prescribed in the Tender document.
- iii) 'Contract' shall mean and include the Tender Notice, instructions to bidders, terms and conditions of contract, Letter of Acceptance, the Offer, the Agreement and mutually accepted conditions in the authorized correspondence exchanged with the bidder by the Bureau and any other document forming part of the contract.
- iv) 'Contract Amount' shall mean the sum quoted by the Contractor in his bid and accepted by the Bureau.
- v) 'Competent Authority' shall mean any officer authorized by the Bureau to act on behalf of the Bureau under this contract.
- vi) 'Government' shall mean the Central Government.
- vii) 'Bureau' shall mean Bureau of Indian Standards established under the Bureau of Indian Standards Act, 1986.
- viii) 'Director General' shall mean the Director General of the Bureau, for the time being holding that office and also his successor and shall include any officer authorized by him.
- ix) 'Approved' shall mean approved in writing including subsequent confirmation of previous verbal approval and "Approval" shall mean approval in writing including as aforesaid.
- x) 'Specification' means the specification referred to in the tender. In case where no particular specification is given, the relevant specification of the Bureau, where one exists, shall apply.
- xi) 'Tender' means formal invitation by the Bureau to the prospective bidders to offer

fixed price for supply of Goods.

- xii) 'Bid' means the Contractor's priced offer to the Bureau for the supply of the Goods at the specified places and remedying of any defects therein in accordance with the provision of the Contract, the installation and services as accepted by the Letter of Acceptance.
- xiii) 'Letter of Acceptance' means the formal acceptance by the Bureau.
- xiv) 'Commencement Date' means the date upon which the Contractor receives the notice to commence the supply of Goods at specified places.
- xv) 'Time for Completion' means the time for completing the supply and passing the Tests of the Goods or any part thereof as stated in the Contract calculated from the Commencement Date.
- xvi) 'Annexure' referred to in these conditions shall means the relevant annexure appended to the Tender Document and the Contract.

## 2 PARTIES TO THE CONTRACT

The parties to the contract shall be the Contractor, whose offer is accepted by the Bureau; and the Bureau.

The person signing the offer or any other document forming the part of Contract on behalf of other persons of a firm shall be deemed to have due authority to bind such person/s o the firm as the case may be, in all matters pertaining to the Contract. If it is found that the person concerned has no such authority, the Bureau may, without prejudice to any other Civil/Criminal remedies, terminate the Contract and hold the signatory and / or the firm liable for all costs and damages for such termination.

## 3 PERFORMANCE SECURITY

**For Foreign Supplier:** The successful bidder shall furnish within 15 days of placement of the order an unconditional Performance Bank Guarantee valid till 60 days after the warranty period from a Nationalized Bank for 10% of the order value. On acceptance of this condition and submission of Bank Guarantee, the Letter of Credit will be opened for 100% order value at BIS HQ/ by concerned lab. If the firm fails to submit the same, the Contract shall be deemed as terminated and the firm's EMD will be forfeited. Performance Security will be furnished in the form Performance Bank Guarantee as per format indicated in **Annexure-1**.

**For Indian Supplier:** The successful bidder shall submit, within 15 days of the placement of the order, an unconditional Performance Bank Guarantee from a Nationalized Bank for 10% of the order value, as per format indicated in Annexure-1, to be valid till 60 days after the warranty period.

Performance Security will remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including warranty obligations.

Any amount due/recoverable from the Contractor under the terms of this Contract or any other account, may be deducted from the amount of Security Deposit. In case, the amount of Security Deposit is reduced by reason of any such deduction, the Contractor shall, within fifteen (15) days of receipt of notice of demand from the Bureau, make good the deficit. In case, security is deposited by way of bank guarantee by the Contractor, then any penalty for damages liquidated or un-liquidated or for any breach or failure or determination of Contract, not previously paid to the Bureau, shall immediately on demand be paid by the said bankers to Bureau under and in terms of the said guarantee.

If during the term of this Contract, the Contractor is in default of the due and faithful performance of its obligations under this Contract, or any other outstanding dues by the way of fines, penalties and recovery of any other amounts due from the Contractor, the Bureau shall, without prejudice to its other rights and remedies hereunder or at the Applicable Law, be entitled to call in, retain and appropriate the Performance Security.

Nothing herein mentioned shall debar the Bureau from recovering from Contractor by a suit or any other means any such losses, damages, costs, charges and expenses as aforesaid, in case the same shall exceed the amount of the Performance Security.

The Performance Security shall be retained until all disputes, if any, between both the parties have been settled to the entire satisfaction of the Bureau. The Performance Security shall be returned to the Contractor by the Bureau within sixty days following the Completion Date or Termination Date of this Contract provided that there are no outstanding claims of the Bureau on the Contractor.

#### **4 CONTRACT DOCUMENTS**

The several Contract documents forming the Contract shall be taken as mutually explained to one party by the other, but in case of ambiguities or discrepancies the same shall be explained and harmonized by the Competent Authority of the Bureau who shall issue to the Contractor necessary instruction thereon and in such event unless otherwise provided in the Contract the priority of the documents forming the contract shall be as follows:

- i) The Agreement
- ii) The terms and conditions of the Contract
- iii) Tender Notice and Tender Document
- iv) Purchase order/ Letter of Acceptance
- v) Any other correspondence exchanged between the parties in connection with the contract.
- vi) The Contractor's Offer

#### **5 QUANTITY OF GOODS / PLACE OF SUPPLY / PERSONS WHO CAN PLACE ORDERS**

- (a) Goods can be ordered by Sc-E & Head of BNBOL only who is authorized by the Bureau to place orders against this Contract.
- (b) The supply of these equipment will be at the following location:

**BUREAU OF INDIAN STANDARDS**  
**Bengaluru Branch Laboratory**  
**Peenya Industrial Area,**  
**1<sup>st</sup> Stage, Tumkur Road,**  
**Bengaluru – 560 058**

**6 VALIDITY OF BIDS**

The rate quoted shall be valid for a period of 120 days from the date of opening of financial bid documents and applicable to the repeat orders also.

**7 TRANSPORTATION**

The supplier is required to ensure having an import license for the equipment quoted where applicable as per GOI guidelines. The Goods shall be delivered at the destinations specified in Clause 5 of the **Schedule -2** and shall include loading, unloading and transportation. The Goods damaged during transportation shall have to be replaced at Contractor's cost. Bureau will provide Customs Duty Exemption Certificate for imported items as applicable, and the successful bidder shall be responsible for necessary customs clearance.

**8 QUALITY OF GOODS**

All Goods to be supplied by the Contractor shall be in conformity with the Technical specifications as laid down in **Schedule – 3** of this contract and the Contractor shall, furnish proof to the satisfaction of the Competent Authority that the goods so comply in the form of a statement to be submitted in the Technical Bid.

**9 INSPECTION**

The supplier shall ensure that the goods confirms to all specification contained in the Contract. The Competent Authority will carry out inspection of the Goods supplied to confirm their conformity to the Contract specification/quality.

The Competent Authority shall be entitled at any time to inspect and examine any Goods intended to be supplied either at the factory, godown or at any place(s) where these are laying or from which these are being obtained and the Contractor shall give such facilities as may be required for such inspection and examination.

