भारतीय प्रौद्योगिकीसंस्थानमद्रासचेन्नै 600 036



INDIAN INSTITUTE OF TECHNOLOGY MADRAS Chennai 600 036 भंडार एवं क्रय अनुभाग

STORES & PURCHASE SECTION

Email: adstores@iitm.ac.in

दूरभाषः (044) 2257 8285 / 8287 / 8288 / 8290 फैक्सः (044) 2257 8082 Telephone: (044) 2257 8285/8287/8288/8290 FAX: (044) 2257 8082

GSTIN: 33AAAAI3615G1Z6



Date: 08.03.2024

P.K. SHEBA SABARI

Assistant Registrar (Stores & Purchase)

Tender No. IITM/SPS/MML/049/2023-24/SPL

Due Date 15.03.2024 Before 02.30 p.m.

Dear Sirs,

On behalf of the Indian Institute of Technology Madras, Tenders are invited in two bid system, namely technical and financial bids for:

SUPPLY OF MECHANICAL METALLURGY LAB (MML) EQUIPMENT AT IIT MADRAS

Conforming to the specifications enclosed.

Tender Documents be downloaded from Central **Public** Procurement Portal may https://etenders.gov.in/eprocure/app. Aspiring Bidders who have not registered enrolled in enroll/register before e-procurement should participating through the website https://etenders.gov.in/eprocure/app. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at "Help for contractors". [Special instructions to the bidders for the e-submission of the bids online through this e-Procurement Portal"].

Tenderers can access tender documents on the website (For searching in the NIC site, kindly go to Tender Search option and type 'IIT'. Thereafter, Click on "GO" button to view all IIT Madras tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website https://etenders.gov.in/eprocure/app as per the schedule attached.

No manual bids will be accepted. All tender documents including Bidder Eligibility Criteria, Technical and Financial bids should be submitted in the E-procurement portal.

	LAST DATE for receipt of Tender	:	15.03.2024 before 02.30 p.m.					
1	Date & Time of opening of Tender	:	18.03.2024 @ 3.00 p.m.					
	GUIDELINES FOR	R TE	ENDER SUBMISSION IN CENTRAL PUBLIC PROCUREMENT PORTAL (E-PROCUREMENT MODE)					
Α	निविदा की प्रस्तुति /Submission of	:	 As per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal URL: https://etenders.gov.in/eprocure/app 					
	Tender		 The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal More information useful for submitting online bids on the CPP Portal may be obtained at: https://etenders.gov.in/eprocure/app 					
			 All tender documents including Technical Bid & Financial Bid should be submitted separately in online CPP portal as per the specified format only. 					

			Right is reserved to ignore any tender which fails to comply with the above instructions. No manual bid submission will be entertained.				
В	के अनुदेश / Instructions for online bid submission		 Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal URL: https://etenders.gov.in/eprocure/app by clicking on "Online Bidder Enrollment". Enrolment on the CPP Portal is free of charge. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) 				
			 issued by any Certifying Authority recognized by CCA India (e.g.Sify/TCS/nCode/eMudhra and etc.)https://eprocure.gov.in/eprocure/app with their profile. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse. Bidder then may log in to the site through the secured log-in by entering their user ID / password and the password of the DSC / eToken. 				
C	निविदा दस्तावेज़ की खोज / Searching for tender documents	:	 There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective "My Tender" folder. This would enable the CPP Portal to intimate the bidders through SMS / email in case there is any corrigendum issued to the tender document. 				
D	बोली की तैयारी / Preparation of bids	:	 The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk. Bidder should take into account any corrigendum published on the tender document before submitting their bids. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid. Bidder, in advance, should prepare the bid documents to be submitted as indicated in the tender document / schedule and generally shall be in PDF / XLS formats as the case may be. Bid documents may be scanned with 100 dpi with black and white option. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, GSTIN Details, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Documents" area available to them to upload such documents. These documents may be directly submitted from the "My 				

		Documents" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission
E	बोली की प्रस्तुति / Submission of bids	 process. Bidder should log into the site well in advance for bid submission so that he/she can upload the bid in time i.e. on or before the bid submission date and time. Bidder will be responsible for any delay due to other issues.
		The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
		 Bidder has to transfer the EMD as applicable by online mode only. The EMD should be transferred on or before the closure date and time of the tender. If the EMD is not transferred before the closure date and time, the tender will be summarily rejected. The proof of transfer has to be submitted in the Technical Bid, Otherwise, the tender will be summarily rejected.
		 A standard BOQ format has been provided in Annexure-C with the tende document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are required to download the BOQ file open it and complete the detail with their respective financial quotes and other details (such as name of the bidder). If the BOQ file is found to be modified by the bidder, the bid will be rejected. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
		 The Tender Inviting Authority (TIA) will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders due to local issues.
		 The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
		 Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
		 Kindly add scanned PDF of all relevant documents in a single PDF file o compliance sheet.
F	बोलीदाताओं के लिए सहायता /Assistance to bidders	 Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
	to bluders	 Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is [0120-4200462, 0120-4001002, 0120 4001005]
G	बोलीदाताओं के लिए सामान्य अनुदेश / General Instructions	The tenders will be received online through porta <u>https://etenders.gov.in/eprocure/app</u> . In the Technical Bids, the bidders are required to upload all the documents in single pdf file.
	to the Bidders	 Possession of a Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through https://etenders.gov.in/eprocure/app
		 Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site https://etenders.gov.in/eprocure/app under the "Information about DSC".

