INDIAN INSTITUTE OF TECHNOLOGY MADRAS
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Ref: ICS/11-12/013/DSTX/TSUN **Date: 21.04.2013**

Tender No.: ASE/SRCH/011/2013

N.E. Nagaraj
Special Officer (Project Purchase)
IC&SR, I.I.T. Madras

Due Date: 13.05.2013, 3:30pm

Dear Sirs,

On behalf of the Indian Institute of Technology Madras, offers are invited for the supply of various Scientific Instruments "1. Wavelength Meter & 2. Pressure Vessel (Air)" conforming to the specifications given in Annexure.

I) Instructions to the Bidder

(i) **Preparation of Bids:-** The tenders should be submitted under two-bid system (i.e.) Technical bid and Financial bid.

(ii) **Delivery of the tender:-** The tender shall be sent to the below-mentioned addresses either by post or by courier so as to reach our office before the due date and time specified in our Schedule. The offer/bid can also be dropped in the tender box on or before the due date and time specified in the schedule. The tender box is kept in the office of the "Special Officer, Project Purchase" IC & SR Building 2nd floor, I.I.T. Madras, Chennai – 600 036.

(iii) **Opening of the tender:-** The offer/Bids will be opened by a committee duly constituted for this purpose. The technical bids will be opened first and it will be examined by a technical committee which will decide the suitability of the bid as per our specifications and requirements. The financial offer/bid will be opened only for the offer/bids which technically meet all our requirements as per the specification. The bidders, if interested, may be present on the financial tender opening Day which will be communicated to you.

(iv) **Prices:-** The price should be quoted in nett per unit (after breakup) and must include all packing and delivery charges to Various Institutions. The offer/bid should be exclusive of taxes and duties, which will be paid by the purchaser as applicable. However the percentage of tax & duties should be clearly indicated.

The price should be quoted without custom duty and excise duty, since I.I.T. Madras is exempt from payment of excise duty, and the custom duty will be paid at concessional rate against duty exemption certificate.

In case of import supply, the price should be quoted on FOB and CIF basis indicating the mode of shipment.

(v) **Agency Commission**:- Agency commission, if any, will be paid to the Indian agents in Rupees on receipt of the equipment and after satisfactory installation. Agency Commission will not be paid in foreign currency under any circumstances. The details should be explicitly shown in Tender even in the case of 'Nil' commission. The tenderer should indicate the percentage of agency commission to be paid to the Indian agent.

(vi) **Terms of Delivery**:- The item should be supplied to our Various Institutions as per Purchase Order. In case of import supply, the item should be delivered at the cost of the supplier to our Institution. The Installation/Commissioning should be completed as specified in our important conditions.

Yours faithfully,

N.E. Nagaraj
Special Officer (Project Purchase)
IC&SR, I.I.T. Madras.

SCHEDULE

I) Important Conditions of the tender

1. The due date for the submission of the tender is **13.05.2013, 3:30pm.**

2. The offer/bids should be submitted in two bid systems (i.e.) Technical bid and Financial bid. The technical bid should consist of all technical details along with commercial terms and conditions. Financial bid should indicate item-wise price for the items mentioned in the technical bid. The Technical bid and the Financial bid should be put in separate covers and sealed. Both the sealed covers should be put into a bigger cover. The limited tender for supply of **"1. Wavelength Meter & 2. Pressure Vessel (Air)"** should be written on the left side of the outer cover.

3. (i) EMD:- Two percent (2%) of the tender value quoted by the company. The EMD should be included in the Financial bid which will not be opened for Technical evaluation. **Enclosing the EMD in the Technical bid will automatically disqualify the tenderer.** EMD should be in the form of DD in favour of "The Registrar, Indian Institute of Technology Madras" and payable at Chennai. The tender without EMD would be considered as UNRESPONSIVE and REJECTED. Photo/FAX copies of the Demand Draft/Banker's pay orders will not be accepted. The EMD will not be paid any interest and EMD shall be converted as a security deposit of the successful bidder and the same will be returned after the completion of the warranty period.

   (ii) The Successful bidder should submit Performance Security an amount of 5% of the value of the contract. The Performance Security may be furnished in the form of an Account Payee DD, FD Receipt from the commercial bank, Bank Guarantee from commercial bank will be an acceptable.

