



**ODISHA POWER TRANSMISSION CORPORATION LTD  
CENTRAL PROCUREMENT CELL,  
JANPATH, BHUBANESWAR - 751022**

**TENDER SPECIFICATION  
NO. SR.G.M.-CPC –TELECOM-LT-35/2012-13  
FOR**

**PROCUREMENT OF**

**800A,0.5mH LINE TRAP FOR 132KV SYSTEM- 30 NOS.**

**Sale of tender paper – From dt- 10.01.2013 (10.00 AM) to dt- 11.02.2013 (1.00 PM)**

**Last date of submission of tender paper- dt- 12.02.2013 (1.00 PM)**

**Date of opening of Tender - dt- 12.02.2013 (4.00 PM)**



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

**TENDER NOTICE NO. 34 / 2012-13**

For and on behalf of ODISHA POWER TRANSMISSION CORPORATION LTD., Sr.G.M. [C.P.C.] invites Tenders from reputed manufacturers for supply of 800A,0.5mH LINE TRAP FOR 132KV SYSTEM- Tender papers shall be sold at the office of the undersigned during working hours (from 10.00am to 1.00PM) from dt:10.01.2013 to dt: 11.02.2013. Interested manufacturers may visit OPTCL's official web site <http://www.optcl.co.in> for detail specification.

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



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

**TENDER NOTICE NO-34/2012-13**

For and on behalf of the ODISHA POWER TRANSMISSION CORPORATION LTD., the undersigned invites bids under two-part bidding system in double-sealed cover, duly super scribed with tender specification number and date of opening, from manufacturers for supply of the following equipments, as required under the following specifications.

<b>Sl. No</b>	<b>Tender Specification No.</b>	<b>Description of equipments/ materials</b>	<b>Quantity</b>	<b>Earnest Money Deposit (In Rs.)</b>	<b>Cost of Tender Spec. document (in Rs.)</b>	<b>Last date of receipt &amp; opening of tender</b>
2.	Sr.GM-CPC-Telecom-LT-35/2012-13	(I) 800A,0.5mH Line Trap for 132KV System-	30 Nos.	64,800/-	10,000/- + VAT @5%	

The tender specification documents can be obtained from the office of the undersigned on payment of non-refundable cost of tender specification documents in the shape of cash from 10 A.M to 1 P.M during any working day from dt.10.01.2013 to 11.02.2013 (both days inclusive) either in person or by remitting demand draft payable to Drawing & Disbursing Officer, ODISHA POWER TRANSMISSION CORPORATION LTD., Regd. Office: Janpath, Bhubaneswar- 751 022. No tender documents will be sold on any other day except as indicated.

The specification can also be down loaded from OPTCL'S official web site and the same may be submitted along with the cost of tender document by way of demand draft/pay order payable to D.D.O., OPTCL Ltd. Janpath, Bhubaneswar at the time of submission of tender document. In case, any deviation is found in the tender document, submitted by the tenderer from the content mentioned in our web site and/or non-submission of the cost of tender documents, the tender shall be liable to be rejected at any stage of the contract. The tenderer has to indemnify OPTCL for any loss accruing due to such alteration in the terms and conditions of the tender document &/ or for such alternation, resulting, in the cancellation of the contract.

The intending bidders, who want to get a copy of the tender specification document by post, are required to deposit an additional amount of Rs.100/- (Rupees one hundred) only over and above the cost of the tender specification, mentioned against each Tender Specification under heading "Cost of tender specification". Complete bids for different items will be received up to 1.00 P.M. only and the same will be opened at 04.00 P.M. on the date

mentioned in the notice inviting tender. Date and time of opening of price bids shall be intimated to the techno-commercially responsive bidders only. In the event of any specified date for the sale, submission or opening of bids being declared a holiday for purchaser, the bids will be sold/ received/ opened up to the appointed times on the next working day. Only one representative of each bidder will be allowed to participate in the bid opening with valid identification certificate. OPTCL also reserves the right to accept or reject any or all tenders without assigning any reason thereof, if the situation so warrants. OPTCL shall not be responsible for any postal delay or loss at any stage.

