**REQUEST FOR EXPRESSION OF INTEREST (EoI)**
**DSITC OF 2 × 20 KL LIQUID MEDICAL OXYGEN (LMO) STORAGE TANKS, CYLINDERS INCLUDING COMPLETE TURNKEY WORKS FOR INSTALLATION OF LMO TANKS, MEDICAL GASES CYLINDER AND MAINTENANCE OF MEDICAL GAS MANIFOLDS AT IMSF, IISc CAMPUS, BENGALURU**


**EoI DOCUMENT NO: Ref:IMSF/EoI/26-27/08 For the Design, Supply, Installation, Testing, Commissioning, and Operation of a Liquid Medical Oxygen (LMO) Storage Tank, Medical Gas Cylinder and Liquid Oxygen gas & Hospital gases Distribution System at IISc Medical School Foundation, Bangalore.** Date: 18.06.2026

**Director,**

**IISc Medical School Foundation, Bangalore – 560012.**

This Expression of Interest (EoI) invites proposals for a **turnkey solution** to **design, build, supply, install, train, commission, and operates** a modern hospital **Liquid Medical Oxygen (LMO) storage system and Manifold Medical Gas Cylinder with hospital gases** for the **IISc Medical School Foundation**.
The scope includes design and construction of the services for certain critical areas in the hospital may need to be provided 24x7.
The scope of work includes the design, engineering, supply, installation, testing, and commissioning of the system, along with necessary training and operational support. The selected partner will also be responsible for ensuring continuous supply, reliable service for critical areas of the hospital that require 24x7 availability.

## PROJECT BRIEF

The Proposed IMSF project is being constructed at Indian Institute of Science Campus, Bangalore - 560 012. The said Project is a combination of RCC and Steel Structure Building and it is Basement + Lower Ground + Ground + 9 Storeys + Helipad. Basement is in RCC - Concrete Structure it has, but columns and roof framing works are in Structural Steel. The DSITC of **Commissioning, and Operation of a Liquid Medical Oxygen (LMO) Storage Tank and Liquid Oxygen Gas Distribution System**. The project details are listed below.

- Total number of Beds: 832 Nos.
- Type of Structure: RCC + Structural Steel.
- Total site area: 14.35 Acres.
- Total built up area: 14,67,478.62 Square feet.
- Building overall length (outer to outer): Length 239.58mtrs x Breadth 90.41 Mtrs.
- Total height of the building: 49.85 Mtrs. (Including Helipad)
- Total number of Block: 05 along with Core and Atrium areas etc., (A, B, C, D and E)
- Block A and Core areas (B +LG+ GF + 03 upper floors + terrace) @ Height of 17.55 Mtrs
- Block B and Core areas (B +LG+GF + 09 upper floors + terrace) @ Height of 41.85 Mtrs
- Block C and Core areas (B +LG+GF + 09 upper floors + terrace) @ Height of 41.85 Mtrs.
- Block D (B+LG+GF + 07 upper floors + terrace) @ Height of 33.75 Mtrs
- Block E (GF + 05 upper floors + terrace) @ Height of 25.65 Mtrs.
- Atrium and Core areas.
- Basement and Parking Area.

At IISc, the planned infrastructure is designed to support a wide range of advanced clinical capabilities essential for patient care, teaching, and research. This comprehensive setup will facilitate the integration of cutting-edge technologies and services across various clinical areas, ensuring optimal outcomes and fostering innovation in healthcare practices. Further details about IISc and its requirements can be accessed from:

https://medicine.IISc.ac.in/

## SCOPE OF WORK

The project scope includes the **Design, Build, Supply, Installation, Testing, Training, and Commissioning** of the **Medical Liquid Oxygen (LMO) Storage Tank and Oxygen Distribution System** at the **IISc Medical School Foundation, Bangalore**.

This scope also includes the **complete integration** of the new system with the existing **Medical Gas Pipeline System (MGPS)**, ensuring full compliance with **HTM 02-01**, **ISO 7396-1**, **PESO**, and other relevant statutory and regulatory standards.

