



**TENDER DOCUMENT**  
**FOR**  
**SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND TRIAL RUN OF**  
**GAS FIRED BOILER, REFRIGERATION EQUIPMENTS,**  
**DG SET, MOTOR CONTROL CENTER, ELECTRICAL ITEMS,**  
**ERECTION MATERIALS**  
**AT**  
**TIRTOL DAIRY**



**THE ORISSA STATE CO-OPERATIVE MILK PRODUCERS' FEDERATION LTD.**

**D-2, SAHID NAGAR**  
**BHUBANESWAR -751007**

**April -2024**

**Cost : Rs.5,000/- +18% GST**

**THE ORISSA STATE CO-OPERATIVE MILK PRODUCERS' FEDERATION LTD,**  
**D-2, SAHEED NAGAR, BHUBANESWAR, ORISSA.**

**TELEPHONES :( 0674)-2546121, 2544576, 2540417, 546030, 2540273 FAX: 0674-2506974**

Email: dairyoperation@omfed.com web site: www.omfed.com

**TENDER FOR:**

**SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND TRIAL RUN OF GAS FIRED BOILER, REFRIGERATION EQUIPMENTS, DG SET, MOTOR CONTROL CENTER, ELECTRICAL ITEMS, ERECTION MATERIALS AT TIRTOL DAIRY OF OMFED.**

**LOCATION OF DAIRY SITE : TIRTOL DAIRY**

**TENDER REFERENCE : PROJ/229/Tirtol Dairy/23/Vol-IV**

**DATE OF COMMENCEMENT TO DOWN LOAD OF BIDDING DOCUMENT : 12.03.2024**

**DATE OF PRE - BID MEETING : 20.03.2024 at 1500 hours**

**LAST DATE FOR DOWN LOAD OF BIDDING DOCUMENT / ONLINE BIDDING : 08.04.2024 UPTO 1400 hours**

**DATE AND TIME FOR RECEIPT OF BIDDING DOCUMENTS : 08.04.2024 at 1400 hours**

**DATE AND TIME OF OPENING OF TECHNICAL BIDS : 08.04.2024 at 1530 hours**

**PLACE OF OPENING OF BIDS : OFFICE OF THE ORISSA STATE COOP.MILK PRODUCERS FED.LTD. D-2, SAHEEDNAGAR, BHUBANESWAR, ODISHA.**

**ADDRESS FOR COMMUNICATION : THE ORISSA STATE CO- OP. MILK PRODUCERS' FEDERATION. LTD. D-2, SAHEEDNAGAR, BHUBANESWAR- ODISHA, INDIA.751007**

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## **SPECIFICATION CONTENTS**

<b>Sl no</b>	<b>Name of equipment</b>	<b>Capacity</b>	<b>Quantity (nos)</b>	<b>Page No.</b>
1	Gas Fired Boiler	300 Kg./hr	1	47
2	Refrigeration Plant Equipments	-	1	58
3	DG set	250 KVA	1	61
4	Motor Control Center (MCC Panel)	lot	1	63
5	Electrical Items	lot	1	-
6	Erection Materials	lot	1	-

## SECTION - I



The Odisha State Cooperative Milk Producers' Federation Ltd.  
D-2, Sahid Nagar, Bhubaneswar-751 007.  
Ph No- (0674) 2546030/2540273/2540417,  
Fax No (0674) 2540974

[www.omfed.com](http://www.omfed.com)

### TENDER NOTICE

OMFED invites sealed techno-commercial offer in separate envelope from experienced manufacturers / authorized distributors for **Supply, installation, testing, commissioning and trial run of Gas Fired boiler, Refrigeration plant equipments, DG Set, Motor Control Center, Electrical Items, Erection Materials at Tirtol Dairy of OMFED.**

Tender document can be downloaded from website [www.omfed.com](http://www.omfed.com) from **dt.12.03.2024 to dt.08.04.2024**. The tender document should be duly filled & submitted on due date along with the cost of tender paper of **Rs.5,000/- + 18%GST (or Rs.5,900/-)** in shape of Demand Draft drawn in favour OMFED, drawn on any Nationalized bank payable at Bhubaneswar. **Bids with paper cost and EMD as specified in the tender document shall be received up to 1400 hours on dt.08.04.2024 & shall be opened on the same day at 1530 Hrs.** at OMFED Corporate Office, D/2, Sahid Nagar, Bhubaneswar – 751007 in presence of interested bidders. Bids without requisite EMD shall not be considered.

The **corrigendum/amendment** to this notice if required shall be published only in the OMFED web site and will not be published again in newspaper.

OMFED reserves the right to accept or reject any or all the tenders or part thereof without assigning any reason.

**MANAGING DIRECTOR**



### **3.0 Price basis:**

#### **3.1 For supply:**

The quoted prices for the equipment shall be on FOR destination basis, inclusive of all taxes, including GST, packing & forwarding charges, transportation, insurance and other incidental charges, loading & unloading charges etc. as applicable. The bidder shall, however, provide a break-up of the prices quoted.

Bidders are required to give break up of unit rates & quantities of each & all items to be supplied for the purpose of the contract.

#### **3.2 For erection/installation, testing, commissioning, trial run & handing over:**

Bidders shall submit separate rates for complete installation, testing and commissioning, including satisfactory performance trial run for 10 days.

Prices quoted should be on FOR destination basis, inclusive of all taxes & duties, packing & forwarding charges, transportation, insurance and other incidental charges, loading & unloading charges etc. as applicable. The contractor shall be responsible for supply of all sundries / power / fuel as may be required for erection, testing, commissioning & performance trial run for 10 days, including oil and lubricants. However, electrical/ fuel charges during the 10 days period of performance trial run shall be borne by OMFED.

The contractor shall have to create their own storage space for all the equipments & materials and provide watch & ward for it. Insurance of equipments & materials during storage, shifting, installation & testing shall be contractor's responsibility.

### **4.0 Cost of Bidding**

The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Orissa State Cooperative Milk Producers' Federation Limited, hereinafter referred to as "THE OMFED", will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

## **B. THE BIDDING DOCUMENTS**

### **5.0 CONTENT OF BIDDING DOCUMENTS**

5.1 The goods required, bidding procedures and contract terms are prescribed in the bidding documents. In addition to the tender notice, the bidding documents include:

- (a) Instruction to bidders;
- (b) General Conditions of Contract;
- (c) Special Conditions of contract (for Erection works);
- (d) Special Conditions of contract (for Mechanical installation);
- (e) Special conditions of contract (for Electrical installation);
- (f) Technical Specifications and schedule of quantities;
- (g) Form of Agreement;
- (h) Bid Form;
- (i) Schedule of Supp. Information;
- (j) Standard Forms of Bank Guarantees;

- 5.2 The Bidder is expected to examine all instructions, forms, terms and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the bidder's risk and may result in the rejection of its bid.

## **6.0 Clarification of Bidding Documents**

A prospective Bidder requiring any clarification of the Bidding Documents may notify the OMFED in writing or by Fax or Cable at the OMFED'S mailing address indicated in this document. The OMFED will respond in writing to any request for clarification of the bidding Documents which it receives not later than 15 days prior to the deadline for the submission of bids prescribed by the OMFED. Written copies of the OMFED'S response (including an explanation of the query but without identifying the source of inquiry) will be sent to all prospective Bidders which have received the bidding Documents, and will be attached to the Bidding Documents sold subsequently.

## **7.0 Amendment of Bidding Documents**

- 7.1 At any time prior to the deadline for submission of bids, the OMFED may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by amendment.
- 7.2 The amendment will be notified in writing or by Fax or cable to all prospective Bidders, which have received the Bidding Documents and will be binding on them. The amendment will be attached to the bidding documents sold subsequently.
- 7.3 In order to afford prospective Bidders reasonable time in which to take the amendment into account in preparing their bids, the OMFED may, at its discretion, extend the deadline for the submission of bids.

## **8.0 PREPARATION OF BIDS**

### **8.1 DOCUMENTS TO BE SUBMITTED IN THE TECHNICAL BID:**

- Documents towards credentials of the bidder.
- Audited profit & loss account statement for the year 2020-21, 2021-22 & 2022-23.
- Proof of sales turn over for last three consecutive years i.e. 2020-21, 2021-22 & 2022-23.
- Copy of IT return for the financial year 2020-21, 2021-22 & 2022-23.
- Copy of GST registration certificate
- Copy of PAN card.
- Purchase order copy and commissioning report / performance report in support of supply of said machineries and installation during last three years.
- Cost of tender paper in shape of Demand draft only.

- **Demand draft towards EMD as specified at clause no.13.0 (page-10) in the tender document.**
- The original bidding document as downloaded by the bidder should be signed & sealed in each page by the bidder as a token of having read, understood & accepted the contents, therein.

## **8.2 DOCUMENTS TO BE SUBMITTED IN THE COMMERCIAL BID:**

- Filled in Commercial bid with Cost of said equipments with details along with installation & Commissioning charges.
- The rate shall include freight, packing, forwarding **inclusive of GST / all taxes etc.**
- The bid form and schedule of quantities, provided in the bidding document, completed in accordance with clauses 09 and 10.
- Documentary evidence established in accordance with Clause 11 that the bidder is eligible to bid and is qualified to perform the contract if its bid is accepted.
- The rate shall include freight, packing, forwarding all taxes including service taxes & duties and including CESS.

## **9.0 Bid form**

The Bidder shall complete the bid Form and the schedule of quantities furnished in the Bidding Documents, indicating for the goods to be supplied, a brief description of the goods, quantity and prices.

## **10.0 Bid Prices**

10.1 The bidder shall indicate in the schedule of quantities, provided in this document, the unit prices and total Bid prices of the goods it proposes to supply under the Contract, on FOR destination basis, inclusive of all taxes & duties, packing & forwarding charges, transportation, insurance and other incidental charges, loading & unloading charges etc. as applicable. It is not mandatory on the part of OMFED to procure all the items and quantity as mentioned in the bills of quantity.

## **10.2 Bidders shall provide the break-up of their offered prices separately in the following manner:**

- (i) The price of the goods, quoted ex-factory, ex-showroom, ex-warehouse or off-the-shelf, as applicable, including all duties / GST and other taxes already paid or payable:
  - On the components and raw material used in the manufacture or assembly of goods quoted ex-factory;

Or

  - The price of the goods, quoted ex-factory, ex-showroom, ex-warehouse or off-the-shelf, as applicable, including all duties and sales other taxes already paid or payable on the imported goods of foreign origin quoted ex-showroom, ex-warehouse or off-the-shelf.

- (ii) Any other taxes applicable in India which will be payable on the goods if this contract is awarded;
- (iii) Charges for packing and forwarding, inland transportation, insurance and other costs incidental to delivery of the goods to their final destination; and

**(iv) The cost of all incidental services required under the contract.**

10.3 The bidder's separation of price components in accordance with Para. 10.2 above will be solely for the purpose of facilitating the comparison of bids by the OMFED.

**10.4 Fixed Price**

Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account. A bid submitted with an adjustable price basis for such goods and services will be treated as non-responsive and rejected, pursuant to clause 23.

**11.0 Documents Establishing Bidders' Eligibility and Qualifications**

11.1 The Bidder shall furnish, as part of its bid, documents establishing the bidder's eligibility to bid and its qualifications to perform the contract if its bid is accepted. The bidder should also give information in the format attached to the Bid document.

11.2 The documentary evidence of the Bidder's qualification to perform the contract if its bid is accepted, shall establish to the OMFED'S satisfaction:

- a) That, in the case of a bidder offering to supply goods under the contract which the bidder did not manufacture or otherwise produce, the Bidder has been duly authorized by the goods' manufacturer or producer to supply the goods.
- b) That the bidder has the financial, technical and production capability necessary to perform the contract. To this end, all bids submitted shall include the following information along with Schedule-I and schedule-II under Section VIII:
  - i) Copies of original documents defining the constitution or legal status, place of registration and principal place of business of the company or firm or partnership etc.
  - ii) Details of experience and past performance of the bidder on equipment offered and on those of similar nature within the past 3 years and details of current contracts in hand and other commitments;
  - iii) Major items of plant and equipment available/ installed in the Bidder's factory premises;
  - iv) Qualification and experience of key personnel for successful execution of the contract;
  - v) Reports on financial standing of the bidder such as profit and loss statements, balance sheets and auditor's report of the past three years, bankers certificates etc;
  - vi) Information regarding any current litigation in which the bidder is involved.

**12.0 Documents Establishing Goods' Eligibility and Conformity to Bidding Documents**

- 12.1 The bidder shall furnish, as part of its bid, documents establishing the eligibility and conformity to the Bidding Documents of all goods and services, which the bidder proposes to supply under the contract.
- 12.2 The documentary evidence of the goods and services conformity to the bidding documents may be in the form of literature, drawing and data, and shall furnish:
- A detailed description of the goods' essential technical and performance characteristics.
  - A list giving full particulars, including available sources and current prices, of all spare parts, special tools, etc. necessary for the proper and continuing functioning of the goods for a period of two years, following commencement of the goods' use by the OMFED: and
  - A clause-by-clause commentary on the OMFED'S technical specification demonstrating the goods' and services' substantial responsiveness to those specifications or a statement of deviations and exceptions to the provisions of the technical specification.
- 12.3 For purposes of the commentary to be furnished pursuant to Clause 12.2 (c) above, the Bidder shall note that standards for workmanship, material and equipment, and references to brand names or catalogue numbers designated by the OMFED in its Technical specifications are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names and/ or catalogue numbers in its bid, provided that it demonstrates to the OMFED'S satisfaction that the substitutions are substantially equivalent or superior to those designated in the Technical specifications.**

**13.0 Bid Security (Earnest Money Deposit)**

- 13.1 Pursuant to clause 8, the Bidder shall furnish, as part of its bid, **bid security as furnished below.**

SI No	Name of equipment	Capacity	Quantity	EMD
1	Gas Fired Boiler	300 Kg./hr	1 lot	<b>Rs.30,000/-</b>
2	Refrigeration Plant Equipments	-	lot	<b>Rs.70,000/-</b>
3	DG set	250 KVA	1 lot	<b>Rs.20,000/-</b>
4	Motor Control Center (MCC Panel)	lot	1 lot	<b>Rs.8,000/-</b>
5	Electrical Items	lot	1 lot	<b>Rs.12,000/-</b>
6	Erection Materials	lot	1 lot	<b>Rs.10,000/-</b>

- 13.2 The bid security is required to protect the OMFED against the risk of bidder's conduct, which would warrant the security's forfeiture, pursuant to para.13.7.
- 13.3 The bid security shall be in one of the following forms:
- A Bank guarantee issued by a Nationalised bank located in India in the form provided in the Bidding Documents, and valid for 30 days beyond the validity of the bid, or
  - A demand draft in favour of ORISSA STATE CO-OPERATIVE MILK PRODUCERS' FEDERATION LTD., Payable at Bhubaneswar.
- 13.4 Any bid not secured in accordance with para's. 13.1 and 13.3 will be rejected by the OMFED as non-responsive.
- 13.5 Unsuccessful bidder's bid security will be discharged/returned as promptly as possible but not later than 30 days after the expiration of the period of bid validity.

13.6 The successful Bidder's bid security will be discharged upon the bidders executing the agreement and furnishing the performance security, pursuant to clause 31.

- 13.7 The bid security may be forfeited:
- (a) If a bidder withdraws its bid during the period of bid validity specified by the bidder on the bid form; or
  - (b) In the case of successful bidder, if the bidder fails;
    - (i) To sign the contract in accordance with clause 31
    - Or
    - (ii) To furnish performance security in accordance with clause 32.

**14.0 Period of validity of bids**

- 14.1 Bids shall remain valid for six months after the date of bid opening, stated in the cover page/ tender notice. A bid valid for a shorter period may be rejected by the OMFED as non-responsive.
- 14.2 In exceptional circumstance, the OMFED may solicit the bidders' consent to an extension of the period of validity. The request and the responses thereto shall be made in writing or by Cable or Fax. The bid security provided under clause-13 shall also be suitably extended. A bidder may refuse the request without forfeiting its bid security. A bidder granting the request will not be required nor permitted to modify its bid.

**15.0 Format and signing of bid**

- 15.1 The original bid shall be typed or written in indelible ink and shall be signed by the bidder or a person or persons duly authorised to bind the bidder to the contract. The latter authorization shall be indicated by written power-of-attorney accompanying the bid. All pages of the bid, except for unamended printed literature, shall be initialed by the person or persons signing the bid.
- 15.2 The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the bidder, in which case corrections shall be initialed by the person or persons signing the bid.

**D. Submission of bids**

**16.0 Sealing and marking of bids**

- 16.1 The bidders shall seal the original bidding document, along with all relevant documents & drawings, in an envelope.
- 16.2 The envelope shall:
- (a) Be addressed to the OMFED at the following address:  
THE ORISSA STATE CO-OPERATIVE MILK PRODUCERS' FEDERATION LTD., D-2,  
Sahid Nagar, Bhubaneswar – 751007.
  - (b) Bear the Tender Reference No., Name of work & Date of opening.
  - (c) Indicate the name and address of the bidder.
- 16.3 If the outer envelope is not sealed and marked as required by Para. 16.2, The OMFED will assume no responsibility for the bid's misplacement or premature opening. A bid opened prematurely for this cause will be rejected by the OMFED.
- 16.4 The bidders shall submit the "Eligibility and post-qualification application" along with the bid.

## **17.0 Deadline for submission of bids**

- 17.1 Bids must be received by the OMFED at the address specified in cover page / tender notice not later than the date and time specified for receipt of the bids as indicated in cover page / tender notice.
- 17.2 The OMFED may, at its discretion, extend this deadline for the submission of bids by amending the bidding documents in accordance with Para 7, above in which case all rights and obligations of the OMFED and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

## **18. Late bids**

Bids received after the deadline for submission of bids will be rejected or returned unopened to the bidder. OMFED shall not bear any responsibility for late delivery of bids submitted by post.

## **19. Modification and withdrawal of bids**

- 19.1 The bidder may modify or withdraw its bid after the bid's submission, provided that written notice of the modification or withdrawal is received by the OMFED prior to the deadline prescribed for submission of bids.
- 19.2 The bidder's modification or withdrawal notice shall be prepared, sealed, marked and submitted in accordance with the provisions of Para 16. A withdrawal notice may also be sent by Fax or cable but followed by a signed confirmation copy, post marked not later than the deadline for submission of bids.
- 19.3 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity. Withdrawal of a bid during this interval shall result in the bidder's forfeiture of its bid security.

## **E. BID OPENING AND EVALUATION**

### **20.0 Opening of Bids by OMFED**

- 20.1 The OMFED will open bids, in the presence of bidders' representatives who choose to attend, at the time and date specified in the Tender notice, at the office of the ORISSA STATE CO-OPERATIVE MILK PRODUCERS' FEDERATION LTD., D-2, Sahid Nagar, Bhubaneswar-751007, Orissa, India. The Bidders representatives who are present shall sign attendance sheet evidencing their presence during the bid opening.
- 20.2 The Bidders' names, bid prices, modifications, bid withdrawals and the presence or absence of the requisite bid security and such other details as the OMFED, at its discretion, may consider appropriate will be announced at the opening.

## **21.0 Clarification of bids**

21.1 To assist in the examination, evaluation and comparison of bids the OMFED may, at its discretion, ask the Bidders for a clarification of its bid. The request for clarification and the response shall be in writing.

## **22.0 Preliminary Examination**

22.1 The OMFED will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.

22.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail. If there is a discrepancy between words and figures, the amount in words will prevail. The total price shall be corrected accordingly. If the bidder does not accept the correction of the errors, its bid will be rejected.

22.3 Prior to the detailed evaluation, pursuant to Para 23, the OMFED will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these clauses, a substantially responsive bid is one, which conforms to all the terms and conditions of the bidding documents without material deviations. The OMFED'S determination of a bid's responsiveness is to be based on the contents of the bid itself.

22.4 A bid determined as not substantially responsive will be rejected by the OMFED.

22.5 The OMFED may waive any minor informality or non-conformity or irregularity in a bid, which does not constitute a material deviation, provided such waiver, does not prejudice or affect the relative ranking of the Bidder.

## **23.0 Evaluation and Comparison of Bids**

23.1 The OMFED will evaluate and compare the bids previously determined to be substantially responsive, pursuant to Para 22. However, bidders are allowed the option to offer discounts. The discounts will be taken into account in the evaluation of bids so as to determine the bid offering the lowest evaluated cost for the OMFED in deciding award.

23.2 The comparison shall be on FOR site basis, (such price to include all costs as well as duties and taxes paid or payable on components and raw material incorporated or to be incorporated in the goods and GST payable on finished goods offered) as well as on the cost of installation, testing, commissioning & performing 30 days trial run.

23.3 The OMFED'S evaluation of a bid will take into account, in addition to the bid price and the cost of services including installation, testing, commissioning, performance trial run & handing over, the following factors:

- (a) Cost of inland transportation, insurance and other costs incidental to delivery of the goods to their final destination including excise duty;
- (b) Delivery schedule offered in the bid;
- (c) The cost of components, spare parts and service;

The availability in India of spare parts and after sales services for the equipment offered in the bid;

- (d) Deviation in payment schedule from that specified in the special conditions of contract;
- (e) The quality and adaptability of the equipment offered.

**24.0 Contacting the OMFED**

- 24.1 No Bidder shall contact the OMFED on any matter relating to its bid, from the time of the bid opening to the time the contract is awarded, unless invited by the OMFED for discussions / clarifications.
- 24.2 Any effort by a bidder to influence the OMFED in the OMFED'S bid evaluation, bid comparison or contract award decisions shall result in the rejection of the Bidder's bid.

**F. AWARD OF CONTRACT**

**25.0 Post-qualification**

- 25.1 In the absence of pre-qualification, the OMFED will determine to its satisfaction whether the bidder selected as having submitted the lowest evaluated responsive bid is qualified to satisfactorily perform the contract.
- 25.2 The determination will take into account the Bidder's financial, technical and production capabilities. It will be based upon an examination of the documentary evidence of the bidder's qualifications submitted by the bidder, as well as such other information as the OMFED deems necessary and appropriate including details of experience and records of past performance. The OMFED may also inspect the works of the bidder to satisfy itself regarding the capability of the bidder.
- 25.3 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid, in which event; the OMFED will proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.

**26.0 AWARD CRITERIA**

The OMFED will consider award of contract to the successful bidder whose bid have been determined to be substantially responsive and have been determined as the lowest evaluated bid, pursuant to Para 23 and 25 & who is determined to be qualified to satisfactorily perform the contract.

The composite price towards the cost of the equipment and Annual Maintenance contract shall be considered to arrive at the lowest bidder price.

**27.0 OMFED'S RIGHT TO VARY QUANTITIES AT TIME OF AWARD.**

The OMFED reserves the right to increase or decrease the quantity of goods and services specified in the schedule of requirements without any change in unit price or other terms and conditions.

