

**LRSI**

**LALA RAM SARUP INSTITUTE OF TUBERCULOSIS &  
RESPIRATORY DISEASES, NEWDELHI**

**Tender**

**for**

**Supply Installation Testing & Commissioning of Laundry  
Equipments at LRS Institute of Tuberculosis & Respiratory  
Diseases New Delhi**

**VOLUME – II**

**GENERAL INSTRUCTION TO BIDDERS,**

**CONDITIONS OF CONTRACT  
&  
TECHNICAL SPECIFICATION**

**April 2012**



( Consultants & Engineers for Mega Hospitals & Laboratories )  
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**Tender No. HSCC/LRSI/PG-1/107/LAUNDRY/2012**

## SECTION I: INSTRUCTIONS TO BIDDERS

### A. General

#### 1.0 Scope of work:

##### 1.1.1 LRSI through HSCC (India) Ltd. invites bids for the Supply, Installation, Testing & Commissioning of Laundry Equipments at LRSI, New Delhi

1.2 The successful bidder will be expected to complete the works within **12 (Weeks)** from the date of Award of work.

#### 2.0 The Employer:

Lala Ram Sarup Institute of Tuberculosis & Respiratory Diseases (LRSI), 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. Power of attorney of the signatory of the bid to commit the bidder.
2. 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
- Volume-III : Bill of Quantities

## **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.
- 11.2.1 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. **1,40,000/-**.
- 14.2 The bid security and cost of document shall be in the form of a Pay order/ Demand Draft 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.
- (ii) **Envelope No. 2** shall contain the bidder's application for pre-qualification, original bid document comprising of Volume-I and all the asked information and documents in support of pre-qualification.
- (iii) **Envelope No. 3** shall contain the covering letter and original bid document comprising of Volume-II, duly signed and stamped and the other documents as indicated at Clause 3.1, duly signed and stamped, without any conditions or reservation.
- (iv) **Envelope No. 4** 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. 4 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 & 3**

**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 four envelopes shall be sealed and enclosed in an envelope and addressed to the General Manager (PG-I), 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 Laundry Equipments at LRSI, 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 shall be evaluated.

Envelope No.3: Shall be opened for only those parties who meet the pre-qualification criteria and are pre-qualified, on the same day or at a subsequent date to be intimated in advance to such eligible bidders. Bids of parties who do not accept the conditions laid down in the bid documents may be rejected.

Envelope No. 4 : 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 5% 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 phyLRSIal 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 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 phyLRSIal 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:**

The Contractor is to execute the work of supply, installation, testing & commissioning of Laundry Equipments at LRSI, 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 by the third party like SGS/Lloyd/TUV 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 **Twenty four (24) 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 Twenty Four (24) 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 test certificates of third party like SGS/Lloyd/TUV and internal factory final inspection-cum quality report 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 Pipeline System at site and take over by the Employer(LRSI).



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 Laundry system/ Equipments 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):  
(*LRSI 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 2 years warranty period

- 57.3 The Contractor shall provide comprehensive maintenance services for the Laundry equipment and system **for a period of Thirty Six (36) Months after completion of warranty period** as detailed below:
- a. For the laundry equipment and system along with accessories and system 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 CMS will be added with total cost of Laundry equipments 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 and maintenance of Laundry equipments and system along with necessary Water piping & Plumbing work, Electrical distribution panel with wiring & cabling, Ventilation of Laundry Room and Water Softening System for supply of soft water to Laundry equipment.
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 Pipeline System for evaluation and ranking purpose.**
3. The bidder may collect the copy of **building layout plan** and visit the site, for complete evaluation of the project before submitting the bid with due permission from HSCC Site office, LRSI, NewDelhi.
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 bidder should have **service facility in Delhi-NCR**, in the event of work, is awarded to provide useful service with spares during warranty and CMC with zero downtime.
7. The selection of all equipments and system should be **as per the standard noted** in the specification.
8. Any **misinformation** regarding the specification of the equipment offered would mean outright technical **rejection**.
9. The bidder must submit **Printed catalogue** and technical data sheet to substantiate offer.
10. The bidder must submit **User list and Performance report** of similar type of work, within last 7 years from major hospital.
11. **Warranty for 2 yrs** from the date of hand-over to the Employer.
12. **95% uptime warranty** during warranty period of the complete system otherwise with penalty of extension of warranty period by double the down time period
13. Two years 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**
14. 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.

