

**MINISTRY OF HEALTH & FAMILY WELFARE  
(GOVT. OF INDIA)**

**ALL INDIA INSTITUTE OF MEDICAL SCIENCES,  
NEW DELHI**

**Tender**

**for**

**Supply, Installation, Testing & Commissioning of Medical Gas  
Manifold System along with Buy Back of existing manifold gas  
pipeline as on where is basis of CT-2 CCU at All India Institute of  
Medical Sciences, New Delhi**

**VOLUME – II**

**GENERAL INSTRUCTION TO BIDDERS,**

**CONDITIONS OF CONTRACT  
&  
TECHNICAL SPECIFICATION**

**September 2013**



( Consultants & Engineers for Mega Hospitals & Laboratories )  
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**Tender No. HSCC/PG-II/AIIMS-CCU/MGMS/2013**

## SECTION I: INSTRUCTIONS TO BIDDERS

### A. General

#### 1.0 Scope of work:

1.1.1 **AIIMS through HSCC (India) Ltd. invites bids for the Supply, Installation, Testing & Commissioning of Medical Gas Manifold System along with buy back of existing manifold gas pipeline as on where is basis of CT-2 CCU at All India Institute of Medical Sciences, New Delhi**

1.2 The successful bidder will be expected to complete the works within **2 (Months)** from the date of Award of work.

#### 2.0 The Employer:

All India Institute of Medical Sciences (AIIMS), New Delhi represented by their consultant M/s HSCC (India) Limited (HSCC), A Government of India Enterprise, having its Corporate office at plot No. 6(A), Block-E, Sector -1, Noida, Distt. Gautam Budh Nagar (UP) will enter into the agreement with the chosen contractor for & on behalf of the Employer.

2.1 In these documents wherever the word tender / tenderer / tendering has been used, the same shall be considered synonymous with bid/bidder/bidding.

#### 3.0 Information to be submitted:

3.1 All bidders shall include the following information and documents with their bids:

1. A work plan clearly bringing out how the bidder proposes to carry out the work to achieve the time schedule.

#### 4.0 Cost of bidding:

The bidder shall bear all costs associated with the preparation and submission of his bid, and the Employer will in no case be responsible or liable for those costs.

#### 5.0 Site visit:

The bidder is advised to visit and examine the Site of Works and its surroundings and obtain for himself on his own responsibility and at his own risk all information that may be necessary for preparing the bid and entering into a contract for the works as detailed in the Scope of work. The cost of visiting the Site shall be at the bidder's own expense.

### B. Bidding Documents

#### 6.0 Content of bidding documents:

The set of bidding documents comprises the documents listed below:

Volume-I : Pre-Qualification Criteria  
Volume-II : Conditions of contract & Technical specifications

**7.0 Clarification of bidding documents:**

A prospective bidder requiring any clarification of the bidding documents may notify the Employer in writing or by cable (hereinafter, "cable" includes facsimile) at the Engineer's address indicated in the Invitation to Bid. The Engineer will respond to any request for clarification which he received earlier than 7 days prior to the submission of bid. Copies of the Engineer's response will be forwarded to all purchasers of the bidding documents, including a description of the enquiry but without identifying its source.

**8.0 Amendment of bidding Documents:**

- 8.1 Before the deadline for submission of bids, the Engineer may modify the bidding documents by issuing addenda.
- 8.2 Any addendum thus issued shall be part of the bidding documents and shall be communicated in writing or by cable to all purchasers of the bidding documents.
- 8.3 To give prospective bidders reasonable time to take an addendum into account in preparing their bids, the Engineer shall extend as necessary, the deadline for submission of bids in accordance with Sub-Clause 16.2.

**C. Preparation of Bids**

**9.0 Language of bid:**

All documents relating to the bid shall be in English Language only.

**10.0 Documents comprising the bid:**

The bid submitted by the bidder shall comprise the following:

- (a) Bid Security
- (b) All information and document regarding the pre-qualification
- (c) Conditions of Contract
- (d) Specifications
- (e) Bill of Quantities
- (f) Tender drawings, if any
- (g) Documents mentioned in 3.1 above

and any other documents required to be completed and submitted by bidders in accordance with these instructions.

**11.0 Bid prices:**

- 11.1 The bidder shall fill the rates against each item of BOQ both in words and figures.  
All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause shall be included in the rates, prices, and total amount of bid submitted by the bidder. The evaluation and comparison of bids by the Employer shall be made accordingly.
- 11.3 The rates and prices quoted by the bidder shall be fixed for the duration of the Contract and shall not be subject to adjustment on any account.

**12.0 Currencies of bid and payment:**

The rate to be quoted by the bidder shall be in Indian Rupees.

**13.0 Bid validity:**

- 13.1 Bids shall remain valid for a period of 120 days after the deadline for bid submission specified in Clause 16.
- 13.2 In exceptional circumstances, the bidders may be requested to extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing or by cable. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his bid security for the period of the extension, and in compliance with Clause 14 in all respects.

**14.0 Bid security:**

- 14.1 The bidder shall furnish, as part of his bid, a security amount of Rs.2,83,000/-.
- 14.2 The bid security and cost of document shall be in the form of a Pay order/ Demand Draft/Bank Guarantee from a Nationalized/Scheduled bank in favour of HSCC (I) Ltd., payable at Delhi/Noida.
- 14.3 Any bid not accompanied by an acceptable bid security shall be rejected.
- 14.4 The bid security of unsuccessful bidders will be returned within 28 days of the end of the bid validity period specified in Sub-Clause 13.1.
- 14.5 The bid security of the successful bidder will be discharged when the bidder has signed the Agreement and furnished the required performance security.
- 14.6 The bid security will be forfeited:
- (a) if the bidder withdraws his bid during the period of bid validity;
  - (b) if the bidder does not accept the correction of his bid price, pursuant to Clause 23; or
  - (c) in the case of a successful bidder, if he fails within the specified time limit to :
    - (i) sign the Agreement ; or
    - (ii) furnish the required performance security.
- 14.7 No interest will be payable on the bid security amount cited above.

**15.0 Sealing, marking and submission of bid:**

- 15.1 The bid shall be submitted in accordance with the procedure detailed herein. Documents shall be enclosed in separate envelopes of appropriate size each of which shall be sealed.
- (i) **Envelope No. 1** shall contain the bid security as indicated in clause 14 of these instructions to bidders and Bid document fee/copy of Receipt for purchase of tender document.
  - (ii) **Envelope No. 2** shall contain the bidder's application for pre-qualification, original bid document comprising of Volume-I (Prequalification document) & Volume –II (General Instructions to bidders, Conditions of Contract & Technical Specifications) and all the asked information and documents in support of pre-qualification.
  - (iii) **Envelope No. 3** shall contain only the bill of quantities (Vol III) and rates/prices duly filled in and signed and stamped without any conditions whatsoever. Bids containing any conditions in Envelope no. 3 are liable to be summarily rejected. In case of any variation between the rates mentioned in figures and words, the rates in words shall prevail.

**The format of Bill of Quantity in the Price Bid should be neatly hand written. The Bill of Quantity in the Price Bid in any other format other than the tendered format or typed written shall be rejected. The contractor must fill up the prices both in words and figures.**

**Please note that the price should not be indicated in any of the documents enclosed in envelope 1 & 2.**

**All bidders are required to submit unconditional bids. Conditional bids if submitted shall be liable to be rejected and no correspondence in this regard shall be entertained.**

- 15.2 The bidder shall seal the bid.
- 15.3 All the three envelopes shall be sealed and enclosed in an envelope and addressed to the Chief General Manager (D&E & Projects), HSCC (India) Ltd, Plot No. 6(A), Block-E, Sector 1, Noida, Distt. Gautam Budh Nagar, Uttar Pradesh, Pin – 201 301.
- 15.4 All the above envelope shall bear the following identification.

**Name of work: - Supply, Installation, Testing & Commissioning of Medical Gas Manifold System along with buy- back of existing manifold gas pipeline as on where is basis of CT-2 CCU at All India Institute of Medical Sciences, New Delhi.**

- 15.5 All the envelopes shall indicate the name and address of the bidder to enable the bid to be returned unopened, if required.
- 15.6 All recipients for the purpose of submitting a bid shall treat the contents of the documents as private and confidential.

**16.0 Deadline for submission of bids:**

- 16.1 Bids must be received by the Engineer at the address specified above not later than the designated date and time.
- 16.2 The Engineer may extend the deadline for submission of bids by issuing an amendment in accordance with Clause 8, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.

**17.0 Late bids:**

Any bid received by the Engineer after the deadline prescribed in Clause 16.0 will be returned unopened to the bidder.

