



**INDIAN MARITIME UNIVERSITY  
MUMBAI PORT CAMPUS**

**TENDER FOR "SHIFTING, SERVICE, REPAIRS and AMC OF EQUIPMENT FOR  
(a) FLUID MECHANICS LABORATORY (b) ELECTRICAL & ELECTRONICS  
LABORATORY (c) MATERIAL SCIENCE LABORATORY"**

**at IMU Mumbai Port campus, Hay Bunder Road**

**TENDER NO – IMU-MPC/PUR/2021-22/Repairs/22**

**VOLUME - I**

**TECHNICAL BID**

<b>Issue of Tender Document</b>	<b>: 28.07.2021</b>
<b>Pre-Bid Meeting</b>	<b>: 1530 Hrs on 04.08.2021</b>
<b>Last Date for Submission</b>	<b>: up to 1230 Hrs on 09.08.2021</b>
<b>Opening of Technical Bid</b>	<b>: 1530 Hrs on 09.08.2021</b>
<b>Earnest Money Deposit (EMD)</b>	<b>: NIL</b>
<b>Estimated Cost</b>	<b>: 9 Lakhs</b>

[Bidders are advised to study the Tender Document (including all Sections, Schedules and Annexure etc.,) carefully. Submission of Tender shall deem to have been done after careful study and examination of the Tender Document with full understanding of its implications.]

All bidders are requested to visit IMU Mumbai Campus website : [www.imumumbaiport.ac.in](http://www.imumumbaiport.ac.in) & [www.imu.edu.in](http://www.imu.edu.in) for regular updates.

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**INDIAN MARITIME UNIVERSITY**  
**(A central University, Govt. of India)**  
**Mumbai Port Campus,**  
**Mumbai – 400033**

**TENDER NO. IMU-MPC/PUR/2021-22/Repairs/22**

**TENDER FOR “SHIFTING, SERVICE, REPAIRS and AMC OF EQUIPMENT FOR  
(a) FLUID MECHANICS LABORATORY (b) ELECTRICAL & ELECTRONICS  
LABORATORY (c) MATERIAL SCIENCE LABORATORY” AT IMU-MUMBAI PORT  
CAMPUS**

**1. OBJECTIVE:-**

IMU Mumbai Port Campus is inviting open tenders from qualified bidders for providing “SHIFTING, SERVICE, REPAIRS and AMC OF EQUIPMENT FOR (a) FLUID MECHANICS LABORATORY (b) ELECTRICAL & ELECTRONICS LABORATORY (c) MATERIAL SCIENCE LABORATORY” at IMU Mumbai Port Campus, Hay Bunder Road, Mumbai – 400033.

**2. PRE-QUALIFICATION CRITERIA:-**

The eligible bidder has to satisfy the following condition

Sr. No.	Qualification Criteria	Supporting Documents	Bidder Confirmation with Page No.
2.1	a) The bidder should have satisfactorily completed three similar works during the last two years each costing not less than 40% of the present estimated cost i.e. Rs. 3,60,000/- in Central Government/ State Govt. / PSUs / Private Organizations/ Marine Training Institute; <b>OR</b>	1. Copy of Purchase Order or Contract agreement proving 'Award of Work'. <u>OR</u> 2. Copy of Completion Certificate. <u>OR</u> 3. Final Invoice. <u>OR</u> 4. Letter indicating return of Security Deposit for proving satisfactory 'Completion of Work', Cost of each item to be indicated separately on submitted documents. <b>(Duly filled Annexure III [Form-II])</b> [Similar Works means work in “SERVICE, REPAIRS, SHIFTING & AMC of Laboratory Equipment]	
	b) Two similar works during last two years each costing not less than 50% of the present estimated cost i.e. Rs. 4,50,000/- in Central Government/ State Govt. / PSUs / Private Organizations/ Marine Training Institute; <b>OR</b>		
	c) One similar work during last two years each costing not less than 80% of the present estimated cost i.e. Rs. 7,20,000/- in Central Government/ State Govt. / PSUs / Private Organizations/ Marine Training Institute.		
2.2	The bidder should have average annual turnover of Rs. <b>03 Lakhs</b> during the last 03 financial years (i.e. 2017-18, 2018-19, 2019-20).	1. Copy of Profit & Loss Account of the company for each of the 3 years authenticated by a Chartered Accountant. 2. Copy of Income Tax return for each of the 3 years authenticated by a Chartered Accountant	<b>2017-18</b> Rs. _____ <b>2018-19</b> Rs. _____ <b>2019-20</b> Rs. _____
2.3	Bidder should be a Manufacturer or an authorized dealer.	In case of bidder is an authorized dealer, letter of authorization from OEM shall be submitted and in case of manufacturer BIS certificate should be submitted.	

**3. EARNEST MONEY DEPOSIT (EMD):-**

Every Bidder shall submit a Bid Security Declaration in the attached format as Annexure III (Form IV).

#### **4. Security Deposit:-**

- 4.1. Within 07 days of the successful bidder's receipt of notification of award from IMU – MPC, the Bidder shall furnish a Security Deposit at the rate of 03% of the contract value in the form of an A/C Payee Demand Draft drawn in the name of Indian Maritime University – Mumbai Port Campus, payable at Mumbai towards due compliance of contract obligations to the satisfaction of the IMU – MPC and to make good any loss or damage caused to the IMU – MPC owing to acts in pursuance/violation of terms herein.
- 4.2. Security Deposit will be refunded / returned without any interest only 90 days after successful completion of AMC period. The refund or return of Security Deposit is subject to the complete fulfillment of the contract obligation by the supplier to the satisfaction of IMU and after adjustment of dues to IMU or penalty imposed by IMU.