**28.0 OMFED'S Right to Accept Any Bid and to reject Any or All Bids**

The OMFED reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to 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 grounds for the OMFED'S action.



**29.0 Notification of Award**

29.1 Within the period of bid validity, the OMFED will notify the successful bidder in writing by registered letter or by cable/ telex/ fax, (to be confirmed in writing by registered letter) that its bid has been accepted.

29.2 The notification of award will constitute the formation of the contract.

29.3 Upon the successful bidder's furnishing of performance security, the OMFED will promptly notify each unsuccessful bidder and will discharge its bid security.

**30.0 Signing of Agreement**

Within 15 days of receipt of the notification of award, the successful bidder shall prepare & sign the agreement, in the format provided in this bidding document, and send the same to the OMFED along with a duplicate copy. The original contract form shall be retained by the OMFED, & a duplicate copy of the same shall be sent to the contractor, after it has been signed and dated.

**31.0 Performance Security**

31.1 Within 15 days of receipt of the notification of award from the OMFED, the successful bidder shall furnish the performance security deposit in accordance with clause 6 of the general conditions of contract, either in the form of a Bank guarantee valid for **15 months** from the expected date of completion of contract (as per the performance security form provided in the bidding document) or in the form of demand draft of required value in favour of OMFED, payable at Bhubaneswar.

31.2 Failure of the successful bidder to comply with the requirement of Para 30 or Para 31 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the OMFED may make the award to the next lowest evaluated bidder or call for new bids.

**32.0 IMPORT LICENCE**

No import license shall be provided by the OMFED for goods offered against this bid.

## SECTION -III.

### GENERAL CONDITIONS OF CONTRACT

#### **1. Definitions**

1.1 In this contract, the following terms shall be interpreted as indicated.

- (a) "The contract" means the agreement entered into between the OMFED and the contractor, as recorded in the contract form signed by the parties, including the notification of award, all attachments and appendices thereto and all documents incorporated by reference therein;
- (b) "The contract price" means the price payable to the contractor under the contract for the full and proper performance of its contractual obligations;
- (c) "The goods" means all of the equipment, machinery, and/or other materials which the contractor is required to supply to the OMFED under the contract;
- (d) "Services" means services ancillary to the supply of the goods, such as transportation and insurance, and any other incidental services, such as installation, testing, commissioning, performance trial run for 30 days, provision of technical assistance, training and other such obligations of the contractor covered under the contract;
- (e) "The OMFED" means the organization purchasing the goods and services under the contract i.e. ORISSA STATE COOPERATIVE MILK PRODUCERS' FEDERATION LTD.
- (f) "The contractor" means the individual(s) or firm(s) supplying the goods under this contract i.e., with which an agreement has been signed by the OMFED for supply of goods & services required elsewhere in this document.

#### **2. APPLICATION**

These general conditions shall apply to the extent that they are not superseded by provisions in other parts of the contract.

#### **3. STANDARDS**

**The quality standard with ISI / BIS / any other recognized standard shall be preferred.**

The goods supplied under this contract shall conform to the standards mentioned in the technical specifications, and, when no applicable standard is mentioned, to the Indian standards.

Wherever reference is made in the contract to the respective standards and codes in accordance with which goods and materials are to be furnished, and work is to be performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect on the date of signing of agreement shall apply, unless otherwise expressly set forth in the contract.

#### **4. Use of Contract and Information**

- 4.1 The contractor shall not, without the OMFED'S prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the OMFED in connection therewith, to any person other than a person employed by the contractor in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
- 4.2 The contractor shall not, without the OMFED'S prior written consent, make use of any document or information enumerated in para.4.1 except for purposes of performing the contract.
- 4.3 Any document, other than the contract itself, enumerated in Para. 4.1 shall remain the property of the OMFED and shall be returned (in all copies) to the OMFED on completion of the contractor's performance under the contract if so required by the OMFED.

#### **5. PATENT RIGHTS**

The contractor shall indemnify the OMFED against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the goods/services or any part thereof in India.

#### **6.0 PERFORMANCE SECURITY**

- 6.1 Within 15 days of the contractor's receipt of notification of award of the contract, the contractor shall furnish **performance security to the OMFED in the amount of 10% of the contract value, in accordance to clause 31 of the instruction to bidders.**
- 6.2 The proceeds of the performance security shall be payable to the OMFED as compensation for any loss resulting from the contractor's failure to complete its obligations under the contract.
- 6.3 The performance security shall be denominated in Indian rupees and shall be in the following form:
- a) A Bank guarantee, issued by a Nationalised Bank in India, and in the form provided in the bidding documents.
  - b) Demand draft in favour of "Orissa State Co-operative Milk Producers' Federation Limited" payable at Bhubaneswar.

Such Bank guarantee shall be valid upto three months after the expiry of the warranty / guarantee period.

- 6.4 The performance security will be discharged by the OMFED and returned to the contractor not later than 90 days following the date of completion of the contractor's performance obligations, including any warranty / guarantee obligations, under the contract.

6.5 No interest shall be paid on the performance security deposit by the OMFED.

## **7. Inspection and Tests**

- 7.1 The OMFED or its representative shall have the right to inspect and/or test the goods to confirm their conformity to the contract. The Technical Specifications shall specify what inspections and tests the OMFED shall notify the contractor in writing of the identity of any representatives, if retained for these purposes.
- 7.2 The inspection of the goods shall be carried out to check whether the goods are in conformity with the technical specifications and shall be in line with the inspection/test procedures laid down in the schedule of specifications and the contract conditions.
- 7.3 The inspections and tests may be conducted on the premises of the contractor or its subcontractor(s) / at point of delivery and/or at the good's final destination. Where conducted on the premises of the contractor or its subcontractor(s) / all reasonable facilities and assistance including access to drawings and production data, shall be furnished to the inspectors at no charge to the OMFED. In case of any defects or deficiency notified by the OMFED'S inspection authority, the contractor will rectify and make good the same without delay and not proceed further processing of such items(s) of goods without obtaining approval from the inspection authority.
- 7.4 Should any inspected or tested goods fail to conform to the specifications/ the OMFED may reject them and the contractor shall either replace the rejected goods or make all alterations necessary to meet specification requirements free of cost to the OMFED.
- 7.5 The OMFED'S right to inspect, test and, where necessary, reject the goods after the goods' arrival at destination shall in no way be limited or waived by reason of the goods having previously been inspected, tested and passed by the OMFED or its representative.
- 7.6 Nothing in clause 7 shall in any way release the contractor from any warranty or other obligations under this contract.

## **8. Packing and Marking**

- 8.1 The contractor shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to temperature, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit & destination.
- 8.2 The packing, marking and documents within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, required by law, and, subject to clause 18, in any subsequent instructions ordered by the OMFED.

- 8.3 Each package shall be marked to indicate:
- a) Name of the contractor
  - b) Details of items in the package
  - c) Name of the consignee
  - d) Order number
  - e) Gross/net and tare weights of the item
  - f) Destination

**9. Delivery and documents**

9.1 Delivery of the goods shall be made by the contractor for destination, by road.

9.2 The following documents shall be provided by the contractor / contractor:

Original and three copies of:

- (i) The contractor's invoice showing order no. Goods description, quantity, unit price, total amount;
- (ii) Delivery note/packing list/lorry receipt;
- (iii) Manufacturer's/contractor's guarantee certificate;
- (iv) Inspection certificate issued by the nominated inspection agency, and the contractor's factory inspection report;
- (v) Insurance policy;
- (vi) Excise gate pass/octroi receipts, wherever applicable, duly sealed indicating payments made; and
- (vii) Any other document evidencing payment of statutory levies.

**Note:** The nomenclature used for the item description in the invoice/s, packing list/s and delivery note/s etc. should be identical to that used in the order. The dispatch particulars including name of transporter, LR no. and date should also be mentioned in the invoice/s.

**10. Insurance:**

**10.1 For supply of equipments:**

The manufacturer shall have to arrange **all transit risk insurance warehouse to warehouse basis**, including strike clauses, for an amount equal to 110 % of the FOR destination value of the Goods, valid for a period of not less than 3 months after the expected date of arrival of Goods at destination.

In the event of any damage to/loss of consignment in transit, it will be your responsibility to lodge necessary claims with the carriers/ underwriters and pursue them till settlement. Since the insurance policy will be in our name, if required, we shall give you necessary authorisation letter authorizing you to lodge and pursue claims on our behalf with the carriers/ underwriters. Also you shall have to make good the losses/ damages occurred in transit by making replacement /payment to us in the first instance and if claims are settled by the underwriters and any amounts are realized by us, the amounts thus realized in settlement of claims shall be reimbursed to you. In other words, the prima

facie responsibility rests on you for getting compensation of the damage/losses incurred if any, due to all transit hazards.

**10.2 During storage at site:**

The contractor shall arrange for insurance of all items stored/ received at the site including the items of supply covered under this contract & the contractor shall furnish necessary details of such insurance to the OMFED, on demand. Any default on the part of the contractor due to which any item does not get covered under insurance; the consequential losses shall be charged to the contractor.

The contractor shall arrange for insurance of all the items brought by him to the site for use during the execution of the contract, till handing over of the complete job.

**11. Transportation**

The contractor is required to deliver the Goods FOR Destination, by road. Transport of the goods to the destination shall be arranged through a reputed and Bank approved transporter having local offices at destination and Bhubaneswar, and shall be paid for by the contractor.

**12. Incidental services**

12.1 The contractor is required to provide the following services:

- a) Performance of on-site assembly, installation, hooking-up to existing system, Start-up, testing, commissioning, performance trial run for a period of 30 days and handing over of the supplied goods;
- b) Furnishing of tools & tackles required for assembly and maintenance of the supplied goods;
- c) Furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;
- d) Operation, maintenance and repair of the supplied goods for a period of 30 days, provided that this service shall not relieve the contractor of any warranty obligations under this contract; and
- e) Conduct of training of the OMFED'S personnel, on-site, in assembly, start-up operation, maintenance and repair of the supplied goods, if required.

12.2 Prices charged by the contractor for the preceding incidental services are to be included in the price of the contract.

**13. Spare parts**

- 13.1 The contractor may be required to provide any or all of the following materials and notifications pertaining to spare parts manufactured or distributed by the contractor:
- a) Such spare parts as the OMFED may elect to purchase from the contractor, provided that this election shall not relieve the contractor of any warranty obligations under the contract; and
  - b) In the event of termination of production of the spare parts:
    - (i) Advance notification to the OMFED of the pending termination, in sufficient time to permit the OMFED to procure its needed requirements; and
    - (ii) Following such termination, furnishing at no cost to the OMFED, the blueprints, drawings and specifications of the spare parts, if and when requested.
- 13.2 Contractors shall carry sufficient inventories to assure ex-stock supply of consumable spares such as gaskets, plugs, washers, belts, etc. other spare parts and components shall be supplied as promptly as possible but in any case within six months of placement of order.
- 13.3 The obligation of contractor stated in Para 13.1 shall continue even after expiry of the contract.

**14. Warranty / guarantee**

- 14.1 The contractor warrants that the goods supplied under the contract are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the contract. The contractor further warrants that the goods supplied under this contract shall have no defect arising from design, material of workmanship or from any act or omission of the contractor that may develop under normal use of the supplied goods in the conditions. The contractor also guarantees that the goods supplied shall perform satisfactorily as per the designed/rated/ installed capacity as provided for in the contract.
- 14.2 This warranty / guarantee shall remain valid for 12 months after the goods, or any portion thereof as the case may be, have been delivered, commissioned & handed over to the OMFED after the performance of 30 days trial run period.
- 14.3 The OMFED shall promptly notify the contractor in writing of any claims arising under this warranty.
- 14.4 Upon receipt of such notice, the contractor shall, with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the OMFED.
- 14.5 If the contractor, having been notified, fails to remedy the defects(s) within a period of 30 days, the OMFED may proceed to take such remedial action as may be necessary, at the contractor's risk and expense and without prejudice to any other rights which the OMFED may have against the contractor under the contract.

14.6 This warranty/ guarantee shall not cover any damage/s resulting from normal wear and tear or improper handling by the OMFED or his authorised representatives.

**15. Terms of payment For Mechanical equipments.**

**15.1 For Supply of Equipment.**

**80%** Payment after safe arrival of material at site.

Balance payment after successful commissioning and handing over.

All payments are subject to deduction of statutory dues as applicable.

PSD @10% of the order value shall be retained & shall be released after one year from the date of handing over subject to satisfactory performance. PSD can be released during retention period against equivalent amount of Bank guarantee.

**15.2 For Erection component.**

Payment in full shall be released after successful installation / commissioning.

**16. Fixed prices**

Prices charged by the contractor for goods delivered and services performed under the contract shall not, vary from the prices quoted by the contractor in its bid.

**17. Change orders**

17.1 The OMFED may, at any time, by a written order given to the contractor, make changes within the general scope of the contract in any one or more of the following:

- (a) Drawings, designs or specifications, where goods to be furnished under the contract are to be specifically made for the OMFED;
- (b) The method of shipment or packing;
- (c) The place of delivery; or
- (d) The services to be provided by the contractor.

17.2 If any such change causes an increase or decrease in the cost, or the time required for, the contractor's performance of any part of the work under the contract, whether changed or not changed by the order, an equitable adjustment shall be made in the contract price or delivery schedule, provided that such claims by contractor are reasonable & to the satisfaction of the OMFED. Any claims by the contractor for adjustment under this clause must be asserted within thirty (30) days from the date of the contractor's receipt of the OMFED's change order.

**18. Contract Amendment**

Subject to clause 17, no variation in or modification of the terms of the contract shall be made except by written amendment signed by the OMFED.

**19. Assignment**

The contractor shall not assign, in whole or in part, its obligations to perform under the contract, except with the OMFED'S prior written consent.

**20. Subcontracts**

The contractor shall notify the OMFED in writing of all subcontracts awarded under the contract if not already specified in his bid, such notification, in his original bid or later, shall not relived the contractor from any liability or obligation under the contract.

**21.0 Delays in the contractor's performance**

21.1 Deliveries in the goods and performance of services shall be made by the contractor in accordance with the time schedule specified by the OMFED, in Section –I of the bidding documents.

21.2 An unexcused delay by the contractor in the performance of its delivery obligations shall render the contractor liable to any or all of the following sanctions: - forfeiture of its performance security, imposition of liquidated damages, and/ or termination of the contract for default.

21.3 If at any time during performance of the contract, the contractor or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services. The contractor shall promptly notify the OMFED in writing of the fact of the delay, its likely duration and its cause (s). As soon as practicable after receipt of the contractor's notice, the OMFED shall evaluate the situation and may at its discretion extend the contractor's time for performance, in which case the extension shall be notified to the contractor by amendment of the contract.

**22.0 Time for completion**

Subject to any requirement in the contract as to completion of any section of the works before completion of the whole, the whole of the works shall be completed, within the stipulated time stated in section–II of the bidding documents or such extended time as may be allowed under clause 23 hereof.

**23.0 Extension of Time of Completion**

Should the amount of extra or additional work of any kind or any cause of delay referred to in these conditions, or exceptional adverse climatic conditions, or other special circumstances of any kind whatsoever which may occur, other than through a default of the contractor, be such as fairly to entitle the contractor to an extension of time for the completion of the works. OMFED shall determine the amount of such extension and shall notify the contractor accordingly. Provided that the OMFED is not bound to take in account any extra or additional works or other special circumstances unless the contractor has within thirty days after such work has been commenced, or such circumstances have arisen, or as soon thereafter as is practicable, submitted to the engineer full and detailed particulars of any extension of time to which he may consider himself entitled in order that submission may be investigated at the time.

## **24.0 Penalty for Delay**

- 24.1 If the contractor shall fail to achieve completion of the works within the specified time, then the contractor shall pay to the OMFED the sum at the rate of 0.5 % (half percent) of the total value of work done under the contract, as a penalty, for every week or part of the week which shall elapse, between the time prescribed & the date of certified completion of the work. The OMFED may without prejudice to any other method of recovery, deduct the amount of such penalty from any payment in its hands, due or which may become due to the contractor. The payment or deduction of such penalty shall not relieve the contractor from obligations to complete the works, or from any other of his obligations and liabilities under the contract.
- 24.2 The aggregate maximum of the penalty for delay payable to the OMFED under this clause shall be subject to a maximum of 10 % of the total value of work.
- 24.3 The criteria for deriving the penalty for delay shall be the actual value of works executed and the amended time of completion.
- 24.4 Any incremental taxes and levies due to the delay in the performance of the contract by the contractor shall be to the contractor's account.

## **25. Termination for default**

- 25.1 The OMFED may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the contractor, terminate the contract in whole or in part,
- (a) If the contractor fails to delivery an or all the goods within the time period (s) specified in the contract, or any extension thereof granted by the OMFED pursuant to clause 17, 21, & 22;
- Or
- (b) If the contractor fails to perform any other obligation(s) under the contract.
- 25.2 In the event the OMFED terminates the contract in whole or in part, pursuant to Para. 25.1, the OMFED may procure, upon such terms and in such manner, as it deems appropriate, goods similar to those undelivered, and the contractor shall be liable to the OMFED for any excess costs for such similar goods. However, the contractor shall continue performance of the contract to the extent not terminated.
- 25.3 Consequent to such termination of contract, the OMFED shall recover the advance paid, if any, to the contractor along with interest @ 18 % per annum compounded quarterly on the last day of March, June, September and December on the advance paid for the entire period for which the advance was retained by the contractor.

## **26. Force Majeure**

- 26.1 Notwithstanding the provisions of clauses hereof, the contractor shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extend that, its delay in performance or other failure to perform its obligations under the contract is the result of an event of force majeure.

26.2 For purposes of this clause, "force majeure" means an event beyond the control of the contractor and not involving the contractor's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the OMFED either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

26.3 If a force majeure situation arises, the contractor shall notify the OMFED in writing of such condition and the cause thereof, within 7 days. Unless otherwise directed by the OMFED in writing, the contractor shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

### **27.0 Termination for Insolvency**

The OMFED may at any time terminate the contract by giving written notice to the contractor, without compensation to the contractor, if:

- (a) The contractor becomes bankrupt or otherwise insolvent,
  - (b) The contractor being a company is wound up voluntarily by the order of a court receiver, liquidator or manager appointed on behalf of the debenture holders or circumstances shall have arisen which entitle the court or debenture holders to appoint a receiver, liquidator or a manager,
- Provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the OMFED.

### **28.0 Termination for Convenience**

28.1 The OMFED, may by written notice sent to the contractor, terminate the contractor, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is of the OMFED'S convenience, the extent to which performance of work under the contract is terminated, and the date upon which such termination becomes effective.

28.2 The goods that are complete and ready for shipment within 30 days after the contractor's receipt of notice of termination shall be purchased by the OMFED at the contract terms and prices. For the remaining goods, the OMFED may elect:

- (a) To have any portion completed and delivered at the contract terms and prices; and /or
- (b) To cancel the remainder and pay to the contractor an agreed amount for partially completed goods and for material and parts previously procured by the contractor.

### **29.0 Settlements of Disputes**

29.1 If the contractor considers any work demanded of him to be outside the requirements of the contract, or considers any drawings, record or ruling of the engineer on any matter in connection with or arising out of the contract or the carrying out of the work to be unacceptable, he shall promptly ask the engineer in written instructions or decision. There upon the engineer shall give his written instructions or decision within a period of fifteen days of such request.

- 29.2 Upon the receipt of the written instructions or decisions the contractor shall promptly proceed without delay to comply with such instructions or decisions.
- 29.3 If the engineer fails to give his instructions or decisions in writing within a period of fifteen days after being requested, or if the contractor is dissatisfied with the instructions and decisions, he shall appeal to the OMFED, which shall afford an opportunity to the contractor to be heard and to offer an evidence in support of his appeal. The OMFED shall give a decision within a period of thirty days after the contractor has given the said evidence in support of his appeal.
- 29.4 If the contractor is dissatisfied with this decision, the contractor within a period of thirty days from the receipt of the decisions shall indicate his intension to refer the dispute to arbitration, failing which the said decision shall be final and conclusive.

**30.0 Arbitration**

All disputes or differences in respect of which the decision is not final and conclusive shall, on the initiative of either party, be referred for adjudication as per the Arbitration And Conciliation Act 1996

**31.0 Applicable law**

The contract shall be interpreted in accordance with the laws of the union of India.

**32. Notices**

- 32.1 Any notice given by one party to the other pursuant to the contract shall be sent in writing or by telegram/ fax/ cable and confirmed in writing to the address specified for that purpose in the special conditions of contract.
- 32.2 A notice shall be effective when delivered or on the notice's effective date, which ever is later.

**33.0 Taxes and Duties**

The contractor shall be entirely responsible for all taxes, duties, license fees etc. incurred until handing over of the contractor goods and services to the OMFED. All Government fees paid for inspections and approvals by statutory authorities shall be reimbursed by the OMFED on production of copy of treasury Challan for same. Service charges for depositing the govt. fees or submission of requisite forms with the statutory authorities shall be not being admissible.

**33.0 Right of use defective equipment**

If after handing over of the equipments and within the guarantee and warranty period, the operation or use of the equipment(s) proves to be unsatisfactory, the OMFED shall have the right to continue to operate or use such equipment

Until rectifications of defects errors or omissions by repair or partial or complete replacement is made, without interfering with the OMFED'S operation.

**35.0 Jurisdiction**

For the settlement of any dispute arising out of the contract against this bid, only the courts at Bhubaneswar only shall have jurisdiction.

## SECTION-IV

### SPECIAL CONDITIONS OF CONTRACT

#### ERECTION & COMMISSIONING OF EQUIPMENT

##### **1.0 Sufficiency of Tender**

The contractor by bidding shall be deemed to have satisfied himself as to all the conditions and circumstances affecting the contract price, as to the possibility of executing the works as shown and described in the contract, as to the general circumstances at the site of the works, as to the general labour position at site, and to have determined the prices accordingly.

##### **2.0 Programme of installation and commissioning.**

Within 30 days of receipt of letter of acceptance of the bid, the contractor shall submit to the OMFED for approval a comprehensive programme in the form of PERT Network / bar chart and any other form as may be required by the OMFED showing the sequence of order in which the contractor proposes to carry out the works including the design, manufacture, delivery to site, erection, hooking-up, commissioning, trial run & hand-over, thereof. After submission to and approval by the OMFED of such programme, the contractor shall adhere to the sequence of order and method stated therein. The submission to and approval by the OMFED of such programme shall not relieve the contractor of any of his duties or responsibilities under the contract. The programme approved by the OMFED shall form the basis of evaluating the pace of all works to be performed by the contractor. The contractor shall update the PERT network every month, submit it to the OMFED and shall inform the OMFED the progress on all the activities falling on schedule for the next reporting date.

