



TENDER DOCUMENT

For purchase of Scanning Electron Microscope & Accessories under the project entitled “Mechanical Properties Stability And Structure Of Polymeric Composite Reinforced With Functionalized Fibres” (vide letter no.10/06/2010-TUFS);sponsored by MOT.GOI

Total No. of Equipment/machines : 1
Tender No. BTRA/MOT/IB/11/2018 DATED 05/08/2018

Sale of Tender Document & downloading (from www.btraindia.com , http://tenders.gov.in https://www.tcil-india-electronictender.com	Up to 14-08-2018(10.00 am)
Last date & time for acceptance of online Tenders only on https://www.tcil-india-electronictender.com	14-08-2018 (05.00 pm)
Date & time of opening of Technical bids through e-procurement portal	16-08-2018 (11.00 am)
Date & time of opening of Commercial Bids Through e-tender portal	Will be intimated later to eligible Bidders
Place of submission of online bids	https://www.tcil-india-electronictender.com

THE BOMBAY TEXTILE RESEARCH ASSOCIATION
L.B.S. Marg, Ghatkopar (West), Mumbai – 400 086
Tel:022-2500 3651/2500 2652; Fax No.022-2500 0459
E-mail: info@btraindia.com

**FORMAT TO BE FILLED UP AND SUBMITTED
IN THE LETTER HEAD OF THE BIDDER**

To,

The Director,
BTRA,
LBS Marg
Ghatkopar(W),
Mumbai – 400 086.

Sub: Supply of scanning electron microscope instrument to the laboratories of BTRA as per the specifications and quantities mentioned in the tender.

Dear Sir,

- a) Having examined the conditions of Tender & Specifications of the instruments / equipment we, the undersigned, offer to supply instruments / equipment as mentioned in the **Annexure I** as per the quantity and specifications given in the tender along with standard spares/accessories as specified.
- b) Bidders are required to submit Earnest Money Deposit (EMD) minimum Rs.4,50,000/- of the 'Tender Value' (quoted)

EITHER

Through Demand Draft from any scheduled bank, favoring "BTRA" payable at Mumbai.

A scanned copy of the Demand Draft should be uploaded on e-tender portal and demand draft should be forwarded in a sealed envelope to our office as below:

**To,
The Director
The Bombay Textile Research Association
L.B.S. Marg, Near R City Mall, Ghatkopar (W)
Mumbai – 400 086.**

OR

Through RTGS/NEFT to the Bank account. FOLLOWED BY AN E-MAIL ALONG WITH DETAILS OF RTGS/NEFT TO BTRA ON info@btraindia.com before closure of submission of bids. The Bank details are following :

Name of the beneficiary : The Bombay Textile Research Association
Name of the Bank : Andhra Bank
Branch : Damodar Park, L.B.S.Marg, Ghatkopar(W).Mumbai-400086.
Account No. : 023811100000900
MICR : 400011011
IFCS Code : ANDB0000238

- c) **The original tender document duly signed on all pages is enclosed.**

- d) In case of Imported Items, we quote CIF value up to Mumbai Airport. We also specify the packing dimension, Nos. of Box / carton & gross weight of each Box / Carton (Packing list) and also specify the name of the port & Country of origin, from where the goods will be dispatched.
- e) If our tender is accepted, we undertake to supply the instruments and equipments and install the same in the Laboratories as mentioned in the tender within the specified periods mentioned in **Annexure V** from receipt of the order from the BTRA in writing.
- f) We agree to supply consumable spare parts and replacement of the broken/damaged/non-compatible parts during the guarantee / warranty period, free of charge, as per the terms & conditions.
- g) We agree to train the personnel of laboratories free of charge, as per the terms and conditions.
- h) If our tender is accepted we will, obtain and arrange:
 - 1. Security Deposit / Bank Guarantee as defined
 - 2. Insurances
 - 3. Any other statutory obligation, if any, prior to commencement of supply of machinery.
- i) We agree for the validity of our tender up to 13/11/2018
- j) We agree to your right to forfeit our EMD/Security deposit without prejudice to any other right or remedy for the following failures on our part.
 - 1) Changes in terms and conditions of tender are made within validity period.
 - 2) Supply and installation of instrument / equipment is not commenced within specified period as given in the Tender document.
 - 3) Obligations under (e) above are not fulfilled
- k) The bidders shall use only tender documents as issued for submitting his bid and shall comply with various terms and conditions.
- l) Unless and until a formal Agreement/order is prepared and issued, this tender together with your written acceptance thereof, shall constitute a binding contract between us and BTRA.
- m) We understand that you are not bound to accept the lowest or any tender you may receive.
- n) We agree to make a presentation of the products to be supplied by us, before the Purchase Committee if need be on a mutually convenient date.

Authorized Signatory
Of The Renderer

Signature Dated
Designation / Capacity
Name

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Note: Interpretation of any term /word /clause lies with the BTRA, Mumbai.

III (A) TERMS AND CONDITIONS- GENERAL

1. Modifications, if any, made in the above documents will be done by addenda / corrigenda, and same will be uploaded on websites www.btraindia.com and <https://www.tcil-india-electronictender.com>. Tender documents is be submitted mandatorily on online portal <https://www.tcil-india-electronioctender.com>.
2. The full name of the person authorised to file the tender, designation, current and main office address, Phone No., Fax No. & E-mail address shall be indicated in the tender.
3. Tenders sent through Fax and Telex will not be entertained.
4. No claim for costs, charges, expenses incurred by the bidder in connection with preparation of tender submission and for subsequent clarifications of their tender shall be accepted.
5. BTRA will not be responsible for any typographical errors/ambiguity/ additions /omissions committed by the bidder while filling up of the tender.
6. Submission of a bid by a tenderer implies that he has read all terms & conditions, and has made himself aware of the scope and specifications of the items to be supplied, availability of materials, local conditions and other factors bearing on the execution of the supply.
7. The bidder shall be deemed to have full knowledge of documents and no extra charges consequent on any misunderstanding or otherwise shall be allowed.
8. The bidder shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender and about the rates quoted by him and cover all his obligations under the tender.
9. Bids submitted by manufacturers and authorised agents only shall be considered.