15. The bidder must quote for supply of the **major laundry equipments of same manufacturer.**
16. 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.
17. **All laundry equipments must be CE marked from ISO certified Company.**
18. The contractor must provide at least **30 days training program** to the concerned LRSI personnel on the Mechanised Laundry equipments and system and the necessary cost for training shall be borne by the contractor.

#### 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 :	General Manger (PG I ) 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 ten weeks 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 LRSI, New Delhi,	[1]
*The Warranty is Two years	[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 [47]

Amount : 5% of Contract price  
Currency: Indian Rupees



FORM OF AGREEMENT

1. This Agreement made the \_\_\_\_\_ day of \_\_\_\_\_ 2009 between Lala Ram Sarup Institute of Tuberculosis & Respiratory Diseases (LRSI, 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 Laundry Equipments 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 LRSI, 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 Nationalised 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 Lala Ram Sarup Institute of Tuberculosis & Respiratory Diseases, 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 \_\_\_\_\_ 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 \_\_\_\_\_ 2009

For and on behalf of Bank.

Issued under seal :

**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**

## PACKAGE : MECHANISED LAUNDRY

### SCOPE

The scope of work covered under this package comprises of supply, installation, testing and commissioning and handover of complete laundry for the 500 bedded Hospital including all equipments, accessories and auxiliary items in accordance with the specifications, bill of quantities and drawings including necessary Water piping & Plumbing work, Electrical distribution panel with wiring & cabling, Ventilation of Laundry Room and Water Softening System for supply of soft water to Laundry equipment & accessories.

### PERFORMANCE OF LAUNDRY

The following design parameters have been taken into consideration for the laundry equipment selection and system design:

- a. Duration of laundry operation/day : 8 hours
- b. Estimated maximum linen load from wards & OTs etc. : 1000 kg
- c. Weather conditions : Hot, Cold and Dry

Based upon the above design parameters, taking into consideration diversity factor of 0.95 the laundry is designed to cater 950 kg of dry linen generated per day from the hospital which includes soiled, blood and mucous stained linen from the operation theatres and wards etc.

### WASH PROCESS AND OPERATION SEQUENCE

The dirty linen received from various departments of the hospital shall be marked and subsequently sorted out in the soiled linen storage and sorting area. The clothes with blood stains shall be separated for the sluicing operation and the balance load shall be fed to the washer Extractor. The linen after washing and extraction of water is divided into two - one for the flat work ironers and the other for the drying tumblers. From the drying tumbler some of the goods which require high order finish are forwarded to the finished goods store for issue to various departments of the hospital. All the goods received from flat work ironers and the flat bed presses are also forwarded to the finished goods store, which has a mending unit attached to it for minor repairs before issue. Mending unit is also attached to the incoming linen sorting area to carry out any minor mending work before the linen is sent for washing.

### SYSTEM CONFIGURATION

The laundry equipment shall be electric heated type. As per the design parameters and operation sequence described above to cater for the hospital needs the following equipment have been included in the laundry.

S.No.	EQUIPMENT	CAPACITY	QTY
1.	Sluicing cum washer Extractor (Electric heated type)	30 kg	1 No.
2.	Washer Extractor (Electric heated type)	30 kg	1 No.
3.	Washer Extractor (Electric heated type)	60 kg	2 Nos.
4.	Drying tumbler (Electric heated type)	30 kg	3 Nos.

5.	Flat bed press (Pneumatically operated)	1500x700 mm	1 No.
6.	Flat Work Ironer Chest heated (Calendaring m/c)	500 dia. x 3000 mm	1 No.
7.	Vacuum Finishing table with steam Hand press	1250 x 700 mm	2 Nos
8.	Mending Machine (Motorized Sewing machines with table)		2 Nos
9.	Mobile table	100Kg	1 No.
10.	Wash room trolley	50 Kg	4 Nos.
11.	Dry linen trolley	50 Kg	4 Nos
12.	Shelf Trolley (finished goods)	100 Kg	2 Nos.
13.	Industrial Weighing Machine	100 Kg	1 No.
14.	Electrical distribution panel		1 No.
15.	Electrical cabling & wiring		1 Lot
16.	Plumbing & water piping		1 Lot
17.	Industrial Blower/Axial Fan for Air-washing and ventilation of Laundry room		1 Lot.
18.	Water Softener		1 No.

