



**ODISHA POWER TRANSMISSION CORPORATION LTD**  
**OFFICE OF THE CHIEF GENERAL MANAGER,**  
**CENTRAL PROCUREMENT CELL,**  
**JANPATH, BHUBANESWAR - 751022**  
**NO. Sr.GM.-CPC -E-TENDER- ISOLATOR- 45/2016-17**  
**FOR PROCUREMENT OF FOLLOWING ISOLATORS**

| Lot | Sl. No. | ITEM DESCRIPTION                   | 2016-17 | 2017-18 | Total |
|-----|---------|------------------------------------|---------|---------|-------|
| I   | i       | 400KV HCB with double E/S, 2000A   | 3       | 3       | 6     |
| II  | i       | 132KV SI W/O E/S, 2000A            | 0       | 6       | 6     |
|     | ii      | 132KV DI with E/S, 2000A           | 0       | 7       | 7     |
| III | i       | 33KV SI W/O E/S, 2000A             | 0       | 6       | 6     |
|     | ii      | 33 kV Beam Mounted isolator, 2000A | 6       | 4       | 10    |

**Request for online tender documents – From dt- 11 .02.2017 (10.00 Hrs)**  
**to dt- 08 .03.2017 (13.00 Hrs)**

**Last date of submission of online tender – up to dt-09.03.2017(13.00 Hrs)**

**Date of opening of Tender - 10.03.2017(15.00 Hrs)**

**ODISHA POWER TRANSMISSION CORPORATION LTD.**  
**REGD. OFFICE: JANPATH, BHUBANESWAR – 751 022,**  
**ODISHA**

**e-TENDER-CPC- ISOLATOR- 45/2016-17**

For and on behalf of ODISHA POWER TRANSMISSION CORPORATION LTD, Sr.G.M. [C.P.C.] invites Bids from reputed manufacturers in two part bidding system for supply of 400KV HCB,132KV DBCR & 33KV DBCR Isolators. The interested bidders would be required to enroll themselves on the Bid portal [www.tenderwizard.com/OPTCL](http://www.tenderwizard.com/OPTCL). Complete set of bidding documents are available at [www.tenderwizard.com/OPTCL](http://www.tenderwizard.com/OPTCL) from 11.02.2017 at 10.00 A.M to 08.03.2016 at 13.00 P.M.. Interested manufacturers may visit OPTCL's official web site <http://www.optcl.co.in> and [www.tenderwizard.com/OPTCL](http://www.tenderwizard.com/OPTCL) for detail specification.

**N.B: All subsequent addendum / corrigendum to the Bid shall be hosted in the OPTCL's official website <http://www.optcl.co.in>, [www.tenderwizard.com/OPTCL](http://www.tenderwizard.com/OPTCL) only.**

**SENIOR GENERAL MANAGER [C.P.C.]**

**NOTICE INVITING BID**  
**ODISHA POWER TRANSMISSION CORPORATION LTD.,**  
**REGD. OFFICE: JANPATH, Bhubaneswar.**  
**e-TENDER- CPC-ISOLATOR- 45 /2016-17.**

For and on behalf of the ODISHA POWER TRANSMISSION CORPORATION LTD., the undersigned invites bids under two-part bidding system in e- Biding mode only as per the following details.

| Lot | Sl. No. | ITEM DESCRIPTION                    | Total | Total Est. Cost (in Rs.) in lakhs | EMD in Rupees | Cost of Bid Spec. document (in Rs.) | Tender Processing fee (in INR) | Last date of receipt & opening of Bid                        |
|-----|---------|-------------------------------------|-------|-----------------------------------|---------------|-------------------------------------|--------------------------------|--|
| I   | i       | 400KV HCB SI with double E/S, 2000A | 6     | 66.000595                         | 66001         | 10000/ + 5% VAT = 10500             | 5750                           | up to dt-09.03.2017(13.00 Hrs)<br>& on 10.03.2017(15.00 Hrs) |
| II  | i       | 132KV SI W/O E/S, 2000A             | 6     | 14.83212                          | 48121         |                                     |                                |  |
|     | ii      | 132KV DI with E/S, 2000A            | 7     | 33.28927                          |               |                                     |                                |  |
| III | i       | 33KV SI W/O E/S, 2000A              | 6     | 6.07206                           | 16213         |                                     |                                |  |
|     | ii      | 33 kV Beam Mounted isolator, 2000A  | 10    | 10.1414                           |               |                                     |                                |  |

The bidders can view the Bid documents from website free of cost.

The bidders who want to submit bid shall have to pay **Rs. 10,500/- (Rupees Ten thousand five hundred only)**- non refundable including VAT @ 5%) towards the Bid cost, in the form of Demand draft/Cash only, drawn in favour of the D.D.O Head qrs, OPTCL, Bhubaneswar.

The bidders shall have to pay nonrefundable amount of **Rs. 5750/- (Rupees Five thousand seven hundred & fifty only)** towards the Bid processing fee to K.S.E.D.C.Ltd, in e-payment mode. The e-payment of above amount is to be made to enable the bidder to download the bid proposal sheets and bid document in electronic mode.

The bidders shall scan the Demand Draft/Pay order/ Bank guarantee, towards EMD/ notarised hard copy of valid registration as local MSE(if any)based in Odisha and upload the same in the prescribed form in .gif or .jpg format in addition to sending the original as stated above on or before the date of submission of Bid.

The prospective bidders are advised to register their user ID, Password, company ID from website [www.tenderwizard.com/OPTCL](http://www.tenderwizard.com/OPTCL) by clicking on hyper link "Register Me".

Any clarifications regarding the scope of work and technical features of the project can be had from the undersigned during office hours.

**Minimum qualification criteria of bidders: AS STIPULATED IN SECTION-II, PART-I (G.T.C.C) OF THE BID SPECIFICATION.**

**SENIOR GENERAL MANAGER(CPC)**  
**ODISHA POWER TRANSMISSION CORPORATION LTD.**  
**OFFICE OF THE SR. GENERAL MANAGER**  
***CENTRAL PROCUREMENT CELL***  
**JANAPATH, BHUBANESWAR - 751022**  
**FAX NO.:0674 -2542964 ,**  
**TELEPHONE NO.:0674 -2541801**

**TENDER SPECIFICATION NO. Sr.GM.-CPC - ISOLATOR- 45/2016-17**  
**CONTAINING**

**PART - I**

- SECTION - I : INSTRUCTION TO BIDDERS**
- SECTION - II : GENERAL TERMS AND CONDITIONS OF  
CONTRACT ( G.T.C.C.) (COMMERCIAL)**
- SECTION - III : LIST OF ANNEXURES (COMMERCIAL)**
- SECTION - IV : TECHNICAL SPECIFICATION**

- PART - II : PRICE BID.**

**PART-I**  
**SECTION – I.**  
**INSTRUCTIONS TO BIDDERS**

| <b><u>Clause.</u></b> | <b><u>Title.</u></b>   | <b><u>Page.</u></b> |
|-----------------------|--|---------------------|
| 1.                    | Submission of Bids.  | 06                  |
| 2.                    | Division of Specification.   | 07                  |
| 3.                    | Bids shall be in two parts.  | 08                  |
| 4.                    | Opening of Bids .  | 08                  |
| 5.                    | Purchaser’s right regarding alteration in<br>Quantities, Bided.  | 09                  |
| 6.                    | Procedure and opening time of Bids.  | 09                  |
| 7.                    | Bidder’s liberty to deviate from specification.  | 09                  |
| 8.                    | Eligibility for submission of bids.  | 09                  |
| 9.                    | Purchaser’s right to accept/reject bids.   | 09                  |
| 10.                   | Mode of submission of Bids.  | 09                  |
| 11.                   | Earnest money deposit.   | 10                  |
| 12.                   | Validity of the bids.  | 11                  |
| 13.                   | Price.   | 11                  |
| 14.                   | Revision of Bid Price by Bidders.  | 11                  |
| 15.                   | Bidders to be fully conversant with<br>the clauses of the Specification.   | 11                  |
| 16.                   | Documents to accompany Bids.   | 11                  |
| 17.                   | Documents/Papers to Accompany PART – II Bid.   | 12                  |
| 18.                   | Conditional Offer.   | 12                  |
| 19.                   | General.   | 12                  |
| 20.                   | Expenses in respect of OPTCL’s representative<br>for witnessing the inspection & testing of the offered<br>equipment/materials at the inspection and testing site. | 13- 14              |
| 21.                   | Litigation/Arbitration   | 15                  |

## COMMERCIAL SPECIFICATION.

### PART-I

#### SECTION-I

#### INSTRUCTIONS TO BIDDER

##### 1. Submission of Bids: -

The bidder shall submit the bid in Electronic Mode only i.e. [www.tenderwizard.com/OPTCL](http://www.tenderwizard.com/OPTCL). The bidder must ensure that the bids are received in the specified website of the OPTCL by the date and time indicated in the Bid notice. Bids submitted by telex/telegram will not be accepted. No request from any bidder to the OPTCL to collect the Bids in physical form will be entertained by the OPTCL.

The OPTCL reserves the right to reject any bid, which is not deposited according to the instruction, stipulated above. The participants to the Bid should be registered under ODISHA Sales Tax, Act, VAT Act / Central sales Tax Act.

1. For all the users it is mandatory to procure the Digital Signatures.
2. Contractors / Vendors / Bidders / Suppliers are requested to follow the below steps for **Registration**:
  - a. Click “Register”, fill the online registration form.
  - b. Pay the amount of Rs. 2300/- through e payment mode only.
  - c. Send the acknowledgment copy for verification.
  - d. As soon as the verification is being done the e-Bid user id will be enabled.
3. After viewing Bid Notification, if bidder intends to participate in Bid, he has to use his e-Bidding User Id and Password which has been received after registration and acquisition of DSCs.
4. If any Bidder wants to participate in the Bid he will have to follow the instructions given below:
  - a. Insert the PKI (which consist of your Digital Signature Certificate) in your System.  
(Note: Make sure that necessary software of PKI be installed in your system).
  - b. Click / Double Click to open the Microsoft Internet Explorer (This icon will be located on the Desktop of the computer).
  - c. Go to Start > Programs > Internet Explorer.
  - d. Type [www.tenderwizard.com/OPTCL](http://www.tenderwizard.com/OPTCL) in the address bar, to access the Login Screen.
  - e. Enter e-Bid User Id and Password, click on “Go”.

- f. Click on “Click here to login” for selecting the Digital Signature Certificate.
  - g. Select the Certificate and enter DSC Password.
  - h. Re-enter the e-Procurement User Id Password
5. To make an request for Bid Document Bidders will have to follow below mentioned steps.
    - Click “Un Applied” to view / apply for new Bids.
    - Click on Request icon for online request.
  6. After making the request Bidders will receive the Bid Documents which can be checked and downloaded by following the below steps:
    - Click to view the Bid documents which are received by the user.
    - Bid document screen appears.
    - Click “Click here to download” to download the documents.
  7. After completing all the formalities Bidders will have to submit the Bid and they must take care of following instructions.
    - Prior to submission, verify whether all the required documents have been attached and uploaded to the particular Bid or not.
    - Note down / take a print of bid control number once it displayed on the screen
  8. Bid Opening event can be viewed online.
  9. Competitors bid sheets are available in the website for all.
  10. **For any e-Bidding assistant contact help desk number mentioned below.**
    - Bangalore – 080- 40482000.

The participants to the Bid should be registered under ODISHA Sales Tax, Act,VAT Act/Central sales Tax Act.

## **2. Division of Specification.**

The specification is mainly divided into two parts viz. Part-I & Part-II.

### **Part-I Consists of**

- |                   |   |
|-------------------|---|
| [i] Section-I     | Instruction to Bidders.                 |
| [ii] Section-II   | General Terms & conditions of contract. |
| [iii] Section-III | Schedules and forms etc.                |
| [iv] Section-IV   | Technical Specification.                |

### **Part-II Consists of**

- [i] Abstract of price components as per Annexure-IV
- [ii] Schedule of prices as per Annexure-V

**3. Bids shall be in Two Parts.**

The Bidders are required to submit the Bids in two parts viz. Part-I ( Techno commercial) & Part-II (Price bid).

The Bidders are required to submit the Bids in two parts Part-I, technical and commercial and Part-II “Price Bid”.

**4. Opening of Bids.**

[a] The part-I shall be opened on the date and time fixed by the OPTCL for opening of bids in Electronic mode in presence of such of the Bidders or their authorized representatives [limited to one person only] on the due date of opening of Bid who opt remain present. After scrutiny of the technical particulars and other commercial terms, clarifications, if required, shall be sought for from the bidders. The Bidders shall be allowed 15 days’ time for such activity.

[b] On receipt of technical clarification, the bids shall be reviewed, evaluated and those not in conformity with the technical Specification / qualifying experience, shall be rejected. If any of the technical proposal requires modification to make them comparable, discussion will be held with the participating bidders.

All the responsive bidders shall be given opportunity to submit the revised technical and revised price proposals as a follow up to the clarification (modification if any) on the technical proposals. The qualified bidders shall be given opportunity to submit revised price proposals within 15 days from the date of such discussion or within time frame mutually agreed, whichever is earlier.

[c] When the revised price proposals are received, the original price proposals will be returned to the bidders unopened along with their original technical proposals. Only the revised technical and price proposals will be considered for bid evaluation. The price bids [Part-II] of such of the Bidders, whose Bids have been found to be technically and commercially acceptable, including those supplementary revised price bids, submitted subsequently, shall be opened in the presence of the bidder’s representative on a date and time which will be intimated to all technically and commercially acceptable Bidders.

[d] The bidders are required to furnish sufficient information to the Purchaser to establish their qualification, capacity to manufacture and/or supply the materials/perform the work. Such information shall include details of bidder’s experience, its financial, managerial and technical capabilities.

[e] The bidders are also required to furnish details of availability of appropriate technical staff and capability to perform after sales services. The above information shall be considered during scrutiny and evaluation of bids and any



bid which does not satisfactorily meet these requirements, shall not be considered for price bid evaluation.

- [f] The price bids of the technically and otherwise acceptable bids shall only be evaluated as per the norms applicable in terms of this Specification.

