



श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, तिरुवनन्दपुरम- 11, केरल
Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram- 11, Kerala
(भारत सरकार के अधीन राष्ट्रीय महत्व संस्थान)

(An Institute of National Importance under Government of India)
टेलीफॉन नं./Telephone No. 0471-2443152 फाक्स/Fax 0471-2446433 / 2550728
ई-मेल/E-mail :sct@sctimst.ac.in वेबसाइट/ Website : www.sctimst.ac.in

SCT/H/ IND/P4/2020-21/2

Dated:15.06.2020

E- TENDER

E-Tenders in **TWO BID** system are invited from Manufacturers/their accredited Agents/
Distributors for the supply of the following items.

Sl.No	Particulars	Tender No.	Qty
1	Liquid Medical oxygen of Purity not less than 99.5%.	SCT/H/ IND/P4/2020-21/2	As per Annexure I

Pre-Bid Meeting with prospective bidders

Venue for pre-bid meeting : Office of the Medical Superintendent, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Medical College P.O.,Thiruvananthapuram-695 011,Kerala	
Last date of submission of pre-bid queries as email to purchase@sctimst.ac.in with a copy to spsos@sctimst.ac.in	20/06/2020
Date of Pre-Bid Meeting	24/06/2020 at 11.00 am
Date of Publishing Corrigendum if any after pre-bid meeting	29/06/2020

Last date and time of online submission of Technical Bid & Price Bid	17/07/2020 at 5.00 pm
Last date and time of submission of Original EMD along with hardcopy of Technical Bid as specified in Annexure II. (Price Bid has to be submitted online only)	22/07/2020 at 1.00 pm
Earnest Money Deposit Amount	Rs.1,50,000/- (Rupees One Lakh Fifty Thousand Only)
Date of tender Opening	22/07/2020 at 3.00 pm
Date of online Price Bid Opening	Will be informed later
Contact Person	Senior Purchase & Stores Officer, SCTIMST Email: purchase@sctimst.ac.in spso@sctimst.ac.in Phone: 0471- 2524445/145/325

Interested bidders are advised to download the Tender document from the websites www.sctimst.ac.in or www.eprocure.gov.in/cppp or www.tenderwizard.com/SCTIMST under “Tender Free View” link for complete details.

Vendors should obtain the USER ID and PASSWORD from www.tenderwizard.com/SCTIMST by clicking on “Enrolment/REGISTER ME” link in the homepage.

The vendor registration fees has to be paid to KEONICS for Rs 2000/- plus tax using the e-payment link provided at the time of registration. The mode of payment are Credit Card, Debit Card and internet banking. Vendor Registration is valid for ONE Year.

For further details on e-Tender participation, please contact KEONICS Help Desk on

- Telephone: 080-49352000/080-40482100/

- 9747363433 [Mr Sanil (Kerala Executive)]
- Email:sridevi.m@etenderwizard.com, harishkumar.kb@etenderwizard.com,
ambasa@etenderwizard.com

The hardcopy of Technical Bid should be accompanied by **Earnest Money Deposit (EMD) of Rs. 1,50,000 /- .** EMD should be in the form of an account payee demand draft, fixed deposit receipt, or banker's cheque in favour of Director, SCTIMST or a bank guarantee. EMD should have a validity of 180 days beyond the date of opening of bids. **The original EMD should be enclosed with Technical Bid only.**

The EMD will be waived based on the relevant certificate for the tendered items on production of documents such as DGS &D, NSIC Registration Certificate etc for the specific category of item and should remain valid for the period required for EMD.

Clarifications, if any with regard to tender documents may be communicated /sought well in advance before the closing date of the tender.

The Director of the Institute reserves the right to accept the offer by individual items and reject all or any of the tenders or in whole or part without assigning any reason thereof and does not bind itself to accept lowest quotations.

Important Note: A scanned copy of the EMD should be uploaded along with the online Technical Bid only, not with the Price Bid. Tenders not accompanied with the specified EMD shall automatically stand rejected.

Sd/-

DIRECTOR

TERMS & CONDITIONS

1. The tender(s) must be submitted as per the tender documents and below terms and conditions. It should be free from corrections/erasures. In case there is any unavoidable correction(s), it should be properly attested. If not the tender(s) will not be considered. Further, tender(s) written in pencil will not be considered.
2. (a) The bidder should declare whether they are manufacturer, accredited Agents, or sole representative (indicating the name of Principal) on the top of the Bid.
(b) In case of agents quoting in offshore procurements, on behalf of their principal manufacturer(s), one agent cannot represent two manufacturers or quote on their behalf in particular tender. One manufacturer can authorize only one agent / dealer. Only one bid, either from principal manufacturer directly or through one Indian agent on his behalf or Indian/foreign agent on behalf of principal manufacturer shall be entertained.
3. All offers should be accompanied with detailed specifications, relevant documents as elaborated in Annexure 1 & 2.
4. Bids should be accompanied with illustrated catalogue, brand, model number, make, literature, write up where ever applicable.
5. In case the items coming under the provisions of Drugs & Cosmetics Act & Rules, the following should be submitted :
 - a) For imported items : Central Drugs Controller Certificate from Central Drugs Standard Control Organization, New Delhi.
 - b) For indigenously manufactured items : Certificate issued by State Drugs Controller
6. The documents to be furnished in both the bids are given in Annexure-2. Technical bid will be opened and evaluated first. Price bid of technically qualified bidders will be opened on prior intimation. The lowest offer will be arrived on adding basic cost, GST applicable, incidentals (if any). Negotiation will be conducted with the lowest qualified tenderer only, if required.
7. The Director of the Institute reserves the right to accept the offer by individual items and reject all or any of the tenders in whole or in part without assigning any reason thereof and does not bind itself to accept lowest quotations.
8. The prices quoted should be FOR Trivandrum for delivery at Main Store, Hospital Wing, SCTIMST. Rates quoted should not be revised till the supplies are completed and the rate shall be valid for 180 days from the date of opening of bid.

