

Indian Institute of Technology Palakkad

भारतीयप्रौद्योगिकीसंस्थानपालक्काड

STORES & PURCHASE SECTION

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Tender No. TENDER/2023-24/239 Date of Publication: 09-11-2023 Date/Time of Closing: 01-12-2023, 15:00 hours

Indian Institute of Technology Palakkad Invites Tender under Two-bid system for the:

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF DIGITAL IMAGE CORRELATION (DIC) SYSTEM

Conforming to the specifications as in BoQ Technical.

Tender Documents may be downloaded from the e-Wizard Portal https://mhrd.euniwizarde.com/. Aspiring Bidders who have not enrolled/registered in e-Wizard should enroll/register before participating through the website https://mhrd.euniwizarde.com/. Bidders are advised to go through the instructions provided at "Procedure for Submission of E-tender". [Special Instructions to the Contractors/Bidders for the e-submission of the bids online through this e-Wizard Portal"].

Bidders can access tender documents on the website. For searching in the site, kindly go to Live Tenders option, Click "Advance Search" and select Department as 'IIT Palakkad'. Thereafter, Click on "Search" button to view all IIT Palakkad tenders. Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website https://mhrd.euniwizarde.com/ as per the timeline below.

No manual bids will be accepted. All tender documents including Techno-Commercial, Technical and Financial bids should be submitted in the e-Wizard portal.

S. No.	Events	Date and Time
1.	Publication of the Tender Document	09-11-2023
2.	Date of Pre-Bid Meeting	20-11-2023, 15:30 hours
3.	Last Date/Time for submission of ONLINE Bids	01-12-2023, 15:00 hours
4.	Opening of Technical Bids	01-12-2023, 15:15 hours

Note:

- The bidder should be a Class-I / Class-II Local Supplier meeting the requirement as per the Order No. P-45021/2/2017-PP (BE-II) issued by the Public Procurement Section, DPIIT, Ministry of Commerce and Industry, GOI dated 16-09-2020.
- 2. Bidders other than Class-I / Class-II Local Suppliers, who may participate in this tender, may be doing so at their own risk. Such bids would not be considered and rejected outright

Pre-Bid Meeting:

- 1. Online Pre-Bid meeting will be held on 20-11-2023, 15:30 hours to clear the doubts of intending bidders. The details of the meeting will be intimated through the ONLINE Portal. Bidders, who are unable to attend the Pre-Bid meeting, may send their queries for the same, latest by 17-11-2023, 15:00 hours to purchase@iitpkd.ac.in
- 2. Queries received after the Pre-Bid Meeting shall not be considered. Addendum/ Corrigendum/ Clarifications to the queries will be uploaded, paused the Pre-Bid meeting in the online portal, which shall be part of the tender document.

