



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

NIT No.:Mech-500331-2017-18

Date: December 1, 2017

NOTICE INVITING TENDER

Subject: NIT No. Mech-500331-2017-18 for Supply & Installation of **Full Field Digital Image Correlation Systems**

Indian Institute of Technology (Indian School of Mines), Dhanbad invites tenders/ quotations for supply and installation of Full Field Digital Image Correlation Systems - 01 No in our Mech 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.2,000.00 (Rupees Two Thousand only)
2.	Earnest money deposit	Rs.36,000.00 (Rupees Thirty Six Thousand only)
3.	Last date and time for submission of tenders	27.12.2017 at 1:00 P.M.
4.	Date and time of opening of tenders	27.12.2017 at 3:00 P.M.

Tender document containing following document is available in our website www.iitism.ac.in/tender page, which may kindly be referred.

1. Technical specifications as per Annexure-I
2. General terms & condition as per Annexure-II
3. Acceptance of terms & conditions as per Annexure-III
4. Financial bid format-IV
5. Compliance Statement as per Annexure -V

Encl : As above

Deputy Registrar



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Annexure-I

Technical Specification

2D DIC System Specifications

1. Camera – 01 No

- 5M CCD 12 bit digital camera with resolution of 2448 x 2050 pixel and pixel size 3.45 μm x 3.45 μm , speed of 14 frame/sec or above.

2. PC interface card - 1 No

- To connect minimum of 2 cameras

3. 35mm c- mount, f/1.6 lenses – 1 Set

4. LED light source – 02 No. s

- White color Pulsed LED for strain illumination
- Length should be equal or more than 30cm
- Software controlled

5. Mounting system – 1 No

- Accommodate camera, tripod, rail, camera mount and 2 LED mounts

6. Hardware Integration and synchronization– 1 No

- System should be able of running low speed cameras from within the provided software, i.e. images can be triggered, displayed and stored
- It must be possible to have fully integrated using high speed cameras controlled from within the provided software, i.e. images can be triggered, recording parameters changed, images displayed and stored directly for DIC processing without the need to save and then reimport
- Not only rely on software based triggers
- A/D converter for synchronized logging of load signal



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7. Data processing, management, import and export

- Ability to process data without applying any filtering or de-noising. The raw data must be available to the end-user
- Good interfacing with Matlab, so that system can read data format from the DIC system directly into Matlab, and write data from Matlab in the same format such that it can be read back into the DIC software
- Able to display and edit data within Matlab without the need for additional license's
- Capable to export data in Preview format
- Possible to include generic files within the DIC software project such as Word, Excel and PDF formats, such that these files can be launched from the DIC project
- Simple methodology to import images from external sources in all standard formats for DIC processing
- Need ability to batch process multiple sets of images (e.g. overnight) with predefined processing parameters
- Software Module should be available for image acquisition and analysis of 2D deformation field with an accuracy of 0.01 pixel

8. Calibration

- Capable of calibrating a 2D (one camera) setup either by simple scaling, or fitting camera pinhole or complex models
- An alternative to the camera pinhole method must be offered for cases where there are strong optical distortions, i.e. when working at high magnifications or through curved glass boundaries
- Capable of calibrating a 3D stereoscopic setup for future 3D up gradation
- Possible to calibrate 4 cameras in a 2x Stereo Setup in a common co-ordinate system with one view of a two sided plate

9. Specialist hardware

- Possible to use standard Stereo Microscopes, and have the appropriate calibration procedures to deal with the complex distortions present in microscope optics
- Possible for the supplier to provide the necessary optics and lighting to perform high temperature measurements up to 1200 deg C as and when required in future



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10. Advanced software features

- Ability to correct the data for and rigid body shift of the samples
- Must be possible for the end-user to write macros which can easily invoked within the provided software
- Software must incorporate automatic generation of adaptive mask shapes via user defined operation pipeline
- Algorithmic Mask: Useful for complex shapes
- Possibility to upgrade software to process volumetric data to study sub-surface deformation and strain phenomena, i.e. from X-ray CT machines
- Upgradeable later to DVC software

11. Laptop for Strain Master Portable

- Aluminium laptop housing
- 4th generation Intel Core i7-4600M Processor (2.9GHz, 4MB Cache)
- 44cm (17.3 Zoll) Ultra Sharp FHD (1.920×1.080), back lighted display
- 8GB (2x4GB) RAM: 1.600MHz DDR3L
- AMD FirePro M6100 with 2GB GDDR5
- Hybrid-SATA- hard disk, 2,5", 500GB, 6Gbit/s, with 8-GB-Flash-drive
- 8 x DVD+/-RW-drive
- Smart nCard reader
- 4 USB 3.0 port
- Internal US/International Qwerty Backlit dual Pointing Keyboard
- 9-cell (97Wh) Lithium-Ion-battery pack with Express Charge
- Microsoft Windows 7 Professional 64bit DVD
- Good quality leather carry case

12. Support and Updates

- Free phone and email support for the lifetime (e.g. 10 years) of the system
- No annual maintenance cost for support or minor software updates

