



TENDER DOCUMENT

FOR

- A. SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND TRIAL RUN OF
500 KVA SUBSTATIONS, CABLE AND MAIN LT PANEL AT BHAWANIPATNA
DAIRY, DIST – KALAHANDI.**
- B. SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND TRIAL RUN OF
AIR COMPRESSOR AT BHAWANIPATNA AND SAMBALPUR DAIRY.**



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

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

MARCH -2016

Cost Rs. - 5000/- +5% vat

THE ORISSA STATE CO-OPERATIVE MILK PRODUCERS' FEDERATION LTD,

D-2, SAHEED NAGAR, BHUBANESWAR, ORISSA.

TELEPHONES : (0674)-2546121, 2544576, 2540417, 546030, 2540273 GRAM: OMFED

FAX: 0674-2506974, EMAIL: [omfed @ yahoo.com](mailto:omfed@yahoo.com), web site: www.omfed.com

TENDER FOR:

- A. SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND TRIAL RUN OF 500 KVA SUBSTATIONS, CABLE AND MAIN LT PANEL AT BHAWANIPATNA DAIRY, DIST – KALAHANDI.
- B. SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND TRIAL RUN OF AIR COMPRESSOR AT BHAWANIPATNA AND SAMBALPUR DAIRY.

LOCATION OF DAIRY SITE

**: 1. BHAWANIPATNA DAIRY, BHANGABADI
(NEAR KRISHI VIGYAN KENDRA) BHAWANIPATNA,
DIST- KALAHANDI, PIN -766001**

**2. SAMBALPUR DAIRY, AT –GOSHALA,
PO – KALAMATI, DIST - SAMBALPUR**

TENDER REFERENCE : PROJ/115/RKVY/BPD/ELE/14

DATE OF COMMENCEMENT TO DOWN : 08.03.2016

LOAD OF BIDDING DOCUMENT

LAST DATE FOR DOWN LOAD OF : 30.03.2016 UPTO 1300 Hrs

BIDDING DOCUMENT

LAST DATE AND TIME FOR RECEIPT : 30.03.2016 UPTO 1400 Hrs

OF BIDS

DATE AND TIME OF OPENING OF BIDS : 30.03.2016 AT 1500 Hrs

**PLACE OF OPENING OF BIDS: OFFICE OF THE ORISSA STATE COOP. MILK
PRODUCERS FED. LTD.**

D-2, SAHEED NAGAR, BHUBANESWAR, ODISHA.


ADDRESS FOR COMMUNICATION

**: THE ORISSA STATE CO- OP. MILK
PRODUCERS' FEDERATION. LTD.
D-2, SAHEED NAGAR, BHUBANESWAR-
ODISHA, INDIA. 751007**

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SECTION - I

 www.omfed.com	<p>The Odisha State Cooperative Milk Producers' Federation Ltd. D-2, SAHID NAGAR, BHUBANESWAR-751 007. Ph No- 2546030/2540273/2540417, Fax No (0674)2540974</p>
<p style="text-align: center;"><u>TENDER NOTICE</u></p> <p>OMFED invites sealed Technical and Commercial bids in separate envelop from</p> <p>A) HT Licensed Electrical contractor for supply, installation, testing, commissioning and trial run of 500 KVA substations, Cable and Main LT Panel at Bhawanipatna Dairy, Dist – Kalahandi.</p> <p>B) Authorized Manufacturer /supplier for supply, installation, testing, commissioning and trial run of 15 HP Air Compressor at Bhawanipatna and Sambalpur Dairy.</p> <p>Tender document can be down loaded from website www.omfed.com against payment of Rs.5,000/- + 5%VAT (or Rs.5,250/-) in shape of Demand Draft drawn in favour of OMFED drawn on any Nationalized bank payable at Bhubaneswar. The tender document should be duly filled & submitted on due date along with the cost of tender paper. Bids with 1% EMD of the quoted value shall be received up to 1400 hours on 30.03.2016 & shall be opened (Technical Bid) on the same day at 1500 Hrs. at above mentioned address in presence of interested bidders. Bids without requisite EMD shall not be considered.</p> <p>The corrigendum/amendment to this notice if required shall be published only in OMFED web site and will not be published again in newspaper.</p> <p>OMFED reserves the right to accept or reject any or all the tenders or part thereof without assigning any reason.</p> <p style="text-align: right;">General Manager (P&D)</p>	

SECTION II

INSTRUCTION TO BIDDERS

1.0 GENERAL INFORMATION

1.1 NAME OF WORK:

- A. SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND TRIAL RUN OF 500 KVA SUBSTATIONS, CABLE AND MAIN LT PANEL AT BHAWANIPATNA DAIRY, DIST – KALAHANDI.
- B. SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND TRIAL RUN OF AIR COMPRESSOR AT BHAWANIPATNA AND SAMBALPUR DAIRY.

1.2 LOCATIONS AND AREA

- (a) Nearest Railway Station : BHAWANIPATNA AND SAMBALPUR
- (b) Nearest Airport : BHUBANESWAR / SAMBALPUR
- (C) Nearest Major Town : BHAWANIPATNA / SAMBALPUR
- (D) Access Road : PUGGA

1.3 Period of Completion

The period of completion shall be **SIX months** from the date of placement of work order, which shall include the period of commencement and the non – working periods during monsoon and festivals. The work shall progress along with the civil works at site if required.

1.4 IMPORTANT NOTE

Period of completion of work is very important for this project. The work has to be carried out strictly as per the work programmer.

2.0 Eligibility and Qualification requirements:-

- 2.1 The bidder should have minimum Five years experience in the related field like supply / installation / Erection & commissioning etc.
- 2.2 Annual Sales turn over should not to be less than **10** lakhs during the financial year 2012-2013, 2013-2014, 2014-2015 for **Electrical / Substation work**.
- 2.3 Annual Sales turn over should not to be less than **05** lakhs during the financial year 2012-2013, 2013-2014, 2014-2015 for **Air Compressor**.

3.0 Price basis:

3.1 For supply:

The quoted prices for the equipments shall be on FOR destination basis, inclusive of all taxes, including service taxes, & duties, 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. "C" forms shall be issued by OMFED, wherever applicable.

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 30 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 30 days, including oil and lubricants. However, electrical/ fuel charges during the 30 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:

- Audited profit & loss account statement for the year 2012-2013, 2013 -2014, 2014 - 2015.
- Proof of sales turn over for last three consecutive years.
- Copy of IT return for the financial year 2013 – 2014-2015.
- Central excise registration number / Service Tax Registration Number..

- TIN / CST No / PAN No.
- Credentials in support of supply of said work / machineries and installation during last five years.
- Cost of tender paper in shape of Demand draft.
- Bidder should have valid License issued by competent authority of Govt. of Odisha for Electrical work.

