



भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS

**e-tender Document for Supply, Installation and Commissioning of Test Equipments for BIS
Laboratories
(Tender Reference No. -MECHANICAL 2020)**

INVITED BY

BUREAU OF INDIAN STANDARDS (BIS)

Scientist F & Head, Laboratory Policy and Planning Department (LPPD)

9, BSZ Marg, New Delhi-110002

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E-TENDER NOTICE

Bureau of Indian Standards (Laboratory Policy and Planning Department) invites bids, under **two bid system (Technical bid and Financial bid)** from bonafide experienced Manufacturers/Suppliers/Dealers / Agencies/ Direct Importers for the job defined in this tender, as per details given below:

DESCRIPTION	SUPPLY, INSTALLATION AND COMMISSIONING OF test Equipment for..... (Please refer Annex-3 for Technical Specifications of the equipment)
Type of Tender	OPEN
EMD Amount (in INR)	Please see point No 1-3 Below
<p>i. Bidder(s) having beneficial ownership in countries which share land border with India in accordance with Department of Expenditure Order no. F. No. 6/18/2019-PPD dated 23.07.2020 and DPIIT OM No.P-45021/112/2020-PP(BE-II)(E-43780) dated 24.08.2020 shall register themselves with DPIIT after applying on the prescribed format.</p> <p>ii. The bidder can bid for one or more than one equipment. The items reserved for MSE as per MSE Policy 2012 shall be bid by MSE OEM only.</p> <p>iii. The EMD amount for each equipment is, as detailed in Annex 3. Bidder shall quote only those products in the bid which are not obsolete in the market and has at least 7 years residual market life i.e. the offered product shall not be declared end-of-life by the OEM. The bidder has to bid for each equipment separately and provide EMD amount mentioned for each equipment separately for which he is submitting his bid. The EMD is to be submitted through payment online in an acceptable form or instrument bank guarantee or banker's cheque or fixed deposit receipt (the bidder shall have to upload scanned copy of the transaction document showing transaction code/RTGS No. etc.) in favour of Bureau of Indian Standards, New Delhi, payable at New Delhi. A scanned copy of EMD submitted also needs to be uploaded along with the bid at the Central Public Procurement Portal. For the purpose of online payment of EMD, the bank details of the BIS are as follows:</p> <ul style="list-style-type: none"> • Syndicate Bank, Bureau of Indian Standards, 9 Bahadur Shah Zafar Marg, New Delhi. • IFSC/NEFT Code: SYNB0009084, Account No.: 90841010000018, Email id: dac@bis.gov.in, PAN No. AAATB0431G, GSTIN : 07AAATB0431G1ZD <p>iv. Proof of payment of EMD should be submitted along with Technical Bid.</p> <p>v. No interest shall be payable for the sum deposited as Earnest Money Deposit.</p> <p>vi. EMD of the unsuccessful bidders would be returned to them after expiry of the final bid validity and latest on or before the 30 days after the award of the contract.</p> <p>vii. The EMD shall remain valid for a period of forty-five days beyond the final bid validity period.</p> <p>viii. If EMD is forfeited for any reason, the concerned bidder may be debarred from participation in the RFPs/tenders floated by BIS in future as per its sole discretion.</p> <p>Registered MSEs & Start-ups (Micro and Small enterprises (MSEs) as defined in MSE procurement policy 2012 issued by Department of MSME or are registered with the Central Purchase organisation or the concerned ministry or department or start-ups as recognised by the Government) or OEMs registered with NSIC are exempted from payment of EMD provided proof of registration is submitted.</p>	

PERFORMANCE SECURITY DEPOSIT

- i) The successful bidder will have to submit a Performance Security equivalent to 10% of the total order in the form of online payment or instrument fixed deposit in an acceptable form; in favour of BIS, New Delhi. Performance Security should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligations. For the purpose of online payment of Performance Security, the bank details of the BIS are as follows:
- Syndicate Bank, Bureau of Indian Standards, 9 Bahadur Shah Zafar Marg, New Delhi.
 - IFSC/NEFT Code: SYNB0009084, Account No.: 90841010000018, Email id: dac@bis.gov.in, PAN No. AAATB0431G, GSTIN : 07AAATB0431G1ZD
- ii) The successful bidder has to renew the performance security on the same terms and conditions for the period up to the contract including extension period, if any.
- iii) Performance Guarantee would be returned only after successful completion of job assigned to them after adjusting/recovering any dues recoverable/payable from/by the Supplier on any account under the contract.

Address of the issuing Authority	Sc F & Head, Laboratory Policy and Planning Department (LPPD) 9, BSZ Marg, New Delhi-110002 Email: clpolicycell@bis.gov.in Phone: 011-23230860
Download Start & Bid Submission Start Date & Time	14-10-2020
Download End & Bid Submission End Date & Time	5-11-2020
Pre Bid Meeting	22-10-2020
Technical Bid opening date & Time	06-11-2020

1. Bureau of Indian Standards reserves the right to amend or with draw any terms and conditions contained in the tender document or to reject any or all bids without giving any notice or assigning any reason. The decision of issuing authority in this regard shall be final.
2. The bidder can submit his technical and financial bid along with applicable EMD for one or more number of equipments separately. The evaluation of technical and financial bid for each equipment will be carried out separately and L1 bidder will be determined for each equipment separately. The selection process for one equipment will not have any effect on other equipments. BIS reserves the right to proceed with one or more equipments as mentioned in the tender document while cancelling the purchase of one or more number of equipments.
3. Performance security deposit for each equipment will have to be submitted separately by the selected bidder in the manner as detailed above.

-Sd-
Sc F & Head (LPPD)

TENDER DOCUMENT

PART-I: TECHNICAL BID

A: PRE-QUALIFICATION CRITERIA (PQC)

1. The bidder shall be PSU/ autonomous /public /private limited / Partnership/ Proprietorship / any other firm having been in business in India for the last three calendar years (2017-18, 2018-19, 2019-20) for supply of the same/similar equipment. The documents authenticating the establishment of the firm shall be submitted.
2. The bidder shall have supplied, installed and commissioned at least three such same/ similar equipment in India and one of them should be in the last three years. Additionally, the list of customers shall also be enclosed.
3. The bidder shall enclose copies of purchase orders/letters of satisfaction from buyers or any other document as a proof of supply of same / similar equipment to Govt. or private customers with the minimum value of order.
4. The bidder shall submit copies of audited financial statements containing P & L account & balance sheets of last three years.
5. The bidder shall enclose valid proof of tax registrations as applicable to them such as GST/ PAN / last ITR or any other registration for taxation purpose (for Indian Bidders).
6. The bidder should not have been blacklisted. A declaration regarding the same is to be submitted by the bidder in the format supplied at Annexure-4 A.
7. The bidder should not have earlier withdrawn from any tendering process of BIS.
8. The Bidder shall be willing to provide after sales support through a combination of warranty and comprehensive annual maintenance contract for a period of 6 years as per terms and conditions.
9. The bidder should not be under liquidation, court receivership or similar proceedings, should not be bankrupt. Bidder to upload undertaking to this effect with bid.
10. Net worth of the OEM should be positive as per the last audited financial statement

Note: The bidder shall enclose all requisite documents self attested as specified in the checklist. The bidder must fill the checklist enclosed with relevant details.

Checklist for Pre-Qualification Criteria (PQC)

Bidders must fill this check list with a **tick (✓)** in the boxes in the right hand column. Relevant document, as per the checklist, shall also be enclosed with the technical bid.

S No.	Requirement	Document submitted	Check box
1.	Bidder is	1. Original Equipment Manufacturer 2. Dealer/ agency/ supplier/	1. <input type="checkbox"/> 2. <input type="checkbox"/>
2.	Bidder is based in	1. India 2. Abroad	1. <input type="checkbox"/> 2. <input type="checkbox"/>
3.	The bidder is a public undertaking/ autonomous body/ public limited / private limited / Proprietorship Company / firm	1. PSU/Autonomous 2. Limited/ Private Limited 3. Proprietary / Partnership firm/LLP 4. Others (specify)	1. <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/> 4. <input type="checkbox"/>
4.	Enclose applicable documents of establishment of firm - Certificate of Incorporation - Authorization letter from Principals - Partnership Deed/LLP - Proprietary Details - Others (specify)	1. Yes, details enclosed 2. No, details not enclosed	1. <input type="checkbox"/> 2. <input type="checkbox"/>
5.	Enclose applicable documents of Tax Registration: - GST - PAN - Last ITR - Others (specify)	1. Yes, details enclosed 2. No, details not enclosed	1. <input type="checkbox"/> 2. <input type="checkbox"/>
6	Enclosed statements of turnover per year for last three successive years.	1. Yes, details enclosed 2. No, details not enclosed	1. <input type="checkbox"/> 2. <input type="checkbox"/>
7.	Enclose copies of audited financial statements containing P & L account Balance Sheet for last three years	1. Yes, details enclosed 2. No, details not enclosed	1. <input type="checkbox"/> 2. <input type="checkbox"/>
8.	List of customers attached	1. Yes, details enclosed 2. No, details not enclosed	1. <input type="checkbox"/> 2. <input type="checkbox"/>
9.	Enclosed letter of satisfaction from buyers or purchase orders or any other document from customers whom same / similar equipment was supplied.	1. Yes, details enclosed 2. No, details not enclosed	1. <input type="checkbox"/> 2. <input type="checkbox"/>
10	Whether Bidder is willing to provide after sales support through a combination of warranty and comprehensive annual maintenance contract for a period of 6 years as per mutually worked out terms and conditions	1. Yes, willing to provide 2. No, not willing to provide	1. <input type="checkbox"/> 2. <input type="checkbox"/>
11	Whether withdrawn from tendering process of BIS on an earlier occasion	1. Yes 2. No	1. <input type="checkbox"/> 2. <input type="checkbox"/>
12	Whether blacklisted (submit declaration in annexure -4 A)	1. Yes 2. No	1. <input type="checkbox"/> 2. <input type="checkbox"/>
13.##	Had earlier supplied equipment/ service to BIS	1. Yes 2. No	1. <input type="checkbox"/> 2. <input type="checkbox"/>

- This is an additional information.