The system shall be designed and executed to provide a **safe, reliable, and uninterrupted medical oxygen supply** to all clinical areas of the facility.

- **PESO (Petroleum and Explosives Safety Organisation)**
- **HTM 02-01** – Medical Gas Pipeline Systems
- **ISO 7396-1** – Pipeline Systems for Compressed Medical Gases and Vacuum
- **CDSCO** – Central Drugs Standard Control Organization
- **National Building Code of India (NBC 2016)**
- **Food Safety and Standards Authority of India (FSSAI)**
- **National Accreditation Board for Hospitals and Healthcare Providers (NABH)**
- **Hospital Infection Control Committee (HICC)** norms and recommendations

**Project Intent and Functional Overview**

The **IISc Medical School Foundation** facility is envisioned as a **state-of-the-art teaching, research, and healthcare centre**, integrating **advanced clinical infrastructure** with **academic and translational research facilities**.
The project aims to deliver a fully coordinated and compliant setup supporting the following objectives:

- High-quality **patient care** through advanced clinical and support systems
- Seamless **integration of technology and operations** across all departments
- Compliance with **national and international healthcare design standards**
- Support for **teaching, simulation, and research** in medical sciences
- Sustainable design and **energy-efficient infrastructure**

## Key Considerations – Turnkey Work Execution for Liquid Medical Oxygen (LMO) Storage System

The turnkey execution of the Liquid Medical Oxygen (LMO) storage and distribution system shall be planned and implemented with a comprehensive, safety-driven, and standards-compliant approach. The following key considerations must be addressed by the bidder:

## Site Assessment & Feasibility

A detailed **site assessment and feasibility study** shall be conducted prior to commencing design and execution activities. The objective is to ensure that the proposed **Liquid Medical Oxygen (LMO) storage system** is installed in the most suitable and compliant location, ensuring operational safety, accessibility, and efficiency.

**Key aspects to be covered include:**

- **Survey and evaluation** of available space for LMO tank installation, taking into account safety clearances, access for refilling, and proximity to hospital gas distribution points.
- **Assessment of existing infrastructure**, including foundation conditions, relevant utility availability (power, water, drainage etc.) and compatibility with the existing Medical Gas Pipeline System (MGPS).
- **Identification of site-specific risks** such as vibration, heat sources, restricted access and any other risk that may affect safe operation.
- **Determination of optimal tank capacity** based on projected hospital oxygen demand, patient load, and contingency requirements.
- Preparation of a **site feasibility report** including layout drawings, risk analysis, and recommendations for approval prior to detailed design and execution.

## 2. Design & Engineering.

The **design and engineering** phase shall ensure that the **Liquid Medical Oxygen (LMO) storage and distribution system** is planned in full compliance with applicable codes, standards, and hospital operational requirements. The design must emphasize **safety, reliability, maintainability, and scalability** for future expansion.

**Key design and engineering considerations include:**

- Preparation of detailed **design drawings**, **P&ID (Process and Instrumentation Diagrams)**, and **layout plans** indicating location of LMO storage tank, vaporizer, pressure regulation skid, and interconnecting pipelines.
- Design compliance with **HTM 02-01**, **PESO**, **ASME Section VIII**, **NFPA 99**, and relevant **BIS/ISO** standards.
- Incorporation of **redundancy and fail-safe features** to ensure uninterrupted gas supply to critical areas.
- Optimization of **pipeline sizing**, **pressure regulation**, and **distribution routing** to minimize pressure drops and ensure consistent flow.

- Selection of suitable **materials of construction** (such as copper, stainless steel or approved alloys) compatible with medical gases and designed for long-term durability.
- Integration of **instrumentation and control systems**, including pressure gauges, temperature sensors, flow meters, and alarm monitoring panels.
- Preparation of detailed **engineering documentation**, including load calculations, pressure drop analysis, and equipment specifications for client approval prior to execution.