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

## **EQUIPMENTS SPECIFICATIONS**

### **1. SLUICING CUM WASHER EXTRACTOR -30 Kg capacity**

The sluicing cum washer extractor shall be of fully programmable microprocessor control with all suitable customized and preset processes. Electric heated suitable for heavy duty continuous operation. Suitable control arrangement shall be provided in the machine to ensure sequencing of prewash cold water cycle and final hot water wash cycle after loading the dry linen.

The machine shall be front loading with AISI-304 Stainless steel inner and outer drums constructed out of heavy gauge AISI-304 Stainless steel sheet and AISI-304 Stainless Steel front and door made out of single Die press. The inner drum shall have Die sunk perforations. All joints in AISI-304 Stainless steel parts shall be Argon arc welded ground to smooth finish. Agitators shall be provided in the inner drum for effective cleaning. The inner drum along with the mounting shaft shall be statically and dynamically balanced to ensure vibration and noise free operation. The bearing of all rotating shafts/parts shall be heavy duty ball/roller type fully sealed and housed in suitable housing to ensure long service life. All parts of the machine coming in contact with water shall be constructed out of AISI-304 Stainless steel to prevent corrosion. The loading door shall be provided with suitable gasket with tight locking arrangement to ensure there is no spillage/ leakage of water during operation.

The outer body of the machine shall be fabricated out of heavy gauge steel sheets with suitably pre treated and finally painted with two coats of weather and chemical resistant stove enamel powder coated paint.

Suitable interlocking arrangement shall be provided to ensure that the machine does not operate until such time the front door is tightly closed and secured in position.



All electrical switch gears and controls etc. in the electrical control panel should be of L&T, Siemens, ABB, GE or Schneider make and all wiring should conform to relevant ISI codes.

Variable frequency drive energy efficient motor shall be of Kirloskar /NGEF/Siemens/ABB/Crompton Greaves make for various speed.

The machine shall be provided with following controls and accessories (but not limited to):

- a. Thermal overload protection for drive motors and heaters.
- b. Thermostat for cutting off heaters at preset temperature.
- c. Timer for presetting operating time.
- d. Detergent dispenser(4/5 compartments) with auto dosing for various processes.
- e. In built electrical control panel, duly isolated from water sources, complete with indication lamps, contactors, push buttons, relays, internal wiring etc.
- f. Water inlet and outlet connections with valves, overflow, drain outlet connections etc.
- g. Automatic water level and temperature controllers.
- h. Non clog large drain valves.

#### **TECHNICAL DATA**

- a. Type : Front loading, Single door
- b. Inner drum material : Stainless Steel –AISI 304 grade
- c. Outer drum material : Stainless Steel –AISI 304 grade
- d. Outer cover material : MS sheet powder coated or stove enamel painted
- e. Extraction Speed : More than 800 RPM
- f. G force at final extract : 340 G :
- g. Type of bearings : Ball/Roller type
- h. Type of heating : Electric heating
- i. Electric Heating load : 24 KW
- j. Power supply : 415 V /3 Ph/ 50 Hz / AC

#### **2. WASHER EXTRACTOR -30 Kg capacity**

The washer extractor shall be of fully programmable microprocessor control with all suitable customized and preset processes. Electric heated suitable for heavy duty continuous operation.

The machine shall be front loading with AISI-304 Stainless steel inner and outer drums constructed out of heavy gauge AISI-304 Stainless steel sheet and AISI-304 Stainless Steel front and door made out of single Die press. The inner drum shall have Die sunk perforations. All joints in AISI-304 Stainless steel parts shall be Argon arc welded ground to smooth finish. Agitators shall be provided in the inner drum for effective cleaning. The inner drum along with the mounting shaft shall be statically and dynamically balanced to ensure vibration and noise free operation. The bearing of all rotating shafts/parts shall be heavy duty ball/roller type fully sealed and housed in suitable housing to ensure long service life. All parts of the machine coming in contact with water shall be constructed out of AISI-304 Stainless steel to prevent corrosion. The loading door shall be provided with suitable gasket with tight locking arrangement to ensure there is no

spillage/ leakage of water during operation.

The outer body of the machine shall be fabricated out of heavy gauge steel sheets with suitably pre treated and finally painted with two coats of weather and chemical resistant stove enamel powder coated paint.

Suitable interlocking arrangement shall be provided to ensure that the machine does not operate until such time the front door is tightly closed and secured in position.