TERMS AND CONDITIONS

1	GENERAL	(a) The responsibility of submission of the bids on or before the last date
1	GENERAL	 (a) The responsibility of submission of the bids on or before the last date shall rest with the tenderer. The institute will hold no responsibility for the non-receipt of the bids or the bids received after the date/time specified. Any bid received by ITTPKD after the bid submission deadline prescribed by IITPKD, shall be rejected and returned unopened to the Bidder. (b) Canvassing or offer of an advantage or any other inducement by any person with a view to influencing acceptance of a bid is an offence under the Laws of India. Such action will result in the rejection of bid, in addition to other punitive measures. (c) Each bidder shall submit only one bid, either by himself or as a partner in a joint venture or as a member of the consortium. If a bidder or if any of the partners in a joint venture or any one of the members of the consortium participate in more than one bid, the bids (of both the individual and the partnership/consortium/joint venture) are liable to be rejected. (d) The bidder shall bear all costs associated with the preparation and submission of his bid and IITPKD shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tender process. (e) IITPKD will respond to any request for clarification or modification of the Tender Document that are received up to TWO DAYS prior to the deadline for submission of bids prescribed by IITPKD. For this purpose, the prospective bidder(s) requiring clarification in the Tender Document shall notify IITPKD through the ONLINE Portal ONLY. Any such clarification, together with all the details on which the clarification had been sought, will be published in the ONLINE Portal ONLY. Deviations, if any, observed by the Institute in the submitted bids, from the Terms and Conditions of the Tender Document will not be accepted by the Institute. (f) Except for any such clarification by the Institute, which is expressly stated to be an addendum to the tender document issued b
		missing pages, the bidder shall inform the same to the Section/
		(h) The bidder shall not make or cause to be made any alteration, erasure or obliteration to the text of the Tender Document.(i) The Supplier shall not, without the prior written consent of the IITPKD, assign to any third party, the Contract or any part thereof.
2	COMPOSITION OF THE	(a) The Tender Document comprises of:
	TENDER DOCUMENT	Instruction to the bidders including terms and conditions
		 Technical Specifications (Annexure-I) Undertaking by the Bidder (Annexure-II)
		 Undertaking by the Bidder (Annexure-II) Fall Clause Notice Certificate (Annexure-III)
		4. Annexure regarding Blacklisting/Debarment (Annexure-IV)
		5. Self Declaration – MII Order (Annexure-V)
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3	DOCUMENTS	(a) The Technical, Techno-commercial and Commercial Bids (Cover
	COMPRISING THE BID	One) and Commercial Bid (Cover Two) shall be submitted ONLINE
		through the e-Wizard Portal.
		(b) Bids submitted in any mode other than ONLINE will be rejected
		outright.
		(c) Documents establishing the conformity of the terms and conditions of
		the Tender Document shall be provided along with the bid. The
		offer/bids should be sent only for a system or that is available in the
		market and supplied to a number of customers. A list of customers in
		India and abroad with details must accompany the quotations.
		Quotations for a prototype machine will not be accepted.
		(d) Original catalogue (not any photocopy) of the quoted model duly signed by the principals must accompany the quotation in the Technical bid. No
		prices should ever be included in the Technical bid.
		(e) Compliance or Confirmation report with reference to the specifications
		and other terms and conditions should also be obtained from the principal.
		(f) Information related to the agency/bidder such as photocopies of the
		Registration/PAN/GST/TIN shall be furnished.
		(g) The technical bid should consist of all technical details along with commercial terms and conditions. No prices should be included in the
		technical bid. Mentioning of Prices in the Technical Bid shall lead to
		DISQUALIFICATION.
		(h) Bidders who are bidding for this tender,
		1) Should have implemented at least ONE ORDERS of Digital Image
		Correlation (DIC) system during previous FIVE financial years
		(2018-19, 2019-20, 2020-21, 2021-22, 2022-23) from Centrally
		Funded Technical Institutes (IITs, NITs, IISc, IISER), DRDO, ISRO, CSIR labs or Government Firms in India. Copies of the most recent
		purchase orders and user certificates of successful implementation
		must be included. Copies of financial statements or evidence of
		turnover must be furnished.
		2) Should have an Average Annual Turnover of Rs 1,50,00,000/-
		(RUPEES ONE CRORE FIFTY LAKH ONLY) during the last
		THREE financial years (2020-21, 2021-22, 2022-23). The bidder
		shall enclose the audited statements of the indicated financial years,
		which should have been certified by a Chartered Accountant or a
		Competent Authority. 3) Should submit Digitally signed Tender Document in Cover One.
		3) Should subliff Digitally signed Tender Document in Cover One.
4	EARNEST MONEY	(a) The bidder shall furnish EMD of Rs. 1,50,0000/- (Rupees One Lakh
	DEPOSIT (EMD)	Fifty Thousand Only) through online payment gateway in the E-
		Wizard. (b) Pids not accompanied by FMD shall be DISQUAL IFIED.
		(b) Bids not accompanied by EMD shall be DISQUALIFIED.
5	PERFORMANCE	(a) The performance security shall be submitted within FIFTEEN DAYS of
	SECURITY	receipt of the material by the IITPKD. The successful bidder shall
		furnish the Performance Security equal to 5% of the order / contract
		value (excluding the value of annual maintenance charges). The
		Performance Security shall be valid all along the warranty period and
		shall extend upto SIXTY DAYS after the date of completion of warranty
		period. It shall be ensured by the successful bidder that the validity of the Performance Security submitted is extended depending on the date of
		commencement of the Warranty.
		(b) The performance security shall be a bank guarantee/ E-Bank Guarantee
		(Digital Document Execution – DDE MODE by National E-Governance
		Service Limited) (in the format as provided) issued by the Indian
	1	Page 3 of 12

