



NATIONAL INSTITUTE OF TECHNOLOGY, DURGAPUR

MAHATMA GANDHI AVENUE

DURGAPUR –713 209, WEST BENGAL, INDIA

FAX: 0343-2547375; E-mail: gopinath_haldar@yahoo.co.in / gopinathhaldar@gmail.com; Website: www.nitdgp.ac.in

Telephones: + 91-9434788189/03432754090

BID REFERENCE: NITD/CHEMICAL/DST-STARCH/2017/01

Date: 23.01.2017

To

Dear Sir,

SUB : Invitation for quotations for supply and installation of Instruments/ Equipment for DBT-sponsored project “**Dispersion of modified Starch onto Polymer matrix towards Enhancement of its Biodegradability to reduce the Solid Waste Generation**” as specified in **annexure-II**.

1. You are invited to submit your most competitive quotation for the listed items of instruments/equipment as per **Annexure-II**. For each item, please quote separately in separate envelope superscripted with ITEM Name. Price bid form as per Annexure-I must be filled with complete numerical values. Please note that each item will include sub-items. **No separate quotations are required for sub-items.**
2. **Bid Price (Annexure-I)**
 - a) The contract shall be for the full quantity as described above. Corrections, if any, shall be made by crossing out, initialing, dating and re writing.
 - b) All duties, taxes and other levies payable by the contractor under the contract shall be included in the total price **F.O.R. NIT Durgapur.**
 - c) The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
 - d) The bid price must be quoted in **Indian Rupees.**
3. **The bid submitted by the bidder must comprise the following:**
 - (a) Detailed technical specifications, conforming to the given specifications (vide Annexure – I), and literature /drawings /manuals of the goods/services to be supplied
 - (b) Authorized dealership certificate from the original manufacturer
 - (c) Credentials and list of organizations where the bidder supplied similar items
 - (d) Warranty period (3 year comprehensive on-site)
 - (e) Valid sales-tax / VAT clearance certificate
 - (f) Price bid as per Annexure-I
4. **Validity of Quotation**

Quotation shall remain valid for a period not less than 60 days after the deadline date specified for submission.
5. **Evaluation of Quotations**

The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e.
(a) which are properly signed and
(b) conform to the terms and conditions, and specifications.

6. Award of contract

The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive, technologically acceptable and who has offered the lowest evaluated quotation price.

- 7.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.
- 7.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.
8. Delivery shall be made at **Department of Chemical Engineering at NIT, Durgapur.**
9. Payment shall be made immediately within 30 days after satisfactory installation, commissioning and acceptance of the good.
10. Comprehensive onsite warranty shall be applicable to the supplied goods for a period of **36 months** from the date of installation.
11. The Institute is **exempted from payment of custom and excise duty** on items mentioned below:
 - a) Scientific and technical instruments, apparatus, equipment (including computers)
 - b) Accessories, spare parts and consumables thereof
 - c) Computer software, CD-ROM, recorded magnetic tapes, microfilms, and microchips.
12. The successful bidder must submit before the release of payment a valid bank guarantee on any nationalized bank of 10% of the order value towards **Performance Security** during the warranty period. Else, 90% of the payment will be released retaining 10% of the order value towards Performance Security during the warranty period.
13. **Liquidated Damage** will be applicable at the rate of 0.5% per week. The purchaser has the right to cancel the purchase order when LD accumulates to 10 %.
14. A bank draft or bank guarantee worth 2% of the quoted value payable to **“DST-STARCH PROJECT”** at Durgapur will be enclosed with the bid by the bidder towards the **Earnest Money Deposit (EMD)**. The EMD shall remain valid for a period of **105 days**.
15. Settlement of any dispute will be made under the jurisdiction of Durgapur Court.
16. You are requested to provide your offer latest by 11.00 hours on **February 10, 2017**
17. The purchaser will open the technical bids (no price bids) at 11.30 hours on **February 10, 2017** in the seminar room of Chemical Engg Department
18. The bid document must be signed and sealed and enclosed with the bid as a token of acceptance of all terms and conditions in the bid document by the bidder.
19. The items must be delivered within **60 days** from the date of placement of purchase order at the respective department.
20. Comprehensive onsite warranty for **36 months** from the date of satisfactory installation shall be applicable for offered goods.
21. All other terms and conditions of GFR 2005 of the Government of India will be application.
22. **Place of Delivery: Dept. of Chemical Engineering, NIT Durgapur.**
23. **Installation / commissioning / demonstration requirement: Installation, commissioning, complete demonstration and successful running at Dept. of Chemical Engineering, NIT, Durgapur**

I look forward to receiving your quotations and thank you for your interest in this project.