All electrical switch gears and controls etc. in the electrical control panel should be of L&T, Siemens, ABB, GE or Schneider make and all wiring should conform to relevant ISI codes.

Variable frequency drive energy efficient motor shall be of Kirloskar /NGEF/Siemens/ABB/Crompton Greaves make for various speed.

The machine shall be provided with following controls and accessories (but not limited to):

- a. Thermal overload protection for drive motors and heaters.
- b. Thermostat for cutting off heaters at preset temperature.
- c. Timer for presetting operating time.
- d. Detergent dispenser(4/5 compartments) with auto dosing for various processes.
- e. In built electrical control panel, duly isolated from water sources, complete with indication lamps, contactors, push buttons, relays, internal wiring etc.
- f. Water inlet and outlet connections with valves, overflow, drain outlet connections etc.
- g. Automatic water level and temperature controllers.
- h. Non clog large drain valves.

#### **TECHNICAL DATA**

- a. Type : Front loading, Single door
- b. Inner drum material : Stainless Steel –AISI 304 grade
- c. Outer drum material : Stainless Steel –AISI 304 grade
- d. Outer cover material : MS sheet powder coated or stove enamel painted
- e. Extraction Speed : More than 800 RPM
- f. G force at final extract : 340 G
- g. Type of bearings : Ball/Roller type
- h. Type of heating : Electric heating
- i. Electric Heating load : 24 KW
- j. Power supply : 415 V /3 Ph/ 50 Hz / AC

#### **3. WASHER EXTRACTOR-60 Kg capacity**

The washer extractor shall be of fully programmable microprocessor control with all suitable customized and preset processes. Electric heated suitable for heavy duty continuous operation.

The machine shall be front loading with AISI-304 Stainless steel inner and outer drums

constructed out of heavy gauge AISI-304 Stainless steel sheet and AISI-304 Stainless steel front and door made out of single Die press. The inner drum shall have Die sunk perforations. All joints in AISI-304 Stainless steel parts shall be Argon arc welded ground to smooth finish. Agitators shall be provided in the inner drum for effective cleaning. The inner drum along with the mounting shaft shall be statically and dynamically balanced to ensure vibration and noise free operation. The bearing of all rotating shafts/parts shall be heavy duty ball/roller type fully sealed and housed in suitable housing to ensure long service life. All parts of the machine coming in contact with water shall be constructed out of AISI-304 Stainless steel to prevent corrosion. The loading door shall be provided with suitable gasket with tight locking arrangement to ensure there is no spillage/ leakage of water during operation.

The outer body of the machine shall be fabricated out of heavy gauge steel sheets with suitably pre-treated and finally painted with two coats of weather and chemical resistant stove enamel/ powder coated paint.

Suitable interlocking arrangement shall be provided to ensure that the machine does not operate until such time the front door is tightly closed and secured in position.

All electrical switch gears and controls etc. in the electrical control panel should be of L&T/ Siemens, ABB, GE or Schneider make and all wiring should conform to relevant ISI codes.

Variable frequency drive energy efficient motor shall be of Kirloskar/NGEF/Siemens/ABB/Crompton Greaves make for various speeds.

The machine shall be provided with following controls and accessories (but not limited to):

- a. Thermal overload protection for drive motors and heaters.
- b. Thermostat for cutting off heaters supply at preset temperature.
- c. Timer for presetting operating time.
- d. Detergent dispenser (5 compartments) with auto dosing for various processes.
- e. In-built electrical control panel, duly isolated from water sources, complete with indication lamps, contactors, push buttons, relays, internal wiring etc.
- f. Water inlet and outlet connections with valves, overflow, drain outlet connections etc.
- g. Automatic water level and temperature controllers.
- h. Non clog large drain valves.

#### **TECHNICAL DATA**

- |    |                       |  |
|----|-----------------------|--|
| a. | Type                  | : Front loading, Single door                     |
| b. | Inner drum material   | : AISI-304 Stainless Steel                       |
| c. | Outer drum material   | : AISI-304 Stainless Steel                       |
| d. | Outer cover material  | : MS sheet powder coated or stove enamel painted |
| e. | Extraction Speed      | : More than 700 RPM                              |
| f. | G force               | : 350 G or more.                                 |
| g. | Type of bearings      | : Ball/Roller type                               |
| h. | Type of heating       | : Electric heating                               |
| i. | Electric heating load | : 24/36 KW                                       |

j Power supply : 415 V /3 Ph/ 50 Hz / AC

#### 4. **DRYING TUMBLER- 30Kg capacity**

The drying tumbler shall be front loading heavy duty microprocessor control electric heated type.