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

**SR. GENERAL MANAGER  
CENTRAL PROCUREMENT CELL**



FAX NO:0674 – 2542964

TELEPHONE NO:0674 – 2541801

**ODISHA POWER TRANSMISSION CORPORATION LTD.  
CENTRAL PROCUREMENT CELL**

**JANAPATH, BHUBANESWAR – 751022**

**TENDER SPECIFICATION**

**NO.SR.G.M.-CPC-TELECOM- 35 / 2012-13**

**CONTAINING**

**PART – I**

**SECTION – I : INSTRUCTION TO TENDERERS**

**SECTION – II : GENERAL TERMS AND CONDITIONS OF  
CONTRACT ( G.T.C.C.) (COMMERCIAL)**

**SECTION – III: LIST OF ANNEXURES (SCHEDULES &  
PROFORMA)**

**SECTION – IV : TECHNICAL SPECIFICATION**

**PART – II PRICE BID.**

- 1. PRICE**
- 2. INSURANCE**
- 3. CERTIFICATE FOR EXEMPTION FROM  
EXCISE DUTY/ SALES TAX.**
- 4. PROPER FILLING OF THE PRICE SCHEDULE**
- 5. NATURE OF PRICE.**

**COMMERCIAL SPECIFICATION**  
**PART-I**  
**SECTION-I**  
**INSTRUCTION TO BIDDER.**

1. **Submission of Bids: -**

Sealed tenders in triplicate on two part bid basis, each complete in all respects, in the manner hereinafter specified are to be submitted in the office of Chief General Manager [Central Procurement cell], OPTCL, Bhubaneswar on or before the date and time specified against the relevant tender Specification in the notice inviting the tenders. Each copy of the bids [Original, duplicate and triplicate] shall be in separate double sealed envelopes, super scribed on each of the covers, the relevant tender specification number and the due date of opening of the bids on the top right hand side of the envelopes. On the top left sides, original/duplicate/triplicate as is relevant, shall be written. The participants to the tender should be registered under Odisha Sales Tax Act (VAT)/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 Tenderers.               |
| [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. **Tenders shall be in Two Parts**

The Bidder are required to submit the tenders in two parts each in separate double sealed covers. Part-I shall be super scribed as "E.M.D"., technical and commercial and Part-II shall be super scribed as "Price Bid"

4. **Opening of Bids.**

[a] The part-I shall be opened in the Office of the Senior General Manager [Central Procurement Cell] in presence of such of the Bidders or their authorized representatives [limited to one person only] on the due date of opening of tender. After scrutiny of the technical particulars and other commercial terms, clarifications, if required, shall be sought for from the bidders. The Bidder 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 Bidder, whose tenders 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 Bidder.
- [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 Tendered:**  
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 tenderer 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 tenders.**  
Tenders will be opened in the office of the Senior General Manager [C.P.C.] on the specified date and time in presence of the Bidder 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. The Senior General manager [C.P.C.] or his authorized representatives will, on opening each bid, read aloud the name of the bidder. He shall also read aloud the attested and unattested corrections and shall record the number of such corrections on each page of the Techno-Commercial Bid over his dated initials and also initial all such corrections.
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 tender specification are eligible to participate in the tender. They should submit the money receipt as a proof of such payment. Further, the tender specification can also be downloaded from OPTCL's website and the cost of tender specification, in such a case, shall have to be remitted along with the submission of tender papers. Tenders submitted by others will be rejected. Also tender specification downloaded from OPTCL website may not be taken as 100% correct due to website technical difficulties. So it is advisable to purchase hard copies from the office of the Sr. General Manager (C.P.C.), OPTCL Bhubaneswar.
9. **Purchaser's right to accept/reject bids:**  
The purchaser reserves the right to reject any or all the tenders 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 Tenders.**  
[A] Tenders shall be submitted in person or by Registered Post with AD. Any other means of delivery shall not be accepted. When delivered in person, the tenders shall

- be received by a responsible officer of the office of the Senior General Manager [C.PC.], OPTCL who shall officially acknowledge the receipt of the same. Tenders received after due date and time shall be returned un-opened.
- [B] **Telegraphic or FAX tenders** shall not be accepted under any circumstances.
11. **Earnest money deposit:**

The tender shall be accompanied by Earnest Money deposit of value specified in the notice inviting tenders. Tenders without the required EMD as indicated at **Annexure-VIII** will be rejected outright and their Part-II envelope will be returned to them, unopened.

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.

**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 tender failing which the tender 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 Bidder of different categories is placed at **Annexure-VIII.**
- (vi) In the case of un- successful Bidder, the EMD will be refunded after the tender 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. 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) Tenders not accompanied by Earnest Money shall be disqualified.

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

The tenders (only price Bid Part-II) should be kept valid for a period of **180** days from the date of opening of the tender, failing which the tenders will be rejected.

13. **PRICE: -**

Tenderers 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 tender price by Bidders: -**

- [a] After opening of tenders and within the validity of period, no reduction or enhancement in price will be entertained. If there is any change in price, the tender shall stand rejected and the EMD deposited shall be forfeited.
- [b] If required, the Bidder may be asked to extend the validity period of bids under the same terms and conditions as per the original tender except for the change in delivery period. In such an event, the Bidder are free to change any or all conditions of their bids including price at their own risk.



