



TENDER DOCUMENT

For purchase of Spares/Accessories for Carbon Fibre Spinning Machine under the project entitled “Development of Carbon Nanotube Reinforced Acrylic Precursors for Carbon Fibre” Sponsored by, Ministry of Textiles, Government of India, under(NTTM)National Technical Textiles Mission (vide letter no.F.No.2/3/2021-NTTM dated 09th April 2021)

Total No. of Equipment/machines: 1

Tender No. BTRA/MOT/NTTM/14/2022 Dated 07/09/2022

(Tender is invited from Original Equipment Manufacturers (OEM) Only)

Sale of Tender Document & downloading (from www.btraindia.com , https://eprocure.gov.in/eprocure/app)	From 07/09/2022 (14.30 pm) Up to 22/09/2022(17:00 pm)
Last date & time for acceptance of online Tenders only on https://eprocure.gov.in/eprocure/app	23/09/2022 (17:00 pm)
Date & time of opening of Technical bidsthrough e-procurement portal	26/09/2022 (11:55 am)
Date & time of opening of Commercial Bids Through e-tender portal	30/09/2022 (11:55 am)
Place of submission of online bids	https://eprocure.gov.in/eprocure/app

THE BOMBAY TEXTILE RESEARCH ASSOCIATION

L.B.S. Marg, Ghatkopar (West), Mumbai – 400 086
Tel:+91 22 6202 3636/6202 3666; Fax No.022-2500 0459

E-mail: info@btraindia.com

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

To,

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

Sub: Supply of Spares/Accessories for Carbon Fibre Spinning Machine 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 **Annexure I** as per the quantity and specifications are given in the tender along with standard spares/accessories as specified.
- b) Bidders are not required to submit Earnest Money Deposit (EMD) minimum @5% of the 'Tender Value' (quoted) waives for this tender as a special case.

EITHER

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

A scanned copy of the Demand Draft details should be uploaded on the e-tender portal and the 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 the closure of submission of bids. The Bank details are following:

Name of the beneficiary	: The Bombay Textile Research Association
Name of the Bank	: Union Bank of India
Branch	: Damodar Park, L.B.S. Marg, Ghatkopar (W), Mumbai-400086.
Account No.	: 023812010000196
MICR	: 400026273
IFCS Code	: UBIN0802387

- c) **The original tender document duly signed on all pages are enclosed.**
- d) If our tender is accepted, we undertake to supply the instruments and equipment 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.
- e) We agree to supply consumable/spare parts/accessories and replacement of the broken/damaged/non-compatible parts during the guarantee/warranty period, free of charge, as per the terms & conditions.
- f) We agree to train the personnel of laboratories free of charge, as per the terms and conditions.
- g) 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, before the commencement of the supply of machinery.
- h) We agree to the validity of our tender up to 30/12/2022.
- i) 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 the validity period.
 - 2) Supply and installation of instrument/equipment are not commenced within a specified period as given in the Tender document.
 - 3) Obligations under (e) above are not fulfilled
- J)The bidders shall use only tender documents as issued for submitting their bid and shall comply with various terms and conditions.
- k) 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.
- l) We understand that you are not bound to accept the lowest or any tender you may receive.
- m) 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

CONTENTS

Sr. No.	Subject	Page No.
I)	Terms and conditions - General	5
II)	Terms and Conditions- Special	11
III)	Annexure- I: Technical specification of the Spares/Accessories	17
	Annexure-II: Details of EMD payable for each item(Waive as a special case)	45
	Annexure- III: Format for filling up of cost details	46
	Annexure-IV: Format for Bank Guarantee	48
	Annexure-V: Delivery Schedule for indigenous	50
IV)	(Annexure-VI) Check List to Bidder	51

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

III (A) TERMS AND CONDITIONS- GENERAL

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://eprocure.gov.in/eprocure/app>

1. Tender documents are to be submitted mandatorily on the online portal <https://eprocure.gov.in/eprocure/app>
2. The full name of the person authorized 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 the 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 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 authorized agents only shall be considered.
10. **EARNEST MONEY DEPOSIT (EMD)**
- 10.1 Bidders are required to submit Earnest Money Deposit (EMD) minimum @5% of the 'Tender Value' (quoted) (This clause waives as a special case)

EITHER

Through Demand Draft/Bank Guarantee from any scheduled bank, favoring "The BTRA" payable at Mumbai.