##### **3.0 Preparations of drawings for approval**

The contractor should visit the site to acquaint himself in respect of existing site conditions and to know the details/ information required for understanding the nature and type of civil construction works involved in the project.

##### **The contractor shall submit to the OMFED for approval:**

- a) Within the time given in the specification or in the program, such drawings, samples, patterns and models as may be called for therein, and in numbers therein required.
- b) During the progress of works and within such reasonable times as the OMFED may require such drawings of the general arrangement and detailed of the works as the OMFED may require.

The specifications/conditions concerning the submission of drawings by the contractor are detailed as under:

Within four weeks from the date of receipt of the order, contractor shall furnish all necessary drawings, in three sets, (as briefly described below) for approval, identifying each drawing by a serial number and descriptive title. The list given below may be revised and extended if necessary, during the progress of work depending on the nature of the contract also.

The OMFED shall signify his approval or disapproval of all drawings or such drawings that would affect progress of the contract as per the agreed programmer.

**Brief list of drawings:**

- i) Equipment drawings for fabricated items.
- ii) Service piping layout in production and service blocks.
- iii) Electrical cable, conduit/cable tray layout.
- iv) Other miscellaneous drawings as required for erection work.

Drawings showing fabrication details, dimensions, layouts and bill of materials submitted for approval shall be signed by responsible representative of contractor and shall be to any one of the following sizes in accordance with Indian standards: AO, A1, A2, A3, and A4.

All drawings shall show the following particulars in the lower right hand corner in addition to contractor's name:

- i) Name of the OMFED
- ii) Project title
- iii) Title of drawing
- iv) Scale
- v) Date of drawing
- vi) Drawing number
- vii) Space for OMFED'S drawing number.

In addition to the information provided on drawings, each drawing shall carry a revision number, date of revision and brief description of revision carried out. Whenever any revision is carried out, correspondingly revision number must be up-dated.

**All dimensions on drawings shall be in Metric Units.**

Drawings (**three sets**) submitted by the contractor for approval will be checked, reviewed by the OMFED, and comments, if any, on the same will be conveyed to the contractor. It is the responsibility of the same contractor to incorporate correctly all the comments conveyed by the OMFED on the contractor's drawing. The drawings which are approved with comments are to be resubmitted to the OMFED for purpose of records. **Such drawing will not be checked / reviewed by the OMFED to verify whether all the comments have been incorporated by the contractor.** If the contractor is unable to incorporate any comments in the revised drawings, contractor shall clearly state in his forwarding letter such non-compliance along with the valid reasons.

Drawing prepared by the contractor and approved by the OMFED shall be considered as a part of the specification. However, the examination of the drawings by the OMFED shall not relieve the contractor of his responsibility for engineering design, workmanship, and quality of materials, warranty obligations and satisfactory performance of equipments, services & installation covered under the contract.

If at any time before completion of the work, changes are made necessitating revision of approved drawings the contractor shall make such revisions and proceed in the same routine as for the original approval.

**4.0 Operation and maintenance manual:**

The contractor shall furnish to the OMFED before the works are taken over, operating and maintenance instruction together with drawings of the works as completed, in sufficient detail to enable the OMFED to maintain, dismantle, reassemble and adjust all parts of the works, unless otherwise agreed, the works shall not be considered to be completed for the purposes of taking over until such instruction and drawing have been supplied to the OMFED.

**5.0 Contractor's superintendence and deployment of erection team and conduct of personnel**

The contractor shall employ one or more competent representatives, whose name or names shall have previously been communicated in writing to the OMFED by the contractor, to superintend the carrying out of the works on the site. The said representative or if more than one shall be employed, then one of such representatives shall be present on the site during all times, and any orders or instructions which the OMFED may give to the said representative of the contractor shall be deemed to have given to the contractor.

The said representative shall have full technical capacities and complete administrative and financial powers to expeditiously and efficiently execute the work under the contract.

The contractor shall, execute the works with due care and diligence within the time for completion and employ contractor's team comprising qualified and experienced engineers together with adequate skilled, semi-skilled and Unskilled workmen in the site for carrying out the works. The contractor shall ensure adequate work force to keep the required pace at all times as per the schedule of completion. The contractor shall also ensure availability of competent engineers during commissioning / start up, trial runs, operation of the plant / equipment till handing over of the plant.

The contractor shall furnish the details of qualifications and experience of their senior supervisors and engineers assigned to the work site, including their experience in supervising erection and commissioning of plant and equipment of comparable capacity.

When the contractor or his representative is not present on any part of the work where it may be desired to give directions in the event of emergencies, orders may be given by the OMFED and shall be received and observed by the supervisors or foremen who may have charge of the particular part of the work in reference to which orders are given. Any Such instructions, directions or notices given by the OMFED shall be deemed to have been given to the contractor.

The contractor shall furnish to the OMFED a fortnightly labour force report showing by classifications the number of employee engaged in work. The contractors' employment records shall include any reasonable information as may be required by the OMFED. The contractor should also display necessary information as may be required by statutory regulations, and shall comply with all statutory obligations as required under the prevailing rules of the state & country.

None of the contractor's supervisors, engineers, or labourers may be withdrawn from the work without notice to the OMFED and further no such withdrawals shall be made if in the opinion of the OMFED, it will adversely affect the required pace of progress and / or the successful completion of the work.

The OMFED shall be at liberty to object to any representative or person, skilled, semi-skilled or unskilled worker employed by the contractor in the execution of or otherwise about the works who shall in the opinion of the OMFED, misconduct himself or be incompetent, or negligent or unsuitable, and the contractor shall remove the person so objected to upon receipt of notice in writing from the OMFED and shall provided in that place a competent representative at contractor's own expense within a reasonable time.

In the execution of the works no persons other than the contractor, sub-contractor and their employees shall be allowed on the site except by written permission of OMFED.

## **6.0 OMFED'S Instructions**

The OMFED may in his absolute discretion, issue from time to time drawings and/or instructions, directions and clarifications which are collectively referred to as OMFED's instructions in regard to:

Any additional drawing and clarifications to exhibit or illustrate details.

Variations or modifications of the design, quality or quantity of work or additions or omissions or substitution of any work.

Any discrepancy in the drawings or between the schedule of quantities and/or specifications.

Removal from the site of any material brought there by the Contractor, which are unacceptable to the OMFED and the substitution of any other material thereof. Removal and/or re-execution of any work erected by the Contractor, which are unacceptable to the OMFED.

Dismissal from the work of any persons employed there upon who shall in the opinion of the OMFED, misconduct himself, or be incompetent or negligent.

Opening up for inspection of any work covered up.

Amending and making good of any defects.

## **7.0 Rights of the OMFED**

### **7.1 Rights to direct works:**

The OMFED shall have the right to direct the manner in which all works under this contract shall be conducted, insofar as it may be necessary to secure the safe and proper progress and specified quality of the works. All work shall be done and all materials shall be furnished to the satisfaction and approval of the OMFED.

Whenever in the opinion of the OMFED, the Contractor has made marked departures from the schedule of completion or when circumstances or requirement force such a departure from the said schedule, the OMFED, in order to ensure compliance with the schedule, shall direct the order, pace and method of conducting the work, which shall be adhered to by the Contractor.

If in the judgment of the OMFED it becomes necessary at any time to accelerate the overall pace of the plant erection work, the Contractor, when directed by the OMFED, shall cease work at any particular point and transfer Contractor's men to such other point or points and execute such works, as may be directed by the OMFED and at the discretion of the OMFED.

### **7.2 Right to order modifications of methods and equipment**

If at any time the Contractor's methods, materials or equipment appear to the OMFED to be unsafe, inefficient or inadequate for securing the safety of workmen or the public, the quality or work or the rate of progress required, the OMFED may direct the Contractor to ensure safety, and increase their efficiency and adequacy and the Contractor shall promptly comply with such directives. If at any time the Contractor's

working force and equipment are inadequate in the opinion of the OMFED, for securing the necessary progress as stipulated, the Contractor shall if so directed, increase the working force and equipment to such an extent as to give reasonable assurance of compliance with the schedule of completion. The absence of such demands from the OMFED shall not relieve the Contractor of Contractor's obligations to secure the quality, the safe conducting of the work and the rate of progress required by the contract. The Contractor alone shall be and remain liable and responsible for the safety, efficiency and adequacy of Contractor's methods, materials, working force and equipment, irrespective of whether or not the Contractor makes any changes as a result of any order or orders received from the OMFED.

### **7.3 Right to inspect the work**

The OMFED representative shall be given full assistance in the form of the necessary tools, instruments, equipment and qualified operations to facilitate inspection.

The OMFED reserves the right to call for the original test certificates for all the materials used in the erection work.

In the event the OMFED's inspection reveals poor quality of work/materials, the OMFED shall be at liberty to specify additional inspection procedures if required, to ascertain Contractor's compliance with the specifications of erection work.

Even though inspection is carried out by the OMFED or their representatives, such inspection shall not, however, relieve the Contractor of any or all responsibilities as per the contract, nor prejudice any claim, right or privilege which the OMFED may have because of the use of defective or unsatisfactory materials or bad workmanship.

### **8.0 Contractor's functions**

The Contractor shall provide everything necessary for proper execution of the works, according to the drawings, schedule of quantities and specifications taken together whether the same may or may not be particularly shown or described therein, provided that the same can reasonably be inferred there from and if the Contractor finds any discrepancy therein, he shall immediately refer the same to the OMFED whose decision shall be final and binding on the Contractor.

The Contractor shall proceed with the work to be performed under this contract in the best and workman like manner by engaging qualified and efficient workers and finish the work in strict conformance with the drawings and specifications and any changes/modifications thereof made by the OMFED.

The work shall be carried out as approved by the OMFED or his authorized representative/s from time to time, keeping in view the overall schedule of completion of the project. The Contractor's job schedule must not disturb or interfere with OMFED's or the other Contractor's schedules of day-to-day work. The OMFED will provide all reasonable assistance for carrying out the jobs.

**Night work will be permitted only with prior approval of the OMFED. The OMFED may also direct the Contractor to operate extra shifts over and above normal day shift to ensure completion of contract as per schedule.** Adequate lighting wherever required should be provided by the Contractor at no extra cost. The Contractor should employ qualified electricians and wiremen for these facilities. In case of Contractor's failure to provide these facilities and personnel, the OMFED has the right to arrange such facilities and personnel and to change the cost thereof to the Contractor, on actual cost basis.

#### **8.1 Third Party Insurance**

Before commencing the execution of the works the Contractor, but without limiting his obligations and responsibilities, shall insure against his liability for any material or physical damage, loss or injury which may occur to any property, including that of the OMFED, or to any person, including any employee of the OMFED, or by arising out of the execution of works or in the carrying out of the Contract.

The Contractor shall, produce to the Engineer/OMFED the policy or policies of insurance and the receipts for payment of the current premiums, as and when required.

The terms shall include a provision whereby, in the event of any claim in respect of which the Contractor would be entitled to receive indemnity under the policy being brought or made against the OMFED, the insurer will indemnify the OMFED against such claims and any costs, charges and expenses in respect thereof.

Such insurance shall be for an amount not less than Rs.1, 00,000/- per occurrence, with the number of occurrences unlimited.

#### **8.2 Compensation for accidents or injury**

The OMFED shall not be liable for or in respect of any damages or compensation payable at law in respect or in consequence of any accident or injury to any workman or other person in the employment of the Contractor or any sub-Contractor, save and except an accident or injury resulting from any act or default of the OMFED, his agents, or servants. The Contractor shall indemnify and keep indemnified the OMFED against all such damages and compensation, save and except as aforesaid and against all claims, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

The Contractor shall insure against such liability with an insurer approved by the OMFED, which approval shall not be unreasonably withheld, and shall continue such insurance during the whole of the time that any persons are employed by him on the works shall, on demand, produce to the OMFED or OMFED's representative such policy of insurance and the receipt for payment of the current premium. Provided always that, in respect of any persons employed by any sub-Contractor, the Contractor's obligations to insure as aforesaid under this sub-clause shall be satisfied if the sub-Contractor shall have insured against the liability in respect of such persons in such manner that the

OMFED is indemnified under the policy, but the Contractor shall require such sub-Contractor to produce the OMFED or OMFED's representative, on demand, such policy of insurance and the receipt for the payment of the current premium.

### **8.3 Duties of contractor Vis-à-vis other contractors:**

Whenever proper execution of the work under the contract depends on the jobs carried out by some other Contractor, in such cases the Contractor should inspect all such erection and installation jobs and report to the OMFED regarding any defects or discrepancies. The Contractor's failure to do so shall constitute as acceptance of the other Contractor's installation/jobs as fit and proper for reception of Contractor's works.

The Contractor should also report any discrepancy between the executed work and the drawings.

The Contractor shall extend all necessary help/co-operation to other Contractor's working at the site in the interest of the work.

### **8.4 VARIATIONS**

8.4.1 The OMFED shall make any variation of the form, quality or quantity of the Works or any part thereof that may, in his opinion, be necessary and for that purpose, or if for any other reason it shall, in his opinion be desirable, he shall have power to order the Contractor to do and the Contractor shall do any of the following:

- (a) Increase or decrease the quantity of any work included in the contract.
- (b) Omit any such work.
- (c) Change the character or quality or kind of any such work.
- (d) Change the levels, lines, position and dimensions of any part of the works, and
- (e) Execute additional work of any kind necessary for the completion of the works.

And no such variation shall in any way vitiate or invalidate the contract, but the value, if any, of all such variations shall be taken into account in ascertaining the amount of the Contract price.

8.4.2 No such variations shall be made by the Contractor without an order in writing of the OMFED. Provided that no order in writing shall be required for increase or decrease in the quantity of any work where such increase or decrease is not the result of an order given under this clause, but is the result of the quantities exceeding or being less than those stated in the Contract / Bill of Quantities. Provided also that if for any reason the OMFED shall consider it desirable to give any such order verbally, the Contractor shall comply with such order and any confirmation in writing of such verbal order given by the OMFED, whether before or after the carrying out of the order, shall be deemed to be an order in writing within the meaning of this clause. Provided further that if the Contractor shall within seven days confirm in writing to the OMFED and such confirmation shall not be contradicted in writing by the OMFED within 14 days, it shall be deemed to be an order in writing by the OMFED.

8.4.3 All extra or additional work done or work omitted by order of the OMFED shall be valued at the rates and prices set out in the contract if in the opinion of the OMFED, the same

shall be applicable. If the contract does not contain any rates or prices applicable to the extra or additional work, then suitable rates or prices shall be agreed upon between the OMFED shall fix such rates or prices as shall, in his opinion, be reasonable and proper.

- 8.4.4 Provided that if the nature or amount of any omission or addition relative to the nature or amount of the whole of the works or to any part thereof shall be such that, in the opinion of the OMFED, the rate or price contained in the contract for any item of the works is, by reason of such omission or addition, rendered unreasonable or inapplicable, then a suitable rate or price shall be agreed upon between the OMFED and the Contractor. In the event of disagreement of the OMFED shall fix such other rate or price as shall, in his opinion, be reasonable and proper having regard to the circumstances.

Provided also that no increase or decrease under sub-clause 8.4.1 of this clause or variation of rate or price under sub-clause 8.4.2 of this clause shall be made unless, as soon after the date of the order as is practicable and, in the case of extra or additional work, before the commencement of the work or as soon thereafter as is practicable, notice shall have been given in writing:

- a) By the Contractor to the OMFED of his intention to claim extra payment or a varied rate or price.  
Or  
b) By the OMFED to the Contractor of his intention to vary a rate or price.

- 8.4.5 If on certified completion of the whole of the works, it shall be found that a reduction or increase greater than 15 percent of the sum named in the Letter of Acceptance results from the aggregate effect of all Variation Orders but not from any other cause, the amount of the contract price shall be adjusted by such sum as may be agreed between the Contractor and the OMFED or failing agreement, fixed by the OMFED having regard to all material and relevant factors, including the Contractor's site and general overhead costs of the contract.

- 8.4.6 The Contractor shall send to the OMFED's representative once in every month an account given particulars, as full and detailed as possible, of all claims for any additional payment to which the Contractor may consider himself entitled and of all extra or additional work ordered by the OMFED which he has executed during the preceding month.

No final or interim claim for payment for any such work or expense will be considered which has not been included in such particulars. Provided always that the OMFED shall be entitled to authorize payment to be made for any such work or expense, notwithstanding the Contractor's failure to comply with this condition, if the Contractor has, at the earliest practicable opportunity, notified the OMFED in writing that he intends to make a claim for such work.

**Note: This clause shall not be applicable for complete turn-key jobs.**

## **8.5 Duties of the Contractor Vis-à-vis the OMFED**

The equipment and the items, if any, to be supplied by the OMFED for erection, testing and commissioning by the Contractor, shall be as listed in the contract.

The Contractor shall keep a check on deliveries of all such equipment covered in the scope of erection, testing and commissioning work and shall advise the OMFED well in advance regarding possible hold-up in Contractor's work due to the likely delay in delivery of such equipment/components to enable him to take remedial actions.

**8.6 Preparation of foundation surfaces etc. for Erection of equipments:**

Contractor shall carry out final adjustments of foundations, leveling and dressing of foundation surfaces, bedding and grouting of anchor bolts, bed plates etc, required for seating of equipment in proper position. The Contractor shall be responsible for the reference lines and proper alignment of the equipment. However, all minor civil works which form and inseparable part of the installation and erection job like digging trenches for laying of cables, conduits and underground pipes, making cut-outs in walls, floors and ceilings for pipelines, adjustment, leveling, dressing and grouting of foundations, grouting of supports are to be carried out by the Contractor at no extra cost. The necessary refilling/repairs of these cutouts, pockets and trenches shall be done by the Contractor: The Contractor should arrange for laying the supports, cut-outs, grouting of bolts, etc, when the civil works are in progress, so as to avoid refilling/repair works. The damages occurring to civil and other works are to be made good by the Contractor at Contractor's own costs.

**9.0 Supply of tools, tackles and materials**

The Contractor shall, at his own expense, provide all the necessary equipment, tools and tackles, haulage power, consumables, lubricants & sundries necessary for effective execution and completion of the works during erection, testing, commissioning & trial run.

**10.0 Protection of plant**

The OMFED shall not be responsible or held liable for any damage to person or property consequent upon the use, misuse or failure of any erection tools and equipment used by the Contractor or any his sub-Contractor's even though such tools and equipment may be furnished, rented or loaned to the Contractor or any of his sub-Contractors. The acceptance and / or use of any such tools and equipment by the Contractor or his sub-Contractor shall be construed to mean that the Contractor accepts all responsibility for and agrees to indemnify and save the OMFED from any and all claims for said damages resulting from the said use, misuse or failure of such tools and equipments.

The Contractor or his sub-Contractor shall be responsible during the works, for protection of work, which has been completed by other contractors. Necessary care must be taken to see that the Contractor's men cause no damage to the same during the course of execution of the work.

All other works completed or in progress as well as machinery and equipment that are liable to be damaged by the Contractor's work shall be protected by the Contractor and protection shall remain and be maintained until its removal is directed by the OMFED.

The Contractor shall effectively protect from the effects of weather and from damages or defacement and shall cover appropriately, wherever required, all the works for their complete protection.

The contractor shall carry out the work without damage to any work and property adjacent to the area of Contractor's work to whomsoever it may belong and without interference with the operation of existing machines or equipment.

Adequate lighting, guarding and watching at end near all the storage, handling, fabrication, reassembly and erection sites for properly carrying out the work and for safety and security shall be provided by the Contractor at his cost. The Contractor should adequately light the work area during nighttime also. The Contractor should also engage adequate electricians/wiremen, helper etc. to carry out and maintain these lighting facilities. If the Contractor fails in this regard, the OMFED may provide lighting facilities as he may deem necessary and charge the cost thereof to the Contractor.

The Contractor shall take full responsibility for the care of the works or any section or portions thereof until the date stated in the taking over certificate issued in respect thereof and in case any damage or loss shall happen to any portion of the works not taken over as aforesaid, from any cause whatsoever, the same shall be made good by and at the sole cost of the Contractor and to the satisfaction of the OMFED. The Contractor shall also be liable for any loss of or damage to the works occasioned by the Contractor or his sub-Contractor in the course of any operations carried out by the Contractor or his sub-Contractors for the purpose of completing any outstanding work or complying with the Contractor's obligations.

**11. Unloading, transportation and inspection**

The Contractor shall be required to unload all the materials/equipment from the carriers. The Contractor shall plan in advance, based on the information received from the OMFED, Contractor's requirement of various tools, tackles, jacks, cranes, sleepers etc. required to unload the material/equipment promptly and efficiently. The Contractor shall ensure that adequate and all measures necessary to avoid any damage whatsoever to the equipment at the time of unloading are taken.

Any demurrage / detention charges incurred due to the delay in unloading the material/equipment and releasing the carriers shall be charged to the Contractor's account.

The Contractor shall be responsible for the reception and safe storage on site of all plant and equipment delivered or handled over to the Contractor, for the purposes of the contract.

The Contractor shall safely transport/shift the unloaded materials/equipment to the storage area and/or the place of work, as the case may be.

The materials/equipment would be carefully unpacked by the opening the wooden cases/other modes of packing as the case may be.

In case of equipments / materials to be supplied by the OMFED, all the materials / equipments received from OMFED prior to arrival of the Contractor at site, shall be handed over to the contractor who shall, thereupon, inspect the same & furnish the receipt to OMFED.

Detailed inventory of various items shall be prepared clearly listing the shortages, breakages / damages after checking the contents with respect to the Contractor's packing list, OMFED's order and approved drawings. The contractor shall also check every equipment for any shortage/shortcoming that may create difficulty at the time of installation, commissioning & trial run.

All the information and observations by the Contractor shall be furnished in the form of 'INSPECTION REPORT' to the OMFED with specific mention/suggestions which in the opinion of the Contractor should be given due consideration and immediate necessary actions, to enable the OMFED to arrange repair or replacement well in time and avoid delays due to non-availability of equipment and parts at the time of their actual need.

The protection, safety and security of the materials shall be the responsibility of the contractor, until they are handed over to the OMFED after erection, commissioning and testing and performance trial run as per the terms of the Contract.

## **12.0 Storage of equipment.**

The Contractor shall be responsible for the proper storage and maintenance of all materials/equipment under the Contractor's custody. The Contractor shall take all required steps to carry out frequent inspection of equipment/materials stored as well as erected equipment until the same are taken over by the OMFED. The following procedure shall apply for the same:

The Contractor's inspector shall check stored and installed equipment/materials to observe signs of corrosion, damage to protective coating to parts, open ends in pipes, vessels and equipment, insulation resistance of electrical equipment etc. The Contractor shall immediately arrange a coat of protective painting whenever required. A record of all observations made on equipment, defects noticed shall be promptly communicated to the OMFED and OMFED's advice taken regarding the repairs/rectifications. The Contractor shall there upon carry out such repairs/rectifications at his own cost. In case the Contractor is not competent to carry out such repairs/rectifications, the OMFED reserves the right to get this done by other competent agencies at the Contractor's responsibility and risk and the entire cost for the same shall be recovered from the Contractor's bills.