- 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 tenders. 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 tender.
- 16. Documents to Accompany Bids.**  
Bidders are required to submit tenders in the following manner:  
**Part-I of the Tender 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 Annexure, 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.
- 17. Documents/Papers to accompany Part-II Bid.**
- (a) Part – II of the tender 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) Over writing shall be avoided.
  - (ii) Erasures and other changes shall bear the dated initial of the person signing the tender.
  - (iii) 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
  - (iv) For evaluation, the price mentioned in words shall be taken if there is any difference in figures and words in the price bid.
  - (v) Notice inviting tender shall form part of this specification.
  - (vi) The price bids of the technically and otherwise acceptable bids shall only be evaluated. The price bids of others along with EMD, if any, shall be returned to the bidders un-opened.
  - (vii) Bidder can offer any lot or all the lots of the tender, if there are any lots. But the tender (bid) must be furnished separately for each lot. For each lot, the tenderer has to submit PART-I & PART-II of the bids separately.
  - (viii) The person signing the tender should sign on each page of the Tender paper in acknowledgement of having gone through the entire Tender Specification and in agreement thereof. Tender papers, not signed on each page with official seal by the bidder(s), shall not be considered.
  - (ix) 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.

**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 Chief General Manager [Central Procurement Cell] for and on behalf of ODISHA 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 tender, Notice Inviting Tender, 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 5 nos. of Technical personnel, when deputed by the Purchaser for acquiring first hand knowledge in assembly of the equipment and for it's proper operation and 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 Bank guarantee.
- [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 organizations 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 PSU. 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, 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 tenderers to study the specification, specified in the tender schedule thoroughly before tendering so that, if any deviations are made by the Tenderers,(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 tender. Unless deviations in scope, technical and commercial stipulations are specifically mentioned in the list of deviations, it shall be presumed that the tenderer has accepted all the conditions, stipulated in the tender specification, not withstanding any exemptions mentioned therein.

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

The purchaser reserves the right either to reject or to accept any or all tenders if the situation so warrants in the interest of the purchaser. Orders may also be split up between different Tenderers on individual merits of the Tenderer. 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 Tenderer 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 tenderers, 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-III A & III B (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 judgment 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 judgment 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 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 stores / 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:**

- (a)[i] For manufacturers situated Inside & out side the state of Odisha.

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, shall be furnished from any nationalized/scheduled bank having a place of business at Bhubaneswar, to the office of Chief 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.
- (b)[i] The successful bidder is required to submit Security Bank Guarantee for 100% [hundred percent] of the total buy back cost of the old battery sets from any nationalized/scheduled bank having a place of business at Bhubaneswar, to the office of Chief 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 till lifting of old batteries , 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 required 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 installation & commissioning 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) **Payment of Freight & Insurance charges and Entry Tax.**

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

(iii) **Entry Tax:-**

The Entry Tax shall be payable by OPTCL, as the way bill shall be issued for the materials & equipments to be purchased. However if the Entry Tax is to be paid by the supplier / firm, the same shall be reimbursed on production of documentary evidence.

**[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 receipted challan 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 will not be rectified by the supplier within the guarantee period, 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 awaiting 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 tender. Pan card Xerox copy of the firm shall be enclosed with the tender.
- 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 Tenderers. The Supplier(s) shall be responsible for any discrepancy noticed in the documents, submitted by them alongwith 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 tender, failing which the tender 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 plus installation & commissioning charges. 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 tenders clause-34 of this tender, relative quality, adaptability of Supplies or services, experience, financial soundness, record of integrity in dealings, performance of materials/equipments 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.

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

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

- i) The bidder should have manufacture and supply experience of above rated or higher capacity equipments for a minimum period of 2 (two) years as on the date of opening of the tender
- ii) At least 50% of the tendered 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 2 (two) 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 tendered equipments in Government approved laboratory within last five years from the date of opening of the tender.

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

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 Odisha extends.

**32. Correspondences.**

- i) Any notice to the supplier under the terms of the contract shall be served by Registered Post/Speed 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.
- iii)

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

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

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

**34. Outright Rejection of Tenders**

Tenders shall be outrightly rejected if the followings are not complied with.

- [i] The Tenderer should have purchased/obtained the Bid specification document from the office of the Purchaser or downloaded the same from website of OPTCL, but shall deposit the tender cost, while submitting the tender.
- [ii] The Tender shall be submitted in person or by Registered Post with A.D.
- [iii] The Tender shall not be submitted telegraphically or by FAX.
- [iv] The Tender shall be accompanied by the prescribed Earnest Money deposit.The validity of the EMD in the form of bank Guarantee shall be at least for 240(two hundred forty) days from the date of opening of tender failing which the tender will be liable for rejection.
- [v] The Tender shall be kept valid for a minimum period of 180 days from the date of opening of tender.
- [vi] The Tender shall be submitted in two parts as specified.
- [vii] The Tenders shall be accompanied by a list of major supplies effected prior to the date of opening of tender. Data of at least 2 (two) years shall be furnished.
- [viii] Tender shall be accompanied by Photostat copy of latest type test certificates (for the tests, carried out on the tendered equipments, being offered). Such type tests should have been conducted within last five years from the date of opening of this tender in a Government approved laboratory/CPRI in presence of any Government Organization'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 tender liable for rejection. Vide Clause-4(ii) of Part-II.
- [x] The Tenderer 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 tender.
- (xi) Tender shall be accompanied by legibly written user's certificate to prove the satisfactory operation of the offered equipments/materials for a minimum period of 2 (two) years from the date of commissioning/use as per the tender 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.