## 3. Statutory & Regulatory Compliance

**All activities related to the** design, installation, testing, and operation **of the** Liquid Medical Oxygen (LMO) storage and distribution system **shall strictly adhere to applicable** statutory, regulatory, and safety standards **as mandated by national and international authorities. The contractor shall be responsible for obtaining all necessary approvals, licenses, and certifications prior to commissioning**.

**Key compliance requirements include**.

- The LMO vendor, Adherence to Petroleum and Explosives Safety Organization (PESO) guidelines for LMO storage, handling, and operation.
- Compliance with relevant provisions of the **Gas Cylinder Rules, 2016**, and Static and **Mobile Pressure Vessels (Unfired) Rules, 2016**.
- Conformance to international standards such as HTM 02-01, NFPA 99, ASME Section VIII, and ISO 7396-1 for medical gas pipeline systems.
- Submission and approval of all design drawings, safety documents, and layout plans to **PESO** and other statutory authorities prior to installation.
- Ensuring that all equipment and components are certified, tested, and bears valid manufacturers' test certificates and **PESO approvals**.
- Implementation of a comprehensive safety management plan, covering fire protection, emergency response, and risk assessment as per hospital safety norms.
- Maintenance of complete regulatory documentation and records for future audits and compliance verification.

## 4. Third-Party Certifications (ISO, CE, CDSCO, and other applicable agencies)

All equipment, materials, and components used in the **Liquid Medical Oxygen (LMO) storage and distribution system** shall be sourced from reputed manufacturers possessing valid **third-party certifications** to ensure quality, reliability, and safety. Vendors and OEMs must demonstrate compliance with internationally recognized standards and certification systems.

- **Key requirements include:**

- All major system components — such as LMO storage tanks, vaporizers, pressure regulation skids, safety valves, and instrumentation — shall have valid ISO, CE, & **CDSCO** equivalent third-party certifications from accredited bodies.

- The Medical Gas Pipeline System (MGPS) materials (pipes, fittings, valves, outlets, and accessories) shall conform to ISO 7396-1, HTM 02-01, or relevant EN/BS standards.

- OEMs must have ISO 9001:2015 certification for quality management systems and, preferably, ISO 13485 for medical device manufacturing.

- Calibration and testing instruments must be certified by NABL-accredited laboratories or equivalent recognized agencies.

- Copies of all valid certificates and test reports shall be submitted along with the technical proposal for verification and approval.

- The contractor shall ensure that no uncertified or locally fabricated equipment is used without prior written approval from the client or consultant**.**

## 5. Procurement & Quality Assurance

The contractor shall ensure that all materials and equipment for the **Liquid Medical Oxygen (LMO) storage and distribution system** are procured from **approved and certified sources**, meeting the highest standards of quality, safety, and reliability. A robust **quality assurance (QA)** and **quality control (QC)** plan shall be implemented from manufacturing to installation.

- Sourcing of **PESO-approved** LMO storage tanks complete with valid hydrostatic test certificates, material traceability documents, and manufacturer data sheets.

- Vaporizer selection and sizing shall be based on the peak flow rate and hospital oxygen demand to ensure continuous supply under all operating conditions.

- Installation of a pressure-reducing and regulation station with dual-line redundancy to maintain uninterrupted service and facilitate maintenance without system downtime.

- Use of stainless steel (SS) and high-pressure medical-grade copper pipelines with appropriate manufacturer approvals and compliance to HTM 02-01 and ISO 7396-1 standards.

- Implementation of stringent quality checks during manufacturing, pre-dispatch inspection, transport, and on-site installation to prevent damage or contamination.

- All materials shall be accompanied by mill test certificates, inspection reports, and OEM quality compliance documents for client verification.