8.2 DOCUMENTS TO BE SUBMITTED IN THE COMMERCIAL BID:

- The original bidding document as issued to the bidder signed & sealed in each page by the bidder as a token of having read, understood & accepted the contents, therein.
- Price offer of the Equipment as per the technical specification & schedule of quantity mentioned in the Tender documents.
- Cost of all incoming / out going cable with all accessories as per actual requirement.
- Installation/commissioning Charges.
- The rate shall include freight, packing, forwarding all taxes including service taxes & duties and including CESS.
- Demand draft towards EMD@1% of the quoted value.
- The quoted rate shall be uniform for all the site.
- 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.

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.

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 and sales 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 excise duty, sales and 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) A detailed description of the goods' essential technical and performance characteristics.
 - (b) 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
 - (c) 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 of 1% (one percent) of the total bid value.**
- 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) 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
 - (b) 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, pursuant to clause 32, and furnishing the performance security, pursuant to clause 34.
- 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 01 year 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:
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 excise duty 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, 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.

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

The OMFED reserves the right at the time of award or performance of the contract, to increase or decrease by up to 15 (fifteen)% 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 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 Boiler / Mechanical equipments.(Part-C,D,E)

15.1 For Supply of Equipment.

90% Payment after safe arrival of material at site.

Balance payment after successful commissioning and handed over.

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

PSD @10% of the bill 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 retentation 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, pursuant to clause 31, 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 manufactured 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 of, 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 time stated in section–I 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 extent 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 shall have jurisdiction.

SECTION -IV

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 / approved drawing of the OMFED or as per the battery limits fixed by the OMFED.

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 conform 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.

All similar materials and removable parts shall be uniform and interchangeable with one another.

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

3.1 **Power Cables (HT)**

Three core, aluminum conductor, screened, XLPE insulated, armored shielded and PVC sheathed cables suitable for 11/12.7/22/33 KV, earthed system, conforming to IS 7098 (Part II) amended up to date.

3.2 **Power Cables (LT)**

Power cables for use on 415 V system shall be of 1100 volt grade, aluminum 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 drawings. If neither of these drawings are available, the size of cable shall be as specified in cable selection chart enclosed at Annexure – VI. NO CABLE OF SIZELESS THAN 4 SQ.MM. SHALL BE USED.

3.3 **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.

3.4 **Cable Trays**

These shall be channel type, fabricated from slotted MS. Sheets (14 gauge minimum), hot dip galvanized, complete with all accessories such as bends, tees and reducers. Only aluminum flat clamps with GI / chrome plated bolts-nuts/screws to be used for clamping cables. Sizes of these trays shall be as specified in schedule of quantities or approved by Engineer-in-Charge.

3.5 Cable Glands

Cable glands shall be of heavy-duty compression type of brass, chrome plated. These shall have a screwed nipple with conduit electrical thread and check nut. These shall be suitable for armored/unarmored cables, which is being used.

3.6 Cable connectors

Cable connectors, lugs/sockets, shall be of copper/aluminum alloy, suitably tinned, solder less, crimping type. These shall be suitable for the cable being connected and type of function (such as power, control or connection to instruments, etc.)

3.7 Cable Route Markers

These shall be galvanised Cast Iron plate with marking (LT/HT) diameter 150 mm with 600 mm long 25x25 mm MS. Angle riveted/bolted with this plate.

3.8 Cable Indicators

These shall be self-sticking type and of 2 mm thick lead strap for overall cable. PVC identification numbers, ferrule shall be used for each wire.

3.9 G.I. Pipes for Cables

For laying of cables under floor, G.I. class 'A class' pipes shall be used. MS. Conduits are not acceptable for this purpose. All accessories of pipes shall be threaded type. Size of pipe shall depend upon the overall outer diameter of cable to be drawn through pipe. NO G.I. PIPE LESS THAN 40 MM DIA SHALL BE USED FOR THIS PURPOSE. To determine the size of pipe, assume that 40% area of pipe shall be free after drawing of cable.

3.9.1 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.

3.11 Motor Junction Box.

These shall be in Aluminum cast housing, completely dust, vermin and weather proof, suitable for 25 A. 415 Volts, 50 Hz, with heavy duty bakelite connector, complete with cable/conduit gland. Refer detailed drawing. Sample to be got approved before use.

3.12 Remote Push Button stations (For Dairies)

These shall be floor / wall-mounted type as specified in schedule of quantities. These shall be fabricated from 1.6 mm thick stainless steel sheets (S.S: 304). In case of floor-mounted stations, these shall be supported on 51 mm 'A' class MS, pipe clad with S.S. pipe. Front cover shall be removable type with suitable rubber gaskets to make them dust, vermin and moisture proof. All outer S.S. surfaces shall be polished to 150 grit finishes.

Each push button station shall be provided with one lockable (key operated) push button to control supply to station. Each feeder of station shall be provided with name plate (white bakelite), indication lamp, one "ON" (Green) push button and one "Off" (Red) push button with latch to prevent accidental starting when required, Green and Red push button shall have contact elements having 1 NO + 1 NO. Number of feeders shall be specified in schedule of quantities. The indication lamp can be combined with 'ON' push button.

4.0 ERECTION OF EQUIPMENT

The cases containing the equipment (being supplied by the OMFED) shall be handed over to the Contractor. The Contractor shall make his own arrangements for safe transportation of all the items to the erection site and also carry out complete loading unloading during transportation. Equipment shall not be removed from packing cases unless the floor has been made ready for installing them. The cases shall be opened in presence of the Engineer-in-charge or his authorised representative. These empty packing cases shall be returned to the stores and any document if found with the equipment shall be handed over to the Engineer-In-Charge. Any damage or shortage noticed shall be reported to the Engineer-In-Charge in writing immediately after opening of packing cases.

4.1 Power control centers, distribution boards, control panels & bus ducts

4.1.1. Erection

Electrical panels and bus duct shall be delivered in convenient shipping section by the manufacturers. The Contractor shall be responsible for final assembly and inter-connection of bus bars / wiring. Foundation channel shall be grounded in the flooring by the contractor. Switchgear shall be aligned and leveled on their base channels and bolted or tack welded to them as per the instructions of the Engineer-In-Charge. The earth bus shall be made continuous throughout the length. Loosely supplied relays and instruments shall be mounted and connected on the switchgear. The contacts or the draw-out circuit breakers shall be checked for proper alignment and inter-changeability.

After erection the switchboard shall be inspected for dust and verminproofness. Any hole, which might allow dust or vermin etc, to enter the panel, shall be plugged suitably without any extra cost.