**18.0 Modification and withdrawal of bids:**

- 18.1 The bidder may modify or withdraw his bid by giving notice in writing before the deadline prescribed in Clause 16.
- 18.2 The bidder's modification or withdrawal notice shall be prepared, sealed, marked, and delivered in accordance with Clause 15, with the outer and inner envelopes additionally marked "MODIFICATION" or "WITHDRAWAL", as appropriate.
- 18.3 No bid may be modified after the deadline for submission of bids.
- 18.4 Withdrawal of bid between the deadline for submission of bids and the expiration of the original period of bid validity specified in the Form of Bid may result in the forfeiture of the bid security

pursuant to Clause 14.

**D. Tender Opening and Evaluation**

**19.0 Bid opening:**

19.1 Bids shall be opened in the office of H SCC (India) Ltd, Plot No. 6(A), Block-E, Sector 1, Noida, Distt. Gautam Budh Nagar, Uttar Pradesh, Pin - 201301, half an hour after the prescribed time for tender submission in presence of the bidders representatives who may wish to be present.

Envelope No.1: Shall be opened first. If the bid Security is not found as prescribed the bid shall be summarily rejected.

Envelope No.2: Shall then be opened. The applications of bidders for pre-qualifications and the information and documents submitted in (Vol-I & Vol-II) shall be evaluated.

Envelope No. 3 :Containing the sealed price bid of only for those parties whose bid is found to be generally in order and substantially responsive shall be opened either at the bid opening or at a subsequent date to be intimated in advance to such eligible bidders.

19.2 The Engineer will examine the bids to determine whether they are complete, whether the requisite bid securities have been furnished, whether the bids have been properly signed and whether the bids are generally in order.

19.3 Telegraphic/ fax offer will be treated as defective/ invalid and rejected. Only detailed complete bids received prior to the closing time and date will be taken as valid.

19.4 The bidders names, general technical details, the presence of the requisite bid security and such other details as the Engineer, at his discretion may consider appropriate will be announced at the bid opening.

19.5 The bidder should quote **cost of CMC in the Price Bid and the rate of CMC will be added for evaluation and ranking purpose.**

19.6 The bid of any bidder who has not complied with any of the instructions contained herein may not be considered.

**20.0 Process to be confidential:**

20.1 Information relating to the examination, clarification, evaluation, and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful bidder has been announced. Any effort by a bidder to influence the Engineer's processing of bids or award decisions may result in the rejection of his bid.

**21.1 Clarification of bids:**

21.1 To assist in the examination, evaluation, and comparison of bids, the Engineer may, at his discretion, ask any bidder for clarification of his bid, including break down of unit rates. The request for clarification and the response shall be in writing or by cable, but no change in the price or substance of the bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Engineer in the evaluation of the bids in accordance with Clause 23.

**22.0 Examination of bids and determination of responsiveness:**

22.1 Prior to the detailed evaluation of bids, the Engineer will determine whether each bid (a) meets

the eligibility criteria; (b) has been properly signed; (c) is accompanied by the required securities; (d) is substantially responsive to the requirements of the bidding documents; and (e) provides any clarification and/or substantiation that the Engineer may require.

22.2 A substantially responsive bid is one which conforms to all the terms, conditions, and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the bidding documents, the Engineer's right or the bidder's obligations under the contract or (c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

22.3 If a bid is not substantially responsive, it will be rejected by the Engineer, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

**23.0 Correction of errors:**

23.1 Bids determined to be substantially responsive will be checked by the Engineer for any arithmetic errors. Errors will be corrected by the Engineer as follows :

(a) Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern; and

(b) If the bidder does not accept the corrected amount of bid, his bid will be rejected, and the bid security may be forfeited in accordance with Sub-Clause 14. 6(b).

**24.0 Currency for bid evaluation:**

Bids shall be evaluated as quoted in Indian Rupees in accordance with Clause 12.

**25.0 Evaluation and comparison of bids:**

25.1 The Engineer will evaluate and compare only the bids determined to be substantially responsive in accordance with Clause 22.

25.2 In evaluating the bids, the Engineer will determine for each bid the Evaluated Bid Price by adjusting the Bid Price after making any correction for errors pursuant to Clause 23.

**E. Award of Contract**

**26.0 Award Criteria:**

26.1 Subject to Clause 27, the Engineer on behalf of the Employer intends to award the Contract to the bidder whose bid has been determined to be substantially responsive to the bidding documents and who has offered the Lowest Evaluated Bid Price.

**27.0 Employer's right to accept any bid and to reject any or all bids:**

27.1 Notwithstanding Clause 26, the Engineer on behalf of the Employer reserves the right to accept or reject any bid, and to cancel the bidding process and reject all bids, at any time prior to the award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the ground for the Employer's action.

**28.0 Notification of award:**

28.1 Prior to expiration of the period of bid validity prescribed, the Engineer on behalf of the Employer will notify the successful bidder by cable confirmed by registered post /courier letter that his bid has been accepted. This letter (hereinafter and in the Conditions of Contract called the "Letter of

Acceptance") shall name the estimated sum which the Employer will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").

28.2 The notification of award will constitute the formation of the Contract, subject only to the furnishing of a performance security in accordance with the provision of Clause 29.

28.3 Upon furnishing by the successful bidder of a performance security, the Engineer on behalf of the Employer will promptly notify the other bidders that their bids have been unsuccessful.

**29.0 Performance Security:**

29.1 Within 15 days of receipt of the notification of award from the Engineer on behalf of the Employer, the successful bidder shall furnish to the Employer a performance security in the form of a bank guarantee for an amount equivalent to 10% of the Contract Price. The performance security shall be valid till the successful completion of the Defect Liability Period by the Contractor.

29.2 Failure of the successful bidder to comply with the requirements of Sub-Clause 29.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the bid security.



## Section II. Conditions of Contract

### **A. General**

#### **1.0 Definitions:**

1.1 Terms which are defined in the Contract Data are not defined in the Conditions of Contract but keep their defined meanings. Capital initials are used to identify defined terms.

Acceptance is the date when the Contract came into existence upon receipt by the Contractor of the Letter of Acceptance issued by the Engineer on behalf of the Employer.

The Activity Schedule is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works.

The Completion Date is the date when the Engineer notifies that the works can be used by the Employer.

The Consultant is M/s. HSCC (I) Ltd. (HSCC).

The Contract is the contract between the Employer of the one part and the Contractor of the other.

The Contract Data defines the documents and other information which comprise the Contract.

The Contractor is a person or corporate body whose bid to carry out the Works has been accepted by the Employer.

The Contractor's Bid is the completed bidding document submitted by the Contractor to the Employer.

The Contract Price is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days; months are calendar months.

A Defect is any part of the Works not completed in accordance with the Contract.

The Engineer is the person named in the Contract Data who is responsible for supervising the Contractor, administering the Contract, certifying payments due to the Contractor, issuing and valuing Variations to the Contract, awarding extensions of time etc.

Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

The Initial Contract Price is the Contract Price at the date of the Employer's written acceptance of the Contractor's Bid.

The Intended Completion Date is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the Engineer by issuing an Extension of time.

Plant is any integral part of the Works which is to have a mechanical, electrical, electronic or chemical function.

The Site is the area defined as such in the Contract Data.

The Start Date is given in the Contract Data. It is the date when the Contractor can commence

work on the Contract.  
It does not necessarily coincide with any of the Site Possession Dates.

A Subcontractor is person or corporate body who has a contract with the Contractor to carry out a part of the work in the Contract.

Temporary Works are works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

A Variation is an instruction given by the Engineer which varies the Works.

The Works are what the Contract requires the Contractor to construct, install, and hand over to the Employer.

## **2.0 Interpretation:**

In interpreting these Conditions of Contract, singular also means plural, male also means female, and vice versa. Headings and cross-references between clauses have no significance. Words have their normal meaning under the language of the Contract unless specifically defined.

## **3.0 Language and law:**

The language of the Contract and the law governing the Contract are stated in the Contract Data.

## **4.0 Engineer's decisions:**

The Engineer is to decide contractual matters between the Employer and the Contractor fairly and impartially.

## **5.0 Delegation:**

The Engineer may delegate any of his duties and responsibilities to other people after notifying the Contractor and may cancel any delegation after notifying the Contractor.

## **6.0 Communications:**

Communications between parties which are referred to in the conditions are effective only when in writing.

## **7.0 Sub-Contracting: Deleted**

## **8.0 Other Contractors:**

**Deleted**

## **9.0 Personnel:**

**Deleted**

## **10.0 Removal of personnel:**

If the Engineer asks the Contractor to remove a person who is a member of his staff or his work force and states his reasons the Contractor is to ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

## **11.0 Contractor's risks:**

11.1 All risks of loss of or damage to AIIMS property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Contractor.

Excepted Risks are:

- a.
  - (i) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
  - (ii) Rebellion, revolution, insurrection, or military or usurped power, or civil war,
  - (iii) ionizing radiations, or contamination by radio - activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radio - active toxic explosive, or other hazardous properties of any explosive nuclear assembly or nuclear component thereof,
  - (iv) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speed,
- b. loss or damage due to the use or occupation by the Employer of any section or part of the Permanent Works, except as may be provided for in the Contract.
- c. loss or damage to the extent that it is due to the design of the Works, other than any part of the design provided by the Contractor or for which the Contractor is responsible.