The Contractor's inspector shall also inspect and provide lubrication to the assembled equipment. The shafts of such equipment shall be periodically rotated to prevent rusting as well as to check freeness of the same.

The Inspector shall check for any signs of moisture or rusting in any equipment.

If the commissioning of equipment is delayed after installation of the equipment, the Contractor shall carry out all protective measures suggested by the OMFED during such period.

Adequate security measures shall be taken by the Contractor to prevent theft and loss of materials under the Contractor's custody. The Contractor shall carry out periodical inventory checks of the materials stored and installed by the Contractor and any loss noticed shall be immediately reported to the OMFED. A proper record of these inventories shall be maintained by the Contractor. The Contractor should not sell, assign, and mortgages, hypothecate or remove equipment or materials, which has been installed or stored at the site under Contractor's custody without the written consent of the OMFED.

Suitable grease recommended for protection of surfaces against rusting (refined from petroleum oil with lanoline minimum (70 DEG.CENT.) and water in traces) shall be applied over all equipment as required once in every three months. Quality of grease is to be approved by OMFED.

All equipment shall be stored inside a closed shed or in the open depending upon whether they are of indoor or outdoor design. Adequate storage area, as required, shall be made available by the contractor, within the site premises.

All the necessary items/goods required for protection as described above shall be arranged by the Contractor and such cost shall be included in the Contract price.

### **13.0 Approvals**

The contractor shall obtain the necessary approvals of Factories & Boilers Inspectorate, Electrical Inspectorate, Legal Meteorology dept., Explosives Inspectorate and any other state/local authorities, as may be statutorily required or as may be directed by OMFED, and the cost of obtaining such approvals shall be included in the Contract price.

All the necessary details, drawings, submission of application and proformas will be furnished by the Contractor to the OMFED for verification/signature, and shall therefore be submitted to the appropriate authorities for approval.

The Contractor on behalf of OMFED shall submit the necessary application duly filled-in, together with the prescribed fees to the appropriate authorities. However, all the actual statutory fees paid by the Contractor shall be reimbursed by OMFED upon production of receipt. The contractor shall also make all necessary arrangements for inspection of the works by the statutory authorities, as and when required. Cost of all such inspections shall be included in the contract price.

Whenever necessary or required, the contractor shall furnish the necessary test and/or inspection certificates etc, from the appropriate authorities as per IBR, IER and other statutory regulations and the cost of obtaining these certificates shall be included in the contract price.

In case of capacity enhancement of existing plants, the contractor shall arrange for and obtain necessary approvals, as stated herein, for the entire expanded plant, either in phases or in whole as the case may be & the cost of obtaining such approvals shall be included in the Contract price.

Any modifications or changes required or advised by the appropriate authorities during the course of inspection and/or the contractor at his own cost shall carry out approval.

**14.0 Review and co-ordination of erection work**

The Contractor shall depute senior and competent personnel to attend the site co-ordination meetings that would generally be held at the site every month. The Contractor shall take necessary action to implement the decisions arrived at such meetings and shall also update the erection schedule, accordingly.

## **SECTION -IV (A)**

### **SPECIAL CONDITIONS OF CONTRACT**

#### **(FOR MECHANICAL INSTALLATION)**

##### **MECHANICAL INSTALLATION**

The installation work would comprise of:

- a) General installation i.e. positioning and installing all the equipments as per approved layout drawings and as per the contract.
- b) Supply and installation of structural platforms and tables.
- c) Supply and installation of all service piping including ancillary items.
- d) Insulation and cladding of piping equipment and electrical auto tracing of LSHS, including supply of materials.
- e) Interconnections of services and electrical with equipment.
- f) Guide line for expansion work.
- g) Clean up of work site.
- h) Supply of all cleaning chemicals and lubricants,
- i) Testing, commissioning and start-up.
- j) Painting including supply of paints as approved by the OMFED.
- k) Training of personnel.

Detailed specifications are given in the subsequent clauses.

#### **2.0 GENERAL INSTALLATION**

##### **2.1 Positioning of equipment.**

The work involves preparation of access for moving of the plant and equipment including their fittings from the work site godown or from the place within the site where they have been unloaded, to the place of erection, decrafting and placing on the foundation wherever required. All the civil foundations as per the manufacturer / Contractor's drawings shall be arranged by the bidder. The Contractor shall place the equipment and carry out final adjustment of the foundations including alignment and dressing of foundation surface, embedding and grouting of anchor bolts and bedplates. The Contractor shall be responsible for obtaining correct reference lines for purpose of fixing the alignment of various equipment. Tolerances shall be as specified in equipment manufacturers drawings or as stipulated by the OMFED's Engineer. No equipment shall be permanently bolted down to foundations or structure until the alignment has been checked by the Contractor and witnessed by the OMFED. The Contractor shall carry out minor alterations in the anchor bolts, pockets etc., at no extra cost and set the

equipment properly as per approved layout, drawings and manufacturer's instructions. The Contractor shall supply all the necessary foundation / anchor bolts and bedplates without extra cost.

The Contractor shall supply, fix and maintain, at his own cost, during the erection work, all the necessary centering, scaffolding, staging required not only for proper execution and protection of the said work but also for protection of the surrounding plant and equipment. The Contractor shall take out and remove any or all such centering, scaffolding, staging planking etc., as occasion shall require or when ordered to do so and shall fully reinstate and make good all things disturbed during execution of the work, to the satisfaction of the OMFED. The Contractor shall be paid no additional amount for the above.

### **3.0 CLEANING CONDITION AND LUBRICANTS**

The necessary quantities of cleaning chemicals, lubricants, etc. required for the installation and commissioning, testing and start up of all the equipment till handing over are to be supplied the contractor and nothing extra would be paid for these.

### **4.0 TESTING, COMMISSIONING AND START UP**

4.1 The contractor shall operate, maintain and give satisfactory trial run of the plant for a period of continuous **10 days (Ten Days)** at the rated output, after satisfactory commissioning and start-up of the plant. All rectification of damages / defects and routine troubleshooting should be carried out by the contractor. The contractor shall incorporate / execute necessary minor modifications during the trial period for maximising operational efficiency. The contractor should also execute minor modifications as may be suggested by the manufacturer / OMFED. The contractor shall suggest recommended log sheet proformas for recording necessary operating data and pass it on to the OMFED in proof of satisfactory rated output and performance of the equipments / plant.

#### **4.2 The commissioning shall also include the following for each equipment:**

- 4.2.1 Field dis-assembly and assembly.**
- 4.2.2 Clean out of lubrication system including chemical cleaning wherever required.
- 4.2.3 Circulation of lubricant to check flow.**
- 4.2.4 Clean out and check out of all the service lines.
- 4.2.5 Check out and commissioning of instruments, equipment and plants, filtering of transformer and other oils so that if deteriorated, they shall attain the required properties/standards, specified tests in this regard must be carried out by approved authorities and their satisfactory reports submitted to the OMFED before start-up.
- 4.2.6 Recharging or make-up filling of lubricant oil up to the desired level in the lubrication system of individual machine.

- 4.2.7 Operation in empty condition to check general operation details wherever required and wherever possible.
- 4.2.8 Closed loop dynamic testing with water wherever required.
- 4.2.9 Operation under load and gradual load increase to attain maximum rated output.
- 4.2.10 Trouble shooting during the trial period.
- 4.3 The Contractor shall demonstrate proper working of all mechanical and electrical controls; safety and protective device, in presence of the OMFED's engineer and the same should be duly recorded.
- 4.4 After conducting testing, in case a particular equipment is not working properly or not giving rated output the Contractor will furnish a detailed report to the OMFED stating therein the detailed account on the performance of the equipment with possible reasons for improper or not working of the same in case such equipment is supplied by OMFED.

The OMFED after receipt of report from the Contractor would take up the matter with the manufacturers and if required would invite the representative of original manufacturers. In case the OMFED considers that the nonperformance of equipment is only due to in-experience of the Contractor, then the charges incurred for the manufacturer's representative visit would be debited to the Contractor's account.

- 4.5 In case of turnkey contracts, the contractor shall furnish a detailed account of the performance of all the equipments. In case any particular equipment fails to perform properly or at its rated output, then the contractor shall take up the matter with the original manufacturer, under intimation to OMFED. In case OMFED considers it necessary, the contractor shall invite, at his own cost, the technical personnel of the original manufacturer to visit the site & carry out necessary rectification/modifications to get the rated performance. In case the contractor fails to do so within 7 days of receipt of instructions from OMFED, the OMFED shall take necessary action to invite the representatives of the Original manufacturer to visit the site & the cost of such visit(s) shall be debited to the contractor's account.
- 4.6 Further before commencement of testing of commissioning, the OMFED reserves the right to invite the original manufacturer's representative at the cost of the Contractor for start-up help, assist and guide the Contractor during commissioning in the following cases:
  - a) The Contractor has no previous experience of commissioning and start-up of the similar equipment.
  - b) The OMFED is of the opinion that the Contractor is not capable to commission and start-up of certain specific equipment.

However, in either of the cases the manufacturer's representatives would be called with prior information to the Contractor and the Contractor will have to

extend all co-operation to such representatives in good spirit and in the interest of the work.

- 4.7 After satisfactory commissioning and start-up the Contractor shall keep his representatives under whose supervision the OMFED's staff shall be operating and maintaining the plant and equipment for the trial run period of 30 days. The Contractor's representatives should be present at all times during the running and operation of plant and equipment. During this period the Contractor shall ensure proper working of complete plant and equipment and attend any works required to be done and shall also take complete responsibility for proper operation and maintenance of the complete plant and equipment.

## **5.0 PAINTING**

All the equipment/machineries like motors, pumps, HT / LT panel, transformer, switch boards, starters, junction boxes, isolators, storage tanks, supporting structures, pipe supports and MS / GI pipes and all exposed and visible iron parts included in the scope off erection / commissioning shall be given double coat of paint of approved shade over a double coat of anti-corrosive primer wherever necessary.

Irrespective of the condition of original paint of equipment / machineries / structures / supports. All surfaces wherever required must be properly cleaned from scale, dirt and grease prior to painting. Spray painting must preferably be used on all the equipment / machineries and wherever practicable. Suitable and necessary cleaning / wiping of sight / dial glasses, other non-metallic parts, flooring, walls and other surfaces which have been spoiled by paint during painting must also be carried out by the Contractor.

Lettering and other markings, including capacity and flow direction markings, shall also be carried out by the Contractor on the tanks, pipe lines, starter's, motors, isolators and wherever else necessary, as directed and as per the standard practice of installation. ISI colour codes and colour charts as mentioned in Annexure-III must be adhered to. Supply of all paints and all other materials required it included in the scope of supply of the Contractor under this contract/order.

## **6.0 TRAINING OF PERSONNEL**

Necessary staff as may be deputed by the OMFED shall be trained by the Contractor for operating the plant. The personnel will be associated for the training during the installation, testing, commissioning, start-up and trial run period and the training tenure shall be extended for a minimum period of one month from the date of commissioning and start-up.

**SECTION -IV (B)**  
**SPECIAL CONDITIONS OF CONTACT**  
**FOR ELECTRICAL INSTALLATION**

**1.0 SCOPE**

The intent of this specification is to define the requirements for the installation, testing and commissioning of the electrical system like high tension switch yard with accessories and equipments, transformers, HT panels, oil circuit breakers, LT panels and power control centers, Distribution boards, capacitors and banks panels, power and control cables, remote push button stations, motors, earthing network, etc. Requirement of a particular project shall be as specified in schedule of quantities.

**2.0 STANDARDS**

2.1 The work shall be carried out in the best workman like manner in conformity with this specification, the relevant specification / codes of practice of the Indian Standards Institution, approved drawings and the instructions issued by the Engineer-in-charge or his authorised representatives, from time to time. Some of the relevant Indian Standards are listed in Annexure-IV.

2.2 In addition to the standards as mentioned in 2.1, all works shall also confirm to the requirements of the following:

- a) Indian electricity act and rules framed there under.
- b) Fire Insurance Regulations.
- c) Regulations laid down by the chief electrical inspector of the state / Electricity board.
- d) Regulations laid down by the factory Inspector of the state.
- e) Any other regulations laid down by the local authorities.
- f) Installation & operating manuals of original manufacturers of equipments.

**3.0 EQUIPMENT AND ACCESSORIES –SPECIFICATIONS**

This defines specifications and requirements mainly for the equipment and accessories which are generally supplied by the erection agencies and do not cover the specification of main electrical equipment such as Transformers, HT. and LT. panels, switchboards and motors etc. which may be supplied by the OMFED.

All materials, fittings and appliances to be supplied by the contractor shall be of best quality and shall confirm to the specification given here under. The equipment shall be manufactured in accordance with current Indian Standard Specifications wherever they exist or with the BS or NMA specifications, if no such ISS are available. In the absence of any specification, the materials shall be as approved by the OMFED or his authorized representatives.

Makes of bought out items selected by the Contractor must be furnished by him as per the Performa given in Annexure-V.

### 3.1 **Control Cables**

Control cables for use on 415 V system shall be of 1100 volts grade, copper conductor, PVC insulated, PVC sheathed, armored and overall PVC sheathed, strictly as per IS: 1554 (Part I) – 1976. Unarmored cable to be used only if specifically mentioned in schedule of quantities.

The size of these cables shall be as specified in schedule of quantities or as per erection drawing. THE MINIMUM CONDUCTOR DIAMETER SHALL BE 2.5 SQMM.

### 3.2 **Motor Isolators**

These shall be in Aluminum cast housing, completely dust, vermin and weather proof, suitable for 25A, 415 volts, 50 Hz with rotary type switch and reroll type metallic plug, complete with cable gland for incoming and outgoing cables. Operating hand to be of metal and final finish of housing to be buffer mirror. Sample to be got approved before supply.

**SECTION – V**  
**TECHNICAL SPECIFICATION**

1. **Gas (LPG) Fired Boiler - 300 Kg./hr**

1.	DESIGN	:	3 PASS, COIL TYPE (NON - IBR)
2.	MODEL	:	TO BE FILLED BY BIDDER
3.	Steam generation capacity	:	300 KG/HR. FROM 100 °C FWT
4.	Maximum working Pressure	:	10.5 KG/CM <sup>2</sup>
5.	Fuel	:	HSD/LPG (Dual fired)
6.	Dryness fraction	:	80%
7.	Thermal efficiency on NCV	:	88% $\pm$ 2%
8.	Burner	:	On – Off type, pressure jet atomizing
9.	Fuel consumption at full load considering GCV	:	Maximum 24 Ltr/Hr (Diesel) or LPG equivalent to Diesel.
10.	Overall Dimension (L x B x H)	:	TO BE SPECIFIED BY BIDDER
11.	Electrical Load	:	A.C, 3 – PHASE, 4 WIRE , 415 V $\pm$ 6%, 50HZ $\pm$ 3 , KW
12.	Over Head OIL Storage Tank	:	300 Ltrs capacity
13.	Steam quality/ dryness fraction	:	80%
14.	Flue Gas Out Let	:	200 MM
15.	Start up time	:	3 to 5 minutes

**Note:** It is our consent endeavour to improve the design; hence specifications are subjected to change without prior notice. Given Specification are only for the guideline purpose.

## **SCOPE OF SUPPLY**

### **Boiler mountings and fitting**

All mountings and fittings should be provided to facilitate safe, efficient and convenient operation and including:

- Main stop valve with counter flange.
- GM Non-return valve with counter flange.
- Extra valve for auxiliary steam lines.
- One safety valves with 5 m pipe each to lead steam outside boiler room.
- Pressure parts fabricated out of high temperature resistance boiler quality tubes as per BS-3059
- Feed check and shut down valves with counter flanges.
- Blow down valve with counter flanges and blow down piping for economizer and boiler.
- Down firing pressure jet burner comprises of Blower and oil pump with motor, oil filter, Pressure gauge, Burner with Solenoid Valve, Nozzle, Ignition Electrode, Ignition Transformer, Photocell, SS Needle Valve Etc.
- Water level pressure Gauges - 2 sets.
- Pressure gauges
- Set of jointing/rings.
- Suitable thickness insulation to ensure safe working temp.
- Aluminium sheet metal covering for the insulation.
- Inducted/forced draft fan should be provided for supplying intake air to the boiler. if required.
- Fuel gas safty devices should be provided on top of Boiler shell.
- Dust proof prefabricated control panel comprises of : Contractors, over load relays, control fuses, MCB, Sequence controller, anm switches, Hooter, indicating lamps, Push bottom switch, Etc.
- Shell and tube type Economizer.
- Oil Storage Tank

### ❖ **Feed Water Pump**

Two electrically driven feed water pumps (one standby) to match with the boiler operation. Each should be fitted with a suction strainer, suction insulating valves, non-return valves and pressure gauge.

- ❖ One number steam operated water injector.
- ❖ High and low water level controls and alarms.
- ❖ All controls, motors, starters, fuse, isolators should be mounted in a dust-proof control panel with selectors, indicators and manual controls on the outside. All electricals and control devices should be prewired to this panel which terminates with one main incoming isolator.
- ❖ Technical details of the boiler should be furnished in the enclosed proforma.
- ❖ Three sets of operation and maintenance manuals.
- ❖ One water flow meter of suitable size to be installed in the common suction header of the boiler feed pumps, for checking the rate & cumulative flow of water through the header.

### ❖ **Flue Gas Ducting and Chimney**

The chimney for the boiler shall be of ground mounted but guy ropes supported type, made out of mild steel sheets of suitable thickness, with stiffeners, helical stakes for safety of the chimney etc. as may be required. Chimney bottom upto 2 M height should be suitably insulated and finally cladded with 3 mm thick mild steel sheet. One opening with suitable cover should be provided near the bottom for removing the soot deposits manually. The Chimney shall be installed outside the boiler room. The chimney shall be suitable painted after installation.

The mild steel cladding should be of butt welded construction and all welds should be ground smooth. The chimney should conform to IS 6533-1971. Minimum chimney height should be 15 m. or as per the requirements of the local Air Pollution Control Authorities.

The chimney shall be complete with chimney hood, monkey ladder, safety cage for ladder starting from 5 metres upto top. Painter's pulley, 5 pronged lightning Arrestor (Copper with GI earth conductor of 25 X 6 mm section including earthing as per specifications, etc. complete duly painted. Necessary foundation bolts required for the chimney shall also be supplied. Details of foundation is to be provided by contractor for necessary civil works.

The Chimney height and specifications should meet the requirements of Air Pollution Control authorities. Smoke sampling platform, with power plug point with cable etc. should be provided if required by the Air Pollution Control authorities.

The contractor shall arrange for inspection & approval of the Pollution Control Authorities and all costs for such inspection & approval shall be included in the contract cost.

Flue gas ducting made of suitable gauge MS sheet shall be provided for connection from Boilers exhaust outlet to the chimney.

❖ **Pressure Reducing Station:**

The pressure reducing station shall comprise of strainer with blow down cock, moisture separator with steam trap, sight glass & moisture drainage pipeline, pressure reducing valve, isolating valves at both ends, safety valve, pressure gauges (upstream & downstream), pressure control stop valve and by-pass pipeline with valves etc. complete as required and generally as per the drawing provided in this document. A suitable MS structural platform & access ladder shall be provided & installed in boiler room for maintenance of the PRS in future.

❖ **Feed Water Tanks:**

One 2000 litres MS water tank of rectangular / cylindrical shape made from 3.15 mm M.S. sheet shall be supplied & installed by the contractor, complete with all accessories like water inlet pipe & outlet pipe with valves of suitable size, over flow pipeline of suitable size & length to carry the water to nearest drainage point or outside the boiler room, water level indicator drain pipe with valve etc.

❖ **Spare Parts:**

List of essential spare parts for normal operation for a period of 2 years should be given along with the offer. Description of spare parts, unit prices should be mentioned in the offer.

❖ **Battery Limits**

**Battery limits for this job shall be as under:**

- a) **Fuel:** Diesel / LPG shall be provided by OMFED.
- b) **Safety Lines:** Pipe lines from safety valves upto outside of the boiler house shall be supplied and installed by the supplier.
- c) **Condensate drain lines:** Pipeline from steam traps for drainage of Condensate upto nearest drain point or outside boiler room is to be supplied & installed by contractor.
- d) **Water:** Scope of work contractor starts from outlet valve on existing soft water tank located over the existing boiler room and shall include all necessary piping to feed water tank, to boiler feed pumps and to boiler.
- e) **Steam Pipelines :** The scope includes supply installation, testing & commissioning of H.P/LP steam pipelines & valves with all necessary fittings & supporting materials upto

the existing LP steam line near the existing boiler room including inter connection of new LP line to the existing 40 mm dia LP. The LP steam line & water line shall be taken overhead across the road to the existing boiler room through suitable MS structural floor supports depending upon the site conditions.

f) **Blow Down & Drain**: Supply and laying of drain pipelines from blow down valves upto blow down pit is in the scope of the contractor. The contractor shall provide necessary drawings for civil construction of trench & blow down pits.

g) **Electricity**: Wall mounted MCC is included in the scope of work supply, laying & connection at both ends of 4 core X 10 sqmm PVC insulated Al. armoured cable of suitable length as power supply cable from PCC to the boiler MCC is included in scope of work.

Interconnection of MCC to various equipment and instruments including supply and laying of power cables, conduits, cable trays, earthing etc. is in the scope of the contractor. One earth pit for the lightening arrestor shall be supplied and installed by the contractor. The MCC shall be double earthed as per the requirement of Electrical Inspectorate.

h) **Insulation**: **Supply** and application of insulation of boiler, refractory materials, and brick work is completely in the scope of the contractor. The HP&LP steam pipe lines including non-return valves shall also be insulated with 50 mm thick glass wool or equivalent insulation material by the contractor. This will be cladded with 24 SWG alluminium sheet.

i) **Tools, tackles & instruments**: All tools, tackles, consumables (except coal) and manpower required for work shall be arranged by the contractor at his own cost. Necessary instruments for conducting tests to measure specified parameters and to establish capacity & efficiency of the boiler shall also be brought by the contractor at his cost. All the equipments & instruments required conducting tests to measure all required parameters for inspection & approvals by statutory authorities shall be brought by the contractor at his own cost.

**1 Alternative Offers.**

In addition to the specifications mentioned above, the supplier may also offer any other improved version of boiler and optional accessories, if any, for improving the boiler efficiency. Complete technical and commercial details of such offers shall also have to be furnished. The cost differential for such offers should also be clearly mentioned in the offer.