The Competent Authority shall have full powers to require removal of any or all of the Goods supplied by the Contractor which are not in accordance with the contract specifications or which do not conform in character or quality to the samples approved by the Bureau. In case of default on the part of the Contractor in removing the rejected goods, the Competent Authority of the Bureau shall be at liberty to have them removed by other means. The Competent Authority shall have full powers to procure other proper goods to be substituted for rejected goods and in the event of the Contractor refusing to comply; he may cause the same to be supplied by other means. All costs, which may attend upon such removal and/or substitution, shall be borne by the Contractor.

## 10 WARRANTY

- 10.1 The equipment along with all critical components/accessories is to be guaranteed for trouble free performance for a **minimum period of three years after installation**. The defects, if any, during the warranty period are to be rectified free of charge by arranging free replacement at site, wherever necessary. **The last six months of the warranty period shall be free of complaints, failing which the warranty period will get extended by another six months, which again shall be trouble free.**
- 10.2 If the warranty period is less than three years, the Comprehensive Annual Maintenance Contract Charges for the remaining period (three years – the actual warranty period quoted) shall be added to the cost of equipment for the purpose of evaluation of the financial bid.

## 11 LIQUIDATED DAMAGES FOR DELAYED SUPPLY

**If the supplier fails to Install and Commission the system as per specifications mentioned in the order within the due date, the Supplier is liable to pay liquidated damages of one percent value of the Purchase Order awarded, per every week delay subject to a maximum of 10% of the total value of the order and such money will be deducted from any money due or which may become due to the supplier.**

## 12 RISK PURCHASE

In case the Contractor fails to deliver the quantity as stipulated in the delivery schedule, the Bureau reserves the right to procure the same or similar Goods from alternate sources at the risk, cost and responsibility of the Contractor.

## 13 IMPOSITION OF FINES / PENALTY

Subsequent to an order being placed against the quotation received in response to this enquiry if it is found that the goods supplied are not of the right quality or not according to specifications required by the BUREAU or received in damaged or broken condition or otherwise not satisfactory owing to any reason of which BUREAU shall be the sole judge, the BUREAU shall be entitled to reject the goods, cancel the contract and buy its requirements in the open market and recover the loss, if any, from supplier reserving to itself the right to forfeit the security deposit, if any, furnished by the supplier against the contract. The supplier will make his own arrangements to remove the rejected goods within 30 days of instruction to do so. Thereafter, they will lie entirely at the supplier's risk and responsibilities and storage charges along with any other charges applicable will be recoverable from the supplier.

## 14 PAYMENTS TERMS

### a) Payment to foreign suppliers:

- (i) **Payment for imported items:** 80% payment shall be made by an Irrevocable Letter of Credit established in favour of the supplier at BIS HQ/ by concerned

BIS laboratory, for the order value against the presentation of original Shipping documents provided, that the Performance Security for 10% of the order value, within 15 days of placement of the order is given to us. 20% of the order value of goods received shall be paid within 30 days of receipt of the goods and successful installation & commissioning upon submission of claim supported by the acceptance certificate issued by the Purchaser along with the Performance Security.

- (ii) **Payment for indigenous items:** 100% payment shall be made against delivery, installation, commissioning, training at site and on acceptance as per Purchase Order provided, that the Performance Security for 10% of the order value, within 15 days of placement of the order is given to us.

- b) **Payment to Indian Suppliers:** 100% payment shall be made against delivery, installation, commissioning, training at site and on acceptance as per Purchase Order provided, that the Performance Security for 10% of the order value, within 15 days of placement of the order is given to us.

## 15 **INDEMNITY**

The Contractor shall indemnify and keep indemnified the Bureau against all losses and claims for injuries or damage to any person or any property whatsoever which may arise out of or in consequence of the Contract and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto under the provisions of various labour laws as amended from time to time.

The Contractor shall indemnify, protect and save the Bureau against all claims, losses, costs damages, expenses, action suits and other proceeding, resulting from infringement of any patent, trademarks, copyrights etc. or such other statutory infringements.

## 16 **CORRUPT OR FRAUDULENT PRACTICES**

The Bureau requires that the Bidders under this Bid observe the highest standards of ethics during the procurement and execution of such Contracts. Accordingly, the Bureau defines the terms set forth as follows:

- a) “corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of the public official in the procurement process or in contract execution; and
- b) “fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or an execution of a contract to the detriment of the Bureau, and includes collusive practice among Bidders (prior to or after Bid submission) designed to establish Contract Prices at artificial non-competitive levels and to deprive the Bureau of the benefits of the free and open competition.

The Bureau will reject a proposal for award if it determines that the Contractor has engaged in corrupt or fraudulent practices before, during or after the period of contract; The Bureau

will hold the Contractor ineligible to be awarded a contract, either indefinitely or for a period of 24 months from the date of declaring the contractor ineligible if it at any time determines that the Contractor has engaged in corrupt and fraudulent practices in competing for, or in executing the Contract.

**17 BUREAU MAY TERMINATE THE ORDER, IF**

- a) The Contractor becomes insolvent;
- b) A receiver, administrator, trustee or liquidator is appointed over a substantial part of its assets;
- c) Any act is done or event occurs with respect to the Contractor or its assets, which, under any applicable law has substantially similar effect to any of the foregoing acts or events;
- d) Serious discrepancy in the quality of the Goods is noticed during the inspection.
- e) Delays in delivery beyond the scheduled date of delivery as stipulated in the order or any extensions sanctioned.
- f) Delays in installation and commissioning beyond the period stipulated in 21.1 of Schedule 1 or any extensions sanctioned.
- g) If the Contractor is in breach of any law or statute governing the supply of Goods/ Services;
- h) The Contractor, in the judgement of the Bureau, has engaged in corrupt or fraudulent practices in competing for or in carrying out the Services under the Contract.
- i) The Contractor enters into voluntary or involuntary bankruptcy, or liquidation.

It shall also be lawful for the Bureau to terminate the Agreement at any time without assigning any reason and without being liable for loss or damage which the Contractor may suffer by reason of such termination, by giving the Contractor 15 days' notice in writing by the Bureau for such termination. Any such termination shall be without prejudice to any other right of the Bureau under the Contract.

**18 OPENING OF FINANCIAL BIDS**

The Bureau shall open Envelope No.2, on notified date, and the rates quoted by the bidder in price schedule (Part 2: Financial Bid) shall then be read out.

**19 ACCEPTANCE OF BID**

Acceptance of Bid shall be done by the Competent Authority of the Bureau. The Bureau is not bound to accept the lowest or any Bid. The Bureau reserves the right to reject any or all Bids received without assigning any reason whatsoever. The acceptance of Bid will be communicated to the successful Bidder in writing by the authorized officer of the Bureau.



20 **PROCESS TO BE CONFIDENTIAL**

Information relating to the examination, evaluation and comparison of Bids and the award of a Contract shall not be disclosed to Bidders or any other person not officially concerned with such process until the award to the successful Bidder has been announced.

21 **CONFIDENTIALITY**

The Contractor shall not divulge or disclose proprietary knowledge obtained while delivering Goods and services under this Contract to any person, without the prior written consent of the Bureau.