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

The supplier shall treat the details of the specification and other tender 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]**

The following schedules and proformas 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

# ANNEXURE - I

## DECLARATION FORM

TO

The Chief General Manager (CPC)  
OPTCL Head Qrs.BBSR,751022

Sub:- Tender Specification No-\_\_\_\_\_

Sir,

1. Having examined the above specification together with terms & conditions referred to therein \* I/We the undersigned hereby offer to supply the materials/equipments covered therein complete in all respects as per the specification and General conditions, at the rates, entered in the attached contract schedule of prices in the Tender.
2. \* I/We hereby undertake to have the materials/equipments delivered within the time specified in the Tender.
3. \* I/We hereby guarantee the technical particulars given in the Tender supported with necessary reports from concerned authorities.
4. \* I/We certify to have purchased/ downloaded a copy of the specification by remitting \*cash/money order/D.D./ remitting the cost of tender, herewith and this has been acknowledged by your letter/ money receipt No. Dated,
5. In the event of Tender, being decided in \*my/our favour, \* I/We agree to furnish the Composite B.G. in the manner, acceptable to ORISSA POWER TRANSMISSION CORPORATION LTD., and for the sum as applicable to \*me/us as per clause-19 of section-II of this specification within 15 days of issue of letter of intent/purchase order failing which \*I/We clearly understand that the said letter of Intent/Purchase order will be liable to be withdrawn by the purchaser, and the EMD deposited by us shall be forfeited by OPTCL.

Signed this

day of

2010

Yours faithfully

Signature of the Tenderer with seal of the company

[This form should be dully filled up by the tenderer and submitted along with the original copy of the tender]

\* (Strikeout whichever is not applicable).

**ANNEXURE-II**  
**ABSTRACT OF GENERAL TERMS AND CONDITIONS OF**  
**CONTRACT [COMMERCIAL] TO ACCOMPANY PART-I**

1	(a) OPTCL Money Receipt No. & Date towards purchase of Tender. (b) Earnest money furnished. <b>(A)</b> Bank Guarantee, <b>(B)</b> Bank Draft.	
2	Manufacturer's supply experience including user's certificate furnished or not.[As per clause No.7 of Section-II.]	Yes/No
3	A)Deviations to the specification if any  [list enclosed or not As per clause-9 of the Section-II]	(a) Commercial Yes/No (b)Technical. Yes/No  (a)Commercial Yes/No (b)Technical. Yes/No
4	<b>Delivery</b> (period in months from the date of purchase order)	
5	<b>Guarantee:-</b> Whether agreeable to OPTCL's terms. [As per clause-18 of Section-II]	Yes/No
6	Whether agreeable to furnish Composite B.G. in case his tender be successful [As per clause-19 of Section-II]	Yes/No
7.	<b>Terms of payment:-</b> Whether agreeable to OPTCL's terms or not[As per clause-21 of Section-II]	Yes/No.
8.	Nature of price:- FIRM	Yes/No
9.	<b>Penalty:-</b> Whether agreeable to OPTCL's terms or not (As per clause-22 of Section-II)	Yes/No
10.	Whether STCC/ P&L A/C, Balance Sheet for the required period are furnished as per clause-25 of Section-II	Yes/No
11.	<b>Validity:</b> - Whether agreeable to OPTCL's terms or not [As per clause-28 of Section-II]	Yes/No
12.	Whether recent type test certificates from any Government approved laboratory are furnished or not. [As per clause-34[viii] of section-II]	Yes/No
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.	
17.	Whether registered under Odisha Sales Tax Act. 1947/Orissa VAT act 2004	Yes/No
18.	Whether declaration form duly filled in furnished or not.	Yes/No.
19.	Whether MODVAT benefit in any has been fully passed on to the purchaser	Yes/No.

**Place: -**

**Date: -**

**Signature of the Tenderer**  
with seal of the company

**ANNEXURE-III**  
**SCHEDULE OF QUANTITY AND DELIVERY**  
 (To be filled up by the tenderer )

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

Place:

Date:

Signature of Tenderer  
with seal of Company

## ANNEXURE-IV

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

1	Price basis	F.O.R. Purchaser's destination Stores/site.
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 in any has been fully passed on to the purchaser	Yes/No.