#### **5. GENERAL INSTRUCTION:-**

5.1. **Sale of Documents:** The Tender document can be downloaded free of cost from the IMU website [www.imu.edu.in](http://www.imu.edu.in) and [www.imumumbaiport.ac.in](http://www.imumumbaiport.ac.in).

#### **5.2. Submission:**

5.2.1. The Tender shall be submitted in tender box which will be placed at the Main Gate of IMU-MPC, addressed to **THE DIRECTOR, INDIAN MARITIME UNIVERSITY, MUMBAI PORT CAMPUS, HAY BUNDER ROAD, MUMBAI-400033upto date mentioned in cover page.**

5.2.2. The tenderer's shall seal the Technical-Bid and Price-Bid in separate envelopes (Cover-1 and Cover-2) duly marking the envelopes as **"Cover-1-Technical Bid"** and **"Cover-2-PriceBid"**.The two envelopes along with the covering letter, EMD, Power of Attorney, if any shall then be sealed in an outer envelope.

5.2.3. The main envelope shall contain thefollowing:

##### **OuterEnvelope**

- (a) CoveringLetter;
- (b) Earnest MoneyDeposit Demand Draft;
- (c) Sealed Cover -1;and
- (d) Sealed Cover -2

##### **Cover-1 – TechnicalBid**

- a. Duly filled in Tender-Document with relevant details and complete in all respects. (Except pricebid)
- b. Documents in support of pre-qualification criteria as mentioned in para 2.1 to 2.3
- c. Annexure – I (Compliance matrix to be filled and signed)
- d. Annexure-II ( Form of Tender)
- e. Annexure – III (Form I to Form IV)
- f. Annexure – IV (Mandate Form)

## **Cover –2 – PriceBid**

**PRICE BID/COVER** duly filled in (both in figures and words).

- 5.2.4. The IMU-MPC, in exceptional circumstances, and at its sole discretion, may extend the tender due date by issuing a corrigendum.
- 5.2.5. The tenders will be opened in the presence of the representatives of the tenderers who choose to attend the tender opening (The maximum number of representatives attending the technical bid opening to be limited to 01 person).
- 5.2.6. The financial bids of the bidders who are technically qualified will be opened. The Bidders are requested to visit IMU Mumbai port Campus website [www.imu.edu.in](http://www.imu.edu.in) and [www.imumumbaiport.ac.in](http://www.imumumbaiport.ac.in) for updates.
- 5.2.7. IMU reserves the right to cancel or withdraw the tender any time. IMU also reserves the right to reject any or all tenders without assigning any reason.
- 5.2.8. The bidder shall read and understand the contents of the tender documents, carefully. Failure to comply with the requirements of tender submission will render the tender liable for rejection. Tenders, which are not responsive to the requirements of the tender conditions, will be rejected.

### **6. Validity:**

The offer will remain valid for a period of 120 days from the date of opening of tender. If required, the validity shall be extended for further period by mutual consent.

### **7. Evaluation of Bids:**

#### **7.1. Technical Bid Evaluation:**

The information furnished by the bidder in Cover – I in the prescribed format supplied by IMU- MPC will form the basis for the technical evaluation. In exceptional cases IMU- MPC or his representative reserves the right to obtain any clarifications from any of the bidder without vitiating the tendering process. If, in the opinion of the IMU- MPC, Seal & Signature of Bidder information and documents supplied in support of the tender do not meet the requirements of the tender specifications, the tender may be determined as non-responsive and may be rejected by the IMU- MPC. After satisfying that all / or some of the bidders have attained the minimum qualifying criteria as detailed above, bids of only the technically qualified bidders who fulfill all the pre-qualification / eligibility criteria, will be considered for further evaluation. If a bidder does not fulfill even single minimum eligibility criteria / pre-qualification criteria during the technical bid evaluation, his financial bids will not be evaluated.

#### **7.2. Financial Bid Evaluation:**

7.2.1. The bidder may place their bids for any or all lab equipment services/ repairs/ shifting.

7.2.2. The Bidder who are placing their bids for only one item should write NOT

APPLICABLE in the bid for the other item.

7.2.3. The price bid will be reviewed for each equipment separately or both cumulatively for all items at the discretion of IMU-MPC i.e. IMU-MPC may declare L1 for each equipment separately or cumulative.

7.2.4. The L1 for each item will be calculated as per formula [Rates quoted for items + Average of two years AMC rates quoted]

## **8. Inspection & Rejection:**

The supply may be subject to inspection by IMU-MPC and IMU's decision to the acceptance of any equipment or rejection of any equipment/goods as not conforming to specification shall be final and binding on the successful bidder. Such of the equipment / goods which are rejected shall be removed by the successful bidder at their own expense and replaced by fresh ones within a time, as determined by IMU.

