



भाकृअनुप-राष्ट्रीय प्राकृतिक रेशा अभियांत्रिकी एवं प्रौद्योगिकी संस्थान
ICAR-National Institute of Natural Fibre Engineering and Technology

(पूर्व भाकृअनुप-निरजैफ्ट Erstwhile ICAR-NIRJAFT)

भारतीय कृषि अनुसंधान परिषद INDIAN COUNCIL OF AGRICULTURAL RESEARCH
12, रीजेन्ट पार्क, कोलकाता -700040 12, REGENT PARK, KOLKATA -700040

(आईएसओ 9001:2015 प्रमाणित संस्थान ISO 9001:2015 CERTIFIED INSTITUTE)

दूरभाष Phone: 2471-1807 (निदेशक Director), 24212115/16/17 (ईपीबीएक्स EPBX), फैक्स Fax: ++91-33-24712583

ई-मेल E-Mail- director.ninfet@icar.gov.in, nirjaftdirectorcell13@gmail.com, वेबसाइट/Website:

www.nirjaft.res.in



F. No- 7(5)/Adm.III/Grading Instrument/Banana Fibre/19-20

Date: 27/01/2020

Sealed and Typed tenders are invited from interested firms under **single bid system** for
“**Manufacturing service of one Integrated Grading Instrument for Banana Fibre in respect of fibre strength and fineness as grading parameters**” to ICAR-NINFET, Kolkata-700040.

CRITICAL DATE SHEET

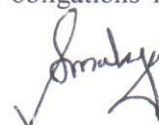
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|---|---|
| Date and Time for Issue/Publishing | 05:00 P.M on 27.01.2020 |
| Bid Submission Start Date and Time | 10.00 A.M on 28.01.2020 |
| Bid Submission & EMD Submission End Date and Time | 02.00 P.M on 18.02.2020 |
| Date and Time for Opening of Bid | 03.00 P.M on 18.02.2020 |
| Address for Communication | Director, ICAR NINFET, 12 Regent Park, Kolkata-700040 |
| For any clarification, please contact | Swarnali Mukherjee Asstt. Administrative Officer(Adm III) Contact:033-24212115/16/17 |

The Tender document is also available at our web-site: www.nirjaft.res.in and
<https://eprocure.gov.in/epublish/app> **Tender ID No. 2020_ICAR_513128_1**

Swarnali Mukherjee 27/01/2020
Asstt. Administrative Officer (Adm III)

TERMS & CONDITIONS :

1. **Our quotation no and its due date of opening** should be inscribed on the cover of your quotation. Unsealed quotation will not be accepted. Quotation which does not indicate our quotation no. and its due date of opening will be summarily rejected. Price/rate to be quoted should be clearly mentioned in figure and words. Any overwriting/use of white ink or other discrepancy will make the tender liable to be rejected.
2. Last date of submission of tender is 18.02.2020 upto 2.00 P.M, which should be dropped in the tender box kept in Adm III section either by hand or by post. The Authority will not be liable for any kind of postal delay. Tender will be opened on the same date at 3.00 P.M.
3. The interested Firms are required to deposit (in original) **Earnest Money Deposit (EMD) of ₹5,000/-(Five thousand only)** in the form of Demand Draft from any of the scheduled Bank in favour of **"ICAR NINFET" payable at Kolkata** so as to reach on or before bid opening date and time as mentioned in the Critical Date Sheet, otherwise the tender will not be considered. If the firm is seeking exemption, they should submit the concerned certificate of exemption in relevant field issued from the competent authority. ICAR NINFET will not be liable for any postal delay. The EMD will be returned to the unsuccessful bidders after completion of tender evaluation process. No interest on Security Deposit and Earnest money deposit shall be paid by the ICAR NINFET to the tenderer.
4. The firm, after submitting tender, will not be permitted to withdraw their offer or modify the terms and conditions thereof. If the firm fails to observe and comply with the foregoing stipulation, EMD will be forfeited. In the event of the offer made by the firm not being accepted, the amount of EMD will be refunded. No interest will be paid on EMD.
5. No extra payment shall be paid on account of any discrepancy in nomenclature of service. While submitting the tender, if any of the prescribed conditions are not fulfilled or are incomplete in any form, the tender is liable to be rejected. If any tenderer stipulate any condition of his own, such conditional tender is liable to be rejected.
6. Any change/corrigendum/extension of opening date in respect of this tender shall be issued through websites only and no press notification will be issued in this regard. Bidders are therefore requested to regularly visit our website www.nirjaft.res.in for updates.
7. If the date fixed for opening of Tenders is subsequently declared a holiday, the tenders will be opened on the next working day following the holiday but there will be no change in the time for opening indicated above.
8. The tender must be in the prescribed formats only and shall be accompanied with all other necessary documents. The consolidated amount with breakup of the GST amount has to be indicated in Indian Rupees both in words and figures (in the prescribed proforma of Financial Bid-Annexure IV) and there shall be no correction or overtyping etc. The offers with any corrections/deviation in prices either in words/figures shall be summarily ignored. The conditional offer (s) shall, in no case, be accepted.
9. The successful bidder shall have to deposit 10% of the total bid amount as performance security and within the time frame indicated by the ICAR NINFET. Performance Security must be made valid till the end of 60 days beyond the expiry of the all contractual obligations including the