10. EARNEST MONEY DEPOSIT (EMD)

- 10.1 Bidders are required to submit Earnest Money Deposit (EMD) minimum Rs.4,50,000/- of the 'Tender Value' (quoted)

EITHER

Through Demand Draft from any scheduled bank, favoring "BTRA" payable at Mumbai.

A scanned copy of the Demand Draft should be uploaded on e-tender portal and demand draft should be forwarded in a sealed envelope to our office as below:

**To,
The Director
The Bombay Textile Research Association
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Through RTGS/NEFT to the Bank account. FOLLOWED BY AN E-MAIL ALONG WITH DETAILS OF RTGS/NEFT TO BTRA ON info@btraindia.com before closure of submission of bids. The Bank details are following :

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Account No. : 023811100000900
MICR : 400011011
IFCS Code : ANDB0000238

- 10.2 Tenders not accompanied by Earnest Money Deposit shall be rejected.
- 10.3 The EMD of the unsuccessful bidder will be returned within 3 months from the date of opening the technical bids.

11 SECURITY DEPOSIT

The successful bidder shall have to deposit an amount of 5% of the cost of the machinery/equipment (including the retained EMD amount) towards interest free security deposit and retention money as mentioned in Annexure IV. The amount is payable in the form of Demand Draft(DD) or NEFT/RTGS (Scanned copy of the DD or NEFT/RTGS Transaction is to be uploaded and original DD to be sent to our office in sealed envelope) or Bank Guarantee (BG) as per the format given in Annexure – IV. This BG or DD or NEFT/RTGS should be submitted along with the acceptance of the Purchase Order. /the security deposit (BG or DD or NEFT/RTGS) should cover the entire warranty period of the items to be supplied.

12 AUTHORITY OF SIGNING

- 12.1 If the tender is submitted by an individual, it shall be signed by him.
- 12.2 If the tender is submitted by a proprietary firm, it shall be signed by the proprietor.
- 12.3 If the tender is submitted by a partnership firm, it shall be signed by all the partners of the firm or by a partner holding the power of attorney for the firm for signing the tender, in which case, a certified copy of power of attorney shall accompany the technical bid.
- 12.4 If the tender is submitted by a limited company or a corporation, it shall be signed by a duly authorized person or the person holding the power of attorney for signing the tender, in which case a certified copy of the power of attorney shall accompany the technical bid.

13 PRICE & CURRENCY BID

- 13.1 The rates shall be written both in words and in figures. The bidder shall also show the amount of each item, the total of each section and the grand total of the whole tender.
- 13.2 Correction, if any, shall be made by crossing out, initialing with date and rewriting.

- 13.3 In case of conflict between the figures and words in the rates, the latter shall prevail.
- 13.4 The tenders shall be verified by the bidder for accuracy in the arithmetical calculations, prior to submission.
- 13.5 The price may be offered in either Indian Rupee or any foreign currency viz; US Dollar, Euro, etc for all imported items.

14 ONLINE SUBMISSION

14.1 The tender shall be submitted online on <https://www.tcil-india-electronictender.com> on or before 14/08/2018 up to 05.00 pm. Any tender received after this date and time shall not be accepted. Tenders shall be submitted online along with scanned copies of the documents listed below.

14.2 **“Qualification Documents”**: following documents are to be uploaded:

- a) EMD – DD of not less than Rs.4,50,000/- of tender value to be submitted from any Scheduled Bank or through RTGS/NEFT to BTRA's Bank Account. The applicant without EMD will be out rightly disqualified.(Scanned copy of the DD or NEFT/RTGS Transaction is to be uploaded and original DD is to be sent to our office in sealed envelope)
- b) EMD is exempted for the bidders who are registered as Micro and small Enterprises with the Government. A self attested copy of the same is to be uploaded.
- c) Details about the bidder's organization :
 - a. Profile the bidder organization
 - b. Copy of PAN Card
 - c. Copy of GST registration or any other suitable document.
 - d. Turnover in India for last three financial years.
 - e. Period of existence of manufacturer or its authorized representative in India.
- d) An authorization letter from principal / manufacturer, if the bidder is not a manufacturer.

14.3 **“Technical bids”** shall contain (scanned copies need to be uploaded)

- a) Technical Specifications in details of equipment / machine for which bid has been submitted.
- b) List of items including spare parts with quantities for which the financial bid has been submitted.
- c) List of clients including government institutions to whom the respective equipment with same specification has been supplied.
- d) Detailed catalogue for each machine/equipment for which bid has been submitted.
- e) Pre-installation requirements

- f) **Proof that the bidder** is (i) either manufacturer or (ii) an authorised agent for the equipment / item for which the bid is submitted.
- g) List of organisations in India and abroad, along with Contact Person, address, Tel. No., Fax No. etc., to which **similar make / model** of the equipment were supplied.
- h) Compliance that the bidder has manufactured or supplied the equipment during the past 2 years and **performance report from at least 2 such users** for the past 2 years.
- i) Covering letter, in the letter head of the bidder stating:
 - a. That the minimum **warranty period of Two year**,
 - b. That the bid **conforms to the terms and conditions** of the tender;
 - c. Confirmation about the **supply of Certified Reference Materials / Samples** for checking the performance of the instruments, wherever applicable.
 - d. Confirmation that the quoted rates are valid till **13/11/2018**
 - e. The details regarding the service centres, stocking of spares etc.,
- j) Addenda / corrigenda /clarification issued by BTRA before due date of tender, duly signed by the authorised person.
- k) A letter indicating assumptions, criterion, technical alternative etc., if any. However, the alternatives suggested by the bidder would not be taken as the basis for technical/commercial evaluation of the bids.
- l) Details of pre-installation requirements including space, size of the table required, power point ampere, etc.
- m) Power of attorney authorizing the person who has filed the tender, if applicable.
- n) **A copy of the certificate for the calibration of the similar makes and model equipment/instrument for which bid is submitted from an accredited calibration laboratory or National Physical Laboratory, wherever applicable.**