I Pre-bid Meeting

A Pre-bid meeting for interested Bidders will be held at the scheduled date and time indicated in the tender document. Any change in venue or timing of pre-bid meeting will be hosted on BIS website (www.bis.gov.in) and the Central Public Procurement (CPP) Portal of Government of India (<https://eprocure.gov.in/cppp>) .

Interested Bidders will be allowed to seek clarification and get their doubts cleared during pre-bid meeting.

Any change that would be made in the Tender Document by the Competent Authority after issue of the Tender /Pre bid meeting will be hosted on BIS website (www.bis.gov.in) and on CPP Portal of Government of India in the form of Corrigendum/Addendum for incorporating the same in the Bid before submission

The minutes of pre-bid meeting shall be intimated to all bidders present in the pre-bid meeting and shall also be exhibited on BIS website and on the CPP portal.

II Availability of Tender Document:

The Tender document may also be downloaded from the website of the Bureau (www.bis.gov.in) and the CPP Portal.

The bidder shall bear all costs associated with the preparation and submission of its tender. The Bureau shall, in no case, be responsible or liable for these costs, regardless of the conduct or the outcome of the Bidding process.

III Language of Bid/Contract:

The language of the Bid shall be in English/Hindi and all correspondences etc. shall conform to English/Hindi language.

IV Last Date for Submission

Tenders have to be submitted online on CPP Portal (<https://eprocure.gov.in/eprocure/app>). It shall be the responsibility of the bidder / tenderer to ensure that tender is submitted on before the deadline of submission prescribed.

Submission of Tenders shall be closed on CPP Portal mentioned earlier at the date & time of submission prescribed after which no bidder shall be able to submit the Tender.

It shall be the responsibility of the bidder / tenderer to ensure that his tender is submitted online on the CPP Portal (<https://eprocure.gov.in/eprocure/app>) before the deadline of submission. BIS will not be responsible for non-receipt of tender documents due to any delay or loss etc.

V Manner of Submission of Bid

Bids shall be submitted online only at CPP Portal.

Bidders are advised to follow the instructions provided in the 'Instructions to the Contractors/Bidder for the e-submission of the bids online through the Central Public Procurement Portal. A set of instructions for online bid submission are enclosed.

Bid documents may be scanned with minimum 100 dpi with black and white option which helps in reducing size of the scanned document.

Bidder who has downloaded the tender from the BIS website and the Central Public Procurement Portal shall not tamper/modify the tender form including downloaded price bid template in any manner. In case if the same is found to be tempered/modified in any manner, bid will be completely rejected and EMD would be forfeited and Bidder may be banned from doing business with BIS.

E-mail or fax submission shall not be considered.

VI Contents of the bid document

The bidders shall submit their bids in two parts, one part of the bid shall be **Technical Bid** and second part **Financial Bid**.

VII BID Format

- a) Price Schedule(s) as per the BoQ format filled up with all the relevant information to be uploaded in the form of BOQ_PriceBid.xls.

The price bid format is provided as BoQ_PriceBid.xls along with this Tender Enquiry Document at <https://eprocure.gov.in/eprocure/app>. Bidders are advised to download this BoQ_XXXX.xls as it is and quote their offer/rates in the permitted column and upload the same in the commercial bid. **Bidder shall not tamper/modify downloaded price bid template in any manner.** In case if the same is found to be tempered/modified in any manner, tender will be completely rejected and tenderer is liable to be banned from doing business with the Bureau.

- b) The authorized signatory of the bidder must digitally sign the bid. Bid sent by fax/email shall not be considered.

B: INSTRUCTIONS TO BIDDERS (FOR STRICT COMPLIANCE)

I DISCLAIMER

The information contained in the Tender Document, provided by the Bureau, is for information of the Bidders to assist them in formulation of their bids. Each Bidder can conduct their own investigation and analysis before submission of the bid. The Bureau shall not incur any liability, whatsoever, with regard to the completeness of the information contained in the Tender Document that the Bidder may require for submission of the bid. The Bureau reserves the right to amend any condition of the Tender Document through publication of a Corrigendum, besides rejection of any or all the bids received, if the Competent Authority of the Bureau decides so.

II ONLINE BID SUBMISSION

The bidder can bid for one or more than one equipment. The bidder has to bid for each equipment separately and provide EMD amount mentioned for each equipment separately for which he is submitting his bid.

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal. More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.

Bidder should be responsible for registering his company at Central Public Procurement Portal and seeking all necessary approvals required to upload the bid.

The THE BUREAU reserves the right to amend the document, tentative schedule and critical dates. It is the sole responsibility of prospective bidders to go through Central Public Procurement Portal / THE BUREAU Website from time to time for any updated information.

III REGISTRATION ON CPP PORTAL

- i. Bidders are required to enrol on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link “Online bidder Enrolment” on the CPP Portal which is free of charge.
- ii. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- iii. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- iv. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- v. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- vi. Bidder then logs in to the site through the secured log-in by entering their user ID /password and the password of the DSC / e-Token.

IV SEARCHING THE TENDER DOCUMENT

- i. There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- ii. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender Annexes. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- iii. The bidder should make a note of the unique Tender ID assigned to each tender; in case they want to obtain any clarification / help from the Helpdesk.

V PREPARATION OF BIDS

- i. Bidder should consider any corrigendum published on the tender document before submitting their bids.
- ii. Bidder should go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- iii. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / Annex and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- iv. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. GST/PAN, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

VI SUBMISSION OF BIDS

- i. Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- ii. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- iii. Bidder has to select the payment option as "offline" to pay the EMD as applicable and enter details of the instrument. Bidder should pay the EMD as per the instructions specified in the tender document. The details of the NEFT/online instrument, should tally with the data entered during bid submission time. Otherwise the uploaded bid will be rejected. The EMD amount will be returned to the unsuccessful Bidders as per the provisions of GFR. It will be returned to the successful Bidder after receipt of the Performance Security.

Forfeiture of EMD: The Bid Security / Earnest Money deposited is liable to be forfeited if the tenderer withdraws or amends or impairs or derogates the offer in any respect within the period of

validity of the tender or fails to comply with any other condition stipulated in the document or if the successful Bidder does not pay the Performance Security in the prescribed time limit or fails to sign the Agreement after the award of Contract.

- iv. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it, enable Macro in the excel sheet and complete the coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
- v. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- vi. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128-bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- vii. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- viii. Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- ix. The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

VII ASSISTANCE TO BIDDERS

- i. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- ii. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk Nos. 0120-4200462, 0120-4001002

VIII TERMS & CONDITION

- i. The Invitation for Bids is to be uploaded on two bids basis i.e. Technical Bid and Financial Bid. The bidder can bid for one or more than one equipment. The EMD amount for each equipment is, as detailed in Annex 3. The bidder has to bid for each equipment separately and provide EMD amount mentioned for each equipment separately for which he is submitting his bid.
- ii. It is the responsibility of the Bidder to ensure that the bids are up loaded on time within the deadline through www.eprocure.gov.in A scanned copy of the EMD submitted needs to be uploaded at the Central Public Procurement Portal and the original instrument of EMD shall be submitted before the Registered Micro & Small Enterprises (MSEs) as defined in MSEs Procurement Policy, 2012 issued by Department of Micro, Small & Medium Enterprises (MSME) or as registered with the Central Purchase Organisation or the concerned Ministry or Department or Start-ups recognized by

Department of Industrial Policy and Promotion (DIPP) are exempted from payment of EMD on production of valid certificate of registration with the authority/agency as indicated in the policy.

- iii. All bids shall remain valid for 180 days from the last date of submission of bids.
- iv. The BIS reserves the right to solicit additional information from Bidders.
- v. The THE BUREAU reserves the right to accept the whole, or part of or reject any or all bids without assigning any reasons and to select the Bidder(s) who, in the sole opinion, best meet the interest of the THE BUREAU.
- vi. Although negotiations are severely discouraged, the THE BUREAU also reserves the right to negotiate with the bidders placed as L1 bidder in the interest of the THE BUREAU.
- vii. The THE BUREAU reserves the right not to accept bid(s) from agencies resorting to unethical practices or on whom investigation/enquiry proceedings have been initiated by Government investigating Agencies/Vigilance Cell.
- viii. All information contained in this tender/bid, or provided in subsequent discussions or disclosures, is proprietary and confidential. No information shall be shared by the bidder with any other organizations/agencies.
- ix. The successful bidder will submit the supply plan to THE BUREAU.
- x. The **Financial bid will be opened** on a date, to be fixed later, for the successful bidders in the technical bid. Authorized representative of the bidder with an authority letter may remain present on the scheduled date and time.
- xi. The bid along-with all requisite documents must **be signed and stamped by the authorized person**, failing which the bid shall be liable for rejection.
- xii. The BUREAU reserves the right to accept or reject any bid or all the bids without assigning any reason thereof.
- xiii. **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.
- xiv. Any kind of canvassing in regard to the offered equipment after submitting bid shall be treated as disqualification.