13. General Requirements & Qualification Criteria

- Manufacturer should possess ISO 9001 – 2008 accreditation
- Vendor should have supplied minimum 04 No.s of DIC systems and above capacity preferably to government organizations, reputed industries & institutes in India in the past 5 years



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- Vendors should submit a global list of systems supplied for a minimum period of 5 years with complete contact details of the end users such as phone number, fax number, e-mail ID etc.
- Vendors should have Single Source Local Service Support Facility in India and should submit address and contact details
- Firms should give an undertaking for supply of Software upgrades if any, during the warranty period of 1 year, free of charge



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Annexure-II

GENERAL TERMS & CONDITIONS

NIT No. Mech-500331-2017-18

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 and drawn in favor of Registrar, IIT (ISM) Dhanbad and payable at 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 IIT (ISM) website (www.ismdhanbad.ac.in) and submit the same duly signed on all pages by the tenderers along with demand draft for tender cost
 - b. **Earnest Money Deposit (EMD):** Should be submitted in form of A/C payee demand draft drawn in favor of Registrar, IIT (ISM), Dhanbad and payable at any other Bank/ Branch located in Dhanbad. It can also be submitted in the form of bank guarantee issued by a Nationalized Bank in India in the format given in Annexure-IV.
 - c. Tenders without payment of tender cost and EMD may not be considered unless the tenderer is exempt from such payment under Govt. Rules/Regulations 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.
 - 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. 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 short-listed tenderers shall be opened in their presence on a pre-notified date and time.**
5. **Educational discount, if any, should be clearly mentioned.**
6. The Institute is generally at present paying concessional custom duty @9.36% for all items as per Govt of India notification. IIT (ISM) is also 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 to any Indian Agent/dealer or distributor at any circumstances. IIT (ISM) has not agreed any high sea sales Purchase. IIT (ISM) will provide only custom duty exemption certificate for availing concessional custom duty. IIT (ISM) will not pay any extra custom duty other than duty exemption certificate.
7. 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 (enclosed as Annexure V) should be indicated.



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8. **Warranty:** Minimum 12 months from the date of installation and commissioning at the site.
9. **Validity:** Offer must be valid for a period of **180 days** from the date of opening of tender.
10. Price should be quoted on FOR, Dhanbad basis in case of indigenous supply and Ex-works/ FOB, Port of loading/CIF, Kolkata basis in case of foreign supply
11. Your full address for correspondence and name address of the beneficiary's banker should be clearly indicated in the offer.
12. Country of origin and port of shipment should be stated in your offer clearly.
13. 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 FOB/CIF price of the offer" should be clearly indicated in your offer.
14. One set of technical literature/catalogue with the detail specification of the material under purchase should be furnished with the offer.
15. Earliest/expected delivery period should be clearly indicated.
16. Packing should be suitable for 'Air freight'.
17. Please note that no part shipment third party shipment is acceptable to us.
18. The dimension and gross and net weight in kilogram of the consignment should be indicated in the offer.
19. The offer should reach at the earliest in a sealed envelope superscribed 'Enquiry Reference Number' address to **Deputy Registrar (P&S), Indian Institute of Technology (Indian School of Mines), Dhanbad-826004, Jharkhand, India.**
20. **Performance Bank Guarantee (PBG):** Successful bidder has to submit a bank guarantee issued by a Nationalized Bank in India towards PBG for an amount equal to 10% of order value of purchase order and valid till the period beyond two months of completion of warranty period should be submitted in favour of **REGISTRAR, IIT (ISM) DHANBAD.**
21. **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) Detailed technical specifications of equipments.
 - 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. (VAT/CST/TIN), & Bank A/c no., name of bank & branch.
22. **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.
23. **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.
24. **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.
25. **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.
26. **Conditional offer will not be accepted.**
27. **Payment:** will be made within 30 days after satisfactory supply, inspection, installation/commissioning & acceptance and on submission of pre-receipted tax invoice, delivery challan, warranty certificate and



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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.

28. **Institute does not make any advance payment. However, as a special case 90% Letter of Credit Payment terms is accepted only in case of foreign supplier and balance 10% after satisfactory, installation report received from the user department.**
29. **Last date** for receipt of tenders and date & time for opening of the same is given in annexure-III. 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.
30. (i) Tender should be submitted in a sealed cover/envelope and must be superscribed as:
 "Tender No. _____ (NIT no. should be mentioned for _____ (tendered item should be mentioned) due on _____ (tender opening date should be mentioned) at _____ (tender opening time should be mentioned).
 (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 send 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.
31. IIT (ISM) 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. 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.
32. In case of any dispute, the decision of IIT (ISM) shall be final and binding on the bidders/tenderers.



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Annexure-III

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-IV

Format for Financial Bid

NIT No.: Mech-500331-2017-18

Date:

Bidders Ref: No.

Date:

GSTIN No.:

Subject: Supply & Installation of full field digital image correlation system

Sl. No.	Full Description of Items with (HSN Code/SAC Code)	Qty.	Rate	Amount
			Packing & Forwarding (if any)	
			Total	
			GST	
			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 GST, HSN Code, SAC Code, duties, livies, transportation cost and insurance costs etc. if any
- 3) All the rates must be quoted in Indian Rupees.



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Annexure-V

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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