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Warranty obligations calculated from the date of award of contract. The same shall stand forfeited in case of cancellation of the contract for any breach of contract or for any deficiency in the performance noticed during the currency of the contract.

10. The tendering firm has to carefully assess the scope of work with specific reference to the inside and outside premises of the building and understand the details of the infrastructure/facilities requisitioned. The tenderer may, in their own interest, inspect the site ICAR NINFET, 12 Regent Park, Kolkata 700040, where the services are to be provided. For any clarification (s) as to the tender/scope of work or inspection of the premises, the prospective bidders may contact Dr. D.P.Ray, Pr Scientist, QE&I Division of ICAR NINFET, Kolkata-700040 with prior appointment on phone no.033-24212115/16/17 (extn 295) on any working day between 3 to 4 PM.
11. The tenderer are liable to be ignored if complete information as required is not given therein or if the particular asked for in the schedules to the tenders is not fully filled in. Person signing the tenders or other documents must ensure that he is an authorized person on behalf of the firm to do so. The person signing the tenders form or any other documents forming part of the contract on behalf of another shall be deemed to warranty that he has authority to bind such other and if, on enquiry it appears that the person so signing had no authority to do so, ICAR NINFET shall without prejudice to other civil and criminal remedies cancel the contract and hold the signatory liable for all costs and damages. Each page of the tenders and the schedules to the tenders and annexure, if any, should be signed by the tenderer.
12. Acceptance by ICAR NINFET will be communicated by letter or any other form of communication. Formal letter of acceptance and work order of the Tenders will be forwarded as soon as possible, but the earlier instructions in the FAX, email/Express letter etc. should be acted upon immediately.
13. The Contract will be strictly monitored as per Scope of work given in Annexure I in respect of minimum standard defined in the said Annexure. In case any shortcomings or deficiencies are noticed during the currency of contract period or any other contractual dispute, the contract can be terminated by giving writing intimation. The decision of the Director, ICAR NINFET in this regard shall be final and binding.
14. If the contract is terminated on the grounds of glaring shortcomings or deficiencies during the currency of its tenure including extended tenure, if any, ICAR NINFET shall have all rights to make suitable alternative arrangements and the cost, if any, will be borne by the agency/contractor.
15. The rates quoted by the Agency should be inclusive of all taxes, packing & forwarding charges and FOR delivery at ICAR NINFET. It shall be fixed for the period of the contract and no request for any change/ modification shall be entertained before expiry of the period of the contract. The rates quoted shall be valid for a minimum period of 60 days from the last date fixed for the receipt of quotations. Delivery along with installation of the item should be done within 30 days from the date of purchase order from ICAR NINFET.
16. Payment will be made through e transfer on after satisfactory execution of the assignment and on production of pre-receipted bills in triplicate. Bank Account No, Account Holders Name, Branch Name and IFSC code of the bank must be given in NEFT mandate form, failing of which payment will not be released. Tax will be deducted at source as per rule, if applicable.
17. The supplied instrument must have one year warranty on mechanical and electronic components starting from date of installation against manufacturing defects.