Special Conditions: Cost of the items should be mentioned clearly in the **Part-II: Financial Bid** only. The following details need to be included:

- a. Price break-up of main equipment, accessories. Consumables, spares, fixtures (whichever is applicable) to be supplied by the bidder.
- b. Rates quoted should specifically mention GST/other taxes-duties, as applicable. In absence of any such stipulation, it will be presumed that the prices include all Taxes/charges and no claim for the same shall be entertained.
- c. Please quote your rates, other charges, applicable taxes and duties in the format prescribed in **Part-II: Financial Bid** (Please refer page 18).
- d. The equipment is required to be supported for performance for six years, i.e., three years of warranty plus three years of CAMC (Comprehensive Annual Maintenance Contract). If the warranty offered by the bidder is less than three years, then the bidder shall quote the CAMC charges, year wise, for the remaining period of warranty, plus for fourth, fifth and sixth years. Please refer (B) of **Part-II: Financial Bid**

Financial bid shall be evaluated on the total price quoted, which is a combination of unit price of the equipment and CAMC charges upto six years of operation of equipment. The payment will be made for unit price of the equipment which will cover the warranty period also. The CAMC charges as quoted in the financial bid at (B) of Part -II shall be payable on yearly basis after CAMC starts.

e. Prices shall be quoted in Indian Rupees.

f The rates quoted shall be valid for a period of one year from the date of opening of the financial bid of the tender.

g. The successful bidder is responsible for Packing, Forwarding, Freight & Insurance, Delivery at site and Installation, Commissioning and Training of THE BUREAU personnel (at least 2 personnel per instrument) in a satisfactory manner.

h. The Agency Commission to the Indian Clearing Agent will not be paid by the THE BUREAU and the same would be borne by the supplier.

i. The bidder is expected to work out his rates keeping in view the technical specifications as per Annexure-3 of Technical bid & 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 form for financial bid (Part-II), 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 any claim for extra payment on any such account shall not be entertained.

j. The price quoted by the bidder shall be applicable for the repeat order(s), if repeat orders are placed with the supplier. However, THE BUREAU reserves the right, not to place the repeat order.

xvii. Execution of Agreement: It shall be incumbent on the successful bidder to execute the Agreement, as per Annexure 6, on a non-judicial stamp paper of appropriate value to be purchased in New Delhi before commencement of the supply of the laboratory equipment and pay stamp duty, legal and statutory charges for the Agreement, if any, as applicable on the date of the execution. Please read carefully, the conditions of contract as given in **Part-III: Conditions of contract.**

xviii. The bidder can submit his technical and financial bid along with applicable EMD for one or more number of equipments separately. The evaluation of technical and financial bid for each equipment will be carried out separately and L1 bidder will be determined for each equipment separately. The selection process for one equipment will not have any effect on other equipments. THE BUREAU reserves the right to proceed with one or more equipments as mentioned in the tender document while cancelling the purchase of one or more number of equipments.

xix. In case, more than one bidder becomes L1 jointly and there are more than one equipment of that kind to be supplied, the purchase order will be split in the successful bidders.

xx. Customs Duty Drawback-If any of the contracted stores are, on exportation, entitled to a drawback of customs duty in respect of themselves or the raw materials involved in their manufacture, the price to be charged by the Seller should be the net price after the deduction of all the entitled custom duty drawbacks.

xxi. Country of Origin: All goods and services to be supplied and provided under the contract shall have the origin in India or in the countries with which the Government of India has trade relations. The word "origin" incorporated in this clause means the place from where the goods are mined, cultivated, grown, manufactured, produced or processed or from where the services are arranged.

xxii. The insurance cover shall be obtained by the Supplier in its own name and not in the name of the Purchaser or its Consignee.

xxiii. Software and Software Upgrades :

The Supplier shall agree to provide copies of as-built software in executable code that are installed in the system at all levels. It shall also state the Hardware that needs to be in place for implementation ensuring that the Equipment/ Instrument un-availability is minimal. The Supplier shall also comply and guarantee software upgrades for the service life of the Equipment/ Instrument. Taking into account the operational requirements of the Purchaser, there may be a need to customize some portion of the software. Supplier should agree for such customization, which is expected to be limited, at no extra cost. Any software upgrades developed by the Supplier during the warranty and the post warranty period should be made available to the Purchaser at no extra cost and should be delivered and installed in a prompt and efficient manner. The Supplier should install and train the operator with software upgrades. The software provided should be able.

Force Majeure: Force Majeure (FM) means extraordinary events or circumstance beyond human control such as an event described as an act of God (like a natural calamity) or events such as a war, Strike, riots, crimes (but not including negligence or wrong-doing, predictable/ Seasonal rain and any other events specifically excluded in the clause). An FM clause in the contract frees both parties from contractual liability or obligation when prevented by such events from fulfilling their obligations under the contract. An FM clause does not excuse a party's non-performance entirely, but only suspends it for the duration of the FM. The supplier has to give notice of FM as soon as it occurs and it cannot be claimed ex-post facto. There may be a FM situation affecting Bureau of Indian Standards only. In such a situation, the Bureau of Indian Standards is to communicate with the supplier along similar lines as above for further necessary action. If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of FM for a period exceeding 90 (Ninety) days, either party may at its option terminate the contract without any financial repercussion on either side. Notwithstanding the punitive provisions contained in the contract for delay or breach of contract, the supplier would not be liable for imposition of any such sanction so long as the delay and/ or failure of the supplier in fulfilling its obligations under the contract is the result of an event covered in the FM clause.

- xxiv. **Preference to 'Make in India':** The process will also be subjected to the provisions of 'Public Procurement (Preference to Make in India) Order 2017 and the same will be followed. The bidder, however, shall meet the requirements of technical bid for availing preference under the make in India order.
- xxv. **Integrity Pact:** For successful supplier, it is essential to sign the integrity pact with the THE BUREAU, given at annexure-7. The pact essentially envisages an agreement between the prospective suppliers/ bidders and the buyer, committing persons/ officials on both sides, not to resort to any corrupt practices in any aspect/ stage of the contract. Only those suppliers/ bidder, who commit themselves to such a pact with the buyer, would be considered competent to participate in the bidding process. In other words, entering into this pact is a preliminary qualification.

C: STANDARD FORMS TO BE UTILIZED BY THE BUREAU AND THE BIDDERS.

- a. Annexure-1 Details to be furnished by Bidders
 Details to be furnished by the bidders
- b. Annexure-2 Statement regarding the deviations from the clauses of

 the tender document
- c. Annexure-3 Technical Specification
- d. Annexure-4 Technical compliance statement by the bidder
- e. Annexure-5 Declaration regarding blacklisting or litigation

Annexure-1

Details to be furnished by the bidders

- i. Name of the bidder:
- 2 Details Registration/Import licence if any with validity date:
 - i. Address for Communication:
 - i. Telephone No.:
Landline:..... Mobile:.....
 - i. E-mail:
 - i. Manufacturers Name and Address (if different);
7. Bank Account Details:
Name of the bank:..... A/c no.
IFSC code Type of A/c.....
- i. Name and designation of the person authorized to sign the documents:
7. PAN, TIN Number of the bidder:
- 8 GST No.:
- i. Details of EMD
Draft Number :..... Date:
Name of the Bank: Payable at:

This is to certify that the above facts are true to the best of my/our knowledge and belief. I/We have read and understood the terms and conditions of the Tender document.

I/We give an undertaking to abide by these terms and conditions of the tender document.

Name and Signature of the bidder

Seal of the Bidder

Date

Annexure-2

**Statement regarding the deviations from the clauses
of the tender document:**

S No.	Tender clause no.	Details of deviation	Justification, if any

Annexure-3

List of equipment

Sl. No	Equipment	Item No	No. of Equipment Required	Estimated Total Cost of equipment	EMD Amount (Lakhs)	BIS Lab where supply is to be made(*)	Technical Specifications
1.	All cut Machine	B1	7	140 lakhs	Rs. 2.80 Lakhs	EROL, WROL, SROL, NROL, CL, PBOL, BNBOL	Annexure B1
2.	Computerized cupping machine	B2	6	60 lakhs	Rs. 1.20 Lakhs	NROL, WROL, SROL, CL, EROL, PBOL	Annexure B2
3.	Computerized digital profile projector, 3D	B3	2	200 lakhs	Rs. 4.00 lakhs	CL, EROL	Annexure B3
4.	Metallurgical Microscope	B4	3	210 lakhs	Rs. 4.20 Lakhs	EROL, NROL, CL	Annexure B4
5.	Thickening time tester unit	B5	1	50 lakhs	Rs. 1.00 Lakhs	EROL	Annexure B5
6.	HST Machine with PID Controller	B6	3	105 lakhs	Rs. 2.10 Lakhs	SROL, WROL, CL	Annexure B6
7.	CNC Milling Machine	B7	6	90 lakhs	Rs. 1.80 Lakhs	CL, WROL, SROL, BNBOL, PBOL, EROL	Annexure B7
8.	Bend Test machine	B8	3	45 lakhs	Rs. 0.90 Lakhs	SROL, WROL, PBOL	Annexure B8

Annexure 3A

Technical Specification of test equipment for

S.No.	Components/ Fixtures/ Accessories/ Spare parts/ CRMs etc.	Requirement
(1)	(2)	(3)
1.		
2		
3		
4		

Annexure-4

**Technical compliance statement by the bidder for Test equipment for
.....**

Sl.No.	Technical Specification (Annexure 3)	Quoted details by the bidder	Deviation from col (2), if any	Remarks
(1)	(2)	(3)	(4)	(5)

Note:

**Do not mention “We Comply or Complied with or yes” in your response at col (3),
Quote the actual specifications of equipment to be supplied in col (3).
Deviations, if any, from col (2) be quoted in col (4).**

Annexure-4 A

Declaration regarding black-listing 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. I/We further declare that no criminal case is registered or pending against the firm/ company or its owner/ partners/ directors anywhere in India.