A scanned copy of the Demand Draft should be uploaded on the e-tender portal and the 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 the closure of submission of bids. The Bank details are following:

Name of the beneficiary : The Bombay Textile Research Association
Name of the Bank : Union Bank of India
Branch : Damodar Park, L.B.S. Marg, Ghatkopar (W), Mumbai-400086.
Account No. : 023812010000196
MICR : 400026273
IFCS Code : UBIN0802387

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 Spares/Accessories 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 a 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 total of the whole tender.

13.2 Correction, if any, shall be made by crossing out, initialing with the 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, before submission.

13.5 The price may be offered in Indian Rupee INR .

14 ONLINE SUBMISSION

14.1 The tender shall be submitted online on or before 23/09/2022 up to 17:00 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 5% 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 outrightly 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 a sealed envelope)
(EMD waive as a special case for this tender)

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 the last three financial years.
- e. Period of the existence of manufacturer or its authorized representative in India.

d) An authorization letter from the 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 the 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 authorized agent for the equipment/item for which the bid is submitted.
 - g) List of organizations in India and abroad, along with Contact Person, Address, Tel. No., Fax No. etc., to which a **similar make/model** of the equipment was 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 letterhead of the bidder stating:
 - a. That the minimum **warranty period of three years for comprehensive warranty**
 - 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 testing instruments, wherever applicable.
 - d. Confirmation that the quoted rates are valid till 30/09/2022.
 - e. The details regarding the service centres, stocking of spares etc.,
 - j) Addenda/corrigenda/clarification issued by BTRA before the due date of tender, duly signed by the authorized person.
 - k) A letter indicating assumptions, criteria, 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, PowerPoint 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 any certified authorized agency, wherever applicable.**
- 14.4 **“COMMERCIAL BIDS”** shall contain (Scanned copies need to be uploaded)
- a) 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.

- b) Minimum required essential spare parts for the 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://eprocure.gov.in/eprocure/app>

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

15. VALIDITY OF THE TENDER: -

Rates quoted by the bidder and the earnest money deposit submitted shall be valid till 30/09/2022.

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 the tenderer through public notice/individual Correspondence/through BTRA's website.
- Technical bids will be evaluated based on the technical capabilities for executing the order.
- **Commercial bids will be opened only for technically qualified bidders. Award of a contract may be made to the L1 bidder.**

17. AGREEMENT

The successful bidder shall sign and return a copy of the 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 in **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.
- 18.2 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 that 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 is liable to be rejected.
- 18.5 If the validity of the bid is not up to 30/09/2022 the tender will be rejected.
- 18.6 If the Offer document(PDF form) as per tender duly signed by the authorized a 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 equipment 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 the requirement 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 the requirement of instruments and change the location where the supply has to be effected.
23. In case of a supply of indigenous equipment/machinery & accessories, the payment terms shall be as under:
a) 20% of the order value will be paid as an advance against the confirmation of orders.
b) 70% payment will be made against the successful installation, commissioning, training and demonstration of satisfactory performance of the machinery / Equipment at the site.
c) Balance 10% payment will be made after one year from the date of commissioning
24. The delivery installation & commissioning period as agreed will not be extended under normal conditions. A 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.
25. 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://eprocure.gov.in/eprocure/app> a Government of India portal. 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 at least 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 an official copy of the 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 the relevant part (i.e., 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 the integrity of data and authenticity/ non-repudiation of electronic records, and to be compliant with IT Act 2000, each user must have a Digital Certificate (DC). also referred to as Digital Signature Certificate (DSC), of Class 3, issued by a Certifying Authority (CA) licensed by Controller of Certifying Authorities (CCA) [refer <http://www.cca.gov.in>].

Registration

To use the ElectronicTender® portal <https://eprocure.gov.in/eprocure/app>, 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 the e-tendering activities. In ETS terminology, this person will be referred to as the SuperUser (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 <https://eprocure.gov.in/eprocure/app> 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 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 the 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 the creation of users, assigning roles to them, etc.

Helpdesk	
Telephone/Mobile	+91-0120-4200462, +91 0120-4001002 +91 0120-4001005
E-mail ID	cppp-nic@nic.in

Some Bidding related Information for this Tender

The entire bidsubmission would be online on ETS (unless specified for Offline Submissions). The 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 the 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/ Bank Guarantee in favour of 'The Bombay Textile Research Associations' payable at Mumbai to the extent of a minimum of 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 a 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', security provision has been made at various stages in ElectronicTender's software. Specifically for Bid Submission, some security-related aspects are outlined below:

As part of the ElectronicEncrypted® functionality, the contents of both the 'ElectronicForms®' 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. A separate Pass-Phrase must 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 the e-tendering service provider.