Н	बयाना जमा : ईएमडीEarnest Money Deposit (EMD)	 i. EMD of INR 1,50,000/- (Rupees One Lakh Fifty Thousand only) should be transferred through NEFT/RTGS to the following bank account on or before due date 15.03.2024 before 2:30 p.m. Name: Registrar IIT Madras Bank: State Bank of India Account No.: 10620824305 Branch: IIT MADRAS
		ii. As per O.M. No.F.1/2/2022-PPD Dated 01.04.2022, the EMD will be returned to the unsuccessful Bidder(s), within 30 days after declaration of result of first stage i.e. technical evaluation etc. The EMD shall be forfeited if any Bidder withdraws the offer before finalization of the tender.
		iii. The EMD amount should not be sent through DD.
		iv. Non-submission of EMD details on or before the due date and time will result in rejection of the e-bid.
		v. As per Rule 170 of GFR 2017, exemption of EMD will be given subject to submission of undertaking by the firm seeking such exemption. Copies of relevant orders/ documents regarding such exemption should be submitted along with the tender document.
		vi. The successful bidder shall submit a Performance Guarantee of 3% of the purchase order value by way of DD/Bank Guarantee (including e-Bank Guarantee)/FDR/ Insurance surety bonds in favour of "The Registrar, IIT Madras" to be obtained from any commercial bank, within 14 (Fourteen) days from the date of issue of order by IIT Madras, which would be released 60 days after the successful completion of the warranty period after the adjustment dues if any without interest.
		vii. In case of successful bidder, the EMD will be adjusted towards the Performance Guarantee on request, subject to validity.
		viii. The amount of EMD is liable to be forfeited if the bidder withdraws the offers after submission of the tender or after the occupation of the offer and fails to remit the Performance Guarantee.
I	तकनीकी बोली पर मार्किंग /Marking on Technical Bid	i. The Bidder Eligibility Criteria, technical specification of the item for this tender is given in Annexure A . The Bidders shall go through the Bidder Eligibility Criteria, Technical Specification and submit the technical bid in the proforma given in Annexure B in the tender document along with the supporting documents.
		 ii. The Technical bid should be submitted in pdf format only through online (etender). No manual submission of bid will be entertained. iii. The technical bid should have the page-wise heading as "Technical Bid" and page no. in all pages with seal and signature of authorized signatory. The total no. of pages should be mentioned at the last page of the documents. iv. The technical bid should consist of a) Document proof for EMD payment b) Technical Compliance sheet as per proforma given in Annexure -B c) Document proof for Bidder eligibility criteria, technical details along with catalogue / brochure and other technical, commercial
		terms and conditions.
J	वित्तीय बोली पर : मार्किंग Marking on Financial Bid	Financial bid (BOQ) should be submitted in the prescribed format given in Annexure- C in xls format through e-tender only. No manual or other form of submission of Financial Bid will be entertained.

निविदा के निबंधन व शर्तें TERMS AND CONDITIONS OF TENDER निविदा की तैयारी Preparation of Tender: 1. The bids should be submitted through online only in two bid system i.e. Technical Bid and Financial Bid separately. The bidder has to submit the tender document duly signed on all pages by an authorized person and his / her full name and status shall be indicated below the signature along with official seal/stamp of the firm. Submission of wrong / forged information / document will be liable to legal action, and rejection of the bid submitted by the firm. The bids of the agency/firm/company not in possession of valid statutory license / registrations are liable for rejection. If any relative of the bidder is an employee of the IIT Madras, the name, designation and relationship of such employee shall be intimated to the Registrar, IIT Madras in writing while submitting the bid. No bidder will be allowed to withdraw / alter / modify the bid during the bid validity period. निविदा पर हस्ताक्षर Signing of Tender: 2. The Tender is liable to be rejected if complete information is not given therein or if the particulars and date (if any) asked for in the schedule to the Tender are not fully filled in or not duly signed/authenticated. Specific attention is drawn to the delivery dates and terms and conditions enclosed herewith. Each page of the bids required to be signed and bears the official seal of the Bidders. If the bid is submitted by a firm in partnership, it shall be signed (with seal) by all the partners of the firm above their full typewritten names and current addresses or alternatively by a partner holding power of attorney for the firm in which case a certified copy of the power of attorney shall accompany the application. A certified copy of the partnership deed along with current addresses of all the partners of the firm shall also accompany the application. If a limited company or a corporation makes the application, it shall be signed by a duly authorized person holding power of attorney for signing the application, in which case a certified copy of the power of attorney shall accompany the application. Such limited company or corporation may be required to furnish satisfactory evidence of its existence. The bidder shall also furnish a copy of the Memorandum of Articles of association duly attested by a Notary Public. वह अवधि जिसके लिए ऑफर खुला रहेगा Period for which the offer will remain open: 3. The Tender shall remain open for acceptance/validity till: 120 days from the date of opening of the tender. However, the day up to which the offer is to remain open being declared closed holiday for the Indian Institute of Technology Madras, the offer shall remain open for acceptance till the next working day. कीमत Prices: 4. · The prices quoted by the bidders should be inclusive of Training, Installation, Transportation, GST and other charges. • All conditional tenders will be summarily rejected. भगतान टीमें Payment terms : 5. Local: 90% against delivery at site and 10% after installation. Advance if any required may be considered against the request of successful vendor by submitting equivalent amount of BG in addition to Performance Security Deposit. 6. सुपुर्दगी Delivery: The delivery period should be maximum 2 months from the date of issue of purchase order. Warranty and AMC: 7. a. 2 years Standard Warranty from the date of installation for all the equipment.

b. A continuous operational support to IIT Madras should be provided without any additional cost

d. Annual Maintenance contract (AMC) should be quoted as option for 2 years upon the completion

e. Comprehensive maintenance contract should include cost of services as well as spares.

during the warranty period.

of the extended warranty period.

c. OPTIONAL for extended warranty - 3 years.