**5. Purchaser's Right Regarding Alteration of Quantities Bided.**

The Purchaser may alter the quantities of materials/equipment at the time of placing orders. Initially the purchaser may place orders for lesser quantity with full freedom to place extension orders for further quantity under similar terms and conditions of the original orders. Orders may also be split among more than one Bidder for any particular item, if considered necessary in the interest of the Purchaser to get the goods/equipment earlier.

**6. Procedure and opening time of Bids.**

Bids will be opened in the office of the Senior General Manager [C.P.C.] on the specified date and time in presence of the Bidders or their authorized representatives [limited to one person only] in case of each bidder who may desire to be present, at the time of opening the bids.

**7. Bidder's Liberty to deviate from Specification.**

The Bidder may deviate from the specification while quoting, if in his opinion, such deviation is in line with the manufacturer's standard practice and conducive to a better and more economical offer. All such deviations should however be clearly indicated giving full justifications for such deviation. [Read with Clause-9, Section-II of the Specification].

**8. Eligibility for submission of bids.**

Only those manufacturers who have deposited the cost of Bid specification are eligible to participate in the Bid. They should submit the money receipt as a proof of such payment. The local Micro and small Enterprises (MSEs) based in Odisha registered with respective DICs, Khadi, Village, Cottage & Handicrafts Industries, OSIC and NSIC can participate without payment of the cost of Bid specification

**9. Purchaser's right to accept/reject bids:**

The purchaser reserves the right to reject any or all the Bids without assigning any reasons what so ever if it is in the interest of OPTCL, under the existing circumstances. [Read with clause-10, Section-II of the specification].

**10. Mode of submission of Bids.**

[A] Bids shall be submitted in electronic mode only. ([www.Tenderwizard.com/OPTCL](http://www.Tenderwizard.com/OPTCL))

[B] **Telegraphic or FAX Bids** shall not be accepted under any circumstances.

**11. Earnest money deposit:**

The Bid shall be accompanied by Earnest Money deposit of value specified in the notice inviting Bids against each lot / bid. Bids without the required EMD as indicated at **Annexure-VIII** will be rejected outrightly.

The local Micro and small Enterprises (MSEs) based in Odisha registered with respective DICs, Khadi, Village, Cottage & Handicrafts Industries, OSIC and NSIC can participate by submitting Earnest Money Deposit @ fifty percent of the amount indicated in the Notice Inviting Bid.

The earnest money deposit shall be furnished in one of the following forms subject to the conditions mentioned below:

- (a) **Cash:-** Payable to drawing & disbursing Officer, OPTCL (Hd.qrs. Office), Bhubaneswar - 751022
- (b) **Bank Draft:** -To be drawn in favour of Drawing & Disbursing Officer, OPTCL [H.Qrs.Office], Bhubaneswar-751 022.
- (c) Bank Guarantee from any Nationalized/Scheduled Bank strictly as per enclosed proforma vide **Annexure-VI** to be executed on non-judicial stamp paper worth Rs.29.00 or as applicable, as per prevailing laws in force and also to be accompanied by the confirmation letter of the issuing Bank Branch.
- (d) National saving certificate, duly pledged in favour of Senior General Manager [Central Procurement Cell] OPTCL {H.Qrs.Office}, Bhubaneswar-751 022.

**NOTE:**

- (i). The validity of the EMD in the form of Bank Guarantee shall be at least for 240 days from the date of opening of Bid failing which the Bid will be liable for rejection.
- (ii) No interest shall be paid on the Earnest Money Deposit.
- (iii) E.M.D. in shape of cash may be submitted up to Rs. 25,000/- (Rupees Twenty-five) Thousand) only. Above Rs. 25,000/- (Rupees Twenty-five thousand) the Earnest Money Deposit shall be furnished in any one of the forms indicated above (i.e. Through Bank Draft, Bank Guarantee/ National Savings Certificate).
- (iv) No adjustment towards EMD shall be permitted against any outstanding amount with the **ODISHA POWER TRANSMISSION CORPORATION LTD.**
- (v) The chart showing particulars of EMD to be furnished by Bidders of different categories is placed at **Annexure-VIII.**
- (vi) In the case of un- successful Bidder, the EMD will be refunded after the Bid is decided. In the case of successful Bidder, this will be refunded only after furnishing of security money referred to at clause-19of Section-II.

- (vii) Suits, if any, arising out of this clause shall be filed in a Court of law to which the jurisdiction of High Court of ODISHA extends.
- (vii) EMD will be forfeited if the bidder fails to accept the letter of intent and/or purchase order issued in his favour or to execute the order, placed on them.
- (viii) Bids not accompanied by Earnest Money shall be disqualified.

**12. Validity of the Bids: -**

The Bids should be kept valid for a period of **180** days from the date of opening of the Bid, failing which the Bids will be rejected.

**13. PRICE: -**

Bidders are requested to quote-'FIRM' Price. No deviation from **FIRM PRICE** will be entertained irrespective of deviation clause No.7 of this part of the specification.

**14. Revision of Bid price by Bidders: -**

[a] After opening of Bids and within the validity of period, no reduction or enhancement in price will be entertained. If there is any change in price, the Bid shall stand rejected and the EMD deposited shall be forfeited.

[b] After opening of price bid if the validity period is not sufficient to place purchase order, the bidder may be asked by the purchaser to extend the validity period of the bid under the same terms and condition as per the original Bid.

However, the bidders are free to change any or all conditions including price except delivery period of their bids at their own risk, if they are asked by the purchaser to extend the validity period of the bid prior to opening of price bid.

**15. Bidders to be fully conversant with the clauses of the Specification: -**

Bidders are expected to be fully conversant with the meaning of all the clauses of the specification before submitting their Bids. In case of doubt regarding the meaning of any clause, the Bidder may seek clarification in writing from the Senior General Manager (Central Procurement Cell) OPTCL. This, however, does not entitle the bidder to ask for time beyond due date, fixed for receipt of Bid.

**16. Documents to Accompany Bids.**

Bidders are required to submit bids in the following manner:

**Part-I of the Bid shall Contain the following documents.**

- [i] Declaration Form. [As per Annexure-I]
- [ii] Earnest Money. [As per **Annexure-VIII**]

- [iii] Technical specification and Guaranteed Technical Particulars conforming to the Purchaser's Specification along with drawings, literatures and all other required Annexures, duly filled in.
- [iv] Photostat copies of type test certificates of materials/equipments offered as stipulated in the Technical Specification.
- [v] Abstract of Terms & conditions in prescribed proforma as per **Annexure-II**.
- [vi] General Terms & Conditions of supply offer as per Section-II of the Specification.
- [vii] List of orders executed for similar materials/equipments during preceding 2 (two) years indicating the customer's name, Purchase Order No. & Date, date of supply and date of commissioning etc.
- [viii] Data on past experience **as per Clause-7 of Section-II** of the Specification.
- [ix] Sales tax clearance certificate for the previous year. The permanent account number [PAN] of the firm is required under Income tax Act.
- [x] Audited Balance sheet & profit loss accounts of the bidder, for past (3) three years.
- [xi] Schedule of quantity and delivery in the prescribed Proforma vide Annexure, as appended.
- [xii] List of Orders in hand to be executed.
- [xiii] Deviation schedule.
- [xiv] Notarized hard copy and soft copy of valid registration as local MSE(if any).

**17. Documents/Papers to accompany Part-II Bid.**

- (a) Part – II of the Bid shall consist of the following
  - (i) Abstract of Price Component, as per Annexure-IV
  - (ii) Schedule of prices in the prescribed proforma as per Annexure-V

**18. Conditional Offer:**

Conditional offer shall not be accepted.

**19. General: -**

- (i) In the event of discrepancy or arithmetical error in the schedule of price, the decision of the purchaser shall be final and binding on the Bidder.
- (ii) For evaluation, the price mentioned in words shall be taken if there is any difference in figures and words in the price bid.
- (iii) Notice inviting Bid shall form part of this specification.
- (iv) The price bids of the technically and otherwise acceptable bids shall only be evaluated. The EMD of others, if any, shall be returned to the bidders.
- (v) Bidder can offer any lot or all the lots of the Bid, if there are more than one lots. But the Bid (bid) must be furnished separately for each lot. For each lot, the bidder has to submit PART-I & PART-II of the bids separately.

- (vi) It should be distinctly understood that the part-II of the bid shall contain only details/documents relating to price, as outlined in clause-17 mentioned herein above. Inclusion of any of the documents/information etc. shall render the bid liable for rejection.

**20.0 Expenses in respect of OPTCL's representative for witnessing the inspection & testing of the offered equipment/materials at the inspection and testing site.**

The testing and inspection of the equipment/ materials at manufacturer works are in the scope of work of the Contractor/Supplier.

OPTCL inspecting officer, on receipt of offer for inspection from the contractor/supplier, proceeds to the manufacturer works to witness the Type/Acceptance/Routine test.

**Important:**

It is hereby informed to all the bidders that the relevant clauses of the contract specification, pertaining to inspection and testing of equipment/materials, are hereby supplemented with following additional terms and conditions.

The expenses under the following heads, in respect of OPTCL's representative for witnessing the inspection & testing of the offered equipment/materials at the inspection and testing site, shall be borne by the contractor / supplier.

**a) Hotel Accommodation:**

I. Single room accommodation in 4 star hotel for the OPTCL inspecting officer of the rank of Assistant General Manager (Grade E-6) and above.

II. Single room accommodation in 3 star hotel for the OPTCL inspecting officer of the rank below Assistant General Manager (Grade E-6).

**N.B.:** It is the responsibility of the contractor to arrange the hotel accommodation matching with their inspection and testing schedule, so that the inspecting officer can check-in the hotel one day prior to the date of inspection and check out after the completion of the inspection, subject to availability of the return travel ticket. In case of extended duration of inspection or non-availability of the return travel ticket, Contractor/supplier/manufacturer shall arrange for the extended stay of the inspecting officer in the Hotel accordingly. In case there is no hotel with prescribed standard in and around the place of inspection, the contractor/supplier/manufacturer shall suggest alternative suitable arrangement at

the time of offer for inspection, which is subjected to acceptability of OPTCL inspecting officer.

**b) Journey of the inspecting officer:**

(i) To and fro travel expenditure from the Head Quarters of the inspecting officer to the place of inspection/testing shall be borne by the contractor/supplier/manufacturer. Journey from the Head Quarters of the inspecting officer to the nearest Air Port by train (Ist/IIInd A.C) & A/C Taxi then by Air to the place of inspection/testing or to the nearest place of inspection/testing and then by train (Ist/IIInd A.C) & A/C taxi to the place of inspection/testing shall be arranged by the contractor/supplier/manufacturer.

(ii) For train journey, inspecting officer of the rank Assistant General Manager and above shall be provided with 1st class AC ticket and inspecting officer below the rank of Assistant General Manager shall be provided with 2nd class AC ticket.

(iii) The Air-ticket / train-ticket booking/cancellation is the responsibility of the contractor / supplier.

(iv) Moreover, if during the journey there is an unavoidable necessity for intermediate travel by road/ waterway/sea-route, the contractor/supplier shall provide suitable conveyance to the inspecting officer for travel this stretch of journey or bear the cost towards this. Any such possibilities shall be duly intimated to OPTCL at the time of their offer for inspection.

**c) Local Conveyance:**

At the place of the inspection/testing, for local journey of the inspecting officer between Hotel and inspection/testing site and or any other places, Air-conditioned four wheeler vehicle in good condition shall be provided by the contractor/supplier/manufacturer.

**d) Following points are also to be considered:**

(i) All the above expenses shall be deemed to be included in the bidder's quoted price for that supply item. Bidder shall not be eligible to raise any extra claim in this regard.

(ii) Contractor/supplier/manufacturer may assume that only in 40% of the inspection and testing offer cases, OPTCL inspecting officer, not below the rank of Assistant General Manager will witness the inspection and testing.

(iii) In case of inspection and testing of some critical equipment/materials like Power transformers, OPTCL may depute more than one inspecting officer.

(iv) Contractor/supplier/manufacturer shall judiciously plan the inspection/testing schedule and place of inspection/testing, so that optimum number of

inspection/testing and minimum time shall be required to cover all the equipment/materials of the relevant contract package.

*(v) It shall be the responsibility of the Contractor/Supplier to organize the above tour related matters of OPTCL inspecting officer including the matters related to overseas inspection/testing, if any.*

## **21. Litigation/Arbitration**

**(i)**- Bidder has to furnish detailed information on any litigation or arbitration arising out of contracts completed or under execution by it over the last five years. A consistent history of litigation by or against the bidder may result in rejection of bid.

**(ii)** The bidder should not have any pending litigation or arbitration with OPTCL with regard to any project or related activity. The bidder should certify/declare the same in unequivocal terms by way of an affidavit duly sworn before a magistrate. Bid furnished by the bidder shall not be eligible for consideration if it is not accompanied by the affidavit. Further, the bid/LOA/LOI shall be liable for outright rejection/cancellation at any stage if any information contrary to the affidavit/declaration is detected.