Place

Date:

**Signature of Tenderer  
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.

### 1) SCHEDULE OF PRICES TENDER SPECIFICATION No.

Item No.	Description.	Unit	Qty	SUPPLY in INR Rs.									
				Unit Ex-factory Price.	Unit Packing & Forwarding.	Unit Freight Charges.	Unit Insurance Charges.	Unit landing cost at destination store/site excluding ST,ED & Entry tax.	Unit E.D.	Unit S.T.	Unit Entry Tax.	Unit landing Cost including All taxes & Duties.	Total landing cost Including all taxes & duties.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	#	Nos											

Signature of Bidder  
Name, Designation and Seal

NB: -

- I. The Bidder should fill up the schedule properly and in full. The tender will be rejected, if the schedule of price is submitted in incomplete form. No post tender correspondence will be entertained on break-up of prices. Also, the supplier should agree for delivery at Stores / Site.
- II. 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.
- III. The Bidder shall certify in the price bid that MODVAT benefit, if any, has been fully passed on to the purchaser while quoting the tender price.
- IV. Conditional offers will not be acceptable.
- V. The Bidder is to clearly indicate the period up to which the tax holidays are available to them.
- VI. Price bid in any other format will not be acceptable and the offer will be rejected.
- VII. 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 1
- Date \_\_\_\_\_ Bank Guarantee No: \_\_\_\_\_
- 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 \_\_\_\_\_
- \_\_\_\_\_ wis  
h/wished to participate in the said tender 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 Branch at Bhubaneswar (indicate the detail address of the branch) in the state of Odisha.

Notwithstanding anything contained herein :

- (i) Our liability under this Bank Guarantee shall not exceed Rs..... (Rupees .....
- (ii) Bank guarantee shall be valid up to .....
- (iii) We are liable to pay the guarantee amount or any part thereof under this Bank Guarantee only, if you serve upon us at Branch at Bhubaneswar (Address of the Branch) in the State of Odisha a written claim or demand on or before .....

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

For \_\_\_\_\_

Witness(Signature, names & address)

[Indicate the name of Bank]

- 1.
- 2

## ANNEXURE-VII

### PROFORMA FOR COMPOSITE BANK GUARANTEE FOR SECURITY DEPOSIT, PAYMENT AND PERFORMANCE

- This Guarantee Bond is executed this \_\_\_\_\_ day  
of \_\_\_\_\_ 20 \_\_\_\_\_ 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 notwithstanding 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 Branch at Bhubaneswar (detail address of branch) in the state of Orissa.

Notwithstanding anything contained herein :

- (i) Our liability under this Bank Guarantee shall not exceed Rs..... (Rupees .....
- (ii) Bank guarantee shall be valid up to .....
- (iii) We are liable to pay the guarantee amount or any part thereof under this Bank Guarantee only, if you serve upon us at Branch at Bhubaneswar (detail address of branch) in the State of Odisha a written claim or demand on or before .....

Date at \_\_\_\_\_ the, \_\_\_\_\_ day of \_\_\_\_\_  
Two thousand \_\_\_\_\_

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

Witness (Name, Signature & Address)  
1.  
2.

## **ANNEXURE-VIII**

### **CHART SHOWING PARTICULARS OF EARNEST MONEY DEPOSIT FURNISHABLE BY TENDERERS**

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

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

- [a] In case of unsuccessful tenderers, the EMD will be refunded immediately after the tender is decided. In case of successful tenderer, 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 tenderer 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 MVA rating, voltage class, Impulse level, 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 tenderer  
Name, Designation, Seal





**ANNEXURE-XI**  
**SCHEDULE OF INSTALLATIONS.**

<b>Details of equipment, offered.</b>	<b>Rated Voltage</b>	<b>Place of installation and complete postal address</b>	<b>Year of commissioning</b>

**Place: -  
Date**

**Signature of Tenderer:  
Name, Designation, Seal**

## **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 tender prices.
- (iv) Offer for discount if any should be submitted inside the sealed envelop for price bid in percentage term only, to arrive at Unit Landing cost. Any conditional offer for discount shall be considered.
- (v) Destination of Delivery of materials: Within the jurisdiction of Odisha and shall be intimated at the time of issuing of despatch clearance (materials are likely to be delivered at the designated Grid S/S the list of which is annexed with Tech. Specification).

**2. INSURANCE :**

Insurance of materials/equipments/materials, 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/materials 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/materials damaged or lost which will be reported by the Consignee within 30 days of receipt of the equipments/materials/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 tender 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.