The machine shall be front loading with AISI-304 Stainless steel inner drum constructed out of heavy gauge stainless steel sheet. The inner drums shall have die sunk perforations and lifters for tumbling the load during operation. The outer body of the machine shall be glass wool insulated from all sides to minimize heat loss. All joints in AISI-304 Stainless steel parts shall be Argon arc welded ground to smooth finish. The inner drum along with the mounting shaft shall be statically and dynamically balanced to ensure vibration and noise free operation. The bearings of all rotating shafts/parts shall be heavy duty ball/roller type fully sealed and housed in suitable housing to ensure long service life. All parts of the machine coming in contact with water shall be constructed out of AISI-304 Stainless steel to prevent corrosion.

The outer body of the machine shall be fabricated out of heavy gauge steel sheet with suitably pretreated and finally painted with two coats of weather and chemical resistant stove enamel/powder coated paint.

Suitable interlocking arrangement shall be provided to ensure that the machine does not operate until such time the front door is tightly closed and secured in position.

The air blower cast out of Aluminum shall be centrifugal type, direct driven with impeller. The electric heaters shall be of Stainless Steel with GI fins closely spaced to provide maximum heat transfer area.

All electrical switch gears and controls etc. in the electrical control panel should be of L&T/ Siemens, ABB, GE or Schneider make and all wiring should conform to relevant ISI codes.

Frequency controlled Drive motor shall be of Kirloskar/NGEF/Siemens/ABB/Crompton Greaves make.

Automatic digital time(drying & cooling) and temperature control.

Self cleaning Lint Screen of AISI-304 Stainless Steel for easy maintenance

The machine shall be provided with following controls and accessories (but not limited to):

- a. Thermal overload protection for drive motors and heaters.
- b. Electric heating Load : 24KW
- c. Power supply : 415 V /3 Ph/ 50 Hz / AC

#### 5. **FLAT BED PRESS (Pneumatically operated) (1500 x 700)mm**

The flat bed press shall be electric heated/steam heated with built-in Steam Generator, pneumatically raising and lowering type with automatic head opening.

Head shall be of Stainless steel smoothly ground and polished for flat finish/High quality steel with machined Ironing surface smoothly polished and Pressing surface lined with Teflon or high graded Nickel plating.

The head shall be supported on the rocker arm by means of spring and studs joint to ensure even pressing to uneven thickness of linen.

Buck with heat resistant high quality padding and cover

Arrangements shall be provided to adjust the amount of pressure exerted between the head and the buck at the time of locking to suit requirement of different kinds of fabrics or garments of

varying thickness.

The opening of the head after it is locked in position shall be automatically controlled as per preset time. Head closing by two buttons and safety head guard

The press shall be complete with following accessories.

- a. Vacuum motor, Blower/Compressor
- b.. Worktable of ample proportion mounted on the steel frame.
- c. Controls of automatic digital timed release of head at preset time.
- d. Steam inlet, Steam trap valve, connecting steam pipes and condensate lines incase steam heating
- e. Electric heating load : 12/18 KW (In case electrically heated)
- f. Power supply : 415 V /3 Ph/ 50 Hz / AC

6. **FLAT WORK IRONER (CHEST HEATED) (500 Dia x 3000)mm  
(Calendaring m/c..)**

The ironer shall have highly polished, ironing chest with fixed Roller and moveable chest. The Ironer shall be of electric heated/steam heated(built-in steam Generator /auxiliary portable steam Generator) offer constant pressure with maximum ironing surface for the super ironing quality. The machine shall have double rollers with variable speed options. The ironer shall have the facility to adjust optimum speed of roller for particular linen at preset temperature. The padding to the roller shall be with Springs and Polyester/Nomex capable of withstanding high Chest temperature. The Ironer shall be provided with auto digital temperature control mechanism. The contact angle between roller & chest shall be 180degree.The ironer shall have total electrical & mechanical protections. The ironer shall have the self alignment mechanism of roller & chest. The ironer shall be provided with suction arrangement.