## SECTION – II.

### GENERAL TERMS AND CONDITIONS OF CONTRACT [G.T.C.C.]

| <u>Clause.</u> | <u>Title.</u>   | <u>Page.</u> |
|----------------|---|--------------|
| 1.             | Scope of the contract.  | 17           |
| 2.             | Definition of terms.  | 17           |
| 3.             | Manner of execution.  | 18           |
| 4.             | Inspection and testing.   | 18           |
| 5.             | Training facilities.  | 19           |
| 6.             | Rejection of materials.   | 19           |
| 7.             | Experience of bidders.  | 19           |
| 8.             | Language and measures.  | 20           |
| 9.             | Deviation from Specification.                                       | 20           |
| 10.            | Right to reject/accept any Bid.                                     | 20           |
| 11,            | Supplier to inform himself fully.                                   | 21           |
| 12.            | Patent rights etc.  | 21           |
| 13.            | Delivery.   | 21           |
| 14.            | Despatch Instructions.  | 21           |
| 15.            | Supplier's Default Liability.                                       | 22           |
| 16             | Force Majeure.  | 22           |
| 17.            | Extension of Time.  | 22           |
| 18.            | Guarantee Period.   | 23           |
| 19.            | Bank Guarantee towards Security Deposit<br>Payment and Performance. | 23           |
| 20.            | Import License.   | 24           |
| 21.            | Terms of Payment.   | 24           |
| 22.            | Penalty for Delay in Completion of Contract.                        | 24           |
| 23.            | Insurance.  | 25           |
| 24.            | Payment Due from the Supplier.                                      | 25           |
| 25.            | Sales Tax clearance, Balance Sheet& P/L<br>A/C                      | 25           |
| 26.            | Certificate of exemption from E.D/Sales Tax.                        | 26           |
| 27.            | Supplier's Responsibility.  | 26           |
| 28.            | Validity.   | 26           |
| 29.            | Evaluation.   | 26           |
| 30.            | Minimum qualification criteria of Bidders.                          | 27           |
| 31.            | Jurisdiction of High Court of ODISHA.                               | 27           |
| 32.            | Correspondences.  | 27           |
| 33.            | Official Address of the Parties to the<br>Contract.                 | 28           |
| 34.            | Outright rejection of Bids.   | 28           |
| 35.            | Documents to be treated as confidential.                            | 29           |
| 36.            | Scheme/Projects.  | 29           |



PART-I

SECTION-II

**GENERAL TERMS AND CONDITIONS OF CONTRACT [G.T.C.C.]**

1. **Scope of the contract:**

The scope of the contract shall be to design, manufacture, supply of equipments as per the specification at the consignee's site, and rendering services in accordance with the enclosed technical specification and bill of quantity.

2.0 **Definition of terms:**

For the purpose of this specification and General Terms and Conditions of contract [GTCC], the following words shall have the meanings hereby indicated, except where otherwise described or defined.

2.1 "The Purchaser" shall mean the Senior General Manager[Central Procurement Cell] for and on behalf of ORISSA POWER TRANSMISSION CORPORATION LTD., Bhubaneswar.

2.2 "The Engineer" shall mean the Engineer appointed by the Purchaser for the purpose of this contract.

2.3 "Purchaser's Representative" shall mean any person or persons or consulting firm appointed and remunerated by the Purchaser to supervise, inspect, test and examine workmanship and materials of the equipment to be supplied.

2.4 "The supplier" shall mean the bidder whose bid has been accepted by the purchaser and shall include the bidder's executives, administrators, successors and permitted assignees.

2.5 "Equipment" shall mean and include all machinery, apparatus, materials, and articles to be provided under the contract by the suppliers.

2.6 "Contract Price" shall mean the sum named in or calculated the bid.

2.7 "General Condition" shall mean these General Terms and Conditions of Contract.

2.8 "The Specification" shall mean both the technical as well as commercial parts of the specification annexed to or issued with GTCC and shall include the schedules and drawings, attached thereto as well as all samples and pattern, if any.

2.9 "Month" shall mean "Calendar month".

2.10 "Writing" shall include any manuscript, type written, printed or other statement reproduction in any visible form and whether under seal or under hand.

2.11 "FOR Destination costs" shall mean the cost of equipment and material at the consignee's store/site. The cost is inclusive of Excise duty, Sales tax and other local taxes, packing, forwarding and insurance and freight charges.

- 2.12 The term “Contract document” shall mean and include GTCC, specifications, schedules, drawings, form of Bid, Notice Inviting Bid, covering letter, schedule of prices or the final General Conditions, any special conditions, applicable to the particular contract.
- 2.13 Terms and conditions not herein defined shall have the same meaning as are assigned to them in the Indian Contract Act, failing that in the Orissa General Clauses Act.
3. **Manner of execution:**  
All equipments supplied under the contract shall be manufactured in the manner, set out in the specification or where not set out, to the reasonable satisfaction of the Purchaser’s representative.
4. **Inspection and Testing:**
- [i] The purchaser’s representative shall be entitled at all reasonable times during manufacture to inspect, examine and test at the supplier’s premises, the materials and workmanship of all equipments/materials to be supplied under this contract and if part of the said equipment/material is being manufactured in other premises, the supplier shall obtain for the purchaser’s representative permission to inspect, examine and test as if the equipment/material were being manufactured in the contractor’s premises. Such inspection, examination and testing shall not relieve the supplier from his obligations under the contract.
- [ii] The Supplier shall give to the purchaser adequate time/notice (at least clear 15 days for inside the state suppliers and 20 days for outside the state suppliers) in writing for inspection of materials indicating the place at which the equipment/material is ready for testing and inspection and shall also furnish the shop Routine Test Certificate, Calibration certificates of Testing instruments, calibrated in Govt. approved laboratory with authenticity letter of that laboratory along with the offer for inspection. A packing list along with the offer, indicating the quantity which can be delivered in full truck load/Mini truck load to facilitate issue of dispatch instruction shall also be furnished.
- [iii] Where the contract provides for test at the Premises of the supplier or any of his sub-vendors, the supplier shall provide such assistance, labour, materials, electricity, fuel and instruments, as may be required or as may be reasonably demanded by the Purchaser’s representative to carryout such tests efficiently. The supplier is required to produce shop routine test Certificate, calibration certificates of Testing Instruments before offering their materials/equipment for inspection & testing. The test house/laboratory where tests are to be carried out

must be approved by the Govt. A letter pertaining to Govt. approved laboratory must be furnished to the purchaser along with the offer for inspection.

- [iv] After completion of the tests, the Purchaser's representative shall forward the test results to the Purchaser. If the test results conform to the specific standard and specification, the Purchaser shall approve the test results and communicate the same to the supplier in writing. The supplier shall provide at least five copies of the test certificates to the Purchaser.
- [v] The Purchaser has the right to have the tests carried out at his own cost by an independent agency whenever there is dispute regarding the quality of supply.
- [vi] If the firm fails to present the offered items for inspection/testing as per their inspection call due to any reason(s) during the visit of inspecting officer at the testing site ,the firm shall have to bear all expenses towards repetition of inspection and testing of the total offered quantity or part thereof.

5. **Training facilities.**

The supplier shall provide all possible facilities for training of Purchaser's Technical personnel, when deputed by the Purchaser for acquiring first hand knowledge in assembly of the equipment, its erection, commissioning and for its proper operation & maintenance in service, wherein it is thought necessary by the purchaser.

6. **Rejection of Materials.**

In the event any of the equipments/material supplied by the manufacturer is found defective due to faulty design, bad workmanship, bad materials used or otherwise not in conformity with the requirements of the Specification, the Purchaser shall either reject the equipment/material or ask the supplier in writing to rectify or replace the defective equipment/material free of cost to the purchaser. The Supplier on receipt of such notification shall either rectify or replace the defective equipment/material free of cost to the purchaser within 15 days from the date of issue of such notification by the purchaser. If the supplier fails to do so, the Purchaser may:-

- [a] At its option replace or rectify such defective equipments /materials and recover the extra costs so involved from the supplier plus fifteen percent and/or.
- [b] Terminate the contract for balance work/supplies, with enforcement of penalty Clause as per contract for the un-delivered goods and with forfeiture of Performance Guarantee/ Composite Bankguarantee.
- [c] Acquire the defective equipment/materials at reduced price, considered equitable under the circumstances.

7. **Experience of Bidders:**

The bidders should furnish information regarding experience particularly on the following points:

- [i] Name of the manufacturer:
- [ii] Standing of the firm and experience in manufacture of equipment/material quoted:
- [iii] Description of equipment/material similar to that quoted, supplied and installed during the last two years with the name(s) of the Organisations to whom supplies were made wherein, at least one (1) certificate shall be from a state/central P.S.U.
- [iv] Details as to where installed etc.
- [v] Testing facilities at manufacturer's works.
- [vi] If the manufacturer is having collaboration with another firm [s], details regarding the same.
- [vii] A list of purchase orders of identical material/equipments offered as per technical specification executed during the last two years along with users certificate. User's certificate shall be legible and must indicate, user's name, address, designation, place of use, and satisfactory performance of the equipment/materials for at least two years from the date of commissioning. Wherein at least one (1) certificate shall be from a State/Central or P.S.U. Bids will not be considered if the past manufacturing experience is found to be un-satisfactory or is of less than 2 (two) years on the date of opening of the bid and bids not accompanying user's certificate will be rejected.

8. **Language and measures:**

All documents pertaining to the contract including specifications, schedule, notices, and correspondence, operating and maintenance instructions. Drawings or any other writing shall be written in English language. The metric system of measurement shall be used exclusively in this contract.

9. **Deviation from specification:**

It is in the interest of the Bidders to study the specification, specified in the Bid schedule thoroughly before Bidding so that, if any deviations are made by the bidders, (both commercial and Technical), the same are prominently brought out on a separate sheet under heading "Deviations Commercial" and "Deviations Technical".

A list of deviations shall be enclosed with the Bid. Unless deviations in scope, technical and commercial stipulations are specifically mentioned in the list of deviations, it shall be presumed that the Bidder has accepted all the conditions, stipulated in the Bid specification, notwithstanding any exemptions mentioned therein.

10. **Right to reject/accept any Bid:**

The purchaser reserves the right either to reject or to accept any or all Bids if the situation so warrants in the interest of the purchaser. Orders may also be split up between different Bidders on individual merits of the Bidder. The purchaser has exclusive right to alter the quantities of materials/ equipment at the time of placing final purchase order. After placing of the order, the purchaser may defer the delivery of the materials. It may be clearly understood by the Bidder that the purchaser need not assign any reason for any of the above action [s].

11. **Supplier to inform himself fully:**

The supplier shall examine the instructions to bidders, general conditions of contract, specification and the schedules of quantity and delivery to satisfy himself as to all terms and conditions and circumstances affecting the contract price. He shall quote price [s] according to his own views on these matters and understand that no additional allowances except as otherwise provided there in will be admissible. The purchaser shall not be responsible for any misunderstanding or incorrect information, obtained by the supplier other than the information given to the supplier in writing by the purchaser.

12. **Patent rights Etc.**

The supplier shall indemnify the Purchaser against all claims, actions, suits and proceedings for the infringement of any patent design or copy right protected either in the country of origin or in India by the use of any equipment supplied by the manufacturer. Such indemnity shall also cover any use of the equipment, other than for the purpose indicated by or reasonably to be inferred from the specification.

13. **Delivery:-**

- [a] Time being the essence of the contract; the equipment shall be supplied within the delivery period, specified in the contract. The Purchaser, however, reserves the right to reschedule the delivery and change the destination if required. The delivery period shall be reckoned from the date of placing the Letter of Intent/Purchase order, as may be specified in LOI/Purchase order.
- [b] The desired delivery period shall be as indicated at Annexure-D & E (Quantity & Delivery Schedule) of Section-IV (Technical Specification).

14. **Despatch instructions.**

- I] The equipments/ materials should be securely packed and dispatched directly to the specified site at the supplier's risk by Road Transport only.
- II] **Loading & unloading of Ordered Materials.**

It will be the sole responsibility of the supplier for loading and unloading of materials both at the factory site and at the destination site/store. The Purchaser shall have no responsibility on this account.

15. **Supplier's Default Liability.**

- [i] The Purchaser may, upon written notice of default to the supplier, terminate the contract in circumstances detailed hereunder.
- [a] If in the judgement of the Purchaser, the supplier fails to make delivery of equipment/material within the time specified in the contract or within the period for which if extension has been granted by the Purchaser in writing in response to written request of the supplier.
- [b] If in the judgement of the Purchaser, the supplier fails to comply with any of the provisions of this contract.
- [ii] In the event, Purchaser terminates the contract in whole or in part as provided in Clause-15 (I) of this section, the Purchaser reserves the right to purchase upon such terms and in such a manner as he may deem appropriate in relation to the equipment/material similar to that terminated and the supplier will be liable to the Purchaser for any additional costs for such similar equipment/material and/or for penalty for delay as defined in clause-22 of this section until such reasonable time as may be required for the final supply of equipment.
- [iii] In the event the Purchaser does not terminate the contract as provided in clause 15(I) of this Section, supplier shall be liable to the Purchaser for penalty for delay as set out in Clause-22 of this section until the equipment is accepted. This shall be based only on written request of the supplier and written willingness of the Purchaser.

16. **Force Majeure:**

The supplier shall not be liable for any penalty for delay or for failure to perform the contract for reasons of force majeure such as acts of god, acts of the public enemy, acts of Govt., Fires, floods, epidemics, Quarantine restrictions, strikes, Freight Embargo and provided that the supplier shall within Ten (10) days from the beginning of delay on such account notify the purchaser in writing of the cause of delay. The purchaser shall verify the facts and grant such extension, if facts justify.

17. **Extension of time:-**

If the delivery of equipment/material is delayed due to reasons beyond the control of the supplier, the supplier shall without delay give notice to the purchaser in writing of his claim for an extension of time. The purchaser on receipt of such

notice may or may not agree to extend the contract delivery date as may be reasonable but without prejudice to other terms and conditions of the contract.

18. **Guarantee period: -**

[i] The stores covered by this specification should be guaranteed for satisfactory operation and against defects in design, materials and workmanship for a period of at least 18 [eighteen] months from the last date of delivery or 12 [twelve] months from the date of commissioning whichever is earlier. The above guarantee certificate shall be furnished in triplicate to the purchaser for his approval. Any defect noticed during this period should be rectified by the supplier free of cost to the purchaser provided such defects are due to faulty design, bad workmanship or bad materials used, within one month upon written notice from the purchaser failing which provision of clause 22 (ii) shall apply.

[ii] Equipment/material failed or found defective during the guarantee period shall have to be guaranteed after repair/replacement for a further period of 12 months from the date of commissioning or 18 months from the date of receipt at the store/site after such repair/replacement whichever is earlier. The Bank Guarantee is to be extended accordingly. Date of delivery as used in this clause shall mean the date on which the materials are received in OPTCL'S stores/site in full & good condition which are released for Despatch by the purchaser after due inspection.

19 **B.G. towards security deposit, 100% payment and performance guarantee:**

[i] For manufacturers situated Inside & outside the state of Orissa.