Vendor should also give schedule of preventive maintenance in their offer. During the period of contract vendor should respond to breakdown within 72 hours of reporting. g. The vendor should also mention the payment schedule for AMC along with their offer. 8. **Installation & Training:** a. All the essential requirements ensuring a ready-to-use set up at IIT Madras should be supplied. b. Overall dimensions of the machine to be shown schematically, specifying the area required to install the machine in all three dimensions with the accessories. c. Clear documentation on the site requirements and site needs should be provided. d. OEM / Bidder should carry out the installation and commission of the machine at the Customer site at free of cost. e. After installation and commissioning of the equipment, there will be a Site Acceptance Test (SAT) on mutually agreed terms. f. Safety training at the time of installation should be provided on-site at the time of installation and acceptance test. There should not be any restriction on number of persons to be trained. g. Training should be provided on-site at the time of installation and acceptance test. There should not be any restriction on number of persons to be trained. h. However, training shall be restricted to one batch of few persons. i. All the training instructions have to be in English only. Duration of training should be adequate for the identified operators to understand and operate the machine independently. Spare parts and accessories will be available for smooth operation over at least 15 years from the date 9. of installation. However, the consumables and parts required at the time of installation and standardisation should be given free of cost. (Self declaration- APPENDIX-A) The bidder should have local presence of qualified engineer(s) for prompt and efficient after sales 10. services for at least the next 10 years. They should also have established local application laboratory to assist us for our regular assistance for our samples/methods/data interpretations- (Self declaration APPENDIX- B). **Additional Mandatory Conditions:** 11. a. The operational status of all the equipment in India should be provided (Self Declaration). b. "Emergency Stop" button(s) should be provided at convenient and easily accessible location. c. The equipment brochures, operation and safety manuals, charts should be provided. d. Flow line diagrams and electrical circuit diagrams should be provided. e. A preinstallation instructions should be provided with the equipment, indicating electrical, space, gas connections and safety protocols should be provided. Overall dimensions of the machine to be shown schematically, specifying the area required to install the machine in all three dimensions with the accessories. g. After installation and commissioning of the equipment, there will be a Site Acceptance Test (SAT) on mutually agreed terms. निबंधन व शर्तें Terms and Conditions: 12. Failure to comply with any of the instructions stated in this document or offering unsatisfactory explanations for non-compliance will likely to lead to rejection of offers. स्वीकृति का अधिकार Right of Acceptance: IIT Madras reserves the right to reject the whole or any 13. part of the Tender without assigning any reason or to accept them in part or full. स्वीकृति की सूचना Communication of Acceptance: Letter of Intimation and acceptance will be 14. communicated by post /email to the successful bidder to the address indicated in the bid. All information including selection and rejection of technical or financial bids of the prospective bidders 15. will be communicated through CPP portal. In terms of Rule 173(iv) of General Financial Rule 2017, the bidder shall be at liberty to question the bidding conditions, bidding process and/or rejection of bids. बोलीदाता को इस निविदा के साथ जमा करना होगा Bidder shall submit along with this Tender: 16. Name and full address of the Banker and their swift code and PAN No. and GSTIN number. 17. क्षेत्राधिकार Jurisdiction: All questions, disputes, or differences arising under, out of or in connection with the contract, if concluded, shall be subject to the exclusive jurisdiction at the place from which the acceptance of Tender is issued.

18. Right of IIT Madras

- The Registrar, IIT Madras reserves right to withdraw / relax any of the terms and conditions mentioned above so as to overcome the problem encountered by the contracting parties.
- The Registrar, IIT Madras reserves the right to accept or reject any or all the tenders without assigning any reason whatsoever and his / her decision shall be final and binding on the tenderer.
- IIT Madras reserves the right to suitably increase / reduce the scope of supply put to this
 tender. In case of any ambiguity in the interpretation of any of the clauses in tender document
 or purchase order, interpretation of the clauses by the IIT Madras shall be final and binding on
 all parties.

19. जुर्माना परिसमापन क्षति Penalty & Liquidated Damages / Force Majeure:

- If the selected Bidder fails to complete the due performance of the contract in accordance with
 the terms and conditions, Institute reserves the right either to cancel the contract or to accept
 performance already made by the selected Bidder after imposing Penalty on Selected Bidder.
 A penalty will be calculated on a per week basis and on the same Rate as applicable to
 Liquidated Damages (LD). In case of termination of the contract, Institute reserves the right to
 recover an amount equal to 5% of the Contract value as Liquidated Damages for nonperformance.
- Both Penalty and Liquidated Damages are independent of each other and are applied separately and concurrently. Penalty and LD are not applicable for reasons attributable to the Institute and Force Majeure. However, it is the responsibility of the selected Bidder to prove that the delay is attributable to the Institute and Force Majeure. The selected Bidder shall submit the proof authenticated by the Bidder and Institute's official that the delay is attributed to the Institute and/or Force Majeure along with the bills requesting payment.
- 20. The bidder shall certify that the tender document submitted by him / her are of the same replica of the tender document as published by IIT Madras and no corrections, additions and alterations made to the same. If any deviation found in the same at any stage and date, the bid / contract will be rejected / terminated and actions will be initiated as per the terms and conditions.
 - 21. The bidder shall study the Tender document, Bidder Eligibility criteria and technical specification in detail as given in **Annexure A** before submitting the bid.