CAUTION: All bidders must fill ElectronicForms® for each bid-part sincerely and carefully, and avoid any discrepancy between information given in the ElectronicForms® and the corresponding Main-Bid. For transparency, the information submitted by a bidder in the ElectronicForms® 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 ElectronicForms®, the TOE officer may make available for downloading the corresponding Main-Bid of that bidder at the risk of the bidder. If the variation is noted between the information contained in the ElectronicForms® and the 'Main-Bid', the contents of the ElectronicForms® shall prevail. Alternatively, the Buyer organization reserves the right to consider the higher of the two pieces of information (eg the higher price) for short-listing, and the lower of the two pieces of information (eg the lower price) for 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 the 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 BidPart is submitted to BTRA in a sealed envelope before the start date and time of the Tender Opening Event (TOE).

There is 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 representatives of bidders (i.e. Supplier organization) are requested to carry a Laptop with Wireless Internet Connectivity, if they wish to come to the 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://eprocure.gov.in/eprocure/app>, 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 an 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 the 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 the creation of -

Marketing Authority (MA) [i.e. 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 (i.e. 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 the 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 a physical copy of Tender Documents with official receipt in the paper-based manual tendering system.

5. Submit your bids well in advance of the 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 the deadline for Bid-Submission, a facility is provided to the bidder to 'Annual Previous Submission' from the Bid-Submission Overview page and start afresh with new Pass-Phrase(s)

7. ETS will make your bid available for an 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 the '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 a configuration with minimum Windows 7 or above, and Broadband connectivity Microsoft Internet Explorer 7.0 or above Digital Certificate(s)

Detailed Specifications of 1) Spares /Accessories for Carbon fibre spinning machine

The purpose is to put a tender on a pilot-scale processing line to develop carbon fibre precursors from the various polymer solutions and their characterization. dimethylformamide (DMF).

Equipment No. 1.

Requirements for Spares/Accessories for Carbon Fibre Spinning Machine

Fibre spinning machine parts specification

Requirements for Spinning machine parts and dope testing equipment

- a. 2 Computer-controlled reactors capable (40L net capacity) to polymerize/prepare and store PAN dope solution in DMAc, DMF and DMSO with a range of tools for homogenization and, viscosity control etc.
- b. 1 miniature table top reactor based on the same design and material specification but smaller in size (2L capacity) to simulate the polymerization reaction and working of the main reactor on Lab-scale.
- c. Control parameters
- d. Wide range of characterization equipment for dope.

Detailed specification:

2 Reactors need to be made as per the drawings and specifications:

Sketch of batch tank

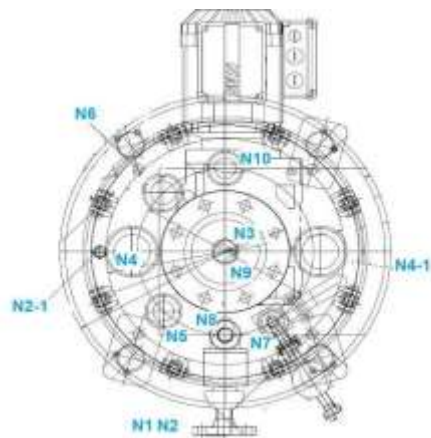
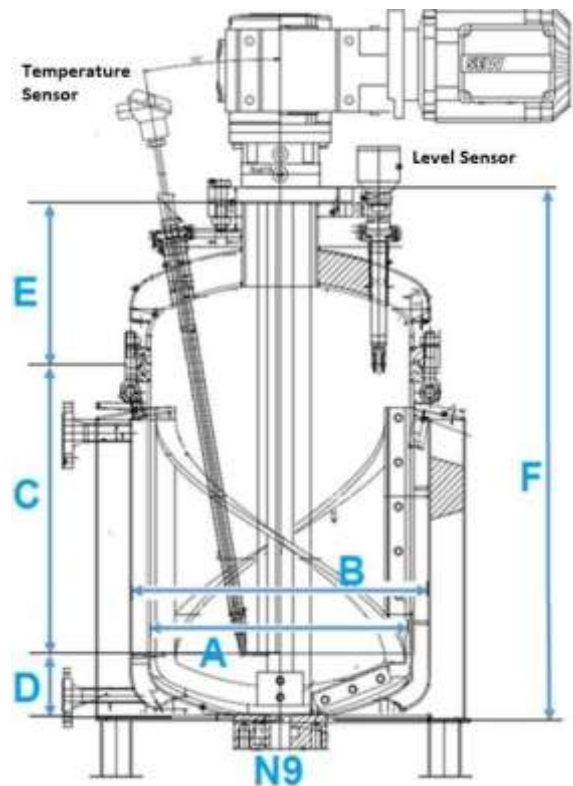
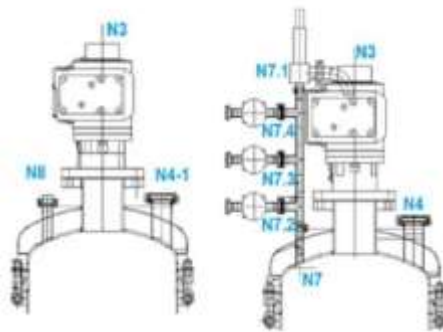
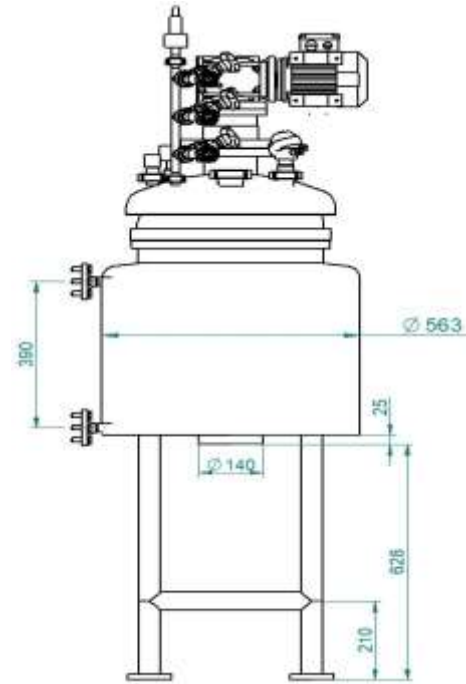