14.4 **“COMMERCIAL BIDS”** shall contain (Scanned copies need to be uploaded)

- a) Separate price of each of the items should be submitted which will be inclusive of all applicable taxes, duties or any other Govt. levies & all other charges by whatever name called including freight, insurance and installation charges. In case of imported items, CIF value up to Mumbai should be mentioned along with installation, commissioning and training at the places as specified by BTRA.
- b) Minimum required essential spare parts for next 2 years after the warranty period are to be specified. The cost of the spares is to be quoted separately along with the commercial bids, as optional as per the details given in **Annexure-III**.

- c) Annual Preventive Maintenance charges for the next 3 years, after the expiry of the warranty period, in the format prescribed in the tender document at **Annexure-III**.
- d) All the pre-installation requirements such as Voltage stabilizer, surge arrestor, necessary length of cables, plugs etc. should be provided by the bidder along with the equipment/item. The bidder shall quote for these items separately. The Centre will provide adequate space, furniture and electricity only for the installation and commissioning of the equipment/item.
- 14.5 Separate bid for each of the items should be submitted on online portal <https://www.tcil-india-electronictender.com>

NOTE: Bidders need to furnish Pass- Phrase in separate sealed envelope for both the bid parts (Technical & Financial separately) and to be sent to BTRA along with off line document before tender opening.

15. VALIDITY OF THE TENDER: -

Rates quoted by the bidder and the earnest money deposit submitted shall be valid till **13/11/2018**.

The Bidder shall not withdraw or revise or alter any conditions, rate(s) quoted within this stated period. The Director, BTRA reserves the right to forfeit the earnest money deposit if the bidder revokes or withdraws the tender within this stated period.

16. TENDER OPENING & EVALUATION:

- The tender shall be opened on the specified date and time. In the event of any
- change in the date and time of the tender opening, the same would be Informed/notified to the tenderer through public notice / individual Correspondence / through BTRA's website.
- Technical bids will be evaluated on the basis of the technical capabilities for executing the order.
- **Commercial bids will be opened only for technically qualified bidders. Award Of contract may be made to the L1 bidder.**

17. AGREEMENT

The successful bidder shall sign and return copy of Purchase Order placed with him, as a token of acceptance of the terms and conditions of the Purchase Order. The bidder shall also enclose the applicable security deposit in the form of BG or DD as specified at **Clause No. 11**.

18. CRITERION FOR REJECTION

- 18.1 The BTRA reserves the right to accept or reject any tender or reject all tenders without giving any reasons whatsoever for their decision.
- 28.2 Tenders are liable to be rejected in which any of the prescribed particulars / information is either missing or incomplete in any respect and/or if the prescribed conditions are not fulfilled.

- 18.3 Tenders which are found to be technically non- responsive shall be rejected and their commercial bids shall not be opened.
- 18.4 Tenders containing specific conditions of the bidder other than the terms and conditions given in the tender document and not acceptable to the BTRA are liable to be rejected.
- 18.5 If the validity of the bid is not up to **13/11/2018** the tender will be rejected
- 18.6 If the Offer document(PDF form) as per tender duly signed by the authorized person on all pages is not submitted, the tender will be rejected**
19. The BTRA caters mainly to the manufacturers / exporters. Hence, Purchase Committee may at its discretion give preferences to more popular brands of instruments, which give results that are widely accepted internationally by buyers abroad and the decision of the Committee will be final.
20. Before submission of the tender, the prospective bidders are expected to examine technical specifications of the equipments required, terms and conditions, etc., given in this tender document. Failure to furnish all information required in the tender document may result in the rejection of the bid.
21. The BTRA reserves the right to cancel items, from the list of requirements of instruments without assigning any reason thereof.
22. The number of instruments required is tentative so also the location mentioned where the supply has to be effected. BTRA at its discretion may delete/add the number of requirement of instruments and change the location where the supply has to be effected.
23. In case of supply of indigenous equipment / machinery & accessories, the payment terms shall be as under :
- a) 20% of the order value will be paid as advance against confirmation of orders.
 - b) 70% payment will be made against successful installation, commissioning, training and demonstration of satisfactory performance of the machinery / Equipments at site.
 - c) Balance 10% payment will be made after one year from the date of commissioning
24. **In case of Imported Items, 100% Payment will be made through Irrevocable Letter of Credit.**
25. The delivery installation & commissioning period as agreed will not be extended under normal conditions. Suitable penalty for delay in executing the order may be enforced. In case of the delay due to some unforeseen reason, written permission is required from the Chairman, Purchase Committee, BTRA to avoid penalty.
26. Disputes, if any are subject to Mumbai (India) jurisdiction only.

SPECIAL INSTRUCTIONS TO BIDDERS FOR E-TENDERING

General

The Special Instructions (for e-Tendering) supplement 'Instruction to Bidders', as given in these Tender Documents. Submission of Online Bids is mandatory for this Tender.

E-Tendering is a new methodology for conducting Public Procurement in a transparent and secured manner. Now, the Government of India has made e-tendering mandatory. Suppliers/ Vendors will be the biggest beneficiaries of this new system of procurement. For conducting electronic tendering, BTRA has decided to use the portal <https://www.tcil-india-electronictender.com> through TCIL, a Government of India Undertaking. This portal is based on the world's most 'secure' and 'user friendly' software from Electronic Tender®. A portal built using Electronic Tender's software is also referred to as Electronic Tender System® (ETS).