## 6. Civil & Mechanical Works

The turnkey contractor shall be fully responsible for executing all associated civil and mechanical works required for the safe and compliant installation of the Liquid Medical Oxygen (LMO) storage and distribution system. All works shall be designed and executed in accordance with approved drawings, relevant codes, and statutory norms to ensure structural stability, safety, and ease of maintenance.

**Key requirements include:**

- Site preparation and foundation construction for LMO tanks, vaporizers, and associated mechanical equipment, including design validation by a qualified structural engineer.
- Construction of protective enclosures, equipment platforms, and peripheral fencing as per PESO safety distance requirements and hospital fire safety norms.
- Provision of access pathways, drainage systems, and rainwater protection to ensure safe and dry operational areas.

- Execution of mechanical installation works including mounting, alignment, and secure anchoring of tanks, vaporizers, manifolds, and pipe supports. The vendor will provide all safety reports to the Hospital.

- All supports, clamps, hangers, and mechanical fasteners shall be made of non-corrosive, high-strength materials suitable for medical gas pipeline applications, ensuring long-term durability, mechanical stability, and resistance to chemical exposure.

- Coordination of civil and mechanical works with electrical, plumbing, and MGPS installation teams to ensure seamless integration and avoid service conflicts.

- Preparation and submission of as-built drawings, structural stability certificates, and inspection reports after completion and demonstration of successful operation of the Medical Gas system.

- Implementation of earthing and bonding provisions for all metallic structures and pipelines to eliminate static charge accumulation will be done by the client.

## 7. Painting, Labeling & Safety Signage

The Vendor, All components of the Liquid Medical Oxygen (LMO) storage and distribution system, including storage tanks, vaporizers, pipelines, and accessories, shall be properly painted, labeled, and equipped with safety signage to ensure identification, corrosion protection, and compliance with statutory safety norms.

**Key requirements include:**

- Surface preparation and painting of all exposed metal components using anti-corrosive primer and high-durability enamel or epoxy coatings, suitable for outdoor and medical environments.

- Color coding of pipelines and equipment as per HTM 02-01, ISO 14726, or relevant BIS standards for medical gas identification.

- All pipelines shall carry directional flow arrows and gas name labels at regular intervals, at entry/exit points, and near valves for clear identification.

- Warning and safety signage (e.g., “No Smoking,” “Oxygen in Use,” “Flammable Gas”) shall be installed prominently in English and the local language, as per PESO, and NFPA 99 requirements.

- Tank and vaporizer identification plates shall display details such as gas type, capacity, operating pressure, test date, and PESO approval number.

- Emergency instructions and contact information shall be displayed clearly near the storage and control areas.

- Regular inspection and maintenance of coatings and signage shall be carried out to maintain legibility, visibility, and compliance with safety audits.

## 8. Electrical & Automation

The contractor shall design and implement all **electrical and automation systems** necessary for the safe, reliable, and uninterrupted operation of the **Liquid Medical Oxygen (LMO) storage and distribution system**. All works shall comply with relevant **IS codes**, **HTM 02-01**, and **PESO** requirements, ensuring operational continuity and system integration with hospital infrastructure.

**Key requirements include:**

- LMO Vendor to be coordinated with hospital project team for dedicated power backup (UPS or DG source) for critical alarm circuits, water supply, and control panels, ensuring 24x7 system reliability during power interruptions.
- The LMO vendor provides and coordinates with Project team for Integration of the LMO tank alarm system with the Building Management System (BMS) or Nurse Station, Gas manifold room, OT complex and engineering room for real-time monitoring of liquid levels, pressure, and system status.
- Deployment of an **Internet of Things (IoT)**-based remote monitoring system for tank level, flow rate, and pressure, enabling predictive maintenance and remote supervision (optional feature).
- All electrical wiring shall use flame-retardant, low-smoke (FRLS) or fire-resistant cables, properly labeled and routed in PVC or GI conduits for protection.
- Submission of single-line diagrams (SLDs), load calculations for client review and approval prior to commissioning.

