



भारतीय प्रौद्योगिकी संस्थान (भारतीय खनि विद्यापीठ), धनबाद

धनबाद, झारखण्ड, भारत, पिन-826004

(मानव संसाधन विकास मंत्रालय, भारत सरकार के अधीन राष्ट्रीय महत्व का एक संस्थान)

INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD

DHANBAD, JHARKHAND, INDIA, PIN-826004

(An Institute of National Importance under Ministry of H.R.D., Govt. of India)

STORES & PURCHASE SECTION

Phone:(0326) 2235678 || Email : purchase@iitism.ac.in || Website : www.iitism.ac.in

No. FME-500304-2017-18

Date: 24 November 2017

NOTICE INVITING TENDER

Sub: NIT No. FME-500304-2017-18 for Supply & Installation of
Bomb Calorimeter– 01 No

Sirs,

Indian Institute of Technology (Indian School of Mines), Dhanbad invites tenders/ quotations for Supply and Installation of **Bomb Calorimeter– 01 No** in our FME Department. *Particulars of tender cost, earnest money deposit and date and time of submission and opening of tenders are as under:*

| S No | Items | Particulars |
|------|--------------------------------------|--|
| 1. | Tender cost | Rs. 2,500.00 (Rupees Two Thousand & Five Hundred only) |
| 2. | Earnest money deposit | Rs. 40,000.00 (Rupees Forty Thousand only) |
| 4. | Date and time for submission of bids | 29.12.2017 at 1:00 P.M. |
| 5. | Date and time of opening of bids | 29.12.2017 at 4.00 P.M. |

Tender document containing following document is available on websites of (<https://eprocure.gov.in> & www.iitism.ac.in), which may kindly be referred.

1. Technical specifications as per Annexure-I
2. General terms & condition as per Annexure-II
3. Compliance Statement as per Annexure –III
4. Financial Bid as per Annexure- IV

Encl: As above

Deputy Registrar



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Annexure-I

Technical Specification for Isoperibol Bomb Calorimeter

1. **Range:** 1000 to 8000 Kcal/Kg in same Bomb for 1 gm sample.
2. **Sample Amount:** 0.6 to 1.2 gm
3. **Precision:** ≤ 0.1 % RSD on Benzoic Acid. System should comply ASTM & BIS standards.
4. **GCV Resolution:** 1 BTU/lb, 0.1 Cal/g.
5. **Temperature resolution:** 0.0001 $^{\circ}\text{C}$
6. **Analysis Time:** Less than or equals to 8 minutes. Time will be counted from pressing of start button to the end of the analysis cycle. Overall minimum 6 sample analysis per hour.
7. **Auto heat correction facility:** Acid or % Nitrogen, fuse wire, sulfur moisture, spiking, ash and hydrogen should be available.
8. **Combustion vessel/bomb:** The calorimetric bomb should be highly resistant to corrosion and certificate for safety as per ASTM E144, of bomb under high pressure should be provided. Bomb self-life should be 5000 or more sample tests.
9. **Extra Bomb:** One identical extra combustion vessel should be supplied. Extra bomb can be used in instrument without separate calibration before every operation.
10. **Crucible and Consumables:** Only base metal alloy make crucible has to be supplied. Benzoic Acid, Crucibles, thread, fuse wire, O-rings, Filters and any other consumables for 5000 samples regular operation should be supplied.
11. **Operation:** System must be operated through compatible PC (Latest operating system) with appropriate software for real time temperature, method storage and graphic display. Instrument should have facility to interface with the balance, computer and printer. The Analyzer must be CE approved with built in diagnostic facility.
12. **External PC and software:** The computer should have the following specifications or better: Branded computer having processor i5 or higher, 1 TB HDD, 8 GB RAM, 19" or higher LED display with necessary USB, RS232 and HDMI ports, keyboard, optical mouse. All necessary software should be loaded in PC provided along with backup CD/DVD/ USB Drive. If updated version of software is available, the same should be replaced/installed without additional cost within the warranty period. Necessary online UPS with minimum 30 Minutes backup for analyzer & computer.
13. **Safety:** Software should automatically keep track of number of times bomb have been fired. Built-in auto counter must aid in the tracking of routine maintenance and other expendable components.