22. बोलीदाता पात्रता मानदंड Bidder Eligibility Criteria:

- a. The bidder shall not be from a country sharing land border with India and if the bidder is from a country sharing land border with India the bidder should have been registered with the competent authority as per orders of DIPP OM No. F. No. 6/18/2019-PPD dated 23rd July 2020, and MoCI Order No. P-45021/112/2020-PP (BE) (E-43780) dated 24th August 2020. A declaration shall be submitted with the bid as per format given in **Annexure D.**
- b. 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P45021/2/2017-PP (BE) dated 16th September 2020 and other subsequent orders issued therein, shall be eligible to bid in this tender. Declaration for Class-I / Class-II local suppliers should be submitted in the prescribed proforma format as per **Annexure E.**
- c. Neither the tender participating firm nor any of its partner has been blacklisted / debarred /involved / convicted in any criminal case / economic offence nor any criminal case / economic offence is pending against firm or any partner of the Firm before any Court of Law / Police. A self-declaration format given in **Annexure F.**
- d. The bidder should be an OEM or authorized supplier of OEM. Necessary OEM certificate / OEM authorization letter for this particular tender should be submitted by the bidder as given in **Annexure-G.**
- e. The bidder must have an aggregate financial turnover of at least Rs.40 Lakhs in the last 3 years i.e. 2020-21, 2021-22 & 2022-23 (Should enclose the audited financial statement signed by the Chartered Accountant)
- f. The bidder should have a service centre in Chennai for service support. Proof of service centre in Chennai should be furnished as documentary evidence (such as valid rental agreement/GST Certificate/ Certificate of incorporation etc.)
- g. The bidder should have supplied atleast one identical item called for in the tenders to 5 different reputed Institutions like IIT/NIT/ Central or State Government / Central Research Labs / R&D units/ IISC, IISERs in India in the last five years.

Copies of the document listed below should be submitted as a proof for the above work experience: a. Work Order/purchase order should be submitted and also the list of similar instruments supplied including contact details (name of the person-in-charge, email, and phone number) should be provided. b. Work Completion Certificate/or User performance Certificate from End User. c. A global reference list as well as user list in India should be enclosed. बोलियों की संख्या और उनका प्रस्तुतीकरण Number of Bids and their Submission: 23. Bids should be submitted in e- Procurement Portal. Two bid system should be followed as detailed below Bid I: Technical Bid The bidder should go through the Bidder Eligibility Criteria and Technical Specification given in Annexure-A of the tender document, understand the requirement of IITM and submit their technical bid along with all relevant document proof in the proforma given in Annexure-B. Any tender documents without these shall be invalid and rejected. The technical bid should consist of proof of EMD transfer, Bidder Eligibility Criteria, Technical specification and compliance sheet (proforma given in Annexure - B) along with all relevant documents proof. Bid II: Financial Bid Financial bid should be submitted only in e-Procurement Portal as per Proforma for Financial bid format given in Annexure (C). No manual or other form of submission of Financial bid will be entertained. The Quoted price should be for supply, installation, transportation, loading and unloading of the item and inclusive of all cost at IIT Madras. बोलियों का मुल्यांकन / Evaluation of Bids: Bid Evaluation will take place in two stages. Stage I: Technical Bid evaluation: 1. In the 1st stage, the Bidder will be evaluated first for conformity with Bidder Eligibility Criteria and those bidders who have complied with this criterion will alone be evaluated further. 2. In the 2nd stage, the Technical Specification offered by the bidders will be evaluated by the technical committee for compliance. Only those bidders who have fully complied with Bidder Eligibility Criteria and Technical Specification will be considered for financial bid evaluation. The technical specification will be evaluated for each line item separately. 23. Stage II: Financial Bid Evaluation: 1. The technical specification will be evaluated for each line item separately. The Lowest rate quoted for each line item by the technically qualified bidder will alone be taken for L1 rate evaluation for that particular item. The Order will be awarded to successful bidder for L1 of each line item and not to the overall L1 bidder. 2. Optional Extended Warranty and Optional AMC will not be considered for price bid evaluation to arrive the L1 rate. सफल बोलीदाता का चयन और आदेश प्रदान करना Selection of successful bidder and Award of Order: The order will be directly awarded to the technically qualified bidder as per the condition in para 3A of 24. DIPP, MoCI Order No. 45021/2/2017-PP (BE) dated 16th September 2020 and other subsequent orders issued therein. The bidders will not be entertained to participate in opening of Bids. Since the tender is e-tender, the 25. opening of the bids may be checked using the respective logins of the bidders. In accordance to the Rule 173 of GFR, 2017 and relevant provisions thereof in Procurement Manuals, 2022, IITM reserves the right to carry out the negotiation process through its purchase/technical 26. committee with L1/H1 (as applicable) vendor to ensure price reasonability before final recommendation to the Competent Authority. The negotiation details, if any, on case to case basis shall be recorded in minutes of meeting suitably for records.

Assistant Registrar Stores & Purchase

ACKNOWLEDGEMENT

It is hereby acknowledged that I/We have gone through all the points listed under "Bidder Eligibility Criteria, Technical Specification and Terms & Conditions" of tender document, the same is abided and agreed to be executed. In case, if any of the information furnished by me/us is found false, I/We are fully aware that the tender /contract will be rejected / cancelled by IIT Madras & EMD shall be forfeited.

Signature of the Bidder Name & Address of the Bidder with Office Stamp

SCHEDULE OF TENDER

SUPPLY OF MECHANICAL METALLURGY LAB EQUIPMENT AT IIT MADRAS Tender No. IITM/SPS/MML/049/2023-24/SPL

Name of Organization	Indian Institute of Tachnology Madras
Name of Organization	Indian Institute of Technology Madras
Tender Type (Open/Limited/EOI/Auction/Single)	OPEN
Tender Category (Services/Goods/Works)	Goods
Type/Form of Contract (Work/Supply/Auction/ Service/ Buy/ Empanelment/ Sell)	Supply
Name of the Supply	SUPPLY OF MECHANICAL METALLURGY LAB EQUIPMENT AT IIT MADRAS
Source of Fund (Institute/Project)	IIT Madras
Is Multi Currency Allowed	No
Date of Issue/Publishing	08.03.2024
Document Download Start Date	08.03.2024
Document Download End Date	15.03.2024
Bid Submission Start Date	08.03.2024
Last Date and Time for Uploading of Bids	15.03.2024 @ 02.30 p.m.
Date and Time of Tender Opening	18.03.2024 @ 03.00 p.m.
No. of Covers (1/2/3/4)	2
Bid Validity days (180/120/90/60/30)	120 Days
Address for Communication	For Technical Queries: Dr. Murugaiyan Amirthalingam Associate Professor, Department of Metallurgical and Materials Science Engineering, IIT Madras, Chennai - 600 036. Phone No: 044- 2257- 4784 Email: murugaiyan@iitm.ac.in For General Queries: The Assistant Registrar Stores & Purchase Section IIT Madras Chennai - 600 036 Email: adstores@iitm.ac.in Contact No. 044- 2257 8287/8288/8290/8285