	Scheduled bank acceptable to the IITPKD or a Demand Draft favoring,
	INDIAN INSTITUTE OF TECHNOLOGY PALAKKAD payable at
	PALAKKAD. (c) The performance security shall automatically become null and void once
	all the obligations of the Supplier under the Contract have been fulfilled,
	including, but not limited to, any obligations during the Warranty Period
	and any extensions to the period. The performance security shall be
	returned to the Supplier not later than fifteen (15) days after its
	expiration.
	(d) Failure of the successful Bidder to comply with the requirements shall
	constitute enough grounds for the annulment of the award and forfeiture
	of the EMD, in which event the IITPKD may make the award to the next
	lowest evaluated bid submitted by a qualified Bidder or call for new
(DID DDIGEG AND	bids.
6 BID PRICES AND	
CURRENCY	(b) Price quoted for equipment/items shall include all the costs associated with packing, local transportation from the point of
	clearance to HTPKD, insurance, loading, unloading and associated
	delivery charges. The delivery shall be on DOOR DELIVERY basis
	to the institute including its installation, commissioning, integration
	and validation. It is the sole responsibility of the supplier to ensure
	that the equipment is delivered on DDP mode to IIT Palakkad. An
	undertaking to this effect as in Annexure-II.
	(c) Prices quoted by the bidder shall be fixed during the validity of the bid.
	(d) Prices of the equipment/items shall be quoted in Indian Rupees
	(INR).
7 LETTER OF CREDIT	(a) Upon the successful Bidder's furnishing of the copy of the Purchase
	Order duly signed on each page and the Performance Security, for the
	equipment ordered in foreign currency, IITPKD will open a letter of credit
	(LC) in a convenient Nationalized Bank in India. For opening of LC necessary information shall be provided by the supplier or its authorized
	agents.
	(b) In case the successful bidder is a foreign company and wishes to submit
	Performance Security in the form of Bank Guarantee, the Bank Guarantee
	should be routed through the Beneficiary Bank to the end user bank.
	Otherwise, the Indian Agent of the foreign vendor shall submit a Bank
	Guarantee from a Nationalized Bank of India. The following documents shall
	be submitted in case of an Indian agent submitting the Performance Security
	on behalf of his principal:
	Foreign principal's proforma invoice indicating the commission
	payable to the Indian agent and nature of after-sales service to be
	rendered by the Indian agent.Copy of the agency agreement with the foreign principal and the
	precise relationship between them and their mutual interest in the
	business.
	(c) For imported equipment, a Letter of Credit (LC) shall be opened for
	100% CIP price on receipt of the acknowledgment of the purchase order.
	However, 80% of the LC amount only shall be released on proof of the
	shipment of the consignment with necessary documents to be provided in
	detail at the time of placing of the purchase order. Balance 20% of the LC
	amount shall be released upon the receipt of a performance security of 5% of
	the total value of the purchase order and installation, commissioning,
	integration, validation and installation report/certification jointly given by the
	end user and the supplier. Any costs associated with the amendments made in the LC as per the
	Any costs associated with the amendments made in the LC as per the request made by the Supplier's should be borne by the supplier.
	request made by the supplier's should be bothe by the supplier.