If the instrument transformers are supplied separately they shall be erected as per the direction of the Engineer-In-Charge. The Contractor shall fix the cable glands after drilling the bottom top plates of all switchboards with suitable holes without any extra cost.

Range of overload relays/timers etc, shall be checked with requirement of motor actually to be connected at site and if the same is under-sized/over-sized, it shall be brought to the notice of Engineer-in-charge, who shall arrange procurement of correct rated components. However, the Contractor shall not charge anything extra for labour for such replacements.

The bus duct shall be suitably supported between switchgear and transformer. The opening in the wall where the duct enters the switchgear room shall be sealed to avoid rainwater entry. The foundation of the switchgear shall be raised suitably for minor adjustment to ensure proper alignment and connection of the bus duct at no extra cost. Expansion joints, flexible connection, etc. supplied by the manufacturer of the bus duct shall be properly connected.

4.1.2 Testing

Before electrical panel is energised, the insulation resistance of each bus shall be measured from phase to ground. Measurement shall be repeated with circuit breakers in operating positions and contact open.

Before switchgear is energized, the insulation resistance of all DC control circuits shall be measured from line to ground.

The following tests shall be performed on all circuit breakers during erection:

- i. Contact alignment and wipe shall be checked and adjusted where necessary in accordance with the breakers manufacturer's instructions.
- ii. Each circuit breaker shall be drawn out of its cubicle, closed manually and its insulation resistance measured from phase to phase and phase to ground.
- iii) All adjustable direct acting trip devices shall be set using values given by the Engineer-In-Charge / manufacturer.
- iv) The dielectric strength of insulating oil wherever applicable shall be checked.

Before switchgear is energised the following tests shall be performed on each circuit breaker in its test position.

- i. Close and trip the circuit breaker from its local control switch, push button or operating handle. Switchgear control bus may be energised to permit test operation of circuit breaker with AC closing with prior permission of the Engineer-In-Charge.
- ii. Test tripping of the electrically operated circuit breaker by operating mechanical trip device.
- iii. Test operation of circuit breakers latch, check carriage limit switch if provided.
- iv. Test proper operation of lock out device in the closing circuit, wherever provided by simulating conditions which would causes a lockout to occur.

- v. Trip breaker either manually or by applying current or voltage to each of its associated protective relays.

Before switchgear is energized, the test covered above shall be repeated with each breaker in its normal operating position:

Capacitor banks in capacitor control panel shall be tested as per manufacture's instructions. In addition test for output and / or capacitance, insulation resistance test and test for efficiency of discharge device shall be carried out.

All electrical equipment alarms shall be tested for proper operation by causing alarms to sound under simulated abnormal conditions.

The Contractor shall arrange testing and calibrations of relays. The testing equipment including primary and secondary injection sets (if required) etc. shall also have to be arranged by the Contractor, payment for above work shall be deemed to have been included in the erection of switch boards/control panels.

4.1.3 Proforma for PCC, DB, Motor control centers test

1. Circuit (breaker or Contractor module designation/bus no.)
2. Insulation Resistance Test (Contacts open, breaker racked in position).
 - a) Between each phase of bus : Mega Ohm
 - b) Between each phase and earth : Mega Ohm
 - c) DC and AC control and auxiliary
Circuits : Mega Ohm
 - d) Between each phase of CT/PT
and between CT and PT circuit
if any: : Mega Ohm
3. **CT checks:**
 - a) CT ratio
 - b) CT secondary resistance
 - c) CT polarity check
4. Check for contact alignment and wipe
5. Check / test all releases / relays
6. Check mechanical interlocks

7. Check electrical interlocks
8. Check switchgear /control panel wiring
9. Checking o breaker/ Supplier circuits for
 - a) Closing-local and remote wherever applicable
 - b) Tripping-local and remote wherever applicable
10. Opening time of Breaker/contactator
11. Closing time of Breaker/contactator

(This Proforma shall be jointly signed by the Engineer-in-Charge and the Contractor)

4.2 Battery and battery charger

Batteries shall be erected on wooden stands and insulators supplied by the manufacturer of the batteries. Electrolyte shall be filled as per the manufacturer's instructions. Interconnections shall be made with leads supplied by the manufacturer. Filling of electrolyte (supplied by the manufacturer), charging, discharging, recharging shall be carried out under the supervision of the Engineer-in-Charge. or his authorised representative. Lamp bank (loads) for discharging shall be provided by the Contractor under this contract. Erection of battery charger and DC board will be carried out by the Contractor under the supervision of the Engineer-In-Charge or his authorised representative. The Contractor shall also offer such facilities as may be required for carrying out the tests on the complete battery charger and DC board / AC board.

Battery charger shall be tested for proper operation and to verify the charger delivers its maximum rated output. The contractor shall supply skilled/unskilled labour for carrying out the test by the engineer-in-charge. Batteries shall be given a boost charge in accordance with the manufacturer's instructions and adjusted for float operation before being placed regular service.

4.3 Motors

4.3.1 Erection and testing

Erection and coupling of motors with machines will be done under the mechanical erection. However, earthing, cable termination, testing and commissioning are covered under this section, before starting the alignment and coupling of motors with machines the insulation resistance of the motors will be measured and recorded by the Contractor. The direction of the rotation of the motor shall also be checked before the driven equipment is finally coupled. Motor bearings are to be checked and rectified including supply and changing of grease, checking of fans coupling with bodies etc. The Contractor shall take adequate precaution and care while executing the work. For all damage due to negligence etc. the Contractor shall be responsible to replace / repair at his own cost.

Before connecting power cables to motors the insulation resistance of all motor windings shall be measured. Measurement shall be repeated after power cable terminations are completed and before first charging.

Motor shall be operationally tested together with the starting gear and auxiliary apparatus such as push button stations, the contractors, level and pressure controls, signal and alarm apparatus, power and control circuits etc.

Check the anti-condensation heater and its circuit (if installed).

Check the setting of the thermal overload protection/single phase prevention. Testing of these devices is to be done wherever required as per the instructions of the Engineer-In-Charge.

All motors shall run uncoupled for a maximum period off 4 hours before the driven equipment is placed in regular service.

4.3.2 Performa for motor testing

1. Name plate details: Voltage_____ HP_____ KW_____
Mounting_____Current____RPM_____
Frame size_____Make_____S no._____
Others_____
2. **Insulation Test (Before cable connection)**
a) Between phase and earth_____ Mega ohms
b) Between each phase _____ Mega ohms
3. **Insulation Test (After cable connection)**
a) Between phase and earth_____ Mega ohms
b) Between each phase _____ Mega ohms
4. No load current : R phase Amps
Y phase Amps
B phase Amps
5. Full load current : R phase Amps
Y phase Amps
B phase Amps

6. **Temperature rise after 4 hours run:**

On no load O °c.