Table of Dimensions

Indication	Unit	Value	Dimension
------------	------	-------	-----------

Tank volume	litre	Net 40 and Gross 60	As per drawing
Tank width inside	A	mm	400
Tank width outside	B	mm	-
Height tank	C	mm	400
Height dished bottom	D	mm	-
Height lid	E	mm	-
Distance flange to bottom	F	mm	-

Execution					
Table of Nozzles					
Denomination	No.		Number	DN / PN	
Infeed tempering medium	N1		1	DN15/PN16	
Outlet tempering medium	N2		1	DN20/PN16	
Venting tempering medium	N2.1		1	1/4"	
Agitator	N3	1	DN200	Execution	Description
Sight glass	N4	1	DN50 AWH	EN1092-1 / 11B	-
Sight glass	N4.1	1	DN65 AWH	EN1092-1 / 11B	-
Level Indicator max	N5	1	DN25/PN16	Sleeve at the highest point in the temperature control jacket	-
Temperature Indicator	N6	1	DN25/PN10	centrically in the upper floor	-

Distributor	N7	1	DN15/PN10	Sight glass fitting	with borosilicate glass
Safety valve	N7.1	1	DN15	Sight glass fitting incl. LED light	with borosilicate glass
Venting valve	N7.2	1	DN15	Blind cover and welded socket 3/8" level measurement	-
Inlet valve	N7.3	1	DN15	Immersion tube	-
Vacuum Connection	N7.4	1	DN16		-
Polimer Inlet	N8	1	DN15	reader Typ481	-
Outlet flange	N9	1	Ø 140/30H8	DV-ST UP 2-W	-
Pressure Indicator	N10	1	1 ½"	DV-ST UP 2-W	-

Batch Tank			
Drawing No.	Dim		
General			
corrosion potential inside	-	Demineralized water, DMAC, DMF, DMSO, PAN polymer or blends of the media	-
corrosion potential double wall	-	water with corrosion inhibitors and biocides, Thermofluid	-
design of tempering /	-	indirectly by tempering medium from separate tempering system	-
Material of sealing's in contact with tempering media /	-	PTFE / FFKM	-

Isolation material outside wall /	-	Outer cladding made of Cr-Ni steel, welded Execution	-
Material of insulation /	-	50 mm mineral wool, aluminium-clad, chloride-free	-

Tank			
Filling volume of vessel	1	40	-
Total volume of vessel	1	60	-
volume of double wall	1	-	-
Material of container in contact with dope	-	stainless steel grade 1.4571	-
Material of double shell outside	-	stainless steel grade 1.4301 or similar	-
Surface vessel inside	-	Polished, max. Ra 0.8 µm	-
Surface vessel outside	-	manufacturer standard	-
Max. gap space at radius vessel wall to agitator	mm	without	Scraper on the wall and scraper on the floor
operating pressure media space	bar abs	0.1 – 8	-
design pressure media space	bar abs	0.1 – 8	-
test pressure media space	bar abs	ca. 10	depending on regulations
operating pressure double shell	bar abs	6	-
design pressure double shell	bar abs	8	-