**ODISHA POWER TRANSMISSION CORPORATION  
LIMITED**

**OFFICE OF THE CHIEF GENERAL MANAGER,  
CENTRAL PROCUREMENT CELL,  
JANPATH, BHUBANESWAR – 751022**

**SECTION -IV  
TECHNICAL SPECIFICATION  
FOR**

**800A,0.5mH LINE TRAP FOR 132KV SYSTEM- 30 NOS.**

1. **SCOPE:**

This specification covers design, manufacture, testing before dispatch, delivery at site (Store)

The outdoor coupling for the above may be phase to phase or phase to ground as the situation demands. Bidders are required to quote the above materials along with the following documents.

- (a) Guaranteed Technical Particulars.
- (b) Technical Literatures, brochures and drawings as per this specification.
- (c) Type Test Reports.

2. **BASIC REQUIREMENTS:**

(i) All the work shall conform to the IE Rules, 1956, unless modified by this specification.

(ii) All the materials and equipment offered under this specification shall comply in all respects with the provisions of the latest editions of the relevant British or Indian Standards specification and / or equivalent standards of the country or manufacture. Such standards must be clearly stated by the tenderer.

(iii) Basic design data, drawings and descriptive literature explaining the details and functions of the component parts, all necessary fixings etc. must accompany the tender.

(iv) **CLIMATIC AND SERVICE CONDITIONS:**

The outdoor equipments are required to operate satisfactorily under the following conditions.

- (a) Maximum ambient temperature: – 50 degree C.
- (b) Maximum daily average ambient air temperature:- 45 degree C.
- (c) Maximum relative humidity:- 100%
- (d) Altitude not exceeding:- 1000 M.
- (e) Maximum wind pressure:- 260kg / sq.m .
- (v) **OPERATIONAL CONDITIONS:**

All equipments and devices shall be capable of continuous satisfactory operation on AC and DC supplies of nominal voltage, mentioned above with variations as given below.

- (a) AC voltage variation:- 10%
- (b) Frequency variation:- 0.5%
- (c) Combined voltage & frequency variation:- 0.10%
- (d) DC voltage variation: 190V to 240V DC.

(vi) **INSTALLATION:**

The Line Traps covered under this specification shall be suitable for outdoor installation without any protection from rain, mist and direct rays of the sun.

**A. GENERAL TECHNICAL REQUIREMENTS FOR LINE TRAPS**

A.1. **STANDARDS:-**

The line traps shall conform in all respects to high standards of Engineering design, workmanship and latest revision of relevant standards at the time of offer and the purchaser shall have the full power to reject any material which is not in full accordance therewith.

Except to the extent modified in the specifications, line traps shall conform to the latest editions and the amendments of the standards lists here under.

SI.No.	Standard ref. No.	Title
1	1271; 1971	Thermal evaluation and classification of electrical insulation (first revision)
2	2165 (Part 1) ; 1977	Insulation coordination : Part 1 Phase to earth insulation coordination
3	3070 (Part 1); 1985	Specification for lightning arrestors for alternating current systems: Part 1 Non-linear resistor type lightning arrestor (2 <sup>nd</sup> revision)
4	8826:15:00	Line traps for AC power systems – Methods of tests (first revision)
5	IEC -171	Insulation coordination
6	IS – 2071	Method for high voltage testing
7	IS - 2165	Degree of protection provided by enclosures for low voltage switch-gear and control

#### A.2. TECHNICAL PARTICULARS:

1. Each Sub-Station terminal of a line section meant of coupling the carrier equipments to the line conductors shall be provided with a line trap or wave trap in order to prevent undue attenuation in the H.F. carrier channels under all power system conditions and to by-pass different line sections for minimizing interference and also to prevent interruption of the channel when ground switches are closed on Substation side.
2. The wave traps shall be designed to block the carrier frequency currents efficiently but to allow the normal 50 cycle power currents to flow .
- 3.(a) The wave traps shall be of broadband type and suitable for blocking the transmitting and receiving frequencies. The relative component of impedance of the wave trap within the bandwidth shall not be less than 570 ohms.  
(b) The Bidders shall specify the bandwidth of the wave traps. The characteristic impedance of the H.T. line may be assumed to be 400 ohms, for phase-to earth coupling and 600 ohms for inter phase / inter circuit coupling.
4. Since the wave traps are connected in series with the power line, these shall be capable of carrying the maximum continuous rated (full load) power current as well as the short time fault circuit currents incident to the line at the maximum ambient temperature.
5. The line trap shall be suitable for outdoor pedestal mounting and mechanically strong to withstand the stresses due to maximum wind pressure of 195 Kgs / Mt<sup>2</sup>. Necessary clamps for installing the wave traps on the pedestal structure should be supplied along with the clamps for ACSR jumpers at the connecting terminals of wave traps to High Tension line or station equipment. Besides, the special clamps and mounting stool of non-magnetic material for pedestal mounting of W.T. may also be provided.
6. The main coil of the wave traps may be of heavy copper cable or Aluminum wound on a porcelain cylinder or any impregnated fibrous materials. The insulating spacers separating the turns of the main coil shall be of completely weather proof to guard against ingress of moisture and decay. It shall be supplemented with a tuning device and a protective device.
- 7.(a) **The auxiliary tuned circuits viz,** tuning coils tuning condensers and damping resistors shall be built in a porcelain container which shall form a part of the trap. Lightning arrestors shall be provided to by-pass the surges across the coil.