22 **PUBLICITY**

Any publicity by the Contractor in which the name of the Bureau is to be used, should be done only with the explicit written permission of the Bureau.

23 **DISPUTES & ARBITRATION**

The Bureau and the Contractor shall make every effort to resolve amicably by direct informal negotiation, any disagreement or dispute arising between them under or in connection with the contract.

If a dispute(s) of any kind whatsoever that cannot be resolved the same shall be referred to the Arbitrator, appointed by the Authorized Officer indicated in Schedule-3. The provisions of the Indian Arbitration and Conciliation Act, 1996 shall apply.

24 **MODE OF SERVING NOTICE**

Communications between Parties which are referred to in the Contract are effective only when in writing. A notice shall be effective only when it is delivered. All notices shall be issued by the authorized officer of the Bureau unless otherwise provided in the Contract. In case, the notice is sent by registered post to the last known place or abode or business of the Contractor, it shall be deemed to have been served on the date when in the ordinary course of post these would have been served on or delivered to it.

25 **GOVERNING LANGUAGE**

Governing language for the entire contract and communication thereof shall be English only.

26 **LAW**

The contract shall be governed and interpreted under Indian Laws.

27 **LEGAL JURISDICTION**

No suit or other proceedings relating to performance or breach of Contract shall be filed or taken by the Contractor in any Court of law except the competent Courts having jurisdiction in Bangalore.

28 **STAMP DUTY**

The Contractor shall bear and pay any stamp duty and registration charges if any, in respect of the supply.

### SCHEDULE - 3: SPECIFICATIONS & REQUIREMENTS

**Goods to be procured under the Tender:**

<u>Sl. No.</u>	<u>Equipment ID</u>	<u>Description of Equipment</u>	<u>Qty.</u>
1	BNBOL-LED-15/16	RAIN TEST APPARATUS (EQUIPMENT FOR INGRESS PROTECTION AGAINST WATER - IPX1 to IPX8)	01

**Technical Specifications:** As enclosed in **Annexure-6**.

**Warranty:** **Three years** from the date of Commissioning of the equipment with all critical components/ accessories.

Note: If the warranty period is less than three years, the Comprehensive Annual Maintenance Contract Charges for the remaining period (three years – the actual warranty period quoted) shall be added to the cost of equipment for the purpose of evaluation of the financial bid.

**Training:** **Complete Training shall be provided at our site for employees of the Bureau.**

**Place of Delivery, Installation and Commissioning:**

Sc.E & Head,  
BUREAU OF INDIAN STANDARDS  
Bengaluru Branch Laboratory  
Peenya Industrial Area, 1st Stage,  
Tumkur Road, Bengaluru-560 058

**Delivery:** **Eight weeks** from the date of placing of Purchase Order.

**Authorized Officer:**

Authorized Officer on behalf of the Bureau for this tender/contract: **Head, BNBOL, BIS, Bangalore.**

**SCHEDULE - 4: OTHER STANDARD FORMS, IF ANY, TO BE UTILIZED BY THE  
PURCHASER AND THE BIDDERS**

1	Annexure – 1	Form of bank guarantee bond
2	Annexure – 2	Details to be furnished by the bidders
3	Annexure – 3	Details of the similar type of goods supplied by the bidder during last 3 years
4	Annexure – 4	Declaration regarding blacklisting and/or litigations
5	Annexure – 5	Deviation statement form
6	Annexure – 6	Technical specification
7	Annexure – 7	Technical compliance statement
8	Annexure – 8	Agreement form

**ANNEXURE-1**

**FORM OF BANK GUARANTEE BOND**  
**PERFORMANCE SECURITY FORM**

1. In consideration of Bureau of Indian Standards (hereinafter called 'The BUREAU') having agreed to exempt \_\_\_\_\_  
(hereinafter called "the said Contractor(s)") from the demand under the terms and conditions of an Agreement dated \_\_\_\_\_ made between \_\_\_\_\_ and \_\_\_\_\_ for \_\_\_\_\_  
(hereinafter called "the said Agreement of security deposit for the due fulfilment by the said Contractor (s) of the terms and conditions contained in the said Agreement, on production of a Bank Guarantee for Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ Only)  
we, \_\_\_\_\_ {hereinafter referred to as \_\_\_\_\_ (indicate the name of the bank) 'the bank'} at the request of \_\_\_\_\_  
[[Contractor (s)] do hereby undertake to pay the Bureau an amount not exceeding Rs. \_\_\_\_\_ against any loss or demand caused to or suffered or would be caused to or suffered by the Bureau by reason of any breach by the said Contractor (s) of any of the terms or conditions contained in the said Agreement.
2. We \_\_\_\_\_ do hereby indicate the name of the bank) undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Bureau of Indian Standards stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Bureau by reason of breach by the said Contractor (s) of any of the terms or conditions contained in the said Agreement or by reasons of the Contractor (s) failure to perform the said Agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. ....
3. We, undertake to pay to the Bureau any money so demanded notwithstanding any dispute or disputes raised by the Contractor (s) / Supplier (s) in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Contractor (s) / Supplier (s) shall have no claim against us for making such payment.

4. We, \_\_\_\_\_ further agree that the Guarantee

(indicate the name of Bank)

herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Bureau under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till the authorized officer of the Bureau (General Administration Department) certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor (s) and accordingly of the said Agreement have been fully and properly carried out by the said Contractor (s) and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the .....we shall be discharged from all liability under this guarantee thereafter.

5. We ..... further agree with the Bureau that

(indicate the name of Bank)

the Bureau shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time to performance by the said Contractor (s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Bureau against the said Contractor (s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor (s) or for any forbearance, act or commission on the part of the Bureau or any indulgence by the Bureau to the said Contractor (s) or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor (s) / Supplier (s).

7. We, ..... lastly undertake not to revoke this

(indicate the name of bank)

guarantee during its currency except with the previous consent of the Bureau in writing.

Dated the .....day of .....20

For .....

(indicate the name of bank)

**Annexure-2**

**DETAILS TO BE FURNISHED BY THE BIDDERS**

1. Name of the Firm/Company:
2. Details Registration/Import licence if any with validity date:
3. Address for Communication:
4. Telephone No.:
5. E-mail:
6. Manufacturers Name and Address (if different);
7. Bank Account Details.
6. Details of Proprietor/Partner/Director /Authorised Signatory: (Name, Address, etc.)
7. PAN, TIN Number of the Firm/Company:
8. Service Tax Registration No.:
9. EMD Draft Number/Date & Name of the Bank:

This is to certify that the above facts are true complete and correct to the best of my knowledge and belief. Further, it is certified that I/We have read and understood the terms and conditions of the Tender Notice.

I/We give an undertaking and give our unconditional and unequivocal acceptance of all terms and conditions of the Tender and agree to abide by these terms and conditions.

Name and Signature of the Firm/Company

Seal of the Firm/Company

Date

**Annexure-3**

**Details of the similar type of goods supplied by the Bidder during last 3 years**

A statement showing the minimum Three Sale and installations of specified equipment to Govt or reputed R&D Laboratory in India in the last three (3) years **(Annexure-3)** supported **by Documentary Evidence**.