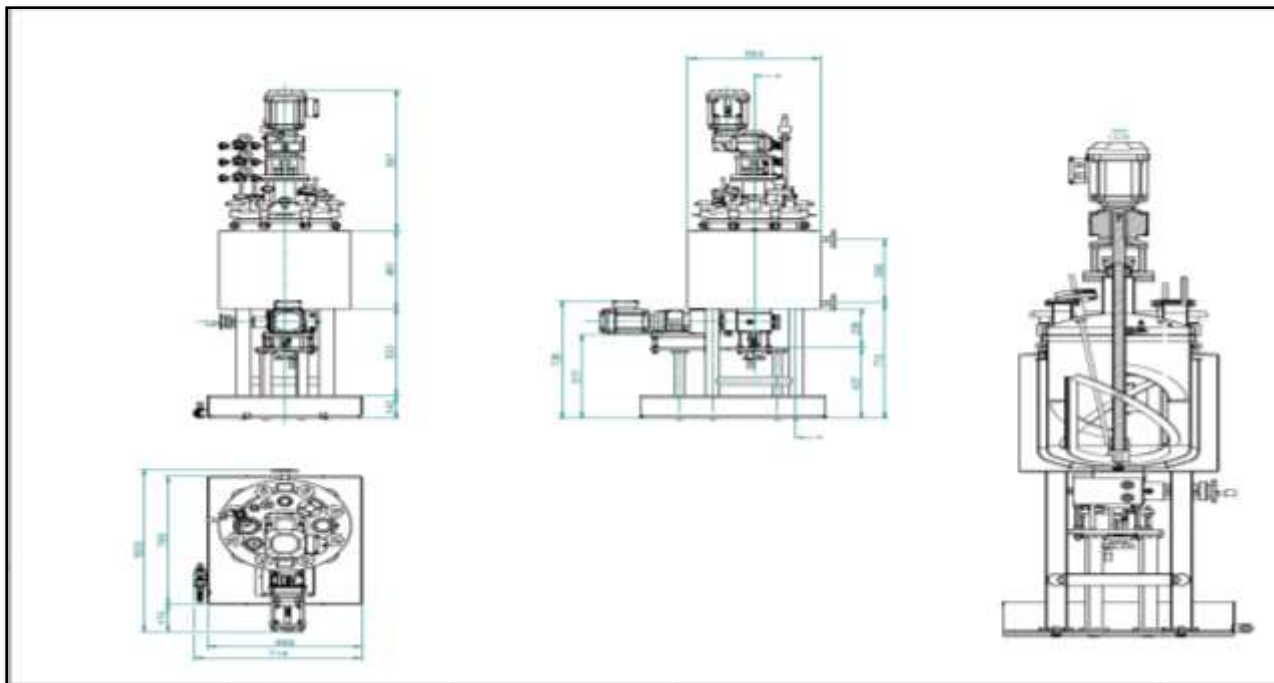
test pressure double shell	bar abs	ca. 10	depending on regulations
operating temp in vessel	°C	15 to 90	-
temp in double shell of vessel	°C	15 to 100	-
Ambient temperature, max.	°C	35	-
Insulation	-	Mineral wool	-
Material of sealing's in contact with process media	-	PTFE	-
Fixing cover	-	with screws	-
lifting lugs	-	by 2 pcs lifting lugs at cover	-
fixation to framework	-	by 4 pcs feet, Pipe, material: stainless steel	-

Agitator			
Agitator task	-	Homogenize, support the degassing	-
Agitator type	-	Double helix segment stirrer, i.e. Double helix stirrer open at the top, agitators connected to agitator shaft, including motor and gear, frequency-controlled motor, coupling between agitator and drive, motor suitable for inverter operation	exemplary representation according to drawing (perhaps to design more rigid)
Agitator Motor Power	kW	1,1kW	-