## **12.0 Insurance:**

- 12.1 The following insurance cover **110%** is to be provided by the Contractor in the joint names of the Employer and the Contractor for the period from the Start Date to the end of the Defects Notice Period or of the last Defects Correction Period whichever is later:
  - (a) cover against damage to other people's property caused by the Contractor's acts or omissions;
  - (b) cover against death or injury caused by the Contractor's acts or omissions to
    - (i) anyone authorised to be on the Site ;
    - (ii) third parties who are not on the Site ;
  - (c) cover against damage to the Works and materials during construction.
- 12.2 Policies and certificates for insurance are to be produced by the Contractor to the Engineer for approval before the Start Date given in the Contract Data and subsequently as the Engineer may require.
- 12.3 If the Contractor does not produce any of the policies and certificates required, the Employer may affect the insurance for which the Contractor should have produced the policies and certificates and recover the premiums it has paid from payments due to the Contractor.
- 12.4 Alterations to the terms of insurance may be made either with the approval of the Engineer or as a result of general changes imposed by the insurance company with which the insurance policy is affected.
- 12.5 Both parties are to comply with conditions of the insurance policies.

## **13.0 Indemnities:**

- 13.1 The Contractor is liable for and indemnifies the Employer against losses, expenses and claims for loss or damage to AIIMS property, personal injury, and death caused by his own acts or omissions.
- 13.2 The Contractor indemnifies the Employer against claims for damage caused by the movement of his Equipment or Temporary Works outside the Site.

## **14.0 Site Investigation report:**

Deleted

## **15.0 Queries about the contract data:**

The Engineer is to give instructions clarifying queries about the Contract Data.

**16.0 Contractor to execute the works:**

1.1.2 The Contractor is to execute the work of **Supply, Installation, Testing & Commissioning of Medical Gas Manifold System along with buy back of existing manifold gas pipeline as on where is basis of CT-2 CCU at All India Institute of Medical Sciences, New Delhi** in accordance with the Specification and contract.

**17.0 The works to be completed by the intended completion date:**

The Contractor may begin the Works on the Start Date and is to carry out the Works in accordance with the program submitted by him, as updated with the approval of the Engineer, and complete them by the Intended Completion Date.

**18.0** Approval of samples shall be taken by the contractor prior to their delivery at site.

**19.0 Safety:**

The Contractor is responsible for the safety of all activities on the Site.

**20.0 Discoveries:**

**Deleted**

**21.0 Possession of the site:**

The Employer is to give possession of all parts of the Site to the Contractor, where the work is required to be executed. If possession of a part is not given by the date stated in the Contract Data, the Employer is deemed to have delayed the start of the relevant activities.

**22.0 Access to the site:**

The Contractor is to allow the Engineer and any person authorized by the Engineer access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

**23.0 Instructions:**

The Contractor shall carry out all instructions of the Engineer.

**24.0 Procedure for disputes:**

If any dispute or difference of any kind what so ever shall arise between the Employer and the contractor or the Engineer and the contractor in connection with or arising out of the Contract, or the execution of the works, whether during the progress of the works or after their completion and whether before or after the termination, abandonment or breach of the contract, it shall, in the first place, be referred to and settled by the Engineer who shall, within a period of ninety days after being requested by either party to do so, give written notice of his decision to the Employer and the Contractor. Subject to arbitration, as hereinafter provided, such decision in respect of every matter so referred shall be final and binding upon the Employer and the Contractor and shall forthwith be given effect to by the Employer and by the Contractor, who shall proceed with the execution of the works with due diligence whether he or the Employer requires arbitration or not. If the Engineer has given written notice of his decision to the Employer and the Contractor and no claim to arbitration has been communicated to him by either the Employer or the Contractor within a period of ninety days from receipt of such notice, the said decision shall remain final and binding upon the Employer and the Contractor. If the Engineer shall fail to give notice of his decision, as aforesaid within a period of ninety days after being requested, or if either the

Employer or the Contractor be dissatisfied with any such decision, then and in any such case either the Employer or the Contractor may within ninety days after receiving notice of such decision or within ninety days after the expiration of the first named period of ninety days as the case may be require that the matter or matters in dispute be referred to arbitration as hereinafter provided. All disputes or differences in respect of which the decision if any of the Engineer has not become final and binding as aforesaid, shall be finally settled under the Indian Arbitration and Conciliation Act, 1996 or any statutory modification or re - enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause. Such arbitration shall be settled by Sole arbitrator who shall be appointed by Chairman cum Managing Director, HSCC. The arbitration shall take place in New Delhi unless both parties agree otherwise. Neither party shall be limited in the proceedings before the arbitrator to the evidence nor did arguments put before the Engineer for the purpose of obtaining his said decision. No decision given by the Engineer in accordance with the foregoing provisions shall disqualify him from being called as a witness and giving evidence before the arbitrator on any matter whatsoever relevant to the dispute or difference referred to the arbitrator as aforesaid. The reference to arbitration may proceed notwithstanding that the works shall not then be or be alleged to be complete provided always that the obligations of the Employer, the Engineer and the Contractor shall not be altered by reason of the arbitration being conducted during the progress of the works.

**B. Time Control**

**25.0 Program:**

- 25.1 Within the time stated in the Contract Data, the Contractor shall submit to the Engineer for his approval a program showing the general methods, arrangements, order, and timing for all the activities in the Works.
- 25.2 The Contractor is to submit to the Engineer an updated program as required by the Engineer.
- 25.3 The Engineer's approval of the program does not alter the Contractor's obligations. The Contractor may revise the program and submit it to the Engineer again at any time. A revised program is to show the effect of Variations.

**26.0 Extension of the intended completion date:**

- 26.1 The Engineer is to extend the Intended Completion Date if an event not attributable to the contractor causing delay occurs or a Variation is issued which makes it impossible for completion to be achieved by the Intended Completion Date.
- 26.2 The Engineer is to decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking him to decide upon the effect of a event causing delay or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by his failure is not considered in assessing the new Intended Completion Date.

**27.0 Acceleration:**

Deleted

**28.0 Delays ordered by the Engineer:**

The Engineer may instruct the Contractor to delay the start or progress of any activity within the Works.

**29.0 Management meetings:**

- 29.1 The Engineer and/ the Contractor may be required the other to attend a management meeting.

The business of a management meeting is to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

### **C. Quality Control**

#### **30.0 Identifying defects:**

The Engineer is to check the Contractor's work and to notify the Contractor of any Defects which he finds. Such checking does not affect the Contractor's responsibilities. The Engineer may instruct the Contractor to search for a Defect and to uncover and test any work which he considers may have a Defect.

#### **31 & 32.0 Inspection & Tests:**

Inspection and Tests of all equipment will be carried out before supply to the site and for other plumbing, electrical and masonry work as per the relevant BIS at site. In case it is not available in BIS the same shall be carried out as per decision given by engineer based on existing general practice which will be binding to the agency. The material which is not passing to BIS or any other test will be rejected or may be accepted with reduced rates as per decision taken by engineer.

#### **33.0 Warranty**

33.1 The contractor warrants that the goods supplied under the contract is new, unused and incorporated all recent improvements in design and materials unless prescribed otherwise by the purchaser in the contract. The contractor further warrants that the goods supplied under the contract shall have no defect arising from design, materials or workmanship or from any act or omission of the contractor that may develop under normal use of the supplied goods under the conditions prevailing in India.

33.2 This warranty shall remain valid for **Twelve (12) months** after the goods or any portion thereof as the case may be, have been delivered to the final destination and installed and commissioned at the final destination and accepted by the purchaser in terms of the contract, unless specified otherwise in the SCC.

33.3 In case of any claim arising out of this warranty, the purchaser / consignee shall promptly notify the same in writing to the contractor. **The contractor shall attend with 95% uptime during Warranty period of the complete system otherwise with penalty of extension of Warranty period by double the downtime period actually taken by the contractor.**

33.4 Upon receipt of such notice, the contractor shall, within 8 hours on a 24(hrs) x 7 days) x 365(days) basis, repair or replace the defective goods or parts thereof, free of cost, at the ultimate destination. The contractor shall take over the replaced parts / goods after providing their replacements and no claim, whatsoever shall lie on the purchaser for such replaced parts / goods thereafter.

33.5 In the event of any rectification of a defect or replacement of any defective goods during the warranty period, the warranty for the rectified / replaced goods shall be extended to a further period of Twelve (12) months from the date such rectified / replaced goods starts functioning to the satisfaction of the purchaser.