**Annexure-4**

**Declaration regarding black-listing and/or litigations**

I/we hereby declare that our firm/agency is not black-listed by any Ministry or Department of Central Government/State Government or PSU or other bodies under the Central Government/State Government in India. I/we further declare that no criminal case is registered or pending against the firm/company or its owner/partners/directors anywhere in India.

Signature of Bidder: \_\_\_\_\_

Name & Address of Bidder: \_\_\_\_\_

Seal of the Firm/Company:

Date:

**Annexure-5**

**DEVIATION STATEMENT FORM**

The following are the particulars of deviations from the requirements of the tender document and specifications:

TENDER CLAUSE	DEVIATION	REMARKS INCLUDING JUSTIFICATION

Annexure – 6

**TECHNICAL SPECIFICATIONS**

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Equipment Specification Code	:	<b>BNBOL-LED-15/16</b>
Name of the Equipment	:	<b>RAIN TEST APPARATUS</b> (EQUIPMENT FOR INGRESS PROTECTION AGAINST WATER - IPX1 to IPX8)
Proposed for (BIS Lab/s)	:	<b>BNBOL</b>
Total Quantity Required	:	<b>01(ONE)</b>

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**1.0 Scope**

Covers the basic guiding requirements for Equipment for Ingress Protection Against Water (IP X1 to IP X8) required for carrying out the following test:

- Test for ingress protection against water (IP X1 to IP X8) on luminaires as per Cl. 9.2.3 to 9.2.9 of IS 10322 (Pt.1): 2014.

**2.0 Test Requirements**

- **Drip-proof** luminaires (second characteristic IP numeral 1) are subjected for 10 min to an artificial rainfall of 3 mm/min, falling vertically from a height of 200 mm above the top of the luminaires.
- **Rain-proof** luminaires (second characteristic IP numeral 3) are sprayed with water for 10 min by means of a spray apparatus as shown in Fig. 7 of IS 10322 (Pt.1): 2014. The radius of the semicircular tube shall be as small as possible and compatible with the size and position of the luminaire. The tube shall be perforated so that jets of water are directed towards the centre of the circle and the water pressure at the inlet of the apparatus shall be approximately 80 kN/m<sup>2</sup>. The tube shall be caused to oscillate through an angle of 120°, 60° on either side of the vertical, the time for one complete oscillation (2 × 120°) being about 4s. The luminaire shall be mounted above the pivot line of the tube so that the ends of the luminaire receive adequate coverage from the jets. The luminaires shall be turned about its vertical axis during the test at a rate of 1 rev/min. After this 10 min period, the luminaire shall be switched off and allowed to cool naturally whilst the water spray is continued for a further 10 min.
- **Splash-proof** luminaire (second characteristic IP numeral 4) are sprayed from every direction with water for 10 min by means of the spray apparatus shown in Fig. 7 and described in 9.2.4 of IS 10322 (Pt.1): 2014. The luminaire shall be mounted under the pivot line of the tube so that the ends of the luminaires receive adequate coverage from the jets. The tube shall be caused to oscillate through an angle of almost 360°, 180° on either side of the vertical, the time for one complete oscillation (2 × 360°) being about 12 s. The luminaire shall be turned about its vertical axis during the test at a rate of 1 rev/min. The support for the equipment under test shall be of grid shaped in order to avoid acting as a baffle. After this 10 min

period, the luminaire shall be switched off and allowed to cool naturally whilst the water spray is continued for a further 10 min.

- **Jet-proof** luminaires (second characteristic IP numeral 5) are switched off and immediately subjected to a water jet for 15 min from all directions by means of a hose having a nozzle with the shape and dimensions shown in Fig. 8. The nozzle shall be held 3 m away the sample. The water pressure at the nozzle shall be adjusted to achieve a water delivery rate of 12.5 l/min  $\pm$  5 percent (approximately 30 kN/m<sup>2</sup>).
- **Powerful water jet-proof** luminaires (second characteristic IP numeral 6) are switched off and immediately subjected to a water jet for 3 min from all direction by means of a hose having a nozzle with the shape and dimensions shown in Fig. 8. The nozzle shall be held in 3 m away from the sample. The water pressure at the nozzle shall be adjusted to achieve a water delivery rate of 100 l/min  $\pm$  5 percent (approximately 100 kN/m<sup>2</sup>).
- **Water-tight** luminaires (second characteristic IP numeral 7) are switched off and immediately immersed for 30 min in water, so that there is at least 150 mm of water above the top of the luminaires and the lowest portion is subjected to at least 1 m head of water. Luminaires shall be held in position by their normal fixing means. Luminaires for tubular fluorescent lamps shall be positioned horizontally, with the diffuser upwards, 1 m below the water surface.
- **Pressure water-tight** luminaires (second characteristic IP numeral 8) are heated either by switching on the lamp or by other suitable means, so that the temperature of the luminaire enclosure exceeds that of the water in the test tank by between 5°C and 10°C. The luminaires shall then be switched off and subjected to a water pressure of 1.3 times that pressures which corresponds to the rated maximum immersion depth for a period of 30 min.

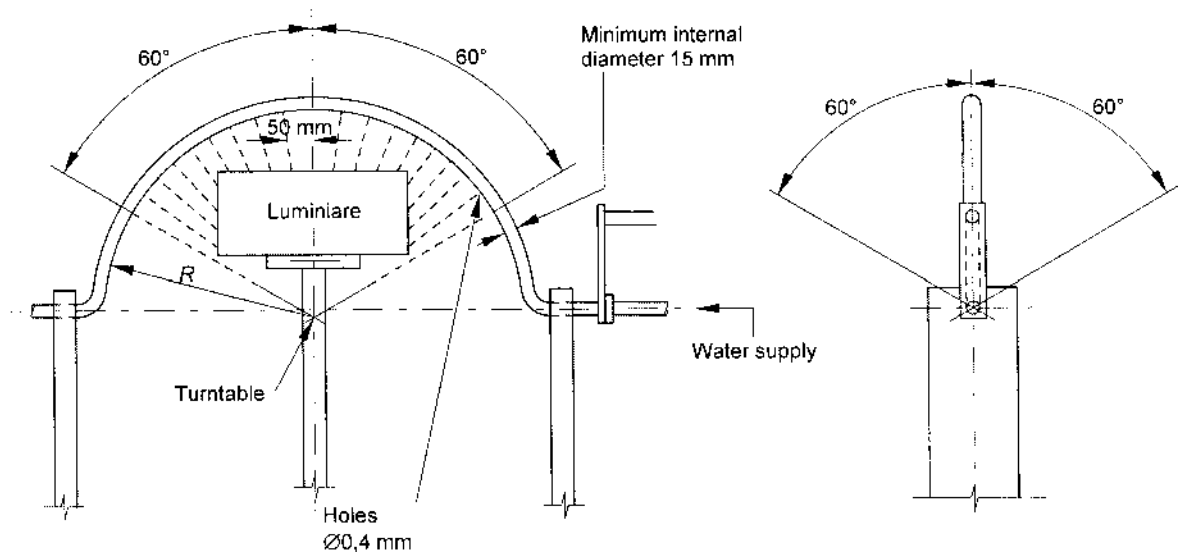
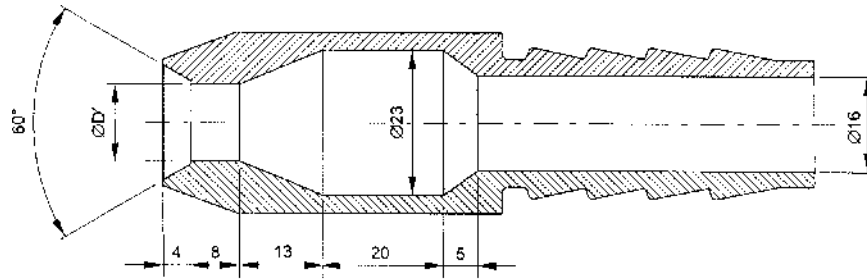
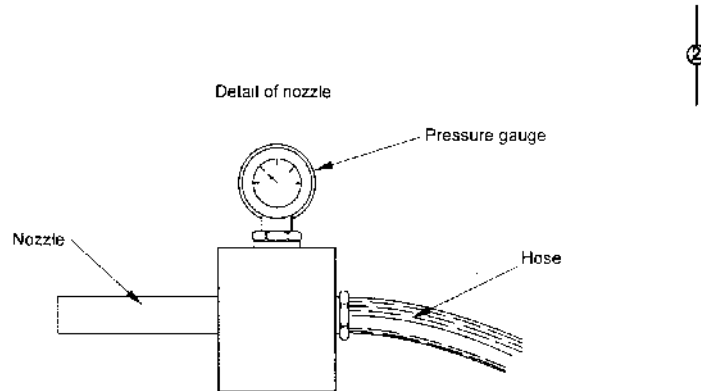