Agitator Motor Frequency	Hz	50Hz	-	
Speed agitator for design	U/min	(113 U/min) @50Hz	-	
Speed range agitator	U/min	30-120	-	
Rated torque agitator	Nm	-	-	
Motor for agitator	-	3Ph.230/ 400V Y/Δ4,45A/2,55A	Motor 400V 4Ph. Inverter driven	3xPTC
Material agitator, in contact with the product	-	1.4571 or similar, polished, Ra = 1.6 μm	-	
Surface agitator not in contact with the product	-	1.4571	-	
scraper	-	PTFE with 25% GF	Gap agitator / tank adapted to scrapers /	
Viscosity Mixing material for agitator design	PaS	0,1 Pas - Max. 250 Pas	-	
additional equipment	-	Rotary vane vacuum pump for degassing the product means for generating a negative pressure in the tank, for example, bush RA 0016 with 16m ³ /h and 0.5 mbar final pressure	-	
Product data Mixer for	kg/m ³	1170	-	

agitator design: Density			
-----------------------------	--	--	--

Power and Control			
Supply Voltage	V	400	-
Connection current, fusing	A	Included in module Spinning Unit	-
operator interface		Included in module Spinning Unit	-
Pressure sensor	PI	1 Tri-Clamp 1 ½ with measuring transmitter. WIKA (SA-11-A-BCS-RT-AGA4ZZ-ZZZ)	WIKA 4 - 20mA
Dope temperature	TIC	GA25x	Labom PT100
Level sensor	LI	Level switch in the tank	VEGA
Control		Included in module Spinning Unit	-
electrical interfaces		Included in module Spinning Unit	-
length of connection cables		Included in module Spinning Unit	-



Jacketed vessel drawing

NOTE: Supplier must supply suitable fittings and piping with the machine at the time of installation. Separate computers for each reactor. Computers connected to the reactors should be of the latest mid-end to high-end configuration for recording and dope characteristic data during operation along with a printer

Table-top miniature reactor for lab-scale polymerization

Net volume	2 Litre
Reactor Design	Table-top
Table	movable stainless-steel table
Design Temperature	Same as main reactors
Design Pressure	Same as main reactors
Reactor inner lining	Same as main reactors
Compatible solvents	DMAc, DMSO, DMF

Polymerization system	PAN polymer, PAN-copolymer etc.
-----------------------	---------------------------------

NOTE: The material specification for the miniature reactor is the same as that of the main reactors and should be able to simulate all the possible conditions and must have all the necessary sensors and accessories as mentioned for main reactors. The miniature reactor design should not differ from the main reactor.

Specification of vacuum pump:

Inlet connection thread	: G 3/4" + G 1/2" Inside
Outlet connection	: - - -
Nominal pumping speed at 50 Hz	: 16.0 m ³ /h 9.4 cfm
Nominal pumping speed at 60 Hz	: 19.0 m ³ /h 11.2 cfm
Pumping speed at 50 Hz	: 15.0 m ³ /h 8.8 cfm
Pumping speed at 60 Hz	: 17.0 m ³ /h 10.0 cfm
Ultimate partial pressure without gas ballast	: ≤ 1.0 mbar ≤ 0.75 Torr
Ultimate total pressure without gas ballast	: ≤ 1.0 mbar ≤ 0.75 Torr
Ultimate total pressure with gas ballast	: ≤ 2.0 mbar ≤ 1.5 Torr
Water vapour tolerance at 50 Hz	: 10.0 mbar 7.5 Torr
Water vapour tolerance at 60 Hz	: 15.0 mbar 11.3 Torr
Water vapour capacity at 50 Hz	: 30 g/h
Water vapour capacity at 60 Hz	: 50 g/h
Operating fluid	: LVO 120
Operating fluid capacity	: 0.5 l 0.53 qt
Noise level to DIN 45 635 without gas ballast	: 60 - 64 dB(A)
with gas ballast	: - - -
Mains connection Hz	: 3-ph, 220-240/380-415 V, 50 Hz
60 Hz	: 3-ph, 220-266/380-460 V,
Motor rating at 50 Hz	: 550 W 0.75 HP
Motor rating at 60 Hz	: 750 W 1.00 HP
Rotation speed at 50 Hz	: 3.000 min ⁻¹ 3.000 rpm
Rotation speed at 60 Hz	: 3.600 min ⁻¹ 3.600 rpm
Motor protection rating	: IP 55-F
Admissible ambient temperature	: +12 to +40°C +54 to +104°F

Specification of Vacuum pump accessory (cold trap):

Inlet	: Small flange KF DN 25
Outlet	: Small flange KF DN 25
Materials	: Stainless steel, FKM, NBR
Volume catchpot	: 500 ml
Coolant capacity	: 1000ml

NOTE: Supplier must supply suitable fittings and piping with the machine at the time of installation with the reactors.