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18. (ii) The free technical support should be given during sample testing during initial phase of operation of instrument within 2 months from date of installation.
19. The Schematic diagram, Circuit diagram, Software or Firmware code or any other relevant documents for development of equipment will be the sole property of ICAR NINFET and to be handed over to ICAR NINFET on or before installation of the equipment. The IPR knowhow, of the developed equipment will be the commercial secret and to be remained with ICAR NINFET.
20. Liquidated Damages clause:
- (i) Contractor shall be responsible for the faithful compliance of scope of work mentioned in Annexure I.
 - (ii) Any authorized person may inspect the premises to see the work carried out by the agency. Shortfall, if any, will be communicated to the agency/ contractor in writing/ email by ICAR NINFET. In the event of any shortfall or services found unsatisfactory, Liquidated Damage clause will be invoked by levying a penalty @Rs. 500/- per day. The Liquidated Damage amount will be deducted from the bill of the agency.
 - (iii) After three such incidents of un-satisfactory reports, the contract shall be liable to be terminated. Performance Security will also be withheld in full or part. Final decision for invoking penalty will be taken at the level of Director, ICAR NINFET.
21. Any dispute arising out of and in relation to this agreement shall be referred the Director, ICAR NINFET. His decision will be binding on the firm.
22. The Tender Committee (TC) constituted by the Director, ICAR-NINFET shall have the right to verify the particulars furnished by the bidder independently and to relax the minor deviations/shortfalls.
23. ICAR-NINFET reserves the right to accept/reject any or all the tenders in part/full without assigning any reason thereof.
24. All the communications with respect to the tender shall be addressed to: The Director, ICAR-NINFET, 12 Regent Park, Kolkata-700040
- The Firms are required to upload copies of the following documents for technical consideration:-
- 1) TECHNICAL BID**
- a) Earnest Money Deposit (EMD) or its exemption (MSME/NSIC in relevant field), if any.
 - b) Documentary Proof whether the firm is proprietary firm or partnership firm or JV (Joint Venture) or a Company registered in Company Act 1956 (amended in 2013). Copy of Registration certificate should be submitted.
 - c) Trade license
 - c) Copy of PAN Card.
 - d) Copy of GST Registration Certificate.
 - e) Tender Acceptance letter & details of the firm on the letter head (Annexure-II & Annexure-III).
 - f) Copies of proof of Last five years experience in relevant field from the clients in Central Govt. establishments/Autonomous bodies of Govt. of India /State Govt/PSU/Central Universities etc.
 - h) Copy of Income Tax Return (ITR) for the last two assessment years i.e. for the assessment year 2018-19 and 2019-20

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- i) Copy of certified balance sheet along with P&L account/certificate from Chartered Accountant for turnover of the firm for last two assessment years i.e. for Assessment Year 2018-19 and 2019-20 showing annual turnover of ₹15.00 lakhs or more.
- j) Copy of the Affidavit to the effect that the firm has not been blacklisted by any Govt. Office/Institute/ICAR for any reason. The Affidavit so provided should not be more than 6 months old otherwise the tender will be rejected
- l) Complete Bank Details of the Firm in NEFT mandate form Viz. Name of the Bank and Branch, Address, type of Account No, IFS Code, MICR Code and PAN No.

2) FINANCIAL BID

- a) Price Bid - Must quote the entire amount including GST as per Annexure IV. The cost is inclusive of transportation, labour charge, taxes, others (if any) etc. ICAR NINFET will not bear any extra cost on any account.

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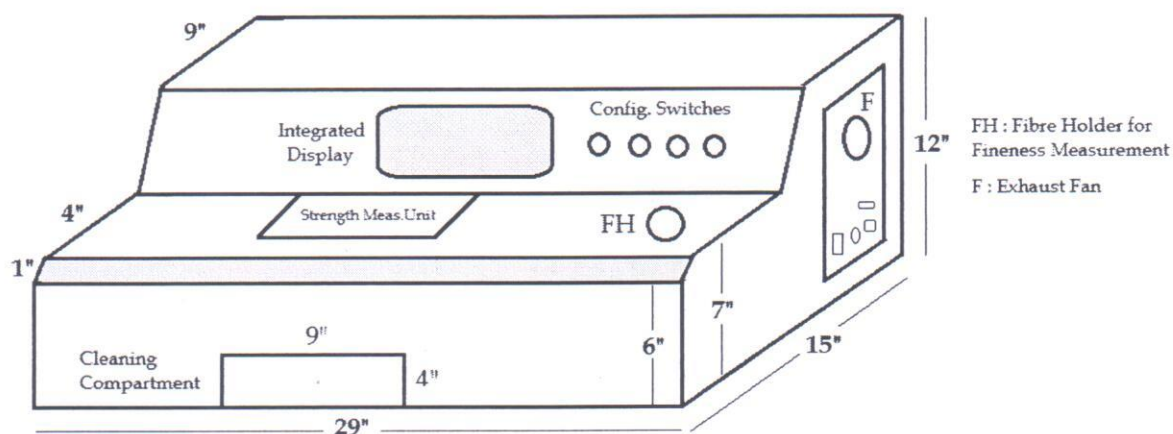
ANNEXURE I

1. The details of the work or service to be performed by the contractor;

Description of Item: Manufacturing service of one Integrated Grading Instrument for Banana Fibre in respect of fibre strength and fineness as grading parameters.