## **9. Payment Terms:**

### **9.1. Annual Maintenance Contract:**

9.1.1. In respect of AMC, AMC charges will be paid at the end of each AMC period.

### **9.2. Repair, Servicing and Shifting of equipment:**

9.2.1. The payment w.r.t. repair/servicing/up-gradation will be made only after the successful completion of the respective activity and trials.

9.3. The Tax Invoice raised by the supplier must be in compliance of relevant GST acts, rules & notifications made there under and should bear the IMU MPC GST Registration no. 27AAAI2610K2ZW. The rate and amount of CGST, SGST, IGST and GST (Compensation to state) cess, related to supply of goods, shall be shown separately in tax invoice for each item of supply.

9.4. GST on LD charges/ penalty deducted against supplies and EMD/ Security deposit/ performance guarantee forfeiture against supplies, if any, shall be borne by you.

9.5. Statutory variation: If there is any statutory change in CGST & SGST or IGST within contractual delivery period, the same shall be admissible and will be paid at actual based on the documentary evidence. However, no upward revision in the same beyond original delivery period shall be admissible.

## **10. Clarification / Information:**

A bidder requiring any clarification regarding the tender documents may notify in writing to the address mentioned in the invitation of tenders or E-Mail to [procurement.mumbaiport@imu.ac.in](mailto:procurement.mumbaiport@imu.ac.in) with a copy to [director.mumbaiport@imu.ac.in](mailto:director.mumbaiport@imu.ac.in). IMU-MPC will respond to any valid request for clarification, raised during the pre-bid meeting or received one week prior to the last date for submission of tenders. IMU-MPC's decision is final and binding with regard to interpretation of terms used or other tender contents.

## **11. Resolution of Disputes:**

11.1. Any dispute or difference or claim of any kind whatsoever between IMU and the Contractor arising in connection with or out of this contract; its execution whether during the execution of Contract or upon expiry; or whether before/after the determination, abandonment or breach of Contract ("the Dispute") shall in the first instance be amicably resolved through good faith negotiations between the Parties within a period of 10 days from the date of

service of notice on the other Party regarding such Dispute.

## 12. Scope of Work:

### A. FLUID MECHANICS LABORATORY

#### Shifting, Repairs, Service and AMC

Sl. No.	Name of the Equipment	Defects
1	Verification Bernoulli's Theorem Apparatus	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).
2	Gear Pump Test Rig Apparatus.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).
3	Reciprocating Pump Test Rig.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).
4	Determination of Coefficient of Discharge by Venturi meter Apparatus.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).
5	Centrifugal Pump Test Rig	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).
6	Determination of Pipe Friction Apparatus	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).
7	Centrifugal Pump in Series-Parallel test Rig.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).
8	Flow Measurement by Pitot Tube Apparatus	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).
9	Flow Measurement by Orifice & Mouth Piece Apparatus.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).
10	Flow Over Notches Apparatus.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).
11	Close-circuit hydraulic Cavitation Test Rig Apparatus.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).
12	Tilting Flume Apparatus.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor)
13	Pelton wheel apparatus	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).

## **B. ELECTRICAL AND ELECTRONICS LABORATORY**

### **B-1 : Repairs, Service and AMC of Electrical & Electronics LAB Equipments**

Sl. No.	Name of the Equipment	Defects
1	Multi Process Control Trainer	<ul style="list-style-type: none"> <li>• Faulty components to be repaired/replaced – Keypad , display, motor, sensors</li> <li>• Proper configuration and tuning of control loops so that it is fully functional and the experiments including all 4 process parameters can be conducted.</li> <li>• To be brought back into fully working condition</li> <li>• Minimum 3 years warranty</li> <li>• Additional 2 years AMC</li> </ul>
2	PLC based Oil and Water Separator	<ul style="list-style-type: none"> <li>• Cleaning and refurbishing of Oil and water tanks.</li> <li>• Recalibration of PLC system</li> <li>• To be brought back into fully working condition</li> <li>• Minimum 3 years warranty</li> <li>• Additional 2 years AMC</li> </ul>

### **B-2 : Shifting, Repairs, Service and AMC of Electrical & Electronics LAB equipments**

Sl. No.	Name of the Equipment (Qty. One each)	Current Location
1	D.C. Integrated machine Trainer	Equipment on 3 <sup>rd</sup> floor of MERI Building
2	Marine Main Switch Board trainer	
3	Measuring Instruments Trainer	
4	Single Phase motor trainer	
5	Three Phase motor trainer	
6	Universal single phase transformer trainer	
7	Pneumatic circuit trainer with compressor	
8	Pneumatic PI controller trainer	Equipment on 7 <sup>th</sup> floor of MERI building
9	Control valve characteristic measurement trainer	
10	Oil Mist Detector trainer	

Sl. No.	Description of Furniture	Current Location
1	Lab tables (including stored of small electrical equipment inside) – 5 Nos.	Furniture on 3 <sup>rd</sup> floor of MERI Building
2	Cupboards with materials/files : Big 3 Nos., Small 2 Nos.	
3	Office table -1 Nos.	
4	Chairs- 5 Nos.	