   (iii) The Performance Security should be valid for the period of 12 months from the date of Installation.

   (iv) The EMD (Bid Security) will be refunded to the Successful bidder on receipt of Performance Security.

4. If an Indian agent is involved, the following documents must be enclosed:

   i) 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.
   ii) Copy of the agency agreement with the foreign principal and the precise relationship between them and their mutual interest in the business.
   iii) The enlistment of the Indian agent with Director General of Supplies & Disposals under the Compulsory Registration Scheme of Ministry of Finance.

5. The offer/bids should be sent only for a machine 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.

6. 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.

7. Documentary proof for the claimed position and repetition accuracies must be obtained from the principals and submitted along with the relevant pages of the standards.

8. Compliance or Confirmation report with reference to the specifications and other terms & conditions should also be obtained from the principal.

9. **Delivery Schedule**:- 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.

10. **Risk Purchase Clause**:- In the event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from other sources on the total risk of the supplier under risk purchase clause.

11. **Payment**:- No Advance payment will be made for Indigenous purchase. However 90% Payment against Delivery and 10% after installation is agreed to wherever the installation is involved. In case of import supplies the payment will be made only through Letter of Credit and 90% payment will be released against delivery and 10% after installation wherever the installation is being done.

12. **On-site Installation**:- The equipment or machinery has to be installed or commissioned by the successful bidder within 15 to 20 days from the date of receipt of the item at Institution of IIT Madras.

13. **Warranty/Guarantee**:- The offer should clearly specify the warranty or guarantee period for the machinery/equipment. Any extended warranty offered for the same has to be mentioned separately.

14. **Late offer**:- The offers received after the due date and time will not be considered.

15. **Acceptance and Rejection**:- I.I.T. Madras has the right to accept the whole or any part of the Tender or portion of the quantity offered or reject it in full without assigning any reason.

16. **Disputes and Jurisdiction**:- Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Chennai in Tamil Nadu.

17. **Acknowledgement**:- It is hereby acknowledged that the tenderer has gone through all the conditions mentioned above and agrees to abide by them.

SIGNATURE OF TENDERER ALONG WITH SEAL OF THE COMPANY WITH DATE.

SEALED TENDERS ARE INVITED FOR THE SUPPLY OF ITEM MENTIONED BELOW IN TWO SEPARATE ENVELOPES MARKED 1. TECHNICAL BID, 2. PRICE BID

1.Wavelength Meter

- **Wavelength range: Visible and infrared (380nm to 5µm)**
- **Input Laser Power: min:0.1mW**
- **Laser type CW or pulsed lasers**
- **Measurement rate: 4Hz or above**
- **Measurement Accuracy: 0.001nm at 1micron wavelength**
- **Fiber coupled input option and free space laser to fiber coupling option.**
- **Output shall be provided in electronic form for continuous tracking of wavelength of the laser as a function of time. Or data acquisition along with external trigger must be possible.**
- **Must provide visible tracer beam for alignment in infrared**
- **Warranty Terms : Must provide 1 year warranty and quote for 3 years warranty option**
- **Must provide a list of similar wavelength meter already supplied by vendors in India /abroad and a contact person for reference, failing which the offer may be rejected.**

2. Pressure Vessel (AIR)

Air Storage containers, 15m3 capacity at working pressure 40 Kg/cm² with accessories such as

a) Pressure Relief valve
b) Vent Valve
c) Drain valve
d) Gauge
e) Pressure transmitter (PT)

As shown in figure – Qty – 02 Nos

Conditions

1) Corrosion Resistance Steels Selected from ASTM A516 Gr. 70 (Meeting the requirement of Clause 2 of IS:2835)
2) Code to be followed ASME Sec VIII Division -1.
3) Pressure Vessel content : Air
   Working Pressure : 40 Bar (Max)

Volume of each container	: 15 M3 water capacity
Type of container	: Cylindrical with Dished ends
Material of construction	: ASTM A516 Gr. 70
Number of containers	: 02 Nos
Position	: Horizontal Vessel
Length	: Max 7- 8 Mtrs.