9. In case of no quotes against a particular item in the tender(s), this should be clearly mentioned along with reasons. The prices quoted should not be revised till the supplies are completed. The rates should be quoted in words and figures. In case of difference in quote(s) written in figure and words arise, the amount written in words will be treated as quoted rate. Rates quoted should be free delivery at destination including all charges otherwise the tender is likely to be rejected. Prices quoted for free delivery at destination will be given preference. If there is no indication regarding the FOR, in the tender, then it will be considered as FOR destinations. Price quoted should be net and valid for a minimum period of six months from the date of opening of the tender. GST applicable should be mentioned separately in support of HSN code. If no indication regarding GST is recorded in the tender the GST will be considered as included in the quote(s).
10. Samples must be submitted wherever specified along with the tender. Samples must be carefully packed, sealed and labeled clearly with tender number, subject and sender's name for easy identification. Rejected samples will be returned at your cost if insisted.
11. For all supplies / contract above rupees one lakh, the successful tenderer should furnish a performance guarantee / security deposit @ 5 percent of purchase order value excluding GST against items in the form of Fixed Deposit or Bank Guarantee from a commercial bank having a validity period of 60 days beyond the completion of all contractual obligations of the supplier. The valid EMD can also be substituted for security deposit and balance amount if any shall be furnished by the successful tenderer.
12. Selected bidder shall have to confirm the purchase order within seven days from the date of receipt of purchase order otherwise the purchase order will be deemed to be accepted by vendor. In case the selected bidder notices any mistake in the contents of the order, he/they must bring the same to the notice of the Institute and seek clarifications. However, selected bidder will have to bear the responsibility for failure to take this action.
13. All supplies are subject to inspection and approval before acceptance. Manufacturer/ supplier warranty certificates and manufacturer/Government approved lab test certificate shall be furnished along with the supply, wherever applicable. In case of non-acceptance, the materials should be taken back within seven days of intimation with the risk of supplier and the rejected items should be replaced within ten days from the date of non-acceptance.
14. Customs Duty, GST rate, packing , forwarding, transportation cost etc., if payable should be included in the quoted price. Any exemptions on above may be mentioned.

15. This Institute reserves the right to modify the quantity specified in this tender.
16. Mode of payment.
 - (1) **For INR:** Electronic Transfer (NEFT) within 30 days of satisfactory receipt and acceptance of items at our store.
 - (2) Proforma invoice in triplicate should be submitted.
17. Penalty clause:
 - (I) **Delay in Delivery:**
 - (i) If the delivery of purchased goods is not effected on due date as specified in the purchase order, the Director, SCTIMST will have the right to impose penalty at 0.5 percent per week subject to a maximum of 5 percent of order value.
 - (ii) If the deliveries are not effected as per schedule and due to that account, Institute is forced to buy the material at the risk and cost of the defaulting supplier from elsewhere, the cost towards loss or damage sustained thereby will be recovered from the defaulting supplier.
18. Recovery Clause: All losses liquidated or otherwise due to the violation of terms and conditions of the purchase order or defective documentation will be to the supplier/agent's account.
19. In case the quote is not according to the above terms and conditions, the same will be summarily rejected. Further, false certification in the compliance statement and misrepresentation of facts may attract blacklisting of tenderer.
20. All correspondence after tender submission will be by e-mail only and the companies should provide their valid e-mail Id and should keep it updated.
21. Fall Clause: At any time during the period of contract, if the price of tendered item is reduced or brought down by any law or any Act of the State Government or Central Government or by the bidder himself, or reduction in price for any other reasons, the bidder shall inform the tender inviting authority immediately and offer such reduction in the contracted prices. Tender inviting authority is empowered to unilaterally effect such reduction as necessary, in case the bidder fails to notify or fails to agree for such reduction rates.
22. All successful bidders will have to compulsorily register at SCTIMST Vendor Portal. All the payments will be through online payment mode only.