33.6 If the contractor, having been notified, fails to rectify / replace the defect(s) within 8 hours on a 24(hrs)) x 7 (days) x 365 (days) basis, the purchaser may proceed to take such remedial action(s) as deemed fit by the purchaser, at the risk and expense of the contractor and without prejudice to other contractual rights and remedies, which the purchaser may have against the contractor.

33.7 During Warranty period, the contractor is required **to visit at each consignee/s site at once in 6 months** commencing from the date of the installation for preventive maintenance of the goods

#### **34.0 Incorrect defects after completion date:**

34.1 After completion the Engineer may arrange for a third party to correct a Defect if the contractor has not corrected it within the Defects Correction Period.

34.2 The Engineer is to give the Contractor at least 28 days notice of his intention to use a third party to correct a Defect. If the Contractor does not correct the Defects himself within this notice period, the Engineer may have the Defect corrected by the third party. The cost of the correction will be deducted from the Contract Price.

**D. Cost Control**

**35.0 Bill of quantities:**

- 35.1 The Bill of Quantities is to contain items for the work to be done by the Contractor.
- 35.2 The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work done at the rate in the Bill of Quantities for each item.

**36.0 Changes in the quantities:**

- 36.1 Final work done may exceed to any extent item wise as well as total work value wise, as per the requirement of the works to be executed under the contract.
- 36.2 If requested by the Engineer, the Contractor is to provide the Engineer with a detailed cost breakdown of any rate in the Bill of Quantities.

**37.0 Variations:**

- 37.1 All Variations are to be included in updated programs produced by the Contractor.

**38.0 Payments for variations:**

If the contract does not contain any rates or prices applicable to the varied work, the rates and prices in the contract shall be used as basis for valuation so far as may be reasonable, failing which , after due consultation by the engineer with the contractor, suitable rates or prices shall be agreed upon between the engineer and the contractor. In the event of disagreement, the engineer shall fix such rates or prices as are, in his opinion, appropriate based on CPWD norms and shall notify the contractor accordingly.

**39.0 Cash flow forecasts:**

- 39.1 The contractor shall provide cash flow forecast at the start of work to the Engineer. When the program is updated, the Contractor is to provide the Engineer with an updated cash flow forecast.

**40.0 Payment certificates:**

- 40.1 The contractor shall submit to the Engineer monthly statements of the value of the work completed less the cumulative amount certified previously on a printed proforma (prepared at the cost of Contractor).
- 40.2 The Engineer shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
- 40.3 The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

**41.0 Payment**

- 41.1 65% of BOQ rate shall be paid on receipt of equipment/materials at Site and after inspection and verification of equipment/materials and their respective documents including internal factory final inspection-cum quality report and material test reports etc. on pro-rata basis
- 41.2 25% of BOQ rate shall be paid on satisfactory erection, installation and commissioning of entire system and successful completion of running tests and removal of all defects if arises during running and operation of the system of Medical Gas Manifold System at site and take over by the Employer.



41.3 10% of BOQ rate shall be paid on completion of 30 days trial run from the date of takeover by the employer.

The following shall be the terms of payment for the comprehensive Maintenance services;

a) The payment shall be released quarterly as per the quoted rates for the particular year as follows :

100% - On submission of unconditional Bank guarantee of equal amount from any Nationalized/ Scheduled Bank and in the acceptable format and valid for one year (i.e. valid during the entire operation and maintenance period for the particular year).

**42.0 Taxes:**

Taxes shall be deducted as applicable.

**43.0 Cost of Labour:**

The Contractor shall be deemed to have allowed in his Tender Price for the full cost of labour having due regard to the provision of all labour legislation of the Central and State Government which are in force on the date of the tender and which are applicable to labour engaged for the Contract.

**44.0 Retention Amount:**

44.1 The Employer is to retain from each payment due to the contractor the proportion stated in the Contract Data until Completion of the whole of the Works.

44.2 On Completion of the whole of the Works, half the total amount retained is repaid to the Contractor and balance half when the Defects Notice Period has passed and the Engineer has certified that all Defects notified by him to the Contractor before the end of this period have been corrected. The second half of the retention may be paid against submission of Bank Guarantee approved by the Engineer from any nationalized bank if applicable.

**45.0 Liquidated damages:**

45.1 If the contractor fails to complete execution of works within the relevant time as specified in the Contract Data / Extended date, the contractor shall pay the employer the relevant sum as stated in the Contract Data as liquidated damages for every day or part of a day which shall elapse between the relevant time of completion and the date stated in Taking over certificate

**46.0 Advance payment:**

46.1 Deleted.

**47.0 Securities:**

47.1 The performance payment securities are to be provided to the Employer by the Start Date and are to be issued in a form and by a bank acceptable to the Employer.

47.2 If there is no reason to call the performance security, the performance security is to be returned by the Employer within 14 days of the last Defects Correction Period.

47.3 The Employer is to notify the Contractor of any claim made against the institution issuing the security.

47.4 The Employer may claim against the surety if any of the following occurs for 42 days or more  
(a) the Contractor is in breach of the Contract and the Employer has notified him that he is

(b) the Contractor has not paid an amount due to the Employer.

**48.0 Day works:**

48.1 Deleted

**49.0 Cost of repairs:**

Loss or damage to the Works or materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods is to be mended by the Contractor at the Contractor's cost if the loss of damage arises from the Contractor's acts or omissions.

**E. Finishing the Contract**

**50.0 Completion:**

The Engineer shall issue a certificate certifying Completion to the Contractor and the Employer when he decides that the work is completed.

**51.0 Taking over:**

The Employer shall take over the Works within seven days of the Engineer issuing a certificate of Completion.

**52.0 Final account:**

52.1 The Contractor shall furnish to the Engineer a detailed account of the total amount which he considers is payable to him under the Contract before the end of the Defects Notice Period. The Engineer is to certify any final payment which is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer is to issue a schedule which states the scope of the corrections or additions which are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Engineer is to decide on the amount payable to the Contractor.

**53.0 Operating and maintenance manuals:**

The contractor shall submit operation and maintenance manual for the complete Medical Gas Manifold System clearly indicating the trouble shooting, the preventive maintenance to be carried out and maintenance schedule, in three sets in hard binding.

**54. Remedies and Powers due to Default of Contractor:**

54.1 If the contractor shall become bankrupt or if the Engineer shall certify in writing to the Employer that in his opinion the contractor.

- a) has abandoned the contract, or
- b) without reasonable excuse has failed to commence the work or has suspended the progress of the works for twenty eight(28) days after receiving from the Engineer written notice to proceed, or
- c) has failed to remove materials from the Site or to pull down and replace work twenty eight(28) days after receiving from the Engineer written notice that the said materials or work had been condemned and rejected by the Engineer under these conditions, or
- d) despite previous warnings by the Engineer, in writing, is not executing the works in accordance with the contract, or is persistently or flagrantly neglecting to carry out his obligations under the Contract, or
- e) has to the detriment of good workmanship, or in defiance of the Engineer's instructions to the

contrary, sublet any part of the contract, then all the events mentioned in this clause 54.1 shall for the avoidance of doubt be a breach of this contract and the Employer may, after giving fourteen(14) days notice to the contractor, enter upon the site and the works and expel the contractor there from without thereby voiding the contract, or releasing the Contractor from any of his obligations or liabilities under the contract, or affecting the rights and powers conferred on the Employer or the Engineer by the contract, and may himself complete the works or may employ any other contractor to complete the works. The Employer or such other contractor may use for such completion so much of the constructional plant, Temporary works and materials, which have been or are deemed to be reserved exclusively for the execution of works under the provisions of the contract, as he or they may think proper, and the Employer may, at any time sell any of the said constructional plant, Temporary works and unused materials and apply the proceeds of sale in or towards the satisfaction of any sums due or which may become due to him from the contractor under contract.

**54.2 Valuation at date of forfeiture :**

The Engineer shall as soon as may be practicable after any such entry and expulsion by the Employer, fix and determine ex-parte, or by or after reference to the parties, or such investigation or enquiries as he may think fit to make or institute, and shall certify what amount, if any, had at the time of such entry and expulsion been reasonably earned by or would reasonably accrue to the contractor in respect of work then actually done by him under the contract and the value of any of the said unused or partially used materials, any constructional plant and any Temporary works.

**54.3 Payment after forfeiture:**

If the Employer shall enter and expel the contractor under this clause, he shall not be liable to pay to the contractor any money on account of the contract until the expiration of the Defects Notice period and thereafter until the costs of execution and maintenance, damages for delay in completion, if any, and all other expenses incurred by the Employer have been ascertained and the amount thereof certified by the Engineer. The contractor shall then be entitled to receive only such sum or sums, if any as the Engineer may certify would have been payable to him upon due completion by him after deducting the said amount. If such amount shall exceed the sum which would have been payable to the contractor on due completion by him then the Contractor shall, upon demand pay to the Employer the amount of such excess and it shall be deemed a debt due by the contractor to the Employer and shall be recoverable accordingly.