All electrical switch gears and controls etc. in the electrical control panel should be of L&T/ Siemens/ ABB/GE/ Schneider make and all wiring should conform to relevant ISI codes.

Variable frequency Drive motor shall be of Kirloskar/NGEF/Siemens/ABB/Crompton Greaves make.

All external MS parts of the machine shall be suitably pretreated and finally painted with two coats of weather and chemical resistant stove enamel powder coated paint.

The machine shall be provided with following controls and accessories (but not limited to):

- a. Thermal overload protection for drive motors and heaters.
- b. In built electrical control panel, duly isolated from water sources, complete with indication lamps, contactors, relays, internal wiring etc. Push button to start and stop the machine and Emergency switch.

Electric heating load : 24/36 KW (In case electrically heated)

Power supply : 415 V /3 Ph/ 50 Hz / AC

**AUXILIARY AIR COMPRESSOR TO IRONER (In case required)**

The air compressor of Kirloskar/Elgi/Ingersolrand make shall be multistage stage, fully automatic suitable for delivering dry compressed air at pressure compatible to Ironer.

Drive : Belt driven with pulleys, belts and belt guard.

Motor : 3 hp. (Kirloskar/Siemens/NGEF/Crompton Greaves make)

Electric supply : 415 V/ 3 Ph / 50 Hz AC

### **ACCESSORIES**

- a. Suction silencer with filter.
- b. Moisture separator with auto drain trap.
- c. Non return valve.
- d. Low oil pressure safety switch.
- e. High pressure safety valve.
- f. Pressure gauge etc.

### **7. VACUUM FINISHING TABLE WITH STEAM HAND PRESS (1250 x 700) mm**

The vacuum table shall have rectangular top with heat resistant silicon padding. The table shall have thermostatically controlled heater, extended exhaust duct with lighting device. The table shall be vacuum operated by foot operated centrifugal blower. Swiveling arms for fitting of vacuum finishing shapes.

The Electric iron shall be constructed in die cast hard construction with stainless steel steam chamber & perforated stainless steel sole. The iron shall have provision and control for steam injection with Die cast sole plate with heating element thermostatically controlled.

The machine shall be equipped with built-in Steam Generator /Auxiliary Steam Generator

### **AUXILIARY STEAM GENERATOR (In case required)**

The Steam Generator of steam capacity 8Kg/hr Compatible to the Vacuum finishing Table-2 Nos. must be fully automatic and electrically operated. The Steam Generator shall be equipped with pressure vessel of heavy gauge AISI-316 Stainless Steel fitted with SS heating elements and built-in electric control panel, Pressure Regulator, High Pressure Water Injection Pump of 1hp, Pressure Gauge, Solenoid steam release Safety Valve, Highly sensitive Float Regulator, Blow down Valve, Built-in water storage tank, Inlet and Outlet connections, Solenoid valve with Flow Control Device and Drain lines. Pressure vessel should withstand double of working pressure hydraulically.

### **8. MENDING MACHINE(Motorised Sewing Machine with table)**

The Mending machine or motorized sewing machine shall be heavy duty type with all metallic shuttle, and moving parts. The machine shall be complete with mounting table with adequate space for placement and movement of garments to be stitched/mended. The machine shall have a table mounted drive motor foot pedal operated for convenience of operation with both hands free.

### **9. MOBILE TABLE -100 Kg Capacity**

The rolling table shall be specially designed for carrying rolling and folding of linen in the laundry. The frame of the table shall be fabricated out of Stainless Steel tubes and bars supported on 4 Nos. castors min. 75 mm size swiveling type. The table top shall be of polished Stainless steel with smoothly. The under shelf of the trolley shall be made of Stainless steel.

### **10. WASH ROOM TROLLEY -50Kg Capacity**

The wash room trolley shall be designed for movement of wet linen within the laundry. The frame of the trolley shall be fabricated out of Stainless Steel tubes and flats in all welded construction

ground smooth & finished , supported on 4 castor wheels min. 75 mm size of swiveling type. The main body of the trolley shall be formed out of thick stainless steel mesh in all welded construction.

**11. DRY LINEN TROLLEY -50 Kg Capacity**

The dry linen trolley shall be designed in Stainless Steel construction with all welded joints ground & smooth finished out of Stainless Steel tubes and bars and foldable front. The base frame shall be supported on 4 Nos. castor wheels min. 75 mm size of swiveling type.