A Composite Bank Guarantee as per the Proforma enclosed at Annexure-VII of the specification for 10% [ten percent] of the total FORD cost of the purchase order (In case of successful bidder who is a local Micro and small Enterprise (MSEs) based in Odisha registered with respective DICs, Khadi, Village, Cottage & Handicrafts Industries, OSIC and NSIC 5% (five percent)), shall be furnished from any nationalized/scheduled bank having a place of business at Bhubaneswar, to the office of Sr. General Manager [Central Procurement Cell] OPTCL within 15 days from the date of issue of the purchase order. The BG shall be executed on non-judicial stamp paper worth of Rs.29.00 [Rupees twenty nine] only or as per the prevalent rules, valid for a period of 20 months **from the last date of stipulated delivery period**, for scrutiny and acceptance, failing which the supply order will be liable for cancellation without any further written notices. The BG should be accompanied by a confirmation letter from the concerned bank and should have provision for encashment at Bhubaneswar, before the Bank Guarantee is accepted

and all concerned intimated. The B.G should be revalidated as and when intimated to you to cover the entire guarantee period.

[ii] No interest is payable on any kind of Bank Guarantee.

[iii] In case of non-fulfillment of contractual obligation, as required in the detailed purchase order/Specification, the composite Bank guarantee shall be forfeited.

**20. Import License**

In case imported materials are offered, no assistance will be given for release of Foreign Exchange. The firm should arrange to import materials from their own quota. Equipment of indigenous origin will be preferred.

**21. (A) Terms of Payment.**

(i) 100% value of each consignment with 100% Excise duty, Entry Tax, if any, and sales tax in full as applicable along with freight & Insurance charges will be paid on receipt of materials in good condition at stores/desired site and verification thereof, subject to furnishing and approval of Composite Bank Guarantee at the rate of 10% (Ten percent) of the cost of supplied materials, as stipulated under clause-19 of this specification & on prior approval of guarantee certificate & Test certificate by the Purchaser.

(ii) Any imposition of new tax or revision of tax shall be paid/reimbursed at the time of dispatch, scheduled or actual whichever is lower (i.e. If delivery is within schedule period, tax variation is applicable, and if delivery is made beyond schedule date, any additional financial implication due to statutory variation in tax shall be to bidder's account).

(iii) **Payment of Freight & Insurance charges and Entry Tax.**

Freight & Insurance Charges & Entry Tax, incorporated in the Purchase contract shall be paid after receipt of materials at stores/desired site in good condition and on production of authenticated documentary evidence, otherwise no Freight, Insurance charges & entry taxes shall be payable.

**[B]** The supplier shall furnish Composite Bank Guarantee of appropriate amount to OPTCL covering 10% of F.O.R. Destination cost of the purchase order well in advance (within 15 days from the date of issue of the purchase order) before despatch of materials.

**22. Penalty for Delay in Completion of Contract**

I) If the Supplier fails to deliver the materials/equipments within the delivery schedule, specified in the contract including delivery time extension, if any, granted thereto, the Purchaser shall recover from the Supplier, penalty for a sum of half percent (0.5 percent) of the Ex-works price of the un-delivered equipment for each calendar week of delay or part thereof. For this purpose, the date of



received chalan shall be reckoned as the date of delivery. The total amount of penalty shall not exceed five percent (5%) of the ex-works price of the unit or units so delayed. Equipment will be deemed to have been delivered only when all its components and accessories as per technical Specification are also delivered. If certain components & accessories are not delivered in time, the equipment will be considered delayed until such time as the missing parts are delivered.

- II) If the Supplier fails to rectify /replace the equipment/material within 30 days from the date of intimation of the defect, so noticed by the purchaser within the guarantee period then the penalty for sum of one half of the one percent (0.5%) of the total Purchase order amount for each calendar week of delay shall be recovered by the purchaser within the guarantee period. For this purpose, penalty date will start from the 30<sup>th</sup>. day from the date of issue of letter on defectiveness of equipment/material, so supplied, by the purchaser. The total amount of penalty in this case shall not exceed 10% (TEN PERCENT) of the purchase order amount. The purchase order amount shall mean ex-works price + freight & insurance and all taxes & duties. If the defects so intimated within the guarantee period will not be rectified by the Supplier within the stipulated period as per clause 18 (i), then whole of the B.G. will be forfeited by the purchaser, without any intimation to the Supplier.

23. **Insurance**

The Supplier shall undertake insurance of stores covered by this Specification unless otherwise stated. The responsibility of delivery of the stores at destination in good condition rests with the Supplier. Any claim with the Insurance Company or transport agency arising due to loss or damage in transit has to be settled by the supplier. The Supplier shall undertake free replacement of materials damaged or lost, which will be reported by the consignee within 30 days of receipt of the materials at destination without waiting for the settlement of their claims with the carriers and underwriters.

24. **Payment Due from the Supplier.**

All costs and damages, for which the supplier is liable to the purchaser, will be deducted by the purchaser from any money, due to the supplier, under any of the contract (s), executed with OPTCL.

25. **Sales Tax clearance certificate and Balance sheet and profit & Loss Account:**

- i. Sales Tax clearance certificate for the previous year shall be enclosed with the Bid.
- ii. Audited Balance Sheet and Profit & Loss Account of the bidder for the previous three years shall be enclosed to assess the financial soundness of the bidder(s).

**26. Certificate of Exemption from Excise Duty/Sales tax.**

Offers with exemption from Excise duty including sales tax shall be accompanied with authenticated proof of such exemption. Authenticated proof for this clause shall mean attested Photostat copy of exemption certificate. Any claim towards Excise duty/ Sales Tax shall be paid on actual basis subject to production of authenticated documentary evidence.

**27. Supplier's Responsibility.**

Notwithstanding anything mentioned in the Specification or subsequent approval or acceptance by the Purchaser, the ultimate responsibility for design, manufacture, materials used and satisfactory performance shall rest with the Bidders. The Supplier(s) shall be responsible for any discrepancy noticed in the documents, submitted by them along with the bid(s)

**28. Validity.**

Prices and conditions contained in the offer should be kept valid for a minimum period of 180 days from the date of opening of the Bid, failing which the Bid shall be rejected.

**29. EVALUATION.**

(i) Evaluation of bids will be on the basis of the FOR DESTINATION PRICE (By Road Transport) including Excise Duty, sales Tax & other levies as may be applicable. The FORD PRICE shall consist of the following components

- a) Ex-works price.
- b) Packing & Forwarding charges.
- c) Freight
- d) Insurance.
- e) Excise Duty.
- f) Sales Tax.
- g) Other levies.
- h) Mandatory spares, if any for maintenance of equipment. (At the discretion of the purchaser)
- i) Test charges, if any.
- j) Supervision of erection, testing and commissioning charges, if any.
- k) Any other items, as deemed proper for evaluation by the purchaser.
- l) Loading factors will be taken in to account during evaluation if the prices of some of the items, not quoted.

(II) **Weightage shall be given to the Following factors in the Evaluation & Comparison of Bids.**

In comparing bids and in making awards, the Purchaser will consider other factors such as compliance with Specification, minimum qualification criteria as per clause-30, outright rejection of Bids clause-34 of this Bid, relative quality, adaptability of Supplies or services, experience, financial soundness, record of integrity in dealings, performance of materials/equipment's earlier supplied, ability to furnish repairs and maintenance services, the time of delivery, capability to perform including available facilities such as adequate shops, plants, equipment and technical organization.

**(III)** The local MSE bidders shall be required to furnish their willingness to match their bid price with that of the lowest evaluated bidder without any price preference and in case they agree, they shall be eligible to get up to 30% of the Bided quantity to be distributed suitably among the willing MSE bidders failing which the said 30% of the Bided quantity be awarded to the lowest evaluated bidder.

**30. Minimum Qualification Criteria of Bidders.**

All the prospective bidders are requested to note that their bids for Bided equipment can only be considered for evaluation if:

- i) The bidder should have manufacture and supply experience of above rated or higher capacity equipment's for a minimum period of 3 (three) years as on the date of opening of the Bid
- ii) At least 50% of the Bided quantity. of above rated or higher capacity equipment should have been supplied within the above-stipulated period.
- iii) The above rated or higher capacity equipment should have at least 3 (three) years successful performance from the date of commissioning. At least one of the performance certificates shall be submitted from Govt. of India/State Govt.(s) or their undertakings.
- iv) The bidder should have conducted type tests on the Bided equipment's in Government approved laboratory within five years from the date of opening of the Bid..

**31. Jurisdiction of the High Court of Orissa.**

Suits, if any, arising out of this contract shall be filed by either Party in a court of Law to which the jurisdiction of High court of Orissa extends.

**32. Correspondences.**

- i) Any notice to the supplier under the terms of the contract shall be served by Registered Post or by hand at the Supplier's Principal Place of Business.

- ii) Any notice to the Purchaser shall be served at the Purchaser's Principal Office in the same manner.

33. **Official Address of the Parties to the Contract**

The address of the parties to the contract shall be specified:-

- [i] **Purchaser:** Senior General Manager (Procurement)(CPC) OPTCL  
Bhubaneswar-751022 (Orissa)  
Telephone No. 0674 - 2541801  
FAX No. 0674 - 2542964
- [ii] **Supplier:** Address  
Telephone No.  
Fax No.

34. **Outright Rejection of Bids**

- [i] The Bidder shall submit the bid in electronic mode only and shall submit the Bid cost on or before the date and time of submission of technical bid. In case of local Micro and small Enterprises(MSEs)based in Odisha registered with respective DICs, Khadi, Village, Cottage & Handicrafts Industries, OSIC and NSIC participating in the Bid they have to submit notarised hard copy of valid registration as local MSE as above on or before the date and time of submission of technical bid.
- [ii] The Bidder shall submit the bid in electronic mode only
- [iii] The Bid shall not be submitted telegraphically or by FAX.
- [iv] The prescribed EMD shall be submitted on or before the date and time of submission of technical bid.
- [v] The Bid shall be kept valid for a minimum period of 180 days from the date of opening of Bid.
- [vi] The Bid shall be submitted in two parts as specified.
- [vii] The Bids shall be accompanied by a list of major supplies effected prior to the date of opening of Bid. Data of at least 3 (three) years shall be furnished.
- [viii] The Bidder shall upload the scanned copy of latest type test certificates (for the tests, carried out on the Bided equipments, being offered). Such type tests should have been conducted within last five years from the date of opening of this Bid in a Government approved laboratory/CPRI in presence of any Government Organisation's representative(s).
- [ix] The schedule of prices should be filled up fully to indicate the break-up of the prices including taxes and duties. Incomplete submission of this schedule will make the Bid liable for rejection. Vide Clause-4(ii) of Part-II..
- [x] The Bidder should quote 'FIRM' price only and the price should be kept valid for a minimum period of 180 days from the date of opening of the Bid.

(xi) The Bidder shall upload the scanned copy legibly written user's certificate to prove the satisfactory operation of the offered equipments/materials for a minimum period of 3 (three) years from the date of commissioning/use as per the Bid specification. User's certificate shall include the detailed address of the user with Equipment/Material, Name and type as per this specification, number of years of satisfactory use/operation & date of issue of this user's certificate with official seal written in English only & clearly visible must be furnished. At least one of the user's certificates shall be from state or Central Govt. or their Undertakings.

(xii) Guaranteed Technical particulars & Abstract of terms and Conditions should be filled in completely.

[xiii] The bidder should not have any pending litigation or arbitration with OPTCL with regard to any project or related activity. The bidder should certify/declare the same in unequivocal terms by way of an **affidavit** duly sworn before a **Magistrate**. Bid furnished by the bidder shall **not be eligible** for consideration, if it is not accompanied by the affidavit. Further the bid/LOA/LOI shall be liable for **outright rejection/ cancellation** at any stage if any information contrary to the affidavit/declaration is **detected**.

35. **Documents to be treated as confidential.**

The supplier shall treat the details of the specification and other Bid documents as private and confidential and these shall not be reproduced without written authorization from the Purchaser.

36. **Scheme/Projects**

The materials/equipment covered in this specification shall come under "O&M WORKS "

**SECTION - III.**

**LIST OF ANNEXURES**

**[ I TO XI ]**

**[ PAGE 30 TO 43 ]**

**[LIST OF ANNEXURES]**

The following schedules and proforma are annexed to this specification and contained in Section-III as referred to in the relevant clauses.

|     |   |                 |
|-----|---|-----------------|
| 1   | Declaration form  | ANNEXURE-I      |
| 2   | Abstract of terms and conditions to accompany Section-II of Part-I          | ANNEXURE-II     |
| 3   | Schedule of Quantity and Delivery   | ANNEXURE-III    |
| 4   | Abstract of price component [to accompany Part-II of this specification]    | ANNEXURE-IV     |
| 5   | Schedule of prices to accompany Part-II                                     | ANNEXURE-V      |
| 6   | Bank Guarantee form for earnest money deposit                               | ANNEXURE-VI     |
| 7   | Composite Bank Guarantee form for security deposit, payment and performance | ANNEXURE-VII    |
| 8.  | Chart showing particulars of E.M.D.   | ANNEXURE - VIII |
| 9.  | Data on Experience.   | ANNEXURE - IX   |
| 10. | Schedule of spare parts.  | ANNEXURE-X      |
| 11. | Schedule of Installations.  | ANNEXURE-XI     |
| 12. | Schedule of deviations(Technical)   | ANNEXURE-XII(A) |
| 13. | Schedule of deviations(Commercial)  | ANNEXURE-XII(B) |
| 14  | Litigation/Arbitration  | ANNEXURE-XIII   |







|     |  |         |
|-----|--|---------|
|     | approved laboratory are furnished or not. [As per clause-34[viii] of section-II] |         |
| 13. | Whether guaranteed technical particulars in complete shape are furnished or not  | Yes/No  |
| 14. | Whether dimensional design/drawings furnished or not                             | Yes/No  |
| 15. | Whether materials are ISI/ISO marked.  | Yes/No  |
| 16. | Manufacturer's name and it's trademark.  | Yes/No  |
| 17. | <b>Whether registered under ODISHA Sales Tax Act. 1947</b>                       | Yes/No  |
| 18. | Whether declaration form duly filled in furnished or not.                        | Yes/No. |

**Place: -**

**Date: -**

**Bidder**

**Signature of the**

with seal of the company

**ANNEXURE-III**

**SCHEDULE OF QUANTITY AND DELIVERY**

(To be filled up by the Bidder )

| SL No | Description of materials | Quantity required | Desired Delivery | Destination | Remarks. |
|-------|--------------------------|-------------------|------------------|-------------|----------|
| 1     | 2                        | 3                 | 4                | 5           | 6        |
|       |                          |                   |                  |             |          |

Place:

Date:

Signature of Bidder

with seal of Company.