23. All purchases should be effected as per purchase order and as per tender conditions. Supply of items must be as per the schedule and date of delivery (quantity and date) specified in the purchase order.
24. The time for and the date of delivery of item stipulated in purchase order shall be deemed to be the essence of the contract and delivery must be completed within scheduled date, which is 30 days from the date of purchase order unless specified otherwise. The consignment should be delivered at Main Store, SCTIMST, Trivandrum between 9:00 AM to 4:00 PM during the working days.
25. At the time of receipt of supply at consignee end, all items should have a minimum 3/4th of their shelf life.
26. If the product is not consumed within the expiry period, the supplier shall replenish with fresh stock of longer shelf life. Otherwise the expired product shall be taken back by the supplier and the value equal to the cost of the expired quantity shall be recovered from the supplier.
27. No advance payment towards the costs of items will be made to the supplier.
28. The bidder submitting the tender would be deemed to have considered and accepted all the terms and conditions.
29. The Purchaser reserves the right to give the price preference to small-scale sectors etc. and purchase preference to central public sector undertakings as per the instruction in vogue while evaluating, comparing and ranking the responsive tenders.

i. In exercise of powers conferred in Section 11 of the Micro, Small and Medium Enterprises Development (MSMED) Act 2006, the Government has notified a new Public Procurement Policy for Micro & Small Enterprises effective from 1st April 2012. The policy mandates that 25% of procurement of annual requirement of goods and services by all Central Ministries/Public Sector Undertakings will be from the micro and small enterprises. The Government has also earmarked a sub-target of 4% procurement of goods & services from MSEs owned by SC/ST entrepreneurs out of above said 25% quantity.

ii. In accordance with the above said notification, the participating Micro and Small Enterprises (MSEs) in a tender, quoting price within the band of L1+15% would also be allowed to supply a portion of the requirement by bringing down their price to the L1 price, in a situation where L1 price is from someone other than an MSE. Such MSEs would be allowed to supply up to 25% of the total tendered value. In case there are more than one such eligible MSE, the 25% supply will be shared equally. Out of 25% of the quantity earmarked for supply from MSEs, 4% quantity is earmarked for procurement from MSEs

owned by SC/ST entrepreneurs. However, in the event of failure of such MSEs to participate in the tender process or meet the tender requirements and the L1 price, the 4% quantity earmarked for MSEs owned by SC/ST entrepreneurs will be met from other participating MSEs.

iii. The MSEs fulfilling the prescribed eligibility criteria and participating in the tender shall enclose with their tender a copy of their valid registration certificate with District Industries Centers or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or any other body specified by Ministry of Micro and Small enterprises in support of their being an MSE, failing which their tender will be liable to be ignored.

iv. Special provision for Micro and Small Enterprise owned by women. Out of the total annual procurement from Micro and Small Enterprises, 3% from within the 25% target shall be earmarked for procurement from Micro and Small Enterprise owned by women.

Note: "If the bidder is a MSME, it shall declare in the bid document the Udyog Aadhar Memorandum Number issued to it under the MSMED Act, 2006. If a MSME bidder do not furnish the UAM Number along with bid documents, such MSME unit will not be eligible for the benefits available under Public Procurement Policy for MSEs Order 2012."

Preference to Make in India: As per the order issued by Department of Industrial Policy and Promotion (DIPP) vide No. P-45021/2/2017-PP(BE-II) dated 28.05.2018 and the subsequent orders thereof; the purchaser reserves the right to give preference to the local supplier. A copy of this order is enclosed at Annexure-(3) which will form a part of this Tender Enquiry Document (TED) for evaluation and ranking of bids.

30. Dispute clause: Any dispute relating to the enquiry shall be subjected to the jurisdiction of the court at Trivandrum only.

Sd/-

DIRECTOR

Special Conditions of Contract

(I) RESPONSIBILITY OF THE BIDDER

1. Bidders shall be responsible to supply, testing, installation and commissioning of Liquid Medical Oxygen (LMO) system on turnkey basis without any rent or deposit including civil works necessary for the installation of LMO tanks.
2. Bidders are strongly advised to have site visit to physically inspect the LMO site. The bidders are required to survey the site before furnishing the quotations.
3. Civil works for the installation of the plant, crash barrier and fencing should be arranged at the location suggested by SCTIMST.
4. The work shall be carried out in compliance with statutory rules and such that the works are only carried above ground and demolition of existing structures/drain and other services are completely avoided.
5. Bidder shall be responsible for complete design, supply, installation, testing and commissioning including turnkey works, necessary piping to the existing manifold etc.
6. Bidder shall execute all required civil, electrical, plumbing, lighting, fire safety, exhaust systems and other works as maybe required for complete installation and trouble-free functioning as a part of the turnkey work.
7. Bidder should provide automatic changeover between Liquid Medical Oxygen system and oxygen manifold system.
8. Following specifications of LMO, vaporizer and regulator to be followed.
 - (a) Liquid Medical Oxygen: - As per Indian pharmacopoeia 2014.
 - (b) Should be certified for medical use as per IP 2014.
 - (c) Should not contain less than 99.6% V/ V of oxygen.
 - (d) Should not contain more than 5ppm carbon monoxide.
 - (e) Should not contain more than 30ppm carbon dioxide.
 - (f) Should be free of halogen.
 - (g) Should be free of moisture.