### **C. MATERIAL SCIENCE LABORATORY**

#### **Shifting, Repairs, Service and AMC of Material Science LAB equipments:**

<b>Sl. No.</b>	<b>Name of the Equipment</b>	<b>Defects</b>
1	Brinell Hardness Testing Machine	The equipment of Material Science laboratory is working but not giving proper results, functional problem. (Need servicing of equipment & maintenance). (May require component replacement). (MERI 7 <sup>th</sup> floor).
2	Torsion Testing Machine	The equipment of Material Science laboratory is working but not giving proper results, functional problem. (Need servicing of equipment & maintenance). (May require component replacement). (MERI 7 <sup>th</sup> floor).
3	Spring Stiffness Testing Machine	The equipment of Material Science laboratory is working but not giving proper results, functional problem. (Need servicing of equipment & maintenance). (May require component replacement). (MERI 7 <sup>th</sup> floor).
4	Grain Structure Analysis Apparatus	The equipment of Material Science laboratory is working but not giving proper results, functional problem. (Need servicing of equipment & maintenance). (May require component replacement). (MERI 7 <sup>th</sup> floor).
5	Ultrasonic Equipment	The equipment of Material Science laboratory is working but not giving proper results, functional problem. (Need servicing of equipment & maintenance). (May require component replacement). (MERI 7 <sup>th</sup> floor).
6	Fatigue Testing Machine	The equipment of Material Science laboratory is working but not giving proper results, functional problem. (Need servicing of equipment & maintenance). (May require component replacement). (MERI 7 <sup>th</sup> floor).

#### **In addition to above; the scope of work includes shifting of items of exiting seamanship Lab.**

- 12.1.1. The deputed service engineer/technician may inspect the laboratory equipment during the specified period (on working days), between specified time with prior intimation to our designated contact person.
- 12.1.2. The report should include the present status of the items to be serviced, repaired/up-graded with necessary spare parts (required if any).
- 12.1.3. The items which are non- functional and beyond economic repair should be certified with the necessary justification to unable the IMU MPC to replace the same with a new one.
- 12.1.4. In case of the replacement of old damaged/ non-working instruments/apparatus/ machines are required, the agency may suggest upgraded/advanced certified new machines available with the authorized suppliers/original manufacturers.
- 12.1.5. It is vendor's responsibility to check all the modalities involved in shifting and repairs. It may require site visit prior to submitting the tender. Site visit/ inspection can be done **on 02.08.2021 and 03.08.2021**
- 12.1.6. The duration of service period is 60 working days from the issue of work order.
- 12.1.7. The warranty of the working of laboratory/ workshop equipment/ machines should be at least of three year after the servicing of the same plus two year AMC.

- 12.1.8. The completion certificate with the confirmation of respective laboratory In-charges has to be submitted along with the bill.
- 12.1.9. Dismantling (if required), Loading, Shifting, Unloading, Reassembly(if required), wiring and provision of Electrical supply to all equipment and Reinstallation of Laboratory Equipment and other materials of the Electrical laboratories from "MERI 3<sup>rd</sup> and 7<sup>th</sup> Floor" to new locations at "LBS NEW HOSTEL BUILDING" including furniture.
- 12.1.10. Experienced Labours as required to handle the sensitive laboratory equipment.
- 12.1.11. Shifting of the Laboratory Equipment, related furniture, files of the Electrical Laboratory.
- 12.1.12. The necessary Fork Lift/Lifting Crane, Lifting Tackles, Tools, Wire Rope, Tripod, Sling of Suitable capacities and other equipment to carry out this work shall be arranged by the Contractor/Vendor. No such equipment/machinery will be provided/supplied by the institute.
- 12.1.13. The Contractor/Vendor shall arrange for handling and transportation of items/components from own store to the site as per the requirement of the shifting process.
- 12.1.14. It is recommended that the Laboratory Equipment/Goods to be supported by Cushioning sheets of suitable material, Thermocol sheets, air bubble wrapping material; so that goods can easily overcome jerks while Dismantling, Loading, Shifting, Unloading, Reassembly and Reinstallation of Laboratory Equipment and other materials of the Electrical laboratory and are delivered to the destination without scratch, major damage, breakage etc.
- 12.1.15. Place the equipment in position at designated location as directed by representative of IMU MPC.
- 12.1.16. Make the wiring and provide suitable Electrical supply points s(ingle phase and 3 phase) for all major equipment at designated locations.
- 12.1.17. Install and commission all the major equipment.
- 12.1.18. Servicing of all the major equipment with replacement of faulty components to bring these to fully working condition.

### **13. Comprehensive On-site AMC :**

- 13.1. Comprehensive maintenance for **Two years** is to commence immediately after successful repairs & service of lab equipment and after expiry of the warranty of replace part of the lab equipments.
- 13.2. The supplier shall provide necessary comprehensive preventive and corrective maintenance on site i.e., by sending the engineer to the IMU Campuses for attending the maintenance requirements of the supplied equipment. In case of intimation of breakdown, the successful bidder should respond within 48 hours of reporting during the period of AMC. All spares which need replacement during the period of onsite maintenance are to be replaced without any additional cost. The conditions specified for warranty will be applied by during AMC period and vice-versa.
- 13.3. In addition to above, support should also be available by phone, e-mail to solve the problem as soon as possible during the period of Warranty and Annual Maintenance Contract. He shall have facilities with sufficient service engineers trained to provide support services. The Bidder shall also have sufficient spares on hand for providing the uptime as indicated in this tender.