**55.0 Property:**

55.1 All materials on the Site, Plant, and Equipment owned by the Contractor, Temporary Works and Works are deemed to be the Property of Employer and are at his disposal if the Contract is terminated because of a fundamental breach of Contract by the Contractor.

**56.0 Frustration:**

56.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor the Engineer is to certify that the Contract has been frustrated. The Contractor is to make the Site safe and stop work as quickly as possible after receiving this certificate and is to be paid for all work carried out before receiving it and for any work carried out afterwards to which he was committed.

**57.0 Comprehensive Maintenance contract (CMC):  
(AllIMS reserve the right for contract, placement of order and necessary payment.)**

57.1 The purchaser / consignee reserve the rights to enter into Annual Comprehensive Maintenance Contract between Consignee and the Supplier for the period as required after the completion of Warranty period.

57.2 The supplier along with its Indian Agent and the CMC provider shall ensure continued supply of

the spare parts for the machines and equipments supplied by them to the purchaser for 3 years after the expiry of one year warranty period.

- 57.3 The Contractor shall provide comprehensive maintenance services for the Medical Gas Manifold System **for a period of Thirty Six (36) Months after completion of warranty period** as detailed below:
- a. For the Medical Gas Manifold Manifold System along with accessories for 3 years
  - b. With labour and spares after satisfactory completion of warranty period.
  - c. The cost of CMC may be quoted along with taxes applicable on the date of tender opening.
  - d. **The bidder must quote cost of CMC in the Price Bid and the rate of CMC will be added with total cost of Medical Gas Manifold System for evaluation and ranking purpose.**
  - e. The payment of CMC will be made on quarterly basis after satisfactory completion of contract, duly certified by user.
  - f. **There will be 95% uptime during CMC period of the complete system otherwise with penalty of extension of CMC period by double the downtime period.**
- 57.4 The comprehensive maintenance services during this period shall be inclusive of all spares, accessories, manpower, tools and tackle, replacement of parts, routine servicing and maintenance of equipment/systems etc. complete in all respects. The consumables like water, electricity and detergents during this period shall be arranged and provided by the Consignee. The Contractor shall carry out all routine and special maintenance of the equipment/plant/system and attend to any defects that may arise in operation of the equipments/system and plant. Consumable items required during the maintenance, loss of which is not attributable to bad material and/or workmanship will be arranged by the Consignee without cost to Contractor.

### Section- III Additional Specific Condition of Contract

1. **Supply, installation, Testing, commissioning of Medical Gas Manifold System along with buy-back of existing manifold gas as on where is basis of CT-2 CCU on Turnkey Basis.**
2. **The bidder must quote cost of CMC in the Price Bid and the rate will be added with the total cost of Medical Gas Manifold System for evaluation and ranking purpose.**
3. The bidder may collect the copy of **CCU layout plan** and visit the site, for complete evaluation of the project before submitting the bid with due permission from HSCC Site office, at AIIMS, New Delhi.
4. The entire project has to be done **on turnkey basis** including internal civil, water piping, plumbing and electrical works including water softening. Any minor details of construction which are obviously and fairly intended or which may not have been definitely referred to in this contract but which are usual of construction practice and essential to the work shall be included in this contract.
5. The bidder must enclose with their bids the **item wise compliance statement** for their offered equipment, system & accessories and quality standard categorically with respect to the tender specifications.
6. The selection of all equipments and system should be **as per the standard noted** in the specification.
7. Any **misinformation** regarding the specification of the equipment offered would mean outright technical **rejection**.
8. The bidder must submit **Printed catalogue** and technical data sheet to substantiate offer.
9. The bidder must submit **User list and Performance report** of similar type of work, within last 7 years from major hospital.
10. **Warranty for 1 yr** from the date of hand-over to the Employer.
11. **95% uptime warranty** during warranty period of the complete system otherwise with penalty of extension of warranty period by double the down time period
12. One year warranty as per Specific conditions of contract of the bidding document. The warranty will be for the main equipment along with accessories from the date of **satisfactory installation issued by user**
13. The bidder, in case of participating in the tender as agent, must include the **Manufacturer's Authorization** Form with the offer after getting duly filled as per Format enclosed in Special Condition of contract.
14. The bidder must have **dealership/distributorship** from the same manufacturer (whose manufactured items are offered in the bid) **at least one year** from the last day of the month previous to the one in which tender is invited.

15. The contractor must provide at least **30 days training program** to the concerned AIIMS personnel on the Medical Gas Manifold System and the necessary cost for training shall be borne by the contractor.
16. The Bidder should quote all the items and the Buy Back item as available in the Old CCU, AIIMS. The bid shall be rejected if the Buy Back amount is not quoted in the Price Bid of the tender.

#### Section IV. Contract Data

Items marked "N/A" do not apply in this Contract

The following documents are also part of the Contract:

	<b>Clause Reference (Conditions of contract)</b>
*The Contractor's Bid and Letter of Acceptance	[1]
*The Conditions of Contract	[1]
*The Technical Specifications	
*The Program	[25]
*The Priced Bill of Quantities	[35]
The Engineer is :	Chief General Manger (D&E & Projects ) or any other officer nominated from time to time by CMD of HSCC (I) Ltd. Plot 6(A),Block-E, Sector-1,Noida, Distt. Gautam Budh Nagar, Uttar Pradesh-201301.
*The Start Date is as notified in the letter of Acceptance	
*The Intended Completion Date for the whole work is two months from Date of Award.	[17]
*The Contractor is to submit the program for the works within 7 days of being notified of the acceptance of his bid.	[25]
*The contractor is to submit the updated program at the interval of 15 days	[25.3]
*The Site is located at AIIMS, New Delhi	[1]
*The Warranty is One year	[33]
*The language of the Contract is English	[3]
*The law which applies to the Contract is the Law of the Union of India, Jurisdiction is High Court of Delhi only	[3]
*Arbitration procedure to be used shall be Arbitration and Conciliation Act 1996 or the latest amended.	[24]
*Appointing Authority for the arbitrator	[24]
*Place where arbitration will take place: New Delhi.	[24]
*The currency of the contract is the Indian Rupees.	
*The proportion of payments retained is 5%. Limited to 5% of contract value.	[44]



\*The liquidated damages for the whole of the work are 0.5% per week of delay. [45]

\*Maximum liquidated damages shall be 10% of the Contract price. [45]

\*The amounts and currencies of the Performance guarantee are  
Amount : 10% of Contract price [47]

Currency: Indian Rupees

Insurance : 110% coverage (12)

FORM OF AGREEMENT

1. This Agreement made the \_\_\_\_\_ day of \_\_\_\_\_ 2013 between All India Institute of Medical Sciences (AIIMS), New Delhi ( hereinafter called "The Employer" ) represented by M/s HSCC (India) Limited, E-6(A), Sector - 1, Noida (UP) - 201301 who enters into this Agreement of the one part and M/s \_\_\_\_\_ (hereinafter called "the Contractor") of the other part.

1.1 Whereas the Employer is desirous that certain Works should be executed by the Contractor, viz supply, installation, testing and commissioning of **Medical Gas Manifold System and buy-back of manifold gas pipeline of CT-2 CCU at AIIMS** and has accepted a bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

**Now this Agreement witnesseth of follows :**

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz :
  - (a) The Letter of Acceptance ;
  - (b) The said bid ;
  - (c) The Conditions of Contract ;
  - (d) The Specification ;
  - (e) The Drawings ;
  - (f) The Priced Bill of Quantities ;
  - (g) Any other relevant documents referred to this Agreement or in the aforementioned documents
3. In consideration of the payments to be made by the Employer to the Contractor as herein after mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein the Contract Price or only such sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

In Witness whereof, the parties hereto have caused this Agreement to be executed the day and year first before written.

Signed, Sealed, and Delivered by the Said \_\_\_\_\_

Binding Signature of [ HSCC] on behalf of AIIMS, New Delhi  
\_\_\_\_\_

Binding Signature of Contractor \_\_\_\_\_

in the presence of

Witness (1) :

Witness (2) :

**PROFORMA FOR PERFORMANCE BANK GUARANTEE  
(On a stamp paper of appropriate value from any Nationalized Bank or Scheduled Bank)**

**To,**

M/s HSCC (India) Ltd.,  
Plot No. 6(A), Block E, Sector 1,  
NOIDA - 201 301.