Benefits to Suppliers are outlined on the Home-page of the portal.

Instructions

Tender Bidding Methodology:

Broad Outline of Activities from Bidder's Perspective:

1. Procure a Digital Signing Certificate (DSC)
2. Register on Electronic Tendering System® (ETS)
3. Create Marketing Authorities (MAs), Users and assign roles on ETS. It is mandatory to create atleast one MA
4. View Notice Inviting Tender (NIT) on ETS
5. For this tender -- Assign Tender Search Code (TSC) to an MA
6. Download Official Copy of Tender Documents from ETS. Note: Official copy of Tender Documents is distinct from downloading. To participate in a tender, it is mandatory to procure official copy of Tender Documents for that tender.
7. Clarification to Tender Documents on ETS
 - Query to BTRA if required
 - View response to queries posted by BTRA
8. Bid-Submission on ETS
9. Attend Public Online Tender Opening Event (TOE) on ETS
 - Opening of relevant Bid-Part
10. Post-TOE Clarification on ETS (Optional)
 - Respond to BTRA Post-TOE queries
11. Attend Public Online Tender Opening Event (TOE) on ETS
 - Opening of relevant part (ie Commercial-Part)
(Only for Technical Responsive Bidders)

For participating in this tender online, the following instructions are to be read carefully. These instructions are supplemented with more detailed guidelines on the relevant screens of the ETS.

Digital Certificates

For integrity of data and authenticity/ non-repudiation of electronic records, and to be compliant with IT Act 2000, it is necessary for each user to have a Digital Certificate (DC). also referred to as Digital Signature Certificate (DSC), of Class 2 or above, issued by a Certifying Authority (CA) licensed by Controller of Certifying Authorities (CCA) [refer <http://www.cca.gov.in>].

Registration

To use the Electronic Tender® portal <https://www.tcil-india-electronictender.com>, vendors need to register on the portal. Registration of each organization is to be done by one of its senior persons who will be the main person coordinating for the e-tendering activities. In ETS terminology, this person will be referred to as the Super User (SU) of that organization. For further details, please visit the website/portal, and click on the 'Supplier Organization' link under 'Registration' (on the Home Page), and follow further instructions as given on the site. Pay Annual Registration Fee as applicable.

After successful submission of Registration details and Annual Registration Fee, please contact TCIL/ ETS Helpdesk (as given below), to get your registration accepted/activated

Important Note: To minimize teething problems during the use of ETS (including the Registration process), it is recommended that the user should peruse the instructions given under 'ETS User-Guidance Center' located on ETS Home Page, including instructions for timely registration on ETS. The instructions relating to 'Essential Computer Security Settings for Use of ETS' and 'Important Functionality Checks' should be especially taken into cognizance.

Please note that even after acceptance of your registration by the Service Provider, to respond to a tender you will also require time to complete activities related to your organization, such as creation of users, assigning roles to them, etc.

TCIL/ ETS Helpdesk	
Telephone/Mobile	Customer Support: +91-11-26241790(Multiple Telephone Lines) Emergency Mobile Numbers: +91-9868393775,986839792,9868393717(pl.contact In case of emergency during non-working hours)
E-mail ID	Ets_support@tcil-india.com

Some Bidding related Information for this Tender

The entire bid-submission would be online on ETS (unless specified for Offline Submissions). Broad outline of submissions are as follows:

- Submission of Bid-Parts/ Envelopes
 - Technical-Part
 - Commercial-Part

Offline Submissions:

The bidder is requested to submit the following documents offline to the under mentioned address before the start of Public Online Tender Opening Event in a Sealed Envelope.

The Director,
The Bombay Textile Research Association
L.B.S. Marg, Near R City Mall.
Ghatkopar (W). Mumbai 400 086.

The envelope shall bear (the project name), the tender number and the words 'DO NOT OPEN BEFORE' (due date & time).

1. Demand Draft in favor of 'The Bombay Textile Research Association' payable at Mumbai to the extent of minimum 5% of the Tender Value (Quoted) from any scheduled Bank towards the Earnest Money Deposit.

Note: The Bidder should also upload the scanned copy of the above mentioned original document as Bid- Annexure during Online Bid-Submission.

2. Pass-Phrase in separate sealed envelope for both the bid parts (Technical & Commercial)

Special Note on Security and Transparency of Bids

Security related functionality has been rigorously implemented in ETS in a multidimensional manner. Starting with 'Acceptance of Registration by the Service Provider', provision for security has been made at various stages in Electronic Tender's software. Specifically for Bid Submission, some security related aspects are outlined below:

As part of the Electronic Encrypter® functionality, the contents of both the 'Electronic Forms®' and the 'Main-Bid' are securely encrypted using a Pass-Phrase created by the Bidder himself. Unlike a 'password', a Pass-Phrase can be a multi-word sentence with spaces between words (eg I love this World). A Pass-Phrase is easier to remember, and more difficult to break. It is mandatory that a separate Pass-Phrase be created for each Bid-Part. This method of bid-encryption does not have the security and data-integrity related vulnerabilities which are inherent in e-tendering systems which use Public-Key of the specified officer of a Buyer organization for bid-encryption. Bid encryption in ETS is such that the Bids cannot be decrypted before the Public Online

Tender Opening Event (TOE), even if there is connivance between the concerned tender opening officers of the Buyer organization and the personnel of e-tendering service provider.

CAUTION: All bidders must fill Electronic Forms® for each bid-part sincerely and carefully, and avoid any discrepancy between information given in the Electronic

Forms® and the corresponding Main-Bid. For transparency, the information submitted by a bidder in the Electronic Forms® is made available to other bidders during the Online Public TOE. If it is found during the Online Public TOE that a bidder has not filled in the complete information in the Electronic Forms®, the TOE officer may make available for downloading the corresponding Main-Bid of that bidder at the risk of the bidder. If variation is noted between the information contained in the Electronic Forms® and the 'Main-Bid', the contents of the Electronic Forms® shall prevail. Alternatively, the Buyer organization reserves the right to consider the higher of the two pieces of information (eg the higher price) for the purpose of short-listing, and the lower of the two pieces of information (eg the lower price) for the purpose of payment in case that bidder is an awardee in that tender.