SUPPLY OF MECHANICAL METALLURGY LAB EQUIPMENT AT IIT MADRAS Tender No. IITM/SPS/MML/049/2023-24/SPL

बोलीदाता पात्रता मानदंड Bidder Eligibility Criteria:

- I. The bidder shall not be from a country sharing land border with India and if the bidder is from a country sharing land border with India the bidder should have been registered with the competent authority as per orders of DIPP OM No. F. No. 6/18/2019-PPD dated 23rd July 2020, and MoCI Order No. P-45021/112/2020-PP (BE) (E-43780) dated 24th August 2020. A declaration shall be submitted with the bid as per format given in **Annexure D.**
- II. 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P45021/2/2017-PP (BE) dated 16th September 2020 and other subsequent orders issued therein, shall be eligible to bid in this tender. Declaration for Class-I / Class-II local suppliers should be submitted in the prescribed proforma format as per **Annexure E**.
- III. Neither the tender participating firm nor any of its partner has been blacklisted / debarred /involved / convicted in any criminal case / economic offence nor any criminal case / economic offence is pending against firm or any partner of the Firm before any Court of Law / Police. A self-declaration format given in Annexure F.
- IV. The bidder should be an OEM or authorized supplier of OEM. Necessary OEM certificate / OEM authorization letter for this particular tender should be submitted by the bidder as given in **Annexure-G**.
- V. The firm must have an aggregate financial turnover of at least Rs.40 Lakhs in the last 3 years i.e. 2020-21, 2021-22 & 2022-23 (Should enclose the audited financial statement signed by the Chartered Accountant)
- VI. The bidder should have a service centre in Chennai for service support. Proof of service centre in Chennai should be furnished as documentary evidence (such as valid rental agreement/GST Certificate/ Certificate of incorporation etc.)
- VII. The bidder should have supplied at least one identical item called for in the tenders to 5 different reputed Institutions like IIT/NIT/ Central or State Government / Central Research Labs / R&D units/ IISC, IISERs in India in the last five years.

Copies of the document listed below should be submitted as a proof for the above work experience:

- a. Work Order/purchase order should be submitted and also the list of similar instruments supplied including contact details (name of the person-in-charge, email, and phone number) should be provided.
- b. Work Completion Certificate/or User performance Certificate from End User.
- c. A global reference list as well as user list in India should be enclosed.

TECHNICAL SPECIFICATION:

I. UNIVERSAL TESTING MACHINE (UTM) - 2 NOS.

- 1. The Computerized Universal Testing Machine should have the ability to perform most of the standard mechanical tests (Tensile, Compression, Bend, Flexure, Tear etc.)
- 2. The machine should be capable of testing metals and their alloys, ceramics, composites, polymers and rubber etc.
- 3. The system should have provision for installing an environmental chamber in future.

Mandatory Technical specifications:

S.No.	Parameters	Values or Notes	
A.	Types of tests to be performed	Tensile, Compressive, Bending, Flexure, Peel Adhesion etc.	
В.	Materials to be tested	Metals, Alloys, Ceramics, Composites, Polymers and Rubber etc.	
C.	Specimen Geometry	The machine should be capable of testing all ASTM and ISO standard test samples (tension, compression, bending, tear, flexure etc.). Equipment should be capable of testing ASTM sub-sized samples as well.	
D.	Temperature of testing	Room temperature (tensile, compression, bending, tear, flexure etc.)	
E.	Force range	0 to 30 kN or higher	
F.	Load Resolution	0.01 kN or better	
G.	Load Frame	Double Column Frame	
H.	Load cell accuracy	1. Load cell should have the capability to measure 0 to 30 kN (with a least count of 10 N or lower) 2. Cell accuracy of ±0.5% over 5 to 100% Load Cell range (for example: For 1.2 kN measurement, accuracy should be minimum ±6 N)	
I.	Position control resolution (Machine resolution)	0.01 mm or better	
J.	Position measurement accuracy	± 0.1 mm or better	
K.	Cross head travel	1000 mm, from top of bottom plate to bottom of platen	
L.	Testing speed range	From 0.1 to 500 mm/min or better	
M.	Actuator drive	Digital AC Servo Drive with Servo Motor	
N.	Compatibility with test specifications	All the relevant ASTM and ISO standards for material testing should be met.	
0.	Safety Features	Emergency Stop, Over Travel Protection	
P.	Tension Testing Fixture and platens	Self-tightening Wedge type tensile grip suitable for holding standard tensile samples, 2 Nos. with support fixture (Including LVDT mounting holes). The tensile grips shall be insulated to handle current up to 1500 A current and a maximum temperature of 600°C.	
Q.	Compression Testing Fixture and platens	50 mm diameter or above, 2 Nos. with support fixture (Including LVDT mounting holes). The platen shall be insulated to resist up to 1500 A current.	
R.	Computer with Software	Features: 1. Windows based software should be compatible with the latest version of Windows operating system (Windows 10) and hardware for control of Computerized UTM, Online Data Acquisition to PC and Data Analysis. 2. Real time display of data, Test curves, 3. Online/Offline generation of Graphs of Load Versus length, Load versus Displacement, Load vs Elongation, Stress vs Strain, with scaling feature and error analysis.	