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14. Balance:Balance with the following configuration should be provided which can be interfaced with the calorimeter system directly. Minimum capacity: 150 gm, Readability: 0.1 mg or better, Tare: Full range, Repeatability: 0.1 mg or better Linearity: 0.2 mg or better. Settling time: 2.5 seconds or below. With Automatic Internal Calibration.

15. Water handling system: System should have inbuilt close loop water handling system with cooling/heat exchange facilities. The water handling system must be Original Equipment Manufacturer (OEM) made.

16. Gas filling: System should have automatic combustion gas filling facility with essential accessories like regulator and pressure gauges.

17. Results – The results of the GCV should be saved in the HDD of PC. Can be exported to PDF or MS Office format and can be retrieved at any time. Saved results can be printed.

18. Standard sample: Minimum 5 Nos. of certified CRM of coal samples weighing at least 40 g each, having certified values of GCV with different ranges and their code number should be provided. The certified value details must be submitted.

19. Warranty: Minimum 1 year comprehensive warranty on complete setup including all accessories (Calorimeter, PC, Balance, UPS system and battery) from the date of installation.

20. Technical literature/data: Technical literature/data sheet must be attached supporting the technical bid. Operation and service manuals should be provided with the instrument.

21. Installation: Installation, training and demonstration on samples at IIT (ISM) Dhanbad should be arranged at free of cost.

22. User's list:The vendor should submit the latest **five purchase orders with performance certificate** of the offered instrument issued by IIT/NIT/CSIR Laboratory/PSUs/Govt. Organizations of the quoted model. Without these offer will not be accepted. This is required for the past performance and price justification.



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Annexure-II

GENERAL TERMS & CONDITIONS

NIT No. FME-500304-2017-18

Sealed tenders under **Two-bid system** are invited from manufacturers/ their authorized dealers/ agents for supply and installation in IIT (ISM) Dhanbad of items specified in *Annexure-I*.