FIG. 7 APPARATUS FOR TESTING PROTECTION AGAINST RAIN AND SPLASHING



$D' = 6.3$  mm for the test of 9.2.6 (second characteristic numeral 5)  
 $D' = 12.5$  mm for the test of 9.2.7 (second characteristic numeral 6)



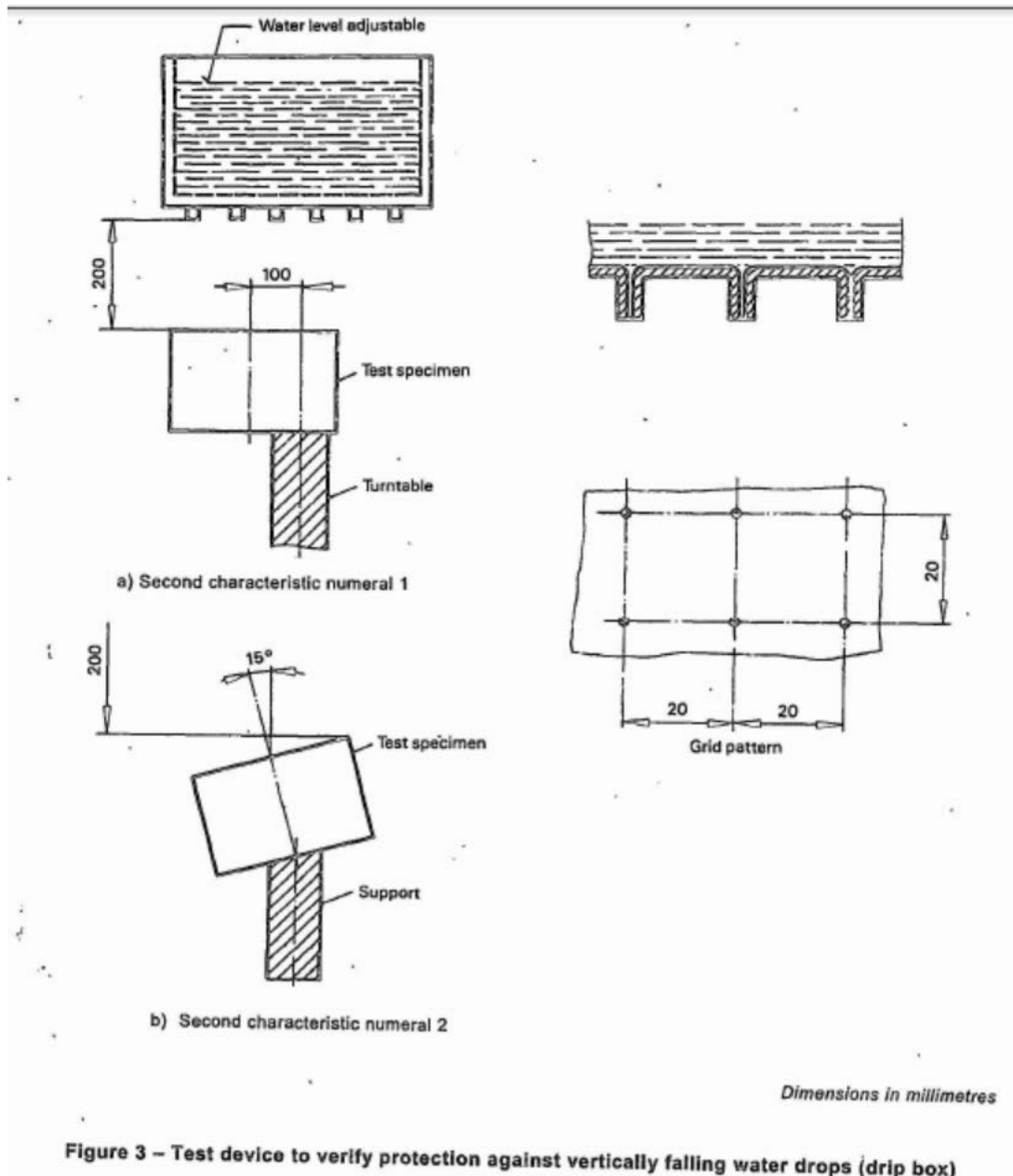
All dimensions in millimetres.

FIG. 8 NOZZLE FOR SPRAY TEST

### 3.0 Design and Construction

#### 3.1 IPX1 & IPX2

- 3.1.1 The test equipment for IP X1 & X2 shall be designed to produce a uniform flow of water drops falling vertically from a height of 200 mm above the top of the test specimen over the whole area with a water flow rate of  $1 \pm 0.5$  mm/min and  $3 \pm 0.5$  mm/min. An example of the test device is given in Fig. 3 below:



- 3.1.2 The set-up shall basically consist of a drip box mounted on top of a support stand with flow control and shut off valve, water pump, piping and any connecting hose. The support stand shall be fabricated out of stainless steel (AISI-304 Grade, Min.) with adequate strength and rigidity. All the joints and corners shall be made with high quality TIG welding and buffing. Lockable castor wheels shall be provided for easy mobility. The design of the stand shall be suitable to place a turn-table carrying the test specimen below the drip box.
- 3.1.3 Drip tank shall be fabricated out of stainless steel (AISI-304 Grade, Min.) with removable nozzles. The design of the drip box shall provide easy access to the top for maintenance and cleaning.