On full load O °c.

Ambient temperature during test O °c.

7. **Operation of thermal overload relay:**

i) At normal FL current of motor

ii) At twice FL current of motor trip in seconds.

(The Engineer-In-Charge and the Contractor shall jointly sign this Performa.)

4.4 **Installation of cable network**

Cable network shall include, power, control, lighting cables which shall be laid in underground trenches, Hume pipes, open trenches, cable trays GI pipes, or on building structure surfaces as detailed in the relevant drawings. Cable schedules or as per the Engineer-In-Charge's instructions, supply and installation of cable trays, GI pipes, conduits cable glands sockets at both ends, isolators, junction boxes, remote push buttons stations, etc. shall be under the scope of the Contractor.

4.4.1 **General requirements for handling of cables**

4.4.1.1 Before laying cables, these shall be tested for physical damage, continuity absence of cross phasing, insulation resistance to earth and between conductors. Insulation resistance tests shall be carried out with 500 / 1000 volt Megger.

4.4.1.2. The cables shall be supplied at site, wound on wooden drum as far as possible. For smaller length and sizes, cables in properly coiled form can be accepted. The cable shall laid by mounting the drum of the cable on drum carriage. Where the carriage is not available, the drum shall be mounted on a properly supported axle, and the cable laid out from the top of the drum. In no case the cable will be rolled on, as it produces kinks, which may damage the conductor.

4.4.1.3. Sharp bending and kinking of cables shall be avoided. The bending radius for PVC insulated and sheath armored cable shall not be less than 10 D where 'D' is overall diameter of the cables.

4.4.1.4. While drawing cables through GI pipes, conduits, RCC pipe, ensure that size of pipe is such that, after drawing cables, 40% area is free. After drawing cable, the end of pipe shall be sealed with cotton/bituminous compound.

- 4.4.1.5. High Voltage (11KV and above), medium voltage (230V and above) and other control cables shall be separated from each other by adequate spacing or running through independent pipes/trays.
- 4.4.1.6. Armour cables shall never be concealed in walls/floors/roads without GI pipes, conduits RCC pipes.
- 4.4.1.7. Joints in the cable throughout its length of laying shall be avoided as far as possible and if unavoidable, prior approval of site engineer shall be taken. If allowed, proper straight through epoxy resin type joint shall be made, without any additional cost.
- 4.4.1.8. A minimum loop of 3 M shall be provided on both ends of the cable, or after every 50 M of un-jointed length of cable and on both ends of straight through cable joint. This additional length shall be used for fresh termination in future. Cable for this loop shall be paid for supply and laying.
- 4.4.1.9. Cable shall be neatly arranged in the trenches/trays in such a manner so that criss-crossing is avoided and final take off to the motor/switchgear is facilitated. Arrangement of cables within the trenches/trays shall be the responsibility of the Contractor.
- 4.4.1.10 All cable routes shall be carefully measured and cable cut to the required lengths and under wastage of Cables to be avoided. The route indicated in the drawings is indicative only and the same may be rechecked with the Engineer-in-charge before cutting of cables. While selecting cables routes, interference with structures, foundations, pipeline, future expansion of buildings, etc. should be avoided.
- 4.4.1.11 All temporary ends of cables must be protected against dirt and moisture to prevent damage to the insulation. For this purpose, ends of all PVC insulated cables shall be taped with an approved PVC or rubber insulating tape. Use of friction type or other fabric type tape is not permitted. Lead sheathed cables shall be plumbed with lead alloy.
- 4.4.1.12 Wherever cable rises from underground/concrete trenches to motors/switchgears/push buttons, these shall be taken in G.I. pipes of suitable size, for mechanical protection upto 300 mm distance of concerned cable gland or as instructed by the Engineer-In-charge.
- 4.4.1.13 Where cables pass through foundation/walls of other under ground structures, the necessary ducts or opening will be provided in advance for the same. However, should it become necessary to cut holes in existing foundations or structures the electrical Contractor shall determine their location and obtain approval of the engineer-in-charge before cutting is done.

4.4.2 Laying of Cables (underground system)

- 4.4.2.1. Cables shall be so laid in ground that these will not interfere with other underground structures. All water pipes, sewage lines or other structures, which become exposed

by excavation, shall be properly supported and protection from injury until the filling has been rammed solidly in places under and around them. Any telephone or other cables coming in the way are to be properly shielded diverted as directed by the OMFED.

4.4.2.2. Cables shall be laid at minimum depth of 750 mm in case of LT & 1200 mm in case of HT, from ground level. Excavation will be generally in ordinary alluvial soil. The width of the trench shall be sufficient for laying of required number of cables.

4.4.2.3 Sand bedding 75mm thick shall be made below and above the cables. A layer of bricks (full size) shall be laid on the edge, above sand bedding on the sides of cables and a flat brick to cover cable completely. More than one cable can be laid in the same trench by providing a brick on edge between two cables. However the relative location of cables in trench shall be maintained till termination. The surface of the ground after back filling the earth shall be made good so as to conform in all respects to the surrounding ground and to the entire satisfaction to the Engineer-in-charge.

4.4.2.4 For all underground cables, route markers should be used.

- a) Separate cable route markers should be used for LT, HT and telephone cables.
- b) Route markers should be grounded in ground with 1:2:4 cement concrete pedestal size 250x250x300 mm.
- c) Cable markers should be installed at an interval not exceeding 50 M along the straight routes of cables at a distance of 0.5 M away from centre of cable with the arrow marked on the cable markers plate indicating the location of cable. Cable markers should also be used to identify change in direction of cable route and for location of every joint in underground cable.

4.4.2.5 RCC Hume pipe for crossing road in cable laying shall be provided by OMFED. No deduction shall be made for cable laying in Hume pipe for not providing bricks, sand and excavation. RCC Hume pipe at the ends shall be sealed by bituminous compound after laying and testing of cable by electrical contractor without any extra charge.

4.4.3 Laying of Cables Under Floors

4.4.3.1 **GI class A pipe shall be used for laying of outgoing cables from distribution boards to motors, isolators/junction boxes of motors, starter of motors and push button stations. Preferably one cable shall be drawn through one pipe. Size of pipe shall be such that after drawing of cable 40% area is free. If length of pipe is more than 30 M, free area may be increased to 50%.**

4.4.3.2 Use of elbows are not allowed at all and number of bends shall be kept minimum. Instead of using bends with sockets, pipe-bending machine shall be used for making long smooth bends at site.

4.4.3.3. Ends of pipe shall be sealed temporarily while laying with cotton/jute/rubber stopper etc. to avoid entry of building material.

