No. 5.1/THESIS/GP-DIU/TENDER/2019-20/275  Dated: 11/03/2020

E-TENDER NOTICE

Sealed tenders are hereby invited by the Principal, Govt. Polytechnic - Diu on behalf of the President of India for supply of Mechanical Engineering Equipment's, (THERMAL ENGINEERING EQUIPMENT'S) as stated below as per the terms and condition stipulated attached herewith. Tender documents should be submitted along with nonrefundable tender fees of Rs. 500/- DD, favor of Daman & Diu Society for Technical Edu. & Higher Edu. (CENT) and refundable E.M.D Rs.1,01,300/- of the total cost of supply items in favor of Daman & Diu Society for Technical Edu. & Higher Edu. (CENT).

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<th>Sr. No.</th>
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| 1.      | Four Stroke Diesel Engine with Brake Drum Loading system (Test Rig) | Full test rig setup.  
1. Engine: Single cylinder 4 stroke diesel engine (vertical) of 5 HP capacity, ISI Marked.  
2. Dynamometer: Rope Brake Dynamometer, on a common base plate. Brake drum of 400 mm dia with cooling arrangement, vertical spring balance, hand wheel, weight hanger, dead weights for conducting experiments.  
4. Calorimeter: Double Pipe Heat Exchanger to measure the heat loss through exhaust gases.  
5. Air Intake Measurement: Air Intake reservoir of size 0.3 x 0.3 x 0.5 m. with orifice plate, U-Tube manometer of 0.3 m height for the measurement of air flow rate.  
6. Cooling Arrangement: Cooling Water measurement by rotameter to determine the discharge of cooling water. Internal cooling water need for engine & drum cooling.  
7. 12 channel Digital Temperature Indicator: With set of thermocouples. Installation and Demonstration (On-Site Service/Maintenance for 3 years) | 1 |
| 2.      | VCRS Test rig with capillary tube and thermostatic expansion valve | 1. Compressor: Hermetically sealed compressor.  
2. Condenser: Air Cooled condenser made out of copper pipe & Aluminum fins of matching capacity with fan cooling.  
3. Evaporator: Copper Coil immersed in water. (Insulated)  
4. Expansion device: Capillary Tube & Thermostatic expansion valve. | 1 |
3. **Window AC/Split AC Test Rig**

2. Condenser: Air cooled condenser made out of copper pipe & aluminum fins of matching capacity with fan cooling.
3. Evaporator: Air calorimeter type evaporator.
4. Expansion device: Thermostatic expansion valve.
5. Energy Meter: For power measurement of compressor.
6. Pressure Gauge: 2 Nos. for H.P., L.P. measurement
7. Suitable filter/drier.
9. Rotameter for Refrigerant flow measurement.
10. Duct: Air duct in which evaporator is fitted.
11. Blower: Suitable capacity blower with air control arrangement.
12. Set of thermocouples.

**CONTROL PANEL:**
1. 12 Channel Digital Temperature Indicator
2. HP-LP Cutout: Make Ranco/Danfoss or Equivalent.
4. Voltmeter: 0 - 250 V.
5. Ammeter: 0 - 15 A (digital preferably)
6. Thermostat: Ranco or equivalent

Installation and Demonstration
(On-Site Service/Maintenance for 3 years)

4. **Desert Cooler Test rig (Air washer) Test Rig**

1. Duct: 500 x 500 x 800 mm Duct
2. Air Fan with Motor: Suction type air fan fitted on the top of the duct.
3. Set of thermocouples.

**CONTROL PANEL**
5. Cooling Tower Test Rig

- Cooling Tower
  - Size: 250 x 250 mm, Height: 1000 mm, Blower Capacity: 1 HP, Geyser Capacity: 3 kW
  - Digital Temperature Indicator: No. of Digits: 4
  - Digital Temperature Sensors: RTD PT-100 type
  - Water flow measurement: Rotameter Range: 0 to 60 cc/sec
  - Calibrated water tank: Material: MS with FRP, coated
  - Size: 250 x 250 mm

Installation and Demonstration On-Site Service/Maintenance for 3 years

6. Vertical Condenser Test Rig

- Heating Arrangement
  - Rotameter for flow measurement of cold water.
  - Range: 0 - 11 LPM
  - Measuring Cylinder for condensate measurement
  - Set of thermocouples 12 Channel Digital Temperature Indicator

Installation and Demonstration On-Site Service/Maintenance for 3 years

7. IC Engine Parts Models

- 1. Fuel pump (1 Nos).
- 2. Carburetor (1 Nos).
- 3. Fuel injector (1 Nos).
- 4. Multipoint fuel injection system (1 Nos).