- 3.1.4 Provisions shall be made for adjusting water flow rate of  $1 \pm 0.5$  mm/min and  $3 \pm 0.5$  mm/min through a flow meter and valve.
- 3.1.5 The water pump used to fill the drip tank shall be of reputed make and the water level in the drip tank shall be maintained through a water level control switch automatically.
- 3.1.6 The size of the drip tank shall be at least 800mm X 800mm to provide a minimum exposure area of 760mm X 760mm and shall be mounted on the support stand at a height of approximately 1.7m from the floor level.
- 3.1.7 The pipelines used to connect the various parts of the apparatus shall have adequate strength and shall be durable and free from rusting.
- 3.1.8 **Instrumentation and Control**

A control panel consisting of required instruments and controls shall be provided for ease of operation. It shall include the following:

- Mains on-off switch
- Mains-on indicator lamp
- ON/OFF switch for operation of drip tank
- Hour meter
- Timer to set the test timing
- Protection for water pump against over load
- Protection for control circuits
- Low water level protection with an electrical float switch.
- Protection of the control circuits against input electrical surge and spike
- Earth terminal.

### 3.2 **IPX3 & IPX4**

- 3.2.1 The spray apparatus for IP X3 & X4 shall be designed and constructed according to Fig. 7 of IS 10322 (Pt.1): 2014 given above.
- 3.2.2 The radius of the semicircular tube shall be 1000 mm. The tube shall be provided with spray holes of 0.4mm dia. for every 50mm over an arc of  $60^\circ$  distance so that jets of water are directed towards the centre of the circle and the water pressure at the inlet of the apparatus shall be approximately 80 kN/m<sup>2</sup>. Provision shall also be made to adjust the total flow rate equal to 0.07 l/min  $\pm$  5% per hole multiplied by number of holes.
- 3.2.3 For IPX3, the tube shall be caused to oscillate through an angle of  $120^\circ$ ,  $60^\circ$  on either side of the vertical, the time for one complete oscillation ( $2 \times 120^\circ$ ) being about 4s. For IPX4, the tube shall be caused to oscillate through an angle of almost  $360^\circ$ ,  $180^\circ$  on either side of the vertical, the time for one complete oscillation ( $2 \times 360^\circ$ ) being about 12 s.

- 3.2.4 The luminaire (test specimen) shall be mounted above the pivot line of the tube so that the ends of the luminaire receive adequate coverage from the jets. The specimen shall be turned about its vertical axis during the test at a rate of 1 rev/min. The support for the equipment under test shall be of grid shaped in order to avoid acting as a baffle. After a period of 10 min, the luminaire shall be switched off and allowed to cool naturally whilst the water spray is continued for a further 10 min.
- 3.2.5 The set-up shall basically consist of semi-circular spray tube supported on electro motor carriers with built-in oscillating mechanism at both ends with fully automated features like inline pressure monitoring, automatic rotating table height adjustment, 360° clockwise and anticlockwise rotations with touch screen control & monitoring.
- 3.2.6 The semi-circular spray tube and the support carriers shall be fabricated out of stainless steel (AISI-304 Grade, Min.) with adequate strength and rigidity. All the joints and corners shall be made with high quality TIG welding and buffing. Lockable castor wheels shall be provided for easy mobility. The design of the equipment shall be suitable to place a rotating table carrying the test specimen at the centre point of the semicircle defined by the oscillating tube.
- 3.2.7 Oscillating tube will have fixed angle limit as specified above for rotation. It shall be coupled with geared motor in line with rotary joint to operate close to 360°. Provision shall be made to automatically stop tube rotation and water flow at the precise test time. Manual mode shall also be provided for flexibility.
- 3.2.8 **Instrumentation and Control**

A control panel consisting of required instruments and controls shall be provided for ease of operation. It shall include the following:

- Mains on-off switch
- Mains-on indicator lamp
- LED/LCD graphical display (7", Min.) for programming and monitoring the test parameters as well as to set up, run, and monitor the test device automatically
- Turn table RPM indicator
- Flow meter
- Manometer
- Single phase, phase reversal, under voltage and over voltage protection for main input power
- EMI protection for control circuit
- Protection for water pump against over load
- Protection of the control circuits against input electrical surge and spike
- ON and OFF switch for operation of Osculating Tube
- Low water level protection with an electrical float switch
- Earth terminal



### 3.3 **IPX5 & IPX6**

- 3.3.1 The apparatus for IP X5 & X6 shall be designed and constructed to subject the test specimen to a water jet for 15 min from all directions by means of a hose having a nozzle with the shape and dimensions shown in Fig. 8 of IS 10322 (Pt.1): 2014 given above.
- 3.3.2 Provisions shall be made to adjust the water pressure at the nozzle to achieve a water delivery rate of 12.5 l/min  $\pm$  5 percent (approximately 30 kN/m<sup>2</sup>) for IPX5 and 100 l/min  $\pm$  5 percent (approximately 100 kN/m<sup>2</sup>) for IPX6.
- 3.3.3 The nozzles shall be made out of stainless steel (AISI-304 Grade, Min.). The diameter of nozzle shall be 6.3mm for IPX5 and 12.5mm for IPX6 as specified above. Nozzles shall be held 3m away from the test specimen. The nozzles shall be suitably placed on a height adjustable stand-alone tripod stand made of stainless steel with a pressure gauge, ball valve and connecting flexible hose of adequate length with flow meter to monitor flow rate.
- 3.3.4 The electric pump used to feed water to the nozzles shall be of reputed make having adequate capacity to obtain the required rate of flow.
- 3.3.5 **Instrumentation and Control**

A control panel consisting of required instruments and controls shall be provided for ease of operation. It shall include the following:

- Mains on-off switch
- Mains-on indicator lamp
- ON and OFF switch for operation for Jet Spray Nozzles
- Hour meter
- Timer to set the test timing
- Single phase, phase reversal, under voltage and over voltage protection for main input power
- EMI protection for control circuit
- Protection for water pump against over load
- Protection of the control circuits against input electrical surge and spike
- Low water level protection with an electrical float switch
- Earth terminal

### 3.4 **IPX7 & X8**

- 3.4.1 The test equipment for IPX7 & X8 shall be designed so that after the test specimen is immersed in water, there is at least 150 mm of water above the top of the specimen and the lowest portion is subjected to at least 1 m head of water for IPX7 and 1.3 times the pressure which corresponds to the rated maximum immersion depth for IPX8 as specified in IS 10322 (Pt.1): 2014 given above.
- 3.4.2 The equipment basically shall consist of an independent stand-alone non-metallic rectangular fiber tank, preferably transparent, with filling and emptying valves for water replacement and

maintenance. Dimensions of the immersion tank shall conform to the requirements of the test and shall be suitable to cover a wide variety of luminaires.

- 3.4.3 A stainless steel column shall be fixed to the tank, complete with manual winch with rope for specimen basket movement. The basket shall be made of stainless steel perforated sheet or wire mesh with a base area of at least 500mm X 500mm.

#### **4.0 Water Circulation System**

- 4.1 Independent monoblock pump of reputed make shall be used to circulate water for IPX1-2 tests.
- 4.2 Independent open well submersible pump of reputed make shall be used for circulating the water for IPX3-IPX6 test system.
- 4.3 Suitable water filter system shall be used to prevent choking of water lines, nozzles, etc.