4) Each container Shall comprise of

- Air charging port 6" with flange end
- Delivery line of 8" with flange end
- Pressure relief valve
- Gauge
- Pressure Transmitter
- Vent valve

5) Pressure Relief Valve

Normal Working Pressure	: 40 Bar
Size of the valve	: 1" or ¾"
Type of valve	: Spring loaded
Test Medium	: Air to Room Temperature
Set Pressure	: 45 Bar ± 2% tolerance
Material of Construction	: Stainless Steel (SS304)
Accumulation	: The container pressure shall not overshoot by 10% of set pressure
Preferable Make	: Fainger / Forbes Marshall

6) Drain Valve / Vent Valve

Normal Working Pressure	: 40 Bar

Size	: 1”
Class	: 300
1” #300 Full bore Flange end	
Material of Construction	: SS304
Preferable Make	: Sankey / Audco

7) Block and Bleed Valve

Size	: ½” (F) BSP
Class	: 300
Material of Construction	: SS304
Preferable Make	: Festo / Aster

8) Gauge

Dial	: 6” Bottom connection
MOC	: SS internals and SS gauge
Range	: 0- 75 Bar
Preferable Make	: Wika

9) Pressure Transmitter

Model	: S10
Output	: 4-20 mA
Connection	: ½” BSP (F)
Enclosure	: WP
Power supply	: DC 10-30 V
Response time	: ≤ 1 MS
Accuracy	: ≤ 0.25% of spam
Compensated temperature range	: 0 TO + 80°c

Working Protection : Protected against reverse polarity over voltage and Short circuiting.

The transmitter shall contain CE conformity

SCOPE OF WORK AND DESIGN PARAMETER

1) Vendor shall design the Air containers to the rated pressure and make details deisgn and production Drawing
2) The design calculation and detailed production drawings and the process plan shall be prepared by the vendor and take approval of Third Party and IIT.
3) The Vendor shall generate the QA Plan for Materials and bought out items
4) Preparation of detail procedure of welding (WPS & PQR) fabrication, NDT, Hydro testing

WELDING

1) The WPS and PQR is to be generated by Vendor and submitted to the IIT/ Third Party for approval prior to any welding operation.
2) Welding procedures and welder should be qualified as per ASME Boiler and Pressure Vessel code Sec-IX.
3) 100% GTAW process shall be adopted with high quality Argon gas shielding, right from root to final passes for all butt welds.
4) 100% Radiography on butt welded joint X-ray machine with 2% sensitivity.
   Radiography procedure shall meet the requirement of ASME- B. Radiography qualified by an ASNT/ISNT Level – II Inspector.

HEAT TREATMENT

1) The total fabricated tank has to be stress relieved at 420+10 degree C, for a minimum soaking time of 2 hours (or as per the maximum thickness) with rate of heating and cooling at 75 to 100 degree C per hour (to be carried out prior to hydro test)

TESTING

1) The finished containers shall in the presence of inspecting authority, pass satisfactorily the Hydro static pressure tests.
2) Each container shall be subjected to an internal hydrostatic test pressure of 1.3 times of the working pressure (i.e : 52 Ksc) as per ASME code for boiler and pressure vessels. The container shall be maintained at that specified test pressure for a sufficient length of time subject to a minimum of 10- 15 minutes to permit a thorough examination of all the seams and joints for leakage. The Container shall be dried thoroughly after hydro test.

DOCUMENTATION REQUIREMENTS

Documentation for all- important stages should be done to keep record of the activity. This also helps in carrying out audit in the end and check that all the activities have been properly conducted

The following should be documented :

a) Material Certification
   - Mil test certificates
   - Laboratory reports
   - Inspection reports
   - Inspection Release Notes