Note:- Provide undertaking each time for compliance & each time LOT is filled

9. Quantity per year : 2,25,000 CUBIC METER with +/- 20% variation.
10. Consumption per day : Varying from 500 to 750 cubic meter as per number of patients and their condition.
11. Liquid Storage Tank : To be Installed by bidder as per requirement at free of cost. No separate payment will be made on this account by the SCTIMST.
12. The quantity of gases can be increase or decrease, as per requirement of this office and no claim whatsoever will be entertained on this accounts.
13. Rate should include loading and unloading charges at factory site as well Institute site.
14. Rates should include all maintenance charges, cost of spares and services.
15. Gas Pressure : Suitable to existing central pipeline(4 Bar) supply of our Hospital.
 - (a) Reference temperature for oxygen gas shall be 27 DegC.
 - (b) Mode of measurement $1\text{Kg}=0.77\text{M}^3$
16. Specifications: - The supply shall conform to specified codes (latest edition).
Medical Oxygen IP-2014.
17. The firm quoting for tender should primary manufacturer of Liquid Medical Oxygen (LMO) through Air Liquefaction process.
18. Firm quoting for LMO should have a valid drug license & should be following testing process as per Indian Pharmacopoeia IP – 2014.

19. The material should be supplied to the manifold room, SCTIMST, Trivandrum within 24 hours from the first delivery call from The In Charge Manifold Room.
20. No extra payment will be made to the contractor on account of damage/theft of fitting spares, valve camps etc. during transit.
21. In case, the second party fails to supply the material as per requisition, penalty will be imposed @0.5% of supply of a particular day. If supply is delayed more than 5 hours (beyond the prescribed time mentioned) during any day will be considered as one day. The penalty will be deducted from the bill of the same day supply.
22. Random sampling will be done at the Institute and pilferage or less quantity will be recovered at panel rate i.e. double the supply rate.
23. In case of increase of frequency of persistence of fall on the part of the firm such kind of action, the action as deemed fit (debar/blacklist) will be taken against the supplier.
24. Tanks should be installed as per AS – 2896 and HTM -02 – 01 requirements. Tanks should be installed free of charge and supplier shall obtain necessary license from chief controller of explosive (Competent Authority).
25. ISO/WHO License or other equivalent quality certificate for manufacturing of gases should be provided by the vendor.
26. The firm quoting should ensure connectivity manifolds from the site of installation of LMO tanks .Firm should satisfy the proper and adequate supply of concerned oxygen outlet.
28. Minimum 40% of stock level to be maintained in the installed capacity to avoid emergency situation & for the same supplier should install suitable monitoring & alarming devices.
29. Supplier should be supplying to minimum 15 Hospitals in Kerala & valid documents from any one of them to be produced.
30. Shall be a reputed firm with an experience of 10 years with their own, manufacture, maintenance & transport of Liquid Medical Oxygen.
31. There should be provision of monitoring daily consumption.
32. The contract will be valid for Five years; however the contract will be renewed on the yearly basis based on the satisfactory performance.
33. All civil work required for installation in the scope of the bidder.
34. The firm should provide documentary evidence regarding the following.
 - (a) Having multi-manufacturing unit & may not be dependent on one unit only.
 - (b) Total production capacity of gases per day in tons (200 tons per day approx).
 - (c) Total storage capacity of gases at different units.
 - (d) Total no. of Liquid Oxygen transport tank.
 - (e) The infrastructure regarding quality control and analysis facilities to test the Composition of gas as per IP standards.
35. Supplier should provide Safety Features in line with Global Safety Standards as a part of the installation.

Following safety devices to be added with the system:

- (A) Minimum safety features for LMO installation required Alarm System as per AS – 2896 (Aus) Or HTM – 02–01 (NZ)
 - (a) Alarm VIE (Vacuum Insulated Evaporator).
 - (b) Low content or Low level of storage indication (Audio – Visual).
 - (c) Low Pressure Alarm (Audio – Visual).
- (B) Low Pressure Alarm in downstream of Pipeline system (Audio – Visual).
- (C) Pressure Regulating: Dual parallel regulation system for uninterrupted supply in case of regulator has to change for repair. One regulator is set at 4.2 bar and other at 3.8 bar as per international practice.
- (D) Three ways Gauge Valve for isolation of Line Pressure & with Manual Maneuvering.
- (E) Telemetry System : For continuous monitoring of liquid level in the storage vessel from a central location anywhere in India.

(F) Continuous monitoring of Vehicle movement : For rescheduling filling in case of any mechanical failure of vehicle.