4.4.3.4 Exact location of equipment motor/isolator/push buttons etc. shall be ascertain prior to laying of pipe.

4.4.4 Laying of cable in Masonry Trenches

4.4.4.1 Masonry/concrete trenches of laying of cable shall be provided by OMFED. However steel members such as MS angles/flats etc. shall be provided & grouted by electrical Contractor to support the cables without any extra charge. Cables shall be clamped to these supports with aluminum saddles/damps. More than one tier of cables can be provided in the same trench if the numbers of cables are more.

4.4.4.2 Entry of cables in trenches shall be sealed with bituminous MASTIC compound to stop entry of water in trenches.

4.4.5 Laying Of Cables In Cable Trays

4.4.5.1 Cable trays and supporting steel members such as MS angle/channel/ flats etc. shall be provided and fixed by the Contractor.

4.4.5.2 Cable shall be fixed in cable trays in single tier formation and cables shall be clamped with aluminum flat clamps and galvanized bolts/unit.

4.4.5.3 Earthing flat/wire can also be laid in cable tray along wit cables.

4.4.5.4 After laying of cables minimum 20% area shall be spare.

4.4.6 Laying of cables on Building Surface/Structure

4.4.6.1 Such type of cable laying shall be avoided as per as possible and will be allowed only for individual cables or small group of cables, which run along structure.

4.4.6.2 Cables shall be rigidly supported on structure steel /masonry using individual cast/malleable iron galvanized saddles and these supports shall be approximately 400 to 500mm for cables upto 25mm overall diameter and maximum 1000mm for cables larger than 25mm. Unsightly sagging of cables shall be prevented. Only aluminum /GI clamps with GI bolts/nuts shall be used.

4.4.6.3 If drilling of steel structure must be resorted to, approval must be secured from the Engineer-in-Charge and steel must be drilled where the minimum weakening of the structure will result.

4.4.7 Termination and Jointing Of Cables

4.4.7.1 Use of Glands

All PVC cable upto 1.1 KV grade, armored or unarmored shall be terminated at the equipment/junction box isolators/push buttons/control accessories, etc. by means of suitable size compression type cable glands armor of cable shall be connected to earth point. The Contractor shall drill holes for fixing glands wherever necessary.

Wherever threaded gland cable is to be screwed into threaded opening of different size, suitable galvanized threaded reducing bushing shall be used for approval type.

In case of termination of cables at the bottom of the panel over a cable trench having no access from the bottom, a close fit holes should be drilled in the bottom plate for all the cables in one line, then bottom plate should be split in two parts along the center line of holes. After installation of bottom plate and cables with glands, it shall be sealed with sold sealing compounds.

4.4.7.2 Use OF Lugs/Socket

All cable leads shall be terminated at the equipment terminals, by means of crimped type solder less connectors unless the terminals at the equipment ends are suitable for direct joining without lugs/sockets.

The following is the recommended procedure for crimped joints and the same shall be followed:

- a) Strip of the insulation of the cable end with every precaution, not to severe or damage any stand. All insulations to be removed from the stripped portion of the conductor and ends of the insulation should be clean and square.
- b) The cable should be kept clean as far as possible before assembling it with the terminal/socket. For preventing the ingress of moisture and possibility of re-oxidation after crimping of the aluminum conductors, the socket should be fitted with corrosion inhibiting compound. This compound should also be applied over the stripped portion of the conductor and the palm surface of socket.
- c) Correct size and type of socket/ferrule/lug should be selected depending on size of conductor and type of connection to be made.
- d) Make the crimped joint by suitable crimped joint.
- e) If after crimping the conductor in socket/lug, same portion of the conductor remains without insulation the same should be covered sufficiently with PVC tape.

4.4.7.3 Dressing of Cable inside the Equipment

After fixing the cable glands, the individual cores of cable shall be dressed and taken along the cable ways (if provided) or shall be fixed to the panels with polyethylene straps. Cable shall be dressed in such a manner that small loop of each core is available inside the panel.

For motors of 20 HP and above, terminal box if found not suitable for proper dressing of aluminum cables, the Contractor shall modify the same without any additional cost.

Cables inside the equipment shall be measured and paid for.

4.4.7.4 Identification of Cables/Wires/Cores

Power cables shall be identified with RED, YELLOW, and BLUE PVC tapes for trip circuit identification, additional red ferrules shall be used only in the particular cores

of control cable at the termination points in the switch gear/control panels and switches.

In case of control cables all cores shall be identified at both ends by their wire nos. by means of PVC ferrules or self-sticking cable markers, wire nos. shall be as per schematic/connection drawing. For power circuit also wire nos. shall be provided if required as per the drawings of switchgear manufacturer.

4.4.8 Testing Of Cables

4.4.8.1 Before energizing, the insulation resistance of every circuit shall be measured from phase to phase and from phase to ground. This requires 3 measurements if one side is grounded and 6 measurements for three phase circuits.

4.4.8.2 Where splices or termination are required in circuits rated above 650 volts, measure insulation resistance of each length of cable before splicing and/or terminating. Report measurements after splices and/or termination are complete.

4.4.8.3 DC high voltage test shall be made after installation on the following:

a) All 1100 volts grade cables in which straight through joints are made.

b) All cables above 1100 volts grade.

For record purposes test data shall include the measured values of leakage current versus time.

The DC high voltage test shall be performed as detailed below:

Cables shall be installed in final position with all the straight through joints complete. Terminations shall be kept unfinished so that motors, switchgears, transformer etc. are not subjected to test voltage.

The test voltage and duration shall be as per relevant codes and practices of Indian standards Institution.

4.4.8 Proforma For Testing Cables

DATE OF TEST

- a) Drum no. from which cable taken _____
- b) Cable from _____ to _____
- c) Length of run of this Table _____ meters
- d) Insulation resistance test:
Voltage of megger _____ volts
 - i) Between core-1 to earth _____ mega ohm
 - ii) Between core-2 to earth _____ mega ohm
 - iii) Between core-3 to earth _____ mega ohm
 - iv) Between core-1 to core-2 _____ mega ohm
 - v) Between core-2 to core-3 _____ mega ohm

- vi) Between core-3 to core-1 _____ mega ohm
- e) High voltage test _____ Voltage duration
- i) Between core and earth
- ii) Between individual cores

(The Engineer-In-Charge and the Contractor shall jointly sign this Proforma)

4.5 Earthing Network

The entire network installation shall be done in accordance with the earthing drawings, specifications and instructions of the engineer-in-Charge. The entire earthing system shall fully comply with the Indian Electricity act and Rules framed there under. The Contractor shall carry out any changes desired by the Electrical Inspector or OMFED in order to make the installation confirm to the Indian Electricity Rules, at no extra cost. The exact location of the earth pits, earth electrodes and conductors and earthing points of the equipments shall be determined at site, in consultation with Engineer-in-Charge. Any change in the methods, routing, size of conductor etc. shall be subject to approval of the OMFED or Engineer-in-Charge before execution.