**2 Standards & statutory regulations:** The boiler should comply with the latest Indian Boiler Regulations (IBR), International Standards Organization (ISO), Air pollution control regulations, and other statutory requirements and as per the specification given above.

The electrical equipment, installation should comply with the latest Indian Electricity Regulations and local regulations.

The boiler and its components should be approved by the appropriate authorities of state of its origin. Also if the concerned authorities of the state where it is installed suggest any improvement/modification the same should be carried out by the supplier without any extra charge.

**3 Boilers & its mountings HP steam piping work to be got approved by the boiler inspectorate where it is installed.**

Technical details of the boiler should be furnished in the following format:

Type:

Steam generating capacity 300 Kg/hr at pressure 10.5 Kg/sqcm when feed water temperature available at temperature 35 degree Celsius, using coal of NCV 11840 Kcal / Kg.

Boiler Pressure: Design \_\_\_\_\_ Operating \_\_\_\_\_

Overall dimensions of boiler: L X B X H m. \_\_\_\_\_

Weight of boiler: Dry \_\_\_\_\_ Flooded \_\_\_\_\_ (t)

Mechanical Details:

i) Tubes: Plain/Stay Heating surface area: m SQ \_\_\_\_\_

ii) Shell: Thickness \_\_\_\_\_ Size \_\_\_\_\_ Material \_\_\_\_\_ of Construction: \_\_\_\_\_.

Design Code: \_\_\_\_\_

Water content: when full \_\_\_\_\_ cum

At working level: \_\_\_\_\_ cum .

Steam space \_\_\_\_\_ cum.

Feed water arrangement:

Pump : Nos.-----/ Type -----/

Make of Motor-----/

Pump Capacity, head, HP-----/

❖ **Valves in feed water piping :**

Suction side : Size----- Make-----

Discharge side : Size ----- Make-----

Pressure gauge : Size -----Make-----

❖ **Firing arrangement :**

Type of furnace -----/Volume-----/Type of grate -----  
Area -----/.

Grate loading kg./hr. m SQ-----type of bricks-----

Arrangement for Ash removal-----

Recommended size of coal for firing-----

Excess Air-----

Coal steam ratio-----

❖ **FD/ID fan**

Qty.-----/Type-----/Capacity-----MCU/Min./HP of Motor-----  
-----/Head-----of WC

**Flue gas opening dia on boiler-----**

**Chimney**

Size & Height-----

Plate thickness-----

Supporting arrangement-----

❖ **Flue gas ducting considered**

i) For new boiler:

Size-----length-----thickness-----

❖ Automatic water level controls

Type-----High/Low-----Make-----

Alarm/Signal-----

❖ **Boiler Mountings**

<u>Sl.No.</u>	<u>Description</u>	<u>Type</u>	<u>Quantity</u>	<u>Size</u>
1.	Steam stop valve			
2.	Non return valve			
2.	Safety Valve			
3.	Feed check valve			
4.	Blow down valve			
5.	Aux steam stop valve			
6.	Air vent valve			
7.	Water level gauge			
8.	Pressure gauge			

❖ **Service Requirements:**

i) Water-----ltr./hr.

ii) Coal-----Kg./hr

iii) Electrical Load :

Feed pump-----HP/ID Fan-----HP/FE Fan  
-----HP/Miscellaneous-----HP

Total load-----.

❖ **Flue gas temperature/stack temperature :**

❖ **Provision of ladder/platform :**

❖ **Whether conforming to IBR: Yes/No.**

❖ **Any other special features.**

❖ **Details of Boiler Required:**

- ❖ **NAME OF THE PROJECT:** Tirtol Dairy.
- a) **CAPACITY:** Continuous water evaporation rate of 300 Kg./Hour at Pressure 10.5 (WP) Kg./Sq.CM when feed water temp. is available at 35 degree Celsius.
- b) **QUANTITY** 1 No.
- c) **CHIMNEY:** Height of Chimney 15 m. for **diesel** / LPG fired boiler min. from finished floor level or as per statutory regulation for Air Pollution Control.
- d) **TYPE OF CHIMNEY** : Ground mounted but guy rope supported, outside Boiler house.
- e) **LENGTH OF FLUE GAS DUCTING:** Unit rate may be given for ducting to adjust the amount for increase/decrease in quantity.

**Note: i) The** supplier should provide the following instruments at their cost for establishing capacity and efficiency of the boilers during trial runs:

- i) Water meter
- ii) CO2 analyzer
- iii) Steam Flow meter

These instruments can be taken back by the supplier after successful trials.

2) Contractor has to ensure that the data provided above shall be sufficient for the scope of work covered by the contract. Acceptance of the above data by Purchaser does not release the bidder of his responsibility to provide satisfactory performance of the entire plant, on a turn-key basis.

❖ **Scope of work**

❖ **Mechanical Installation** :

- ❖ Loading, insurance, transportation of boiler and Accessories from manufacturer's premises and unloading at site & shifting to the new boiler room.
- ❖ The complete boiler and accessories shall be positioned, installed and interconnected which includes fans, water & steam pipings, ducting, chimney, control panel and all other items covered in the scope of supply.
- ❖ All foundation bolts shall be supplied by the contractor.
- ❖ Necessary refractory material, cement and insulation materials shall be supplied and installed, first charge of lubricants, nuts, bolts, gaskets shall be supplied and fixed by the contractor.
- ❖ Arrangement for bringing coal from coal yard to boiler room & coal transportation trolley is to be provided by the contractor.
- ❖ Arrangement for ash removal and ash transportation trolley shall be provided by the supplier.

- ❖ Supply & installation of all water pipelines & fittings from soft water tank placed over existing boiler room to feed water tank (to be supplied & erected by Contractor) to suction header of boilers fed pumps & up to the boilers fed water valves. All pipelines are to be suitably supported by MS structures.
- ❖ Concrete foundations for boilers & chimney and blowdown pipe trench & blow down pits shall be provided by bidder based on the drawings.

❖ **Electrical Installation:**

Supply, installation of Electrical Control panel required for the boiler including supply, laying & connection of required size not less than at least 4 X 10 mm<sup>2</sup> PVC insulated. Al. armoured cable of suitable length as main power supply cable to boiler MCC: insulation of control panels and interconnection of all motors and controls including supply and laying of cables through cable trays/GI pipes etc. and earthing. Necessary trays, glands, earth conductors and all other items for this job shall be supplied and installed by the supplier. Trenches shall be provided by the client as per the detail to be furnished by supplier.

Details given in Section IV Part III of the tender.

❖ **Testing, commissioning & performance trial run:**

The Contractor shall operate, maintain and give satisfactory trial run of the entire steam raising plant for a period of continuous 30 days at the rated output. All rectification of damages, defects and routine trouble shooting should be carried out by the contractor, during this period. Contractor shall incorporate/execute necessary modifications for maximizing operational efficiency. The contractor shall demonstrate proper working of all mechanical and electrical controls, safeties and protective devices in the presence of owner's engineer and the same should be duly recorded. The work shall be deemed to be completed only after satisfactory performance of the entire plant for 30 continuous days at the rated output & after handing over of the same subsequently.

Details given in Section IV part I of the tender.

❖ **Special notes**

- ❖ Bidders are requested to visit the project site for assessment of quantum of work before quoting. This job is a complete turnkey job and accordingly all items necessary to give the rated/designed output are included in scope of work even through it is not specified in the details.

- ❖ The work shall be done in a running dairy plant. Hence, the shutdowns for dismantling/installation of equipments & pipelines & pipe interconnections are to be arranged with the Dairy Authorities in such a way that the production of the dairy does not get affected. The contractor shall prepare programmes for shut-down/hooks up/change over from existing to new system, in consultation with the Dairy authorities & submit the same for approval of Project authority at least 30 days in advance. Bidders would note that no extra payment shall be made on this ground.
- ❖ The contractor's drawings showing installation details, pipe sizing, location of PRS, feed water tank, valves, structural supports & platforms, power cable routes & conduits etc. are required to be approved by OMFED, before commencement of work at site.

❖ **Approved Makes:**

**SCHEDULE - I**

Make of Bought Out Items.

- |    |   |                                    |
|----|---|------------------------------------|
| 1. | Pressure Reducing Station:<br>Thermax                     | Spirax (JN Marshall/Mazda/ Leader/ |
| 2. | MS 'C" Class pipe :                                       | Tata                               |
| 3. | CI sluice valve with GM /Ball:<br>Valve CS working parts. | Kirloskar/Leader/ L&T/Audio        |
| 4. | Insulation materials glass or:<br>or mineral wool mat.    | Mettur Beardsell/Lloyed/Spinte     |
| 5. | LT cables/Control cables :                                | Tropodour/CCI/Closter/Nicco        |
| 6. | Electrical isolating switch :                             | Siemens/L&T                        |
| 7. | MS structural items :                                     | TATA/SAIL                          |
| 8. | Pressure & temperature gauges:                            | JN Marshall/Fiebig/H. Guru         |

**N.B:** The bidder should quote for above makes of items only. The difference in prices should be mentioned clearly, while quoting the items of makes other than the specified above.

## **2. Refrigeration Equipments**

### **FUNCTIONAL REQUIREMENTS**

The Plant is required to supply refrigeration requirements of the dairy plant consisting of ice bank system for chilling the milk and maintains a cold store for milk and milk products.

### **DUTY CONDITIONS**

- a. To chill 40,000 Ltrs. Of milk per day from 35°C to 4°C. in plate chiller at a rate of 10,000 LPH.
- b. To chill 40,000 LPD pasteurized milk from 12°C to 4°C at a rate of 5,000 LPH in a Pasteuriser.
- c. To pre-chill 40,000 LPD of milk in a plate chiller at a rate 10,000 LPH from 10°C to 4°C before packing.
- d. To maintain a cold store of size 298 Cu.M. for keeping milk and milk products of about 60,000 Ltrs. in plastic crates.

### **DESIGN REQUIREMENTS AND SCOPE OF WORK**

#### **SYSTEM TYPE:**

Direct Expansion System:

This system shall be used to provide refrigeration requirements for maintaining low temperature in milk cold store.

#### **ICE BANK SYSTEM:**

This system shall be used to provide chilled water required for processing of liquid milk and its products.

#### **DESIGN REQUIREMENTS:**

#### **REFRIGERATION COMPRESSORS**

#### **COMPRESSORS:**

Ammonia heavy-duty industrial type reciprocating compressor of capacity as specified in design data at - 10 Deg. Cent. suction temperature and 45 Deg. Cent. Condensing temperature. Following standard accessories should be provided with each compressor:

- a. Automatic unloader, capacity controller.
- b. Suction and discharge by pass manifolds with isolating valves.
- c. Control panel having low pressure gauge and cutout, high pressure gauge and cutout, oil pressure gauge and differential pressure cutout and indication lamps for all cutouts / safeties, panel board to be complete with frame for floor mounting.
- d. Bull's eye type oil sight glass.
- e. Complete driving parts, including flywheel, motor pulley, drive belts, belt guards etc.
- f. Base plate/frame vibration eliminators and Anchor bolt etc.as per requirement.
- g. Standard tool kit including piston ring guide etc.

### **MOTORS FOR COMPRESSORS:**

Screen protected squirrel cage, degree of protection IP23 type, induction motor, horizontal foot mounted suitable for 415 volts, 50 Hz, 3 phase, A.C. supply of rating suitable for continuous duty for compressor specified in 3.2.1.1. Necessary slide rails & foundation bolts to be provided with motor. Thermostat motor protection relay to be provided inside the motor winding. The terminal box of motor should be suitable for receiving aluminum conductors and armored cables.

### **STARTERS FOR COMPRESSOR MOTORS:**

Oil immersed rotor resistant starter/automatic star delta starter floor mounted type of capacity suitable for motor specified in 3.2.1.2 Starter to be complete with single phase preventor, ammeter and first charge oil. Air break rotor resistance type automatic starters are preferred over oil immersed starter.

### **AMMONIA OIL SEPARATOR:**

Separator of size suitable to compressor capacity with counter flanges, float valve and strainer for automatic return of oil to the crankcase with bypass arrangement.

### **REFRIGERANT PIPING:**

Suitable size M.S. "C" class (heavy duty) pipes, fittings and valves to interconnect all refrigeration equipment such as compressors, condensers, receivers, chilled water tank and air cooling unit. The main headers for suction, discharge and liquid etc. are already available in the plant room. Bidder has the responsibility to check them at project site for their suitability for the expanded capacity. In case the headers are not suitable for the expanded capacity, suitable size headers are to be provided, without any extra cost, by the contractor.

### **Compressor Jacket Cooling:**

Suitable size 'B' class GI pipe with necessary gate valves (GM body and GM working parts) to be provided from compressor room to atmospheric condenser and return for compressor jacket cooling. Bidder should mention the pipeline size considered in the design.

### **ICE BANK SYSTEM**

Ice accumulation coil to be fabricated from 32 mm NB 'C' class MS (heavy duty) Pipes in suitable sections and each section to be complete with inlet and outlet headers, oil drainage arrangement etc. The design of ice bank coils should be such as to accumulate a maximum of 50 mm thickness of ice. A suitable ice thickness cut out with solenoid valve should be provided for this purpose. Digital electronic thermometer to be provided for each compartment of ice bank.

**All header and ice accumulation coils should be spray galvanised.**

Liquid separator complete with float valve, strainer, by-pass arrangement for regulating the flow of liquid refrigerant in the ice bank coils to be provided.

## **CHILLED WATER TANK**

Tank size and no. of compartment as specified in Design Data (7.0) should be strictly maintained .It should be fabricated from MS plate of commercial grade as follows:

Sides and partition walls	---6.0mm
Bottom	---8.0mm

MS structural members as stiffeners, fasteners and supports etc. should be provided for accommodating the coil and to prevent bulging. Tank to be provided with suitable inlet with float valve. Overflow and drain with valve. MS angles are to be provided on top of chilled water tank to support removable covers. The partition plate should be provided with sufficient stiffeners so that in case on compartment is empty and adjacent compartment is full of water, there is no bulging.

### **Covers**

The removable teak wood covers fabricated in two equal layers each of 25 mm thickness of suitable equal size with 2 nos. lifting handles to be provided for complete ice bank tank except near the ends where non stranded sizes can be used. The two layers of teak wood covers should be separated by waterproof paper.

### **Chilled water tank agitator:**

These shall be mechanical type with 3 phase, 415 V, 50 Hz. Squirrel case TEFC degree of protection IP 55 induction motor of suitable size, along with necessary driving parts. Agitator should be designed to ensure uniform melting of ice on the coils. Each compartment of ice bank tank should be provided with suitable agitator and total number of agitators required for the ice bank tank is specified in design data, which should be strictly maintained.

### **Chilled water pumps:**

These shall be centrifugal, monoblock type with capacity 30000 LPH at 25 MWC total head. Impeller of pumps shall be of bronze and motor shall be 3 phases, 415 V, 50 Hz. TEFC squirrel cage type degree of protection IP 55.

### **Chilled water piping:**

Necessary GI class 'B' pipes and fittings for interconnecting ice bank tank, chilled water pumps, including MS fabricated pot type strainers with brass perforated sheet, non- return valves and isolating valves (gate valves with CI body and brass working parts). One no. 100mm dia pressure gauge with isolation cock should be provided. Bidders should mention the pipe size considered for design.

### 3. DG set - 250 KVA

#### FUNCTIONAL REQUIREMENTS -:

**General Description:** The D.G. Set would be used to generate 3 Phase, AC Electricity at 415 volts and 50 Hz. The generating set would be used in the plant to operate certain essential motors in case of power shut down/failure from the main source.

**CAPACITY:** 250 KVA at 0.8 power factor.

#### DESIGN REQUIREMENTS -:

The diesel generating set should comprise of diesel engine and alternator of 250 KVA capacity.

The diesel engine should be capable of developing required BHP to match with the alternator of 250 KVA capacity. The engine should be designed for continuous running for 24 hrs. with the overload capacity of 10% for a period of 1 hr. in any 12 hrs. running.

The diesel engine should be complete with the following accessories -:

- (i) Fly wheel
- (ii) Fly wheel housing
- (iii) Inlet manifold.
- (iv) Oil bath air cleaner.
- (v) Gear type lubricating oil pump.
- (vi) Lubricating oil cooler
- (vii) Mico bose fuel injection system with injection pump, nozzles and mechanical class A-1 type governor.
- (viii) Fuel filter double bowl type.
- (ix) Exhaust manifold.
- (x) 600 mm long flexible exhaust fitting.
- (xi) Turbo charger.
- (xii) 2 x 12V electric starting arrangement consisting of starter gear ring, starter motor.
- (xiii) 2 x 12V, 180AH dry charged battery with leads.
- (xiv) Engine panel consisting of lube oil pressure gauge, water temp. gauge, start / stop button.
- (xv) Engine protection unit for low lubricant oil pressure, high water temp. with hooters.
- (xvi) Cooling system with radiator, fan for radiator, fresh water pump.
- (xvii) Tacho cum hour meter.
- (xviii) H.D. absorption type silencer.
- (xix) Fuel pipes 2 nos. 1.5 m. long.
- (xx) 500 ltrs. Fuel tank.
- (xxi) Set of std. tools and tackles.
- (xxii) Change over switch of 630A with 3.5 core x 400 mm<sup>2</sup> cable.

#### ALTERNATOR:

KEC/ Stamford alternator developing 250 KVA at 0.8 p.f. 415V, 50 Hz, 3 phase while operating at 1500 rpm as per IS 4722:1968 as per following specification –  
Normal Rating: 250 KVA at 0.8 power factor.

Voltage: 415V

Voltage regulation:  $\pm 2\%$

Type: Self-excited self regulated bushels.

Insulation: As per manufacturer's standard.

**Control panel:**

The generating set should be provided with a control panel enclosed in a fabricated sheet steel box.

The control panel should be floor-mounted type.

The control panel duly wired should be provided with the following components –

- 1 no. A.C. voltmeter, (0 – 600) V, 96 sq.mm
- 1 no. A.C. ammeter, (0 – 600) A, 96 sq.mm
- 1 no. Voltmeter selector switch.
- 1 no. Ammeter selector switch.
- 1 no. Frequency meter, 96 sq.mm
- 1 no. KW meter.
- 1 no. Energy (KWH) meter with CT.
- 1 no. 630A MCCB with over load, short circuit and under voltage protection.
- 1 set of suitable bus bar (Alluminium) as incoming.
- 1 set of suitable bus bar (Alluminium) as outgoing.
- Set of Indicating lamps (for low Lube oil pressure, High coolant temp, Load on set, DC control ON).
- DC excitation - Voltmeter & Ammeter.
- Battery charger - Trickle / Boost type with Ammeter for DC control.
- Set of indicating lamps.
- Base frame: Engine alternator will be supplied on sturdy steel channel base frame duly assembled & coupled, using flexible coupling.

The instrument panel should be provided with the following -

- 1 no. Starting key.
- 1 no. RPM motor.
- 1 no Ammeter for DC circuit with switch.
- 1 no. Lubricant oil temp-gauge and water temp-gauge.
- 1 no. Cutout device for high water temp.
- 1 no. Cutout device for low lube oil pressure.
- Details of cable size and specification.

The diesel engine and alternator should be mounted on specially designed combination plate and MS structure of extreme rigid fabrication. The base plate should be suitable for mounting the set on six nos. suitable cushy feet mounting to be provided with base frame for DG set.

Installation, Commissioning of Gen. set, control panel and inter locking with main LT panel etc. complete in all respects including shifting the DG set to the DG room, loading the DG set on the foundation with all necessary labour, tools and tackles etc. Obtaining

approval from Electrical Inspector, Govt. of Orissa after preparing and submitting necessary drawings shall be the contractor's responsibility. The set should be put on trial run for minimum period of seven days to its full load to prove its capacity.

## **04. MOTOR CONTROL CENTRE (MCC Panel)**

### **1.0 FUNCTIONAL REQUIREMENTS:**

To receive control and distribute electrical power at 440V, 50Hz, AC in a sheet steel housing.

### **2.0 Design Requirement and Scope of supply:**

#### **2.1 Statutory Requirements:**

Motor control center is to be manufactured / assembled as per the latest ISI specification.

Indian Electricity Rules, including special requirements of concerned State Electricity Inspectorate and the detailed specification mentioned below:

#### **2.2 Housing details:**

2.2.1 The Switch Board shall be fabricated out of 14 SWG Sheet Steel and shall front open able Panels arranged to form a continuous line-up of uniform height. Cold rolled sheets shall be used for doors and front covers. Front doors shall be hinged type and bus bars and cable alleys covers shall be bolted type.

2.2.2 The Switch Board shall be totally enclosed, dust, weather and vermin proof. Gaskets of durable materials shall be provided for doors and other openings. Suitable hooks shall be provided for lifting the boards. These hooks when removed shall not leave any opening in the board.

2.2.3 All hardware shall be corrosion resistant. All joints and connections shall be made by galvanized zinc passivated or cadmium plated high tensile strength steel bolts, nuts and washers secured against loosening.

2.2.4 The Switchboard shall be cubical design (each feeder components are housed in individual cubical). Suitable cable and bus bar alleys shall be provided. All components of the switchboard shall be approached from front. Supporting arrangements for dressing of power and control cables in cable alleys also shall be provided.

#### **2.2.5 Painting:**

All metal surface shall be thoroughly cleaned and degreased to remove all scales, rust, grease and dirt. Fabricated structures shall be pickled and treated to remove any trace of acid. The under-surface shall be prepared by applying a coat of phosphate paint and a coat of yellow zinc chromate primer. The under-surface shall be made free from all imperfections before undertaking the final coat.

After preparation of the under surface, the panel shall be spray painted with final two coats of approved shade of automobile paint Supplier shall obtain details of approved paint from the purchaser before final painting.

The finished panels shall be dried in storing ovens in dust free atmosphere. Panel finish shall be free from imperfections like pinholes, orange peels, run-off paint etc.

All unpainted steel parts shall be cadmium plated or suitably treated to prevent rust, corrosion etc.

#### 2.2.6 **Name Plates:**

Nameplates for all incoming and outgoing feeders shall be provided on doors of each compartment. Nameplates shall be fixed by screws only and not; by adhesives. Special danger plates shall be provided as per requirement.

Inside the panels, stickers should be provided for all components giving identification no. as per detailed wiring diagram.

#### 2.3 **Busbar sizing connection and supports:**

The bus bars shall be made from high conductivity electrolytic aluminum conforming to grade E 91 E of IS 5082. The bus bars and supports shall be capable of withstanding the rated and short circuit current. Minimum size of main power bus bars shall be 200 Amps rating maximum current density permissible for aluminum bus bars shall be 0.8 Amps sq mm. An earthing bus bar of minimum 150 sq mm section aluminum shall be provided outside panel at bottom through out the length of the panel.