36. Number of Cylinder Provided as Backup Arrangement should be 500(Bulk D Type Cylinder). 120 filled cylinders out of this 500 numbers should be available at SCTIMST manifold room.
37. The successful Tenderer will be required to undertake to provide at his cost technical training for personnel involved in the use and handling of the equipment on site at the institute immediately after its installation. The company shall be required to train the institute personnel onsite for a minimum period of 1 month.
38. Bidders shall be responsible to supply, testing, installation and commissioning of Liquid medical oxygen system and connect the same to existing oxygen manifold (2x19 cylinder) system.
39. Disposal of building rubbish/ scrap/ similar unserviceable, surplus material dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge.
40. Bidder shall be responsible for supply, installation, testing and commissioning of Liquid Medical Oxygen tanks, complete as per HTM 02-01/NFPA 99C/DIN/EN standards.
41. Bidder should supply complete set of part manuals, service manuals and user manuals for all the systems and subsystems to be supplied.
42. Final electrical safety test, system test, and calibration should be done by authorized persons using calibrated test equipment as per standards.

(II) SUPPLY AND INSTALLATION OF LIQUID MEDICAL OXYGEN TANK (VACCUM INSULATED EVAPORATOR) AND ALLIED EQUIPMENTS

1. Multiple vessel of 1 KL or Higher capacity Liquid oxygen VIE vessel system will be the primary (main) supply source. Total minimum capacity should be 3 KL. Should be provided with multiple vessels.
2. The Three VIE vessel system should be interconnected with automatic change over.
3. Each system should have separate tank, VIE, AV coil, controllers etc.
4. Required pipe line including necessary accessories like isolation valves, non-return valves, line regulators etc. has to be supplied.
5. Essential inter connection to the manifolds through automatic change over control should be provided.
6. Manual change over is also to be provided.
7. Storage of Liquid Oxygen and Supply of High purity Oxygen gas for medical use after conversion of liquid to gas through ambient atmospheric vaporizer.
8. The system to be supplied as per relevant applicable standard and certification.
9. Erection and commissioning of the VIE, AV coil, and the interconnection of LO plant to the manifolds of the hospital with suitable modifications is the vendors responsibility.
10. Necessary maintenance of the VIE, AV coil, controllers etc. is the responsibility of the supplier.
11. The vendor should liaise with the Chief Controller of Explosives, Nagpur to get the essential safety clearance certificate. Service charge required for this work should be paid by the vendor.
12. Preference will be given for higher capacity cylinders which can be installed in the site proposed by SCTIMST. Bidder should clearly mention the capacity of cylinders supplied.
13. It should be fitted with standard accessories and should be "passed" the standard inspection requirement at factory for VIE. The copy of the certificate should be forwarded to SCTIMST prior to shipping and original should be enclosed along with the shipping document. Bidder should follow international Standards.

(III) LIQUID MEDICAL OXYGEN STORAGE TANK

1. The double walled Vacuum Insulated Evaporator shall be constructed of stainless steel inner vessel contained within a carbon steel outer vessel. The annular space between the vessels shall be filled with non-inflammable perlite insulation material to insulate under vacuum.

2. The VIE should be self pressurizing type by partial evaporation of liquid oxygen through a pressure building coil by a non ferrous imported pressure regulator. The vessel shall be supplied as a functional whole with all materials of construction & the cleaning regime suitable for medical grade liquid oxygen.
3. Quantity : Total minimum 3KL or higher in multiple vessels.
4. Installation : Outdoor.
5. Type: Double walled, vertical.
6. Capacity : Minimum 1,000 liters water capacity- 1no. Total Minimum 3,000 liters water capacity-.
7. Design code : ASME Sec.VIII Div.I latest Edition / EN -13458-2 Annexure-C/ AD2000 MARKBLATTER 2004 Edition
8. Maximum working pressure: 17 Bar G.
9. Design temperature : -196°C to +50°C.
10. Hydraulic Test Pressure: 26 bar G.
11. Type of Insulation: Vacuum, Perlite filled.
12. Safety Valve Set pressure : 17 Bar G (dual safety valve with three way diverter valve).
13. Bursting Disc Set Pressure : 23 Bar G (Bursting disc).
14. Standard fittings: Pressure rising coil, pressure building regulator of adequate capacity and size, dual safety valve with imported three way diverter valve, bursting disc., pressure gauges, liquid over flow line, liquid level gauge and adequate numbers of extended spindle glove valve etc.
15. Maximum Evaporation Rate: <0.35% of net value.
16. Material of Construction: Inner shell and wetted parts of SS 304 Outer shell of CS ASTM A 516 Gr. 70 / CGA 341 2002 EN13455 S275/S355.
17. Joint Efficiency : 100%.
18. Radiography :100% for inner and outer spot
19. External piping : From LMO Tank to Vaporizer :- SS304
From Vaporizer to inlet of Pressure Reducing Station :-SS304
From Outlet of Pressure Reducing Station to Main Header :- Copper
20. Cryogenic Valves: Non ferrous (Imported).
21. Cryogenic Safety Valves : Imported.
22. Pressure Building regulator :Non ferrous.
23. Painting : Primer and finish with White RAL 9010
24. Inspection : By 3rd party (SGS/LLOYDS/TUV)
25. Cleaning : Degreasing for Oxygen Service and Pressurize with Nitrogen.
26. Withdrawal rate : 1000 cum per hr. at 12 Bar G.

