

Indian Institute of Technology Palakkad

भारतीयप्रौद्योगिकीसंस्थानपालक्काड

STORES & PURCHASE SECTION

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Tender No: TENDER/2023-24/142 Date of Publication: 20-09-2023 Date/Time of Closing: 11-10-2023, 15:00 hours

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

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF CIVIL LAB EQUIPMENTS

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	20-09-2023
3	Last Date/Time for submission of ONLINE Bids	11-10-2023, 15:00 hours
4	Opening of Technical Bids	11-10-2023, 15:15 hours

Note:

- 1. 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

TERMS AND CONDITIONS

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 IITPKD 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
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		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 HTPKD. 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 by the Registrar,
		IIT Palakkad, no written or oral communication, presentation or
		explanation by any other employee of any of the Sections/Departments
		of the Institute, shall be taken to bind or fetter the Institute.
		(g) The bidder is expected to examine all instructions, forms, terms and
		conditions in the Tender Document. In the event of discovery of any
		missing pages, the bidder shall inform the same to the Section/
		Department concerned. Failure to furnish the information required by the
		Tender Document or submission of a tender not substantially responsive
		to the Tender Document in every respect will be at the bidder's risk and
		may result in rejection of the bid.
		(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
	LLI DU COMILITA	Technical Specifications (Annexure-I)
		2. Undertaking by the Bidder (Annexure-II)
		3. Fall Clause Notice Certificate (Annexure-III)
		4. Annexure regarding Blacklisting/Debarment (Annexure-IV)
		5. Self Declaration – MII Order (Annexure-V)
3	DOCUMENTS	(a) The Technical, Techno-commercial and Commercial Bids (Cover
	2 3 3 CHILLIAN	(w) The recommend recommendation and commendation bias (Cott)

	COMPRISING THE BID	One) and Commercial Bid (Cover Two) shall be submitted ONLINE
	COMPRISING THE BID	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 Prices in the Technical Bid shall lead to
		DISQUALIFICATION. (h) Bidders who are bidding for this tender,
		1) Should have implemented at least TWO ORDER OF
		EQUIPMENTS during previous THREE financial years (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 20,00,000 /- (RUPEES TWENTY LAKES ONLY) during the last THREE
		(RUPEES TWENTY LAKHS 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.
4	EARNEST MONEY	(a) The bidder shall furnish EMD of Rs. 20,000/- (RUPEES TWENTY
	DEPOSIT (EMD)	THOUSAND ONLY) through the online payment gateway in the E-
		Wizard. (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 up
		to SIXTY DAYS after the date of completion of the 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/EPBG (in the format
		as provided) issued by the Indian 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,