Typically, 'Pass-Phrase' of the Bid-Part to be opened during a particular Public Online Tender Opening Event (TOE) is furnished online by each bidder during the TOE itself, when demanded by the concerned Tender Opening Officer.

It is mandatory to submit the Pass-Phrase (Technical and Commercial) before Tender Opening Event. In case of failure of submitting the Pass-Phrase his relative bid will be Archive Un-opened / Rejected online.

Additionally, the bidder shall make sure that the Pass-Phrase to decrypt the relevant Bid Part is submitted to BTRA in a sealed envelope before the start date and time of the Tender Opening Event (TOE).

There is an additional protection with SSL Encryption during transit from the client-end computer of a Supplier organization to the e-tendering server/ portal.

Public Online Tender Opening Event (TOE)

ETS offers a unique facility for 'Public Online Tender Opening Event (TOE)'. Tender Opening Officers, as well as, authorized representatives of bidders can simultaneously attend the Public Online Tender Opening Event (TOE) from the comfort of their offices. Alternatively, one/ two duly authorized representative(s) of bidders (i.e. Supplier organization) are requested to carry a Laptop with Wireless Internet Connectivity, if they wish to come to BTRA office for the Public Online TOE.

Every legal requirement for a transparent and secure 'Public Online Tender Opening Event (TOE)', including digital counter-signing of each opened bid by the authorized TOE-officer(s) in the simultaneous online presence of the participating bidders' representatives, has been implemented on ETS.

As soon as a Bid is decrypted with the corresponding 'Pass-Phrase' as submitted by the bidder himself during the TOE itself or as per alternative methods prescribed in the Tender Documents, salient points of the Bids (as identified by the Buyer organization) are simultaneously made available for downloading by all participating bidders. The tedium of taking notes during a manual 'Tender Opening Event' is therefore replaced with this superior and convenient form of 'Public Online Tender Opening Event (TOE)'.

ETS has a unique facility of 'Online Comparison Chart' which is dynamically updated as each online bid is opened. The format of the chart is based on inputs provided by the Buyer for each Bid-Part of a tender. The information in the Comparison Chart is based on the data submitted by the Bidders. A detailed Technical and/ or Financial Comparison Chart enhances Transparency. Detailed instructions are given on relevant screens.

ETS has a unique facility of a detailed report titled 'Minutes of Online Tender Opening Event (TOE)' covering all important activities of 'Online Tender Opening Event (TOE)'. This is available to all participating bidders for 'Viewing / Downloading'.

There are many more facilities and features on ETS. For a particular tender, the screens viewed by a Supplier will depend upon the options selected by the concerned Buyer.

Other Instructions

For further instructions, the vendor should visit the home-page of the portal <https://www.tcil-india-electronictender.com>, and go to the User-Guidance Center

The help information provided through 'ETS User-Guidance Center' is available in three categories – Users intending to Register / First-Time Users, Logged-in users of Buyer organizations, and Logged-in users of Supplier organizations. Various links (including links for User Manuals) are provided under each of the three categories.

Important Note: It is strongly recommended that all authorized users of Supplier organizations should thoroughly peruse the information provided under the relevant links, and take appropriate action. This will prevent hiccups, and minimize teething problems during the use of ETS.

SEVEN CRITICAL DO'S AND DON'TS FOR BIDDERS

Specifically for Supplier organizations, the following '**SEVEN KEY INSTRUCTIONS for BIDDERS**' must be assiduously adhered to:

1. Obtain individual Digital Signing Certificate (DSC or DC) well in advance of your first tender submission deadline on ETS
2. Register your organization on ETS well in advance of the important deadlines for your first tender on ETS viz 'Date and Time of Closure of Procurement of Tender Documents' and 'Last Date and Time of Receipt of Bids'. Please note that even after acceptance of your registration by the Service Provider, to respond to a tender you will also require

time to complete activities related to your organization, such as creation of -- Marketing Authority (MA) [ie a department within the Supplier/ Bidder Organization responsible for responding to tenders], users for one or more such MAs, assigning roles to them, etc. It is mandatory to create at least one MA. This unique feature of creating an MA enhances security and accountability within the Supplier/ Bidder Organization.

3. Get your organization's concerned executives trained on ETS well in advance of your first tender submission deadline on ETS

4. For responding to any particular tender, the tender (ie its Tender Search Code or TSC) has to be assigned to an MA. Further, an 'Official Copy of Tender Documents' should be procured/ downloaded before the expiry of Date and Time of Closure of Procurement of Tender Documents. Note: Official copy of Tender Documents is distinct from downloading 'Free Copy' of Tender Documents'. Official copy of Tender Documents is the equivalent of procuring physical copy of Tender Documents with official receipt in the paper-based manual tendering system.

5. Submit your bids well in advance of tender submission deadline on ETS (There could be last minute problems due to internet timeout, breakdown, et al)

6. It is the responsibility of each bidder to remember and securely store the Pass-Phrase for each Bid-Part submitted by that bidder. In the event of a bidder forgetting the Pass-Phrase before the expiry of deadline for Bid-Submission, facility is provided to the bidder to 'Annul Previous Submission' from the Bid-Submission Overview page and start afresh with new Pass-Phrase(s)

7. ETS will make your bid available for opening during the Online Public Tender Opening Event (TOE) 'ONLY IF' your 'Status pertaining Overall Bid-Submission' is 'Complete'. For your record, you can generate and save a copy of 'Final Submission Receipt'. This receipt can be generated from 'Bid-Submission Overview Page' only if the 'Status pertaining overall Bid-Submission' is 'Complete'.