## 9. Testing & Commissioning

The contractor shall conduct comprehensive testing and commissioning of the complete Liquid Medical Oxygen (LMO) storage and distribution system to verify performance, safety, and compliance with all applicable standards before handing over the system for operational use. The vendor should ensure earth resistance as per their requirement with support from the hospital project team.

All testing activities shall be carried out in the presence of authorized representatives from the vendor, client and relevant statutory bodies, as applicable.

**Key requirements include:**

- **Hydrostatic and pneumatic leak testing** of all pipelines, joints, and connections in accordance with **HTM 02-01** and **PESO** norms, ensuring system integrity and leak-free operation.

- **First filling of the LMO tank** shall be carried out **under the supervision of an authorized gas supplier** and witnessed by the client's representative.

- **Trial run and functional testing** of the complete system, including vaporizers, pressure regulation skids, and alarm panels, to verify pressure stability, flow capacity, and automatic changeover functionality.

- **Flow verification tests** at various critical points in the distribution network to confirm consistent oxygen delivery under peak load conditions.

- **Calibration and performance validation** of all sensors, gauges, and alarm devices, with records maintained for future audits.

- **Training sessions for hospital staff and maintenance personnel** covering system operation, safety protocols, and emergency response procedures.

- Submission of a detailed **commissioning report**, **test certificates**, and **as-built drawing, documentation** after satisfactory completion of the work and operational.

## 10. Documentation & Handover for pre-Operational

Once the contractor has supplied and installed as per norms with successful completion of the installation, testing, and commissioning for use the hospital, the contractor shall prepare and submit a comprehensive Operation & Maintenance (O&M) manual (soft & Hard copy) along with all necessary documentation required for smooth operation, maintenance, and statutory compliance of the Liquid Medical Oxygen (LMO) storage and distribution system.

- Submission of complete as-built drawings, covering civil, mechanical (P&ID), and electrical systems, clearly indicating equipment locations, routing, and connections.

- To be arranged and provide of PESO-approved drawings, licenses, and copies of all statutory approvals and certifications obtained during the project execution.

- Submission of warranty and guarantee certificates for all major equipment, components, and systems, ensuring defined coverage periods and terms.

- Preparation and handover of Operation & Maintenance Manuals (O&M) including equipment specifications, operational guidelines, and preventive maintenance schedules.

- Inclusion of Emergency Standard Operating Procedures (SOPs) detailing response actions for leakages, power failures, and other critical situations.

- Submission of a detailed maintenance checklist and recommended spare parts inventory for reliable system performance.

- LMO vendor to Conduct training sessions on routine operations, safety measures, and record-keeping protocols for MGPS operational team.

## 11. Safety & Risk Mitigation

The contractor shall ensure that all necessary safety and risk control measures are implemented throughout the design, installation, testing, and operation of the Liquid Medical Oxygen (LMO) storage and distribution system. All works must comply with applicable standards such as HTM 02-01, PESO, NFPA, and OISD guidelines to guarantee a safe and reliable system.

The contractor shall ensure that comprehensive safety and risk mitigation measures are implemented throughout the design, installation, testing, and operational phases of the Liquid Medical Oxygen (LMO) storage and distribution system. All safety provisions shall comply with PESO, HTM 02-01, and other if latest applicable national and international standards.

**Key requirements include**:

- LMO Vendor to be ensured and provide proper termination and labeling of venting lines

to ensure safe gas discharge and easy identification during maintenance and any emergency.

- Vendor will provide complete Installation of chain-link fencing around the LMO storage area with restricted entry signage to prevent unauthorized access.

- Vendor to be provided of fire extinguishers, sand buckets, and water hydrants at accessible locations near the storage and vaporizer area for immediate emergency response.

- LMO Vendor to train hospital staff to **Maintenance of a daily safety logbook** and inspection checklist to record operating parameters, safety checks, and preventive actions.

- Vendor shall be include the details of regular inspection and testing of safety devices such as pressure relief valves, alarms, and emergency shut-off valves.