**TECHNICAL SPECIFICATION AND COMPLIANCE MATRIX****A. SHIFTING, REPAIRS, SERVICE AND AMC OF FLUID MECHNICS LABORATORY**

<b>Sl. No.</b>	<b>Name of the Equipment</b>	<b>Defects</b>	<b>Compliance To Specification (YES/NO)</b>
1	Verification Bernoulli's Theorem Apparatus	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).	
2	Gear Pump Test Rig Apparatus.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).	
3	Reciprocating Pump Test Rig.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).	
4	Determination of Coefficient of Discharge by Venturi meter Apparatus.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).	
5	Centrifugal Pump Test Rig	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).	
6	Determination of Pipe Friction Apparatus	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).	
7	Centrifugal Pump in Series-Parallel test Rig.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).	
8	Flow Measurement by Pitot Tube Apparatus	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).	
9	Flow Measurement by Orifice & Mouth Piece Apparatus.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need	

		replacements of components). (MERI 7 <sup>th</sup> floor).	
10	Flow Over Notches Apparatus.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).	
11	Close-circuit hydraulic Cavitation Test Rig Apparatus.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).	
12	Tilting Flume Apparatus.	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor)	
13	Pelton wheel apparatus	The equipment of the Fluid Mechanics laboratory is working but not giving proper results, functional problem -components of the equipment are damaged. (Servicing & may need replacements of components). (MERI 7 <sup>th</sup> floor).	

## B. ELECTRICAL AND ELECTRONICS LABORATORY

### B-1: REPAIRS, SERVICE AND AMC

Sl. No.	Name of the Equipment	Defects	Compliance to Specification YES/NO
1	Multi Process Control Trainer	<ul style="list-style-type: none"> <li>• Faulty components to be repaired/replaced – Keypad , display, motor, sensors, piping</li> <li>• Proper configuration and tuning of control loops so that it is fully functional and the experiments including all 4 process parameters can be conducted.</li> <li>• To be brought back into fully working condition</li> <li>• Minimum 3 year warranty</li> <li>• Additional 2 years AMC</li> </ul>	
2	PLC based Oil and Water Separator	<ul style="list-style-type: none"> <li>• Cleaning and refurbishing of Oil and water tanks.</li> <li>• Recalibration of PLC system</li> <li>• To be brought back into fully working condition</li> <li>• Minimum 3 year warranty</li> <li>• Additional 2 years AMC</li> </ul>	

**B-2: SHIFTING, REPAIRS, SERVICE AND AMC**

<b>Sl. No.</b>	<b>Name of the Equipment</b>	<b>Shifting, Service &amp; repairs</b>	<b>Compliance to Specification YES/NO</b>
1	D.C. Integrated machine Trainer	Dismantling (if required), Loading, Shifting, Unloading, Reassembly(if required), wiring and provision of Electrical supply to all equipment and Reinstallation of Laboratory Equipment and other materials of the Electrical laboratories from "MERI 3 <sup>rd</sup> and 7 <sup>th</sup> Floor" to new locations at "LBS NEW HOSTEL BUILDING" including furniture.	
2	Marine Main Switch Board trainer		
3	Measuring Instruments Trainer		
4	Single Phase motor trainer		
5	Three Phase motor trainer		
6	Universal single phase transformer trainer		
7	Pneumatic circuit trainer with compressor		
8	Pneumatic PI controller trainer		
9	Control valve characteristic measurement trainer		
10	Oil Mist Detector trainer		
11	Lab tables (including stored of small electrical equipment inside) – 5 Nos.		
12	Cupboards with materials/files : Big 3 Nos., Small 2 Nos.		
13	Office table -1 Nos.		
14	Chairs- 5 Nos.		

**C. SHIFTING, REPAIRS, SERVICE AND AMC OF MATERIAL SCIENCE LABORATORY**

<b>Sl. No.</b>	<b>Name of the Equipment</b>	<b>Defects</b>	<b>Compliance to Specification YES/NO</b>
1	Brinell Hardness Testing Machine	The equipment of Material Science laboratory is working but not giving proper results, functional problem. (Need servicing of equipment & maintenance). (May require component replacement). (MERI 7 <sup>th</sup> floor).	
2	Torsion Testing Machine	The equipment of Material Science laboratory is working but not giving proper results, functional problem. (Need servicing of equipment & maintenance). (May require component replacement). (MERI 7 <sup>th</sup> floor).	
3	Spring Stiffness Testing Machine	The equipment of Material Science laboratory is working but not giving proper results, functional problem. (Need servicing of equipment & maintenance). (May require component replacement). (MERI 7 <sup>th</sup> floor).	
4	Grain Structure Analysis Apparatus	The equipment of Material Science laboratory is working but not giving proper results, functional problem. (Need servicing of equipment & maintenance). (May require component replacement). (MERI 7 <sup>th</sup> floor).	
5	Ultrasonic Equipment	The equipment of Material Science laboratory is working but not giving proper results, functional problem. (Need servicing of equipment & maintenance). (May require component replacement). (MERI 7 <sup>th</sup> floor).	
6	Fatigue Testing Machine	The equipment of Material Science laboratory is working but not giving proper results, functional problem. (Need servicing of equipment & maintenance). (May require component replacement). (MERI 7 <sup>th</sup> floor).	

**FORM OF TENDER**

**NOTE:** This Memorandum forms part of the Tender and this should be duly filled in, signed & sealed and enclosed along with the Tender.