NOTE:

While the first three instructions mentioned above are especially relevant to first-time users of ETS, the fourth, fifth, sixth and seventh instructions are relevant at all times.

Minimum Requirements at Bidder's End

Computer System having configuration with minimum Windows 7 or above, and
Broadband connectivity
Microsoft Internet Explorer 7.0 or above
Digital Certificate(s)

Detailed Specifications for Scanning Electron Microscopy (SEM) facility

Requirement of a high-resolution Scanning Electron Microscope (SEM) which is intended to use for characterization of textiles (including all types of fibers, yarns and fabrics), pharmaceuticals and nonmaterial's, including both conducting and non-conducting such as metal, ceramics, polymer and composite for investigating the microstructure and perform chemical compositional analysis using Energy Dispersive X-ray Spectroscopy (EDS).

- (a) Scanning electron microscope with Thermionic emission electron gun, secondary and back scattered electron detectors, energy dispersive spectroscopy detector (EDS) for composition mapping and optical imaging to view sample live, accessories, software and requisite licenses to demonstrate successful operation are the part of the basic facility.
 - (b) Optional accessories can be listed in the optional modules so that a decision on including them for price bid comparison can be taken at a later stage depending on constraints from the buyer's side.
 - (c) A complete solution with necessary accessories, software/s and requisite licenses is being proposed for procurement.
- The bidders are required to quote for all items including each of the optional modules if available.
 - The bidders are free to add additional items as part of the basic facility that could enhance the quality of microscopy.
 - Buyer is free to choose one or more or none of the optional modules. Technical bid shall include items necessary for commissioning of any combination of the basic facility + optional modules.
 - The bill of materials for each optional module should be such that it is self sufficient to account for necessary accessories, software and requisite licenses for integration with the basic facility.

- For each optional module, variants available from the vendor should be quoted along with a demonstrable specification to ascertain during the installation and commissioning process.
- Attention is drawn in particular to the detector/s where the parameters that distinguish different variants of the model being quoted should be clearly listed. Documentation on the commissioning and ascertaining of the performance metrics of each detector should be provided along with the technical bid.
- Calibration samples and documentation of the calibration process for each detector shall be part of the respective modules.
- Limitation on assembly or commissioning or operation of any particular combination of basic facility with any combination of modules shall be documented and highlighted as part of the technical bid. Vendor irresponsible to resolve any incompatibilities between different variants of the modules with the basic facility as part of the installation and commissioning process.

Optional Accessories:

1. Peltier cooling and heating stage
2. Sputter coating facility (Gold or carbon)
3. Bench top sample storage facility

High resolution SEM with latest technology must have following minimum specifications:

Sr. No.	Parameters	Required specifications
1.	Electron source	Thermionic–emission electron gun
2.	Resolution	3 nm or better at 30 kV (high vacuum mode) 10 nm or better at 3 kV (high vacuum mode) 15 nm or better at 1 kV (high vacuum mode) 4 nm or better at 30 kV (BSE-low vacuum mode)
3.	Accelerating voltage	0.5 to 30 kV or higher
4.	Magnification range	10 – 3, 00,000X or higher continuous in both high and low vacuum
5.	Probe current configuration	1 pA to 1μA or lower (High resolution must be

		achieved at highest probe current setting).
6.	Working distance	Equal to or less than 10 mm for resolution imaging.
7.	Detectors	<ul style="list-style-type: none"> ❖ Everhart-Thornley SE-detector. ❖ BSE detector for composition image, topographic image and shadow image in low and high vacuum mode. BSE detector should be objective mounted and should work for entire working distance. ❖ IR CCD camera for sample view. ❖ Real-time automatic contrast/brightness and manual override for all detectors.
8.	EDS	<ul style="list-style-type: none"> ❖ The detector should be LN₂ free SDD detector with an area of 25 mm² or more and 129 eV or better resolution at Mn-Kα for handling higher count rate. The detector should be also capable of detecting elements from Be to U and quantification from B to U based on ZAF method. ❖ Supplied EDS server and analysis software should be capable of performing data acquisition, storing and transfer in common Windows based application format. Qualitative and quantitative analysis, multi point analysis, line scanning and dot-mapping (selective area) including spectrum and color imaging and phase mapping with specimen drift correction.

		Suitable calibration standard should be provided. Any further version of the software and updates must be provided free of cost.
9.	Specimen stage	<ul style="list-style-type: none"> ❖ 5-axes Eu centric stage with 3-axis motorization with movements X = 80 mm or higher; Y= 43 mm or higher; Z = 38 mm or higher, T = -5 to 90°, Rotation (R) = 360° continuous. The stage should be Eu centric over the entire working distance to allow specimen tilt without shift in focus or an area of interest and auto Z focus to keep image focused even though stage Z position is altered. ❖ Dual joystick stage controller
10.	Specimen chamber	150 mm or higher inner diameter and 45 mm or higher height
11.	Number of ports	Sufficient number of ports should be available for future upgradations such as WDS, EBSD, Cryo stage, cooling stage, CLD etc.
12.	Specimen holder	Suitable specimen holder for single and multiple samples.
13.	Vacuum system	<ul style="list-style-type: none"> ❖ Turbo molecular pump (along with water chiller if water cooled TMP) backed up by rotary pump to provide ultraclean and high vacuum condition in microscope chamber with freely switchover between high and low vacuum mode without involving any mechanical aperture and alignments. ❖ This system should be fully automatic,