- The Vendor Conducting periodic safety training and emergency drills for all staff involved in LMO system operations.

## 12. Warranty Certificates

The contractor shall provide **comprehensive warranty and guarantee certificates** for all major equipment, materials, and installations supplied under this turnkey project.

**Key requirements include:**

- A minimum warranty period of five (5) years from the date of commissioning and pre-operational approval.

- The contractor shall be covered for all manufacturing defects in case of during inspection workmanship issues, and performance deviations throughout the warranty period.

- Replacement or repair of any defective components at no additional cost to the client within the warranty period.

- Provision of original warranty certificates from the respective Original Equipment Manufacturers (OEMs) for critical equipment such as:

- Liquid Medical Oxygen (LMO) Storage Tanks

- Vaporizers

- Pressure Regulation Skids
- Valves, Instruments, and Control Panels
- The contractor shall ensure continuity of service support and availability of spare parts throughout the warranty and post-warranty periods.
- A formal compliance statement confirming adherence to all warranty obligations shall be included in the final handover documentation.

## 13. Post-Installation Support

Vendor to ensure uninterrupted performance and long-term reliability of the **Liquid Medical Oxygen (LMO) storage and distribution system**, the contractor shall provide comprehensive **post-installation support and service assistance** in accordance with hospital requirements.

**Key requirements include:**

- Submission of an **Annual Maintenance Contract (AMC) proposal** with clearly defined **Service Level Agreement (SLA)** terms, response times, and scope of preventive maintenance for 1 year, 3, year and 5 years.
- Availability of **emergency call-out services** with response time **as defines by the hospital**.
- Assurance of **availability of adequate stock of spare parts, consumables, and accessories** with the vendor for quick replacement and minimum downtime.
- Support for **technical troubleshooting, calibration, and performance optimization** during the warranty and AMC periods.
- Periodic **inspection and preventive maintenance visits** to ensure consistent and safe system operation.

## 14. Quality and Compliance

The selected vendor shall execute the complete this turnkey project will include, **design, build, supply, installation, testing, commissioning, and management of** Liquid Medical Oxygen (LMO) Storage System Including Civil Works, Mechanical, electrical and integration works along with all necessary statutory approval**.**

All materials, equipment, and workmanship shall strictly adhere to the **approved technical specifications**, ensuring the highest standards of safety, reliability, and performance.
The selected vendor should ensure adherence to all the guidelines and protocol laid down by the

project team at site.

The complete system shall comply with the following key regulations and guidelines:

- **PESO (Petroleum and Explosives Safety Organisation) Regulations**
- **HTM 02-01 / ISO 7396-1** – Medical Gas Pipeline System Standards
- **Applicable industry standards**, including **GRIHA (Green Rating for Integrated Habitat Assessment) norms**, promoting energy efficiency and environmental sustainability

The vendor shall be fully responsible for obtaining all **statutory approvals and clearances** from competent authorities before commissioning, including but not limited to:

- PESO Approval
- Fire Safety NOC
- Electrical Inspectorate Clearance
- Gas System Certification and Safety Audit

During the hospital's operational phase, **system performance and compliance** shall be continuously monitored through:

- Defined **Key Performance Indicators (KPIs)**
- **Internal and external audits**
- **Periodic maintenance and performance reviews**
- **User and patient feedback mechanisms**

This approach ensures **long-term safety, efficiency, and regulatory compliance** of the hospital's oxygen infrastructure.

**Turnkey Installation of Liquid Medical Oxygen (LMO) Storage System (Including Civil Works)**

## 15. VENDOR QUALIFICATION CRITERIA

To ensure the successful execution of the Turnkey Liquid Medical Oxygen (LMO) Supply, Installation, Testing, and Commissioning (SITC) project, vendors participating in this proposal process must meet the following qualification criteria:

- The vendor must be a legally registered entity in India with a valid GST registration.
- Vendors should have experience in providing Facility Management Services (FMS) to at least five (5) hospitals in India with 250 beds or more, including a minimum of two (2) hospitals in Bengaluru. Relevant supporting documents and client references shall be submitted.