To  
THE DIRECTOR,  
INDIAN MARITIME UNIVERSITY  
MUMBAI PORT CAMPUS  
HAY BUNDER ROAD  
MUMBAI – 400 033.

Sir,

Being duly authorized to represent and act on behalf of .....  
hereinafter called "the tenderer" and having visited the sites and examined Terms and Conditions of Contract, Instructions to the Tenderers, Schedules and Bill of Quantities for the Menu of Tender for **"SHIFTING, REPAIRS, SERVICE & AMC OF EQUIPMENT FOR (a) FLUID MECHANICS LABORATORY (b) ELECTRICAL & ELECTRONICS LABORATORY (c) MATERIAL SCIENCE LABORATORY"**; and

1. I / We offer to execute the work in conformity with the terms and Conditions of this tender/contract.
2. I / We undertake that, if our Tender is accepted, to do the work for the periods specified in this Schedule.
3. If my / our tender is accepted we will furnish a Security Deposit within 07 days of receipt of work order through a Demand Draft or Bankers Cheque from Nationalized Bank or a Scheduled Bank in India approved by Government of India for a sum equivalent to 3% of the value of contract of any Nationalized Bank or Scheduled Bank in India as Security deposit for the due performance of the Contract.
4. I / We agree to abide by this Tender for a period of 120 days from the date fixed for receiving the same or such further period as may be mutually agreed upon and it shall remain binding upon us and may be accepted at any time before the expiration of that period should we fail to abide by our Tenders during the above said period of 120 days or such extended period as mutually agreed upon, the IMU shall be at liberty to forfeit the Earnest Money deposited by us.
5. Unless and until a formal agreement is prepared and executed, this Tender together with your written acceptance thereof, shall constitute a binding Contract between us.
6. (i) We understand that the IMU reserves the right to,
  - a. Amend the scope of tender and value of contract under this work at any time
  - b. reject or accept any tender including the lowest, cancel the tender process and reject all tender without assigning any reason.
 (ii) We agree that the IMU will not be liable for any such action and will be under no obligation to inform the tenderer of the grounds for such action as rejection, modification, delays, cancellation etc.
7. If our Tender is accepted as a whole or as individual components, we understand that we are held fully responsible for the due performance of the Contract.
8. We agree to execute the works referred to in the Tender Documents upon the Terms and Conditions contained or referred to therein and to carry out such deviations as may be ordered.

SIGNATURE..... FOR AND ON BEHALF OF.....  
DATE .....

**Witnesses:**

- |                   |                   |
|-------------------|-------------------|
| 1. Signature..... | 2. Signature..... |
| Name.....         | Name.....         |
| Address.....      | Address.....      |

**CONTENTS OF QUALIFICATIONFORMAT**

	<b>Description</b>
Form I	Letter of application
Form II	Experience for executing similar works
Form III	Annual Turnover Data
Form IV	Bid Declaration Form



**Contents of Qualification Format**

**INDIAN MARITIME UNIVERSITY**

**Covering Letter to Accompany Technical Bid**

*[On the Letter head of the Bidder and to be put in a separate sealed cover along with DD for EMD of Rs...../-]*

**FORM – I**

**FROM**

**Name & Address of the Bidder**

**TO**

THE DIRECTOR,  
Indian Maritime University,  
Mumbai Port Campus  
Hay Bunder Road,  
Mumbai – 400033.

Sir,

1. Being duly authorized to represent and act on behalf of ..... hereinafter called "The tenderer" and having reviewed and fully understood all the qualifying information provided, the undersigned hereby applies to be qualified under Cover – I for the **Tender for providing "SHIFTING, REPAIRS, SERVICE & AMC OF EQUIPMENT FOR (a) FLUID MECHANICS LABORATORY (b) ELECTRICAL & ELECTRONICS LABORATORY (c) MATERIAL SCIENCE LABORATORY"** AT IMU MUMBAI PORT CAMPUS.
2. Attached to this letter are copies of original documents defining
  - i) The tenderer's legal status
  - ii) The Principal place of business and
  - iii) The place of incorporation or the place of Registration
3. (i) This tender (Under Cover-I and Cover II) is made in the full understanding that contents of Cover-I will be subject to verification of all information submitted therein along with the tender and authorize IMU or its authorized representative to verify the statements, documents and information submitted and to clarify the financial and technical aspects of this application.  
(ii) We understand that the Employer reserves the right to,
  - Amend the scope of tender and value of contract under this work any time
  - reject or accept any tender including the lowest, cancel the tender process and reject all tender without assigning any reason.(iii) We agree that the Employer will not be liable for any such action and will be under no obligation to inform the tenderer of the grounds for such action.
- 4) We certify that all the particulars furnished in our Bid are true and correct and based on documentary evidence. We understand that if any of the particulars is found to be false or misleading, IMU has the right to summarily reject our bid at any stage and that our company is liable to be blacklisted/debarred by IMU for at least 3 years.
- 5) In the event of our being awarded the work, we undertake to remit the Security Deposit and execute the Contract with IMU within 07 (Seven) days from the date of issue of the Purchase Order failing which the Work Order may be cancelled.
- 6) Our Price Bid is exclusive of GST and the price quoted shall be firm till the execution of the contract and for the extended period if any.