6	BID PRICES AND CURRENCY	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 bids. (a) Prices must be quoted separately for each equipment/item identified. (b) Price quoted for equipment/items shall include all the costs associated with packing, local transportation from the point of clearance to IITPKD, 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
7	LETTER OF CREDIT	(INR) / Foreign Currency. (a) Upon the successful Bidder's furnishing of the copy of the Purchase
'	LETTER OF CREDIT	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
		request made by the Supplier's should be borne by the supplier.
		Any fluctuation in rates / rate conversions arising due to the amendment
		requests made by the supplier shall be on the supplier and not on the
0	DEDIOD OF WALIDIAN	institute. (d) Pide shall remain valid for a period of 180 DAVS after the data of the
8	PERIOD OF VALIDITY OF BIDS	(d) Bids shall remain valid for a period of 180 DAYS after the date of the deadline for submission of bids prescribed by IITPKD.
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		(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 period	
	INSTALLATION,	specified in the tender document i.e. within 08 WEEKS of signing the	
	COMMISSIONING AND	purchase order or within the period mutually agreed between IITPKD	
	VALIDATION OF THE	and supplier. All the equipment and accessories should be delivered at,	
	EQUIPMENTS/ITEMS	IIT PALAKKAD, WORKSHOP-7, MANOGATHA BUILDING,	
		NILA CAMPUS, KANJIKODE WEST PALAKKAD, KERALA –	
		678 623.	
		(b) The Supplier shall thereafter proceed with the installation,	
		commissioning, integration and validation and demonstrate operational	
		acceptance of the equipment/items within the period specified. The	
		equipment/items shall be installed and commissioned by the successful	
		bidder within 20 to 25 days from the date of its receipt.	
		(c) The tenderer should indicate clearly the time required for delivery of the	
		item. In case there is any deviation in the delivery schedule, liquidated	
		damages clause will be enforced or penalty for the delayed supply period	
		will be levied.	
		(d) In the event of failure of supply of the item/equipment/items within the	
		stipulated delivery schedule, IITPKD has all the right to purchase 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/model of the	
		Equipment supplied by upgrading the software and the hardware as and when	
		amendments are carried out in the existing version or the product is upgraded.	
		Whereas upgrades to the software shall be supplied free of cost, the Supplier may	
		charge for upgrade in hardware provided it is of major nature. An upgraded	
		higher version of the instrument and software related with the instrument shall be	
		supplied.	
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, Liquidated	
		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/day basis)	
		both during warranty. If downtime exceeds the 5% limit, extension 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, as per	
	DAMAGES	the terms and conditions stipulated therein, it will be open to the Institute to	
		recover liquidated damages from the firm at the rate of 1% of the value of the	
		undelivered goods per month or part thereof, subject to a maximum of 5% of	
		the value of the undelivered goods. It will also be open to the Institute	
		alternatively, to arrange procurement of the required stores from any source,	
		at the risk and expense of the firm, accepted and failed to execute the order	
		according to stipulations agreed upon. This will also entail the removal of the	
		defaulters' name from the approved/registered list of Suppliers.	
14	EEEE CO		
	EFFECT OF FORCE	(a) If the Supplier is prevented, hindered, or delayed from or in performing	
	EFFECT OF FORCE MAJEURE	any of its obligations under the Contract by an event of Force Majeure,	
		any of its obligations under the Contract by an event of Force Majeure, then it shall notify the IITPKD in writing of the occurrence of such event	
		any of its obligations under the Contract by an event of Force Majeure, then it shall notify the IITPKD in writing of the occurrence of such event and the circumstances of the event of Force Majeure within FIFTEEN	
		any of its obligations under the Contract by an event of Force Majeure, then it shall notify the IITPKD in writing of the occurrence of such event and the circumstances of the event of Force Majeure within FIFTEEN DAYS after the occurrence of such event.	
		any of its obligations under the Contract by an event of Force Majeure, then it shall notify the IITPKD in writing of the occurrence of such event and the circumstances of the event of Force Majeure within FIFTEEN DAYS after the occurrence of such event. (b) The Supplier, when affected by the event of Force Majeure shall use	
		any of its obligations under the Contract by an event of Force Majeure, then it shall notify the IITPKD in writing of the occurrence of such event and the circumstances of the event of Force Majeure within FIFTEEN 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	
		any of its obligations under the Contract by an event of Force Majeure, then it shall notify the IITPKD in writing of the occurrence of such event and the circumstances of the event of Force Majeure within FIFTEEN 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	
		any of its obligations under the Contract by an event of Force Majeure, then it shall notify the IITPKD in writing of the occurrence of such event and the circumstances of the event of Force Majeure within FIFTEEN 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	

		(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
	OPERATIONAL, THE	any 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
	AND	the laws of India.
	SETTLEMENT	(b) Any dispute or claim arising out of/relating to this Contract of the
	OF DISPUTES	breach, 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 Ridder whose hid
1	AWARD CRITERIA	 2. 3. 	IITPKD will award the Contract to the Bidder whose bid 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. 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. 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.
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
		_	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
4	CONTRACT DOCUMENTS /	1.	Contract Agreement. All documents forming part of the Contract (and all parts
-	AMENDMENT TO CONTRACT	1.	of these documents) are intended to be correlative,
	AWENDMENT TO CONTRACT		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
		2	(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.
			representative of each party to the Contract.