1. Offer should be submitted under **TWO-BID** system in two separate sealed covers i.e. “**Techno-commercial bid**” and “**Price bid**”.
2. *a) In a tender, either the Indian agent on behalf of the principle/ OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.*
b) If an agent submit bid on behalf of the principle/ OEM, the same agent shall not submit a bid on behalf of another principle/ OEM in the same tender for the same item/product.
3. **Techno-commercial Bid:** should contain the following documents/information:
 - a. **Tender Cost:** Cost of the tender document is to be paid by way of an A/C payee demand draft for an amount indicated in Page No 01 and drawn in favor of Registrar, IIT(ISM) Dhanbad and payable at SBI, IIT(ISM) campus branch or any other Bank/ Branch located in Dhanbad. Tender cost is non-refundable and non-transferable. Alternatively, intending tenderers may **download** the complete set of tender document from CPP Portal <https://eprocure.gov.in> and IIT (ISM) website (www.iitism.ac.in) and submit the same duly signed on all pages by the tenderers along with demand draft for tender cost
 - b. **Bid Security/Earnest Money Deposit (EMD):** Should be submitted in form of A/C payee demand draft drawn in favor of Registrar, IIT(ISM) and payable at Dhanbad (Jharkhand).
 - c. Tenders without payment of tender cost and EMD will not be considered, unless the tenderer is exempt from such payment under Central Govt. Rules/ Regulations and General Financial Rules (GFR) as amended from time to time and claims such exemption along with relevant and valid supporting documents.
 - d. All relevant technical specifications/details of offered items, drawings, printed technical leaflets, and commercial details which are necessary to ensure that offer is complete in all respects should be attached with the technical bid documents.
 - e. *A ‘Compliance Statement’ along with a certificate and duly signed that the tenderer satisfies the technical requirements given in **Annexure-I**. The said statement should be in a tabular form with the columns: sl. no., (2) technical requirement as per NIT; (3) what is offered by the tenderer; and (4) status of compliance: Complied/Not complied).*
 - f. IIT(ISM) does not bind itself to offer any explanation to those bidders whose Technical Bids have not been found acceptable by the Evaluation Committee of the Institute.
4. **Further the following documents have to be furnished by the tenderers:**
 - a) Self attested copies of credentials in support of capability to undertake the supply/work.
 - b) Technical literature/catalogue with the detail specification of the material
 - c) Satisfactory performance certificate from their customers for same/similar supply/service must be enclosed alongwith the technical bid.
 - d) Income tax PAN, Sales tax regn. Nos., GST, & Bank A/c no., name of bank & branch.
5. **Price should be quoted on FOR, IIT(ISM) Dhanbad basis.** The packing, forwarding, freight and transit insurance charges, if any must be included in the price and should not be claimed separately. Duties & taxes, if applicable, are to be shown separately clarifying whether those are extra or included in the price. Price bids of only technically qualified tenderers shall be opened in their presence on a pre-notified date and time.
6. **Educational discount, if any, should be clearly mentioned.**
7. IIT(ISM) is entitled for Excise Duty Exemption under Govt of India notifications and is registered with DSIR, Govt of India for this purpose. This may be taken into consideration while quoting minimum possible rate. *Exemption Certificates* can be issued in favour of manufacturers only. It will not be issued any Indian Agent/dealer or distributor at any circumstances. IIT(ISM) will provide only custom duty



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exemption certificate for availing concessional custom duty. IIT(ISM) will not pay any extra custom duty other than duty exemption certificate.

8. IIT (ISM) does not issue form 'C' or 'D' for concessional Sales tax/VAT. Hence, full rate of sales tax as applicable to educational institutions against the form of certificate should be indicated.
9. **Warranty:** Minimum 01 year from the date of installation and commissioning at the site.
10. **Validity:** Offer must be valid for a period of **240 days** from the date of opening of tender
11. **11. Performance Security/Performance Bank Guarantee:** Performance Security has to be submitted from the successful bidder. Performance Security should be 10% of the ordered value. Performance Security may be furnished in the form of Bank Guarantee/Demand Draft from any Nationalized Bank and Performance security should remain valid for a period of two months beyond the date of completion of all contractual obligations of the successful bidder(s). No interest will be payable by IIT (ISM) Dhanbad on the Performance Security deposited. In case the contractor fails to provide satisfactory service, the Performance Security submitted by the bidder(s) is liable to be forfeited. An undertaking to this is to be submitted.
12. **Delivery Period and Liquidated Damage:** The ordered materials/work complete in all respects are required to be delivered and installed within the period stipulated in the purchase order failing which liquidated damages of 1% per week for the delayed period subject to maximum of 5% of the total basic value of the order shall be deducted from the invoice of the supplier.
13. **Inspection:** Inspection shall be carried out at IIT (ISM), Dhanbad after arrival of the materials and decision of the Institute in this regard shall be final.
14. **Rejection and Replacement:** Rejection, if any, shall be notified to the supplier within 30 days of receipt and inspection of the material/workmanship. Rejected materials/work is to be removed by the supplier at his own risk and cost from IIT (ISM). Campus within 14 days of intimation of rejection. Defective Supplies are required to be replaced within 15 days of the removal of the rejected materials/work.
15. **Risk Purchase:** IIT (ISM) shall be at liberty to realize from the supplier the differential amount, if any, which it shall have to incur on purchase of the material/work at higher price(s) from elsewhere in the market, if the supplier, due to their fault, fails to supply the ordered quality and quantity of the material/work within the stipulated time.
16. Conditional offer will not be accepted.
17. **Payment:** will be made within 30-45 days after satisfactory supply, inspection, installation/commissioning & acceptance and on submission of pre-receipted tax invoice, delivery challan, warranty certificate and installation report in triplicate and Performance Bank Guarantee. The invoice should be duly certified by the Head of Dept to which supply is made or any other IIT (ISM) official authorized for this purpose.
18. Your full address for correspondence and name address of the beneficiary's banker should be clearly indicated in the offer. **Institute does not make any advance payment.**
19. **Country of origin and port of shipment should be stated** in your offer clearly.
20. Name and address of Indian Agent, percentage of agency commission, if any and role of the Agent with respect to the subject supplies and a statement thereon that "Agency Commission is included in the
21. FOR price of the offer" should be clearly indicated in your offer.
22. Earliest/ expected delivery period should be clearly indicated.
23. Packing should be suitable for 'Air freight'.
24. Please note that no part shipment/transshipment/third party shipment is acceptable to us.
25. **Last date** for receipt of tenders and date & time for opening of the same is given in page- 01. The tenders will be opened in the presence of representatives of tenderers present. ***In the event last date is a holiday/declared as a holiday, next working date will be the last date for submission/ opening of tender.***
26. Tender should be submitted in a sealed cover/envelope and must be superscribed as under:
 - i) "Tender No. **FME-500304-2017-18** Date : **24 November 2017** (Supply & Installation of Bomb Calorimeter- 01 No (29.12.2017 at 4.00 P.M.).