Dated theday of2020.

Signature of Bidder _____
Name & Address of Bidder _____

Seal of the Firm/ Company”

PART-II: FINANCIAL BID

- i) The financial bid will be submitted in the following form which can be downloaded from CPPP website. Bidders are advised to quote their offer/ rates in therelevant column and and upload the same in the financial/ commercial bid.
- ii) Financial bid shall be evaluated on the unit price quoted + custome duty + surcharge/ cess on custom duty+ CAMC charges upto six years of operation of equipment+ other taxes including or IGST and unit price quoted + CAMC charges upto six years of operation of equipment + other taxes including GST. The payment will be made for unit price of the equipment (which will cover the warranty period also), custome duty with surcharge/ cess on custom duty (if applicable) and IGST / GST. The CAMC charges as quoted in the financial bid at (B) of Part -II shall be payable on yearly basis after CAMC starts.
- iii) The format for submitting **Financial Bid** is given below:

(A) UNIT PRICE

S No.	Item description and item code	Component As per Technical Specification (Annexure –3)	Unit Price (in INR) Exclusive of all Taxes at designated Delivery Point	Price in words	Surcharge on Custom Duty, to be entered by the bidder	IGST (for imported item) in % of unit price or GST (for indogenous item) in % of unit price to be entered by the bidder	Total Unit Price including of taxes (in INR [(iv)+(v)+(vi)+(vii)])	Period of Warranty (1/2/3 years)
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
1.								
2								
3								

(i) Comprehensive Annual Maintenance Contract (CAMC) Charges (in INR):

S No.	Component	2 nd year	3 rd year	4 th year	5 th year	6 th year
1	CAMC *					
2.	Applicable Taxes					
3.	Total					

Total Price of Bid (A+B) (Inclusive of taxes) (In Words)

.....

.....

Signature of bidder
Name & Address
Date

Note:

- i) *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.*
- ii) .
- iii) * *CAMC for 2nd and 3rd year to be quoted if the warranty period is for one year*

PART-III: CONDITIONS OF CONTRACT

a) CONTRACTOR:

‘Contractor’ shall mean the individual or firm or company whether incorporated or not, has qualified in bidding process and 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.

b) PARTIES TO THE CONTRACT:

The parties to the contract shall be the Supplier/ 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) or 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.

c) PERFORMANCE SECURITY

i) based in India

ii) 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/ scheduled Bank for 10% of the order value, as per format indicated in Annexure-5. 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 Supplier/ Contractor under the terms of this Contract or any other account, may be deducted from the amount of Performance Security. In case, the amount of Performance Security is reduced by reason of any such deduction, the Supplier/ 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 Supplier/ 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 THE 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.

d) 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 Authorized Officer 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 or 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 or PLACE OF SUPPLY or PERSONS WHO CAN PLACE ORDERS

The **Testing Equipments** shall be supplied at various THE BUREAU labs, as detailed in Annexure 3, at the address(s) given below:

- a) CL- Central Laboratory,
Bureau of Indian Standards,
Plot no. 20/9, Site IV, Sahibabad Industrial Area,
Sahibabad- 201010, Distt. Ghaziabad (U.P.)
- b) EROL- Eastern Regional Office Laboratory,
P-230, C.I.T. Scheme VII M,
Block-W, Kankurgachi,
Kolkata-700054.
- c) NROL- Northern Regional Office Laboratory
B-69, Phase VII, SAS Nagar
Industrial Focal Point, Mohali-160051
- d) WROL- Western Regional Office Laboratory
Manakalaya
Bureau of Indian Standards E-9, M.I.D.C.,
Behind Marol Telephone Exchange,
Andheri (East), Mumbai 400 093
- e) SROL- Southern Regional Office Laboratory
C.I.T Campus, IV Cross Road
Chennai-600 113
- f) BNBOL- Bangalore Branch Laboratory
Peenya Industrial Area,
Ist Stage, Bangalore-Tumkur Road,
Bangalore-560 058
- g) PBOL- Patna Branch Laboratory
Pataliputra Industrial Estate, Patna-800 013

Goods for each THE BUREAU Laboratory can be ordered by Head of that THE BUREAU Laboratory only, who is authorized by THE BUREAU to place orders against this Contract. Goods can be repeat-ordered by Head of other THE BUREAU Laboratories, who are authorized by THE BUREAU to place repeat orders against this Contract. However, the Authorized Officer reserves right not to place repeat orders.

Immediately on receipt of the purchase order (leats within one week of receipt of the purchase order), the contractor supplier shall intimate the concerned laboratory about the consumables or other additional articles required for correct functioning of the instrumentor equipment, so that timely installation and commissioning can be done, and no time is lost in completion of such formalities after receipt of the instrumentor equipment.

6 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 8 below and shall include loading, unloading and transportation. **The Goods damaged during transportation shall have to be replaced at Contractor's cost.**

7. QUALITY OF GOODS:

All Goods to be supplied by the Contractor shall be in conformity with the Technical specifications as laid down in Annexure-3 of this bid.

8 CONSIGNMENT DESTINATION:

For the destination mentioned in the purchase order:

- h) (Head) Central Laboratory,
Bureau of Indian Standards,
Plot no. 20/9, Site IV, Sahibabad Industrial Area,
Sahibabad- 201010, Distt. Ghaziabad (U.P.)
- i) (Head) Eastern Regional Office Laboratory,
P-230, C.I.T. Scheme VII M,
Block-W, Kankurgachi,
Kolkata-700054.
- j) (Head) Northern Regional Office Laboratory
B-69, Phase VII, SAS Nagar
Industrial Focal Point, Mohali-160051
- k) (Head) Western Regional Office Laboratory
Manakalaya
Bureau of Indian Standards E-9, M.I.D.C.,
Behind Marol Telephone Exchange.
Andheri (East), Mumbai 400 093
- l) (Head) Southern Regional Office Laboratory
C.I.T Campus, IV Cross Road
Chennai-600 113
- m) (Head) Bangalore Branch Laboratory

Peenya Industrial Area,
1st Stage, Bangalore-Tumkur Road,
Bangalore-560 058

- n) (Head) Patna Branch Laboratory
Pataliputra Industrial Estate, Patna-800 013

- 9 INSTALLATION AND COMMISSIONING:** Installation and commissioning of the equipment will be done by the supplier **FREE OF CHARGE** at the consignee's premises. The supplier has to arrange for labour and others.

10 WARRANTY

10.1 The equipment along with all critical components or accessories is to be guaranteed for trouble free performance for a **minimum period of three years after installation**. 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.

10.2 The defects, if any, during the warranty period shall 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.**

11. FREE TRAINING

Training, free of cost will be provided by the supplier to **at least two THE BUREAU officials** for testing, routine maintenance and smooth running of the equipment, after installation and commissioning at the location.

12. INSPECTION OR PRE-DELIVERY INSPECTION

THE BUREAU reserves the right to carry out predelivery inspection or inspection at the time of delivery. The obligation to supply goods conforming to specification and its successful installation and commissioning shall be on the supplier.

The Authorized Officer shall be entitled to inspect and examine goods intended to be supplied to THE BUREAU either at the factory, godown or at any place(s) where these are lying or from which these are being obtained and the supplier shall provide such facilities as may be required for such inspection and examination. If goods are not found as per specified requirements, purchase order will be revoked and thereafter THE BUREAU shall be free to purchase the goods from the open market. THE BUREAU will not make any payment for any such non-conforming goods.

All goods shall be inspected by THE BUREAU preferably in the presence of supplier or his authorized representative, when the packages are opened in THE BUREAU Labs on delivery and prior to installation. The decision of THE BUREAU shall be binding. Rejected items or goods or 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 or disapproved goods or items or stores. In case of default on the part of the supplier in removing the rejected goods, the Authorized Officer of THE BUREAU shall be at liberty to have them removed by other means. The Authorized Officer shall have full powers to procure other goods through other means for substituting the rejected goods. All costs, which may be incurred upon such removal and/or substitution, shall be borne by the supplier.

The Authorized Officer shall have full powers to decide about removal of any or all of the goods supplied which are not in accordance with the contract specifications or which do not conform to the samples, if any, approved by THE BUREAU.

13. TIME FOR SUPPLY, INSTALLATION AND COMMISSIONING.

13.1 The time allowed for delivery, successful installation and commissioning shall be 8 weeks from the date of purchase order (PO). 13.2 **Liquidated Damages For Delayed Supply Installation and Commissioning:** Time and date of **Supply Installation and Commissioning of equipments** 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 by the Authorized Officer, THE BUREAU may at its option either:-

13.3.1 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.