		4. Comparative study of various test results using features		
		like Multi Graphs, Bar Graphs.		
		5. Software password protection.		
		6. Test Speed Control and Automatic Return		
		7. Database of Test Results		
		8. Printing of Test reports for tested Samples		
		9. Ability to store test data in files		
		10. Statistical analysis of test samples		
		11. Comparative analysis using Multi Graphs		
		12. Self-recognition and Calibration of Load Cell		
		13. User can design and add new tests		
		14. Automatic Calculation of Parameters like Percentage		
		Elongation, Peak load, Break load, Displacement, Peak		
		Elongation, Peak tensile Strength, Break tensile strength,		
		Proof stress, Strain, Young's modulus.		
S.	Equipment utilization	Should be capable of running up to 24 hrs. daily.		
T.	Other requirements (compulsory)	Supplier should provide necessary training to at least 5		
''	other requirements (compaisory)	persons designated by the customer in all types of testing (as		
		mentioned in "Types of test to be performed" parameter) in		
		IIT Madras upon installation of the equipment.		
		in Madras apon installation of the equipment.		

II. INSTRUMENTED CHARPY IMPACT TESTER FOR MINIATURE SPECIMENS – 1 NO.

- A. Desktop impact tester capable of impact testing of notched metallic specimens (miniature specimens) with specimen dimensions corresponding to standard ASTM E2248-15.
- B. Minimum impact energy capacity of 100 J.
- C. Force measurement capacity as a function of time with suitable load cell.
- D. Physical machine dial on the machine showing absorbed energy
- E. Digital indicator showing energy absorbed for fracture by the specimen at the end of the test.
- F. Accuracy (for energy absorbed) within 1 % of maximum capacity in J.
- G. Tangential velocity of striker at the point of impact with specimen should not be less than 1m/s or more than 4 m/s.

PROFORMA FOR TECHNICAL COMPLIANCE SHEET SUPPLY OF MECHANICAL METALLURGY LAB EQUIPMENT AT IIT MADRAS Tender No. IITM/SPS/MML/049/2023-24/SPL

BIDDER ELIGIBILITY CRITERIA:

S. No.	Description	Compliance (Yes / No)	Reference Page No.
1	The bidder shall not be from a country sharing land border with India and if the bidder is from a country sharing land border with India the bidder should have been registered with the competent authority as per orders of DIPP OM No. F. No. 6/18/2019-PPD dated 23rd July 2020, and MoCI Order No. P-45021/112/2020-PP (BE) (E-43780) dated 24th August 2020. A declaration shall be submitted with the bid as per format given in Annexure – D.		
2	'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P45021/2/2017-PP (BE) dated 16th September 2020 and other subsequent orders issued therein, shall be eligible to bid in this tender. Declaration for Class-I / Class-II local suppliers should be submitted in the prescribed proforma format as per Annexure – E .		
3	Neither the tender participating firm nor any of its partner has been blacklisted / debarred /involved / convicted in any criminal case / economic offence nor any criminal case / economic offence is pending against firm or any partner of the Firm before any Court of Law / Police. A self-declaration format given in Annexure – F.		
4	The bidder should be an OEM or authorized supplier of OEM. Necessary OEM certificate / OEM authorization letter for this particular tender should be submitted by the bidder as given in Annexure-G .		
5	The bidder must have an aggregate financial turnover of at least Rs.40 Lakhs in the last 3 years i.e. 2020-21, 2021-22 & 2022-23 (Should enclose the audited financial statement signed by the Chartered Accountant)		
6	The bidder should have a service centre in Chennai for service support. Proof of service centre in Chennai should be furnished as documentary evidence (such as valid rental agreement/GST Certificate/ Certificate of incorporation etc.)		
7	The bidder should have supplied atleast one identical items called for in the tenders to 5 different reputed Institutions like IIT/NIT/ Central or State Government / Central Research Labs / R&D units/ IISc, IISERs in India in the last five years.		
	Copies of the document listed below should be submitted as a proof for the above work experience:		
	 a. Work Order/purchase order should be submitted and also the list of similar instruments supplied including contact details (name of the person-in-charge, email, and phone number) should be provided. b. Work Completion Certificate/or User performance Certificate from End User. c. A global reference list as well as user list in India should be enclosed. 		

TECHNICAL SPECIFICATION:

SI. No.		Compliance Yes/No	Ref Page No.	
ı	UNIVERSAL 1	ESTING MACHINE (UTM) – 2 NOS.	-	
1.	The Computerized Univers perform most of the stand Bend, Flexure, Tear etc.)			
2.		apable of testing metals and their es, polymers and rubber etc.		
3.		ave provision for installing an		
	environmental chamber in	future.		
	Mandatory technical spec			
	Parameters	Values or Notes		
A.	Types of tests to be performed	Tensile, Compressive, Bending, Flexure, Peel Adhesion etc.		
В.	Materials to be tested	Metals, Alloys, Ceramics, Composites, Polymers and Rubber etc.		
C.	Specimen Geometry The machine should be capable of testing all ASTM and ISO standard test samples (tension, compression, bending, tear, flexure etc.). Equipment should be capable of testing ASTM sub-sized samples as well.			
D.	Temperature of testing	Room temperature (tensile, compression, bending, tear, flexure etc.)		
E.	Force range	0 to 30 kN or higher		
F.	Load Resolution	0.01 kN or better		
G.	Load Frame	Double Column Frame		
H.	Load cell accuracy	 Load cell should have the capability to measure 0 to 30 kN (with a least count of 10 N or lower) Cell accuracy of ±0.5% over 5 to 100% Load Cell range (for example: For 1.2 kN measurement, accuracy should be minimum ±6 N) 		
I.	Position control resolution (Machine resolution)	0.01 mm or better		
J.	Position measurement accuracy	± 0.1 mm or better		
K.	Cross head travel	1000 mm, from top of bottom plate to bottom of platen		
L.	Testing speed range	From 0.1 to 500 mm/min or better		
M.	Actuator drive Digital AC Servo Drive with Servo Motor			
N.	Compatibility with test specifications	All the relevant ASTM and ISO standards for material testing should be met.		
0.	Safety Features	Emergency Stop, Over Travel Protection		
P.	Tension Testing Fixture and platens Self-tightening Wedge type tensile grip suitable for holding standard tensile samples, 2 Nos. with support fixture (Including LVDT mounting holes)The tensile grips shall be insulated to handle current up to 1500 A current and a maximum temperature of 600°C.			
Q.	Compression Testing Fixture and platens	50 mm diameter or above, 2 Nos. with support fixture (Including LVDT mounting holes). The platen shall be insulated to resist up to 1500 A current.		