- Vendors shall also indicate whether NABH and/or JCI audits were conducted during their FMS engagement and provide supporting details, if applicable.

- The vendor must provide details of the average annual turnover for the last five (5) financial years, supported by audited statements or CA certification.

- Vendors must provide details of application/software systems used for supply and flow calculations, and automatic pressure regulation, with interoperability to the hospital HIS/EMR system and optional BMS connectivity.

- The vendor must have the ability to supply and install LMO equipment from reputed brands approved by the hospital management.

- The vendor must hold valid licenses and certifications to perform civil, electrical, and gas installations as applicable.

- Compliance with PESO, fire safety, and environmental regulations is mandatory.

- The vendor must maintain adequate technical and skilled manpower to ensure timely and quality execution of the project.

- The vendor must be capable of providing all Operation & Maintenance (O&M) manuals, as-built drawings, warranty certificates, and statutory clearances at the time of project handover.

- The vendor must submit a declaration confirming that they have not been blacklisted or debarred by any government, healthcare, or institutional body.

- The vendor must provide a declaration of legal disputes if any that could affect the timely execution of the project.

**SCOPE OF LMO WORK MATRIX**

| Sl. No. | Activity | Description | Responsibility | Deliverables | Timeline |
|---|---|---|---|---|---|
| 1 | Site Survey & Assessment | Assess site conditions, layout, and space for LMO installation | Vendor | Site Assessment Report, Layout Plan | |
| 2 | Engineering Design & Drawings | Prepare detailed design: civil, mechanical & electrical | Vendor | GFC Drawings | |
| 3 | Civil Foundation Works | Excavation, PCC, RCC base, and | Vendor | Complete Civil Foundation with QA/QC records | |

| | | | | | |
|---|---|---|---|---|---|
| | | foundation bolts for tank | | | |
| 4 | Supply of LMO Tank & Accessories | Procurement and delivery of LMO tank, vaporizers, PRVs, valves | Vendor | LMO Tank, Vaporizer, Pressure Regulating System | |
| 5 | Installation of LMO System | Installation of tank, piping, vaporizers, manifold connections | Vendor | Fully Installed LMO System & AMC & CMC | |
| 6 | Electrical & Instrumentation | Cabling, earthling, power panel, sensors, and alarm systems | Vendor | Functional Electrical & Control Systems | |
| 7 | Safety Compliance & Testing | Safety tests, pressure test, venting, alarms, and regulatory inspections | Vendor | Test Reports, Safety Certificate | |
| 8 | Commissioning & Trial Run | Trial run of the entire system to verify performance & safety | Vendor | Commissioning Report, Trial Run Log | |
| 9 | Training for Hospital Staff | On-site training on operation, emergency handling & maintenance | Vendor | Training Report, Manual, Attendance Sheet | |
| 10 | Final Handover & Documentation | Submission of as-built drawings, manuals, warranties, and certifications | Vendor | Handover Certificate, Documentation Set | |
| 11 | MGPS connection | From LMO tank main Hospital line. LMO to Oxygen Manifold auto and manual operating connection. | MGPS Vendor | MGPS vendor connect pipe from LMO area to MGPS Main | |
| 16 | Networking and Data Boards | Turnkey vendor to specify required network port locations | Client | | |
| 17 | CCTV For Central Monitoring | Turnkey vendor is responsible for providing the necessary technical input | Client | | |
| 18 | Internet Connection | Turnkey vendor to specify required port locations. The vendor is responsible for providing the necessary technical input, and overseeing the execution by the | Client | | |

| | | | | | |
|---|---|---|---|---|---|
| | | client's on-board contractor | | | |
| 19 | Fire Detection System | Vendor to recommend layout; Client to execute based on approved vendor designs. Necessary openings in false ceiling to be provided by the vendor | Client | | |
| 20 | Fire Suppression System (Water Based) | Includes pipe routing and placement of sprinklers/detectors. Client to execute as per approved vendor design. | Client | | |
| 21 | Fire Suppression System (Gas Based | Includes pipe routing and placement of sprinklers/detectors. Client to execute as per approved vendor design | Client | | |
| 22 | Signage | Should align with IMSF branding requirement branding | Vendor | | |
| 23 | Earthpits & connection | As required by PESO standard | Client | | |