**12. SHELF TROLLEY(Finished goods) -100Kg Capacity**

The shelf trolley shall be designed for stacking and carrying finished linen from the laundry to the finished goods store. The base frame of the trolley shall be in Stainless Steel construction with all welded joints ground & smooth finished out of heavy duty Stainless Steel tubes and bars. The trolley shall be fitted with at least 3 Nos. Stainless Steel shelves(2-shelves removable). The base frame shall be supported on 4 Nos. castor wheels min. 75 mm size of swiveling type.

**13. INDUSTRIAL WEIGHING MACHINE -100 Kg capacity**

The weighing machine shall be heavy duty platform type with dial type weight indication. The platform for placement of buckets/goods for weighing shall be with steel casting with adjusting lever mechanism and knob for adjustment of error in machine.

**14. INDUSTRIAL BLOWER/AXIAL FAN (AIR-WASHING & VENTILATION)**

Blowers/Axial fans of appropriate capacities shall be installed at suitable locations for convenience of air-washing and ventilation in the Laundry Room to feed fresh air and vent out hot air (generated due to heat from equipments and Steam Generator) into/from Laundry room to maintain comfortable working condition. Blower with Impeller assembled with motor shall be wall fixed with steel frame. Motor shall be of continuous duty S1 type of IS : 325 standard (Latest version) and of Kirloskar/NGEF/Siemens/ABB/GEC/Crompton Greaves make.

**15. WATER SOFTENER**

Water Softening System is for softening of available ground water for continuous supply of soft water at required ppm i.e <50 ppm for the laundry equipments and system in the laundry room for quality output and prevention of the equipment & system. The Water Softening System shall be installed in the capacity compatible to the requirement of Laundry equipments and system at fully loaded condition. The specimen of ground water is available at the site of installation at LRSI, NewDelhi for design and selection of Water Softening System.

**Standard : All laundry equipments must be CE marked and from ISO certified Company**

Manufacturer's Authorisation certificate as per Annexure- in favour of the bidder for laundry equipment should be attached with the offer.

**IN ADDITION TO THE ABOVE, FOLLOWING TURNKEY WORKS FOR INSTALLATION AND COMMISSIONING OF LAUNDRY AT LRSI DELHI 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, Plumbing, Sanitary and any other protections relevant as per State/Central Govt. regulation/local authority/NDMC, Furniture, 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".
- Laying of GI water pipe line with necessary taps, joints, elbows, Unions, Tees and valves of GI made and IS-1239 standard (Latest version) to various supply points in the Laundry Room from single point supply(Provided by the hospital).
- Installation and commissioning of Water Softener for softening of available ground/supply water continuously at the hardness necessary for washing and other application required for laundry is at least "< 50 ppm" or as per suitability of the Steam Generators/equipment. The Water Softening System shall be installed in the capacity compatible to the requirement of Laundry equipments and system running for the assigned duration at fully loaded condition. The specimen of ground/supply water is available at the site of installation at LRSI, NewDelhi for design and selection of Water Softening System.
- Installation and commissioning of Electric distribution panel with all switchgears, wiring and controls etc of L&T/ Siemens/ ABB/GE or Schneider make ) for distribution of power supply to various load points in the Laundry Room from single point power supply(Provided by the hospital).
- Providing fixing of Electrical Gadgets like ELCB, MCB, Light Points, Power points, Fans, Cool air Fans, Exhaust fan etc in the laundry room.
- Number of fans, power point, bulbs/tube light. Apart from this supplies to the individual equipments with ELCB & MCB in the laundry room.
- Installation of MCB, ACB, ELCB & OCB of Havell/Siemens/L&T/Schneider etc for Control Panel for laundry.
- 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 laundry equipments and other electrical instrument and accessories in the laundry room as per standard guidelines of BIS.
- All the items supplied should be reputed make as approved by engineer.
- Construction/laying of Draining/Sewer system from all the equipments/Sinks to the main drain (outside the Laundry) with proper trap and flow system and tapping.
- Ventilation with installation of Industrial Blowers/Blowers, Fans for proper air-circulation for making comfort working zone in the laundry room at year round all weather conditions is the responsibility of the contractor. Motor shall be of suitable capacity, continuous duty S1 type of IS : 325 standard (Latest version) and of Kirloskar/NGEF/Siemens/ABB/GEC/Crompton Greaves make.
- Arrangement for requisite fire fighting for laundry Room and its maintenance for the contract period