Dear Sir,

In consideration of the All India Institute of Medical Sciences (AIIMS), New Delhi ( hereinafter called Employer) which expression shall include his successor and assigns represented by his Consultant M/s. HSCC (I) Ltd., Plot - 6 (A), Block - E, Sector - I, Noida, Uttar Pradesh - 201301 (hereinafter called HSCC) having awarded to M/s \_\_\_\_\_ (hereinafter referred to as the said Contractor or `Contractor' which expression shall whenever the subject to context so permits include its successors and assigns) a contract No. \_\_\_\_\_ in terms inter alia, of the HSCC Letter No. \_\_\_\_\_ dated \_\_\_\_\_ and the General Conditions of Contract and upon the condition of the contractor's furnishing security for the performance of the contractor's obligations and discharge of the contractor's liability under and in connection with the said contract upto a sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) amounting to

**10% (Ten percent)** of the total contract value.

1. We, \_\_\_\_\_ (hereinafter called `The Bank' which expression shall include its successors and assigns) having our branch office at \_\_\_\_\_ and Registered/Head Office at \_\_\_\_\_ a company registered under the Companies Act, 1956) hereby jointly and severally undertake to guarantee the payment to the Employer in rupees forthwith on demand in writing and without protest or demur or any and all moneys any wise payable by the contractor to the Employer under in respect of or in connection with the said contract inclusive of all the Employer's losses and damages and costs, (inclusive between attorney and client) charges and expenses and other moneys any wise payable in respect of the above as specified in any notice of demand made by the Employer to the Bank with reference to this guarantee upto an aggregate limit of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only).
2. We \_\_\_\_\_ Bank Ltd. further agree that The Employer shall be sole judge of and as to whether the said contractor has committed any breach or breaches of any of the terms and conditions of the said contract and the extent of loss, damage, cost, charges and expenses caused to or suffered by or that may be caused to or suffered by The Employer/ HSCC on account thereof and the decision of The Employer that the said Contractor has committed such breach or breaches and as to the amount or amounts of loss, damage, costs, charges and expenses caused to or suffered by The Employer from time to time shall be final and binding on us.
3. The Employer shall be at liberty without reference to the Bank and without affecting the full liability of the Bank hereunder to take any other security in respect of the Contractor's obligations and liabilities hereunder or to vary the contract or the work to be done thereunder vis-a-vis the Contractor or to grant time or indulgence to the Contractor or to reduce or to increase or otherwise vary the prices of the total contract value or to release or to forbear from enforcement of all or any of the security and/or any other security(ies) now or hereafter held by The Employer and no such dealing(s) reduction(s) increase(s) or other indulgence(s) or arrangements with the Contractor or release or forbearance whatsoever shall absolve the bank of the full liability to The Employer hereunder or prejudice the rights of The Employer against the bank.

4. This guarantee shall not be determined or affected by the liquidation or winding up, dissolution, or change of constitution or insolvency of the Contractor but shall in all respects and for all purposes be binding and operative until payment of all monies payable to The Employer in terms thereof.
5. The bank hereby waives all rights at any time inconsistent with the terms of this guarantee and the obligations of the Bank in terms hereof shall not be any wise affected or suspended by reason of any dispute or disputes having been raised by the Contractor stopping or preventing or purporting to stop or prevent any payment by the Bank to The Employer in terms hereof.
6. The amount stated in any notice of demand addressed by The Employer to the Bank as liable to be paid to The Employer by the Contractor or as suffered or incurred by The Employer on account of any losses or damages or costs, charges and/or expenses shall be conclusive evidence of the amount so liable to be paid to The Employer or suffered or incurred by The Employer as the case may be and shall be payable by the Bank to The Employer in terms hereof.
7. This guarantee shall be a continuing guarantee and shall remain valid and irrevocable for all claims of The Employer and liabilities of the contractor arising up to and until midnight of \_\_\_\_\_.
8. This guarantee shall be in addition to any other guarantee or security whatsoever that The Employer may now or at any time any wise may have in relation to the Contractor's obligations/or liabilities under and/or in connection with the said contract, and The Employer shall have full authority to have recourse to or enforce this security in preference to any other guarantee or security which The Employer may have or obtain and no forbearance on the part of The Employer in enforcing or requiring enforcement of any other security shall have the effect of releasing the Bank from its full liability hereunder.
9. It shall not be necessary for The Employer to proceed against the said Contractor before proceeding against the Bank and the Guarantee herein contained shall be enforceable against the Bank notwithstanding that any security which The Employer may have obtained or obtain from the contractor shall at the time when proceedings are taken against the said bank hereunder be outstanding or unrealised.
10. We, the said Bank undertake not to revoke this guarantee during its currency except with the consent of The Employer in writing and agree that any change in the constitution of the said contractor or the said bank shall not discharge our liability hereunder.
11. We \_\_\_\_\_ the said Bank further that we shall pay forthwith the amount stated in the notice of demand notwithstanding any dispute/difference pending between the parties before the arbitrator and/or that any dispute is being referred to arbitration.
12. Notwithstanding anything contained herein above, our liability under this guarantee shall be restricted to Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) and this guarantee shall remain in force till \_\_\_\_\_ and unless a claim is made on us within 3 months from that date, that is before \_\_\_\_\_ all the claims under this guarantee shall be forfeited and we shall be relieved of and discharged from our liabilities thereunder.

Dated \_\_\_\_\_ day of \_\_\_\_\_ 2013.

For and on behalf of Bank.

Issued under seal :

**PROFORMA FOR BID SECURITY BANK GUARANTEE  
(To cover payment of Bid Security & Conditions of Contract)**

(On a stamp paper of appropriate value from any Nationalized Bank or Scheduled Bank)

To,

M/s HSCC (India) Ltd.,  
Plot No. 6 (A), Block E, Sector -1,  
Noida -201301

Dear Sir,

In consideration of your agreeing to accept Bank Guarantee for Rs. ----- (Rupees -----) in lieu of payment from M/s. ----- having their registered office at ----- (hereinafter called the Bidder) towards bid security in respect of your Tender No. ----- Calling for tender for ----- at ----- and for due fulfillment of the terms & conditions of the said tender, we hereby undertake and agree to indemnify and keep you indemnified to the extent of Rs. .... (Rupees .....).

In the event of any loss or damages, costs, charges or expenses caused to or suffered by you by reason of any breach or non- observance on the part of the bidder of any terms & conditions of the said tender, we shall on demand and without cavil or argument and without reference to the bidder, irrevocably and unconditionally pay you in full satisfaction of your demand the amounts claimed by you, provided that our liability under this guarantee shall not at any time exceed Rs. ....

This guarantee herein contained shall remain in full force and till you finalize the tender and select the tender as per your choice and it shall in the event of the said bidder being selected and entrusted with the said work, continue to be enforceable till the said bidder executes the Agreement with you and commences the work as stipulated under the terms & conditions of the said tender have been fully and properly carried-out by the said bidder and accordingly discharges the guarantee.

We also agree that your decision as to whether the bidder has committed ant breach or non-observance of the terms & conditions of the said tender shall be final and binding on us.

We undertake to pay the Consultant any money so demanded by the Consultant notwithstanding any dispute or disputes raised by the Agency/supplier(s) in any suit or proceedings pending before any Court or Tribunal relating thereto, our liability under this present being absolute and equivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Agency/supplier(s) shall have no claim against us for making such a payment.

This guarantee shall continue to be in full force and effect for a period of 120 days from the date of submission of bid. Notwithstanding the above limitations, we shall honour and discharge the claims preferred by you within thirty days of expiry of this guarantee.

We shall not revoke this guarantee during its currency except with your previous consent in writing. This guarantee shall not be affected by any change in Constitution of our Bank or of the Bidder firm. Your neglect or forbearance in the enforcement of the payment of any money, the payment whereof is intended to be hereby secured or the giving of time for the payment hereto shall in no way relieve us our liability under this guarantee.

Dated this .....day of ..... 201

Yours faithfully

Signature & seal of the Bank (Authorized Signatory)

**MANUFACTURER'S AUTHORIZATION FORM**

No. -----

Dated -----

To

-----  
-----  
-----

Dear Sir,

Tender No. -----

We \_\_\_\_\_ who are established and reputed manufacturer of \_\_\_\_\_(name & description of goods offered) having factories at \_\_\_\_\_ ( address of factory) do hereby authorize M/s \_\_\_\_\_ ( Name & address of agent ) which has been our dealer/distributor since \_\_\_\_\_, to submit a bid, and sign the contract with you for the goods manufactured by us against the above tender.

No company or firm or individual other than M/s \_\_\_\_\_ are authorized to bid and conclude the contract for goods manufactured by us against this specific tender.

We hereby extend our full guarantee and warranty as per the clause of Condition of Contract and Additional Specific Conditions of Contract of above tender for goods and services offered for supply by our authorized firm .

Yours faithfully,

( Name )  
(Name of Manufacturer)

Note: This authorization letter should be on the letter head of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. It should be included by the bidder in its bid.