requests made by the supplier shall be on the supplier and no institute.	t on the
institute.	
8 PERIOD OF VALIDITY (d) Bids shall remain valid for a period of 180 DAYS after the day	te of the
OF BIDS deadline for submission of bids prescribed by IITPKD.	
(e) If the deadline is extended due to unforeseen circumstances	, the bid
validity shall be deemed to have extended accordingly.	
9 TIME FOR SUPPLY, (a) The Supplier shall supply the equipment/items within the	_
INSTALLATION, specified in the tender document i.e. within 08 WEEKS of signal and the second specified in the tender document i.e. within 08 WEEKS of signal and the second specified in the tender document i.e. within 08 WEEKS of signal and the second specified in the tender document i.e. within 08 WEEKS of signal and the second specified in the tender document i.e. within 08 WEEKS of signal and the second specified in the tender document i.e. within 08 WEEKS of signal and the second specified in the tender document i.e. within 08 WEEKS of signal and the second specified in the tender document i.e. within 08 WEEKS of signal and the second specified in the tender document i.e. within 08 WEEKS of signal and the second specified in the tender document i.e. within 08 WEEKS of signal and the second specified in the s	
COMMISSIONING AND purchase order or within the period mutually agreed between	
VALIDATION OF THE and supplier. All the equipment and accessories should be deli	
EQUIPMENTS/ITEMS IIT PALAKKAD, STRUCTURAL ENGINEERING LAF	
CAMPUS, MALAMPUZHA ROAD, WEST KANJ	IKODE,
PUDUSSERRY WEST, KANJIKODE, KERALA 678623. (b) The Supplier shall thereafter proceed with the ins	tallation
commissioning, integration and validation and demonstrate op	
acceptance of the equipment/items within the period specific	
equipment/items shall be installed and commissioned by the st	
bidder within 20 to 25 days from the date of its receipt.	
(c) The tenderer should indicate clearly the time required for deliver	ry of the
item. In case there is any deviation in the delivery schedule, li	-
damages clause will be enforced or penalty for the delayed supp	-
will be levied.	
(d) In the event of failure of supply of the item/equipment/items w	ithin the
stipulated delivery schedule, IITPKD has all the right to pure	hase the
item/equipment/items from other sources on the total risk of the	Supplier
under the risk purchase clause.	
10 PRODUCT UPGRADES The Supplier shall continue to support and maintain the version/mod	
Equipment supplied by upgrading the software and the hardware as a	
amendments are carried out in the existing version or the product is u	
Whereas upgrades to the software shall be supplied free of cost, the Suppli	-
charge for upgrade in hardware provided it is of major nature. An higher version of the instrument and software related with the instrument	
supplied.	i silali oc
11 PENALTIES If the Supplier fails to complete any of the activities in accordance with	the time
specified for it, or any extension of time granted by IITPKD, Li	
Damages Clause shall be invoked.	•
12 UP-TIME GUARANTEE/ (a) The Supplier should provide up-time guarantee of 95% [24 (hours) X	7 (days)
DOWNTIME PENALTY X 365 (days)] basis during the warranty period.	
CLAUSE (b) The Supplier should provide up-time guarantee of 95% (24 hours/d	-
both during warranty. If downtime exceeds the 5% limit, extension	on of the
warranty period will be twice the excess down time period.	
13 LIQUIDATED If a firm accepts an order and fails to execute the order, in full or part, a	-
DAMAGES terms and conditions stipulated therein, it will be open to the Institute to	
liquidated damages from the firm at the rate of 1% of the value of the unc	
goods per month or part thereof, subject to a maximum of 5% of the valundelivered goods. It will also be open to the Institute alternatively, to	
procurement of the required stores from any source, at the risk and exper	
firm, accepted and failed to execute the order according to stipulation	
upon. This will also entail the removal of the defaulters' name	-
approved/registered list of Suppliers.	
14 EFFECT OF FORCE (a) If the Supplier is prevented, hindered, or delayed from or in pe	rforming
MAJEURE any of its obligations under the Contract by an event of Force	_
then it shall notify the IITPKD in writing of the occurrence of su	
and the circumstances of the event of Force Majeure within F.	IFTEEN
DAYS after the occurrence of such event.	

		(b) The Supplier, when affected by the event of Force Majeure shall use
		reasonable efforts to mitigate the effect of the event of Force Majeure
		upon its performance of the Contract and to fulfill its obligations under the
		Contract, but without prejudice to IITPKD's right to terminate the
		Contract.
		(c) No delay or non-performance by the Supplier caused by the occurrence of
		any event of Force Majeure shall:
		i. Constitute a default or breach of the Contract;
		ii. Give rise to any claim for damages or additional cost or expense
		occasioned by the delay or non-performance.
		(d) If the performance of the Contract is substantially prevented, hindered, or
		delayed for a single period of more than THIRTY DAYS or an aggregate
		period of more than SIXTY DAYS on account of one or more events of
		Force Majeure, the IITPKD shall have the right to terminate the Contract
		by giving a notice to the Supplier.
15	EXTENSION OF TIME	(a) The time limit for supply, installation & commissioning, integration &
	LIMITS FOR SUPPLY	validation shall be extended if the supply is delayed or impeded in the
	AND MAKING	performance of any of its obligations under the Contract by reason of any
	OPERATIONAL, THE	of the following:
	EQUIPMENT	i. Any occurrence of Force Majeure;
		ii. Any other matter specifically mentioned in the Contract;
		(b) By such period as shall be fair and reasonable in all the circumstances
		and as shall fairly reflect the delay or impediment sustained by the
		Supplier.
16	GOVERNING LAW	(a) The Contract shall be governed by and interpreted in accordance with the
	AND	laws of India.
	SETTLEMENT	(b) Any dispute or claim arising out of/relating to this Contract of the breach,
	OF DISPUTES	termination or the invalidity thereof, shall be settled by the Hon'ble
		Courts of Justice at Palakkad.
		(c) The page number should be marked in all pages serially (including all
		supporting documents enclosed with the tender document) and the
		declaration for the same shall be submitted by the bidder as in
		Annexure-II.
		(d) IITPKD reserves the right to accept or reject any or all the tenders in part
		or whole or may cancel the tender at its sole discretion without assigning
		any reason whatsoever. No further correspondence in this regard will be
		entertained.