General Features and Functional Description:

The integrated grading instrument will consist of a strength measurement unit for fibre of length 12.5cm in bundled form having variable weight and a fineness measurement unit for fibre of 5cm in length in bundled form having variable weight. The instrument will be compact in form with powdered coated metal cabinet having all mechanical and electronic items fitted inside properly. The estimated external drawing of grading instrument is as under. The dimensions and displayed components may slightly vary depending on manufacturing process tolerances.



The whole work may be divided into two sections as under.

Section-A : Strength measurement unit

This section will measure the breaking strength of the fibre of length 12.5cm in bundled form having variable weight. The mechanical part will consist of motorized vice units which will automatically grip the fibre sample and apply strength in horizontal direction. The electronic part will consist of microcontroller based embedded unit which will measure the peak breaking strength in g/tex with the help of load cell sensors & amplifiers and record the same for calculation of grading index.

Section-B : Fineness measurement unit

This section will measure fineness for fibre of 5cm in length in bundled form having variable weight incorporating airflow method of measurement. The mechanical part will consist of air pump, air chamber, fibre holder, orifice to achieve fineness in tex through airflow method. The electronic part will consist of microcontroller based embedded unit having interface with differential pressure sensors for measurement.

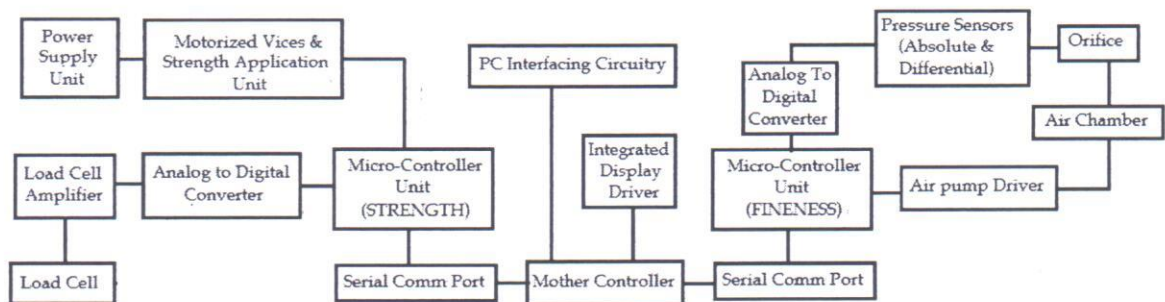
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The facility of electronic calibration method will apply on the instrument for both strength and fineness part. In electronic part the printed circuit boards will have to be high quality double sided through-hole in nature for best result. The front panel will consist of integrated display along with necessary configuration switches for operation. The instrument should have necessary firmware for computer interfacing through USB port of preferably laptop which may be required in future for operation and data collection purpose. The instrument must have both manual and computer operation facility.

The deliverable components:

1. Motors, Vice Units, Blocks, Gear, Pulley, Structural Base, Limit Switch etc
2. Load Cell Sensor Amplifier, Motor Drivers, Connectors & Switches
3. Air Pump, Air Chamber, Fibre Holder, Orifice, Connectors
4. Schematic & PCB Development, User Interface
5. Mother Controller, Integrated Display Unit
6. PC Interface & Firmware
7. Encasing & Assembly
8. Electronic calibration system for the instrument
9. Laptop as data collection terminal

Details of electrical/electronic parts in terms of block diagrams and its required specifications



Specifications of electrical/electronic blocks :

Power supply : 12V DC 10A, +/-12V DC 500mA, 5V DC 500mA
 Motors : 12V, 100 RPM Fwd/Rev
 Analog to digital IC : 16 bit
 Load cell 200Kg 2mV/V
 Load cell amplifier : Differential type
 Microcontroller : 8 bit 11.0592 MHz
 Serial Comm : TTL 5V level

Integrated display : LCD multiline type
 Switches : Rugged panel type
 Air pump driver : Push pull 230V AC
 Pressure sensor : Absolute 0-1.45psi 0.2-4.7V output
 Differential -0.3 to +0.3psi 0.5-4.5V output
 PC Interface : USB port type

2. The facilities and the inputs which will be provided to the contractor by the Ministry or Department;

- (i) The contractor will have to complete manufacturing process in their own premises
- (ii) The flow chart for the firmware development in electronic controller will be provided by the department
- (iii) The block diagram and necessary specifications will be provided by the department

Signature
 27/01/2020

ANNEXURE II

TENDERER TO FILL UP THIS PAGE (In the Letterhead of the Firm) and submit the scanned copy against the first label of the Technical cover.)