- (b) The wave trap shall be provided with a **protective device which shall be designed and arranged** that neither significant alternation in its protective function nor physical damage shall result from temperature rise or the magnetic field of the main coil at continuous rated current or rated short time current. The protective device shall neither enter into operation nor remain in operation following transient actuation for the power frequency 50 c/s voltage across the line trap by the rated short-time current.

The protective device shall be shunt connected to the main coil and the tuning device. For proper co-ordination with the station lightening arrester installed in the Sub-station, the line traps shall be provided with protective device with nominal discharge current of 10 KA

8. All metal parts shall be of non-magnetic material to eliminate heating due to intense magnetic field of the wave trap under heavy load conditions.
9. Sharp corners on the outer surface of the trap shall be avoided to minimize corona losses.
10. The whole trap being designed for the outdoor plant, shall be treated with a special silicon varnish or any other varnish as per Maker's standard practice in order to provide the equipment with a very high electrical insulation adequately rated for weather resistant and extended life.
11. The bird Barriers for preventing the birds form entering into the interior of the traps to be supplied at the top and bottom ends of wave trap.
12. **The wave traps shall confirm to IEC 353 of 1989 or IS-8792-1978 standard and the following parameters.**

<b>Parameter</b>		
	<b>Rated System Voltage (KV)</b>	132 KV
a)	Maximum system voltage on Which Wave traps are to be Used (KV)	145
<b>b)</b>	<b>Rated continuous current at power frequency (A)</b>	800
<b>c)</b>	<b>Rated short-time current Duration 1 second (KA)</b>	32
d)	Asymmetric peak value of the first half Wave of rated short time current (KA-Peak)	41
e)	Minimum resistive components of Impedance within the bandwidth (Ohms)	570
f)	Nominal discharge current of protective device (KA)	10
g)	Attenuation at the tuned Frequency (db)	1.5
h)	Change in resonant frequency due to Ambient temperature variation (%)	NIL
i)	Change in resonant frequency to Submit temperature variation (%)	Not more than 0.01% per °C
j)	Ultimate tensile strength	15,000 Lbs / 6,750 Kgs
k)	Details of protection	As per specification
<b>l)</b>	<b>Type of tuning</b>	Broad band

The test certificate for "one minute short-time current" performed in CPRI laboratory, Bangalore or any other recognized laboratory in India shall be furnished along with the tender in order to consider the offer.



Besides the above particulars, the frequency response curve for different ranges and the corresponding choking frequency value as level ratio at the coil terminals may also be furnished in the tender. The dimension and weight of the unit shall be indicated.

The tenderer shall offer wave trap of 0.5 m H inductance and shall specify various bandwidths for minimum resistive component of impedance being not less than 570 ohms. The tenderer shall be at liberty to quote line traps having higher inductance so that a larger band width is covered by the line traps. The wave traps included in this specification will have a blocking band from 90 KHz to 500 kHz preferably.

#### A.3. **FEATURES:**

- High Operational security should be ensured by full inter term insulation with epoxy impregnated glass fiber.
- High short circuit strength inherent with continuous filament fiberglass “roving” and vertical and horizontal ties.
- Self supporting, solid structures formed by encapsulation technique. Epoxy resins compatible with the glass fiber under thermal shock condition.
- Should be conditioned to withstand extreme temperature fluctuations and weather condition.
- Tuning Element should be designed having components carefully selected to give the optimum performance under all conditions of service.
- Stranded conductors should be used to minimize losses due to eddy currents. Noise levels at full load current should be kept very low.
- Atmospheric pollution and climatic changes should not affect the performance.
- The terminal supporting spider should be reinforced to withstand the short circuit forces during fault conditions.
- Corona Ring provided should maintain the RIV voltage levels low and within specified limits. The line trap on 132kV lines shall show no visual corona discharge at a voltage of 105kV rms power frequency falling voltage.
- The lightning arrester to be used as protective device for main coil shall be station class current limiting active gap type. Its rated discharge current shall be 10KA. Coordination shall be done by taking 20kA at 8/20 micro-second discharge current into account. Bidder has to furnish, full justification in case the use of gap-less metal oxide arrester offered by them.
- The lightning arrester provided with the line trap of each rating shall fully comply with the requirement of IS 3070-Part I (1974) / IEC 99-I (1970) Part-I. It shall conform to type tests as applicable and test certificates shall be submitted by the bidder. Further it shall be subjected to routine and acceptance tests as per IEC 99-(1970) Part-I