13.3.2 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.

14. 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.

15. IMPOSITION OF FINES or 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 THE 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 suppliers risk and responsibilities and storage charges along with any other charges applicable will be recoverable from the supplier.

16. TERMS OF PAYMENT:

A) The Terms of Payment are: The successful bidder shall furnish with in 15 days of placement of the order a Performance Security, from a Nationalized or Scheduled Bank for 10% of the order value. **Performance Security should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligations.** On The Performance Security shall be furnished in the bank account of BUREAU of INDIAN STANDARDS (payable at.....) or Performance Bank Guarantee as per format indicated in Annexure-5.

B)

C) **Payment for Indian Suppliers:** 100% payment shall be made against delivery, installation, commissioning, training at site and on acceptance as per Purchase Order on receipt of invoice, delivery challan. note, certificate of acceptance by the Bureau and other relevant documents and provided, that the

Performance Security for 10% of the order value, within 15 days of placement of the order is given to THE BUREAU.

17. TAXES

Taxes will be deducted by THE BUREAU wherever applicable.

18. 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.

19. 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.

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.

20. THE 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;
- I 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;
- (c) Serious discrepancy in the quality of the Goods is noticed during the inspection.
- I Delays in delivery beyond the scheduled date of delivery as stipulated in the order or any extensions sanctioned.
- (d) Delays in installation and commissioning beyond the period stipulated or any extensions sanctioned.
- (e) If the Contractor is in breach of any law or statute governing the supply of Goods or Services;
- (f) The Contractor, in the judgement of the THE BUREAU, has engaged in corrupt or fraudulent practices in competing for or in carrying out the Services under the Contract.
- (g) 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 THE BUREAU under the Contract.

If the Contractor decides to terminate the Contract before the end of contract period, the Contractor has to give an advance intimation of at least 60 days. If the Contractor terminates the agreement without prior notice of 60 days, then the entire security deposit will be forfeited.

21. 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.

22. 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 New Delhi, where headquarter of THE BUREAU is located.

23. DISPUTE RESOLUTION - In case of any dispute that cannot be resolved amicably, the same shall be referred to the sole Arbitrator appointed by Director General, Bureau of Indian Standards, whose decision shall be final and binding upon both the Bureau as well as the Applicant. The provisions of the Arbitration and Conciliation Act, 1996, as amended from time to time, shall be applicable

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 or speed 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 and or or Hindi only. In case of any dispute, the English version shall prevail.

26. LAW:

The contract shall be governed and interpreted under Indian Laws.

27. STAMP DUTY

The Contractor shall bear and pay any stamp duty and registration charges if any, in respect of the agreement to be signed.

28. AUTHORIZED OFFICER:

The Authorized Officer on behalf of THE BUREAU shall be the Head(s), of the THE BUREAU Laboratory giving the purchase order. In case of repeat orders by any other THE BUREAU Laboratory, the Head of concerned THE BUREAU Laboratory placing the repeat order shall be deemed to be the Authorized Officer in respect of the said order.

29. STANDARD FORMS TO BE UTILIZED BY THE THE BUREAU AND THE CONTRACTOR:

Annexure-5	BANK GUARANTEE BOND
Annexure-6	CONTRACT AGREEMENT FORM

30. CONFIDENTIALITY

The bidder 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.

ANNEXURE-5
FORM OF BANK GUARANTEE BOND

1. In consideration of Bureau of Indian Standards (hereinafter called 'The 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 **Performance Security** for the due fulfillment 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 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 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) or 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) or 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 THE BUREAU (.....Laboratory) 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 thewe shall be discharged from all liability under this guarantee thereafter.

5. Wefurther agree with the 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) or 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-6

CONTRACT FORM or AGREEMENT

THIS AGREEMENT made on this day of between Mors_____ (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 THE BUREAU of Indian Standards, 9-Bhadurshah Zafar Marg, New Delhi-110002 (hereinafter referred to as the 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 manufacturorsor millssor authorized distributorsor dealers (Details of business)

AND WHEREAS THE BUREAU is a body corporate, enacted by Parliament . THE BUREAU intends to purchase _____, therefore, invited bids through Open 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:

“Part-III (Conditions of Contract) of Tender Document”.

(Signature of Contractoror
Authorized Representative)

Name _____

Designation_____

Address_____

Seal of the FirmorCompany

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_____

INTEGRITY PACT GUIDELINES

"The Bureau" and "The supplier" hereby agree not to indulge in any corrupt practices including without limitation any activity or action to influence the transaction on any aspect of contract and commit to take all measures necessary to prevent corruption maintaining complete transparency and fairness in all activities related to the Bureau. Users agree to follow and adhere with the Integrity Pact guidelines as under:

Preamble

The Bureau values full compliance with all relevant laws of the land, regulations, economic use of resources and of fairness or transparency in its relations with its Contractor (s).

Section 1 Commitments of the Bureau.

1. The Bureau commits itself to take all measures necessary to prevent corruption and to observe the following principles:

- (a) No employee of the Bureau, personally or through family members, will in connection with the bid for, or the execution of a person, any material or immaterial benefit which the person is not legally entitled to.
- (b) The Bureau will during the bid process treat all bidders with equity and reason. The Bureau will in particular, before and during the bid process, provide to all Contractor(s) the same information and will not provide to any supplier(s) confidential or additional information through which the supplier(s) could obtain an advantage in relation to the process or the contract execution.
- (c) The Bureau will exclude from the process all known prejudiced persons.

2. If the Bureau obtains information on the conduct of any of its employees which is a criminal offence under the IPC or PC Act, or if there be a substantive suspicion in this regard, the Bureau will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2 Commitments of the supplier(s)

1. The supplier(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the bid process and during the contract execution.

- (a) The supplier(s) will not, directly or through any other persons or firm, offer promise or give to any of the Bureau's employees involved in the bid process or the execution of the contract or to any third person any material or other benefit which he or she is not legally entitled to, in order to obtain in exchange any advantage before or during the execution of the contract.
- (b) The supplier(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- (c) The supplier(s) will not commit any offence under the relevant IPC or PC Act; further the supplier(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the the Bureau as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

(d) The supplier(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

2. The supplier(s) (s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 Disqualification from bid process and exclusion from future contracts

1. If the supplier(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put his reliability or credibility in question, the Bureau is entitled to disqualify the supplier(s) from the bid process or take action as per the related provisions of the RFP document.

Section 4 Compensation for Damages

1. If the Bureau has disqualified the supplier(s) from the bid process prior to the award according to Section 3, the Bureau is entitled to demand and recover the damages equivalent to Earnest Money Deposit.

2. If the Bureau has terminated the contract according to Section 3, or if the Bureau is entitled to terminate the contract according to Section 3, the Bureau shall be entitled to demand and recover from the supplier damages of the amount equivalent to Performance Bank Guarantee.

Section 5 Previous Transgression

1. The supplier declares that no previous transgressions occurred in the last three years with any Government Organization that could justify his exclusion from the bid process.

2. If the supplier makes incorrect statement on this subject, he can be disqualified from the bid process and action can be taken as per the related provisions of the RFP document.

BUYER	BIDDER or SUPPLIER
BUREAU OF INDIAN STANDARDS,	SIGNATURE & SEAL
NEW DELHI	

Annexure 8

TENDER ACCEPTANCE LETTER
(To be given on Company Letter Head)

Date:

To,

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _____

Name of Tender or Work: -

Dear Sir,

1. I or We have downloaded or obtained the tender document(s) for the above mentioned 'Tender or Work' from the web site(s) namely:

As per your advertisement, given in the above mentioned website(s).

2. I or We hereby certify that I or we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc.), which form part of the contract agreement and I or we shall abide hereby by the terms or conditions or clauses contained therein.

3. The corrigendum(s) issued from time to time by your department or organization too have also been taken into consideration, while submitting this acceptance letter.

4. I or We hereby unconditionally accept the tender conditions of above mentioned tender document(s) or corrigendum(s) in its totality or entirety.

5. I or We do hereby declare that our Firm has not been blacklisted or debarred by any Govt. Department or Public sector undertaking.