#### **5.0 Power Supply Requirements**

The environmental chamber shall be capable of operating from an ac supply of 50 Hz either from single phase 240 V  $\pm$  10 percent or 3 phase 415V  $\pm$  10 percent.

#### **6.0 Accessories**

##### **6.1 Rotating test table**

- 6.1.1 A vibration-free rotating/turn table of at least 300mm dia. with variable speed control suitable for placing test specimen for IPX1 to IPX6 tests shall be provided.
- 6.1.2 The turn table shall be made out of stainless steel (AISI-304 Grade, Min.). Provision shall be made for fixing of test specimen on the table and shall rotate according to the requirements of various IP tests described above so that water can be directed on all sides of the test specimen.
- 6.1.3 The rotating table shall have a provision for tilting 15°.
- 6.1.4 The turn table shall be auto-height adjustable with regulated rotation speed. Automatic control of clockwise or anti-clockwise rotation with provision for controlling the angle of rotation shall also be incorporated.

#### **7.0 User Documentation**

The equipment shall be supplied with one (1) user's manual. Manual shall include installation drawings and instructions, a functional description of the equipment with block diagrams, safety precautions, illustrations, step-by-step operating procedures, and routine maintenance guidelines.

## **8.0 Certificates of Calibration**

Calibration certificates for relevant parameters from NABL accredited calibration agency shall be furnished along with the equipment.

**Annexure-7**

**Technical Compliance Statement**

Clause No.	Specified Requirement	Compliance (Yes/No)	Remarks (if any)
1.0	Scope		
2.0	Test requirements		
3.1.1	The test equipment for IP X1 & X2 shall be designed to produce a uniform flow of water drops falling vertically from a height of 200 mm above the top of the test specimen over the whole area with a water flow rate of $1 \pm 0.5$ mm/min and $3 \pm 0.5$ mm/min.		
3.1.2	The set-up shall basically consist of a drip box mounted on top of a support stand with flow control and shut off valve, water pump, piping and any connecting hose. The support stand shall be fabricated out of stainless steel (AISI-304 Grade, Min.) with adequate strength and rigidity. All the joints and corners shall be made with high quality TIG welding and buffing. Lockable castor wheels shall be provided for easy mobility. The design of the stand shall be suitable to place a turn-table carrying the test specimen below the drip box.		
3.1.3	Drip tank shall be fabricated out of stainless steel (AISI-304 Grade, Min.) with removable nozzles. The design of the drip box shall provide easy access to the top for maintenance and cleaning.		
3.1.4	Provisions shall be made for adjusting water flow rate of $1 \pm 0.5$ mm/min and $3 \pm 0.5$ mm/min through a flow meter and valve.		
3.1.5	The water pump used to fill the drip tank shall be of reputed make and the water level in the drip tank shall be maintained through a water level control switch automatically.		
3.1.6	The size of the drip tank shall be at least 800mm X 800mm to provide a minimum exposure area of 760mm X 760mm and shall be mounted on the support stand at a height of approximately 1.7m from the floor level.		
3.1.7	The pipelines used to connect the various parts of the apparatus shall have adequate strength and shall be durable and free from rusting.		
3.1.8	Instrumentation and Control		

	<p>A control panel consisting of required instruments and controls shall be provided for ease of operation. It shall include the following:</p> <ul style="list-style-type: none"> <li>▪ Mains on-off switch</li> <li>▪ Mains-on indicator lamp</li> <li>▪ ON/OFF switch for operation of drip tank</li> <li>▪ Hour meter</li> <li>▪ Timer to set the test timing</li> <li>▪ Protection for water pump against over load</li> <li>▪ Protection for control circuits</li> <li>▪ Low water level protection with an electrical float switch.</li> <li>▪ Protection of the control circuits against input electrical surge and spike</li> <li>▪ Earth terminal.</li> </ul>		
3.2.1	The spray apparatus for IP X3 & X4 shall be designed and constructed according to Fig. 7 of IS 10322 (Pt.1): 2014 given above.		
3.2.2	The radius of the semi-circular tube shall be 1000 mm. The tube shall be provided with spray holes of 0.4mm dia. for every 50mm over an arc of 60° distance so that jets of water are directed towards the centre of the circle and the water pressure at the inlet of the apparatus shall be approximately 80 kN/m <sup>2</sup> . Provision shall also be made to adjust the total flow rate equal to 0.07 l/min ± 5% per hole multiplied by number of holes.		
3.2.3	For IPX3, the tube shall be caused to oscillate through an angle of 120°, 60° on either side of the vertical, the time for one complete oscillation (2 × 120°) being about 4s. For IPX4, the tube shall be caused to oscillate through an angle of almost 360°, 180° on either side of the vertical, the time for one complete oscillation (2 × 360°) being about 12 s.		
3.2.4	The luminaire (test specimen) shall be mounted above the pivot line of the tube so that the ends of the luminaire receive adequate coverage from the jets. The specimen shall be turned about its vertical axis during the test at a rate of 1 rev/min. The support for the equipment under test shall be of grid shaped in order to avoid acting as a baffle. After a period of 10 min, the luminaire shall be switched off and allowed to cool naturally whilst the water spray is continued for a further 10 min.		
3.2.5	The set-up shall basically consist of semi-circular spray tube supported on electro motor carriers with built-in oscillating mechanism at both ends with fully automated features like inline		

	pressure monitoring, automatic rotating table height adjustment, 360° clockwise and anticlockwise rotations with touch screen control & monitoring.		
3.2.6	The semi-circular spray tube and the support carriers shall be fabricated out of stainless steel (AISI-304 Grade, Min.) with adequate strength and rigidity. All the joints and corners shall be made with high quality TIG welding and buffing. Lockable castor wheels shall be provided for easy mobility. The design of the equipment shall be suitable to place a rotating table carrying the test specimen at the centre point of the semicircle defined by the oscillating tube.		
3.2.7	Oscillating tube will have fixed angle limit as specified above for rotation. It shall be coupled with geared motor in line with rotary joint to operate close to 360°. Provision shall be made to automatically stop tube rotation and water flow at the precise test time. Manual mode shall also be provided for flexibility.		
3.2.8	<p><b>Instrumentation and Control</b></p> <p>A control panel consisting of required instruments and controls shall be provided for ease of operation. It shall include the following:</p> <ul style="list-style-type: none"> <li>• Mains on-off switch</li> <li>• Mains-on indicator lamp</li> <li>• LED/LCD graphical display (7", Min.) for programming and monitoring the test parameters as well as to set up, run, and monitor the test device automatically</li> <li>• Turn table RPM indicator</li> <li>• Flow meter</li> <li>• Manometer</li> <li>• Single phase, phase reversal, under voltage and over voltage protection for main input power</li> <li>• EMI protection for control circuit</li> <li>• Protection for water pump against over load</li> <li>• Protection of the control circuits against input electrical surge and spike</li> <li>• ON and OFF switch for operation of Osculating Tube</li> <li>• Low water level protection with an electrical float switch</li> <li>• Earth terminal</li> </ul>		
3.3.1	The apparatus for IP X5 & X6 shall be designed and constructed to subject the test specimen to a water jet for 15 min from all directions by means of a hose having a nozzle with the shape and dimensions shown in Fig. 8 of IS 10322 (Pt.1): 2014 given above.		