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## 16. Terms & Conditions of EoI

The terms of this Expression of Interest (EoI) under which the **IISc Medical School foundation** will receive, evaluate, and assess vendor submissions. Non-compliance with any of these conditions may result in the disqualification of the EoI submission without further consideration.

EoI submissions must include complete and accurate information, along with all supporting documents requested in this document.
Hard copy of the document should be submitted in **the IISC main building**

Following submission, vendors who meet the preliminary qualification criteria will be invited to deliver a technical presentation. This presentation will provide vendors the opportunity to:

- Demonstrate their proposed solution, highlighting technical capabilities, product features, and system integration with hospital infrastructure.

- Present their OEM partnerships, demonstrating their ability to deliver a complete, end-to-end turnkey solution for the LMO project.

- Respond to queries from IISc Medical School foundation and clarify any technical or operational aspects of their proposal.

Wherever applicable, IISc, Medical School foundation may communicate additional specifications or OEM requirements to be incorporated into the final solution.

After the presentation phase, shortlisted vendors will be requested to submit a detailed technical bid, providing comprehensive information on the technology, equipment, systems, and services proposed. The technical bid must demonstrate full compliance with relevant national and international standards applicable to medical gas systems.

If modifications are required based on discussions during the presentation, vendors shall update and resubmit their technical bid accordingly. Upon completion of technical evaluation, vendors whose proposals meet IISc Medical School foundation's requirements will be invited to submit a financial bid.

The final selection shall be based on a comprehensive evaluation of technical merit, regulatory compliance, and overall cost-effectiveness, along with feedback from local healthcare institutions, to ensure the most appropriate, reliable, and sustainable solution for the IISc Medical School Foundation, Bangalore.

## 17.LMO & MEDICAL GAS Cylinder

| S.N | Source Type Oxygen cylinder/tanks | Total Qty (Tentative) |
|---|---|---|
| 1 | LMO Tank | 2 |
| 2 | Oxygen cylinder D-Type for Manifold | 120 |
| 3 | B-Type Oxygen cylinder | 286 |
| 4 | A-Type Oxygen cylinder | 15 |

| S.N | Source Type CO2 cylinder | Total Qty (Tentative) |
|---|---|---|
| 1 | D-Type Cylinders (Manifold) | 12 |
| 2 | B-Type Cylinder | 15 |
| 3 | A-Type Cylinder | 5 |

| S.N | Source Type N2 cylinder | Total Qty (Tentative) |
|---|---|---|
| 1 | D-Type Cylinders (Manifold) | 10 |

| S.N | Source Type Tri Gas Cylinder –Mix (IVF LAB) ($CO_2 + O_2 + N_2$ Premix) | Total Qty (Tentative) |
|---|---|---|
| 1 | D-Type Cylinders (Manifold) | 10 |
| 2 | B-Type Cylinder | 5 |
| 3 | A-Type Cylinder | 5 |

## 17. TIMELINES AND CONTACT DETAILS

**The due date for submission of EoI is Thursday 9th July 2026,5.30pm**

Enquiries, and requests for further information about this RFQ, should be directed to the Contact Officer as follows:

Contact Officer: Mrs. Dhanyasree S., Admin Executive IISc Medical School Foundation/ Office of Admin Deans Main Building, IISc, CV Raman Road, Bangalore – 560 012 Contact No: +91 8022933584 Email Id: office@iiscmedicalschoolfoundation.org