2.3.1 The bus bars shall be provided with heat shrinkable insulating sleeve. Supports for busbars shall be made of suitable size nylon sheets/epoxy compound blocks and these should be adequate in number so as to avoid any sag in the bus bars.

2.3.2 Minimum clearance between phase to phase shall be 25 mm and that between phase to neutral/ earth shall be 20 mm.

#### 2.4 **Power connection:**

##### 2.4.1 **For power interconnection within the panel board:**

Copper conductor PVC insulated cables of adequate cross section shall be used. For current rating above 63 Amps aluminum bus bar strips of adequate rating shall be used. Minimum size of copper conductor to be used shall be 2.5 sq. mm cable lugs/sockets of suitable size and type shall be used for all interconnections.

2.4.2 For all aluminum to copper connections: The copper surface will be silver plated and the aluminum surface will be properly cleaned and supplied with oxide inhibiting grease.

2.4.3 For each outgoing motor (up to 60 HP) feeder, suitable size terminal blocks (Min.3 ways) shall be provided in its cubical and wiring upto these from contactors shall be done by panel suppliers.

2.4.4 To prevent accidental contacts all interconnecting cables/bus bars and all terminals also shall be shrouded.

2.4.5 Standard colour code of red, yellow and blue for phases and black for neutral to be followed for all bus bars/conductors.

2.5 **Auxiliary wiring and terminals:**

2.5.1 Wiring for all controls, protection, metering, signaling etc. inside the switchboard shall be done with 650 V gray colour PVC insulated copper conductors. Minimum size of these conductors shall be 1.5 sq.mm control wiring to components fixed on doors shall be flexible type.

2.5.2 The complete panel would be sub-divided into different sections by purchaser & each section shall have its own control circuit with fuse and indication. Terminal block (Minimum 3-ways) for control wiring shall be provided for each outgoing Motor feeder in its cubical. 10% spare terminals shall always be available in each terminal block. Supplier shall do control wiring up to these terminal block.

2.5.3 All control wiring should be provided with necessary cable sockets/lugs at both ends.

2.5.4 Conductors shall be terminated using compression type lugs. Each termination shall be identified at both the ends by PVC ferrules. The identification termination numbers should match with those on drawings.

2.5.5 Control wiring for motor feeders should be such that the "green" light of motor feeder is "ON" only when control as well as power circuit of feeders is "ON" and it shall have its own fuse.

2.6 **Switch gears:**

2.6.1 **Switches:**

Switches shall be load break, heavy duty, air break having continuous maximum rating type with manual quick make/break mechanism. Mechanical interlock shall be provided to prevent opening of door in switch "closed" position and prevent closing of switch in door "open" position. However, it should be possible to defeat this arrangement for testing purpose.

2.6.2 **Fuses:**

These shall be HRC cartridge link type with operation indicator, which will be visible without removing fuses for the service. These shall be completed with moulded phenolic fuse base and cover.

2.6.3 **Contactors:**

The rating of the power contactors shall be as required depending upon the feeder rating

indicated in the specifications and as per the table given at 2.7.4 below. Contactor coils shall be suitable for 240 Volts, 50 Hz. unless otherwise specified. All contactors shall be supplied with minimum 2 NO + 2 NC auxiliary contacts. Additional contacts if required, for interlocking etc, shall also be provided.

3.6.1 **Protective Devices:**

Bimetal overload relays shall be provided for all motor feeders. The relays shall be adjustable and self reset type.

Any other relays, if required for motor feeders shall be specified in the feeder details.

2.6.5 **Timer:**

The timers shall be electronic type, suitable for 240 V, 50Hz. Supply.

2.6.6 **Push Buttons** (PBs):

Push buttons shall be with contact elements shall be generally mounted on open able covers. Colours shall be as follow:

Stop/Open/Emergency	- Red
Start Close	- Green

It should have minimum 1 NO + 1 NC contacts. Push buttons with built-indication lamps shall also be accepted in which case separate indication lamps are not required.

2.6.7 **Indication Lamps:**

Colours shall be as under :	
Phases	: Red, Yellow & Blue.
Open Stop/Emergency	: Red
Close/Start	: Green

Indication lamps shall be bunch of LED type and suitable for 240 volts AC supply.

2.7 **Special Requirements:**

2.7.1 All motor feeders above 10 HP shall have automatic Star Delta starters and up to 10 HP shall have DOL starters unless specified otherwise.

2.7.2 All motor feeders up to 60 HP shall be provided with switch fuse unit and above 60 HP MCCB's with a minimum breaking capacity of 40 KA shall be provided.

2.7.3 All the power contactors of Star-Delta starters shall have same current rating.

2.7.4 The following selection table shall be followed for starters of motor feeders unless otherwise specified:

SI NO	415v Motor HP	Contractors Rating Amps.	Switch/MCCB Rating Amps.
1.	0 to 10.0 HP	16	25
2.	15HP	16	63
3.	20 to 25 HP	25	63
4.	30HP	32	100
5.	40 to 50HP	40	100
6.	60HP	63	100
7.	75HP	63	200
8.	100 to 125 HP	125	200
9.	150 to 175 HP	125	200

For capacitors, rating of contactors/switch shall be double of rated current of capacitor.

2.7.5 For incoming feeder of rating higher than 600 Amps.. ACB shall be provided unless otherwise stated in the feeder details.

2.7.6 If the outgoing feeder rating is higher than 100 Amps. MCCB shall be provided unless stated otherwise and preferably the shall be located at the lower portion of the panel. These feeders shall also have isolating link for neutral.

Whenever remote control is to be provided for motor feeders, only Red Push Button For 'OFF' shall be provided on the MCC.

2.7.8 Motor starters shall be suitable for AC duty unless specified otherwise.

2.7.9 Maximum length of a shipping section of the panel shall be 2500 mm.

2.7.10 Bidders should specify maximum two "makes" of the following items in order of reference:

1. Contactors
2. Starter realy
3. Timers
4. Switch fuse units
5. MCBs
6. Push Buttons
7. Indicating lamps
8. Control and power wires
9. Terminal blocks
10. Instruments
11. Instrument Transformers

All the major components of a MCC shall be of same "Make".

2.7.11 All feeders above 10 HP shall be provided with CT operated ammeter of suitable range and with a selector switch. The Supplier should prepare and get the purchaser's approval of the following drawings in respect of each of the panels prior to taking up fabrication

2.7.12

- a) General arrangement drawing.
- b) Power circuit drawing.
- c) Control wiring drawing.
- d) MCC for product (Wall mounting type):- One No.

All Cable Entry from Top

SL. NO.	FROM	TO
01	MAIN L.T PANEL BOARD	BOILER PANEL BOARD
02	MAIN L.T PANEL BOARD	PROCESS PANEL BOARD
03	MAIN L.T PANEL BOARD	PRODUCT PANEL BOARD
04	MAIN L.T PANEL BOARD	ETP PANEL BOARD

## **MAIN L.T. PANEL**

### **INCOMING FEEDER:**

- (01) One no 800 Amp.3ph+Neutral ACB with breaking capacity of 45 KA r.m.s. 415V a.c. with-
- (i) One no. Overload release with a relay range of (250-400) A.
  - (ii) One set. Suitable CTs ratio of 600/5 A.
  - (iii) One no. Ammeter and scale range of (0-500) Amp.
  - (iv) One no. Neutral link.
  - (v) One no. 'ON' indicating lamp.
  - (vi) One set of Aluminum bus bar of 600A capacity 3-ph. + N.
  - (vii) One no. Suitable KWH meter for recording power consumption.
  - (viii) One no. Single phasing preventor 3-ph., 415V
  - (ix) One no Voltmeter with a range of suitable rating.
  - (x) One no. Instantaneous E/F relay with suitable CT range.
  - (xi) One no. Power factor meter with a range of 0.5 lag to 0.5 lead.
- (02) One no change over switch 4-pole, 830 A 415V to draw power from D.G. in the event of main power supply fails with inter locking arrangement, if necessary, to Energies the main bus bar from only one source either from electricity department or from D.G.

### **OUTGOING FEEDER:**

- (01) One no. Outgoing feeder of 4-pole 400Amp, MCCB for Refrigeration motor control equipped with -
- (i) One no. Magnetic short circuit release
  - (ii) One set of 'ON' indicating lamps.
  - (iii) Three nos CTs of ratio (400/5) Amp for metering.
- (02) One no. Outgoing feeder of 4-Pole, 250Amp MCCB for Boiler equipped with
- (i) One no. Magnetic short circuit release.
  - (ii) One no. Thermal overload relay with appropriate range.
- (03) One no. Outgoing feeder of 4-Pole 250Amp, 415V a.c. MCCB for Process equipped with
- (i) One no. Magnetic short circuit release.
  - (ii) One no. 'ON & OFF' indicator.
- (04) One no. outgoing feeder of 250 Amp, 415V a.c MCCB for Product and Packing Section.
- (i) One set of 'ON' indicating lamps.
- (05) One no. Outgoing feeder of 100Amp, 4-Pole MCCB for E.T.P. equipped with
- (i) One no. Magnetic short circuit release.
  - (ii) One set of 'ON' indication lamp.
- (06) Two no spare of 100 Amp, 4pole MCCB (spare).

# **MOTOR CONTROL CENTER FOR REFRIGERATION**

## **INCOMING FEEDER:**

(01) **One no 400Amp, TPN SFU having a symmetrical breaking capacity of suitable Amp at 415V a.c. equipped with –**

- (I) One set of CTs ratio of (400/5) Amp. & Accuracy class '1' for metering.
- (II) One no Ammeter of size (96x96) mm and scale range of (0-300) Amp.
- (III) One no. Three way & off Ammeter selector switch.
- (IV) One no. Neutral link.
- (V) One no. 'ON & OFF' indicator.
- (VI) One no. Voltmeter of size (96x96) mm with a range of (0-500) V.
- (VII) One no. Voltmeter selector switch three way & off.
- (VIII) One no. Single phasing preventor 3ph, 415V

## **OUTGOING FEEDER FOR REFRIGERATION:-**

SL NO.	FEEDER DESCRIPTION	H.P. RATING	SWITCH IN AMPS	FUSE IN AMPERE	STARTER
01	Ammonia compressor	50	100 TPN	100	Star/Delta
02	Ammonia Compressor	50	100 TPN	100	Star/Delta
03	Ammonia Compressor	50	100 TPN	100	Star/delta
04	Condenser pump	05	25A	25	DOL
05	Condenser Pump	05	25A	25	DOL
06	Chilled water Pump-I	05	25A	25	DOL

07	Chilled water pump-II	05	25A	25	DOL
08	I.B.T.Agitator-I	02	25A	25	DOL
09	I.B.T.Agitator - II	02	25A	25	DOL
10	Spare-I	05	25A	25	DOL
11	Spare-II	05	25A	25	DOL
12	Capacitor	10KVAR	63A	63	SFU
13	Air compressor-I	15	63A	63	Star/Delta
14	Air compressor-II	15	63A	63	Star/Delta

NOTE: - All feeders should be provided with O/L relay of appropriate range and Provision for remote control Start/Stop.

## **MOTOR CONTROL CENTER FOR BOILER**

### **INCOMING FEEDER:**

- (01) One no. 250Amp, TPN SFU 415V a.c. provided with arrangements  
For -
- (i) One no. Under voltage relay for operating of suitable range.
  - (ii) One set suitable CT of ratio (200/5) Amp for metering and protection.
  - (iii) One no Ammeter of size (96x96) mm and a range of (0-200) Amps.
  - (iv) One no. Three way & off ammeter selector switch.
  - (v) One no Neutral link.
  - (vi) One no 'ON' indicating lamp.
  - (vii) One no. Voltmeter of range (0-500) V.
  - (viii) One no single phasing preventor 3ph, 415V.

### **OUTGOING FEEDER FOR BOILER:**

SL. NO.	FEEDER DESCRIPTION	H.P.RATING	TPN SFU AMPS	FUSE IN AMPS	STARTER
01	Fuel transfer pump-I	03	25	25	DOL
02	Fuel transfer pump-II	03	25	25	DOL
03	Bore well-I	03	25	25	DOL
04	Bore well-II	03	25	25	DOL
05	Boiler fuel pump	02	25	25	DOL
06	Feed water pump	02	25	25	DOL
07	Blower Motor -I	02	25	25	DOL
08	Blower Motor-II	02	25	25	DOL
09	Water softener	02	25	25	DOL
10	Welding	----	63	63	SFU
11	Spare-I	03	25	25	DOL
12	-Do-	03	25	25	DOL

## **MOTOR CONTROL CENTER FOR PROCESS**

### **INCOMING FEEDER:**

01. One no. 250,415 V a.c. TPN SFU equipped with-
  - (i) One set. Suitable CTs of ratio (200/5) Amps.
  - (ii) One no. Ammeter of suitable meter and scaled (0-200) Amps.
  - (iii) One no. 3 way & off ammeter selector switch.
  - (iv) One no. Neutral link.
  - (v) One no 'ON&OFF' indicator.
  - (vi) One no. Single phasing preventor 3ph, 415V.

### **OUTGOING FEEDER FOR PROCESS:**

SL.NO.	FEEDER DESCRIPTION	H.P. RATING	TPN SFU IN AMPS	FUSE IN AMPS	STARTER
01	Hot Water Pump	1.5	16	16	DOL
02	Agitator Ghee Vat	1.0	16	16	DOL
03	Milk Pump-I	3.5	32	32	DOL
04	Milk Pump-II	3.5	32	32	DOL
05	Milk Pump-III	3.5	32	32	DOL
06	C.I.P.-I	3.0	32	32	DOL
07	C.I.P.-II	3.0	32	32	DOL
08	Spare-I	3.0	32	32	DOL
09	Spare-II	3.0	32	32	DOL
10	Agitator MP Vat	2.0	32	32	DOL
11	Homogeniser	20	63	63	Star/Delta
12	To Reception	25	100	SFU	Only
13	To Polypack	25	100	SFU	Only

## **M.C.C. FOR PRODUCT AND PACKING PANEL**

### **INCOMING FEEDER:**

- (01) One no. 100Amp, 415V a.c. TPN SFU with one voltmeter  
Of size (96x96) mm voltmeter range (0-500) V.

### **OUTGOING FEEDER:**

SL.NO.	FEEDER DESCRIPTION	H.P.RATING	TPNSFU IN AMPS	FUSE INAMPS	STARTER
01	---	3	16	16	DOL
02	---	3	16	16	DOL
03	---	3	16	16	DOL
04	---	3	16	16	DOL
05	---	3	16	16	DOL

**NOTE: - All feeders should be provided with O/L relay of appropriate range and Provision for remote control Start/Stop.**

**SECTION - VI**  
**COMMERCIAL BID**

SI No	Name of equipment	Capacity	Quantity (nos)	Unit Rate (Rs.)		Total Amount (Rs.)	
A	Gas Fired Boiler	300 Kg./hr	1				
B	Refrigeration Equipments	lot	1				
C	DG SET	250 KVA	1				
D	Motor Control center (MCC Panel)	Lot	1				
E	Electrical Items	lot	1				
F	Erection Materials	lot	1				
	<b>TOTAL</b>						

- N:B: 1.** Price quoted should be on FOR destination basis, inclusive of GST, all other taxes, duties, royalties, packing & forwarding charges, transportation, insurance and other incidental charges, loading & unloading charges etc. as applicable.
- 2.** It is not mandatory on the bidders to quote for all the items at SI. A to F.
- 3.** Bidders are required to give break up of unit rates & quantities of each & all items to be supplied for the purpose of the contract at the succeeding pages.

**A. SCHEDULE OF QUANTITIES FOR 300KG/HR GAS FIRED BOILER.**

Sl. No.	ITEM DESCRIPTION	QUANTITY	UNIT		UNIT RATE (Rs.)	
			SUPPLY	ERECTION	SUPPLY	ERECTION
01.	Supply, installation and commissioning of new gas fired Non - IBR boiler of capacity 300 Kg/hr. at a pressure of 10.5 kg/sq.cm complete with piping and cabling etc. (as per the technical specifications).	1 Job				
02.	Supply, installation and commissioning of ground mounted guy rope supported chimney outside the boiler room including required ducting as per technical specifications	1 Job				
03.	Supply, installation commissioning of 48 cum OBR at commercial zero ppm. water softener along with all accessories pump, motor Valve, Etc.	01 Job				
04.	Supply, installation & commissioning of PRS, as per specifications	1 job				
05.	Supply, installation & commissioning of 1500 Ltrs. MS feed water tank	1 Job				
06.	Oil storage tank	01 job				
07.	Spare parts	For 2 years				
08.	Inspection and statutory approval from Factory & Boiler Inspector	L.S				
09.	Blow down drain & steam trap	L.S				
<b>TOTAL(1)</b>						

**SCHEDULE OF QUANTITIES FOR SUPPLY & INSTALLATION OF RAW WATER,  
SOFT WATER, STEAM PIPES & FITTINGS, PIPE INSULATION AND  
ELECTRICAL CABLING, EARTHING ETC.**

Sl. No.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT RATE (Rs.)		TOTAL PRICE (Rs.)	
				SUPPLY	ERECTION	SUPPLY	ERECTION
A)	<b>Soft Water Pipes and Fittings:</b>						
1.	G.I. 'B' class pipe of following Dia:						
	a) 25 mm NB	30	Mtr				
2.	CI flanged gate valve / ball valve CS with counter flanges, gasket, bolts and nuts etc of following Dia						
	a) 50 mm NB	02	No				
	b) 25 mm NB	02	No				
	b) 12.5 mm NB	01	No				
<b>B) Steam Pipes and fittings :</b>							
1.	MS 'C' class HP steam pipes with IBR certificate :						
	a) 40 mm NB	20	Mtr				
	b) 25 mm NB	20	Mtr				
2.	Steam Pressure reducing station complete with bye-pass arrangement etc. of SPIRAX (JN MARSHALL make) From 10.5 kg/Sqcm to 3.0 Kg./Sq.cm. suitable for steam flow rate of 100 kg./hr.						
		01	No				
3.	<b>MS 'C' class LP steam pipe</b>						
	a) 50 mm NB	40.0	Mtr				
	b) 40mm NB	40.0	Mtr				
	c) 25 mm NB	18.0	Mtr				
	d ) 20 mm NB	12.0	Mtr				
	e )15 mm NB	18.0	Mtr				
4.	GM Steam globe valve with SS working parts, flanged end type complete with counter flanges gasket, bolts and nuts etc.						
	a) 50 mm NB	03	No				
	b) 40 mm NB	03	No				
	c) 25 mm NB	02	No				
	d ) 15 mm NB	04	No				

<b>5.</b>	<b>Sprax bucket type steam trap</b>							
	a) 15 mm NB	<b>02</b>	<b>No</b>					
<b>6.</b>	<b>Y strainer</b>							
	<b>50 mm NB</b>	<b>02</b>	<b>No</b>					
	<b>25 mm NB</b>	<b>02</b>	<b>No</b>					
<b>7.</b>	<b>40 mm NB NRV</b>	<b>01</b>	<b>No</b>					
<b>C)</b>	<b>Insulation for steam pipe lines:</b>							
<b>1.</b>	50 mm thick glasswool insulation with chicken wiremesh and 24 gauge Al Cladding for steam pipelines of following size :							
	a) 50 mm NB	<b>60.0</b>	<b>Mtr</b>					
	b) 40 mm NB	<b>60.0</b>	<b>Mtr</b>					
	C) 25 mm NB	<b>12.0</b>	<b>Mtr</b>					
<b>D)</b>	For fabrication of pipe/chhanel & angle bridge across the road. MS platform for PRS and MS ladder to feed water tank loft							
<b>1.</b>	MS section of various sizes	<b>1000.00</b>	<b>Kg</b>					
<b>2.</b>	MS chequered plates of various thickness (Minimum 6mm Tk)	<b>500.00</b>	<b>Kg</b>					
<b>Total ( 2 )</b>								

**Note :**

- 01.** The rates of pipes include the supply of pipe fittings like tees, bends, unions, reducers, flanges & hardware like bolts, nuts, washers & gaskets etc.
- 02.** The rate of pipes also include the supply & installation of MS pipe supports and pipe clamps etc. from wall required for supporting of the pipelines.
- 03.** The rate of pipes is inclusive of supply and application of one coat of anti-corrosive red oxide primer, followed by two coats of synthetic enamel paint of approved make and shade.
- 04.** The rate of MS section & chequered plates is inclusive of fabrication, grouting of the structures in ground/walls as required with PCC 1:2:4 and painting of the same with one coat primer & 2 coats of enamel paints of approved brand & shade.

Sl. No	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT RATE (Rs.)		TOTAL PRICE (Rs.)	
				SUPPLY	ERECTION	SUPPLY	ERECTION
e)	<b>Electrical cabling &amp; earthing</b>						
1.	PVC insulated, Aluminium armoured cable, KV of following size for energizing MCC :						
	a) 4 C X 10 Sqmm	<b>40</b>	<b>Mtr</b>				
2.	G.I. earth strip of size :						
	25 mm X6 mm	<b>25</b>	<b>Mtr</b>				
3.	Plate type earthing pit complete with machinery chamber & cast steel cover	<b>01</b>	<b>No</b>				
<b>TOTAL (3)</b>							

**TOTAL- 1 =**

**TOTAL-2 =**

**TOTAL-3 =**

**TOTAL (1+2+3)**

**Bidders may please quote their price inclusive of all Royalties, Taxes & duties etc.**

**NOTE : INSTALLATION OF ELECTRICAL ITEMS WOULD COMPRISE OF THE FOLLOWING :**

1. Supply & laying of cables from MCC to individual motors, control panels, PRS in underground trenches outside the buildings and in RCC hume pipes and cable trays inside the buildings complete with cable connection at either end is included in installation work of MCC.
2. Wherever GI pipes have not been provided, laying LT cables from MCC to various motors and control panels shall be done either in masonry cable trench or overhead GI cable trays with GI Conduit drops from cable trays to the motor junction boxes complete with cable connection at either end.
3. Industrial type drip proof plug & socket will be either floor mounted or wall mounted for each motor separately. The unit will be housed in a 2 mm thick MS sheet enclosure with front cover of 2 mm thick MS sheet. Cost shall be included in installation work of MCC.

4. The erectors shall compute the requirement of the power and control cables and earthing materials on the basis of approved drawings.
5. For cable laying outside the building, the necessary digging for trenches, providing bricks and sand and refilling of the trenches has to be carried out by the contractor as per specifications including cable route markers.
6. The necessary power cable and earthing materials are specified in the schedule of quantities. The rate of cables shall be inclusive of all other ancillary materials like cable lugs, glands and accessories in required quantities.
7. The necessary civil works for earth pits including supply of cement, sand and bricks etc. are to be carried out by the contractor.