(IV) ACCESSORIES: LMO Tank along with P&ID shall be fitted with the following accessories:

1. Top Fill Valve
2. Bottom Fill Valve
3. Liquid charging line blow valve
4. Liquid Delivery Valve
5. Overflow Valve
6. Gas blow valve
7. Filling Coupling
8. Vaporizer Coupling
9. Liquid Level Gauge (Dial 100 mm).
10. High Level Valve
11. Equalizing Valve
12. Low level Valve
13. Pressure Gauge (100mm dial, Range 0-25 kg/cm²).
14. Pressure Gauge Isolation Valve

15. Pressurizing Valve
16. Pressurizing Coil
17. Filter
18. Pressure Regulator
19. Economizer
20. Check Valve
21. Evacuation Port
22. Vacuum Gauge Connection Port/vacuum probe valve.

(V) SAFETY FITTING

1. Two safety valves for inner vessel fitted on pipe line with flow divert valve.
2. Rupture disc for inner vessel.
3. Safety valve for inlet pipeline.
4. Safety valve for pipeline of pressurizing evaporator.
5. One rupture disc/ safety device on outer vessel.

(VI) SUBMITTALS : The Liquid Medical oxygen tank shall accompany the Original Quality Test Certificate covering following Documents.

1. Approval letter from Chief Controller of Explosives (CCOE) along with approved drawing from Chief Controller of Explosives.
2. Approval letter from Chief Controller of Explosives for use of cryogenic vessel(s) at site.
3. Certificate from the authorized inspection agency.
4. Heat chart for pressure parts.
5. Dimension checks report.
6. Dished End reports.
7. Mechanical properties test report for production test coupon.
8. Visual inspection report.
9. Radiography examination report.
10. Liquid penetrant examination.
11. Cleaning inspection report.
12. Hydro-pressure test report.

(VII) PRODUCT AND SERVICE SPECIFICATION

1. Proposed capacity of the primary liquid oxygen storage tank is a total capacity of minimum 3KL or higher with multiple vessels.
2. Gas outlet pressure to be maintained at 4.2 kg/cm².
3. Space taken for installation should be as per regulations of Indian explosive controller and having easy access for LMO tank.
4. The site would be protected by fence around, well lit by sodium vapour lamps and demarcated with proper signage.
5. Indication of liquid oxygen level and outlet gas pressure should be provided.
6. Automatic change over should be provided between the primary and secondary LMO tanks. In case of failure in liquid oxygen supply, it should automatically switch over to an emergency oxygen manifold having 2 x 19 cylinders.

(VIII) SPECIFICATIONS OF COMPONENTS

1. Product: The liquid medical oxygen (LMO) supplied at site should be of IP grade. The LMO supplied should comply with all relevant Static and Mobile pressure vessels(SMPV) regulations and standards under the preview of the Indian Drugs and Cosmetic Act rules. They should also satisfy the IP 2007 specifications.
2. Storage Tank Specifications: The storage tank and the vaporizer coils should be designed as per the ASME Sec.VIII Div.I latest Edition / EN -13458-2 Annexure-C/ AD2000 , MARKBLATTER 2004 Edition.
3. The cryogenic vessel will be of cylindrical shape with vaporizer and the pressure control system. It should be provided with the essential components to fill the liquid, to build up pressure, to relieve pressure, to withdraw product and to evacuate the vessel. All protective, safety and alarm provisions mandatory to Liquid Medical Oxygen plants should be supplied.

(IX) THE REQUIREMENTS OF THE CRYOGENIC VESSEL SHOULD BE

1. Configuration: Vertical
2. Inner vessel maximum allowable working Pressure: 17 kg/cm².
3. Inner vessel hydrostatic test pressure: Greater than 26 kg/ cm².
4. Outer vessel material of construction: Carbon steel.
5. Inner vessel material of construction: Stainless steel
6. Independent AV coil should be provided with each vessel.
7. Suitable By Pass arrangements should be provided for each vessel.

(X) STORAGE TANK CAPACITY

1. Vacuum insulated evaporator vessel should have a capacity of 3 kilo liters or higher with multiple vessels. The AV coil should have adequate capacity to handle the gas flow requirements of the hospital.
2. The fence, lighting, signage, approach gate etc are to be designed and installed by the vendor.

(XII) VAPORISER COIL

- | | | |
|-------------------------------|---|------------------------------------|
| 1. Maximum operating Pressure | : | 20 kg/cm ² . |
| 2. Design Pressure | : | 22 kg/cm ² . |
| 3. Pneumatic test Pressure | : | Greater than 24 kg/cm ² |
| 4. Inlet temperature | : | - 196 to +40°C. |
| 5. Duty cycle | : | Continuous duty |
| 6. Flow rate | : | 1200 cubic meter/ hour |

(XII) SAFETY: The vendor should ensure that all international safety norms and standards applicable as implemented and certified by the CCE. Following are the mandatory provisions for vessel:

1. Vessel low liquid level alarm.
2. Vessel low pressure alarm.
3. Pipeline low pressure alarm.
4. Twin regulator.
5. Twin safety valve.
6. Non return valve and 3 way diverter (bypass) valve.
7. Automatic changeover to manifolds with control panel.