AWARD OF CONTRACT

1	AWARD CRITERIA	1.	IITPKD will award the Contract to the Bidder whose bid
1		1.	has been determined to be substantially responsive and as
			per the Order No. P-45021/2/2017-PP(BE-II) dated 16-
			09-2020 from Department for Promotion of Industry
			and Internal Trade (Public Procurement Section),
			Ministry of Commerce and Industry, Govt. of India.
		2.	The bidder should be a Class-I / Class-II Local Supplier
		•	meeting the requirement of minimum 20% Local Content
			in line with the Public Procurement (Preference to Make in
			India) Order 2017 No. P-45021/2/2017-PP(BE-II) dated
			16-09-2020.
		3.	The Institute reserves the right to buy different
			items/quantities from different bidders considering price of
			individual/group of equipment/items or any other factors
			as decided by the Committee.
		4.	The Institute reserves the right to accept or reject any
			quotations without assigning any reason thereof.
2	AWARD OF PURCHASE ORDER	1.	Prior to the expiration of the period of bid validity,
			IITPKD will issue the Letter of Intent / Purchase Order to
			the successful Bidder in writing.
		2.	Any amendment(s) in the Purchase Order will be permitted
			within SEVEN DAYS of its issuance. No amendments
			will be permitted beyond this period.
		3.	The Purchase Order will constitute the foundation of the
			Contract.
3	CONTRACT AGREEMENT	1.	Within SEVEN DAYS of receipt of the Purchase Order,
			the successful Bidder shall sign and date its copy on each
		2	page and return it to the Purchaser.
		2.	Copy of Purchase Order duly signed and dated by the successful Bidder on each page shall constitute the
			Contract Agreement.
4	CONTRACT DOCUMENTS /	1.	All documents forming part of the Contract (and all parts
•	AMENDMENT TO CONTRACT	1.	of these documents) are intended to be correlative,
			complementary and mutually explanatory. The Contract
			shall be read as a whole.
		2.	The order of precedence of the Contract documents shall
		•	be as follows:
			(i) Contract Agreement/Purchase Order
			(ii) All Forms/Annexures
			(iii) equipment/items and their requirement
			(iv) Supplier's Bid
			(v) Tender Document
		3.	No amendment or other variation of the Contract shall be
			effective unless it is in writing, is dated, expressly refers to
			the Contract and is signed by a duly authorized
			representative of each party to the Contract.

REGISTRAR

Name of the Item:	DIGITAL IMAGE CORRELATION (DIC) SET UP
Quantity:	1
Warranty Period:	3 Years