6. I or We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect or untrue or found violated, then your department or organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

Annexure-B1
Technical Specification of All Cut Machine

	Parameters	Specification
1.	Cutting Height	≥ 600 mm
2.	Cutting Width	≥ 550 mm
3.	Cutting Length	≥ 1250 mm
4.	Allowed cutting taper	±0.2/1000 mm
5.	Work Table	≥ 1250 x 900 mm
6.	Bed size	≥ 750 x 1250 mm
7.	Blade size (approx)	1.1 x 41 x 4860 mm
8.	Blade speed	VFD (variable frequency drive, 20 – 300 Meter./min. or better
9.	Cutting Feed	Hydraulic (1mm – 300mm/Min.)
10.	Motor (Saw)	≥ 5 HP
11.	Motor (Hydraulic)	≥1 HP
12.	Motor (Coolant)	≥ 0.12 HP
13.	Hydraulic Reservoir	≥ 50 Liter
14.	Coolant Reservoir	≥ 25 Liter
15.	Work table	Metallic work table with suitable “T” slot and surface hardness.
16.	Bed	Fabricated with EN 8 plate and machined.
17.	Table movement	Automatic controlled movement
18.	Cutting accuracy of height as well as length	1 mm / meter
19.	Material suitable for cutting	All ferrous and non-ferrous metals, plywood etc.
20.	Blade guide	Carbide (Hydraulic Operated)
21.	Speed attachments	Fixture with scale for quick job setting
22.	Wheels	Cast Iron
23.	Work table maximum load withstanding capacity	≥500 kg
24.	Wire brush	2 Nos.
25.	Work light	2 Nos.
26.	Chip collection tray	2 Nos.
27.	Tool kit	One set

	Essential Spares:	
1.	Pressure and feed valve	2 no. Each type
2.	Cutting Blades (HSS Bimetal Bandsaw blade) suitable to cutting stainless steel material	5 no. Each (TPI – 3/2 , & 4/6)
3.	Contactors and switches	2 sets
4.	Flow control valve	2 nos. Each type
5.	DC Solenoid valve	2 nos. Each type

Annexure-B2

Technical Specification of Computerised Cupping Testing Machine

Sl. No	Components/ Fixtures/ Accessories/ Spare parts/ CRMs etc.	Requirement
(1)	(2)	(3)
1.	Types of tests to be performed	Erichsen Cupping test on Metal/Alloy sheets as per IS 10175/ISO 20482
2.	Materials to be tested	Metals and Alloys
3.	Dimensions	Various dimensions of components of the equipment shall be as per Annex-1
4.	Holding Force	10 kN \pm 0.5 with digital display
5.	Construction	i) Provision to operate the machine for various combination of thickness and width/diameter of test piece as per Annex-1. ii) Camera shall be provided to observe the crack in the test piece during testing with their display on screen. iii) Surfaces of blank holder and of the die in contact with the test piece shall be plane and perpendicular to the axis of the movement of the punch. iv) The forming die shall be self-aligning to the fixed blank holder.
6.	Punch travel	i) Shall have motorized system of Punch travel. ii) Rate of punch travel shall be adjustable from 5 mm/min to 20 mm/min. iii) Resolution of punch travel: 0.01 mm or better
7.	Hardness of Die, Blank Holder and Punch	750 HV 30 (Minimum)
8.	Surface of Punch	i) Spherical and Polished Surface ii) Mean value of roughness (Ra) \leq 0.4 μ m (as defined in ISO 4287)
9.	Operational requirement	i) Complete operation through a connected computer device after placement of test piece in the equipment. ii) Punch shall not turn during the test. iii) Distance from the axis of the die to the centre of the spherical part of the punch shall be less than 0.1 mm throughout its range of movement during operation.
10.	Data acquisition system	i) Measurement of following parameters for complete operation during test: <ul style="list-style-type: none"> ➤ Punch Travel ➤ Drawing Force ➤ Holding Force ➤ Speed of punch travel ii) Graphical display of drawing force v/s punch travel

		<p>iii) Shall have provision to get the values of drawing force and punch travel at selected point at graph.</p> <p>iv) Shall have provision to export the measured values to excel, pdf format.</p>
11.	Spares	One set of punch and former die for all set of dimensions as per Annex-1.
12.	Computer System	40 cm or better LED/LCD with Mouse, keyboard, CPU, 1 TB or higher Hard drive, 8GB RAM or more, UPS, laser printer, windows OS must be supplied.
13.	Connectivity	<p>LAN/Ethernet connectivity with data reporting system shall be present and system shall auto-connect whenever equipment is switched on.</p> <p>The operations of the equipment (switching on, switching off, testing start, testing stop, maintenance, measurement data, results etc.) shall be automatically logged with date and time. This recorded data shall be non-temperable and users shall be able to remotely observe this data logged or stored in the data acquisition system.</p>

Annex-1

Symbol	Designation	Test piece and tool dimensions and Erichsen cupping indices				
a	Thickness of the test piece	$0.1 \leq a \leq 2$	$2 < a \leq 3$	$0.1 \leq a \leq 2$	$0.1 \leq a \leq 1$	$2 < a \leq 3.15$
b	Width or diameter of the test piece	≥ 90	≥ 90	$55 \leq b < 90$	$30 \leq b \leq 55$	≥ 90
d1	Diameter of the spherical end of the punch	20 ± 0.05	20 ± 0.05	15 ± 0.02	8 ± 0.02	20 ± 0.05
d2	Bore diameter of the die	27 ± 0.05	40 ± 0.05	21 ± 0.02	11 ± 0.02	40 ± 0.05
d3	Bore diameter of the blank holder	33 ± 0.1	33 ± 0.1	18 ± 0.1	10 ± 0.1	30 ± 0.1
d4	Outside diameter of the die	55 ± 0.1	70 ± 0.1	55 ± 0.1	55 ± 0.1	70 ± 0.05
d5	Outside diameter of the blank holder	55 ± 0.1	70 ± 0.1	55 ± 0.1	55 ± 0.1	70 ± 0.1
r1	Outside corner radius of the die. outside corner radius of the blank holder	0.75 ± 0.1	1.0 ± 0.1	0.75 ± 0.1	0.75 ± 0.1	1.0 ± 0.1
r2	Inside corner radius of the die	0.75 ± 0.05	2.0 ± 0.05	0.75 ± 0.05	0.75 ± 0.05	2.0 ± 0.05
h1	Height of the inside rounded part of the die	3.0 ± 0.1	6.0 ± 0.1	3.0 ± 0.1	3.0 ± 0.1	6.0 ± 0.1

IE^a	Erichsen cupping index	IE	IE40	IE21	IE11	IE40
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Annexure-B3
Details of requirements and technical specifications of machine

Sl No	Parameters	Requirements
1.	Name of the Machine	Profile Projector (Vertical) Inverted
2.	Diameter	300 mm or more
3.	Screen Material	Fine Ground Glass or better
4.	Angle Reading	Digital Counter (LED) ABS/INC mode switching Zero set
5.	Resolution	Angular: 1 second Linear: 1μ or better
6.	Projection Lens	10x (Standard) and 5x, 20x, 25x, 50x & 100x
7.	Magnification Accuracy	+/-0.1% in Contour illumination +/-0.15% in Surface illumination
8.	X-Y & Angle counter	Inbuilt
9.	Mechanism	Fine Feed & Coarse Feed
10.	Work piece Diameter	Maximum 200mm with 10x Lens
11.	Work piece Height	Maximum 100 mm with 10x Lens
12.	X-Y Measuring Range	100 x 100mm or better
13.	Quick Release Mechanism	X and Y Axis
14.	Swivel Adjustment Range	+/- 10° or better
15.	Top Surface Size of Table	350 x 250mm (minimum)
16.	Optical System	Tele centric Lens
17.	Cross Hairs	90 Degree Solid Lines
18.	Test Specimen Load	Up to 10 Kg
19.	Resolution	1μ /degree or minute or second (selectable) or better
20.	Program Function	Part Program creation, execution, editing
21.	Statistical processing	Number of Data, Max Value, Min Value, Mean Value, Standard Deviation, Range, Histogram, statistics on a measuring function basis (by command)
22.	Display System	Color TFT LCD
23.	Data Acquisition System	LAN/Ethernet connectivity with data reporting system shall be present and system shall auto-connect whenever equipment is switched on. The operations of the equipment (switching on, switching off, testing start, testing stop, maintenance, measurement data, results etc.) shall be automatically logged with date and time. This recorded data shall be non-temperable and users shall be able to remotely observe this data logged or stored in the data acquisition system. Latest configuration computer system (with minimum 16 GB RAM, 1TB HDD with i5 or better processor along with Peripherals, UPS, and Laser Printer.

Annexure-B4

Technical Specification of Metallurgical Optical Microscope

Type	Inverted
Main body	<p>A. Focusing mechanism Adjustment knob: Coaxial focusing system with fine adjustment of 0.2 mm or less per rotation with facility for Coarse adjustment.</p> <p>B. Illumination Illuminator: Built in Koehler's incident illuminator with Halogen Lamp/ LED Lamp/ HG Fibre Illuminator, adjustable brightness, field and aperture diaphragm with yellow, green, blue and ground filters. Light distribution 100%, between camera port and binocular Included.</p> <p>Filter: ((ND16 and ND4) or similar ND filters, GIF, NCB), Polarizing block</p>
Polarizer & Analyzer	Reflector polarizer module & Analyzer Slider or better
Observation method	Fully/Semi apochromatic, Bright filled, Darkfield, Polarizing, DIC
Resolving nosepieces	6 or 7 position nosepieces with coded features
Stage	Stage including two stage inserts (ϕ 20mm and 40mm opening or similar sizes) and control handle
Trinocular eyepiece	<p>Interpupillary distance adjustment 50-75 mm, magnification: 10x or better.</p> <p>The eyepiece shall be suitable for graticule insertion.</p> <p>Accessories for measurement of grain size.</p>
Objective lens	1.25x, 2.5x, 5x, 10x, 20x, 50x, 100x magnification
Optics	Fully Apochromatic optics and microscope optics should be corrected two stages for spherical and three stages for chromatic aberration.
Camera	<p>High resolution camera of 5 MP or better, Microscopic color & monochrome digital camera with minimum 2000 X 1900 Pixels (5 MP or more) chip resolution, live image display with CMOS sensor or better. Chip size 1/2.5" (minimum).</p> <p>Camera should have Autofocus System for fast and accurate focusing with wide capture range up to 100 micro meter or better at full (100X objective) resolution.</p>
Field of View	20 mm or better
Software	<p>Compatible software to view and analyse images. (Grain size, Inclusion, Phases of microstructure etc)</p> <p>Capable for measurement and annotation, Area fraction analysis. Software should capable to store, manage, analyse and export the data in the user format.</p> <p>Automatic Grain Size analysis as per relevant ASTM / IS.</p>
Multiple Phase Analysis	Capable to identify the phases in the microstructure.
Contrasting Techniques Module	Automatic Component recognition

Connectivity	<p>LAN/Ethernet connectivity with data reporting system shall be present and system shall auto-connect whenever equipment is switched on.</p> <p>The operations of the equipment (switching on, switching off, testing start, testing stop, maintenance, measurement data, results etc.) shall be automatically logged with date and time. This recorded data shall be non-temperable and users shall be able to remotely observe this data logged or stored in the data acquisition system.</p>
Computer	Windows 10 OS, Intel core 5 or better processor, 8 GB or more RAM, 128 GB or more SDD, 1 TB HDD, Colored 21 inch Full HD IPS 16M color display system or better display system
Calibration/Verification	Calibration Certificate for the applicable parameters of Metallurgical Microscope traceable to National/International Standard.