*ANNEXURE-IV*

**ABSTRACT OF PRICE COMPONENT [TO ACCOMPANY PRICEBID]**

|     |   |   |
|-----|---|---|
| 1   | Price basis   | F.O.R. Purchaser's destination<br>Stores/sites. |
| 2   | Packing & forwarding  |   |
| 3   | Rate of Insurance charges   |   |
| 4   | Rate of Freight charges   |   |
| 5   | Rate of excise duty   |   |
| 6   | Rate of sales Tax   |   |
| 7   | Rate of other taxes/levies /duties etc.                                   |   |
| 8   | Rate of entry tax.  |   |
| 9.  | Rate of Service Tax on supervision of erection testing and commissioning  |   |
| 10. | Nature of price.  |   |
| 11. | Whether MODVAT benefit if any, has been fully passed on to the purchaser. | Yes / No.                                       |

Place

Date:

Signature of Bidder

With seal of company

NB:- Abstract of price component shall be done for equipment/material offered, for testing & commissioning charges, if any. All the above prices will be taken during bid price evaluation.

*ANNEXURE-V.*

**SCHEDULE OF PRICES**

**BID SPECIFICATION No.**

| Item No. | Description. | Qty (unit) | Unit Ex-factory Price. | Unit Packing & Forwarding. | Unit Freight Charge. | Unit Insurance Charges. | Unit landing cost at destination store/site excluding ST,ED & Entry tax. |
|----------|--------------|------------|------------------------|----------------------------|----------------------|-------------------------|--|
|          |              |            |                        |                            |                      |                         |  |

|    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|
| 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. |
|----|----|----|----|----|----|----|----|

| Unit E.D. | Unit S.T. | Unit Entry Tax. | Unit landing Cost including All taxes & Duties. | Total landing cost Including all taxes & duties. |
|-----------|-----------|-----------------|---|--|
| 9.        | 10.       | 11.             | 12= (8+9+10+11)                                 | 13= (3X12)                                       |

Signature of Bidder

Name, Designation and Seal

NB: -

1. The Bidder should fill up the schedule properly and in full. The Bid will be rejected, if the schedule of price is submitted in incomplete form. No post Bid correspondence will be entertained on break-up of prices. Also, the supplier should agree for delivery at sub-station site.
2. In case, where F&I components are not specifically indicated in this schedule, 5% of the ex-works price shall be taken towards F&I components for the purpose of comparison of price.
3. The Bidder shall certify in the price bid that MODVAT benefit, if any, has been fully passed on to the purchaser while quoting the Bid price.
4. Conditional offers will not be acceptable.
5. The bidder is to clearly indicate the period up to which the tax holidays are available to them.
6. Price bid in any other format will not be acceptable and the offer will be rejected.
7. Test charges (Routine/type) if any, mandatory spares, if any, maintenance equipment charges, if any, as per Technical Specification, supervisory charges, if any, ( in case of equipments by taking 30 Man days) shall be indicated separately, row-wise.
8. All the above charges will be taken into account, during bid price evaluation.

*ANNEXURE-VI*

**PROFORMA FOR BANK GUARANTEE FORM FOR EARNEST MONEY DEPOSIT**

Ref \_\_\_\_\_ Date \_\_\_\_\_ Bank Guarantee No: \_\_\_\_\_

1 In accordance with invitation to Bid No. \_\_\_\_\_ Dated \_\_\_\_\_ of ODISHA POWER TRANSMISSION CORPORATION LTD. [OPTCL][herein after referred to as the OPTCL for the purchase of \_\_\_\_\_ Messers \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_ wish/wished to participate  
in the said Bid and as a Bank Guarantee for the sum of  
Rs. \_\_\_\_\_ [Rupees \_\_\_\_\_]  
Valid for a period of 240 days [Two hundred forty days] is required to be submitted  
by \_\_\_\_\_ the \_\_\_\_\_ Bidder. We \_\_\_\_\_ the

[Indicate the Name of the Bank]

[Hereinafter referred to as 'the Bank'] at the request of M/S

\_\_\_\_\_

[Herein after referred to as supplier (s)] do hereby unequivocally and  
unconditionally guarantee and undertake to pay during the above said period, on  
written request by the Sr. General Manager [Procurement] ODISHA POWER  
TRANSMISSION CORPORATION  
LTD. \_\_\_\_\_

[Indicate designation of the purchaser]

an amount not exceeding Rs. \_\_\_\_\_ to the OPTCL, without any  
reservation. The guarantee would remain valid up to 4.00 PM of  
\_\_\_\_\_

[date] and if any further extension to this is required, the same will be extended on  
receiving instructions from the \_\_\_\_\_ on whose  
behalf this guarantee has been issued.

2. We the \_\_\_\_\_ do hereby, further undertake

[Indicate the name of the bank]

to pay the amounts due and payable under this guarantee without any demur,  
merely on a demand from the OPTCL stating that the amount claimed is due by  
way of loss or damage caused to or would be caused to or suffered by the OPTCL  
by reason of any breach by the said supplier [s] of any of the terms or conditions  
or failure to perform the said Bid . Any such demand made on the Bank 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. \_\_\_\_\_

3. We undertake to pay the OPTCL any money so demanded notwithstanding any  
dispute or disputes so raised by the contractor [s] in any suit or proceeding  
instituted/pending before any Court or Tribunal relating thereto, our liability  
under this present being absolute and unequivocal. The payment so made by us

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

4. We, the \_\_\_\_\_ further agree that the guarantee  
[Indicate the Name of the Bank]

herein contained shall remain in full force and effect during the aforesaid period of 240 days [two hundred forty days] and it shall continue to be so enforceable till all the dues of the OPTCL under or by virtue of the said Bid have been fully paid and its claims satisfied or discharged or till Managing Director, ODISHA POWER TRANSMISSION CORPORATION LTD. certifies that the terms and conditions of the said Bid have been fully and properly carried out by the said Supplier [s] and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the \_\_\_\_\_ we shall be discharged from all liability under this guarantee thereafter.

5. We, the \_\_\_\_\_ further agree with the OPTCL that  
[Indicate the name of the Bank]

the OPTCL 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 the said Bid or to extend time of performance by the said Supplier [s] from time to time or to postpone for any time or from time to time any of the powers exercisable by the OPTCL against the said supplier [s] and to forbear or enforce any of the terms and conditions relating to the said bid and we shall not be relieved from our liability by reason of any such variation, postponement or extension being granted to the said Supplier [s] or for any forbearance act or omission on the part of the OPTCL or any indulgence by the OPTCL to the said Supplier[s] or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the name, style and constitution of the Bank or the supplier [s].

7. We, \_\_\_\_\_ lastly undertake not revoke this  
[Indicate the name of the Bank]

Guarantee during its currency except with the previous consent of the OPTCL in writing.

8. We the \_\_\_\_\_ Bank further agree that this guarantee shall also be invocable at our place of business at Branch of Bhubaneswar ( indicate the name of the branch)in the state of ODISHA.

Notwithstanding anything contained herein.

- 1) Our liability under this bank guarantee shall not exceed Rs.-----  
---( Rupees-----).
- 2) The bank guarantee shall be valid up to dt.-----
- 3) We are liable to pay the guaranteed amount or any part there of under this bank guarantee only & only if you serve upon us at -----branch at Bhubaneswar ( indicate name of the branch) a written claim or demand on or before dt.-----.

Dated \_\_\_\_\_ Day of \_\_\_\_\_

For \_\_\_\_\_

[Indicate the name of Bank]

Witness (Signature, names & address)

- 1.
- 2.

#### **ANNEXURE-VII**

#### **PROFORMA FOR COMPOSITE BANK GUARANTEE FOR SECURITY DEPOSIT**

#### **PAYMENT AND PERFORMANCE**

This Guarantee Bond is executed this \_\_\_\_\_ day of \_\_\_\_\_ 2014 by us the \_\_\_\_\_ Bank at \_\_\_\_\_

P.O. \_\_\_\_\_ P.S. \_\_\_\_\_

District \_\_\_\_\_ State \_\_\_\_\_

1. WHEREAS the ODISHA POWER TRANSMISSION CORPORATION LTD., a body corporate constituted under the Electricity Act, 2003 [hereinafter called “the OPTCL” which shall include its successors and assigns has placed orders No. \_\_\_\_\_ Date \_\_\_\_\_ [hereinafter called “The Agreement”] on M/s. \_\_\_\_\_ [hereinafter called “The Supplier”] which shall include its successors & assigns for supply of materials.

AND WHERE AS the supplier has agreed to supply materials to the OPTCL in terms of the said agreement AND

WHEREAS the OPTCL has agreed [1] to exempt the supplier from making payment of Security [2] to release 100% payment of the cost of materials as per the said agreement and [3] to exempt from performance guarantee on furnishing by the Supplier to the OPTCL, a Composite bank Guarantee of the value of 10 % [ten percent] of the contract price of the said agreement.

NOW THEREFORE, in consideration of the OPTCL having agreed [1] to exempt the Supplier from making payment of Security [2] releasing 100% payment to the Supplier and [3] to exempt from furnishing performance guarantee in terms of the said agreement as aforesaid, we, the \_\_\_\_\_ [Bank][hereinafter referred to as 'the Bank'] do hereby undertake to pay to the OPTCL an amount not exceeding Rs. \_\_\_\_\_ [Rupees \_\_\_\_\_] against any loss or damage caused to or suffered by or would be caused to or suffered by the OPTCL by reason of any breach by the said Supplier [s] of any of the terms or conditions contained, in the said agreement.

2. We the ( \_\_\_\_\_ Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on demand from the OPTCL stating that the amount claimed is due by way of loss or damage caused to or suffered by the OPTCL by reason of any breach by the said Supplier [s] of any of the terms or conditions, contained in the said agreement or by reason of the supplier's failure to perform the said agreement. Any such demand made on the bank 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 \_\_\_\_\_]
3. We the \_\_\_\_\_ Bank} also undertake to pay to the OPTCL any money so demanded not withstanding any dispute or disputes raised by the supplier [s] in any suit or proceeding instituted/pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Supplier [s] shall have no claim against us for making such payment.

4. We, ( \_\_\_\_\_ 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 agreement and that it shall continue to do so enforceable till all the dues of the OPTCL under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Managing Director, ODISHA POWER TRANSMISSION CORPORATION LTD. certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said Supplier [s] and accordingly discharges this Guarantee.

Unless a demand or claim under this guarantee is made on us in writing on or before the [Date\_\_\_\_\_], we shall be discharged from all liability under this guarantee thereafter.

5. We,(\_\_\_\_\_Bank) further agree that the OPTCL 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 the said agreement or to extend time of performance by the said Supplier [s] and we shall not be relieved from our liability by reason of any such variations or extension being granted to the said supplier [s] or for any forbearance, act or omission on the part of the OPTCL or any indulgence by the OPTCL to the said Supplier [s] or by any such matter or thing whatsoever which under the law relating to sureties would but these provisions have effect of so relieving us.
6. This guarantee will not be discharged due to the change in the name , style and constitution of the Bank and supplier [s].
7. We,[\_\_\_\_\_Bank] lastly undertake not to revoke this guarantee during its currency except with the previous consent of the OPTCL in writing.
8. We the \_\_\_\_\_ Bank further agree that this guarantee shall also be invocable at our place of business at Branch of Bhubaneswar ( indicate the name of the branch)in the state of ODISHA.

Notwithstanding any thing contained here in.

- 1) Our liability under this bank guarantee shall not exceed Rs.------(Rupees-----).
- 2) The bank guarantee shall be valid up to dt.-----
- 3) We are liable to pay the guaranteed amount or any part there of under this bank guarantee only & only if you serve upon us at -----branch at Bhubaneswar (indicate name of the branch) a written claim or demand on or before dt.-----  
-----.

Dated \_\_\_\_\_ Day of \_\_\_\_\_

For \_\_\_\_\_  
[Indicate the name of Bank]

Witness (Signature, names & address)

- 1.
- 2.



**ANNEXURE-VIII**

**CHART SHOWING PARTICULARS OF EARNEST MONEY DEPOSIT  
FURNISHABLE BY BIDDERS**

|    |   |   |
|----|---|---|
| 1. | Central and State Government Undertakings | Exempted  |
| 2. | All other inside & outside state units.   | The amount of EMD as specified in the specification /Bid Notice in shape of bank guarantee /DD. |

**NB: - REFUND OF E.M.D.**

[a] In case of unsuccessful Bidders, the EMD will be refunded immediately after the Bid is decided. In case of successful Bidder, this will be refunded only after furnishing of Composite Bank Guarantee referred to in clause No.19 of Section-II of this specification.

Suits, if any, arising out of EMD shall be filed in a court of law to which the jurisdiction of High Court of ODISHA extends.

[b] Earnest Money will be forfeited if the Bidder fails to accept the letter of intent/purchase order, issued in his favour or revises the bid price[ s] within the validity period of Bid.

**ANNEXURE-IX**

*DATA ON EXPERIENCE*

- [a] Name of the manufacturer.
- [b] Standing of the firm as manufacturer of equipment quoted.
- [c] Description of equipment similar to that quoted [supplied and installed during the last two years with the name of the organizations to whom supply was made].
- [d] Details as to where installed etc.
- [e] Testing facilities at manufacturer's works.
- [f] If the manufacturer is having collaboration with another firm, details regarding the same and present status.
- [g] A list of purchase orders, executed during last three years.
- [h] A list of similar equipments of specified rating, voltage class, short circuit rating, Designed, manufactured, tested and commissioned which are in successful operation for at least two years from the date of commissioning with legible user's certificate. User's

full complete postal address/fax/phone must be indicated. (Refer clause No.7 of the Part-I, Section-II of the specification).