TECHNICAL SPECIFICATIONS

S. No.	Items	IIT PKD required Specification
A	General Requirements	
A1		DIC set up must be able to take 2D and 3D coordinates and measurements of the specimen under investigation with the help of cameras, by integrating the same into different mechanical testing machines.
В	Camera and Accessories	
B1		The vendor must supply 4 cameras and the individual hard carry case for the same.
B2		All the 4 cameras should be CMOS USB 3.0 cameras. CCD cameras are not acceptable.
В3		Every camera should individually be able to capture images with 48 frames per second with at least 8MP resolution and should be able to take pictures up to 160 or more frames per second with a resolution not less than 2MP.
B4		The required number of Stereo Vision Mounting Units consisting of aluminum channels and adapters must be provided to house the Cameras on the heavy-duty frame. The vendor must provide high-quality mounting systems for all the cameras, including mounting for top and bottom measurements. The required number of mounting systems should be provided in such a way that the DIC set up can use all the cameras at the same location or at different locations to take 3D and 2D images.
B5		The vendor should provide 4 numbers of high-quality compatible 17mm, 50mm and 100mm lenses and an equal number of UV filters for the lenses.
В6		Lens cleaning kit should be provided
B7		All the lenses should be from reputed manufacturers such as Ni-kon/Zeiss/Computar/Rodagon/Basler. Other Brands will not be acceptable.
В8		Cameras should function continuously with a relatively high image capture rate as described in B3 (but, without getting heated or damaged) for at least 5 hours.
В9		Cameras should function continuously with a relatively low image-capturing rate as described in B3 (but, without getting heated or damaged) for at least 5 days.
B10		A high-quality calibration grid for each arrangement with different target size varying from 3mm to 28 mm should be provided. Carry case for the same should also be provided.
B11		Additionally, Calibration grids, for two target sizes equal/above 40mm and 50mm should be provided, which can be used for calibrating the measurements above 1m size specimens.
B12		Lightweight tripod with tilt and swivel head (Transport Bag Included)
B13		Speckle kit with at least 10 numbers of black and white spray should be provided for the arrangements mentioned.

The vendor must provide the required number of cables and adapters (CF mount) and all other accessories for the arrangement mentioned in the previous clauses. Cables should have sufficient length (at least 5m) to be used while testing different size specimens in different mechanical testing set ups. C1 C1 The overall DIC system should be able to take two simultaneous 3D measurements (images) and/or four simultaneous 2D measurements (images) and/or four simultaneous 2D measurements (images) at the same locations or different locations and post-process the same. Perpetual Image acquisition incenses and post-process for the same (with lifetime validity) must be provided. C2 The image acquisition and post-processing licenses should support data acquisition and post-processing licenses for the same (with lifetime validity) must be provided. The software should support capturing images with 48 or more frames per second with at least 8MP resolution up to 160 or more frames per second with at resolution not less than 2MP. Windows-based software for viewing, recording, and improving images compatible with the arrangement discussed in the above clauses must be provided. It should be with a full-usage perpetual license. C5 Software must support measurements (coordinates, deformation and strain fields) X; Y and Z direction The system should be able to be used for studies that have out of plane deformations (Eg. Backling) C7 The system should be able to extract data from a point, line, and area. C8 Compatible Windows-based software for 2D and 3D digital image correlation, with FFT capabilities, should be provided with a full usage license. C9 Software must support presentations in Video format also. The software must support presentations in Video format also. C10 The system should have provisions to calculate the velocities and acceleration, with FFT capabilities of should and plots related to normal strain, shear strains, principal strains etc. C15 The software should be able to identify rigid body mo	B14		The required number of (at least 4) high-intensity LED lights with stands should be provided.
C1 C	B15		F mount) and all other accessories for the arrangement mentioned in the previous clauses. Cables should have sufficient length (at least 5m) to be used while testing different size specimens in different mechanical test-
The overall DIC system should be able to take two simultaneous 3D measurements (images) and/or four simultaneous 2D measurements (images) and/or for the same (with lifetime validity) must be provided. The image acquisition and post-processing from 1 to 8 cameras. All the cameras should be able to work in a synchronized mode. The software should support capturing images with 48 or more frames per second with a resolution not less than 2MP. Windows-based software for viewing, recording, and improving images compatible with the arrangement discussed in the above clauses must be provided. It should be with a full-usage perpetual license. Software must support measurements (coordinates, deformation and strain fields) X, Y and Z direction The system should be able to be used for studies that have out of plane deformations (Eg. Buckling) The system should be able to extract data from a point, line, and area. Compatible Windows-based software for 2D and 3D digital image correlation, with FFT capabilities, should be provided with a full usage license. C9 Software must support presentations in Video format also. The software must support presentations in Video format also. The system should be able to provide details of different types of strain measures (Green-Lagrangian, Euler-Almansi, Engineering, Biot, Hencky) C12 It should be able to calculate and provide data and plots related to normal strain, shear strains, principal strains etc. The system should be able to identify rigid body motion and remove it out if required Should provide user friendly controlled image capture software for user defined cycle period for fatigue and creep studies. Software must have Incremental Correlation Function. Should support	~	Software Requirements	ing set ups.
C1 measurements (images) and/or four simultaneous 2D measurements (images) at the same locations or different locations and post-process the same. Perpetual Image acquisition licenses and post-processing licenses for the same (with lifetime validity) must be provided. C2 The image acquisition and post-processing licenses should support data acquisition and synchronized mode. C3 Provided In solud support capturing images with 48 or more frames per second with a reast RMP resolution up to 160 or more frames per second with a resolution not less than 2MP. Windows-based software for viewing, recording, and improving images compatible with the arrangement discussed in the above clauses must be provided. It should be with a full-usage perpetual license. C5 Software must support measurements (coordinates, deformation and strain fields), X, and Z direction C6 The system should be able to be used for studies that have out of plane deformations (Eg. Buckling) C7 The system should be able to extract data from a point, line, and area. C8 Compatible Windows-based software for 2D and 3D digital image correlation, with FFT capabilities, should be provided with a full usage license. C9 Software should have Fill Boundary Option in Post Processing Analysis. The software smust support presentations in Video format also. C10 The software smust support presentations in Video format also. C11 The system should be able to provide details of different types of strain measures (Green-Lagrangian, Euler-Almansi, Engineering, Biot, Hencky) C12 It should be able to calculate and provide data and plots related to normal strain, shear strains, principal strains etc. C13 The system should have provisions to calculate the velocitie	С		The overall DIC system should be able to take two simultaneous 3D
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can be input into Excel, MATLAB, etc.) should be possible.	C20		Should support export of data – pixel grid data.
	C21		
C22 The systems and software provided should be compatible to accommo-	C22		The systems and software provided should be compatible to accommo-