В	Computer with Coftware	Footures					
R.	Computer with Software	Features: 1. Windows based software should be					
		compatible with the latest version of Windows					
		operating system (Windows 10) and hardware					
		for control of Computerized UTM, Online Data					
		Acquisition to PC and Data Analysis.					
		2. Real time display of data, Test curves.					
		3. Online/Offline generation of Graphs of Load					
		Versus length, Load versus Displacement, Load					
		vs Elongation, Stress vs Strain, with scaling					
		feature and error analysis.					
		4. Comparative study of various test results					
		using features like Multi Graphs, Bar Graphs.					
		5. Software password protection					
		6. Test Speed Control and Automatic Return 7. Database of Test Results					
		8. Printing of Test reports for tested Samples					
		9. Ability to store test data in files					
		10. Statistical analysis of test samples					
		11.Comparative analysis using Multi Graphs					
		12. Self-recognition and Calibration of Load Cell.					
		13. User can design and add new tests					
		14. Automatic Calculation of Parameters like					
		Percentage Elongation, Peak load, Break load,					
		Displacement, Peak Elongation, Peak tensile					
		Strength, Break tensile strength, Proof stress,					
		Strain, Young's modulus.					
S.	Equipment utilization	Should be capable of running up to 24 hrs. daily.					
		Supplier should provide necessary training to at					
	Other requirements	least 5 persons designated by the customer in					
T.	(compulsory)	all types of testing (as mentioned in "Types of					
		test to be performed" parameter) in IIT Madras					
		upon installation of the equipment.					
II	INSTRUMENTED CHARPY IMPACT TESTER FOR MINIATURE SPECIMENS – 1 NO.						
Α.	Desktop impact tester capable of impact testing of notched metallic						
	specimens (miniature specimens) with specimen dimensions						
	corresponding to standard ASTM E2248-15.						
В.	Minimum impact energy capacity of 100 J.						
C.	Force measurement capacity as a function of time with suitable load cell.						
D.	-	ne machine showing absorbed energy					
E.		energy absorbed for fracture by the specimen at					
	the end of the test.						
F.	Accuracy (for energy abso	rbed) within 1 % of maximum capacity in J.					
G.		er at the point of impact with specimen should					
	not be less than 1m/s or m	nore than 4 m/s.					

^{*} Reference page number is mandatory and should be mentioned in the technical compliance

SIGNATURE OF BIDDER ALONG WITH SEAL OF THE COMPANY WITH DATE

PROFORMA FOR FINANCIAL BID (BoQ)

SUPPLY OF MECHANICAL METALLURGY LAB EQUIPMENT AT IIT MADRAS Tender No. IITM/SPS/MML/049/2023-24/SPL

				Rate	Total Cost	GST (in %)	Total value
Sl.No.	Item Description	Unit	Qty	Per Unit	(without GST)	G51 (75)	ingl. of GST
					(A)	(B)	
Α.	SUPPLY OF MECHANICAL MET specification in Annexure-A	ALLURGY	LAB E	QUIPME	ENT AT IIT MA	ADRAS As per to	echnical
ı	UNIVERSAL TESTING MACHINE (UTM) (As per technical specification in Annexure-A)	Nos.	2			ENTER AND SUBMIT THE FINACIAL BID IN THE CPP (e- PROCURMENT POTAL)	
II	INSTRUMENTED CHARPY IMPACT TESTER FOR MINIATURE SPECIMENS (As per technical specification in Annexure-A)	Nos.	1				
В	OPTIONAL EXTENDED WARRA	ANTY FOR	3 YEA	RS AFTE	R STANDARD	WARRANTY	
	UNIVERSAL TESTING MACHINE (3 rd Year	UTM)- 2 No	os. (As	per tech	nical specificat	ion in Annexure	-A)
•	4 th Year 5 th Year						
=	in Annexure-A) 3rd Year 4th Year 5th Year	T TESTER F	OR MI	NIATURE	SPECIMENS (A	As per technical s	specification
C.	OPTIONAL AMC OF THE EQUIPMENT FOR A PERIOD OF 2 YEARS AFTER THE EXTENDED WARRANTY						
I	UNIVERSAL TESTING MACHINE (6 th Year 7 th Year	UTM)- 2 No	os. (As	per techi	nical specificat	ion in Annexure	-A)
=	INSTRUMENTED CHARPY IMPAC specification in Annexure-A) 6th Year	T TESTER F	OR M	INIATURE	SPECIMENS (A	As per technical	
	7 th Year						
					TOTAL COST II	NCLUSIVE OF ALL	

Note:

The prices quoted by the bidders should be inclusive of Training, Installation, Transportation, GST and other charges.

- 3. The technical specification will be evaluated for each line item separately. The Lowest rate quoted for each line item by the technically qualified bidder will alone be taken for L1 rate evaluation for that particular item. The Order will be awarded to successful bidder for L1 of each line item and not to the overall L1 bidder.
- 4. Optional Extended Warranty and Optional AMC will not be considered for price bid evaluation to arrive the L1 rate.