Specification of conditioning unit (Chiller):

Operating temperature range	-20 °C to 100 °C
Internal temperature sensor	Pt100
Sensor external connection	Pt100
Temperature stability at -10°C	0.2 K
Interface digital Ethernet, USB (Host u. Device),	RS232
Safety classification	Class III / FL
Heating power	12 kW
Refrigeration machine free	air-cooled, CFC- and HCFC-
Refrigerant (ASHRAE, GHS)	R449A (A1, H280)
Circulation pump:	E2
Max. delivery	130 litre/min
Max. delivery pressure	5,7 bar
Delivery at 2,4 bar	116 l/min
Delivery at 2,5 bar	115 l/min
Delivery at 3,0 bar	108 l/min
Delivery at 3,5 bar	100 l/min
Delivery at 4,0 bar	92 l/min
Delivery at 4,5 bar	80 l/min
Delivery at 5,0 bar	59 l/min
Delivery at 5,5 bar	20 l/min

Pump connection	G1 1/4 male
min. filling capacity	18 l
Volume of expansion	48 l
Degree of protection	IP20
Nominal current	27A

NOTE: Supplier must supply suitable fittings and piping with the machine at the time of installation with the reactors.

Specification for dope characterization equipment

High shear homogenizer unit:

Working volume (litre)	: 0.02 to 2
Viscosity max [mPas]	: 5000 (or better)
Speed (Max)	: 18000 (or better)
Speed display screen)	: Digital (LCD or LED)
Continuous running time (hours)	: 10 (or better)
Ability to record and export data operation/mixing data	

Viscometry analysis unit:

Required Brookfield viscometer type rheology analysis equipment for viscosity analysis of the dope solution. Requirement as follows:

Screen display	Digital (LCD or LED screen)
Data export	Should come with a computer and software to export and analyse the measured data
Software display	Viscosity, temperature, shear rate/stress, % torque. Spindle/speed, step program status
Built-In options	Timed tests, data averaging, Programmable QC limits/alarms, customizable speed/spindle lists, live data comparison
Accuracy	1.0% of range
Repeatability	+/- 0.2%

Suitable for working with	Polymer solutions, inks, emulsions, paints, gels, epoxies, asphalt etc.
---------------------------	---

NOTE: Suitable latest configuration mid-end to high-end computer system attached with the machine to record, analyse and export data with the printer facility. The supplier should provide all the probes and accessories required for testing and analysis of the above materials.

High power sonication unit:

- Power Rating: should be able to deliver upto 700 watts of output power (or better)
- Frequency of generated sonication wave: 20 khz or more
- Sonication probe: Standard probe of 1/2” diameter with replaceable tip
- Touch screen control panel with colour LCD/LED screen clearly displaying all operating parameters and options that should enable the easy access to all the parameters and functions of the sonicator
- The System should have full amplitude control (1-100 %) for effective processing of the sample
- The System should run in pulse mode with adjustable pulse on and off times
- Pulse On/Off time should be adjustable to 1 second to 10 sec or more
- Total Energy delivered to the probe should be displayed.
- Should have programmability and memory to save the Parameters including processing Times, pulse on/off and amplitude.
- The unit should be equipped with overload protection
- Should be able to Auto-tune the system by monitoring the frequency changes in the converter/tip assembly to maintain the electrical efficiency.
- Replacement wrench set should be supplied with the machine.

Accessories

- A high throughput probe of 24-tip horn or more to process large no of samples at a time
- Additional Microtip probes of 1/4 inch diameter and 1/8 inch diameter to process small volume samples
- One replacement tip for standard horn (1/2”)
- Sound enclosure to house the sonicator horn
- Jack stand for height adjustment of the sample

Precision weighing unit:

Maximum weight : 200g (or more)

Minimum weight	: 0.1 mg (or better)
Least count	: 0.1 mg (or better)
Display	: Digital (LCD or LED screen)

NOTE: Should come with housing to avoid fluctuations due to atmospheric air

Thin-film preparation unit:

Required spin coating type unit for making even thickness thin films of polymer dope for various characterization:

Speed Max	: 5000 RPM or better
Speed min	: 500 RPM or better
Coating thickness	: 50 micro or better
Work chamber coating	: Teflon (PTFE)
Display	: Digital (LCD or LED screen)
Working chamber size	: 7 inches or better

Warranty:

All equipment must come with at least 3 years of Comprehensive warranty.

Special comments:

1. Team BTRA will inspect the company for capability verification and quality of equipment before awarding the tender.
2. Team BTRA will visit the company premises and verify all the equipment before their dispatch to BTRA premises.
3. Training must be given to at least 3 BTRA people on handling the equipment.
4. Company should submit at least 3 references/recommendations/satisfactory letters from their previous customers at the time of tender submission.