DATE: TENDERER'S SIGNATURE WITH STAMP

**INDIAN MARITIME UNIVERSITY**

**TENDER FOR PROVIDING "SHIFTING, REPAIRS, SERVICE & AMC OF EQUIPMENT FOR  
(a) FLUID MECHANICS LABORATORY (b) ELECTRICAL & ELECTRONICS LABORATORY (c)  
MATERIAL SCIENCE LABORATORY" AT IMU MUMBAI PORT CAMPUS**

**FORM – II**

**Experience on Contract for similar works (executed  
during the last 2 years) as per clause 2.1 of Pre-  
Qualification Criteria**

Sl. No.	Name and address of the Institution & Name of contact person & Telephone No.	Period/ Date of contract	Date of commencement of contract	Date of completion of contract	Work Cost	Mode of Proof enclosed

Note :Each item / contract listed under the above columns shall be supported by documentary evidence / Performance certificate issued by the competent authority in original or with a Xerox copy duly notarized or self attested, subject to production of the originals when demanded.

DATE:

TENDERER'S SIGNATURE WITH STAMP

**INDIAN MARITIME UNIVERSITY**

**TENDER FOR PROVIDING "SHIFTING, SERVICE, REPAIRS & AMC  
OF EQUIPMENT FOR (a) FLUID MECHANICS LABORATORY (b)  
ELECTRICAL & ELECTRONICS LABORATORY (c) MATERIAL SCIENCE  
LABORATORY" AT IMU MUMBAI PORT CAMPUS**

Qualification Questionnaire

**FORM – III**

Annual turnover data form Audited Balance sheet and Profit and loss Account of the firm for the last two financial years shall be enclosed.

The information supplied should be the annual turnover of the tenderer in terms of amount billed for each financial year of work in progress or completed.

Annual turnover data for the last 3 financial years is to be provided in the following format.

SL.NO	FINANCIAL YEAR	ANNUAL TURNOVER
1	2017-18	
2	2018-19	
3	2019-20	

(The latest Income Tax Returns, duly attested by the Tenderer's Chartered Accountant, shall be attached)

DATE:

TENDERER'S SIGNATURE WITH STAMP

**INDIAN MARITIME UNIVERSITY**

**TENDER FOR PROVIDING "SHIFTING, SERVICE, REPAIRS & AMC OF EQUIPMENT  
FOR (a) FLUID MECHANICS LABORATORY (b) ELECTRICAL & ELECTRONICS  
LABORATORY (c) MATERIAL SCIENCE LABORATORY" AT IMU MUMBAI PORT  
CAMPUS  
FORM – IV**

**FORMAT OF BID SECURITY DECLARATION**

I/We-----

----- hereby states and understand that, if I/We -----

-----  
withdraw/modify our tender during the period of validity of the tender, The Indian  
Maritime University, Mumbai Port Campus would suspend the bidder from participation in  
any future tenders of Indian Maritime University for a period of Six (06) months.

Signature \_\_\_\_\_

Name \_\_\_\_\_

Date

Capacity in which signed \_\_\_\_\_

Place

Seal of the firm to be affixed.

**MANDATE FORM  
(Account/s Information form)**

**REAL TIME GROSS SETTLEMENT (RTGS)/ NATIONAL ELECTRONIC TRANSFER (NEFT) / INTRA BANK ACCOUNT TRANSFER FACILITY FOR RECEIVING PAYMENTS FROM IMU.**

**A. DETAILS OF ACCOUNT HOLDER:**

NAME OF ACCOUNT HOLDERER / FIRM

COMPLETE CONTACT ADDRESS

MOBILE NUMBER / PH NO

E.MAIL:

PAN :

**B, BANK ACCOUNT DETAILS:**

**ACCOUNT NAME** (Name appearing in your Cheque Book)

BRANCH NAME WITH COMPLETE ADDRESS,

TELEPHONE NO

BRANCH CODE

**Note: Please attach a Cancelled Cheque along with the account information form.**

**COMPLETE BANK ACCOUNT NUMBER** (Please note that the Bank Account must be in the name of the Firm as appeared in the bill. In case of other Beneficiaries (Non-vendor) the Account name must be in the name of Applicant)

IFSC CODE

TYPE OF ACCOUNT (SB/CURRENT/CASH CREDIT)

MICR CODE OF BANK

I hereby declare that the particulars given above are correct and complete. If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information I would not hold the IMU responsible.

( ..... )

Signature of Beneficiary

Date:

**Mandatory for Vendors/suppliers/Contractors etc., Payment:**

Certified that the particulars furnished above are correct as per our records.

(Bank's Stamp with Date & Place)

( ..... )

Signature of Bank Manager



**INDIAN MARITIME UNIVERSITY  
MUMBAI PORT CAMPUS**

**TENDER FOR "SHIFTING, SERVICE, REPAIRS & AMC OF EQUIPMENT FOR  
(a) FLUID MECHANICS LABORATORY (b) ELECTRICAL & ELECTRONICS  
LABORATORY (c) MATERIAL SCIENCE LABORATORY"**

**at IMU Mumbai Port campus, Hay Bunder Road**

**TENDER NO – IMU-MPC/PUR/2020-21/Repairs/22**

**VOLUME –II**

**FINANCIAL BID**

[Bidders are advised to study the Tender Document (including all Sections, Schedules and Annexure etc.,) carefully. Submission of Tender shall deem to have been done after careful study and examination of the Tender Document with full understanding of its implications.]

