Sealed quotation / tender are invited office of D.G.M.(T) O&M (East), Room No. 105, 220KV Office Complex, Patpar Ganj, Delhi-110 092 from the experienced companies/contractors in relevant business for the following works:-

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Quotation/ Tender Enquiry No.</th>
<th>Name of Work</th>
<th>Estimated Cost(Rs)</th>
<th>Earnest Money Deposit (EMD) (Rs)</th>
<th>Quotation/Tender Fee(Rs)</th>
<th>Work Completion period</th>
<th>Scheduled Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enquiry No.- F.DTL/206/ Mgr.(T) O&amp;M E-2 2020-21/ Q- 14/F-1 Dt. 24.06.2020</td>
<td>Supply of 33 kV Out Door PT as per DTL Specifications at 220kV S/Stn Patparganj under Manager (T) O&amp;M E2.</td>
<td>N/A</td>
<td>Rs.1000/-</td>
<td>N/A</td>
<td>30 days</td>
<td>Start of Sale of Quotation / Tender 25-06-2020 at 10:00 A.M.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Start of Bid Submission 25-06-2020 w.e.f. 11:00 A.M.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>End of Sale of Quotation / Tender 07-07-2020 up to 5:00PM</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>End of Bid Submission 08-07-2020 up to 10:30 A.M</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Opening of Quotation/ Tender 08-07-2020 at 11:30 AM</td>
</tr>
</tbody>
</table>

The quotation form & other documents can be obtained from the office of Manager(T) O & M –E-II, 220KV Sub-Station Patparganj, Office Complex, Near Urja Vihar, Mandawali, Delhi-110092. The request for obtaining of quotation document should be made on original letter head of the party and should contain the signature along with seal/stamp of contractor showing his competency as partnership, proprietorship, authorized signatory etc. In case the request is to issue the quotation document to the bearer of the application then the request should contain clearly the name of the bearer and attested/authenticated signature of the bearer of the application.

These things should also be clarified while submitting offer and other documents with the offer. In case of any difference in the address in the documents submitted by the contractor then that should also be clarified properly.

The quotation will be submitted & opened at Office of D.G.M.(T) O&M (East) , Room No. 105, 220KV Office Complex, PatparGanj, Delhi-110 092. Complete Quotation/Tender documents can also be downloaded from the website of DTL http://www.dtl.gov.in.

Contd.2/-

Signature of the contractor with stamp

Page 1 of 12
NOTE:

1. The face of the envelope of quotation/enquiry must have following details, failing which the Quotation shall not be opened/considered & liable to be rejected.
   a) Name of work/supply.
   b) Enquiry No. / Tender No. with Date.
   c) Date of opening.
   d) Details of Earnest money fee, FDR/DD/Pay Order No. with Date and Amount., Name of Bank & Branch. In case bidder is claiming exemption of EMD Deposit as per Government rules, Such exempted category bidders claiming E.M.D. exemption shall mention the exemption certificate registration No. issued by relevant govt. agency, on the bid envelope failing which their bid shall liable to be rejected.
   e) EMD Fee should be in favour of “DELHI TRANSCO LIMITED” payable at Delhi.
   f) Name and address of the party.
   g) Registration No., if any.
   h) Validity period of quotation must be 120 days from the date of opening.

2. Incomplete quotations are liable to be rejected. Offer must be signed by the contractor with rubber stamp. Rates quoted should be inclusive of all taxes & duties etc.

3. Other terms and conditions as per Annexure -‘A’ & ‘B’ shall also be applicable.

Manager (T) O&M-E II

Signature of the contractor with stamp
Enquiry No.F.DTL/206/2020-21/Mgr(T) O&M-E2/Q-14/F-1

D/400, Office Complex, Patparganj, Delhi-110092

Enquiry Date: 24.06.2020.

M/s. __________________________
______________________________

Date of Opening: 08.07.2020.

Subject: - Supply of Outdoor Type 33kV P. T. as per DTL Specifications at 220kV S/Stn Patparganj

Under Manager (T) O&M E2.