SIGNATURE OF BIDDER ALONG WITH SEAL OF THE COMPANY WITH DATE

	(To be given on the letter head	of the bidder)
Tender No. IITM	/SPS/MML/049/2023-24/SPL	Dated:
	<u>CERTIFICATE</u>	
	(Bidders from Indi	a)
I have read	the clause regarding restrictions on procuremen	nt from a bidder of a country which share
a land bord	er with India and hereby certify that I am not fro	om such a country.
	OR	
	(Bidders from Country which shares a l	land border with India)
I have read	the clause regarding restrictions on procuremen	nt from a bidder of a country which share:
a land bord	er with India and hereby certify that I am from $_{ extstyle }$	(Name of Country
and have re	gistered with the Competent Authority. I also ce	ertify that I fulfil all the requirements in thi
regard and	am eligible to be considered. (Copy/ evidence	ce of valid registration by the Competen

Place: Date: Signature of the Bidder

Name & Address of the Bidder with Office Stamp

FORMAT FOR AFFIDAVIT OF SELF-CERTIFICATION UNDER PUBLIC PROCUREMENT POLICY (PREFERENCE TO MAKE IN INDIA) 2017

Tender Reference Number: Tender No. IITM/SPS/MML/049/2023-24/SPL

Name of the item / Service: SUPPLY OF MECHANICAL METALLURGY LAB EQUIPMENT AT IIT MADRAS

		Date:
I/We		S/o, D/o, W/o,
Resident of		
hereby sole	emnly affirm and declare as under:	
India) Polic orders date September	y vide Gol Order no. P-45021/2/2 ed 28.05.2018, 29.05.2019and 04	onditions of the Public Procurement (Preference to Make in 2017-PP (B.E) dated 15.06.2017 (subsequently revised vide 4.06.2020)MOCI order No. 45021/2/2017-PP (BE) Dt.16th Part(1) (E-50310) Dt.4th March 2021 and any subsequent
	cal content for all inputs which co sponsible for the correctness of th	nstitute the said item/service/work has been verified by me e claims made therein.
Tick (/) a	and Fill the Appropriate Category	
		me of the supplier] hereby confirm in respect of quoted I to or more than 50% and come under "Class-I Local
		me of the supplier] hereby confirm in respect of quoted I to or more than 20% but less than 50% and come under y.
local conter	nt in percentage	ocal value addition is made and the proportionate value of%**
Location at	which value addition done :	
For and on Authorized <insert nan<br="">[Note: In c certificate practicing of companies)</insert>	behalf ofsignatory (To be duly authorized bene, Designation and Contact No.> ase of procurement for a value fromstatutory auditor or cost auccost accountant or practicing of giving the percentage of local cor	in excess of Rs. 10 Crores, the bidders shall provide this ditor of the company (in the case of companies) or from a nartered accountant (in respect of suppliers other than
authority.		** Services such as
		transportation, insurance, installation,
		commissioning, and training and after
		sales service support like AMC/CMC

cannot be claimed as local value

addition

(To be given on the letter head of the bidder)

Tender Reference Number: Tender No. IITM/SPS/MML/049/2023-24/SPL
Name of the item / Service: SUPPLY OF MECHANICAL METALLURGY LAB EQUIPMENT AT IIT MADRAS

Self-Declaration that the Service Provider has not been Black listed

I		0
R/o	police station District	Director
/ Partı	tner/ sole proprietor (Strike out whichever is not applicable) of	
	(Firm or Company) do hereby declare and sol	emnly affirm:
1.	That the Firm	has not been Blacklisted or declared
	insolvent by any of the Union or State Government / Organization	
II.	That none of the individual / firm / Company Blacklisted or any	partners or shareholder thereof has any
	connection directly or indirectly with or has any subsistence i	nterest in the deponent business / firm
	company.	
III.	That neither the Firm nor any of its partner has been involved /	convicted in any criminal case / economic
	offence nor any criminal case / economic offence is pending again	nst firm or any partner of the Firm before
	any Court of Law / Police.	
Place:	:	Signature of the Tenderer
Date:		Name & Address of the
		Tenderer with Office Stamp

Tender Reference Number: Tender No. IITM/SPS/MML/049/2023-24/SPL
Name of the item / Service: SUPPLY OF MECHANICAL METALLURGY LAB EQUIPMENT AT IIT MADRAS

OEM CERTIFICATION FORM

(In Original Letter Head of OEM)

Tender No:				Dated:				
We are Original Equipment Manufacturers (OEN	И) of			(Nam	e of tl	he comp	any)	
Ms	(Name	of	the	vendor)	is	one	of	our
Distributors/Dealers/Resellers/Partners (tick one) for the					and is			
participating in the above mentioned tender	by offerir	ng our	produ	ct model				
(Name of the product with model number).								
Is au	thorized to	o bid, :	sell and	provide ser	vice s	upport v	warra	nty for
our product as mentioned above.								
Please mention Country of Origin								

Name and Signature of the authorized Signatory of OEM along with Seal of the company with Date

Tender Reference Number: Tender No. IITM/SPS/MML/049/2023-24/SPL	
Name of the item / Service: SUPPLY OF MECHANICAL METALLURGY LAB EQUIPMENT AT IIT MADRA	1S

(To be given on the letter head of the bidder)

Self-Declaration by the bidder

I hereby declare that spare parts and accessories will be available for smooth operation over at least 15 years from the date of installation. However, the consumables and parts required for the system's installation and standardisation should be given free of cost.

Place:	Signature of the Bidder
Date:	Name & Address of the
	Bidder with Office Stamp

Tender Reference Number: Tender No. IITM/SPS/MML/049/2023-24/SPL		
Name of the item / Service: SUPPLY OF MECHANICAL METALLURGY LAB EQUIPMENT AT IIT MADRAS		
(To be given on the letter head of the bidder)		

Self-Declaration by the bidder

I hereby declare that I/we shall provide local presence of qualified engineer(s) for prompt and efficient after sales services for at least next 10 years and also shall establish local application laboratory to assist you for regular assistance for your samples/methods/data interpretations.

Place:	Signature of the Bidder
Date:	Name & Address of the
	Bidder with Office Stamp