# **TECHNICAL SPECIFICATIONS**



## TECHNICAL SPECIFICATION FOR MEDICAL GAS MANIFOLD SYSTEM

**Scope of work**            **Supply, installation, testing, commissioning and handing over of Medical Gases Manifold System and providing of free spare parts and service during 1 year Defect Liability Period.**

### **1.0 Distribution piping (Indigenous)**

Medical graded Copper pipes shall be solid drawn, tempered, seamless, phosphorous deoxidized, non-arsenic and degreased for oxygen service. The chemical composition shall be as per BS-6017: 1981 Table 2, Cu-DHP grade. Distribution Copper Pipe manufactured as per BSEN:13348

The supply of pipes shall accompany with manufacturers test certificates for physical properties and chemical composition. The supply of pipes shall be further substantiated with inspection certificates from third party inspectors like LLOYDS.

Each pipe shall be capped at both ends before supply.

The contractor shall use the following sizes:

	<u>Outer Dia.</u>	<u>Thickness</u>
1.	15mm	1.0mm
2.	22mm	1.0mm
3.	28mm	1.0mm

Copper to Copper joints shall be made on site using silver-copper-phosphorous brazing alloy to BS-1845. Copper to brass or gunmetal joints shall not be made on site. Except for mechanical joints used for components, all metallic pipeline joints shall be brazed or welded. All pipelines shall be routed in such a way that their not exposed to a temperature less than 5 deg Celsius above the dew point of the gas distribution pressure. Pipeline shall be supported at interval to prevent sagging.

#### Installation and testing

- i) Installation of piping shall be carried out with utmost cleanliness. Only pipes, fittings and valves that have been degreased and fittings brought in polythene sealed bags will be used at site. Pipes fixing clamps shall be of non-ferrous and non-deteriorating plastic suitable for the diameter of the pipe.
- ii) All pipe joints shall be made using inert gas using flux less silver brazing method (silver brazing). Continuous purging with oil-free nitrogen to be carried out while brazing is done.

- iii) Adequate supports shall be provided while laying pipelines to ensure that the pipes do not sag. Suitable sleeves shall be provided wherever pipes cross through walls/slabs. All pipe clamps shall be non-reactive to copper.
- iv) After erection, the pipes will be flushed with dry nitrogen gas and then pressure tested with dry nitrogen at a pressure equal to twice the working pressure or 150 psig, whichever is higher for period of not less than 24 hours.
- v) All the piping system shall be tested in the presence of the site-engineer or his authorized representative.
- vi) Painting :

All exposed pipes should be painted with two coats of synthetic enamel paint and color codification should be as per IS:2379 of 1963.

## **2.0 ICU PENDANT- Imported.**

### **Suspended technical column ensuring the fitting of electrical and medical gas equipment for ICU**

The anchoring plate shall be of adequate thickness shall ensure its fixing between the concrete ceiling and false ceiling. The plate assembly shall be quoted with primer and paints

The columns shall be made of aluminium profiles ensuring medical gas supply and full access to accessories and pipes in 3 compartments individually closed by 2 removable covers.

Electrical and medical gas connections shall be in the column and shall be accessible without damaging the ceiling. If the ceiling is not ventilated, its medical gas compartments shall have to be made airtight.

The height of the column shall be defined so to leave a 50 cm space between the floor and the bottom of the column.

The electrical and medical gas fittings are completely modular, which allows the components to be extended, moved, removed or maintained without cutting the housing. The design of the technical column also allows an invisible yet efficient ventilation of the medical gas compartment, and a mechanical separation between electrical and medical gas networks. The covers shall be wired to the earth at the bottom of the unit. Prong systems and non-removable covers are prohibited.

The round curves and smooth surface of the product enable its safe use and easy cleaning.

The section of the profiles so assembled must be able to resist important shocks (bed with patient) without damaging the column, or causing equipment to fall over. Its bearing capacity shall be 150 kg minimum.

Two attached stainless steel tubes of a diameter of 30 mm and a height of 150 cm shall be laterally installed on supports placed 20 cm away from the body of the column so to hold accessories (syringe pumps, a monitoring unit, a shelf, a rail, and so on...) without denying access to medical gas and power supply equipment.

The system of tubes and wires shall also be easy to clean and shall enable quick handling of the tubes and wires.

Each work station shall be equipped with :

- 10 earthed 5/15 Amp socket prewired on 2 lines
- 1 RJ45 socket for computer
- 1 RJ45 socket for monitor
- 2 Oxygen (Oxygen) outlets
- 2 Compressed Air (CA) outlet
- 2 Vacuum (Vac) outlets
- Infusion Stand with Bracket
- Curved Infusion Stand with bracket
- 1 large Shelf with drawer
- 2 Small shelves
- Flow meter cum Humidifier holding bracket
- Examination lamp 50W/12V arm length 900mm
- 1xSuction Jar Holder
- 1xNurse call
- Sharps Bin Holder

#### **Gas Outlets of Pendant -Imported**

- a) Outlets shall be manufactured with a 165 mm long Copper inlet pipe stub which is silver brazed to the outlet body. The inlet pipe should be capable of swiveling by 360 degrees for enabling the same to be connected to the pipeline system.
- b) Outlet shall be equipped with a primary and secondary check valve and the secondary check valve shall be rated at minimum pressure of 200 p s i. In the event the primary check valve is removed for maintenance there should not be any leakage (on-line maintenance should be possible w/o disrupting the functioning of other outlets). Outlet bodies shall be gas specific by indexing each gas service to a gas specific dual pin indexing arrangement on the respective identification module.
- c) There should be a push button release mechanism for disconnecting apparatus accessible from top, bottom and side of outlets.
- d) A large color-coded front plate shall be used for ease of gas identification and aesthetic appeal.
- e) With the back rough in mounted the outlet shall adjust up to 25 mm variation in wall thickness.
- f) The latch valve assembly should accept only corresponding gas specific adaptors.
- g) All outlets shall be cleaned and degreased for medical gas service, factory assembled and tested.

## **Alternately**

### **Gas Outlet (Imported)**

- a) Shall have gas indexing geometry to BS 5682:1998. Terminal unit front fascia should be metal and it should be hundred percent metal. Gas specific components comprising the terminal unit second fix shall be manufactured from die cast Zinc alloy or similar hard wearing metal. Plastic Components should not be acceptable. Terminal units socket shall be permanently coated with a low friction fluoropolymer for maximum reliability and service life.
- b) The terminal unit socket die-casting shall incorporate a gas indexing pin to overcome the risk of loosening due to rough handling/mishandling. The second fix socket shall incorporate a sheer plane to safeguard the first fix and pipeline in the event of accidental damage or bed jacking. Gas specific components shall incorporate the gas identity marking permanently stamped or cast into the component surface. The first fix shall all metal construction with a brass base block and copper stub pipe. The first fix shall incorporate an integral check valve to enable servicing of the second fix and valve seals without isolation of the gas supply. Probe roller pins shall be manufactured from stainless steel. Wall mounted terminal unit shall be Provided with white ABS mounting Box with matching fascia. The mounting box shall have smooth rounded corners to avoid the possibility of injury. A bezel shall be available to cover the plaster edge, provide a neat and easily to clean finish.

### **3.0 Infusion cum IV Stand**

30 mm dia of Stainless steel -304 grade rod (Mirror finished) Infusion cum IV Stand adjustable from 1500mm to 2100 shall be mounted over heavy cast iron base/Rectangular tube (51x25mm) of at least 10 gauge steel. A telescopic 13mm dia SS-304 grade rod with double hooks and a T type SS hook (Grip S.S stud fitted in Bakelite knob for holding saline rod in position). Heavy cast iron base should be fitted with three nos swiveling nylon castor wheel and stopper arrangements. Epoxy powder Coated with minimum 50 microns thickness on base.

### **4.0 HP & LP Tubing**

HP & LP Tubing Flexible having Antistatic core as per ISO with proper colour coded

### **5.0 Alarm System\_ (Imported)**

Alarm shall be microprocessor based with individual microprocessors on each area display and sensor board. The sensors shall be capable of local or remote mounting. **Each area display module/sensor unit shall be gas specific.** With an error message display for an incorrect connection.

The alarms shall be field expandable with the addition of extra modules.

Upto six services can be accommodated per standard box

Each specific service shall be provided with an LED digital read out comprising of 0-250 psi for positive pressure and 0-30 inch Hg for vacuum. The digital readout shall provide a constant indication of each service being measured. A bar graph trend indicator shall be provided for each service indicating a green "NORMAL", yellow "CAUTION" and a red "HIGH" or "LOW" alarm condition. Under normal operation the bar graph display shall move up and down in the green range depending on service usage. If an alarm occurs, the "RED" alarm light will flash and the audible alarm will sound. Pushing the "ALARM SILENCE" button will cancel the audible alarm but the unit will remain in the alarm condition until the problem is rectified.

The default set points shall be +/- 20% variation from normal condition.

In the calibration mode the following parameters shall be field adjustable:

- i) High/Low set points
- ii) Imperial/Metric Units
- iii) Repeat alarm enable/disable

Set points shall be adjustable by two on board push buttons.

In addition "PUSH TO TEST" & "ALARM SILENCE" buttons shall be easily accessible to operate and test the unit.