		<p>continuous pressure adjustable, computer controlled with fail-safe against failure of vacuum, power, water supply or ground fault.</p> <ul style="list-style-type: none"> ❖ Variable pressure range should be 100 Pa or higher.
14.	Lens configuration	<p>The SEM system should be equipped with suitable condenser and objective lens. The system should have movable and adjustable aperture for both imaging and analysis purpose.</p>
15.	Essential accessories	<ul style="list-style-type: none"> ❖ 4 rolls of carbon tape. ❖ Suitable UPS with minimum 1hour backup. ❖ Interface between SEM and EDS. ❖ 40 numbers of tungsten filaments. <p>Spares and consumables for minimum 3-year smooth operation.</p>
16.	System control	<ul style="list-style-type: none"> ❖ Microsoft® Windows 10 operating system and software for total system control, including EHT, lens supplies, scanning conditions, imaging, chamber pressure control, and image recording. ❖ Automatic control of a large number of functions including: Gun alignment, probe current optimization for spot size and spot size for magnification, auto brightness, auto contrast, auto stigmator, and auto focus.
17.	Image display and processing	<ul style="list-style-type: none"> ❖ 23" high end LED monitor. ❖ 4:3 Format with 16bit dynamic range:

		<p>1024x768 pixels, 2048x1536 pixels, 3072x2304 pixels, 4096x3072 pixels, 5120x3840 pixels.</p> <ul style="list-style-type: none"> ❖ Graphical User Interface (GUI) of at least 4 live images in a split window for simultaneous SE and BSE detection. ❖ Signal mixing of SE and BSE images to enhance image quality. ❖ Standard data zone includes magnification, working distance, EHT, scale bar and date. ❖ Smart Custom data zone. ❖ Comprehensive image annotation facilities with definable fonts and pseudo coloring. ❖ Measurement of phase area, length, particle size distribution and count with multi image calibrator and shape factor. ❖ Line profile display.
18.	Computer control system	<ul style="list-style-type: none"> ❖ Microsoft® Windows 10 operating system, 64 Bit. ❖ Microscope control software. ❖ RAM: minimum 8 GB or higher. ❖ Hard disk: 128 GB SSD for operating system; 1 TB HDD for data storage. ❖ SATA 3. ❖ Optical drive: DVD+/-R/RW Rewriter. ❖ 3 button optical cordless mouse with scroll wheel. ❖ 2x Gigabit Ethernet on board. First port

		<p>for communication to 3rd party systems second port connects to customer network.</p> <ul style="list-style-type: none"> ❖ Serial and USB ports. ❖ Storage of grey images in industry standard TIFF, BMP or JPG format.
19.	Included essential software	All essential required software CDs for better image acquisition and data analysis should be supplied along with the machine.
20.	Supporting tools	Specimen handling tools, stage tools and specimen preparation materials and general tools for maintenance of SEM machine.
21.	Maintenance	The supplier shall be able to provide uninterrupted supply of spares and accessories for at least a period of 10 years after warranty period. Undertaking certificate must be enclosed with the tender document.
22.	Up-gradation	The supplier shall be able to supply any new and / or upgraded software for SEM and EDS during warranty period free of cost.
23.	Warranty and AMC	2 years warranty after installation on all components and subcomponents should be provided + AMC should be quote for 2 years separately.
24.	Installation and training	The supplier shall be responsible for complete installation of the supplied system and technical as well as 3-4 days hands-on training free of cost at BTRA, Mumbai.

Special clauses:

- (a) If buyer feels to verify, vendor has to demonstrate the specifications, compiled in the technical compliance statement (tender document) after the technical bid opening.**
- (b) During the demonstration, vendor has to demonstrate the quoted equipment performance on 2/3 samples from BTRA, Mumbai on the same proposed model of the machine.**
- (c) Overall, it is summarized as, although the vendors meet and qualify the entire technical requirements, the quoted equipment has to deliver the satisfactorily performance during demonstration, otherwise the claim/s by the vendor is/are liable to be rejected.**

Annexure – II

Details of EMD in the form of D/D or Bank Guarantee to be submitted for each of the equipment

Sr. No.	Name of the item	Quantity	EMD in Rs.
1	Scanning Electron Microscope	1	4,50,000.00

FORMAT FOR COST DETAILS

(Cost particulars should be given in this format instrument wise/ accessories wise separately)

Note: All the cost particulars should be furnished either in Indian Rupees or foreign currency. If more than one model of the instrument is quoted, use separate sheets**Part 1: Cost details of imported equipments/instruments/Machine**

Name of the Instrument/Machine:
--

Sr. No.	Cost Details for foreign components	Cost in Rs / foreign currency (Pl. Specify)
i)	Total landed cost of the equipment inside the laboratory of BTRA as per the destination mentioned in the tender document. including installation, agency commission, packing, forwarding, insurance, custom clearing etc.	
ii)	BTRA will provide only custom duty exemption certificate and applicable duty for R&D purpose.	
iii)	AMC details: - (a) AMC rate/per year (comprehensive/non- comprehensive) for the next 3 years, after the expiry of warranty period including the accessories (Two preventive and one breakdown visits)	1 st Year: 2 nd Year: 3 rd Year:
	(b) Travelling cost /conditions	
	(c) Any other conditions	
Delivery schedule of the equipment:-		months

Part 2: Cost details of Indigenous equipments/instruments

Name of the Instrument :		
Sr. No.	Cost Details of indigenous items	Cost in Rs.
i)	Total Cost (inclusive all taxes, installation charges)	
ii)	AMC details (including the accessories):- (a) AMC rate comprehensive/non- comprehensive cost for the next 3 years, after the expiry of warranty period	1 st Year: 2 nd Year: 3 rd Year:
	(b) 2 preventive visits/1 breakdown visits per annum	
	(c) Travelling cost /conditions	
	(d) Any other conditions	
Delivery schedule of the equipment:-		

Cost details of optional items/spare parts required for the next 2 years

Part-I (imported items)

Sr. No.	Cost Details for foreign components	Cost in \$/£/ ¥/any other specify
i)	Total cost at the specified laboratory including agency commission, packing and forwarding, insurance, etc.	