REGISTRAR

TECHNICAL SPECIFICATIONS

Name of the Item:	MERLIN (Machine for Evaluating Roughness using Low-	
	cost Instrumentation)	
Quantity:	1 No.	
Warranty Period:	3 Years	

S. No.	IIT PKD required Specification
1	• Easy to use
	Self calibrating
	Robust in nature
	Easily maintained
	No complex calculations
	Measures displacement to less than a millimeter
	• It should be possible to use the equipment either for direct measurement of roughness (unevenness) of pavements or for calibrating other instruments such as the Vehicle Mounted Bump Integrator
	 The Machine should have the basic parts and accessories as shown in the Figure below and should be compactable with the specifications mentioned above (As per IRC:82-2015)
	Chart Handles Chart Handles Wheel with marker in contact with the road Probe Rear foot

Name of the Item:	PAVEMENT DYNAMIC CONE PENETROMETER
Quantity:	1 No.
Warranty Period:	3 Years

S. No.	IIT PKD required Specification
1	 A simple and robust instrument for rapid in-situ measurement of the structural properties of road pavements (strength of sub- grade and the bases for roads & runway pavements)
	It should Provide fast and efficient method of obtaining information
	• Facility for continuous measurements up to a depth of 800 mm and 1,200 mm with the extension rod
	Portable and can be accommodated in a carrying case
	Should be Robust in nature
	• It should incorporate a 8 kg weight dropping through a height of 575 mm and a 60" cone having a diameter of 20mm.
	• The weight of Complete assembly tools and weighs should not exceed 25kg
	 It should help us to identify the boundaries and the thickness of the layers.
	 The Machine should have the basic parts and accessories as shown in the Figure below and should be compactable with the specifications mentioned above (As per ASTM D 6951)
	Handle 3 kg Hammer 575 mm 60 Degree Hardened Cone tip Tage measure on a separate rod Hardened 60° cone

Name of the Item:	SAYBOLT VISCOMETER
Quantity:	1 No.
Warranty Period:	3 Years

S. No.	IIT PKD required Specification
1	• Empirical measurement of Saybolt Viscosity of petroleum products at specified temperatures between 70°F and 210°F should be possible
	• Should be able to used for determining the Saybolt Furol viscosity of bituminous materials at temperatures of 250,275,300, 350, 400 and 450°F
	• It should comprises of two cylindrical oil cups, Universal Tip, Furol Tip, immersion heater fitted in a bath, Digital temperature controller and Stirrer
	 Apparatus should be supplied with insulated handle and thermometer support, receiving flask, withdrawal tube, filter funnel, thermometer support for cup and circular spirit level
	• It should be Suitable for operating on 22OV, 50 Hz, Single Phase, AC Supply
	 The Basic model is shown below for the reference, But the model for which the quote is submitting should be compactable with the specifications mentioned above (As per ASTM D88, ASTM D244, AASHTO T 72)
	CONTAINER 60 C.C. RESERVOIR

Name of the Item:	BENKELMAN BEAM
Quantity:	1 No.
Warranty Period:	3 Years

S. No.	IIT PKD required Specification
1	Light weight aluminum construction
	Ease of Transportation, Telescopic Design, simplifying the field set up
	Compact, thereby reducing the amount of storage space needed
	• It should utilize the technique of using balanced beam in conjunction with a suitable vehicle to measuring road flexure, deflection of flexible pavements and moving wheel loads
	Operating on a simple lever arm principle
	• The unit consists of a Reference Beam, Body, two part Probe Beam, Digital dial gauge with 0.001 Least Count and 25 mm travel and Rear Zero adjust
	• The Basic model is shown below for the reference, But the model for which the quote is submitting should be compactable with the specifications mentioned above (As per IRC:81- 1997)
	1410 609 254 Measurement Probe Support Beam