4.5.7 Earth Fault Relay

Earth fault relay of suitable capacity, as required under the IER is to be supplied & installed by the Contractor. This shall be wall be wall/floor mounted, in separate box suitable size, with necessary cable connection to main power supply.

4.5.8 Earth Pit with Electrode

4.5.2 Plate or pipe type earth electrode with earth pit shall be provided for this work unless otherwise advised by the Engineer-in-charge due to typical site conditions. Earthing electrode and pit shall be as per IS: 3043-1966 (code of practices for earthing). For ready reference, sketches for pipes and plate type earth electrode earthing have been shown in Annexure-V. All earth electrodes shall preferably be driven to a sufficient depth to reach permanent moist soil.

**PRIOR APPROVAL OF THE ENGINEER-IN-CHARGE SHALL BE TAKEN FOR
SELECTING TYPE OF EARTH ELECTRODE (PIPE OR PLATE)**

4.5.2 Earth pit center shall be at a minimum distance of 2m from nearest building, unless otherwise advised. The minimum 3m distances shall be maintained between centers of 2 earth pits.

4.5.3 Earth bus, Earthing Lead and Earth Wire/Strip

4.5.3.1 All electrical equipment is to be doubly earthed by connecting two earth strip/wire conductors from the frame of the equipment to a earthing pit/main earthing ring. The earthing ring will be connected via links to several; earth electrodes. The cable armored will be earthed through the cable glands. Conductor size for connection to various equipment shall be as specified in the drawing as instructed by the Engineer-in-charge. However, the length of the branch leads from equipment to earthing grid/ring shall not be more than 10 to 15. Meters.

4.5.3.2 All hardware for earthing installation shall be hot deep galvanised. Spring washers shall be used for all earthing connections of equipments having vibrations.

4.5.3.3. Size of earthing lead/wire shall be as specified below/or as given in schedule of quantities.

Control switches	-G.I. wire 14
Motor upto 10HP	-G.I. wire 8 SWG
Motor above 10HP upto 25 HP	-G.I. strip 25 X 3mm
Motor above 25 HP	-G.I. strip 25 X 6mm
Switch Board	-G.I. strip 25 X 6mm
Power control center/	
LT panel of sub-station	-G.I. strip 40 X 6mm

When earthing wire is to be drawn under floor/in underground, aluminum wire 10mm dia. With PVC insulation shall be used.

However, while deciding type & size of earth lead, the resistance between the earthing system and the general mass of the earth shall be as per IS code of practice. The earth loop impedance to any point in the Electrical system shall not be in excess of 1.0 ohm in order to ensure satisfactory operation of protective devices.

4.5.3.4 G.I. wire/aluminum wire shall be connected to the equipment by providing crimping type socket/lug.

4.5.3.5 Wherever earthing strip to be provided in cable tray, it shall be suitably clamped on cable tray and electrically bonded to the cable tray at regular interval.

4.5.3.6 Excavating & refilling of earth, necessary for laying underground earth bus loops shall be responsibility of the Contractor.

4.5.3.7 Wherever earth leads/strips/wires are laid in cable trenches; these shall be firmly and suitably cleated to the walls/supporting steel structures on which cable is clamped.

4.6 Statutory approvals:

The contractor shall arrange, at his own cost, for inspection of the works and approval of cable layout & schematic drawings from the concerned electrical inspector with necessary test certificates & completion certificates. Contractor without any extra cost shall carry out any modification suggested by the electrical inspector. Omfed shall reimburse statutory fees if any. The approved drawings shall be submitted by the contractor to Omfed, before final payment is released.

ANNEXURE-IV**INDIAN STANDARDS TO BE FOLLOWED FOR ELECTRICAL ERECTION**

- | | |
|---|---------------------------|
| 1. PVC insulated cables (light duty) for working Voltage upto 1100 volts | - 694-1977
Part I & II |
| 2. PVC insulated cables (heavy duty) for Voltage upto 1100 volts | - 1554-1976
Part I |
| 3. -Do- for voltage 3.3Kv to 11KV | - 1554-1976
Part-II |
| 4. Specification for polyethylene insulated PVC Sheathed heavy-duty electric cables, voltage Not exceeding 11000V | - 5959-1970
Part-I |
| 5. -Do- for voltage 3.3 KV to 11KV | - 5959-1970
Part-II |
| 6. Guide for marking insulated conductors | - 5578-1970 |
| 7. Code of practice and installation and Maintenance of paper insulated power Cables | - 1255-1967 |
| 8. Code of practice for earthing | - 3043-1966 |
| 9. Guide for safety procedures and practices in electrical works | - 5216-1969 |
| 10. Code of practice for installation and maintenance of AC induction motor starters | - 5214-1969 |
| 11. Code of practice for installation and maintenance of induction motors | - 900-1965 |
| 12. Code of practice for installation and maintenance of switchgears | - 372-1975 |
| 13. Code of practice for installation and maintenance of transformers | - 1886-1967 |
| 14. Code of practice for electrical wiring installation, voltage not exceeding 650 V | - 732-1963 |
| 15. Code of practice for electrical wiring installation(system voltage exceeding 650 V) | - 2274-1963 |
| 16. Guide for testing three-phase induction motor | - 4029-1967 |

ANNEXURE-V**RECOMMENDED CABLES SIZES FOR INDUSTRIAL WIRING****Aluminum conductor cable size -mm.sq.****Rotor resistance starter****Star-Delta starter**

3phase,415V Motor HP	Supply Side	Motor Side (2- cables)	Supply Side	Motor Side (2- cables)
Upto 7.5	4	4	4	4
10	6	6	6	4
15	10	10	10	4
20	16	16	16	6
25	25	25	25	10
30	25	25	25	10
40	35	35	35	16
50	50	50	50	25
60	70	70	70	35
75	95	95	95	50
100	120	120	120	70
125	150	150	150	95
150	225	225	225	120
180	300	300	300	150
215	300	300	300	185

Note: For D.O.L. Starter up to 7.5 HP motor 4 sq. mm. cable should be used.

SECTION - V

SPECIFICATION

TECHNICAL SPECIFICATION OF ELECTRICAL SUBSTATION AND 11 KV OVERHAED LINE AS PER SCHEDULE.

INTRODUCTION:

It is proposed to install a 11 KV / 433 V, 500 KVA Electrical sub-station to receive power from WESCO Utility and distribute the same to Bhawanipatna Dairy Plant .The substation is to be executed on turnkey basis covering design, supply, installation & commissioning and training of personel. Foundation, earthing and other related civil works shall be provided by the contractor.