		date high-speed cameras and post-process the data acquired by the same.
C23		Facilitating the continued use of software through free additional licenses, USB dongles or other means, if an existing dongle and/or login credentials are lost accidentally.
D	Data Acquisition and Laptop	, , , , , , , , , , , , , , , , , , ,
D1		A 4 or more-channel DAQ, which is essential for capturing and processing the signals from various components of the DIC system and testing machine, should be provided.
D2		The system should be compatible with NI (cRIO-9068,cDAQ-9178) and/or HBM (MX440B,MX840B,MX1615B) DAQ, which are available at IIT Palakkad.
D3		It should support controlling of image acquisition and triggering of image acquisition
D4		Accurate assignment between time, images and analog values (synchronous recording of analog values and images)
D5		Live data transfer with image processing computer during measurement
D6		Analog data output for live evaluations
D7		Control of illumination
D8		Vendor must supply a Laptop of specs (or higher) – 12 th generation Intel Core i7 Processor, 32GB RAM, 256GB SSD, 2TB HDD, Windows 10, 4GB or higher Nvidia/AMD Graphics, 15" to 17" display, MS Office, Minimum 2 x USB 3.0 Ports, USB C Port and other standard features and accessories.
		and decessories.
E	Other Requirements	
E1		All the components which require power should be able to work on standard Indian power supply.
E2		The vendor must provide onsite installation of the system, system inte-
		gration testing and training.
E3		Demonstration videos and software training modules should be provided.
E4		A live working demonstration of the same or similar systems at IIT Palakkad at the cost of the bidder will be asked after opening the technical bid. All the bidders should give a successful demonstration and a comparison with measurements taken by any acceptable contact based sensors like strain gauge. The date and time for the demonstration will be
		chosen by IIT Palakkad. (Technical acceptance of the bid will be based
E5		on the success of this demonstration) Three-year warranty effective from the day of commissioning and user acceptance is mandatory for all supplied items. Vendor should provide continuous technical support and maintenance of the work done.
E6		Warranty service should be provided onsite at IIT Palakkad for the duration of the warranty period
E7		Details of extended warranty for 2 more years are to quoted as Separate item in the financial bid
E8		Fabrications of the indigenous components also require warranty and replacement is also involved if damaged before the warranty period.
E9		All relevant test certificates should be submitted
E10		The OEM should have a direct support center in India to provide Support.
E11		Tender Specific Manufacturer Authorization Form from OEM Required.
E12		The vendor should complete all the works in 60 days from the date of release of PO (supply, installation, commissioning, and training)

<u>UNDERTAKING BY THE BIDDER</u> (TO BE SUBMITTED ONLY THROUGH ONLINE MODE IN APPROPRIATE FORMAT)

We here by accept all the Terms and Conditions of the Tender Document and strictly adhere to the same in the event of getting Purchase order. We also declare that the Technical and Financial Bids submitted by us has NO DEIVATION from the Tender Terms and Conditions.