Name of the Item:	BUMP INTEGRATOR
Quantity:	1 No.
Warranty Period:	3 Years

S. No.	IIT PKD required Specification
1	It should give quantitative integrated evaluation of surface irregularities on a digital counter / LCD Screen
	• It must comprises of a single wheeled trailer with a pneumatic Tyre mounted on a chassis. On which an integrating device is fitted
	 The machine needs to have a panel board fitted with two/four sets of digital counters for accounting the unevenness index value
	• The operating speed of the machine should be 32 +/- 0.5 km/hr
	We should be able to tow the machine by a vehicle usually by a jeep
	Working Principle
	The wheel runs on the pavement surface and the vertical reciprocating motion of the axle is converted into unidirectional rotary motion by an integration unit. The accumulation of this unidirectional motion is recorded by operating electronic sensors incorporated in the circuit, once for every 10mm of accumulated unevenness. Wheel revolutions are also indicated on another digital counter through electronic sensors, actuated by the cam fixed on the wheel hub. The two sets of counter readings give the unevenness index value in cm/km
	 It should be supplied with a suitable no. of transportation wheels which permit towing speeds up to 60km/hr. Without disturbing the accuracy of the unevenness-measuring wheel
	• Machine Dimensions Limitations Overall Length: < 2500 mm
	Overall Width: < 800 mm
	Height: < 1200mm
	Net Weight: < 400 kg (Approx.)
	Tyre Size : 6.00 x 16.4 Ply
	Inflation Pressure: < 2.2 kg/ Sq.cm {30 lbs /sq. inch)
	Standard operation Speed: 32 +/- 0.5 km/hr
	• It should be supplied with 3 nos. towing wheels, Micro processor based indicator with suitable leads and necessary tools
	The transportation wheels should be fitted with shockers
	• It should have the facility to set the length level ranging from 50 m to 9999 m and also it should have the facility for direct reading of road unevenness index at any point

- It should have the facility to skip any obstruction on road to ensure that the reading obtained over a stretch of road is a true reflection of the surface irregularity.
 - It should allow automatic changing & resetting of the counter, after completion of each section
- It should Accumulate vertical undulations after every one centimeter on LCD counter
- It should allow automatic changing & resetting of the counter, after completion of each section
- It should show data of set distances on the panel board
- It should store 2000 segment data with a battery backup
- The data output should comprises of the following
 - Date & Time
 - Length in meter
 - Allows transfer of data through RS 232port. Windows compatible
 - Preset length in meter
 - Section no.
 - Bumps in cm.
 - Speed of vehicle
 - Allows transfer of data through RS 232port. Windows compatible.

The Basic model is shown below for the reference, But the model for which the quote is submitting should be compactable with the specifications mentioned above (As per IRC:82-2015)



<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.

 $\underline{\text{Note:}}$ This letter should be on the $\underline{\text{letterhead of the quoting firm}}$ 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)

Date:	
I/We S/o, D/o, W/o,	
Resident of	
Hereby solemnly affirm and declare as under:	
That I will agree to abide by the terms and conditions of the Public Procurement (Preference to Make in In Order, 2017 (hereinafter PPP-MII order) of Government of India issued vide Notification No:P-45021/2/20 BE-II dated 15/06/2017, its revision dated 28/05/2018 and any subsequent modifications/Amendments, if and	017 -
That the local content for all inputs which constitute the said goods/services/works has been verified by me I am responsible for the correctness of the claims made therein.	and
Tick (✓) and Fill the Appropriate Category	
I/We [name of the manufacturer] hereby confirm in respect of quitems(s) that Local Content is equal to or more than 50% and come under "Class-I Local Supplicategory.	lier"
I/We [name of the manufacturer] hereby confirm in respect of qu items(s) that Local Content is more than 20% but less than 50% and come under "Class-II L Supplier" category.	
I/We[name of the manufacturer] hereby confirm in respect of quitems(s) that Local Content is less than or equal to 20% come under "Non-Local Supplier" category	
For and on behalf of(Name of firm/entity)	
Authorized signatory (To be duly authorized by the Board of Directors) <insert and="" contact="" designation="" name,="" no.=""></insert>	
[Note: In case of procurement for a value in excess of Rs. 10 Crores, the bidders shall provide this certification from statutory auditor or cost auditor of the company (in the case of companies) or from a practicing accountant or practicing chartered accountant (in respect of suppliers other than companies) giving	cost

percentage of local content.]