The bid must be addressed to:

Dr. Gopinath Halder
Principal Investigator
Department of Chemical Engineering
NIT, Durgapur -713209, W.B.
E-mail: gopinath_haldar@yahoo.co.in / gopinathhaldar@gmail.com; Website: www.nitdgp.ac.in
Telephones: + 91-9434788189/03432754090

List of Laboratory Instruments

Sl nos	Name of the Instrument	Specifications	Quantity
01	Hydraulic Press Compression Moulder	<p><u>Specifications :</u></p> <ul style="list-style-type: none"> • Capacity : 1 ton • No. of daylight : 1 • Daylight opening : 0 to Min. 200 mm • Number of Platen : 2 • Platen size : 254 mm × 254 mm • Platen gap : 200 mm • Piston diameter : 127 mm • Platen temperature : Max 200° C • Number of heated Platens : 2 with digitally controlled heaters • Mode of heating platens : Electrical • Temperature controller : PID type or advanced electrical controller for each platen • No. of heater per platen : 2 with digitally controlled heaters • Temperature variation within the platen surface : PID type or advanced electrical controller for each platen • Heating rate : Min 5°C/min and Max 20°C/min • Cooling rate : 20°+5 C/min • Mode of ram operation : Self contained hydraulic pack of suitable capacity. • No. of Pillers : 4 <p><u>Features and Benefits:</u></p> <ul style="list-style-type: none"> ➤ Type of construction <ul style="list-style-type: none"> • Piller type: It should be completed with m.s. fabricated head & base properly machined, solid platens are perfectly machined, grinding & hard chrome plated & internally boarded for proper electrical heating by certified heater & water cooling system to be provided. • Piller to be provided with chrome plated, m.s. fabricated cylinder to be completed with honing and proper sealing, piston to be completed with grinding & hard chromium plated. ➤ Hydraulic power pack system: One Hydraulic power pack to be provided with 3 HP motor, manually operating valve, the pump to be completed with all accessories are reputed make like Polyhedron. ➤ Control panel system: One control panel to be provided should consist of the following: Pilot lamps, Volt metre, Amps metre, Digital 	One

		<p>temperature controller for each platen, heater OFF/ON switch, starrer etc as per our design.</p> <p>➤ Make of electrical, hydraulic and PLC system: Should be reputed make complying with relevant ISO/BS/BIS/EPA standards.</p> <p><u>Other Necessities:</u></p> <p>➤ Warranty: Minimum 1 year</p> <p>➤ Installation and Commissioning: Machine should be unloaded, installed and commissioned at NITD premises with suppliers own tools, equipments and consumables including hydraulic oil for hydraulic power pack.</p> <p>➤ Training: 02 day training to NITD after installation and commissioning on operation, maintenance (periodic and preventive) and overhauling should be provided.</p> <p>➤ Manual: Operating and user manual should be provided along with the machine.</p> <p>➤ Spare part kit:</p> <ul style="list-style-type: none"> • Should provide standard and essential spare part kits. <p>a) 02 sets of additional heating elements</p> <p>b) 02 Nos. of thermostat</p> <p>c) 02 Nos. of high temperature thermometer</p> <p>d) Fuse- 05 Nos.</p> <p>e) Seal – 01 No.</p> <p>Spare part kit should be mentioned separately and quoted.</p> <p><u>Safety Features:</u></p> <ul style="list-style-type: none"> • RCCV emergency short circuit brake. • Emergency stop button 	
02	Tensile Testing Machine	<p><u>Specifications :</u></p> <ul style="list-style-type: none"> • Capacity : 300 Kgf • Machine Frame : Horizontal, machine frame sustainable upto 300 Kgf load • Single speed : 500 mm/min • Load cell capacity: 300 KN (tensile mode) • Accuracy of load cells: 1 % or better • Test space : 200 mm (min) or more 	One

- Drive system : 1 mm to 200 mm
- Power supply : Machine should be operated by Single phase/Three Phase 50 Hz (220/440V, 50 H z)
- Grips required : Mechanical Type grips suitable for plastic sample with 75 mm width and 1mm thickness

Features and Benefits:

- **Testing:** The instrument should be suitable for conducting Tensile, Elongation, Compression, Bend, Shear on specimens.
- **Specimens:** The specimens that can be handled can be Rubber, Belt, Metal, Polymer, Cable, Fabric, Plastic and various others materials using appropriate test attachments/ grips which are optional.
- **Maintenance:** Supplier should be ready for quarterly basis maintenance during warranty period.

Other Necessities:

- **Warranty:** Minimum 1 year
- **Installation and Commissioning:** Machine should be unloaded, installed and commissioned at NITD premises with suppliers own tools, equipment and consumables including hydraulic oil for hydraulic power pack.
- **Training:** 02 day training to NITD after installation and commissioning on operation, maintenance (periodic and preventive) and overhauling should be provided.
- **Manual:** Operating and user manual should be provided along with the machine.

Safety Features:

- Provision of safety cage in test area.