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- ii) All tender shall be received upto to the time and date as stated in the tender notice, after which no tender shall be accepted in any circumstances.
 - iii) All tender must be sent by Registered Post/Speed Post/Courier along with Courier receipt, during IIT (ISM) working days only (i.e. Monday to Friday). Please note that no hand delivery of tender will be received at any circumstances.
27. The Institute at its discretion may change the quantity/quality/parameters/upgrade the criteria/drop any item(s) or part thereof at any time before placing the order. In case of any dispute, the decision of IIT(ISM) shall be final and binding on the bidders/tenderers.
 28. The Institute reserves the right to accept or reject any or all the bids in part or in full without assigning any reason and does not bind himself to accept the lowest bid.
 29. All the bidders, those are interested to participate in this bid, must have to submit the technical specification of their bid in MS-Word Format in a CD with the technical bid. The CD must be marked with the NIT No. and submission deadline.

ABOVE TERMS AND CONDITIONS OF THE NIT ARE ACCEPTED

| | | |
|----|---|--|
| 1 | Name and address of the tenderer | |
| 2 | Telecom nos. of the tenderer i.e. phone fax, & email id. | |
| 3 | Signature, name & designation of the person signing on behalf of the tenderer & his/her office seal | |
| 4. | Name & designation of the contact person & his phone/mobile no. | |



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Annexure-III

Compliance Statement

| Sl. No | Technical requirement as per NIT | What is offered by the tenderer | Status of Compliance Complied/Not Complied |
|--------|----------------------------------|---------------------------------|---|
| | | | |



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Annexure - IV

Format for Financial Bid

NIT No.: FME-500304-2017-18

Date: 24 November 2017

Bidders Ref: No.

Date:

GSTIN:

Subject: Supply & Installation of Bomb Calorimeter

| Sl. No. | Full Description of Items | Qty. | Rate | Amount |
|--|---------------------------|-------------------------------|------|--------|
| | | | | |
| | | | | |
| | | Packing & Forwarding (if any) | | |
| | | Total | | |
| | | GST (if any) | | |
| | | Freight (if any) | | |
| | | Installation (if any) | | |
| Amount should be in figure as well as word | | Grand Total | | |

Note:

- 1) All the details must be provided as per prescribed format only
- 2) Prices quoted by the bidders should include all local taxes, VAT, service tax, GST, duties, livies, transportation cost and insurance costs etc. if any
- 3) All the rates must be quoted in Indian Rupees.