## **B. Price Schedule for Refrigeration Plant EQUIPMENTS**

SLNO	ITEM DESCRIPTION	QNTY.	UNIT RATE IN (Rs)		TOTAL RATE IN (Rs)	
			SUPPLY	ERECTION	SUPPLY	ERECTION
01.	MAIN COMPRESSOR WITH ALL ACCESSORIES	03				
02.	MAIN COMPRESSOR MOTOR WITH SOLIDE RAIL FOUNDATION BOLT PULLEY V. BELT WITH SUITABLE STATOR	03				
03.	AMMONIA OIL SEPARATOR	03				
04.	M.S PIPES COMPLETE WITH GLOBE VALVE NRV FOR REFRIGERATION PIPING INTER CONNECTING COMPRESSOR CONDENSOR, RECEIVER & EVAPORATOR	01 LOT.				
07.	CHILLED WATER TANK LBT COIL	1500 Mtrs				
08.	CHILLED WATER TANK WITH AGITATOR COMPLETE INSULATION & COVER	02 NOS				
09.	CHILLED WATER TANK AGITATOR	02 NOS				
10.	CHILLED WATER PUMP.	03 NOS				
11	CHILED WATER PIPING WITH VALVES, STAINER & ALL STANDARD ACCESSORIES	01 LOT				

SLNO	ITEM DESCRIPTION	QNTY.	UNIT RATE IN (Rs)		TOTAL RATE IN (Rs)	
			SUPPLY	ERECTION	SUPPLY	ERECTION
11.	AMMONIA REFRIGERANT & LUBRICATING OIL (AS PER REQUIREMENT IN KG)	01 LOT				
12.	POWER CABLES, CONTROL CABLES AND CONDUIT/CABLE TRAY FROM MCC TO EACH MOTOR POINT	01 LOT				
13.	FLOOR MOUNTED PUSH BUTTON (FOUR POINT)	02 SETS				
14.	STATION/ISOLATED SWITCH FOR CONDENSOR PUMP AND CHILLED WATER PUMP	06 NOS				
17.	M.S STRUCTURE AND SUPPORTS FOR PIPE LINES.	01 LOT				
18.	PLATE EARTHING AS PER IS SPECIFICATION.	04NOS				
19.	TESTING, COMMISSIONING AND TRIAL RUN	01 JOB				
<b>TOTAL (B)</b>						

**C. Price Schedule for DG Set – 250 KVA**

SL.NO.	ITEM DESCRIPTION	QNTY.	UNIT RATE (IN Rs)		TOTAL RATE (IN Rs)	
			SUPPLY	ERECTION	SUPPLY	ERECTION
01	DG set – 250 KVA	01 NO				

**D. Price Schedule for Motor Control Center**

Sl. No.	Item Description	Capa city	Quantity	Unit Rate(Rs.)		Total Amount(Rs.)	
				Supply	Erect.	Supply	Erect.
1	MAIN LT PANEL	800 Amp	1				
2	MOTOR CONTROL CENTER FOR REFRIGERATION	400 Amp	1				
3	MOTOR CONTROL CENTER FOR BOILER	250 Amp	1				
4	MOTOR CONTROL CENTER FOR PROCESS	250 Amp	1				
5	M.C.C. FOR PRODUCT AND PACKING PANEL	100 Amp	1				
	<b>TOTAL (D)</b>						

## **E. Price Schedule for Electrical Item**

Sl. No.	Item Description	Quantity	Unit Rate(Rs.)		Total Amount(Rs.)	
			Supply	Erect.	Supply	Erect.
01.	Aluminum armoured cable 1.1 KV grade of following size					
	(a) 3 ½ core x 300 mm <sup>2</sup> Transformer to LT Panel	30 M				
	(b) 3 ½ core x 185 mm <sup>2</sup> LT Panel to Process Panel	20M				
	(c) 3 ½ core x 185 mm <sup>2</sup> LT Panel to Refrigeration Panel	30M				
	(d) 3 ½ core x 185 mm <sup>2</sup> LT Panel to Product Panel	35M				
	(e) 3 ½ core x 95 mm <sup>2</sup> LT Panel to Boiler Panel	50M				
	(f) 3 ½ core x 185 mm <sup>2</sup> LT Panel to DG Panel	25 M				
	(g) 3 ½ core x 185 mm <sup>2</sup> DG Panel to Alternator	25M				
	(h) 3 ½ core x 6 mm <sup>2</sup> LT Panel to each motor	35 M				
02.	Armoured copper control cable of following sizes:					
	(a) 30 core x 1.5mm <sup>2</sup>	40 M				
	(b) 24 core x 1.5mm <sup>2</sup>	50 M				
	(c) 19 core x 1.5mm <sup>2</sup>	20 M				
03.	Perforated GI cable tray of sizes:					
	(a) 300 mm x 25 mm	50 M				
	(b) 100 mm x 20 mm	25 M				
04.	GI wire for earthing of electric motor, 8 SWG	800 M				

Sl. No.	Item Description	Quantity	Unit Rate(Rs.)		Total Amount(Rs.)	
			Supply	Erect.	Supply	Erect.
05.	GI earth strip for motor of size: (a) 50 mm x 6 mm (b) 25 mm x 6 mm	80 M 30 M				
06.	Flexible copper cable of following sizes: (a) 3C x1.5 mm <sup>2</sup> (b) 3C x2.5 mm <sup>2</sup> (c) 3C x6 mm <sup>2</sup>	30 M 80 M 10 M				
06.	GI 'A' class conduit pipe of sizes: (a) 50 mm NB (b) 40 mm NB	35 M 70 M				
07.	PVC flexible conduit of pipe sizes: (a) 25 mm NB (b) 20 mm NB	50 M 50 M				
08	Alluminium dia cast junction box, water proof ,dust & vermin proof with 25 A rating connecting strips (6 –ways)	2 No				
09.	Industrial type, 3 phase, 440 volt isolator housed in a fabricated water proof stainless steel enclosure	10 Nos.				
10.	Rubber Mat (electrical grade) of size: 1 M(W) x 2 M(L) x 12 mm (thick)	10 Nos				
11.	Self-standing remote control push buttons station in water proof stainless steel enclosure:					
	a) 5-way with start stop push button & indicating lamps	1No				
	b) 4-way with start stop push button & indicating lamps	2No				

Sl. No.	Item Description	Quantity	Unit Rate(Rs.)		Total Amount(Rs.)	
			Supply	Erect.	Supply	Erect.
	c) 3-way with start stop push button & indicating lamps	2No				
12.	Capacitor bank suitable for 75 HP Ammonia Compressor motors	03 Nos.				
13.	Suitable cable to inter connect capacitor bank to motor starters	03 Nos				
14.	Galvanized cast iron cable route marker, with marking (LT/HT) as per specification.	12 Nos.				
15	Conduit Bend	1 Lot				
16	Neutral Earthing for D.G set.(COPPER)	04 Nos				
	<b>TOTAL (E)</b>					

## **F. Price Schedule for Erection Materials**

**(SUPPLY, ERECTION, TESTING & COMMISSIONING OF PIPING SYSTEMS )**

### **F1.Price Schedule for SS Pipes & Fittings**

Sl. No.	Item Description	Quantity	Unit Rate (Rs.)		Total Amount (Rs.)	
			Supply	Erect.	Supply	Erect.
0.1	SS Process pipe of wall thickness 1.6mm of following sizes: (a) 51.0 mm OD (b) 38.0 mm OD	240 M 72 M				
02.	SS support pipe of wall thickness 2.5 mm of following sizes: (a) 38.0 mm OD	60 M				
03.	SS 90 degree short bend wall thickness 1.6mm, plain end of following sizes: (a) 51.0 mm OD (b) 38.0 mm OD	100 Nos. 30 Nos.				
04.	SS SMS union complete with male part, nut liner & gasket for the following sizes of SS pipe: (a) 51.0 mm OD (b) 38.0 mm OD	200Nos. 60 Nos.				
05.	SS Tee with SMS SS unions & gaskets of following sizes: (a) 51.0 mm OD (b) 38.0 mm OD	06 Nos. 06 Nos.				
06.	SS Blank Nut with Chain for SMS SS unions of following size: (a) 51.0 mm OD (b) 38.0 mm OD	04 Nos. 06 Nos.				

Sl. No.	Item Description	Quantity	Unit Rate (Rs.)		Total Amount (Rs.)	
			Supply	Erect.	Supply	Erect.
07.	SS 3-way plug type valve complete with SMS SS union & gaskets.  (a) 51.0 mm OD (b) 38.0 mm OD	24 Nos. 10 Nos.				
08.	SS 2-way plug type valve complete with 2 SMS SS unions:  (a) 51.0 mm OD (b) 38.0 mm OD	02 Nos. 02 Nos.				
09.	SS vertical NRV with SMS SS unions on pump discharge from silo: (a) 51.0 mm OD	02 Nos.				
10.	SS pipe clamp for following sizes of SS pipes:  (a) 51.0 mm OD (b) 38.0 mm OD	100 Nos. 50 Nos.				
11.	SS reducing liner for SMS SS unions: a) 63.5mm x 51.0mm (b) 51.0mm x 38.0 mm	12 Nos 12 Nos.				
12.	Plastic Cap for piping support: (a) 38.0 mm OD	200 Nos.				

13.	Plain and Bend (a) 38.0 mm	12 Pairs				
14.	SS nipple for pipe clamp of size: (a)20mmx50mm (Long)	65 Nos				
<b>Sl.</b>	<b>Item Description</b>	<b>Quantity</b>	<b>Unit Rate (Rs.)</b>	<b>Total Amount (Rs.)</b>		
<b>No.</b>			Supply	Erect.	Supply	Erect.
15.	SS Nut of size: (a) 51.0mm	15 Nos				
16.	SS end blanks for support pipes 38.00 m OD	20 Nos				
17.	SS inline strainer complete with SMS SS union,gasket etc.for pipe size: 51.00mm OD	02 Nos				
18.	SS flow regulating valve for size: (a) 51.00mm OD	01 No				
	<b>TOTAL (F1)</b>					

## **F2.Price Schedule for Raw & Soft Water Pipes and Fittings**

Sl. No.	Item Description	Quantity	Unit Rate(Rs.)		Total Amount(Rs.)	
			Supply	Erect.	Supply	Erect.
<b>I. Raw water pipes and Fittings</b>						
01.	GI 'B' class pipes of sizes, TATA make: (a) 80 mm NB (b) 50 mm NB (c) 40 mm NB (d) 25 mm NB (e) 20 mm NB (f) 12 mm NB	72 M 24 M 72 M 42 M 48 M 12 M				

02.	Cast steel body flanged type butterfly valve with counter flanges, nuts, bolts & gaskets for pipe size: (a) 80 mm NB (b) 50 mm NB (c) 38 mm NB	03 Nos. 02Nos. 04Nos				
03.	GM Ball valve, screwed end, SS working part for pipe sizes: (a) 40 mm NB (b) 25 mm NB (c) 20 mm NB (d) 12 mm NB	02 Nos. 06 Nos. 06 Nos. 02 Nos				
04	GI Bend, union, Flange, Gasket Nut and Bolt required for erection of above pipelines.	01 Lot				
<b>II. Soft water pipes and Fittings</b>						
05	GI 'B' class pipes of sizes, TATA make: (a) 40 mm NB (b) 25 mm NB	60 M 18 M				
03.	GM Ball valve, screwed end, SS working part for pipe sizes: (a) 40 mm NB (b) 25 mm NB (c) 20 mm NB	04 Nos. 06 Nos. 04 Nos.				
	<b>TOTAL (F2)</b>					

### **F3.Price schedule for Chilled Water Pipes & Fittings**

Sl. No.	Item Description	Quantity	Unit Rate(Rs.)		Total Amount(Rs.)	
			Supply	Erect.	Supply	Erect.
01.	GI 'B' class pipe of sizes: a) 65 mm NB supply and return head (b) 50 mm NB for piping from different equipments	144 M 60 M				
02.	CI flanged sluice valve with counter flanges, gaskets, bolts & nuts etc.- (a) 65 mm NB (b) 50 mm NB	02 Nos. 08 Nos.				
02.	GM flanged gate valve with counter flanges, gaskets, bolts & nuts etc.- (a) 65 mm NB (b) 50 mm NB	02 Nos. 08 Nos.				
03.	GM vertical NRV, screwed type- 40 mm	04 No.				
04.	50 mm thick expanded polystyrene insulation with 22 gauge Alluminium cladding for chilled water pipe of size: a) 65 mm NB (b) 50 mm NB	144 M 60 M				
05.	Digital temperature indicator with PT-100 Sensor range 0°C-50°C for process hall to know the chilled water temperature and another near polypack	02 Nos.				
06	GI Structure bends union flange, nuts, bolts and Gasket required for erection of above pipelines.	1 Set				
	<b>TOTAL (F3)</b>					

### **F4.Price Schedule for Air Pipes and Fittings**

Sl. No.	Item Description	Quantity	Unit Rate(Rs.)		Total Amount(Rs.)	
			Supply	Erect.	Supply	Erect.
01.	GI 'B' class pipes of sizes, TATA make: (a) 50 mm NB (b) 40 mm NB (c) 25 mm NB (d) 12 mm NB	6 M 70 M 30 M 12 M				
02.	GI flanged type globe with counter flanges, nuts, bolts & gaskets etc. for pipe sizes: (a) 40 mm NB (b) 25 mm NB (c) 12 mm NB	03 Nos. 02 Nos. 02 Nos				
03.	GM Ball valve, screwed end, SS working part for pipe sizes: (a) 40 mm NB (b) 25 mm NB (c) 12 mm N	03 Nos. 03 Nos. 02 Nos				
04.	FRL set ½" size for connection on the air line to CIP control Panels, Milk/Cream pasteurizer, Shavo Lubro control unit; size ½" BSPT, with Polybowl, max. Operating Pressure 10 bar, regulator, Pressure gauge range, 0-10 bar, Lubricator.	01 Nos.				
05.	GI bends, union, nipple etc.Nuts and bolt & Gasket required for erection of above pipelines.	1 Lot				
	<b>TOTAL (F4)</b>					

## **F-5. Price Schedule for Steam Piping & Fittings**

Sl. No.	Item Description	Quantity	Unit Rate(Rs.)		Total Amount(Rs.)	
			Supply	Erect.	Supply	Erect.
01.	MS 'C' class L.P. steam pipes of sizes, (TATA make): (a) 65 mm NB (b) 40 mm NB (c) 25 mm NB (d) 20 mm NB	84 M 30 M 30 M 48 M				
02.	MS 'C' class H.P. steam pipes of sizes, (TATA make): (a) 50 mm NB	120 M				
03.	GM steam globe valve with SS working parts, flanged end type complete with counter flanges, nuts, bolts & gaskets etc. for pipe sizes:  (a) 75 mm NB (b) 40 mm NB (c) 25 mm NB (d) 19 mm NB	02 Nos. 06 Nos. 04 Nos. 06 Nos				
04.	20 mm $\varnothing$ Steam strap assemble with pipe valve fitting etc.as required for pipe sizes:	01 set				
05.	Steam stop Glove valve, union bonnet, screwed end for pipe size: (a) 40 mm NB (b) 25 mm NB (c) 20 mm NB	04 Nos. 06Nos. 06 Nos				

Sl. No.	Item Description	Quantity	Unit Rate(Rs.)		Total Amount(Rs.)	
			Supply	Erect.	Supply	Erect.
06.	50 mm Ø Flange type Globe valve IBR certified with complete Flange. Nut, Bolt & Gasket etc.	02 Nos				
07.	50 mm Ø NVR Flange type (Horizontal) with complete Flange.					
08.	Insulation of MS 'C' class L.P steam line with Alluminium cladding pipes of sizes, (TATA make): (a) 65 mm NB (b) 40 mm NB (c) 25 mm NB (d) 20 mm NB	84 M 30 M 30 M 48 M				
09.	Insulation of MS 'C' class H.P steam line with Alluminium cladding pipes of sizes, (TATA make): (a) 50 mm NB	240 M	Rates only			
10.	Dial type 6" 0-10 kg/cm <sup>2</sup> range pressure Gauge for steam line in the Process hall & Product section complete with petcock, nipple etc.	02 no				

11.	Steam Pressure reducing station complete with by pass arrangement etc. with SPAX/JN MARSALL make PRV from 7 kg/sqcm to 3 kg/sqcm suitable for steam flow rate of 100 kg / hr	01 no				
12.	MS bend, union, flanges and fittings etc.nuts, Bolts & Gasket required for erection of above pipelines.	01 Set				
	<b>TOTAL (F5)</b>					

### **F-6. Structural supports for Pipelines**

Sl. No.	Item Description	Quantity	Unit Rate(Rs.)		Total Amount(Rs.)	
			Supply	Erect.	Supply	Erect.
01.	MS angles, channels Structural support for pipe lines:	2000 Kg				
02	Chequed Plate	1500 Kg				
	<b>TOTAL (F6)</b>					

**TOTAL (F) [F1+F2+F3+F4+F5+F6) =**

## Section VII

### FORM OF BID

Bidders are required to fill up all the blank spaces in this form of Bid:

Name and address of OMFED : ORISSA STATE CO-OP. MILK PRODUCERS'  
FEDERATION LTD.,  
  
D-2, SAHEED NAGAR, BHUBANESWAR-751007,  
ORISSA

Description of works : Supply, installation, testing, commissioning and trial run of  
Gas Fired boiler, Refrigeration equipments, DG Set, Motor  
Control Center, Electrical Items, Erection Materials at Tirtol  
Dairy of OMFED.

Dear Sir,

- 1.0 Having examined the bidding documents including conditions of contract, Specifications, schedule of quantities and drawings included in or referred to in the bidding documents including Addenda Nos. \_\_\_\_\_, Receipt of which is hereby duly acknowledged, for the execution of above mentioned works, we, the undersigned offer to supply and deliver goods and services including installation & commissioning as detailed in the price schedule, and maintain whole of the said works, in conformity with the said conditions of Contract, specifications and schedule of quantities for the sum of **Rs \_\_\_\_\_ (Rupees \_\_\_\_\_ only)** or such other sum as may be ascertained in accordance with the schedule of prices attached herewith and made part of this bid and the said technical specifications, drawings and conditions.
- 2.0 We, undertake, if our bid is accepted to commence the works within 15 days of receipt of the notification of award, and to complete and deliver the whole of the above said works comprised in the contract within \_\_\_\_\_\***days calculated from the day of the receipt of the Notification of Award.**
- 3.0 If our bid is accepted we will furnish a security in the form of bank guarantee (as per the format provided in this bidding document) to be jointly and severally bound us for the due performance of the Contract, in amount of 10% of the above named sum in accordance with the conditions of Contract.
- 4.0 We agree to abide by this bid for the period of 90 days from the date of bid opening, and it shall remain binding upon us and may be accepted at any time before the expiry of that period.

- 5.0 Unless and until an agreement is prepared and executed, this bid, together with your written acceptance thereof, shall constitute a bidding contract between us.
- 6.0 We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_

**Signature**\_\_\_\_\_

In the capacity of \_\_\_\_\_

Duly authorized to sign the bid for and on behalf of

\_\_\_\_\_

(In capital letters).

**No. of days should be in confirmation to the period of completion given in clause 1.3 of section –I – Instructions to bidders.**

**APPENDIX TO THE FORM OF BID**

<b>Condition of Contract</b>	<b>Clause No.</b>	
Amount of Performance Security	06	10% of Contract value
a) Bank draft		
b) Bank guarantee		
Minimum amount of third party insurance		
Period for commencement, from the date		
Of receipt of letter of intent.		30 days
Time for completion from the date		
of receipt of letter of intent		2 months
Rate of penalty for delay	24	0.5% of the contract Value /week or part thereof.
Maximum limit of penalty	24	10%
Period of maintenance (Defect liability period)		12 months from the date of completion of work, and acceptance by Engineer-in-charge.
Time within which the payment		
would be made after the certificates for		
<b>Receipt of Goods /completion of work is made.</b>		<b>30 days</b>
Dated this _____ day of _____ 20_____.		

Signature in the capacity  
Of \_\_\_\_\_, duly authorized to  
Sign the bid for and on behalf of

\_\_\_\_\_  
(In capital letter)

## SECTION VIII

### QUALIFICATION APPLICATION

All the bidders who are interested in submitting this bids against this tender for the items must submit the qualification application along with the information in the following formats together with the relevant documentation.

#### **SCHEDULE –I**

### **FINANCIAL BUSINESS AND TECHNICAL CAPABILITY**

Name and address of the bidder :

Telephone No :

1. Latest balance sheet filed with \_\_\_\_\_  
On \_\_\_\_\_ (Attach a copy).
2. Latest profit and loss statement from \_\_\_\_\_ to \_\_\_\_\_ filed with \_\_\_\_\_  
on \_\_\_\_\_. (Attach a copy).
3. **Financial position (in the respective currency)**
  - A) Cash
  - b) Current assets
  - c) Current liabilities
  - D) Working capital
  - e) Net worth
4. **Total liabilities:**
  - a) Current ratio: Current assets to current liabilities.
  - b) Acid ratio test: cash temporary investment held in lieu of cash and current receivable to current liabilities.
  - c) Total liability to net worth.
5. **Net sales (in the respective currency)**
  - a) Current period
  - b) During the last financial year
  - c) During the year before last financial year

- 6. **Net profit before tax**
  - a) Current period
  - b) During the last financial year
  - c) During the year before last financial year

The profit and loss statements have been certified through

\_\_\_\_\_ By \_\_\_\_\_.

**7. Bidders Financial arrangements (check appropriate item)**

- a) Own resources
- b) Bank credits
- c) Other specify

8. Certificate of financial soundness from bankers of bidders

9. Sales

---

Category	Value of current orders to Be executed in respective Currency	value of anticipated sales for next financial year in respective currency
----------	---	---

---

- A) Govt. Department
- B) Commercial

10. Licensed capacity to manufacture:

---

Description	Size	Licensed	No. of units	Manufactured	Second
of equip.	Cap.	Capacity	current year	last year	last year

---

11. List, if any, of bidders rate contract with the following organizations.

Organization	Yes/No	If yes, date contract finalized
a. Directorate General of Supplies & Disposal, Government of India.		
b. Central Equipment Stores Purchase organization for State Governments.		

12. Describe quality control Organization, if any and give the organization chart.

a) Are goods offered subject to batch test random sampling or full 100% test for quality?

b) Are tests carried out by factory employees or by a separate testing agency?

c) Are independent quality control organization checks made and certificates issued?

**13. Income tax clearance**

Following documents with regard to income tax clearance should be submitted along with application.

a) Details of Income tax registration

b) Last Income tax clearance certificate.