Combination master/area alarms shall have no moving parts and shall require no maintenance after initial installation.

### **Alternately**

#### **Alarm System (Imported)**

Alarm system should have microbial coating labels for touch control and capability of monitoring of installed gas services by means of sensors that detect deviations from the normal operating limits. The medical gas area alarm shall fully comply with requirements of BSEN 60601-1 and BS EN 60601-1-2 and BS EN ISO 7396-1. The cover, back box and bezel (if required ) shall be polyester powder. A single tamper proof fastener shall be used to gain access to the hinged door. The hinge shall operate through a minimum of 120° to provide adequate access. It should have each gas service shall be displayed by cored LED to show Normal (green), Low and High pressure (red) conditions. Medical vacuum systems shall be displayed in the Normal (green) and Low vacuum (red) conditions. Failure indicators shall be displayed by flashing lights and normal indications shall be steady. Each LED block indicator shall be a plug-in component with individual long life LED

connected in parallel in two banks to provide duplex circuits. An audible warning shall sound simultaneously with any failure indication and a mute facility shall be provided. Following a mute selection the audible will resound after 15 minutes (approx.) or shall operate simultaneously should a further alarm condition occur. A Mute switch shall be provided inside the panel for use during any maintenance resulting in prolonged pipeline or plant shutdown. This facility shall automatically reset when the gas service returns to normal. The alarm panel shall have a Test facility to prove the integrity of the internal circuits, LED and audible warning. The alarm panel shall incorporate a volt free normally closed relay to allow for interconnection to either a medical gas central alarm system or an event recording circuit of a building management system. Each Alarm shall provide a green LED to indicate that electrical power is available at the panel and a red LED to indicate 'System Alarm'. In the event of an electrical power supply failure the 'System Alarm' LED shall illuminate (flashing) and the audible warning shall be delayed for 30 seconds to enable standby generator tests. Line continuity monitoring circuits shall be provided to constantly monitor the integrity of the input sensors and interconnecting wiring. In the event of any fault the line continuity monitoring circuits shall initiate the specific gas service failure indication, a System alarm indication and an audible warning. Further aids to fault diagnosis shall be provided to allow connection of up to 5 repeater panels, enabling the visual and audible alarm signals to be repeated at other locations within department.

It should be connected through Pressure and Vacuum Switches. Pressure and Vacuum switches shall be manufactured with brass wetted parts and house a PCBA with line continuity monitoring resistors. Electrical connectors shall be designed for frequent disassembly (Spade connectors are not acceptable). Pressure switches shall include both high and low pressure settings in the same switch, using only a single 1/4" BSP threaded pipeline connection to minimize number of sealed joints. The body and housing of the Pressure switch shall be manufactured from impact resistance, rigid and inherently corrosion proof materials. (Coating or plating of Mild Steel is not acceptable). Pressure Switches shall connect directly to the Area Alarm Panel. (It is not acceptable to fit a separate connection Box to convert switch signals to data signal.)

## **6. Valve Boxes - Imported**

Each recessed zone valve box shall consist of the following components: A steel valve box which can house single or multiple shut-off ball valves with tube extensions, A three piece design Valve, an aluminium frame, and a pull-out removable window.

The valve box shall be constructed of 18 gauge steel complete with a baked enamel finish.

The doorframe assembly shall be constructed of anodised aluminium and shall be mounted to the back box assembly by screws as provided. The removable front shall consist of a clear window with a pullout ring pre-mounted to the centre of the window.

Access to the zone shut-off valves shall be by merely pulling the ring assembly to remove the window from the doorframe. The window can be reinstalled without the use of tools only after the valve handles have been returned to the open position.

The window shall be marked with the following :-

"CAUTION: MEDICAL GAS CONTROL VALVE

CLOSE ONLY IN EMERGENCY"

Valves shall be a 4-bolt design, bronze body, double seal, union ball-type, with Teflon (TFE) seats and Viton seals, "O" ring packing, and ball which seals in both directions, blow-out proof stem, with a pressure rating of 2760 kPa (400 psig). Valves shall be operated by a lever-type handle requiring only a quarter turn from a fully open position to a fully closed position. All valves shall be equipped with type "K" washed and degreased copper pipe stub extensions of sufficient length to protrude beyond the sides of the box.

The entire valve body and pipe stubs shall be plated to a minimum of 25 mm (1") beyond the sides of the back box, but in no instance shall the plating be extended to the ends of the pipe stubs. All pipe stub extensions shall be supplied with suitable plugs or caps to prevent contamination of the assembly prior to installation.

Each valve shall be supplied with an identification bracket bolted directly onto the valve body for the purpose of applying an approved medical gas identification label. A package of labels shall be supplied with each valve box assembly for application by the installer.

Valves shall be available with line pressure gauges, as required. Gauges shall be 51 mm (2") diameter, with metal case and ring.

Emergency feed system should be provided.

## **Accessories**

### **7) Flow meter with Humidifier (Imported)**

Back Pressure Compensated flow meter will be of accurate gas flow measurement with following features:

- A Control within a range of 0 – 15 Lpm.
- B It will meet strict precision and durability standard.
- C The flow meter body should be made of brass chrome plated materials.
- D The flow tube and shroud components should be made of clear, impact resistant polycarbonate.
- E Flow Tube should have large and expanded 0 – 15 lpm range for improved readability at low flows.
- F Inlet filter of stainless steel wire mesh to prevent entry of foreign particles.

G The humidifier bottle is made of unbreakable & Reusable of polycarbonate material and autoclavable at 121 degree centigrade.

8) **Ward Vacuum Units (Imported)**

Ward vacuum Unit shall be wall mounted and shall consists of followings with same make :-

- Suction Controller/ Regulator (Digital/Analogue type- easy view)
- Collection bottle 2000ml with mounting arrangement.

The vacuum regulator will be step-less adjustable and have large vacuum gauge providing digital/analogue indication of the suction supplied by the regulator.

Safety trap shall be provided inside the jar to safeguard the regulator from overflowing. Different color options should be available.

The unit will be consisting of reusable 2000 ml shatter resistant bottle, each made up of Polycarbonate material and fully autoclavable at 121 degree centigrade.

**9. IN ADDITION TO THE ABOVE, FOLLOWING TURNKEY WORKS FOR INSTALLATION AND COMMISSIONING OF MEDICAL GAS MANIFOLD SYSTEM ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR:**

- Bidder must take into consideration in its bid, costs to be incurred for any additional work pertaining to Civil, Electrical, Mechanical and any other protections relevant as per State/Central Govt. regulation/local authority, Servo stabilisers, U.P.S. etc. required for successful installation testing and commissioning of the system and the offered price should include all such costs, each Schedule is to be considered a package in itself and contractor to execute the order package on a “turn key basis”.
- Providing fixing of **Electrical Gadgets** like ELCB, MCB, Power points, etc in the Medical Gas Pipeline System.
- Installation of all **electrical cabling** must be of IS: 1554 (As per latest amendment) standard and wiring as per IS: 732 standard and proper earthing of all Medical Gas Pipeline System and other electrical instrument and accessories in the Medical Gas Pipeline System as per standard guidelines of BIS.

**In addition to the above mentioned equipment/appliances**, if the contractor thinks it necessary to include any other equipment/appliances, accessories etc. for the MGMS then that may be provided after approval from Engineer in-charge.

The sizes are approximate. Minor variations in sizes shall be acceptable subject to prior approval of the Engineer.



## APPROVED MAKES

1.	Cable/Wire	SKYTONE/KEI/UNIVERSAL/NATIONAL/RR CABLE
3.	PVC Pipe Class III with Fitting	FINOLEX/ SUPREME/ PRINCE/ ORI-PLAST
5.	G.I. / M.S. Pipe Heavy Class	TATA/ JINDAL/SAIL /SURYA PRAKASH/HSL/ITC
6.	MCCB/Contactor/Relay	L&T/ABB/SIEMENS/SCHNEIDER
7..	Copper Pipe-	MAXFLOW/RAJCO/PRECISION

### Note :

- **The bidder should attach Technical Compliance item wise with respect to the above technical specifications and turnkey work along with Printed catalogues**
- **The contractor shall be responsible for the complete works including submission of working drawing and walk through view.**
- **Bidder should provide complete Operation Manual, Equipment Manual and Service Manuals for all systems and subsystems.**
- **Final electrical safety test, system test and calibration should be done by authorized person with test instruments.**
- **All electrical accessories like cable wire, electrical outlets, switches etc, should be fire proof of reputed make, certified for electrical safety.**
- **Wherever makes have not been specified for certain items, the same shall be as per BIS and as per approval of HSCC.**
- **The contractor should provide test certificate for all materials and equipments used for MGMS**
- **Training of personnel of the Institute should be 7 days at least**
- **The contractor should prepare and submit layout plan for Gas Pipeline System, Electrical Wiring, to HSCC for approval before beginning of supply and installation and As-Built drawing after installation.**