Annexure-B5

Technical Specifications for Pressurized Consistometer or Thickening Time Tester Unit for well oil cement As per IS 8229

Based on the information gathered with study of IS and other details available on internet, draft specifications are as follows:

1		Name of the Equipment	Pressurized Consistometer or Thickening Time Tester Unit
2		Application	For Thickening Time test (as per A-4 of IS 8229:1986) & Determination of Free Water Content of Slurry (as per Cl. A-2 IS 8229:1986)
3		Relevant Indian Standard	IS 8229:1986
4		Specification	
	i)	Required pressure & Control	Atmospheric Pressure to Maximum 150MPa or better With pressure control at any pressure. The final pressure should be held Constant as per IS 8229:1996.
	ii)	Required temperature & Control	27°C - 200°C or better with temperature control option at any temperature. The final temperature should be held Constant within ± 1 °C till completion of the test.
	iii)	Heating Element & temp. Measurement	Provision of a heating element capable of raising the temperature of this oil-bath at the rate of at least 3°C per minute or better. Provisions of thermocouple for determining the temperature of the oil-bath and also that of the cement slurry.
	iv)	Consistency Range:	0 to 100 Bc (Bearden Units) or better with resolution of 1 Bc or better
	v)	Drive speed	Precision magnetic drive assembly or better to achieve constant slurry cup drive speed of 150 rpm or better for improving testing accuracy and consistency
	vi)	Pressure Medium	The space between the slurry container and the walls of the pressure container shall be completely filled with white mineral oil, Grade 95 N}' (National Formulary) or equivalent.
	vii)	Corrosion-Resistance Properties of Equipment	The stirring paddle and all metal parts of the slurry container exposed to the slurry are made of corrosion-resistant alloys
	viii)	Cooling	Automatic cooling & oil reservoir cooling or better
	ix)	Timer	Provision of timer upto 200 minutes or better

	x)	Determination of Free Water Content of Slurry	Provision shall be available to measure Free Water Content of Slurry as per Cl. A-2 of IS 8229:1986
	xi)	Display	Colour touch-screen for display of testing parameter and access to programmable features
	xii)	Safety/ Alarm Provisions	Provisions for programmable/adjustable alarm for viscosity and other parameters as applicable.
	xiii)	Software for data acquisition, analysis and control	Latest software for control of the Machine, Online Data acquisition to PC for controlling option as well as Data analysis and integration to LIMS for reporting of results Easy net LAN connection for remote viewing in real time & USB drive for data export.
	xiv)	Accessories	To provide tool kit, latest windows based Computer, laser jet printer, spares and other accessories as applicable.
	xv)	Calibration	All measuring devices shall be provided with certificates traceable to national/international standards

Annexure-B6

Technical Specifications

SCOPE: To perform short term and long term hydrostatic pressure test on UPVC, CPVC, HDPE, Lateral and Sprinkler pipes and fittings.

Details of Technical Specifications

1	Name of the Equipment	Hydrostatic Test Apparatus
2	Application	For Hydrostatic Pressure Test on UPVC, CPVC, HDPE, Lateral and Sprinkler pipes and fittings.
3	Relevant Indian Standard	IS 4984, IS 4985, IS 15328, IS 15778, IS 14151(P-1)& IS 14151(P-2), IS 16647, IS 10124(1-13), IS 7834 (1-8), IS 12231, IS 13593, IS 15265, IS 14735, IS 16098, IS 16088, IS 16534, IS 14787, IS 12786, IS 14333 etc.
4	Specification	
	No of Stations	08 (for long term and short term)
	Operating range	i) One Station with pressure range (0-1) MPa , LC- 0.001 MPa, Accuracy 0.25% FSD
		ii) One Station with pressure range (0-5) MPa, LC- 0.001 MPa, Accuracy 0.25% FSD
		iii) Two Stations with pressure range (0-10) MPa, LC- 0.001 MPa, Accuracy 0.5% FSD
		iv) Two Stations with pressure range (0-10) MPa, LC- 0.002 MPa, Accuracy 0.5% FSD
		v) One Station with pressure range (0-20) MPa, LC- 0.002 MPa, Accuracy 0.5% FSD
		vi) One Station with pressure range (0-30) MPa, LC- 0.005 MPa, Accuracy 0.5% FSD
	Master Gauge	Separate master gauge for range 0-10 MPa, LC-0.001MPa with accuracy Class 0.25% of FSD and range 0-30 MPa, LC- 0.005MPa with accuracy Class 0.5% of FSD shall be provided to check online pressure of any station.
5	Design Feature	
	Accuracy	Pressurizing equipment capable of applying the required pressure gradually and smoothly in accordance with Cl 7.1 of IS 12235(Part 8/ Sec 1) and then kept it constant to within $\pm 2_{-1}$ Percent of the required pressure for complete duration of test.

	Pressure Control System	<p>All pressure control system shall be capable to apply the test pressure progressively and smoothly $\pm 5\%$ of the desired test pressure in shortest possible time preferably between 30s to 1h and then keeping it constant to within $+2_{-1}$ percent of the required pressure for the duration of the test.</p> <p>Provision shall be provided for removal of pressure gauges and master gauges for outside calibration.</p>
	Computer Interface programmable of data storage in hard disk	<p>Software to collect & print data at specified intervals upto 10000 h.</p> <p>LAN/Ethernet connectivity with data reporting system shall be present and system shall auto-connect whenever equipment is switched on.</p> <p>The operations of the equipment (switching on, switching off, testing start, testing stop, maintenance, measurement data, results etc.) shall be automatically logged with date and time. This recorded data shall be non-temperable and users shall be able to remotely observe this data logged or stored in the data acquisition system.</p> <p>CPU with Hard disks, monitor, printer etc.</p> <p>Each station shall be provided with time totalizer, isolation valve bleed etc.</p>
6	Signal Conditioner	<ol style="list-style-type: none"> i. Computer Interface. ii. Shall conform to all the requirements of IS 4984, IS 4985 etc (Hydrostatic Characteristics). iii. Fully automatic with provision of automatically turning the individual pressure station ON/OFF and record time duration. iv. Timer to cut off pressure station after completion of test. v. Data acquisition, storage and analysis shall be fully automatic. vi. Air compressor with silencers and auto cut-off/restart device. vii. Hose connection and hoses to sustain water at 95 Deg C min. viii. Manual emergency control button. ix. Logged data printing facility. x. Automatic display of bursting/leakage pressure. xi. Real time clock check to keep automatic track of the date, time and runs. xii. Master pressure gauge to connect all pressure stations for calibration checking facility. xiii. Automatic pressure release facility. xiv. Data transmission with USB port. xv. Compatible with latest MS operating system.

		xvi. Facility to download/save/edit /delete along with another sample information such as sample code, batch, date of start, date of completion, IS no, testing personnel name etc.
6	Features	<ul style="list-style-type: none"> i. Manual/tutorial shall be provided along with a hard copy and CD/DVD. ii. Software to collect data in hard disks. iii. Operational precautions and safety requirements. iv. System shall consist of 2 nos. air Hydro boosters capable of developing pressure. v. Cabinet shall be fabricated from 2mm (Minimum) thick CRC sheet duly powder coated. vi. Shall print data at fixed intervals. <p>End caps 3 sets of each size of SS (as per cl 3.1.1) IS 12235(Part-8) covering the range size 12mm to 400mm as per IS 4984, IS 4985, IS 15328, IS 15778, IS 14151(P-1)& IS 14151(P-2), IS 16647, IS 10124(1-13), IS 7834 (1-8), IS 12231, IS 13593, IS 15265, IS 14735, IS 16098, IS 16088, IS 16534, IS 14787, IS 12786, IS 14333 etc.</p>
7	Special Conditions	<ul style="list-style-type: none"> i. All measuring instruments shall be provided with traceable certificate with national/international standards. ii. The Water Bath for Acceptance Test and Type Test shall be supplied along with Hydrostatic Machine. Specification of water bath are enclosed as Annexure-I and Annexure-II.
8	Accessories	<ul style="list-style-type: none"> i. Set of tool Kit ii. Spare parts/ consumables (if any).
9	Data Acquisition System	<p>LAN/Ethernet connectivity with data reporting system shall be present and system shall auto-connect whenever equipment is switched on.</p> <p>The operations of the equipment (switching on, switching off, testing start, testing stop, maintenance, measurement data, results etc.) shall be automatically logged with date and time. This recorded data shall be non-temperable and users shall be able to remotely observe this data logged or stored in the data acquisition system.</p> <p>Latest configuration computer system (with minimum 16 GB RAM, 1TB HDD with i5 or better processor along with Peripherals, UPS, and Laser Printer.</p>

ANNEXURE-I

TECHNICAL SPECIFICATION OF WATER BATH

SCOPE: To maintain Water temperature during Hydrostatic testing of UPVC, CPVC , HDPE, Lateral and Sprinkler pipes and fittings.