Place:

Date:

Signature of Bidder

Name, Designation, Seal

**ANNEXURE-X**

**SCHEDULE OF SPARE PARTS FOR FIVE YEARS OF NORMAL OPERATION & MAINTENANCE**

| SL. No | Particulars | Quantity | Unit delivery rate | Total price |
|--------|-------------|----------|--------------------|-------------|
|        |             |          |                    |             |
|        |             |          |                    |             |
|        |             |          |                    |             |
|        |             |          |                    |             |

Place:

Date:

Signature of Bidder

Name, Designation, Seal

**ANNEXURE-XI**

**SCHEDULE OF INSTALLATIONS.**

| Rated Amp / m H | Rated Voltage | Place of installation and complete postal address | Year of commissioning |
|-----------------|---------------|---|-----------------------|
|                 |               |   |                       |
|                 |               |   |                       |
|                 |               |   |                       |
|                 |               |   |                       |
|                 |               |   |                       |

Place:

Date

Signature of Bidder

Name, Designation, Seal

**ANNEXURE-XII**  
**DEVIATION SCHEDULE.**

**Bidder shall enter below particulars of his alternative proposal for deviation from the specification, if any.**

**A) Technical**

| <b>Sl.No</b> | Clause No. of specification. | Particulars of deviations. |
|--------------|------------------------------|----------------------------|
|              |                              |                            |
|              |                              |                            |

Place: -

Date

Signature of Bidder:

Name, Designation, Seal

**B) Commercial deviations.**

| <b>Sl.No</b> | Clause No. of specification. | Particulars of deviations. |
|--------------|------------------------------|----------------------------|
|              |                              |                            |
|              |                              |                            |

Place: -

Date

Signature of Bidder:

Name, Designation, Seal

**ANNEXURE - XIII**  
**LITIGATION HISTORY**

Name of the Bidder:

Bidder should provide information on any history of litigation or arbitration resulting from contracts executed in the last five years or currently under execution.

| Year. | Award for or against bidder | Name of client, cause of litigation and matter in dispute | Disputed amount (current value in Rs.) |
|-------|-----------------------------|---|--|
|       |                             |   |  |
|       |                             |   |  |

Place: -

Date

Signature of Bidder:

Name, Designation, Seal

## SECTION-IV

### TECHNICAL SPECIFICATION OF ISOLATORS

| Sl.N<br>O. | Type  | 400KV   | 220KV         | 132KV       | 33KV       |
|------------|---|---|---------------|-------------|------------|
| 1          | Main Switch   | <b>HCB</b>                                      | DBCR          |             |            |
| 2          | Service   | Outdoor   |               |             |            |
| 3          | Applicable standard                                   | IS : 9921 / IEC-129/IEC-62271-102               |               |             |            |
| 4          | Pole  | 3 pole gang operator                            |               |             |            |
| 5          | Rated voltage nominal / maximum                       | <b>400/420</b>                                  | 220/245       | 132/145     | 33/36      |
| 6          | Rated frequency                                       | 50 HZ $\pm$ 5%                                  |               |             |            |
| 7          | System earthing                                       | effectively earthed                             |               |             |            |
| 8          | Temperature rise                                      | As per relevant IS/IEC publication              |               |             |            |
| 9          | Insulation level impulse with stand voltage           |   |               |             |            |
| (a)        | Across Isolating distance (kV peak)                   | <b>1665</b>                                     | 1200          | 750         | 195        |
| (b)        | To earthed & between poles (kV Peak)                  | <b>1425</b>                                     | 1050          | 650         | 170        |
| 10         | 1 minute power frequency with stand voltage           |   |               |             |            |
| (a)        | Across Isolating distance (kV Peak)                   | <b>610</b>                                      | 530           | 315         | 80         |
| (b)        | To earthed & between poles (kV Peak)                  | <b>520</b>                                      | 460           | 275         | 70         |
| 11         | Max. RIV for frequency between 0.5 MHz and 2 MHz      | 1000 at 267kV                                   | 1000 at 156kV | 500 at 92kV |            |
| 12         | Corona Extinction Voltage (kV)                        | <b>320</b>                                      | ----          | ----        | -----<br>- |
| 13         | Rated current   | 2000A   |               |             |            |
| 14         | Short time current for 3 sec                          | <b>63KA</b>                                     | 40KA          | 31.5KA      | 25KA       |
| 15         | Operating mechanism                                   | <b>Motor</b>                                    | Motor         | Motor       | Motor      |
| 16(a)      | Auxiliary voltage for control, interlock & indication | 220V DC (80% to 110%)                           |               |             |            |
| 16(b)      | Auxiliary voltage for Motor, heater, lamp & socket    | 415V, 3 phase, AC, 50Hz/220V, 1 phase, AC, 50Hz |               |             |            |

|           |  |  |                           |                           |                   |
|-----------|--|--|---------------------------|---------------------------|-------------------|
| 17(a)     | Safe duration of Over load( 150% over load)                  | 5 minutes  |                           |                           |                   |
| 17(b)     | Safe duration of Over load( 120% over load)                  | 30 minutes   |                           |                           |                   |
| <b>18</b> | <b>Insulator Data</b>  |  |                           |                           |                   |
| a         | Bending Strength (kgf)                                       | <b>800</b>   | <b>800</b>                | <b>600</b>                | <b>600</b>        |
| b         | Height (mm)  | <b>3650</b>  | <b>2300</b>               | <b>1500</b>               | <b>508</b>        |
| c         | Bottom PCD (mm)  | <b>300</b>   | <b>254</b>                | <b>184</b>                | <b>76</b>         |
| d         | Top PCD (mm)   | <b>127</b>   | <b>127</b>                | <b>127</b>                | <b>76</b>         |
| e         | Minimum creepage distance of support and Rotating insulators | <b>10500 mm</b>  | 6125 mm                   | 3625 mm                   | 900 mm            |
| 19        | <b>Phase to phase spacing</b>                                | <b>7000 mm</b>   | <b>4500 mm</b>            | <b>3000 mm</b>            | <b>1500m m</b>    |
| 20        | Mounting structure   | Upright on steel structure   |                           |                           |                   |
| 21        | Terminal connector type                                      | Bimetallic if pad is of copper or else aluminium clamp as per requirement & rating |                           |                           |                   |
| 22        | Control  | <b>Local / Remote</b>  | Local / Remote            | Local / Remote            | Local             |
| 23        | Operating time   | <b>12 second or less</b>   | 12 second or less         | 12 second or less         | 12 second or less |
| 24        | Earth Switch   | <b>Local(motorized) / manual</b>   | Local(motorized) / manual | Local(motorized) / manual | Manual            |

## 1.SCOPE

This specification provides for design, manufacture, testing at manufacturer's works and delivery ,supervision of erection, commissioning(if required )of following type.

**(A) Outdoor type 400KV Horizontal Centre Break Isolator comprises three identical triple pole units which consists of galvanized rigid base made of distortion resistant structural steel having fixing arrangement with the supporting structure and also having two rotating bearing unit on both sides each base with interconnecting pipe fixing clamps for tandem and link pipe. Porcelain insulators made of composite stacks of rated capacity carrying male & female contact assembly are fixed on the rotating bearing unit of base of each pole. Two units of each pole interconnected by link pipes & finally, all three pole are connected to group operating pipe. Movement of group operating pipe for closing & opening operation of isolator is done by Down pipe connected to the operating mechanism(Motor/Manual). Thus, all three poles of the Isolator shall be**

**mechanically gang operated by a common operating mechanism to ensure that operations of all three poles are simultaneous.**

**Double Earth Switch should be provided i.e one on Male side & another on Female side. On each side, E/S of all three poles are mechanically ganged with one common motor operating mechanism.**

**The earthing switches should be of non-ferrous materials especially of the same material as that of main switch assembly and able to carry the same fault current as assigned to the main disconnecter and withstand the dynamic stresses.**

**CONTACTS:-**

**Current density to be adopted for all part of the Isolator and terminal connector shall not exceed the following limits:**

**(a) Hollow tube section : Copper – 2.0 A/mm<sup>2</sup>**

**Aluminum–1.25 A/mm<sup>2</sup>**

**(b) Other sections & terminal connectors: Copper – 1.60A/mm<sup>2</sup>**

**Aluminum – 1.0 A/mm<sup>2</sup>**

**If corona extinction voltage is to be achieved with the help of corona ring or any other similar device, the same shall be deemed to be included in the scope of the Supplier.**

**For each set of Isolator, two sets of clamp connector i.e. one set of clamp connector suitable for 4 inch bus bar & onset of clamp connector suitable for twin moose shall be deemed to be included in the scope of the supplier.**

(B) The 220,132 & 33 KV Isolators shall be outdoor type with three phase double break centre rotating type [ Single(SI) / Double(DI) ] Isolators suitable for electrical as well as manual operation and local/remote operation. They shall have crank and reduction gear mechanism. **Isolator rated for above 72.5 kV shall be of extended mechanical endurance class - M2 as per IEC-62271-102. Isolator rated for 72.5 kV and below shall be of extended mechanical endurance class - M1 as per IEC-62271-102. All earth switches shall be of M0 duty.** All Isolators offered shall be suitable for horizontal upright mounting on steel structures. Each pole unit of the multiple Isolators shall be of identical construction and mechanically linked for gang operation.

Outdoor type 220KV /132KV /33KV, 3 phase triple pole double break gang operated centre rotating type (Single / Double) Isolator with / without earth switches, with electrical inter lock, insulators and complete in all respect with bimetallic / aluminium connectors arcing horns operating mechanism, auxiliary switches, indicating devices, fixing detail etc. as described herein after.

Each pole of the Isolator shall be provided with two sets of contacts to be operated in series and the moving contact blades shall rotate in horizontal plane.

The design shall be such that the operating mechanism with the linkages shall be suitable for mounting on any of the outer pole ends without much difficulty and with minimum shifting of parts.

Moving contacts of all isolators shall rotate through 90 deg from their “fully closed position” to “fully open position so that the break is distinct and clearly visible from ground level.

The Isolators offered by the Bidder shall be designed for Normal rating current for

|                       |        |        |       |
|-----------------------|--------|--------|-------|
| Isolator <b>400kV</b> | 220 kV | 132 kV | 33kV  |
| <b>2000A</b>          | 2000A  | 2000A  | 2000A |

It should suitable for continuous service at the system voltages specified herein. The Isolators shall be suitable to carry the rated current continuously and full short circuit current of **63/40/31.5/25** KA for 400/220/132/33 KV respectively for 3 second at site condition without any appreciable rise in temperature. These shall also be suitable for operation at 110% rated (normal) voltage. The Isolators shall be suitable for Isolating low capacitive / inductive currents of 0.7amp at 0.15 power factor. The isolators shall be so constructed that they don't open under the influence of short circuit conditions.

The Isolators and earthing switches are required to be used on electrically exposed installation and this should be taken into account while fixing the clearance between phases and between phase and earth.

2. STANDARDS

Disconnecting switches covered by this specification shall conform to latest edition IEC- 62271-102 and unless specifically stated otherwise in this specification.

1. MAIN CONTACTS

All Isolators shall have heavy duty, self-aligning and high pressure line type contacts made of high conductivity, corrosion resistant, hard-drawn electrolytic copper strips of proper thickness and contact area. Contacts should consist of loops of above copper strips suitable for 2000 Amps ratings. The hard dawn electrolytic copper strips should be silver plated 25 micron thickness and fixed contacts should be backed by powerful phosphor bronze/stainless steel springs of suitable numbers. However, the thickness and contact area of the contact should conform to the drawing approved during type test. Moving contact with moving arm should be of hard-drawn electrolytic copper of proper thickness and contact area.

These fixed and moving contacts shall be able to carry the rated current continuously and the maximum fault current of 63/40/31.5/25 KA for 400/200/132/33KV respectively for 3 seconds without any appreciable rise in temperature. The Isolator blades shall retain their form and straightness under all conditions of operation including all mechanical stress arising out of operation as well as under rated short circuit condition.

Fixed guides shall be provided so that even when the blades are out of alignment by one inch (maximum), closing of the switches, proper seating of the blades in between contacts and adequate pressure to give enough contact surface is ensured. Wherever possible, the blades shall be counter balanced by weights and springs. The contact shall be self cleaning by the wiping action created by the movements of the blades. The surface of the contacts shall be Bided smooth and silver plated ( 25 micron).

The Isolator shall be self-cleaning type so that when isolators remain closed for long periods in a heavily polluted atmosphere, binding does not occur. No undue wear or scuffing shall be evident during the mechanical endurance tests, contacts and springs shall be designed so that adjustment of contact pressure shall not be necessary throughout the life of the isolator. Each contact or part of contacts shall be independently sprung so that full pressure is maintained on all contact at all times.

## 2. ARCING HORN AND GRADING HORN

Suitable arcing horn made of tinned electrolytic copper which are required for guiding contacts shall be provided on the fixed and moving contacts of all Isolators. The contacts shall be of 'make before and break after" type.

## 3. ELECTRICAL INTERLOCK / MECHANICAL INTERLOCK

The disconnecting switches whenever required shall be with an approved type electrical interlock for interlocking with the associated circuit breakers and earth switch. Electrical interlock assembly should be more right in construction and properly mounted to ensure reliable operation. The design should be such that the electrical circuit for the interlocking mechanism will only remain energised during operation of the switches.

## 4. AUXILIARY SWITCHES

All isolators and earthing switches shall be provided with 220V DC auxiliary switches for their remote position indication on the control board and for electrical locking with other equipment. The auxiliary switch shall be provided with a minimum of ten auxiliary contacts-10 normally open and 10 normally closed and 10 normally open and 10 normally closed for earth switch. Separate auxiliary switches shall be provided for isolating and earth switches. 6 additional NO and NC contact to be provided as spare in each case.

The auxiliary switches and auxiliary circuits shall have a continuous current carrying capacity of at least 10 Amps. Auxiliary switches shall not be used as limit switches. Details of make, rating and type of limit switch shall be furnished in the offer.