Cost details of optional items / spare parts required for the next 2 years.

Part 2 : (Indigenous items) :-

Sr. No.	Cost Details of indigenous items	Cost in Rs.
i)	Total Cost (inclusive installation charges)	
ii)	Any others (to be specified)	
iii)	Total Cost	

Sr. No.	Details of Requirement for Opening L/C.(for imported items only)
1.	Foreign Supplier's Name and Complete address on whom L/C will be opened.
2.	Foreign Banker's Name & Address
3.	Foreign supplier's Bank Account No.
4.	Port of shipment
5.	Country of Origin
6.	Period to keep open the L/C – (Validity of L/C)
7.	Period of negotiation will be 21 days
8.	Delivery Schedule from the date of issuance of purchase order

Note:

1. Additional copies may be taken for each instruments
2. BTRA will not provide any excise or sales tax exemption certificates. However, duty exemption certificate will be given plus applicable duty for equipment/machines for R&D purpose. Please verify the same with specific equipment as some of the equipments are exempted from payment of duties completely.
3. Octroi , if paid , will be reimbursed separately at actuals

ANNEXURE-IV

FORMAT OF BANK GUARANTEE **FOR GUIDANCE PURPOSES ONLY** (ON NON-JUDICIAL STAMP PAPER OF Rs.100/-) (Applicable for successful bidders, to be submitted in lieu of security deposit)

Bank guarantee No. _____ Date: _____

This deed of guarantee made this _____ day of _____ 2016 (Two Thousand Sixteen only (Name and address of the Bank) hereinafter referred to as 'the Bank') which expression shall where successors and assignees of the Bank and the Bombay Textile Research Association, (hereinafter referred to as the BTRA) which expression shall unless repugnant to the context of the meaning thereof include its legal representatives, successors and assignees.

WHEREAS the BTRA has placed its Purchase Order bearing No. _____ dated _____ on (name and address of the bidder) (hereinafter called 'the supplier' for the supply of _____.

AND WHEREAS the BTRA has agreed to pay to the supplier 100% of the value of the equipment on delivery, installation and commissioning of equipment and on submission of a Bank Guarantee of an amount of 5% of the cost of the machinery/equipment (including the retained EMD amount) towards interest free security deposit and retention money which will be kept valid upto _____ being the period of 12 calendar months from the date of Bank Guarantee.

In consideration of the BTRA having agreed to pay to the supplier Rs. _____ (Rupees _____ only) being the 100% cost of the value of the equipment on delivery, installation and commissioning of equipment and on submission of a Bank Guarantee, we (name of the Bank) hereby undertake and guarantee to make repayment to BTRA the said 5% amount or any part thereof which does not become payable to the supplier by the BTRA in accordance with the subject to the terms and conditions of the said order within _____ days from the date of dispatch/from the date of receipt of the material at site. The Bank further undertakes not to revoke this guarantee during its currency except with the previous consent of the BTRA in writing and this guarantee shall be a continuous and irrevocable Guarantee up to a sum of Rs. _____ (Rupees _____ only).

The Bank shall not be discharged or released from this guarantee by any arrangement between the supplier and the BTRA with or without the consent of the Bank or any alterations in the obligation of the parties or by any indulgence, forbearance shown by BTRA to the supplier and the same shall not prejudice or restrict remedies against the Bank nor shall the same in any event be a ground of defence by the Bank against the BTRA. We (name of the Bank) do hereby undertake to pay an amount equal to 5% of the order value being the amount due and payable under this guarantee without any demur, merely on demand from the BTRA stating that the amount claimed is due to the BTRA. In case the BTRA puts forth a demand in writing on the Bank for the payment of the amount in full or in part against this Bank guarantee, the Bank shall consider that such demand by itself a conclusive evidence and proof that the supplier has failed in complying with the terms and conditions stipulated by BTRA in the purchase order and payment shall be made to the

BTRA without raising any dispute regarding the reasons for any such lapse/failure on the part of the supplier.

This guarantee shall be in addition to and without prejudice to any other securities or remedies which the BTRA may have to hereinafter possess against the supplier and the BTRA shall be under no obligation to marshal in favour of the Bank any such securities or fund or assets that the BTRA may be entitled to receiving or have a claim upon and the BTRA at its absolute discretion may vary, exchange renew, modify or refuse to complete or enforce or assign any security or instrument.

The Bank agrees that the amount hereby guaranteed shall be due and payable to the BTRA on BTRA's serving with a notice requiring the payment of the amount and such notice shall be deemed to have been served on the bank either by actual delivery thereof to the Bank or by dispatch thereof to the Bank by Registered Post shall be deemed to have been duly served on the Bank notwithstanding that the notice may not in fact have been delivered to the Bank.

In order to give full effect to the provisions of this guarantee, the Bank hereby waives all inconsistent with the above provisions and which the Bank might otherwise as guarantor be entitled to claim and enforce.

NOTWITHSTANDING anything contained herein before, the liability under this guarantee is restricted to Rs. _____ (Rupees _____ only). The guarantee shall remain in force till the _____ and unless the guarantee is renewed or a claim is preferred against the Bank within three months from the said date all rights of the BTRA under the guarantee shall cease and Bank shall be released and discharged from all liability hereunder.

(SIGNATURE)

PLACE:

DATE:

SEAL

CODE NO.

NOTE: 1. SUPPLIERS SHOULD ENSURE THAT SEAL AND CODE NO. OF THE SIGNATORY ARE AFFIXED BY BANKER, BEFORE SUBMISSION OF THE BANK GUARANTEE.

Annexure V

DELIVERY SCHEDULE OF EQUIPMENT

Sr.No	Equipment	Delivery Schedule from the date of acceptance of Purchase Order – maximum
1.	Indigenous equipments	1 Months from the date of issuing Purchase Order
2.	Imported equipments	3 Months from the date of opening of LC