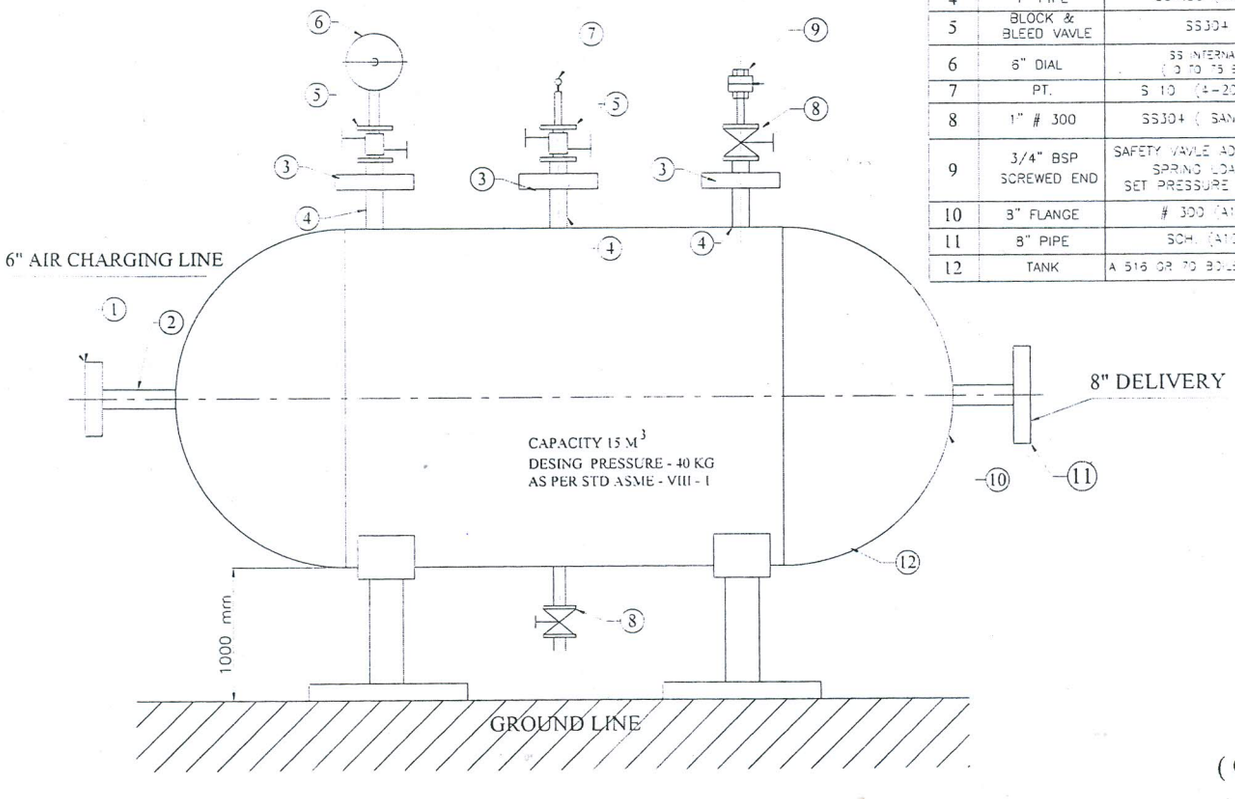
b) Welding Procedure Specification (WPS)
c) Performance Qualification Record (PQR)
d) Engineering Drawing
e) Report of Dimensional checks
f) NDT Reports
   - Radiography
   - Liquid Penetrant Test
   - Other tests
g) Pressure Test Reports

The above documents to be finally submitted to the IIT.

In your Price Bid, please indicate separately

1) Charges for transportation
2) Charges for erection & commissioning
3) The supplier may choose any one of the following as their third party inspector
   a) DOT NORSKE VERITAS (DNV)
   b) LLOYDS
4) The supplier should furnish a list of customers to whom they have supplied similar items. IIT at its own discretion may seek opinion of the customer, based on which the tenderers' offer may be accepted or rejected.

SR.NO	ITEM	DISCRIPTION	MAKE	QTY
1	6" FLANGE	# 300 A105	--	1
2	6" PIPE	SCH.80 (A106)	--	1
3	1" FLANGE	# 300 A105	--	3
4	1" PIPE	SCH.80 (A106)	--	3
5	BLOCK & BLEED VAVLE	SSJ04	ASTER / FESTO	2
6	6" DIAL	SS INTERNAL (0 TO 75 BAR)	WIKA	1
7	PT.	S 10 (4-20 M.A.)	WIKA	1
8	1" # 300	SSJ04 (SANKEY)	SANKEY/ AUDCO	2
9	3/4" BSP SCREWED END	SAFETY VAVLE ADJESTABLE SPRING LOADED SET PRESSURE 45 BAR	FAINGER / FORBES MARSHALL	1
10	8" FLANGE	# 300 (A105)	--	1
11	8" PIPE	SCH. (A106)	--	1
12	TANK	A 516 OR 70 BOILER MATERIAL	--	1



(QTY. - 2 NOS)

SCHEMATIC AIR STORAGE CONTAINER ($15m^3$)