## 5. EARTH SWITCH

Line earth switch shall consist of three earthing blades for Isolator which normally rest against the frame when the connected Isolator is in closed position. The earthing blades for three phase shall be mechanically linked to a coupling shaft which shall be capable of



being fitted on either side of the Isolator. The earthing blades shall match and be similar to the main switch blades and shall be provided at the hinge; with suitable flexible conductors at all moving points with terminal lugs to maintain a continuous path to the station ground bus. The earthing blades shall be operated by a separate mechanism but shall be mechanically interlocked with the main switch so that the earthing blades can be closed only when the main switches are in open position and vice-versa. The earthing blades shall be gang operated and all the three blades will operate simultaneously. 245 kV earth switches shall also comply with the requirements of IEC-62271-102, in respect of induced current switching duty as defined for Class-B and short circuit making capability class E-0 for earthing switches.

#### 6. OPERATING MACHANISM

The operating mechanism shall be simple and shall ensure quick and effective 1000 operation. The design shall be such as to enable one man to operate it with nominal effort. The operating mechanism box shall be made out of aluminum extruded (Aluminum alloy) sections of minimum 3.0 mm thickness. The operating mechanism shall be strong rigid and not subject to rebound.

The Isolator blades shall be in positive continuous control throughout the entire cycles of operation. The operating rods and pipes shall be rigid enough to maintain positive control under most adverse conditions and to withstand all torsional and bending stresses arising from operation. Operation of the switches at any speed should not result in improper functioning, in displacement of parts / machines after final adjustment has been made. All holes in cranks, linkages etc. having moving pins shall be drilled and fitted accurately so as to prevent slackness and lost motion.

Provision shall be made for padlocking the operating mechanism of disconnecting and earth switches in both open and closed positions.

Bearings shall be ball and roller type shall be protected from weather and dust by means of cover and grease retainers. Bearings pressures shall be kept low to ensure long life and care of operation.

Each power operated isolator shall be motor driven as well as manually operated and shall be complete with local / remote selector switch and open / close push buttons. The function of all control facilitates operating isolators.

Provision shall be made in the control cabinet to disconnect power supply to prevent local / remote power operation. Limit switches for open and close positions of isolators shall be provided.

All the terminal blocks to be used in the operating mechanism should of stud type of Poly-amide/Mealmine material of make like Elmex (OAT-6 for non disconnecting type & OAT -6T for disconnecting type) / connectwell ( Equivalent).

## 7. DESIGN, MATERIALS AND WORKMANSHIP

The live parts shall be designed to eliminate sharp points, edges and similar corona producing surfaces. Where this is impracticable, adequate shields to be provided. All ferrous metal parts shall be hot dip galvanized, as per IS 2629. All metal parts shall be of such materials or treated in such a way so as to avoid rust, corrosion and deterioration due to continued exposure to atmosphere and rain. All current carrying parts shall be made from high conductivity electrolytic copper / aluminium.

Bolts, screws and pins shall be provided with standard locking device viz. Locknuts, spring washers, keys etc. and when used with current carrying parts, they shall be made of copper silicon or other high conductivity and wear resistant alloys.

The switches should not need lubrication of any parts except at very long interval of five year minimum.

## 8. PROTECTIVE COATINGS

All ferrous parts including bolts, nuts and washers of the switches assembly shall be galvanised to withstand at least six one minute dips in copper sulphate solution of requisite strength (Prece tests) except the threaded portions which should withstand four dips.

9. Insulators – Support insulators for all type of isolators shall be of solid core type. The insulator shall be made of homogeneous and vitreous porcelain of high mechanical and dielectric strength. It shall have sufficient mechanical strength to sustain electrical and mechanical loading on account of wind load, short circuit forces etc. Glazing of the porcelains shall be of uniform dark brown colour with a smooth surface arranged to shed away rain water. The porcelain shall be free from laminations and other flaws or imperfections that might affect the mechanical or dielectric quality. It shall be thoroughly vitrified, tough and impervious to moisture. The porcelain and metal parts shall be assembled in such a manner and with such material that any thermal differential expansion between the metal and porcelain parts throughout the range of temperature specified in this specification shall not loosen the parts or create under internal stresses which may affect the mechanical or electrical strength or rigidity. The assembly shall not have excessive concentration of electrical stresses in any section or across leakage surfaces. The cement used shall not give rise to chemical reaction with metal fittings. The insulator shall be suitable for water washing by rain or artificial means in service condition. Profile of the insulator shall also conform to IEC-815. Insulator shall have a minimum cantilever strength of 800 kgf (for 400Kv, 220 Kv ) & 600 Kgf for (132KV,33 Kv ). Caps to be provided on top of the insulator shall be of high grade

cast iron or malleable steel casting. It shall be machine faced and hot dip galvanized. The cap shall have four numbers of tapped holes spaced on a pitch circle diameter of 127mm. The holes shall be suitable for bolts with threads having anti corrosive protection. The effective depth of threads shall not be less than the nominal diameter of the bolt. The cap shall be so designed that it shall be free from visible corona and shall have radio interference level within 500 micro volts for 220 Kv & 132 Kv .Casing shall be free from blow holes cracks and such other defects

**If corona extinction voltage is to be achieved with the help of corona ring or any other similar device, the same shall be deemed to be included in the scope of the Supplier**

10. Control Cabinet: The control cabinet of the operating mechanism shall be made out of minimum 3mm thick aluminium alloy sheet. Hinged door shall be provided with pad locking arrangement. Flexible earthing strips to be provided for moving shaft connecting to the isolator with cabinet body as well as the hinged door with main body. Sloping rain hood shall be provided to cover all sides. 15 mm thick neoprene or better type of gaskets shall be provided to ensure degree of protections of at least IP 55 as per IS 2147/IS-3947. The cabinet shall be suitable for mounting on support structure with adjustment for vertical, horizontal and longitudinal alignment. Details of these arrangements shall be furnished alongwith the offer.
11. Motor : Motors rated 1 Kw and above shall be suitable for operation on 3 phase, 415 V, 50 HZ supply. Motors of lower rating shall be single phase type suitable for 240V, 50HZ system. It shall be totally enclosed type if mounted outside the control cabinet. The motor shall withstand without damage stalled torque for atleast 3 times the time lag of tripping device. The motor shall, in all other respects, conform to the requirement of I.S. 325.
12. Gear : The dis-connector / isolator may be required to operate occasionally, with considerably long idle intervals. Special care shall be taken for selection of material for gear and lubrication of gears to meet this requirement. The gear shall be made out of aluminium bronze or any other better material lubricated for life with graphite or better quality non-drawing and non-hardening type grease. Wherever necessary automatic relieving mechanism shall be provided suitable relay, Device shall be provided to prevent over loading of the motor. Single phase preventer (for 3 phase meter) shall be provided to operate on open circuiting of any phase and shall trip off the motor. Complete details of the devices shall be furnished in the offer.

13. Space heaters : Space heaters suitable for 1 phase 240V AC supply shall be provided for each motor operated operating mechanism to prevent condensation and shall be operated by MCB.
14. Terminal block and Wirings – Each operating mechanism shall be provided with 1100V grade stud type terminal block. All auxiliary switches, interlocks and other terminals shall be wired upto terminal block. The terminal block shall have at least 20% extra terminals. All wiring shall be carried out with 1.1KV grade insulated 2.5 sq mm copper wires.
15. Interior Illumination : A holder suitable for a 240 V lamp shall be provided in each of the motor operated mechanism of three poles & shall be door operated type.
16. Control and auxiliary supply – A 3 phase switch with MCB for phases and link for neutral, shall be provided for power supply and a 2 pole MCB shall be provided for control supply.
17. Position indicator : A position indicator to show the isolator is in ON or OFF position to be provided.
18. Name plate : Isolator, earthing switches and their operating devices shall be provided with name plate. The name plate shall be weather proof and corrosion proof. It shall be mounted in such a position that it shall be visible in the position of normal service and installation. It shall carry the following informations duly engraved or punched on it.

A. Isolator Base

Name : OPTCL

Name of manufacturer –

Order No. –

Type Designation –

Manufacturers serial No. –

(Confirming to IS)

Rated voltage –

Rated normal current –

Rated short time current (rms) and duration –

Rated short time peak current (KAP)

Weight

B. Earthing Switch

Name : OPTCL

Name of manufacturer –

Order No. –

Type Designation –

Manufacturers serial No. –

(Confirming to IS)

Rated voltage –

Rated normal current –

Rated short time current (rms) and duration

Rated short time peak current (KAP)

Weight

C. Operating Device

Name – OPTCL

Name of manufacturer –

Order No.

Type Designation –

Reduction gear ratio –

AC motor

- i) Rated auxiliary voltage
- ii) Starting current
- iii) Designation of AC motor as per I.S 4722/325
- iv) Starting torque at 80% of supply voltage
- v) Over travel in degrees after cutting off supply

**Total operating time in seconds**

- i) Close operation – Electrical
- ii) Open operation – electrical  
Open operation – manual

19. Painting Galvanizing and Climate Proofing

At interiors and exteriors of enclosures, cabinets and other metal parts (other than made up of aluminium) shall be thoroughly cleaned to remove all rust, scales, corrosion, grease and other adhering foreign matter and the surfaces treated by phosphating (e.g. seven tank phosphating sequence). After such preparation of surfaces, two coats of zinc oxide primer shall be given by suitable stoving and air drying before final painting. Colour of the final paints shall be of shade no. 697 of IS:5. The finally painted cubicle shall present aesthetically pleasing appearance free from any dent or uneven surface.

Paint inside the metallic housing shall be of anti condensation type and the paint on outside surfaces shall be suitable for outdoor installation.

All components shall be given adequate treatment of climate proofing as per IS:3202 so as to withstand corrosive and severe service conditions.

All metal parts not suitable for painting such as structural steel, pipes, rods ,levers, linkages, nuts and bolts used in other than current path etc. shall be hot dip galvanized as per IS -2629. Galvanisation test will be carried out during routine test.

Complete details of painting, galvanising and climate proofing of the equipment shall be furnished in the offer.

#### 24. **TESTS**

##### **Type Tests**

Isolators offered, shall be fully type tested as per the relevant standards. The Bidder shall furnish Three sets of the following valid type test reports for their different type of offered Isolators along with the offer. The Purchaser reserves the right to demand repetition of some or all the type tests in the presence of purchaser's representative. For this purpose the Bidder may quote unit rates for carrying out each type test and this will be taken during bid price evaluation ,if required.

- a) Short time withstand & peak withstand current test for Isolator & Earth Switch.
- b) Power frequency (Dry & Wet),Lightening Impulse dry withstand Test
- c) Mechanical endurance Test ( M2 class).
- d) IP-55 test.
- e) Temperature rise.
- f) Seismic withstand test.
- g) Induced current test (Class-B)as per IEC 62271-102. (For 220 KV class Isolators).
- h) RIV test. (132 KV & above).

During type tests the isolator shall be mounted on its own support structure or equivalent support structure and installed with its own operating mechanism to make the type tests representative. Drawing of equivalent support structure and mounting arrangements shall be furnished for Purchaser's approval before conducting the type tests.

The type tests shall be conducted on the isolator along with approved insulators and terminal connectors.

Mechanical endurance test shall be conducted on the main switch as well as earth switch of one isolator of each type.

##### **Acceptance and Routine Test :**

All acceptance and routine test as stipulated in the relevant standards shall be carried out by the supplier in presence of Purchaser's representative.

Mechanical operation test (routine test) shall be conducted on isolator (main switch and earth switch) at the supplier's works as well as purchaser's substation site.

Immediately after finalisation of the programme of type / acceptance, routine testing the supplier shall give sufficient advance intimation (clear 20 days advance intimation), along with shop routine test certificates, valid calibration reports from Govt. approved test house for the equipments, instruments to be used during testing for scrutiny by the purchaser to enable him to depute his representative for witnessing the tests. If there will be any discrepancies in the shop routine test certificates and calibration reports furnished by the firm then after settlement of the discrepancies only, purchaser's representative will be deputed for witnessing the tests.

Special tests proposed to be conducted (if decided to conduct ) as type test on isolators, are given at Annexure- II. These special type test charges shall be quoted alongwith all other type tests as per relevant IEC standard and these charges shall be included in the total bid price.

Test certificates of various items including but not limited to the following shall be furnished at the time of routine tests.

- a) Chemical analysis of copper alongwith a copy of excise certificate indicating genuine source of procurement of electrolytic grade copper.
- b) Bearings
- c) Fasteners
- d) Universal / swivel joint coupling
- e) Insulators
- f) Motor
- g) Gears
- h) Auxillary switch
- i) Limit switch
- j) Timer
- k) Overload / single phase preventer relay
- l) Interlocking devices
- m) Terminal block
- n) Any other item

## 25. INSPECTION

i) The Purchaser shall have access at all times to the works and all other places of manufacture, where the disconnectors, earth switches and associated equipment are being manufactured and the supplier shall provide all facilities for unrestricted inspection of the works raw materials manufacture of all the accessories and for conducting necessary tests as detailed herein.

- ii) The supplier shall keep the purchaser informed in advance of the time of starting of the progress of manufacture of equipment in its various stages so that arrangements could be made for inspection.
- iii) No material shall be dispatched from its point of manufacture unless the material has been satisfactorily inspected and tested.
- iv) The acceptance of any quantity of the equipment shall in no way relieve the supplier of his responsibility for meeting all the requirements of this specification and shall not prevent subsequent rejection if such equipment are later found to be defective.

26 QUALITY ASSURANCE PLAN

The Bidder shall invariably furnish following information alongwith his offer, failing which his offer shall be liable for rejection.

- (i) Names of sub suppliers for raw materials, list of standards according to which the raw materials are tested, list of tests normally carried out on raw materials in presence of Supplier's representative, copies of test certificate
- (ii) Information and copies of test certificates as in (I) and (ii) above in respect of bought out accessories.
- (iii) List of manufacturing facilities available
- (iv) Level of automation achieved and lists of areas where manual processing still exists.
- (v) List of areas in manufacturing process, where stage inspections are normally carried out for quality control and details of such tests and inspections.