It is requested to quote the rates in the following format with terms and conditions mentioned hereunder and as

per Annexure- "A" & "B", enclosed herewith in the sealed envelope:-

<table>
<thead>
<tr>
<th>S. No.</th>
<th>HSN Code</th>
<th>Description of items</th>
<th>Unit</th>
<th>Qty. in Nos.</th>
<th>Rate (Rs.)</th>
<th>GST applicable %</th>
<th>Unit Rate inclusive of GST</th>
<th>Amount (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>PT, O/D, Single Phase 33KV/√3//110V/√3, 33KV, Acc Cl 0.2, as per DTL Specifications “Annx-“B”, along with relevant test certificates and complete with terminal connectors.</td>
<td>Nos</td>
<td>01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Grand Total Inclusive of All Taxes

NOTE:

1. In case the enquiry document is downloaded from the web site then the enquiry document fee should be

   enclosed with offer, clearly specifying the same on the face of offer envelop.

2. The face of the envelope of quotation/enquiry must have following details, failing which the

   Quotation shall not be opened/considered & liable to be rejected.

   a) Name of work/supply.
   b) Enquiry No. / Tender No. with Date.
   c) Date of opening.
   d) Details of Earnest money fee, DD/Pay Order No. with Date and Amount., Name of Bank.
   e) Name and address of the party.
   f) Validity period of quotation must be 120 days from the date of opening.

3. Incomplete quotations are liable to be rejected. Offer must be signed by the contractor with rubber stamp.

4. Rates quoted should be inclusive of all taxes & duties etc.

Other terms and conditions as per Annexure -‘A’ & ‘B’ shall also be applicable.

Manager (T) O&M E-II

Signature of the contractor with stamp
1 **RATES**: The rates quoted shall be firm and including of all taxes, duties etc. The rates should be quoted based on the units specified in words as well as in figures without any cutting, in case of difference of values/rates in figures and words or any confusion it will be constituted to take the rates, which are lowest.

2 Following document should be submitted along with the offer, failing which offer is liable to be rejected.
   a). Copy of Permanent Account No.(PAN).
   b). Copy of GST registration / GST Receipt.

3 **Qualification Requirement**: Bidder should submit the copy of supply/works Purchase Order copy along with satisfactory performance / completion report of similar work i.e. Supply of Sub-station Electrical Spares for EHV equipment’s &/or CT / PT of 33kV &/or Repairing of CT/PT of 33kV and above and above executed in DTL / other State transmission utility / Govt Deptt. / Distribution Power utility during last 07 years with satisfactory completion / performance of similar material. Offer submitted without satisfactory completion report and P.O. copy is liable to be rejected.

4. **SECURITY**: The successful tenderer shall have to deposit the security at @ 10% of the total contract value for the proper performance of the contract within ten days of receipt of purchase order in the office of Manager (T) O&M E2 / A.M. (T) 220kV Patparganj, failing which a penalty @ 0.05% per week subject to maximum of 2% shall be imposed. Security shall be submitted in the form of FDR/BG for the guarantee/warrantee period & mentioning the maturity date. FDR/BG shall be in f/o DELHI TRANSCO LIMITED payable at Delhi and no interest is payable by DTL on the amount of security amount deposited by the Tenderers/Contractor. The security will be refunded after the expiry of guarantee / warrantee of materials and no any dues rest upon the contractor, if any.

5. If there is no improvement in proper execution of the order as per terms & conditions of this order, the order shall be cancelled within 15 days with written notice to you and no claim for damage will be entertained.

6. **INSPECTION**: The materials during or after manufacture could be inspected at the works if considered necessary. DTL also reserves the right of getting the material tested for metallurgy at the cost of Bidder if so desired by approving officer.

7. **MATERIALS / WORK APPROVAL**: The Materials to be supplied shall strictly as per the specifications & material shall have to be got approved by Asstt. Manager (T) 220kV S/Stn. Patparganj.

8. **Delivery period / Completion period and Penalty**: - Contractor will be bounded to supply of materials mentioned as per specifications within 30 days from the date of receipt of PO failing which a penalty shall be imposed @ 0.5% per week subject to Maximum 10% on delayed portion of the order value to be supplied.

9. **Guarantee / Warranty**: - The materials shall be guaranteed for 06 month from the date of commissioning and 12 month from the date of supply of materials whichever is earlier.

10. **PAYMENT**: Payment shall be made as per DTL norms through ECS after receipt and approval of materials & submission of bill by the party in the office of Manager (T) O&M E2 / A.M. (T) 220kV Patparganj.

11. **REJECTED MATERIAL**: The contractor will have to replace/repair free of cost such quantity/quantities, which may not be accepted due to defect or inferior quality/poor workmanship within 10 days from the date of information in this respect. Rejected materials shall have to be removed within a fortnight from the date of intimation against replacement, failing which the Deptt. shall have the right to dispose them off in any manner it likes and DTL will have the right to procure the material at the cost of the contractor. The difference of the cost shall be recovered from the contractor.