Bidder shall be responsible for designing and developing the conceptual layout etc. to ensure that the system is installed with minimum investment and least operating cost to meet the entire quality standard as well as to fulfill the design data and technical specification specified in the bidding document.

The system shall be designed supplied and executed in accordance with prevailing and applicable:

- Bureau of Indian Standard
- Indian Electricity Rules
- Indian Factory Acts
- State Statutory Requirement.

And any other applicable Indian Act. Wherever Indian Standards are not available/applicable, the bidder shall follow International Standards mentioned above, DIN, British or American Standards shall be used.

The Bidders shall be responsible for arranging approval from various Central and State Statutory Authority on behalf of the purchaser / Owner at their cost. How ever, the statutory fees shall be reimbursements on production of receipt.

The technical specification for supply and of the sub station has been specified in brief. How ever, the bidder shall provided details technical specification with technical litreture of items offered.

DESIGN DATA

DESIGN DATA FOR TRANSFORMER.

No Load Loss at 100% rated voltage	: Watts
Full Load loss	: Watts
Efficiency	: 99 %
Type & material of winding	: Cooper double wound
Type of Cooling	: Natural , Oil type
Quantity of Cooling Oil for each transformer	: <u>700</u> Ltrs.
Impedance at rated current & frequency at 75° c	: 5%

POWER SUPPLY:

Incoming from WESCO	: 11 KV +/- , 50 Hz, 3- phase, 3 wire earth system.
Incoming from D.G Sets	: 415, 50 Hz, 3 Phase, 4 wire, earth
Motive power project	: 433, 50Hz, 3 phases, 4 wire, Earth
Lighting power for Project	: 433 V, 50 Hz, 3 phases, 4 wire, Earth

IMPORTANT EQUIPMENT OF SYSTEM:

Transformer (01 No)	Type	: Out door, copper wound, core type
Capacity		: 500 KVA
Voltage		: 11 KV / 433 V
Fault Level		: HT 20KA
Bushings		: HT – 3 LT – 4
LT Neutral Earth		: Solid Earthing
Cooling		: oil Natural Air Natural cooling (ONAN)

Distribution Transformer : Manufactured as per IS : 2026 – 1977 complete with fittings,accessories,first filling of oil ,off Cuircuit Tap Switch ranging from +2.5 % to +7.5 % in step of each and LT side Cable end box.

EARTHING:Earthing grid arounds the substation for body earthing of substation equipment & neutral earthing of transformer.

LIGHTING ARRESTOR: 2 Set for Substation.

I) Earthing grid around the sub station for body earthing of substation equipment and neutral earthing of transformer. All earth pit should be as per applicable BIS and IE rules.

This should also include the required size of earth strip.

II) 1 Set of lightening arrestor for the sub station.

MOTOR CONTROL CENTRE

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 throughout 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 75 mm and that between phase to neutral/ earth shall be 75 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.

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 ready
 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.

MAIN L.T. PANEL

INCOMING FEEDER L T PANNEL

01) One no 1200 Amp.3ph + NEUTRAL ACB with breaking capacity of 50 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 400/5 A.
- (iii) One no. Ammeter and scale range of (0-1200) Amp.
- (iv) One no. Neutral link.
- (v) One no. 'ON' indicating lamp.
- (vi) One set of Aluminum bus bar of (4 x 100 mm x 5 mm x 0.8) mm 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, 1000A 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 630 Amp, MCCB for Old Dairy LT panel equipped with -

- (i) One no. Magnetic short circuit release
- (ii) One set of 'ON' indicating lamps.
- (iii) Three nos CTs of ratio (630/5) Amp for metering.

(02) One no. Outgoing feeder of 4-Pole 630Amp, 415V a.c. MCCB for Ice Cream Plant Panel

- (i) One no. Magnetic short circuit release
- (ii) One set of 'ON' indicating lamps.
- (iii) Three nos CTs of ratio (630/5) Amp for metering.

(03) One no. Outgoing feeder of 4-Pole 100Amp, 415V a.c. MCCB for Boiler.

- (i) One no. Magnetic short circuit release
- (ii) One set of 'ON' indicating lamps.
- (iii) Three nos CTs of ratio (100/5) Amp for metering.

(04) One no. Outgoing feeder of 100Amp, 4-Pole MCCB for Lighting of Ice cream plant.

- (i) One no. Magnetic short circuit release
- (ii) One set of 'ON' indicating lamps.
- (iii) Three nos CTs of ratio (100/5) Amp for metering.

(05) One no. Outgoing feeder of 4-Pole 63 Amp, 415V a.c. MCCB for Air Compressor.

- (i) One no. Magnetic short circuit release
- (ii) One set of 'ON' indicating lamps.
- (iv) Three nos CTs of ratio (63/5) Amp for metering.

(06) One no. Outgoing feeder of 4-Pole 63Amp, 415V a.c. MCCB for Air Compressor.

- (i) One no. Magnetic short circuit release
- (ii) One set of 'ON' indicating lamps.
- (iii) Three nos CTs of ratio (63 /5) Amp for metering.

(07) One no. Outgoing feeder of 4-Pole 100Amp, 415V a.c. MCCB Spare.

- (i) One no. Magnetic short circuit release
- (ii) One set of 'ON' indicating lamps.
- (iii) Three nos CTs of ratio (100/5) Amp for metering.

AIR COMPRESSOR

FUNCTIONAL REQUIREMENTS -:

Filtered and dry compressed air shall be used for pneumatic control system of milk pasteurizer, curd pasteurizer, cup filling and sealing machine, CIP etc.

Capacity: 175 PSI at a maximum working pressure of 12kg/cm^2 .

DESIGN REQUIREMENTS& SCOPE OF SUPPLY -:

Maximum working pressure - 12kg/cm^2

Discharge – 175 PSI

2 stage 3 cylinder

3 stage safety valve

15 HP / 415 V / 3 phase TEFC Squirrel cage Induction motor

Automatic star-delta starter

Inter cooler

2 stage after cooler

Auto cut / start press switch

Pressure gauge shut -off valve, extended drain valve

Double side belt guard for safety (IP-55)

Solenoid valve activated delivery unloader

- The Air Compressor should be mounted over 500 ltr air receiver on ready to start mode
- The Air Compressor should be provided with air drier, filter, FRL unit, drain valve, 3 phase AC induction motor, star – delta starter of inline capacity.