All bidders are requested to visit IMU Mumbai Campus website : [www.imumumbaiport.ac.in](http://www.imumumbaiport.ac.in) & [www.imu.edu.in](http://www.imu.edu.in) for regular updates.

## **PRICE BID**

### **SHIFTING, SERVICE, REPAIRS & AMC OF EQUIPMENT FOR (a) FLUID MECHANICS LABORATORY (b) ELECTRICAL & ELECTRONICS LABORATORY (c) MATERIAL SCIENCE LABORATORY**

*[On the Letter head of the Bidder and to be put in sealed cover]*

#### **A. SHIFTING, SERVICING, REPAIRS AND AMC OF FLUID MECHANICS LABORATORY EQUIPMENT**

(Amount in Rs.)

Sl. No.	Name of the Equipment	Qty	Servicing/ Repairing and Shifting Charges	AMC Charges for 1 <sup>st</sup> year	AMC Charges for 2 <sup>nd</sup> year	Total
		1	2	3	4	5 = (2+3+4)
1	Verification Bernoulli's Theorem Apparatus	01				
2	Gear Pump Test Rig Apparatus.	01				
3	Reciprocating Pump Test Rig.	01				
4	Determination of Coefficient of Discharge by Venturi meter Apparatus.	01				
5	Centrifugal Pump Test Rig	01				
6	Determination of Pipe Friction Apparatus	01				
7	Centrifugal Pump in Series-Parallel test Rig.	01				
8	Flow Measurement by Pitot Tube Apparatus	01				

9	Flow Measurement by Orifice & Mouth Piece Apparatus.	01				
10	Flow Over Notches Apparatus.	01				
11	Close-circuit hydraulic Cavitation Test Rig Apparatus.	01				
12	Tilting Flume Apparatus.	01				
13	Pelton wheel apparatus	01				
	<b>Total:</b>					
	(Total in _____ <b>WORD</b> )					
	<b>The rates quoted above should be only the unit price (i.e. inclusive of basic price, transportation and any other charges) and exclusive of GST and any cess on GST.</b>					

**Date:**

**Stamp & Signature of Bidder**

**Place:**



**B. SHIFTING, SERVICING, REPAIRS AND AMCOF ELECTRICAL AND ELECTRONICS LABORATORY EQUIPMENT**

**B-1 : Repairs, Service and AMC of Electrical & Electronics LAB Equipments**

(Amount in Rs.)

Sl. No.	Name of the Equipment	Qty in Unit	Repairing and Servicing Charges	AMC Charges for 1 <sup>st</sup> year	AMC Charges for 2 <sup>nd</sup> year	Total
		1	2	3	4	5 = (2+3+4)
1	Multi Process Control Trainer	01				
2	PLC based Oil and Water Separator	01				
	<b>Total:</b>					
	(Total in _____ <b>WORD</b> )					
	<b>The rates quoted above should be only the unit price (i.e. inclusive of basic price, transportation and any other charges) and exclusive of GST and any cess on GST.</b>					

**Date:**

**Stamp & Signature of Bidder**

**Place:**

**B-2 : Shifting, Repairs, Service and AMC of Electrical & Electronics LAB equipments**

Sl. No.	Name of the Equipment	Qty in Unit	Shifting, Repairing and Servicing Charges	AMC Charges for 1 <sup>st</sup> year	AMC Charges for 2 <sup>nd</sup> year	Total
		1	2	3	4	5
1	D.C. Integrated machine Trainer	01				
2	Marine Main Switch Board trainer	01				
3	Measuring Instruments Trainer	01				
4	Single Phase motor trainer	01				
5	Three Phase motor trainer	01				
6	Universal single phase transformer trainer	01				
7	Pneumatic circuit trainer with compressor	01				
8	Pneumatic PI controller trainer	01				
9	Control valve characteristic measurement trainer	01				
10	Oil Mist Detector trainer	01				
	<b>Total:</b>					
			(Total in _____ <b>WORD</b> )			
			<b>The rates quoted above should be only the unit price (i.e. inclusive of basic price, transportation and any other charges) and exclusive of GST and any cess on GST.</b>			
			<b>Shifting Charges of furniture mentioned separately</b>			

**Date:**

**Place:**

**Stamp & Signature of Bidder**

**C. SHIFTING, SERVICING, REPAIRS AND AMC OF MATERIAL SCIENCE LABORATORY EQUIPMENTS**

(Amount in Rs.)

Sl. No.	Name of the Equipment	Qty in Unit	Shifting, Repairing & Servicing Charges	AMC Charges for 1 <sup>st</sup> year	AMC Charges for 2 <sup>nd</sup> year	Total
		1	2	3	4	5 =(2+3+4)
1	Brinell Hardness Testing Machine	01				
2	Torsion Testing Machine	01				
3	Spring Stiffness Testing Machine	01				
4	Grain Structure Analysis Apparatus	01				
5	Ultrasonic Equipment	01				
6	Fatigue Testing Machine	01				
Total Seamanship Lab (in Words) .....						
<b>The rates quoted above should be only the unit price (i.e. inclusive of basic price, transportation and any other charges) and exclusive of GST and any cess on GST.</b>						

**Date:**

**Stamp & Signature of Bidder**

**Place:**