8. Plate Type Heat Exchanger

- Technical Specifications:
  - System: Water to Water
  - Plates: Material Stainless Steel
  - Water Flow Measurement: By Rotameter (2Nos.)
  - One each for cold hot fluid.
  - Hot Water Tank: Made of Stainless steel, Double Wall, Insulated with ceramic wool.
  - Hot Water Circulation: Magnetic Pump.
  - Heaters: Nichrome wire heater.
  - Rigid Structure
  - Control Panel:
    - Digital Temp. Controller: 0-199.9°C, (For Hot Water Tank)
    - Digital Temp. Indicator: 0-199.9°C, with multichannel switch
    - Temperature Sensors: RTD PT-100 type, 4Nos.
  - Standard make On/Off switch, Mains Indicator etc.

Installation and Demonstration On-Site Service/Maintenance for 3 years

**TERMS & CONDITIONS**

1. Eligibility:
   i. The bidder should be registered under Sales Tax/VAT/GST.
   ii. The bidder should have their support center at Una/Veraval/Rajkot/Ahmedabad and Diu or nearby.
2. The Earnest Money Deposit (EMD) of Rs.1,01,300/- is payable in the form of issued by Scheduled Bank in favor of Daman & Diu Society for Technical Edu. & Higher Edu. (CENT) payable at Diu. Tender received without Earned Money Deposit will be treated as invalid.
3. The rate(s) quoted should be strictly **for free door delivery at Government Polytechnic, Diu, Education Hub, Kevdi-Diu**, respectively & will be valid and operative for supply order issued on or before.

4. The rates should be quoted inclusive of all taxes, installation & commissioning charges.

5. No extra charge for packaging, forwarding and insurance, transportation etc. will be paid in addition to the rates quoted.

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**Financial Bid Cover**

1. The rates should be quoted only for the items specified in the list of requirement and should be for the items of given special make /manufacture.

2. Rates quoted for items other than the required specification/ make/manufacture may not be considered.

3. The decision of the Principal, Govt. Polytechnic-Diu for acceptance/rejection of any articles supplied including the decision for equivalent specifications, standard and quality etc. of articles shall be final.

4. The Purchase Committee will open the Tenders online in presence of tenderer(s) or their representatives, if any presents in the Office of the Principal, Govt. Polytechnic-Diu on **30/03/2020 at 03:00 pm**.

5. The Principal, Govt. Polytechnic-Diu will be at liberty to accept the tender for the entire quantity or the part thereof at the rates submitted by the Bidder or at reduced rate during the negotiations if any.

6. Rates tendered/offered in response to the concerned Tender Notice by the successful bidder shall be considered as acceptance of all above terms and conditions for supply for all legal purpose.

7. (a) The Successful Tenderer will have to pay an amount equal to 05% of the total value of articles mentioned in the supply order within **10 days** from the date of the order as Security Deposit in form of Earnest Money Deposit (EMD) in favor of **Daman & Diu Society for Technical Edu. & Higher Edu. (CENT)**. The successful bidder has to submit performance bank guarantee (here after referred to as Security Deposit) from any nationalized bank of **05% amount of his final offer towards performance security within 10 days** from the date of issue of supply order for the duration of warranty period.

(b) Non-receipt of Security Deposit within stipulated time limit will result in automatic cancellation of the order for supply without any intimation.

8. The Earnest Money(s)/Security Deposit(s) paid by the tenderer(s) earlier against any tender(s) for supply order(s) is/are not adjustable with Earnest Money or Security Deposit required as per conditions of this tender.

9. All bills should be in Triplicate and should invariably mention the number and date of supply order.

10. All bills for amount above Rs. 5,000/- should be pre-receipted on a Revenue Stamp of proper value. Bills for amount exceeding Rs. 5,000/- not pre-receipted on Revenue Stamp of proper value will not be accepted for payment.

11. **As per Good Service Tax (GST) tax will be deducted while making/crediting payment to the supplier. As applicable time to time.**

12. In respect of any dispute given rise to the legal proceedings between the parties, the courts at Daman and Diu & DNH shall alone have the jurisdiction.

13. The tender can be submitted up-to **12:00 pm 30/03/2020** and shall be opened on same day at 3:00 hrs if possible in the office of the Principal, Govt. Polytechnic-Diu or in the office of the Hon'ble Collector, Diu in the presence of the Purchase committee and Tenderer(s) or their representative(s) if present.
14. Items should be covered by 'onsite warranty' for a period of One year from the date of installation and bidder must have service/support location at local level i.e. Diu/Una/Veraval/Rajkot/Ahmedabad or nearby.

15. The designated committee will check quality of the Mechanical Engineering Equipment's, (THERMAL ENGINEERING EQUIPMENT'S) supplied before installation at Principal, Govt. Polytechnic-Diu.

THE ABOVE CONDITIONS ARE ACCEPTED AND ARE BINDING TO ME/US.

(Signature of Supplier/Tenderer)
Date & Rubber Stamp.

Note: Please return one copy of these conditions duly signed along with your tender/Quotations.