SCHEDULE OF QUANTITY

PART A

SL. NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
PART I					
1	Supply 11/0.4 KV 500 KVA transformer as per the specification	No	1		
2	Supply and fixing of LT Feeder Panel Board consisting of 1200 amp MCCB WITH KIT KAT incoming copper bus bar with 1200 amp size, volt meter ,ampere meter ,CT ,selector switch, RYB indicator ,control fuse, powder coated and double door both side openable.	No	1		
3	Two way type changeover switch of suitable capacity.	No	1		
4	3 phase 11 KV line DP with AB switch on 9 mtr x 150 x 150 mm RS Joist pole with double disc arrangement	No	1		
5	Boundry wall as per WESCO Norms	No	1		
6	Plinth	No	1		
7	11 KV AB switch 3 pole	Set	2		
8	11 KV HG fuse 3 pole	Set	2		
9	11KV lighting arrestor	No	6		
10	Erection Charges for part A	Lot	1		
SUB TOTAL I					

SL. NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
PART II					
1	11 KV C.T OF ratio 30/5 amp, resin cast for cubicle meter unit	No.	3		
2	3 CORE 11 KV 70SQMM XLPE CABLE	Mtr.	200		
3	11 KV 70 SQMM JOINTING KIT (OUT DOOR TYPE)	No	2		
4	11 KV 70 SQMM JOINTING KIT (IN DOOR TYPE)	No	2		
5	INSTALLATION OF END JOINT	No	4		
6	EARTHING FOR CUBICLE AND SUBSTATION	No	8		
7	DISMENTLING OF 150KVA	No	2		
8	DISMENTLING COST OF 15/5 AMP C.T	L.S	L.S		
9	INSTALLATION OF METER UNIT	No	1		
10	Ereciton Charges for part B	Lot	1		
11	INSPECTION OF FOUR POLE& SUBMISSION OF INSPECTION REPORT.	L.S	L.S		
12	INSPECTION OF D.G SET, LT PANEL AND ALL MOTORS OF EXISTING PLANT AND ELECTRICAL INSTALLATION / MOTORS OF ICE CREAM PLANT & SUBMISSION OF INSPECTION REPORT.	L.S	L.S		
TOTAL II					

SL. NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
PART III					
1	MAIN LT PANE AS PER OUR SPECIFICATION. BIDDER SHOULD PROVIDE DETAIL DRAWING WITH TENDER	No.	1		
2	3 .5 X 630 SQMM. ALLUMINUM ARMOURED CABLE.	Mtr	200		
3	3.5 X 300 SQMM. ALLUMINUM ARMOURED CABLE	Mtr	200		
4	EARTHING FOR PANEL BOARD	No	2		
5	25 x 5 mm G.I FLAT	Mtr	40		
6	Ereciton Charges for part C	Lot	1		
TOTAL III					

PART B

SL. NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
PART D					
1.	AIR COMPRESSOR (15 HP)	Nos.	06		
TOTAL B					

N.B: The offered priced should be uniform for all the site.

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,
751007, ORISSA**

BHUBANESWAR-

Description of works :

- A. SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND TRIAL RUN OF 500 KVA SUBSTATIONS, CABLE AND MAIN LT PANEL AT BHAWANIPATNA DAIRY, DIST – KALAHANDI.**
- B. SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND TRIAL RUN OF AIR COMPRESSOR AT BHAWANIPATNA AND SAMBALPUR DAIRY.**

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 thereceipt 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

Condition of Contract

	Clause No.	
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		
Receipt of Goods /completion of work is made.		30 days
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	value of anticipated sales
	Be executed in respective	for next financial year in
	Currency	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.

Schedule –II

CAPABILITY STATEMENT OF PERSONNEL, EQUIPMENT, PLANT AND LAST PERFORMANCE

1. **Name and address of bidder:**

Phone:

2. Classifications (1) Manufacturer

Circle what is (2) authorised agent

Applicable (3) Dealer

(4) Others, please specify

3. Plant: a) Location

b) Description, type & size of building

c) Is property on lease or free hold? If on lease indicate date of expiry in each case.

4. Type of equipment manufactured and supplied during last 2 years.

Name of Size	Capacity/ manufactured	Nos. supplies are	Projects to which orders	No. Of
Equipt.			Made	on hand

5. Types of equipments supplied during last 2 years other than those covered under 4 above.

Name of. manufacturer	Capacity, supplied in	Name of. supplied	Total Nos.Projects to which on	No.of	Size
Equipt.& Model. India	& Country are made	of in	supplies	Hand	Origin

6. Plant Facilities: sq. Meter Remark

a) Space available for manufacturer _____

b) Space available for storage _____

c) Space available for inspection
Items offered _____

d) Space available for storage items offered _____

e) Are buildings fire resistant? Yes/No

f) Are premises approved by municipal Fire Department?

g) Are buildings under municipal fire protection? _____

h) Are power and fuel supply adequate to meet

Production requirements? _____

i) Are adequate transport facilities available? _____

j) Are safety measures adequate for performance
of proposed contract? _____

k) Are adequate material handling equipment available?

7. Details of testing facilities available:

a) List testing equipment available

b) Give details of tests, which can be carried out on items offered.

c) Details of testing organizations available

8. Personnel/Organization:

Give organization chart for following, indicating clearly the no. of employees at various levels:

1. Production

2. Marketing

3. Service

4. Spare parts

5. Administrative

9. Nearest service center to buyer:

Location _____ Phone No. _____

10. Details of Organisation At ServiceCenter

a) No. of skilled employees _____

b) No. of unskilled employees _____

c) No. of engineering employees _____

d) No. of administrative employees _____

e) List of special repair/workshop _____

Facilities available

f) The storage space available for

Spare parts _____ Sqm

g) Value of minimum stock of shares

available at all the service centers

in respective currencies _____

h) List of the models/types by number of equipment serviced by the center in the last 2 years:

11. Names of two buyers to whom similar equipment are supplied in the past and to whom reference may be made by the OMFED regarding the bidder's technical and delivery ability:

1). _____

2) _____

12. List of components usually subcontracted _____

13. Schedules for furnishing technical data and certified drawings after receipt of orders.

14. Workload as percentage of total capacity for the current and forthcoming financial year on quarterly basis. _____

15. Number of weeks required to prepare a bid proposal _____

SECTION –IX

Form of Agreement On Non-Judicial Stamp paper of Rs.60/-

THIS AGREEMENT is made and executed on the day of _____
20_____

Between the ORISSA STATE CO-OPERATIVE MILK FEDERATION LTD., a body corporate under the ORISSA STATE CO-OPERATIVE MILK PRODUCERS' FEDERATION LTD. ACT 1987(37 of 1987) and having its registered office at Anand-388001 (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.

*** Thebidder 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.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 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 _____

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 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 90 DAYS 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 EXPLANATION TO BIDDERS.

THE END.