**Signature of the contractor with stamp**
12. **ARBITRATION:** If any dispute/question of controversy arises between DTL and contractor relating to the contract/order or any clause or thing contained therein, the dispute shall be referred at the arbitration of G.M.(O&M)-II or his nominee and the decision of the G.M.(O&M)-II or his nominee shall be final and binding on both the parties.

13. **EXEMPTION:** Earnest Money is to be deposited by all tenderers/bidders, whether registered with DGS&D/NSIC/DTL or such bodies except the exempted categories as per the relevant government rules like small scale enterprises etc. Such exempted category bidders claiming E.M.D exemption shall enclose the verified copy of exemption certificate issued by relevant govt. agency, along with the bid failing which their bid shall liable to be rejected.

14. **INTEREST & REFUND OF EMD:** EMD Shall be submitted in the form of Bank Draft / Demand Draft / Pay Order in favour of DELHI TRANSCO LIMITED payable at Delhi & also in the form of FDR/BG and no interest is payable by DTL on the amount of Earnest Money deposited by the Tenderes/Contractor. Earnest Money is held by DTL till obligations are satisfactorily and completely discharged by the Tenderer/Contractor. The amount of the Earnest Money shall be refunded to the unsuccessful bidders immediately after decision taken by the authority competent to accept the tenders and for successful bidder EMD shall be refundable after submission of security deposit after receipt of request from the bidder.

15. **BLACK LISTING:** Any Party making post tender development directly or indirectly may be black listed for a period up to 3 years. In case tenderer amends/modifies/revise/withdraws the prices/price structure of the offer without the consent of Delhi Transco Limited, after the tender opening and during the period of validity of their offer (i.e. 120 days), the Earnest Money in full or part deposited by them shall be liable to be forfeited or their offer liable to be rejected. They shall also be debarred from participating in future tenders of DTL for the period ranging from 1 to 5 years and shall be placed under Black List. If the supplier fails to supply the material in full or in part within stipulated delivery period specified in the purchase order of material/equipment is found to be defective or failing of fulfill the Guaranteed Performance of the Contract as specified in the Purchase Order, they shall be debarred or black listed from participating in future tender of DTL for the period ranging from 3 to 5 years.

16. **CONTRACTOR’S REPRESENTATIVE:** The contractor shall depute authorized representative or assign this job to skilled man for execution of the contract, who shall be available for communication during any time, and he shall represent the contractor in his absence & all directions give to him shall be binding on the contractor.

17. **DEDUCTION FROM CONTRACT PRICE (RECOVERIES):** All costs, damages or expenses, which the purchaser may have paid or which under the contract the contractor is liable, are to be deducted and recovered by the purchaser from any money due or becoming due to contractor from the purchaser or otherwise from the contractor by action of law. In the event of recovery of the necessary extent becoming impossible, owing to insufficient security money and otherwise held amounts, the balance due to the purchaser & may be recovered in any way the purchaser may deem fit.

18. **ENTRY PASSES:** All such material to be used by the contractor shall be brought in with proper challan & similar authentic document which shall be got inspected by Engineer along with material as per security rules in force. Contractor shall be responsible for antecedents of the workmen & for getting gate passes. Gate pass shall be issued to them by Security wing of the plant. No labour below the age of 18 years shall be employed on the work & labour so employed must be able-bodies persons. The right of entry of the contractor & his workmen in the stations will be reserved with DTL.

19. **FORCE MAJEURE:** No liability shall be attached to contractor for non operation of execution of their obligation under this contract as a result of Force Majeure (strike, lock outs, fire, flood, war, any act of God or any other factor beyond the reasonable control of the Management. No liability shall be attached to contractor for any damage due to natural calamities such as Earth vibro meter/Quake, War, Civil Commotion and Willful damage. A reasonable

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**Signature of the contractor with stamp**

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extension of time shall be granted by arrangement between the parties provided that the delays and its causes have been notified by the contractor at the time of occurrence of the cause of delay.

20. **PACKING & DESPATCH**: The contractor shall include and provide the strong protection and packing material so as to avoid damage in the transit of suit under proper conditions and shall be responsible for all losses or damages caused or occasioned by any defect in packing. The Contractor shall be responsible to get each consignment properly numbered, marked for handling during transit and clearly addressed to Delhi Transco Limited, New Delhi and safely placed in wagons. For all such consignment which are wrongly address labeled or miscued, the contractor shall bear such demurrage warfare or any other charges which may become due on the consignment received.