#### A.4. **RATING PLATES**

The **line trap** shall be provided with a rating plate of weatherproof material, fitted so that it is readily visible. The inscriptions shall be indelibly marked. The rating plate shall give the following data:

- Manufacturer’s name
- Type and serial number
- Rated inductance in m H
- Rated continuous current in amps
- Rated short time current in kA
- Rated frequency in Hz
- Temperature category

- Insulation level
- Diagram showing the terminal marking
- Year of manufacture
- Total mass in kg

Each **tuning unit** shall also be provided with a rating plate giving the following information:

- Manufacturers name
- Type and serial number
- Frequency band in kHz
- Rated impulse protective level of tuning unit
- Blocking Impedance (minimum value) in ohm
- Belonging to main coil with rated inductance (m H) and serial number (optional).

The Bidder shall submit along with his bid, typical drawings clearly indicating the features of the line traps, line trap mounting arrangement and terminal connectors.

#### **A5. TESTS:**

The offered Line Traps should be subjected to the following type tests in any Government approved Testing laboratories. These tests must not have been conducted earlier than five years from the date of opening of the bid. For any change in the design / type offered against this specification, the purchaser reserves the right to demand repetition of some or all type test without any extra cost to OPTCL in the presence of representative of the purchaser at the cost of the supplier.

##### **A5.1 TYPE TESTS:**

- Short-time current test for thermal behavior.
- Test for short circuit performance.
- Test for Switching performance.
- Test for Temperature rise performance.
- Test for Di-electric performance.
- Corona inception / Extinction test.
- Radio Interference Voltage test.
- Lightning Impulse Voltage test.
- Power frequency Voltage withstand test.
- Insulation Level Test of Main coil and Tuning Device.
- Test for Power Losses of the main coil.
- Test for normal discharge current of protective Device.

##### **A.5.2 ROUTINE TESTS:**

The following routine tests shall be conducted on each LT. No sampling is allowed.

- Verification of Markings provided with the rating plate for main coil, tuning device and protection device.
- Measurement of Inductance of main coil.
- Measurement of Rated continuous current (A).
- Measurement of Rated short-time current (kA)
- Measurement of Blocking Resistance & blocking Impedance
- Tapping Loss Test.

## **GUARANTEED TECHNICAL PARTICULARS**

(G.T.P. is to be filled up by the tenderer)

### **LINE TRAP**

1. Name of manufacturer and country.
2. Type, Model, Catalogue No.
3. Inductance of main coil, in Milli Henries.
4. blocking range (resonant frequency range)
5. Minimum Guaranteed resistive component over blocking range.
6. Type of tuning.
7. Variation in 50 Hz impedance per degree centigrade over variation in ambient temperature.
8. Variation in resonant frequency band per degree centigrade change in ambient temperature.
9. Details of protection of capacitors and coils against voltage surges.
10. Impedance at tuned frequency.
11. Change in impedance per degree centigrade variation in ambient temperature.
12. Material of main coil.
13. Attenuation at the tuned frequency band.
14. Attenuation at the distance of 10 Kc/s from the tuned frequency band.
15. Maximum tapping loss (insertion loss with a line impedance of 400 ohms)
16. System voltage rating in KV
17. Continuous current rating in Amp. At ambient temperature of 45 degree centigrade.
18. Continuous current rating in Amp. At ambient temperature of 65.5 degree centigrade.
19. Max symmetrical short circuit current rating for 1 Sec Duration in K.A.
20. Asymmetrical peak value of first half wave or rated short time current.
21. Dynamic limiting current.
22. Rated current and corresponding voltage.
23. Type of incoming and outgoing terminals.
24. Residual voltage at 10 KA peak.
25. Type of mounting.
26. Class of insulation of Line trap as per Table – 1 or IDC-353.
27. Whether corona rings are provided.
28. Whether bird barriers are provided.
29. Dimension of the equipment.
  - a) Height.
  - b) Diameter
30. Net Weight.
31. Gross Weight.

### **Lightning arrester for the line trap**

32. Type of mounting.
33. Make and type of lighting arrester.
34. Rated voltage of arrester (Protective device)-KV (rms).
35. Nominal discharge current for 8/20 micro-second wave impulse.
36. Discharge voltage at 10 KV.
37. Min power frequency spark over voltage (wet or dry) KV (rms).
38. Maximum 1/50 micro-second impulse spark over voltage-KV (peak).

- 39. Impulse withstand voltage of main coil and tuning unit.
- 40. nominal discharge current of protective device.
- 41. Extinction potential of arrestor.
- 42. Max. residual discharge voltage for 8/20 microsecond wave.
  - a) at 500 Amps.
  - b) At 100000 Amps.
- 43. Impulse current withstand voltage of LA.
  - a) Long duration.
  - b) High current.
- 44. Residual voltage at 10 KV peak.