## SECTION –IX

### Form of Agreement On Non-Judicial Stamp paper of Rs.100/-

THIS AGREEMENT is made and executed on the day of  
20 \_\_\_\_\_

Between the ORISSA STATE CO-OPERATIVE MILK PRODUCERS' FEDERATION LTD., a body corporate under the ORISSA CO-OPERATIVE SOCIETIES ACT and having its registered office at Saheed Nagar, Bhubaneswar - 751007 (herein after referred to as OMFED which expression shall, unless repugnant to the context or meaning thereof, include the successors and assignees of the OMFED) of the ONE PART and

(Herein after referred to as the contractor which expression shall, unless repugnant to the context or meaning thereof, include the heirs, successors, assignees, executors and administrators of the contractor) of the OTHER PART.

WHEREAS the OMFED is desirous that certain works should be executed, viz

And has by letter of acceptance Dated \_\_\_\_\_, accepted a bid by the contractor for the supply of such goods and services, including installation, testing, commissioning and performance trial run & guaranteeing such works, **NOW THIS AGREEMENT WITNESSTH AS FOLLOWS:**

- 1.0 In this agreement, words and expressions shall have the same meanings as are respectively assigned to them in the conditions of Contract herein after referred to.
  
- 2.0 The following documents shall be deemed to form and be read as construed as part of this agreement, viz
  - i) This Form of Agreement
  - ii) This Letter of Acceptance
  - iii) The said bid, Appendix and the price Schedule Thereof
  - iv) The Technical Specifications
  - v) The Schedule of Quantities
  - vi) The Drawings
  - vii) The Schedule of Supplementary Information
  - viii) Special Conditions of Contract

- ix) General Conditions of Contract
- x) Schedule of Materials to be issued by OMFED
- xi) Form of Bank Guarantees

3.0 The aforesaid documents shall be taken as complementary and mutually explanatory of one, another, but in the case of ambiguities and discrepancies shall take precedence in the order set out above.

3.0 In the consideration of the payment to be made by the OMFED to the Contractor as herein after mentioned, the Contractor hereby covenants with the OMFED to execute, complete and maintain the works in conformity in all respects with the provisions of the Contract.

**\* The bidder shall not fill up this form.**

4.0 The OMFED shall hereby covenants to pay the Contractor in consideration of the execution, completion and guaranteeing of the works the contract price at the times and in the manner prescribed by the Contract.

IN WITNESS WHEREOF the parties hereto have caused their respective Common seals to be hereunto affix the day, month and year first above written.

Signed, sealed and delivered for  
And on behalf of the within  
named OMFED by the hands of its  
Authorised signatory.

Authorised Signatory

ORISSA STATE CO-OPERATIVE MILK  
PRODUCERS' FEDERATION LTD.

**In the presence of:**

**WITNESS:**

1) Signature

Name and address

2) Signature

Name and address

Signed, sealed and delivered for

And on behalf of the within

Named Contractor, the other part.

Authorised Signatory

CONTRACTOR

**In the presence of:**

**WITNESS:**

1) Signature

Name and address

2) Signature

Name and address

**SECTION-X**  
**ACCEPTABLE FORM OF BANK GUARANTEE**

Proforma of Bank Guarantee for Bid Security On Non-Judicial Stamp Paper of Rs.100/-

Bank Guarantee no.

Date:

This deed of guarantee made this \_\_\_\_\_ day of 20\_\_\_\_\_ (Two thousand and \_\_\_\_\_ ) by (Name and address of the Bank), hereinafter referred to as the Bank, which shall unless repugnant to the context or the meaning thereof includes its legal representatives, successors and assigns and the ORISSA STATE CO-OPERATIVE MILK PRODUCERS' FEDERATION LTD. (hereinafter referred to as the OMFED ) which expression shall be unless repugnant to the context or meaning thereof include its legal representative, successors or assigns.

Whereas the OMFED has invited bids for the supply, installation, testing, commissioning, trial run and guaranteeing of the proposed \_\_\_\_\_

\_\_\_\_\_ by the tender notice reference no. \_\_\_\_\_ .

AND WHEREAS M/S \_\_\_\_\_

\_\_\_\_\_ (Name and the address of the bidders) who having submitted their bids (hereinafter referred to as the Tender) and have agreed to deposit to the OMFED an amount indicated in the tender notice as per the terms and conditions of the bidding documents. AND WHEREAS the OMFED is also willing to accept a Bank guarantee in lieu of payment by demand draft of any amount equivalent to the amount of bid security required to be deposited by the bidder to the OMFED which guarantee shall be kept valid for 120 days after the day of the opening of the bids.

In consideration of the OMFED having agreed to consider the bid proposals having submitted by the bidder without depositing the amount of bid security and against this Bank guarantee, we (name and the address of the Bank ) hereby undertake and guarantee to make payment to the OMFED the amount of bid security or any part thereof not deposited by the bidder to the OMFED at any time ( time being the essence of the Contract) when the OMFED asks for the

same as per the terms and conditions of the bidding documents within 120 days from the date of opening of the bids.

The Bank further undertakes not to revoke this guarantee during its currency except with the previous consent of the OMFED in writing and the guarantee shall be continuous and irrevocable guarantee up to a sum of Rs.-----  
(Rupees-----only) provided always that any indulgence or forbearance on the part of the OMFED to the said bidder. With or without the consent of the Bank shall not prejudice or restrict remedies against the bank nor shall the same in any event be a ground of defense by the Bank against the OMFED.

In case the OMFED puts forth a demand in writing on the Bank for the payment of the amount in full or in part against this Bank Guarantee, the Bank will consider that such demand by itself is a conclusive evidence and proof that the bidder has failed in complying with the terms and conditions stipulated by the OMFED in its bidding document and payment will be made to the OMFED without raising any disputes regarding the reasons for such failures on the part of the bidder.

The Bank shall not be discharged or released from this guarantee by any arrangement between the bidder and the OMFED with or without the consent of the Bank or any alternations in the obligations of the parties or by an indulgence, forbearance shown by the OMFED to the bidder.

This guarantee shall be in addition to and without prejudice to any other securities or remedies which the OMFED may have or hereafter possess against the bidder and the OMFED shall be under no obligations to marshal in favour of the Bank any such securities or fund or assets that the OMFED at its absolute discretion may vary, exchange, renew, modify or refuse to complete or enforce or assign any security or instrument.

The Bank agrees that the amount hereby guaranteed shall be due and payable to the OMFED on OMFED's serving with a notice requiring the payment of the amount and such notice shall be served on the Bank either by actual delivery thereof to the Bank or by dispatching thereof by to the Bank by registered post at the address of the said Bank. Any notice sent to the Bank at its address by registered post shall be deemed to have been duly served on the Bank notwithstanding that the notice may not in fact have been delivered to the Bank.

In order to give full effect to the provisions of this guarantee the Bank thereby waives all rights inconsistent with the above provisions and which the Bank might otherwise as a guarantor be entitled to claim and enforce.

The guarantee shall remain in force until-----and unless the guarantee is renewed or a claim is preferred against the bank within three months from the said date all rights of the OMFED under this guarantee shall cease and the bank shall be released and discharged from all liabilities hereunder.

Notwithstanding anything contained here before, our liability under this guarantee is restricted to Rs. ----- (Rupees----- only) being the amount of the Bid security and it shall remain in force until-----.

Place

Signature

Seal

Code no.

**Note: Bidders should ensure that the seal and code no. of signatory is put by the Bankers, before submission of the Bank guarantees.**

**Proforma of bank guarantee for Performance security On Non-judicial Stamp Paper of Rs.60/-**

Bank Guarantee No.

Date:

This deed of guarantee made this \_\_\_\_\_ day of 20 \_\_\_\_\_ (Two thousand and \_\_\_\_\_) by (Name and address of the bank) hereinafter referred to as the bank, which shall unless repugnant to the context or the meaning thereof includes its legal representatives, successors and assigns and the ORISSA STATE CO-OPERATIVE MILK PRODUCERS' FEDERATION LTD. (hereinafter referred as to the OMFED) which expression shall unless repugnant to the context or meaning thereof includes its legal representatives, successors and assigns .

Whereas the ORISSA STATE MILK CO-OPERATIVE PRODUCERS' FEDERATION LTD. has awarded a contract bearing No. \_\_\_\_\_ on M/s \_\_\_\_\_ (Name and the address of the party) hereinafter referred to as the Contractor, for the supply installation, commissioning, completion and the guaranteeing of \_\_\_\_\_

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And whereas the Contractor has agreed to submit a performance security in the form of bank guarantee to the OMFED as per the terms and conditions of the bidding documents. And the contract which will be kept valid upto \_\_\_\_\_ calendar months from the date of bank guarantees (the period should be till end of period of maintenance) and whereas the bank and its duly constituted agent and officer has already read and understood the contract between the OMFED and the Contractor.

In consideration of the OMFED having agreed to award the contract on the Contractor, we \_\_\_\_\_ (the bank) do hereby guarantee, undertake, promise and agree with the OMFED , its legal representatives, successors, and assigns that the within named (the name of the Contractor) their legal representatives , assignees will faithfully perform and fulfill everything within the bidding document and the contract order on their part to be performed or fulfilled, at the time ( time being the essence of the contract) and in manner therein provided , do all obligations there under and we further undertake and guarantee to make the payment to the OMFED a sum of Rs \_\_\_\_\_ (Rupees \_\_\_\_\_ only). Being 10% of the contract value ,in case the Contractor , their legal representatives, assignees do not faithfully perform and fulfill

everything within the bidding document and the contract order on their part to be performed or fulfilled, at the time and in manner therein provided and do not willfully and promptly do all obligations there under. In case the Contractor fails to perform or fulfill the contract as per the terms and conditions agreed upon, the OMFED is entitled to demand an amount equivalent to 10% of the contract value from the Contractor and the demand made by the OMFED itself will be conclusive evidence and proof that the Contractor has failed to perform or fulfill his obligations under the contract and neither the Contractor nor the bank shall be entitled to raise any dispute regarding the reasons for the failure of performance or fulfillment on any ground whatsoever.

We, (the name of the bank), do hereby undertake to pay an amount equivalent to 10% of the contract value, being the amount due and payable under this guarantee. Without any demur, merely on a demand from OMFED stating that the amount claimed is due by way of Non-performance of the contractual obligations as aforesaid by the contractor or by the reason of the contractor's failure to perform the said contractual commitments, any such demand made on the banks shall be conclusive as regards the amount due and payable by the bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only being the amount equal to 10% of the contract value.

We, the bank further agree that the performance security herein contained shall remain in full force and effect for a period of \_\_\_\_\_ calendar months from the date of the bank guarantee. (the period shall be till the end of period of maintenance) whichever is later or till the OMFED certifies that the terms and conditions of the said contract have been fully and properly carried out by the said Contractor and accordingly discharge the guarantee , unless a demand or a claim under this guarantee is made on us in writing by the OMFED on or before \_\_\_\_\_ (the date shall be 90 days after the end of the period of maintenance ) we shall be discharged from all liabilities under this performance security hereafter.

We, the bank, further agree with the OMFED that the OMFED shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of bidding document and the contract or to extend the time of performance by the said Contractor from time to time and any of the power exercisable by the OMFED against the Contractor and forbear or enforce any of the terms and conditions relating to the said bidding document and the contract and we shall not be relieved from or liability by reason of any such variation ,or extension being granted to the said contractor or for any forbearance, act or omission on the part of the OMFED to the said Contractor by any such matter or thing whatsoever which under the law relating to the sureties would but for this provision have effect of so relieving us. This guarantee shall be in addition to and without

prejudice to any other securities or remedies which the OMFED may have or hereafter possess in respect of the works executed or intended to be executed and the OMFED shall be under no obligation to marshal in favour of the bank any such securities or funds or asset that the OMFED may be entitled to receive or have a claim upon and the OMFED at its absolute discretion may vary, exchange, renew, modify or refuse to complete or enforce or assign any security or instrument.

The bank agrees that the amount hereby guaranteed shall be due and payable to the OMFED on serving us with a notice, requiring the payment of the amount and such notice shall be deemed to have been served on the bank either by actual delivery thereof to the bank or by dispatch thereof to the bank by registered post at the address of the bank.

Any notice sent to the bank at its address by registered post shall be deemed to have been duly served on the bank notwithstanding that the notice may not in fact have been delivered to the bank.

In order to give full effects to the provisions of this guarantee the bank hereby waives all rights inconsistent with the above Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ Only). The guarantee shall remain in force until \_\_\_\_\_ and unless the guarantee is renewed or a claim is preferred against the bank within three months from the said date (the date of expiry ) all rights of the OMFED under the guarantee shall cease and the bank shall be released and discharged from all liabilities hereunder.

Place

Signature

Date

Seal

Code no.

**Note:**

The Contractor should ensure that seal and the code no. of the signatory is put by the bankers, before submission of the bank guarantees.



**Proforma of Bank guarantee for advance payments**  
**On Non judicial stamp paper of Rs 40/-**

In consideration of the ORISSA STATE CO-OP. MILK PRODUCERS' FEDN. LTD. (hereinafter called "the OMFED") having regard to grant advance of Rs. \_\_\_\_\_

(Rupees \_\_\_\_\_) to M/s \_\_\_\_\_

Having their office at \_\_\_\_\_

Hereinafter called "the said contractor") under the terms and conditions of the purchase Order No. \_\_\_\_\_ Dated \_\_\_\_\_ made between the OMFED and M/S. \_\_\_\_\_

for supply, installation, commissioning, trial-running and guaranteeing of \_\_\_\_\_

(Hereinafter called the " the order") on production of bank guarantee for Rs. \_\_\_\_\_

(Rupees \_\_\_\_\_ only), We (the bank) do hereby undertake to pay the OMFED an amount not exceeding Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) against any loss/damage caused to or suffered by the OMFED by reason of any breach by the said contractor of any of the conditions contained in the order.

We, (the bank), do hereby undertake to pay the amounts due and payable under this guarantee without any demur merely on a demand from the OMFED stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the OMFED by reasons of any breach by the said contractor of any of the terms and conditions contained in the order or by reasons of the contractor's failure to perform the said order. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the bank under this guarantee and shall be restricted to an amount not exceeding Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only).

We, \_\_\_\_\_ (the bank), further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said order and that it shall be continue to be enforceable till all the dues of the OMFED, under, or by virtue of the said order have been fully paid and it's claims satisfied or discharged or till OMFED certifies that the terms and conditions of the said order have been fully and properly carried by the said contractor and accordingly discharge the guarantee and unless a demand or a claim under this guarantee is made on us in writing on or before \_\_\_\_\_, we shall be discharged from all liabilities under this guarantee thereafter.

We, \_\_\_\_\_(the Bank), further agree with the OMFED that the OMFED shall have the fullest liberty without our consent and without affecting in any manner our obligation hereunder to vary in any of the terms and conditions of the said order, to extend the time of performance by the said Contractor from time to time or to postpone for any time or from time to time any of the power exercisable by the OMFED against the said Contractor and to forbear or enforce any of the terms and conditions relating to the said order and we shall not be relieved from our liability by reason of any such variation, or extension or for any forbearance, act of omission on the part of the OMFED or any indulgence by the OMFED to the said Contractor or any such matter or thing whatsoever Which under the law relating to the sureties would but for this provision have effect of so relieving us.

We, \_\_\_\_\_ (the bank), lastly undertake not to revoke this guarantee during its currency except with the previous consent of the OMFED in writing.

Notwithstanding anything stated herein above the liability of the bank Guarantee is restricted to Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ Only). The guarantee shall remain in force till the \_\_\_\_\_ and unless the guarantee is renewed or a claim is preferred against the bank within three months from the said date all rights of the OMFED under the guarantee shall cease and the bank shall be released and discharged from the liabilities hereunder.

Place

Signature

Date

Seal

Code no.

**Note**

Note: Contractor should ensure that seal and code no. of the signatory is put by the bankers, before the submission of the bank guarantees.

## **SECTION --XI (1)**

### **MANUFACTURER'S AUTHORIZATION FORM**

No. \_\_\_\_\_ Dated \_\_\_\_\_

To

Orissa State Co-op. Milk Producers Federation. Ltd.

D-2, Saheed Nagar

Bhubaneswar-751001

ORISSA, INDIA

Dear Sir,

Sub: Tender Ref. No. \_\_\_\_\_

We \_\_\_\_\_ an established and reputable manufacturers of \_\_\_\_\_ having factories at \_\_\_\_\_ and \_\_\_\_\_ do hereby authorize M/s \_\_\_\_\_ (Name and address of agents) to bid, negotiate and conclude the contract with you against Tender notice Ref. No. \_\_\_\_\_ for the above goods manufactured by us.

No company or firm or individual other than M/s \_\_\_\_\_,

located at \_\_\_\_\_ are authorized to bid, negotiate and conclude the contract in regard to this business against this specific Tender Notice.

We hereby extend our full guarantee and warranty as per the General conditions of contract for the goods offered for supply against this Tender notice by the above firm.

Yours faithfully,

(NAME)

**For and on behalf of M/s.**

(Name of Manufacturers)

**Note: This letter of authority should be on the letterhead of the manufacturing concern and should be signed by a person competent and having the power of attorney to bind the manufacturer.**

**SECTION-XI (2)**  
**MANUFACTURER'S AUTHORIZATION FORM**

(Please see Clause 14.3 of instructions to bidders)

No. \_\_\_\_\_ Dated \_\_\_\_\_

To

Orissa State Co-op. Milk Producers' Federation. Ltd.

D-2, Saheed Nagar

Bhubaneswar-751007

ORISSA

Dear Sir,

Sub: Tender Ref.No. \_\_\_\_\_

We \_\_\_\_\_ an established and reputable manufacturers of \_\_\_\_\_ having factories at \_\_\_\_\_ and \_\_\_\_\_

do hereby authorize M/s \_\_\_\_\_ (Name and address of agents) to bid, negotiate and conclude the contract with you against bid no. \_\_\_\_\_ for the above goods manufactured by us.

No company or firm or individual other than M/s \_\_\_\_\_

are authorized to bid, negotiate and conclude the contract in regard to this business against this specific IFB.

We hereby extend our full guarantee and warranty as per Clause 81 of the general conditions of contract for the goods offered for supply against this invitation for bid by the above firm.

Yours faithfully,

(NAME)

For and on behalf of M/s

(Name of manufacturers)

Note: This letter of authority should be on the letterhead of the manufacturing concern and should be signed by a person competent and having the power of attorney to bind the manufacturer.

## SECTION - XII

### TECHNICAL DEVIATION STATEMENT FORM

The following are the particulars of deviations from the requirements of the tender specifications.

CLAUSE	DEVIATION	REMARKS
		(Including justification)

Dated- \_\_\_\_\_ Signature and seal of the  
Manufacturer / Bidder

Note:

- (1) Where there is no deviation, the statement should be returned duly signed with an endorsement indicating "No Deviations".
- (2) The technical specifications furnished in the bidding document shall prevail over those of any other document forming a part of our bid, except only to the extent of deviations furnished in the statement.

## SECTION - XIII

### **POINTS BIDDERS SHOULD BEAR IN MIND**

- I. BIDS CONTAINING DEVIATIONS FROM BIDDING DOCUMENT TERMS AND OTHER CONDITIONS MAY BE REJECTED.
- II. BIDS NOT ACCOMPANIED BY BID SECURITY (EARNEST MONEY DEPOSIT) SHALL BE SUMMARILY REJECTED.
- III. NON-COMPLIANCE WITH EVEN A MINOR TECHNICAL REQUIREMENT SHOULD BE SPECIFICALLY STATED BY THE BIDDERS.
- IV. BIDDERS SHOULD FURNISH THEIR COMPLETE ADDRESS FOR THE PURPOSE OF FURTHER CORRESPONDENCE PERTAINING TO BIDDING DOCUMENT.
- V. CORRECTIONS IN THE BID SHOULD BE NOTED OVER AND INITIALED AT THE PLACE OF CORRECTIONS.
- VI. NEGLIGENCE OF THE BIDDER IN PREPARING THE BID CONFERS NO RIGHT TO WITHDRAW THE BID AFTER IT WAS OPENED.
- VII. SPECIFICATIONS, CONDITIONS, SCHEDULES AND DRAWINGS OF BIDDING DOCUMENT CONSTITUTE AN INTEGRAL PART OF THE BID.
- VIII. ALL THE BIDS ALONGWITH ENCLOSURES, DRAWINGS AND TECHNICAL LITERATURE SHOULD BE IN ENGLISH ONLY.
- IX. BIDDING DOCUMENT SHALL BE GOVERNED AND INTERPRETED ACCORDING TO THE SYSTEM AND COMPONENTS UNDER TROPICAL CONDITIONS.
- X. ALL THE BIDDERS SHOULD SUBMIT QUALIFICATION APPLICATION IN THE GIVEN FORMATS WITH REQUIRED DOCUMENTATION.
- XI. BIDS SHOULD BE KEPT VALID FOR ACCEPTANCE FOR A PERIOD OF ONE YEAR FROM THE DAY BIDS ARE OPENED.
- XII. THE BIDDING DOCUMENT SHALL BE GOVERNED AND INTERPRETED ACCORDING TO THE LAWS OF THE UNION OF INDIA.
  
- XIII. ALL BIDDERS ARE URGED TO SUBMIT PROMPTLY WRITTEN REQUESTS ON MATTERS WHERE CLARIFICATIONS OR ADDITIONAL INFORMATION ARE DESIRED, NOT LATER THAN SEVEN DAYS BEFORE BIDS ARE DUE TO OPENING. NO EXTENSION IN DUE DATE OF SUBMISSION OF BIDS WILL BE ALLOWED ON THIS GROUND.
  
- XIV. ALL THE BIDDERS SHOULD QUOTE FOR THE ITEMS AS PER THE SPECIFICATIONS AND DETAILS GIVEN IN THIS BIDDING DOCUMENT ONLY. IN CASE, ALTERNATIVE DESIGNS ETC. ARE TO BE OFFERED BY THE BIDDERS, THEY MAY DO SO BUT THIS SHOULD BE STATED SEPARATELY IN THE OFFER. ORISSA STATE CO-OPERATIVE MILK PRODUCERS' FEDERATION LIMITED RESERVES ITS RIGHT TO ACCEPT OR REJECT SUCH ALTERNATIVE OFFERS, WITHOUT ASSIGNING ANY REASONS THEREOF TO THE BIDDERS.
  
- XV. THE BIDDERS WHO QUOTE FOR SUPERVISION AND COMMISSIONING OF ANY EQUIPMENT SHOULD ALSO INDICATE THE PRICES IN THE BID SEPARATELY. THE SUPERVISION OF COMMISSIONING WOULD INCLUDE CHECKING THE INSTALLATION AND COMMISSIONING THE PLANT TO GIVE THE RATED OUTPUT.
  
- XVI. MANAGING DIRECTOR, ORISSA STATE CO-OPERATIVE MILK PRODUCERS' FEDERATION LTD. RESERVES THE RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDS WITHOUT ANY EXPLNATION TO BIDDERS.

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