1 (a) Name of the Tenderer firm/ Organization/ Agency:

(b) Name of the Proprietor/ Partner:

2. Office Address of the Firm:

3. Telephone/ Mobile No. :

4. Fax No. :

5. E-mail Address:

6. Website address if any:

7. EMD details (DD No, Date, Amount and Bank Name)

Or EMD exemption certificate (NSIC/MSME) UAN No. :

8. i) Trade License No:

ii) PAN No:

iii) GST No:

9. i) Firm's Bank Account No and Type of Account:

ii) Name of Bank & Branch:

iii) IFSC Code No:

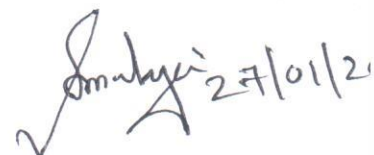
10. Name of Public Sector/Govt. organization/PSU/Central Universities to whom similar services have been provided by the firm during the last four years:

11. Name of authorized representative(s):

12. Whether proprietary or partnership Firm or Company:

Signature of Authorized person of the

Firm/Agency with seal



Tender Covering Letter

(CERTIFICATE TO BE GIVEN ON LETTER HEAD AS PART OF TECHNICAL BID)


To
The Director
ICAR NINFET,
12 Regent Park,
Kolkata-700040

Sir,

It is confirmed that I/we have fully understood the scope of work and all other requirements for Job work /service contract Manufacturing service of one Integrated Grading Instrument for Banana Fibre in respect of fibre strength and fineness as grading parameters to ICAR-NINFET, Kolkata-700040. .

1. I have understood the total quantum of work by going through the tender document and/by visiting the campuses. I/We gathered all information needed to understand the requirement of this service contract as per the given details in the prescribed Annexures of the Tender documents.
2. I/We have hereby agree to the Terms and Conditions of the Contract as detailed in the tender documents and if given an opportunity to provide services, then agree to execute an agreement as per prescribed proforma given in financial bid.
3. I/We undertake that the documents enclosed herewith are genuine and no material/facts have been concealed or suppressed.
4. I/ We undertake that there are not any legal suit/criminal cases pending against our firm for violation of EPF/ESI, Minimum wages Act or other laws. And there is no criminal/ legal suit pending or contemplated against us.
5. I/ We are not blacklisted by any Central/ State Government organization in the field of providing service contract for the Manufacturing/fabrication service of any Instrument
6. We also understand that the contract is liable to be cancelled if found to be obtained through fraudulent means or by concealment of information/facts.
7. This offer is made to be valid for acceptance by ICAR NINFET within 60 days from the date of opening of the technical bid.

(Signature of authorized representative of the firm)
Stamp/Seal of the firm

 27/01/2020

Financial Bid Format(In the letterhead of the Firm)

Manufacturing service of one Integrated Grading Instrument for Banana Fibre in respect of fibre strength and fineness as grading parameters.

| Sl No | Name of Service | Amount (INR) |
|--------------|---|-----------------------------------|
| 1 | Motors, Vice Units, Blocks, Gear, Pulley, Structural Base, Limit Switch etc | |
| 2 | Load Cell Sensor Amplifier, Motor Drivers, Connectors & Switches | |
| 3 | Air Pump, Air Chamber, Fibre Holder, Orifice, Connectors | |
| 4 | Schematic & PCB Development, User Interface | |
| 5 | Mother Controller, Integrated Display Unit | |
| 6 | PC Interface & Firmware | |
| 7 | Encasing & Assembly | |
| 8 | Electronic calibration system for the instrument | |
| 9 | Laptop as data collection terminal | |
| 10 | Others (If any) (Mention the particular component) | |
| 11 | GST@ | |
| Total | | (In figure) (In words) |

Note: The amount charged above is inclusive of transportation, labour charge, taxes, others (if any) etc. ICAR NINFET will not bear any extra cost on any account.

(Signature of authorized representative of the firm)
Stamp/Seal of the firm

[Handwritten Signature]
27/01/2021

Annexure-V

(In case the representative of the Firm attends the bid physically, the form, duly filled in should be handover to ICAR NINFET Authority)

To

The Director, ICAR NINFET

12, Regent Park,

Kolkata- 700 040

West Bengal, India

Subject: Authorization for attending bid opening on..... (date) in the Tender

No.....For.....

.....

Sir,

Following persons are hereby authorized to attend the bid opening for the tender mentioned above on Behalf of.....

(Bidder's name) in order of preference given below.

Order of Preference Name

Signature

specimen

1.

2.

Signature of bidder or Officer authorized to sign the bid Documents on behalf of the bidder.

Note

1. Only one representative will be permitted to attend bid opening
2. Permission for entry to the hall where bids are opened will be refused in authorization as prescribed above is not produced

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