1		Name of the Equipment	Water Bath with Heating and cooling arrangement for Acceptance Test
		Quantity	02 Numbers
2		Application	For Hydrostatic Pressure Test on UPVC, CPVC, HDPE, Lateral and Sprinkler pipes and fittings.
3		Specifications	IS 4984, IS 4985, IS 15328, IS 15778, IS 14151(P-1) & IS 14151(P-2), IS 16647, IS 10124(1-13), IS 7834 (1-8), IS 12231, IS 13593, IS 15265, IS 14735, IS 16098, IS 16088, IS 16534, IS 14787, IS 12786, IS 14333 etc
	a	Temp Range	15°C to Ambient, LC 0.1°C
	b	Accuracy	±1°C
	c	Working Temp.	20°C, 23 °C ,27 °C
	d	Test Duration	Continuous upto 170 h
	e	Type of Temp Controller.	PID with sensor or Better
	f	Internal size	2000mm (L) X 1500mm (W) X 2000mm (H)
	g	Test Temperature	Shall attain working temperature within 2 hrs
4		Material of Construction	
	a	Internal Chamber and Top Cover	SS304
	b	Outer Cover	Metal sheet with Powder coating
	c	Bottom Grill	SS304
5		Equipment shall also comply following:	<p>Digital display of temperature</p> <p>Equipment shall have shock protection and overload protection.</p> <p>A water circulating pump shall be provided to keep the temperature uniform throughout the bath to maintain mean temperature within ±1°C. The system shall be as per cl-3 of IS 12235(Pt-8/Sec 1).</p> <p>For cleaning of water tank a drain plug should be provided at the bottom of the tank.</p> <p>Provision shall be made for proper overflow and drain out of tank.</p>

			Supports enabling the test specimen to be placed into tank in such a way that, there is no contact between the samples and also side of the tank.
		Special Conditions	i. All measuring instrument shall be provided with traceable certificate with national/international standards.

ANNEXURE-II

SCOPE: To maintain Water temperature during Hydrostatic testing of UPVC, CPVC, HDPE, Lateral and Sprinkler pipes and fittings.

1		Name of the Equipment	Water Bath with Heating arrangement for Type Test
2		Application	For Hydrostatic Pressure Test on UPVC, CPVC, HDPE, Lateral and Sprinkler pipes and fittings.
3		Specifications	IS 4984, IS 4985, IS 15328, IS 15778, IS 14151(P-1)& IS 14151(P-2), IS 16647, IS 10124(1-13), IS 7834 (1-8), IS 12231, IS 13593, IS 15265, IS 14735, IS 16098, IS 16088, IS 16534, IS 14787, IS 12786, IS 14333 etc
	a	Temp Range	Ambient to 100°C, LC 0.1°C
	b	Accuracy	±1°C
	c	Working Temp.	55°C, 60°C, 65°C, 70°C, 80°C & 95°C
	d	Test Duration	Continuous upto 10000 h
	e	Type of Temp Controller.	PID with sensor
	f	Internal size	2000mm (L) X 1500mm (W) X 2000mm (H)
	g	Heating Load	12kW (3kW X 4 nos heater)
4		Material of Construction	
	a	Internal Chamber and Top Cover	SS304
	b	Outer Cover	Metal sheet with Powder coating
	c	Bottom Grill	SS304
5		Other requirements	Digital display of temperature

	a		Equipment shall have shock protection and overload protection.
	b		A water circulating pump shall be provided to keep the temperature uniform throughout the bath to maintain mean temperature within $\pm 1^{\circ}\text{C}$. The system shall be as per cl-3 of IS 12235(Pt-8/Sec 1).
	c		
	d		For cleaning of water tank a drain plug should be provided at the bottom of the tank.
	e		Provision shall be made for proper overflow and drain out of tank.
	g		Supports enabling the test specimen to be placed into tank in such a way that, there is no contact between the samples and also side of the tank.
		Special Conditions	i. All measuring instrument shall be provided with traceable certificate with national/international standards.

Annexure-B7
Technical Specification of CNC Milling Machine (3-Axis Vertical Milling)

S. No.	DESCRIPTION OF REQUIREMENT	REQUIRED
	Technical Specification	
	Capacity	
1	Length of table	Minimum: 700 mm
2	Width of table	Minimum: 400 mm
3	load on table	Minimum: 300 kg
4	X travel	Minimum: 700 mm
5	Y travel	Minimum: 400 mm
6	Z travel	Minimum: 300 mm
	Machine Spindle	
1	Spindle Speed	≥ 8000 RPM
	Accuracy	
1	Positional accuracy	0.01 mm in full length
	Coolant System	
1	Tank capacity	Minimum: 100 Litre
2	Filtration system	Minimum: 20 Bar
	Axis drive and Control	
1	Digital controlled drive and motors	For all Axis
2	Guide way	LM guide way
3	Rapid Speed	Minimum: 20m/min
4	Feed rate	Minimum: 6m/min
	CNC Control unit Features	
1	Controller	3 axes simultaneous controllable
2	Least increment with decimal input	0.001 mm
3	Controller memory	Minimum: 500 MB
4	Connectivity	USB Port, Ethernet
5	Features	Emergency stop on control panel Emergency brake knob Tool Load monitoring and Tool Life Management
6	Compensations and Feedback	CNC controller to take care of stored pitch error compensation. Backlash compensation for cutting traverse. Backlash compensation for rapid traverse. Friction compensation control Thermal Compensation Feed forward control
7	Display System	Minimum 12" LCD colour monitor with soft Key, Panel with inbuilt keyboard, monitor & operating knobs, Machine hour reading,
8	Feed control potentiometer	0 – 120% in incremental steps of 10%.
9	Spindle speed control potentiometer	0 – 120% in incremental steps of 10%.
12	Essential Accessories	i. Fully enclosed splash guard with slide windows

		<ul style="list-style-type: none"> ii. Fully encapsulated housing with safety type window iii. Levelling pads (6 Numbers) iv. Door safety interlock v. Full Enclosure for safety operation vi. Inbuilt air conditioner for CNC Control Cabinet
13	Documentation to be supplied	<p>Operating and programming instructions, Installation and Commissioning instructions, Quality Test records, Circuit Diagrams, Maintenance / repair charts, Preventive maintenance instructions, Lubrication chart & parameter list, Requirement/recommendation for power supply, controlled stabilizing has to be given. Lifting instruction mentioned in packing list. Detailed invoice and packing list of all items and devices and detailed prospect of machine and all other accessories enclosed in respective boxes</p>
	Training at the place of installation	
1	Programming course	Shall be part of training as per tender document

Annexure-B8

Technical Specifications

Scope: The specifications cover supply, Installation and Commissioning of Tube Bending Machine.

Details of Technical Specifications

S No.		Name of the Equipment	Tube Bending Machine
1		Application	Equipment is intended to test 'Bending Properties' of Ungalvanized and Galvanized tube of nominal bore upto and including 50 mm with an outside diameter upto 65 mm as prescribed IS 1161:2014, IS 1239(P-1):2004, IS 3601:2006 as per the test method given in IS 2329:2005 for determining the ability of full section to undergo plastic deformation in bending,
2		Relevant Indian Standards	IS 1161:2014, IS 1239(P-1):2004, IS 3601:2006, as per the test method given in IS 2329:2005.
3		Principle	The tube is bend in full section around a grooved former of a specified radius r until the angle of bend a reaches the value specified in the relevant product standard. Tube bending machine shall be designed to prevent the section of tube from becoming oval. The tube bend former of the machine shall have a groove corresponding in the profile to the outside tube. The radius at the bottom the groove shall be specified in the relevant product standards.
4	Specifiacion		
	a	Machine shall be capable to bend Ungalvanized tubes upto 180° and galvanized tube upto 90°	
	b	Metallic component of the equipment shall be rust free	
	c	Power supply: Three phase, 440 VAC	Single phase, 220/230 VAC or Three phase 440 VAC
	d	Safety protection	Overload protection and Stroke protection

	e	Machine should be motorized with all fittings and fixture, dies, clamps, coupling etc. and also conforming to the following requirements	
	f	Emergency stop button should be provided on load frame for pressure release. The cable connecting the load frame, load cell, extensometer etc. to the control consol should be of adequate length for easy handling.	

Annexure-B9

Technical Specification of Power Press

Description	1000 KN
Bed size LRXFB	Minimum: 900x900 mm
Bed to Ram Bottom	Minimum: 550 mm
Stroke	Minimum: 160 mm
Adjustment of slide	Minimum: 45 mm
Bolster Thickness	Minimum: 100 mm
Bed opening	Minimum: 175 mm
Floor to top of bed	Minimum: 800 mm
No of strokes per min	Minimum: 30 mm
Motor power required	Minimum: 25/1440 RPM
Required air pressure	Minimum: 5 kg/sq.cm.
DIE CUSHION	
Stroke length	Minimum: 100 mm
Air pressure	Minimum: 6 kg/sq.cm