We hereby accept that the PRICES OF THE EQUIPMENTS/ITEMS QUOTED ARE AS PER THE INCOTERMS 2022 - DDP MODE, IIT PALAKKAD AND CLAUSE NO.6 OF THE TENDER DOCUMENT.

BOCOMENT.
We hereby undertake that there are pages, serially numbered, in the submitted tender including the supporting documents. (Please serially number all the pages including blank page, if any).
We have submitted our principal's exclusive authorization letter which is specific for this tender No dated
Note: This letter should be on the <u>letterhead of the quoting firm</u> and should be signed by a Competent Authority.
ANNEXURE-III
FALL CLAUSE NOTICE CERTIFICATE
(TO BE SUBMITTED ONLY THROUGH ONLINE MODE IN APPROPRIATE FORMAT)
This is to certify that we have offered the maximum possible discount to you in our Quotation No dated (Please do not reveal the prices here, which will lead to outright rejection of your bid).
The prices charged for the Stores supplied under tender should under no event be higher than the lowest prices at which the party sells the items of identical description to any other Govt. organization/PSU's/Central Govt., /State Govt. Autonomous bodies/Central/state Universities/Central/State Educational Institutions, failing which the "FALL CLAUSE" will be applicable. The institute will look into a reasonable past period to ensure this. In case, if the price charged by our firm is found to be more, IIT Palakkad will have the right to recover the excess charged amount from the subsequent/unpaid bill of the supplier.
Note: This letter of authority should be on the <u>letterhead of the quoting firm</u> and should be signed by a Competent Authority and having the power of attorney.
ANNEXURE-IV
UNDERTAKING REGARDING BLACKLISTING / NON – DEBARMENT Tender No
To, M/s. Indian Institute of Technology Palakkad Ahalia Integrated Campus, Kozhipara, Palakkad, Kerala 678623
We hereby confirm and declare that we, M/s are not blacklisted/ De-registered / debarred by any Government department/ Public Sector Undertaking/ Private Sector/ or any other agency for which we have Executed/ Undertaken the works/ Services.
For Company Name and Seal Authorised Signatory
Note: This letter should be on the letterhead of the quoting firm and should be signed by a Competent

Authority.

FORMAT FOR SELF-CERTIFICATION UNDER PREFERENCE TO MAKE IN INDIA (TO BE SUBMITTED ONLY THROUGH ONLINE MODE IN APPROPRIATE FORMAT)

Format for Affidavit of Self-Certification regarding Minimum Local Content in line with "Make in India" Policy vide GoI Order no. P-45021/2/2017-PP (B.E.-II) dated 15.06.2017 (subsequently revised vide orders dated 28.05.2018, 29.05.2019 and 04.06.2020)

I/We	
Resident	of
Hereby so	olemnly affirm and declare as under:
Order, 20	Ill agree to abide by the terms and conditions of the Public Procurement (Preference to Make in India) 017 (hereinafter PPP-MII order) of Government of India issued vide Notification No:P-45021/2/2017 - ted 15/06/2017, its revision dated 28/05/2018 and any subsequent modifications/Amendments, if any
	local content for all inputs which constitute the said goods/services/works has been verified by me and onsible for the correctness of the claims made therein.
Tick (✓) and Fill the Appropriate Category
	I/We [name of the manufacturer] hereby confirm in respect of quoted items(s) that Local Content is equal to or more than 50% and come under "Class-I Local Supplier" category.
	I/We [name of the manufacturer] hereby confirm in respect of quoted items(s) that Local Content is more than 20% but less than 50% and come under "Class-II Local Supplier" category.
	I/We[name of the manufacturer] hereby confirm in respect of quoted items(s) that Local Content is less than or equal to 20% come under "Non-Local Supplier" category.
For and o	on behalf of(Name of firm/entity)
	ed signatory (To be duly authorized by the Board of Directors) (ame, Designation and Contact No.>
from stat	case of procurement for a value in excess of Rs. 10 Crores, the bidders shall provide this certificate autory auditor or cost auditor of the company (in the case of companies) or from a practicing cost not or practicing chartered accountant (in respect of suppliers other than companies) giving the

percentage of local content.]