3.3.2	Provisions shall be made to adjust the water pressure at the nozzle to achieve a water delivery rate of 12.5 l/min $\pm$ 5 percent (approximately 30 kN/m <sup>2</sup> ) for IPX5 and 100 l/min $\pm$ 5 percent (approximately 100 kN/m <sup>2</sup> ) for IPX6.		
3.3.3	The nozzles shall be made out of stainless steel (AISI-304 Grade, Min.). The diameter of nozzle shall be 6.3mm for IPX5 and 12.5mm for IPX6 as specified above. Nozzles shall be held 3m away from the test specimen. The nozzles shall be suitably placed on a height adjustable stand-alone tripod stand made of stainless steel with a pressure gauge, ball valve and connecting flexible hose of adequate length with flow meter to monitor flow rate.		
3.3.4	The electric pump used to feed water to the nozzles shall be of reputed make having adequate capacity to obtain the required rate of flow.		
3.3.5	<p><b>Instrumentation and Control</b></p> <p>A control panel consisting of required instruments and controls shall be provided for ease of operation. It shall include the following:</p> <ul style="list-style-type: none"> <li>• Mains on-off switch</li> <li>• Mains-on indicator lamp</li> <li>• ON and OFF switch for operation for Jet Spray Nozzles</li> <li>• Hour meter</li> <li>• Timer to set the test timing</li> <li>• Single phase, phase reversal, under voltage and over voltage protection for main input power</li> <li>• EMI protection for control circuit</li> <li>• Protection for water pump against over load</li> <li>• Protection of the control circuits against input electrical surge and spike</li> <li>• Low water level protection with an electrical float switch</li> <li>• Earth terminal</li> </ul>		
3.4.1	The test equipment for IPX7 & X8 shall be designed so that after the test specimen is immersed in water, there is at least 150 mm of water above the top of the specimen and the lowest portion is subjected to at least 1 m head of water for IPX7 and 1.3 times the pressure which corresponds to the rated maximum immersion depth for IPX8 as specified in IS 10322 (Pt.1): 2014 given above.		
3.4.2	The equipment basically shall consist of an independent stand-alone non-metallic rectangular fiber tank, preferably transparent, with filling and emptying valves for water replacement and maintenance. Dimensions of the immersion tank shall conform to		

	the requirements of the test and shall be suitable to cover a wide variety of luminaires.		
3.4.3	A stainless steel column shall be fixed to the tank, complete with manual winch with rope for specimen basket movement. The basket shall be made of stainless steel perforated sheet or wire mesh with a base area of at least 500mm X 500mm.		
4.1	Independent monoblock pump of reputed make shall be used to circulate water for IPX1-2 tests.		
4.2	Independent open well submersible pump of reputed make shall be used for circulating the water for IPX3-IPX6 test system.		
4.3	Suitable water filter system shall be used to prevent choking of water lines, nozzles, etc.		
5.0	Power Supply Requirements		
6.1.1	A vibration-free rotating/turn table of at least 300mm dia. with variable speed control suitable for placing test specimen for IPX1 to IPX6 tests shall be provided.		
6.1.2	The turn table shall be made out of stainless steel (AISI-304 Grade, Min.). Provision shall be made for fixing of test specimen on the table and shall rotate according to the requirements of various IP tests described above so that water can be directed on all sides of the test specimen.		
6.1.3	The rotating table shall have a provision for tilting 15°.		
6.1.4	The turn table shall be auto-height adjustable with regulated rotation speed. Automatic control of clockwise or anti-clockwise rotation with provision for controlling the angle of rotation shall also be incorporated.		
7.0	User documentation		
8.0	Certificates of calibration		



**Annexure-8**  
**CONTRACT FORM**

**AGREEMENT**

THIS AGREEMENT made on this \_\_\_\_\_ day of \_\_\_\_\_ between M/s \_\_\_\_\_ (Name and Address of the Contractor) (hereinafter referred to as the CONTRACTOR, which expression shall, unless it be repugnant to the context or meaning thereof, be deemed to mean and include its successors and assigns) of the ONE PART and the Bureau of Indian Standards, 9-Bhadurshah Zafar Marg, New Delhi-110002 (hereinafter referred to as the BUREAU, which expression shall, unless it be repugnant to the context or meaning thereof, be deemed to mean and include its successors and assigns) of the OTHER PART.

WHEREAS the Contractor is a manufacturers/ mills/ authorized distributor / dealers (Details of business)

AND WHEREAS the Bureau is a body corporate, enacted by Parliament. The Bureau intends to purchase \_\_\_\_\_ on rate contract basis, therefore, invited bids through Open or Advertised / Limited / Single Tender enquiry dated \_\_\_\_\_

WHEREAS the Contractor (successful bidder) submitted his bid vide \_\_\_\_\_ in accordance with the bid document and was selected as 'successful bidder' pursuant to the bidding process and negotiation on contract prices, awarded the 'Letter of Acceptance' (LOA) No. \_\_\_\_\_ to the Contractor on \_\_\_\_\_.

BOTH THE PARTIES HERETO agree to abide the terms and conditions as mentioned in:

**“Schedule-2 (Conditions of Contract) of Tender Document”.**

(Signature of Contractor/  
Authorized Representative)

Name \_\_\_\_\_

Designation \_\_\_\_\_

Address \_\_\_\_\_

**Seal of the Firm/Company**

**Witness:**

(Signature)

Name of Witness \_\_\_\_\_

Address \_\_\_\_\_

(Signature of Authorized Officer of the Bureau)

Name \_\_\_\_\_

Designation \_\_\_\_\_

Address \_\_\_\_\_

**Seal of the Bureau**

**Witness:**

(Signature)

Name of Witness \_\_\_\_\_

Address \_\_\_\_\_

## PART II (FINANCIAL BID)

(To be submitted in separate sealed envelope)

Equipment	Requirement	Unit Price (in INR)	Amount exclusive of taxes (in INR)	Breakup of Taxes as applicable (in INR)
RAIN TEST APPARATUS (EQUIPMENT FOR INGRESS PROTECTION AGAINST WATER - IPX1 to IPX8)	As per Annexure - 6			
	<u>TOTAL</u>			
Comprehensive Annual Maintenance Contract	AMC Charges per annum for three years after the warranty period			
	4 <sup>th</sup> Year of operation			
	5 <sup>th</sup> Year of operation			
	6 <sup>th</sup> Year of operation			
	<u>GRAND TOTAL</u>			

Total Price Bid (exclusive of taxes) (in Words)

.....  
.....

Total Price of Bid (Inclusive of taxes) (In Words)

.....  
.....

Signature of bidder:

Name & Address:

Date:

Note:

- *Discount or any other offers affecting the package price must be mentioned here only. Discount or any other offers affecting the package price mentioned at any other place of the bid will not be considered.*
- *In case of discrepancy between unit price and total price, the unit price shall prevail.*
- *Bids shall be evaluated based on total price (in INR) without taxes.*