Warranty

Should cover all hardware & software parts, consumable, and wear & tear parts for 3 years from the date of complete functioning. Should also apply for installation and defect during installation and shipping.

The warranty should also cover all consumables further repairs and indirect losses at least 3 years of Comprehensive warranty.

Training and cross-checking

1. Bidders should have supplied machines of similar/higher capacity. They should Share the list of their customers.
2. Before we purchase the equipment, we would like to check the capability of the Accessories/Spares with test results. We would like to check out the spinnability is possible or not for the polymer (PAN) having intrinsic viscosity ~ 1.6 dl/g and viscosity average molecular weight 1.1×10^5 or above at your premises. The supplier shall be responsible for complete installation/commissioning of the supplied system and trial running with the above-mentioned samples. The Supplier should also provide professional training for at least 3 members by their experts at their premises.

Warranty

Minimum three years warranty + 3 years compressive AMC

Spare Parts: Necessary or Frequently Required

Latest configuration Personal computer and Printer to be included

Special clauses

- If the buyer feels to verify, the vendor has to demonstrate the specifications, compiled in the technical compliance statement (tender document) after the technical bid opening.
- After qualifying the technical needs, if required, BTRA, Mumbai will check the capability of the bided instrument with the polymer mentioned earlier. Performance checking may be done physically or online. If the performance does not meet the requirement, then the bid will not be considered further.

- Overall, it is summarized as, although the vendors meet and qualify the entire technical requirements, the quoted equipment has to deliver the satisfactory performance during the 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	<u>Spares/Accessories for Carbon Fibre Spinning Machine</u>	1	WAIVE

Annexure III

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 equipment's/instruments/Machine

Name of the Instrument/Machine:
--

Sr.No.	Cost Details for foreign components	Cost in Rs / foreign currency
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, customs clearing etc.	INR
ii)	BTRA will provide only a custom duty exemption certificate and applicable duty for R&D purposes.	
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 equipment/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 the 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 US \$ Only
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	

Note:

1. Additional copies may be taken for each instrument
2. BTRA will not provide any excise or sales tax exemption certificates. However, a duty exemption certificate will be given plus applicable duty for equipment/machines for R&D purposes. Please verify the same with specific equipment as some of the equipment are exempted from payment of duties completely.

Use only for Security Deposit

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 _____ 2022 (Two Thousand Twenty two 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 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 the 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 is 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 defense 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 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 receive 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 equipment	1 Month from the date of issuing Purchase Order
2.	Imported equipment	8months from the date of opening of LC

Check List to Bidder

1. Get all the clarification regarding terms and conditions, specificationsetc. During the pre-bid meeting or by writing to the Director BTRA, before submission of bids.
2. The original tender document purchased/downloaded in full has to be submitted along with the technical bids duly signed on all the pages. Adequate copies of the format of the cost details may be taken separately for each instrument.
3. If the tender document is downloaded,a separate DD of the exact amount as of tender fee is to be enclosed and also the required EMD for each instrument as mentioned in the tender document are to be enclosed. A combined D.D. covering the EMD for all instruments quoted can be drawn and kept in one of the technical bids. Copies of this D.D. can be kept in other technical bids.
4. A covering letter duly signed by the authorized person as per the specimen given at **Annexure V** of the tender document.
5. Ensure that a User certificate from atleast two users, on their letterhead stating that the performance of similar make and model supplied to them is satisfactory, is enclosed.
6. **No. Commercial terms of reference should be given in the technical bid at all.**
7. Descriptive leaflet/brochure of the equipment quoted are enclosed along with the technical bid.
8. Copy of the certificate for the calibration of similar make and model of the equipment/instrument for which bid is submitted from an accredited calibration laboratory or NPL, if applicable, is enclosed.
9. The technical and commercial bids are submitted separately superscribing "Cover 'A' – Technical bid for ----- instrument or Cover 'B' – Commercial bid for ----- instrument. Last date..... Though technical bids can be kept together in 1 envelope, ensure that commercial bids are kept separately for each instrument.
10. Proof regarding manufacturer/authorized agent, as the case may be, is enclosed.

11. Before submission of bids, bidders have to ensure that the equipment quoted by them is suitable for testing as per the national/international standard mentioned in the specification.
12. Cost details are to be given in the prescribed format only. If more than one model of instrument is quoted, a separate sheet may be enclosed.

Note: If the bidder fails to furnish all the relevant documents/information as mentioned in the tender document, the tender will be rejected.