8. Alarm on indicating manifold in use in case the vessel is not in use.
9. Alarm on low pressure back-up manifold cylinders.

(XIII) STATUTORY REQUIREMENTS

1. All statutory requirements of the Chief Controller of Explosives of India and Static and mobile pressure vessels (SMPV) rules need to be followed, besides all regulations and guidelines put forward by the Govt. Of India from time to time should be followed. Documented approvals are mandatory before operating the system.

(XIV) MAINTENANCE

1. All routine preventive maintenance and break-down maintenance of the liquid oxygen plant should be done by the vendor. Experienced personnel should be readily available.
2. Log of all works undertaken in the plant should be meticulously maintained by the vendor.

(XV) TRAINING

1. Satisfactory Training to be provided at site to the designated authorities for minimum period of 1(one) month.

(XVI) SPECIAL TERMS AND CONDITIONS

1. The firm should ensure for refilling and supply liquid oxygen. Supply has to be made available at any time.
2. The validity of the tender will be for the period of five years from the date of Agreement. However the rate quoted should be fixed for minimum one year and bidder shall quote the revision rates after each year onwards till completion of five year. Total amount for 5 years with annual escalation rate will be considered for financial evaluation.
3. The hospital reserves the right to make an alternative arrangement at risk and cost of the firm if it fails to oblige.
4. In case supply is not on time the hospital authorities will have the right to purchase Medical Gases from the open market and extra money spent due to rate difference plus transportation charges will be deducted from the performance security or any payables to the supplier.
5. Failure or delay in supply of life saving medical gases shall result in financial penalty and any other levies as decided by the Director SCTIMST.
6. The bidder should give an undertaking that if he fails to maintain standards of tank and cylinders, gases and if some mishap occurs, the supplier company shall be responsible for the same.
7. Tenderer must give an undertaking to the hospital that they will provide uninterrupted supplies as per demand of the hospital.
8. Institute will not pay any rental/facility charges other than cost of liquid oxygen.
9. The firm should have a valid license for storage, filling and cylinder testing license and other licences, if any, issued by Chief controller of explosives, Nagpur as statutory requirement (attested copies of the letter to be attached)
10. The tenderer has to ensure compliance of Rule 3 of the Gas Cylinder Rules,2004 And Timely obtain necessary filling permission from the Chief Controller of Explosives under Rule 45 while supplying the cylinders for filling of compressed cryogenic gases, if required.

11. Firm should have its own full- fledged lab with full time chemist to test each batch and to provide best testing reports of previous year on demand
12. The firm should have in-house facility for testing/trace impurities in P.P.M/P.P.B range for CO, moisture content etc. The facilities should be opened to scrutiny by the Hospital Authorities.
13. The firm should be able to maintain uninterrupted supply of Medical gases even in emergencies. Firm should give an undertaking to the Hospital in this regard. The hospital reserves the right to make an alternate arrangement for the supply of gases at the firm's risk and the cost will be borne by the firm, if it fails to supply, due to any cause other than Force majeure.
14. Vendor should provide desired medical oxygen bulk 'D' type cylinder(minimum 500) for the manifold as an alternate arrangement for liquid medical oxygen in case of failure to supply the liquid oxygen. Also the firm must ensure at least 3KL liquid oxygen as alternate arrangement.
15. The firm should be responsible if any mishap takes place on account of non conformities of safety standards and rules for medical gases and liquid oxygen plant.
16. The firm should enclose a certificate indicating Total nos. of liquid Oxygen transport tanks in possession and permission to operate.
17. The rejected supply, if any, should be taken back and replaced by the firm at its own cost within the specified period and without causing any interruption to the Hospital services.
18. Supplier must have minimum 15 or more Higher capacity vessel installation in hospitals in Kerala including Trivandrum. [Minimum capacity indicates installation of more than 1 KL capacity]
19. Successful bidder should install new vessel having pressure building regulator with economizer facility.
20. In case the firm fails to supply the items within specified delivery period, the material will be procured from any other competent agency and the difference of cost, if any, will be recovered from Performance Security Deposit or from any payables of defaulting firm by issuing notice and necessary action for blacklisting the firm also be taken.
21. No request for increase in the rates will be entertained during the period of contract nor will the firm raise the same. However, if the rates of Liquid Medical Oxygen will be reduced from the quoted rates, during the period of contract, the rate shall be reduced accordingly. The same should be intimated to the Department of Purchase, SCTIMST by supplier.
22. The requirement of Liquid Medical Oxygen can be increased or decreased and the firm(s) has to supply the Liquid Medical Oxygen during the period of contract.
23. The Liquid Medical Oxygen supplied by the firm should be as per specifications mentioned in the tender document; sub-standard material will not be accepted at all.
24. The hospital reserves the right to make an alternative arrangement for bulk D type cylinder.
25. Rate of refilling liquid oxygen should be fixed with annual escalation for five years.
26. SCTIMST will not permit to operate the system before getting all the mandatory approvals. In case the supplier is failed to get the required approvals, SCTIMST will not be responsible for any investment done by the company.