List of testing equipments with calibration certificates from Govt. approved test house available with supplier for final testing equipment and test plant limitation if any, vis-à-vis the type, special acceptance routine test specified in the relevant standards. These limitations shall be very clearly brought out in the specified test requirements.

The supplier shall within 30 days of placement of order, submit following information to the purchaser.

- i) List of raw material as well as bought out accessories and the names of sub-suppliers selected from the lists furnished alongwith offer.
- ii) Type test certificates of the raw material and both bought out accessories.
- iii) Quality Assurance Plan (QAP) with hold points for purchaser's inspection.

The supplier shall submit the routine test certificates of bought out accessories and raw material viz. Copper, aluminium conductors, lubricating material, gear material etc. at the time of routine testing of the fully assembled isolator.

27. DOCUMENTATION



All drawings shall conform to relevant international standards organisation (ISO). All drawings shall be in ink and suitable for micro filming. All dimensions and data shall be in S.I. Units.

#### List of Drawings and Documents

The Bidder shall furnish four sets of following drawings / documents along with his offer.

- a) General outline and assembly drawings of the dis-connector operating mechanism, structure, insulator and terminal connector.
- b) Sectional views and descriptive details of items such as moving blades, contacts, arms contact pressure, contact support bearing housing of bearings, balancing of heights, phase coupling pipes, base plate, operating shaft, guides, swivel joint operating mechanism and its components etc.
- c) Loading diagram
- d) Drawings with structure for the purpose of type tests.
- e) Name plate.
- f) Schematic drawing.
- g) Type test reports.
- h) Test reports, literature, pamphlets of the bought out items and raw material.

The supplier shall within 2 weeks of placement of order submit four sets of final versions of all the above said drawings for Purchaser's approval. The purchaser shall communicate his comments / approval on the drawings to the supplier. The supplier shall, if necessary, modify the drawings and resubmit four copies of the modified drawings for Purchaser's approval within two weeks from the date of comments. After receipt of approval the supplier shall within three weeks submit 15 prints and two good quality re-producibles of the approved drawings for purchaser's use.

Six sets of the type test reports, duly approved by the Purchaser shall be submitted by the supplier for distribution, before commencement of supply Adequate copies of acceptance and routine test certificates, duly approved by the Purchaser shall accompany the despatched consignment.

The manufacturing of the equipment shall be strictly in accordance with the approved drawings and no deviation shall be permitted without the written approval of the purchaser. All manufacturing and fabrication work in connection with the equipment prior to the approval of the drawing shall be at the supplier risk.

#### 28. INSTRUCTION MANUALS :

Fifteen copies of the erection, operation and maintenance manuals in English be supplied for each type of disconnector one month prior to despatch of the equipment.

The manual shall be bound volumes and shall contain all drawings and information required for erection, operation and maintenance of the disconnecter including but not limited to the following particulars.

- (a) Marked erection prints identifying the component parts of the disconnecter as shipped with assembly drawings.
- (b) Detailed dimensions and description of all auxiliaries.
- (c) Detailed views of the insulator stacks, metallics, operating mechanism, structure, interlocks, spare parts etc.

29. PACKING AND FORWARDING.

The equipment shall be packed in crates suitable for vertical / horizontal transport, as the case may be and suitable to withstand handling during transport and outdoor storage during transit. The supplier shall be responsible for any damage to the equipment during transit, due to improper and inadequate packing. The easily damageable material shall be carefully packed and marked with the appropriate caution symbols. Wherever necessary, proper arrangement for lifting, such as lifting hooks etc. shall be provided. Any material found short inside the packing cases shall be supplied by supplier without any extra cost.

Each consignment shall be accompanied by a detailed packing list containing the following information :

- (a) Name of the consignee.
- (b) Details of consignment.
- (c) Destination.
- (d) Total weight of consignment.
- (e) Handling and unpacking instructions.
- (f) Bill of material indicating contents of each package.

The supplier shall ensure that the bill of material is approved by the purchaser before despatch.

30. SUPERVISION OF ERECTION TESTING AND COMMISSIONING (ET & C)

Purchaser proposes to utilize the services of the supplier for supervision of testing and commissioning of the equipment being supplied by him, if it is required. For this purpose, the supplier should make available the services of trained personnel (Engineers) who shall correct in the field, any errors or omissions in order to make the equipment and material properly perform in accordance with the intent of this specification. The Engineer shall also instruct the plant operators in the operation and maintenance of the commissioned equipment. The supplier shall be responsible for any damage to the equipment on commissioning the same, if such damage results for the faulty or

improper ET&C. Purchaser shall provide adequate number of skilled / semi skilled workers as well as ordinary tools and equipment and cranes required for equipment erection, at his own expenses. Apart from the above, the Purchaser shall not be responsible for providing any other facilities to the supplier. Special tools if required for erection and commissioning shall be arranged by the supplier at his cost and on commissioning these shall be supplied to the purchaser free of cost for future use.

**APPENDIX – I(Isolators)**

LIST OF SPECIAL TESTS TO BE CARRIED OUT IF DECIDED BY THE PURCHASER

| Sl. No. | Name of the Test  | Standard to which it conforms.            |
|---------|---|---|
| 1.      | Test for visible Corona and Radio interference voltage (RIV) on disconnectors and terminal connector. | NEMA Pub No. 107-1964 ISRI Pub No. 1-1972 |
| 2.      | Tests on insulators   | IS-2544 IEC. 168                          |
| 3.      | Tests on terminal connectors  | IS:5561                                   |
| 4.      | Tests on galvanised components  | IS:2633                                   |
| 5.      | Stalled torque test on motor operating mechanism  | At 110% of supply voltage                 |

**Quantity & Delivery Schedule**

**APPENDIX-II**

| Lot. | Sl. No. | ITEM DESCRIPTION                    | 2016-17 & 2017-18 | Destination  | Delivery in months   |
|------|---------|-------------------------------------|-------------------|--|--|
| I    | i       | 400KV HCB SI with double E/S, 2000A | 6                 | Any store/site of OPTCL within the state of ODISHA as per despatch clearance | Within 4 (four) Months from the date of the issue of the Purchase Order. |
| II   | i       | 132KV SI W/O E/S, 2000A             | 6                 |  |  |
|      | ii      | 132KV DI with E/S, 2000A            | 7                 |  |  |
| III  | i       | 33KV SI W/O E/S,2000A               | 6                 |  |  |
|      | ii      | 33 kV Beam Mounted isolator, 2000A  | 10                |  |  |

N.B: The detail delivery programme & quantity to be delivered will be informed at the time of placing P.O / issue of release order.

**GUARANTEED TECHNICAL PARTICULARS FOR DISCONNECTOR  
(ISOLATORS)**

(To be filled in separately for Disconnectors of different voltage classes and types)

1. Type / installation
2. Manufacturer's Name and  
Country of manufacture
3. standard/s according to which  
the isolator are manufactured
4. Maximum design voltage at which  
the isolator can operate (kv)
5. frequency (Hz)
6. Rated Voltage (kv)
7. Max. current that can be safely interrupted by the isolator  
Inductive (A & % PF)  
Capacitive (A & % PF)
8. Continuous current rating (Amps)
9. Rated short time current
  - (i) For 3 second (KA rms)
  - (ii) Rated peak short time current (kVp)
10. Current density at the minimum cross-section of
  - a) Moving blade (Amps/Sq.mm)
  - b) Terminal pad
  - c) Contacts
  - d) Terminal Connector
11. Max. temp rise of current carrying parts when carrying rated current  
continuously. (deg. C)
12. factor for specified site conditions.
13. Derating Insulation levels.
  - i) Impulse withstand voltage (kV peak)
    - a) Phase to Earth
    - b) Across isolating Distance
  - ii) Switching surge withstand voltage (kV peak)
    - (a) Phase to Earth
    - (b) Across isolating Distance
  - iii) Power frequency withstand voltage (kV rms)
    - (a) Phase to Earth

- (b) Across isolating distance
- iv) Radio interference voltage at 1.1 times maximum line to ground voltage (micro volts)
- v) Corona inception voltage (kV rms)
- vi) Corona extinction voltage (KV rms)
- 14. Minimum clearance in air:
  - i) Between poles (mm)
  - ii) Between live parts and earth (mm)
  - iii) Between live part when switch is open
    - (a) On the same pole (mm)
    - (b) Between adjacent poles (mm)
- 15. Rated mechanical terminal load
  - i) Load along the terminal connector side (kg)
  - ii) Load across the terminal connector side(kg)
- 16. Torque required to operate the switch in Kg. m.
- 14. Contact zone
  - (i) Horizontal deflection (mm)
  - (ii) Vertical deflection (mm)
  - (iii) Total amplitude of longitudinal movement w.r.t. conductor supporting fixing contact (mm)
- 15. Design and Construction
  - i) No. of Insulators per pole
  - ii) Contacts
    - a) Material and grade
    - b) Cross-sectional area in sq.mm
  - iii) Moving Blades
    - a) Material and grade
    - b) Cross sectional area
  - iv) Contact Support
    - a) Material and size of channel / block
    - b) Material and size of plate
  - v) Rain hood – Material grade and size
  - vi) Turn and twist mechanism
    - a) Material and size of clamps
    - b) Material and size of springs
    - c) Whether springs are encased
  - vii) Nuts and Bolts.

- a) Size, material and grade in live parts.
- b) Size material and grade in other parts
- viii) Insulator base plate
  - Material and size of plate below insulators
- ix) Bearings.
  - a) Material and size of housing
  - b) No. of bearings, location and size
- x) Tandem pipe
  - a) Size class and no. of pipes
  - b) Size of shackle, screw
  - c) No. of bearings / bush and its material and size
- xi) Type of inter lock
- xii) Down pipe size and class
- xiii) Type of universal / swivel joint
  - a) Between bearing and down pipe
  - b) Between down pipe and operating mechanism
- xiv) Operating mechanism
  - a) Control cabinet
    - Material and thickness
    - Degree of protection
    - Type size and no. of cable glands
    - Whether removable gland plate provided.
  - b) Make type, rating and qty. of motors per isolator
- Gears
- Limit switches
- Contactors
- Over load relay
- Single phase preventor
- Auxiliary switch
- Terminal blocks
- Insulator wires
- HRC fuses
- Pole discrepancy relay
- Timer
- Space Heater
- Interlocks
- xv) Insulators

- a) Make, Type
- b) No. of units per insulator stack.
- c) Rating of insulator (kV)
- d) Height of each insulator stack (mm)
- e) Bolt circle diameter (mm)
- f) Tensile strength (kg)
- g) Compressive strength
- h) Torsional strength (kg. m)
- i) Cantilever strength upright (kg)
- j) Power frequency dry flash over voltage (kV) rms
- k) Power frequency wet flash over voltage (kV) rms
- l) Power frequency puncture voltage (kV) rms
- m) Impulse flash over voltage (positive wave) (kV) peak
- n) Impulse withstand voltage (kV) peak
- o) Power frequency withstand voltage (kV) rms
- p) Visual discharge voltage level (kV) rms
- q) Creepage distance, Total (mm), Protected (mm)
- r) Dry arcing distance (mm)

**xvi) Base**

- a) Size of steel sections used**
- b) Overall size**
- c) Total weight**

**xvii) Terminal connectors**

- a) Clamp Body**

**Alloy Composition**

**Plating if any**

**Area at min. cross section**

**b)Bolts and nuts size**

**Alloy composition**

**Tensile strength**

**c)Type of washers used**

**d)Materials of braids**

**e)Temperature rise when carrying rated current at 50 deg. C ambient (deg.C)**

**f)Weight of each type of clamp (kg)**

**xviii) Resistance of main circuit**

**as per the type test report**

**XIX) Conductivity of HDE copper**

**19.0 List of bought out items.**

---

| Sl. No. | Particulars of components | Qty. | Rating | Make | Type |
|---------|---------------------------|------|--------|------|------|
|---------|---------------------------|------|--------|------|------|

---

20.0 List of test certificates (Type and routine)

21.0 List of drawings furnished.

Name of the firm .....

Signature of Bidder .....

Designation and seal .....

Date .....

**PART – II**

**PRICE BID**

**1. PRICE:**

- (i) Bidders are required to quote their price(s) for goods offered indicating they are 'FIRM'
- (ii) The prices quoted shall be FOR Destination only at the consignee's site/store inclusive of packing, forwarding, Freight & Insurance. In addition, the break-up of FOR Destination price shall be given as per schedule of Prices in Annexure-V of Section – III. The Bidder has to certify in the price bid that MODVAT benefit if any, has been fully passed on to the Purchaser, while quoting the Bid prices.

**2. INSURANCE :**

Insurance of materials/equipments, covered by the Specification should normally be done by the Suppliers with their own Insurance Company unless otherwise stated. The responsibility of delivery of the materials/equipments at destination stores/site in good condition rests with the Supplier. Any claim with the Insurance Company or Transport agency arising due to loss or damage in transit has to be settled by the Supplier. The Supplier shall undertake free replacement of equipments/materials damaged or lost which will be reported by the Consignee



within 30 days of receipt of the equipments/materials at Destination without awaiting for the settlement of their claims with the carriers and underwriters.

3. **CERTIFICATE FOR EXEMPTION FROM EXCISE DUTY/SALES TAX:**

Offers with exemption from excise Duty/ Sales tax shall be accompanied with authenticated proof of such exemption. Authenticated proof for this clause shall mean Photostat copy of exemption certificates, attested by Gazetted Officers of State or Central Government.

4. **PROPER FILLING UP OF THE PRICE SCHEDULE:**

- (i) In case where Freight & Insurance charges are not furnished, 5% of the Ex-works price shall be considered as the freight & Insurance charges.
- (ii) The Bidder should fill up the price schedule (Annexure-V of Section-III) properly and in full. The Bid may be rejected if the schedule of price is submitted in incomplete form as per clause-34 (ix) of Section-II of the Specification.

5. **NATURE OF PRICE INDICATED IN SPECIFICATION SHALL BE FINAL.**

The nature of price indicated in the Clause-13, Section – I of PART –I of the Specification shall be final and binding.