ANNEXURE-1

SL. NO	ITEMCODE	ITEM NAME	UNIT
1	EQOXGP011T	Liquid Medical Oxygen of Purity not less than 99.5%. This Institution shall not pay any money in advance for the supply of liquid Medical oxygen to above said blocks, no rental, transportation and maintenance charges shall be paid by the institution. This institution shall pay only statutory tax amount paid to Govt. by the company. The rate quoted shall hold good for five years from the date of agreement.	Cubic Meter

A. ONLINE TECHNICAL BID

The Online Technical Bid should consists the following:

1. Scanned copy of EMD .
2. Copy of GST Registration Certificate
3. Copy of PANCARD
4. Valid authorisation from the manufacturer if bid is submitted by the agent and distributors.
5. Clear specification matching as given in the tender document
6. Product No/catalogue No.
7. Model No.
8. Technical features
9. Technical Parameters
10. Additional features very particulate to the system.
11. Certificate of quality like CE,ISO,FDA
12. Documents, if clause no(29) in the tender is applicable
13. Compliance statement in the excel format.

(COMPLIANCE STATEMENT SHOULD BE PROVIDED WHICH SHOULD INVARIABLY INDICATE DOCUMENTARY EVIDENCE IN TERMS OF CATALOGUE, LITERATURE, DATA SHEET OR ANY OTHER DOCUMENTS BY WHICH THE CLAIM IS CONFIRMED)

All the above should be scanned and uploaded in online technical bid.

B. Hardcopy of Technical Bid and Original EMD.

The hard copy of the Technical Bid as specified above along with the original EMD should be submitted to the Director , SCTIMST, Medical College P O, Trivandrum, Kerala - 695011 in the sealed envelop superscribed as " Technical bid", " item name", "tender No." and "due date". The sentence " NOT TO BE OPENED" before (due date and time of tender opening) is also to be printed on this envelope.

D. Price Bid

Price Bid in the prescribed proforma should be submitted in online mode only.

GUARANTEE BOND FOR EARNEST MONEY DEPOSIT

In consideration of the Director, SreeChitraTirunal Institute for Medical Sciences & Technology, Thiruvananthapuram, Kerala (hereinafter called the “Employer”) having agreed to exempt M/s.....(hereinafter called the said “Contractor”) from the demand under the terms and conditions of Tender No.....dated.....issued by the Employer to the said Contractor for Rs.....(Rupees.....only) of Earnest Money Deposit for the due fulfillment by the said Contractor of the terms and conditions contained in the said tender on production of a bank guarantee for Rs....., we, Bank of.....do hereby undertake to indemnify and keep indemnified the Employer to the extent of Rs.....against any loss or damage caused to or suffered by the Employer by reason of any breach by the said Contractor of any of the terms and conditions contained in the said tender.

We, Bank offurther agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the finalisation of the said tender and that it shall continue to be enforceable till the tender is finally decided and order placed on the successful tenderer or tillwhichever is earlier.

We, Bank of.....lastly undertake not to revoke the guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything stated above, our liability under this guarantee is restricted to Rs.....Our guarantee shall remain in force until unless a demand in writing to enforce a claim under this guarantee is filed against us before that date, all your rights under the said guarantee shall be released and discharged from all liability there under.

Sree Chitra Tirunal Institute for Medical Science and Technology		
www.tenderwizard.com/SCTIMST		
Tender No. SCT/H/IND/P4/2020-21/2 Dated.15.06.2020		
NAME OF WORK : Tender for Liquid Medical Oxygen		
Technical Bid -Check List		
Name of the Vendor:		
Sl.No.		Particulars
Company Details		
1	Address	
2	District	
3	State	
4	PIN Code	
5	Contact No. (Mobile)	
6	E Mail of Company	
7	GST No.	
8	PAN No.	
9	SCT Vendor Portal Registration ID (if registered)	
	Whether the quotation is submitted by the manufacturer/ authorised agent/Distributor? : If authorised agent/Distributor, fill up the following.	
	Agent / Distrubutor Details	
10	Agent Name	
11	Address	
12	District	
13	State	
14	PIN Code	
15	Contact No. (Mobile)	
16	E Mail of Company	
17	GST No.	
18	PAN No.	
19	SCT Vendor Portal Registration ID (if registered)	
	The Online Technical Bid consists of the following:	Did you enclosed the document (s) YES/NO
20	Scanned Copy of the EMD	

21	Copy of GST Registration Certificate	
22	Copy of PANCARD	
23	Valid authorisation from the manufacturer if bid is submitted by the agent/Distributor	
24	Clear specification matching as given in the tender document	
25	Product No/catalogue No.	
26	Model No.	
27	Technical features	
28	Technical Parameters	
29	Additional features very particulate to the system.	
30	Certificate of quality like CE,ISO,FDA	
31	Documents,if clause no(29) in the tender is applicable	
32	Compliance statement.	