21. **PRICE BASIS**: All prices and price components of materials and services under the subject contract shall remain firm during execution of contract and no price variation whatsoever will be allowed on any of the components.

22. **REPLACEMENT OF DEFECTIVE AND REJECTED MATERIAL**: The contractor shall replace free of cost at destination any such quantities of material or any parts thereof, which be found defective due to inferior quality or bad material or workmanship etc. during the guarantee period within 30 days or the intimation to the effect. The material on receipt at purchaser’s office/site shall be verified and inspected by the purchaser. If the material is not found to purchaser’s satisfactions and specifications the same shall be rejected and the intimation thereof shall be conveyed to the contractor. The contractor shall also be intimated of the shortage and/or damages in the material received in the Purchaser’s site/offices. The rejected/short supplied/damaged stock shall be replaced free of cost at destination within 7 days of intimation from DTL failing which the cost of such material shall be recovered from any amounts due to the contractor. Rejected supplies shall be removed within 10 days of receipt of intimation failing which the contractor may loose the claim of material.

23. **RISK PURCHASE**: The Project shall be completed satisfactorily and within the period specified in the order, failing which purchaser reserves the right to complete the project from other sources at the sole risk and cost of the supplier and the difference of rates will be recovered from the suppliers. If on checking, testing and using, the supplies/services proves to be defective or fails to fulfill the guarantee performance of the contract as specified by himself, the contractor shall have to make good the defects at his costs. If the contractor fails to do so the purchaser may arrange supplies/services at the cost of the contractor. Where supplies/services are not according to specifications and it is decided to retain the inferior supplies/services at the discretion of the purchaser, supplier will be entitled to receive the payment at rates by the purchaser with due regard to the quality of the supplies/services and not at the rates mentioned in the order. In case there is no improvement in the proper execution of the order as per terms and conditions or the contract the purchaser reserves the right to cancel the order after serving 15 days written notice to contractor and no claim or damages will be entertained.

24. **Stoppage & Starting of Work**: The Contractor shall accept all risks of stoppage of hindrances of his work by outside interferences. In the event of any obstruction at site, change in scheme, or due to any reasons the contract can be cancelled for the balance quantity of the unexecuted work. The work can also be suspended temporarily due to any reasons and for such period, extension will be given by Manager (T) if required on the written request of the contractor. No idle charges shall be payable by the department. The work shall be started within one hour from the date of notice either through telegram/special messenger/telephonically. The contractor has to execute the work on working days during the working hours. However, if required, the work can be executed on holidays; under special circumstances.

25. **SUB-LETTING OF CONTRACT**: The contractor shall not unreasonable with hold, assign or sublet his contract or any substantial part thereof, without the written consent of purchaser. Such subletting shall not in any way be interpreted as releasing the contract from his liability & obligations under the contract.

26. **TAXES AND DUTIES**: All the statutory taxes and levies applicable on supplies and services are inclusive in the Contract Price. Relevant Confessional Central Sales Tax declaration forms, as admissible, would be issued to you by DTL as per the provisions of Bidding Document against the supplies on receipt of your written request for all the items identified in this Letter of Award. The above contract price is inclusive of applicable Service Tax and **Signature of the contractor with stamp**
cess thereon. DTL shall not bear any liability whatsoever on this account. DTL shall make statutory deduction at source in accordance with the statutory provisions including income Tax Act, as applicable from time to time, for which necessary TDS certificate(s) shall be issued to you in due course.

27. **TERMINATION OF CONTRACT**: DTL reserves the right to terminate the contract after giving 2 week notice in case of performance of the contractor is not found satisfactory or on account of non-compliance of any of the condition of the contract. In such case the security deposit shall also be forfeited without prejudice to right of the DTL to take any other action of recover any loss suffered by the DTL due to non-performance of the contract.

28. **T & P**: The contractor shall use his own labor, tools & plants required to complete the work.

29. **Transportation**: In case of transportation works contractor shall strictly observe the regulations as laid down by Delhi Traffic Police. Any damage to DTL property / material during transportation shall be recovered from the contractor’s bill.

30. **Rejection of offer**: Delhi Transco Limited reserves the right to reject the offer/offers without assigning any reason.

31. **Adverse Performance**: If adverse performance of contractor is reported from elsewhere in DTL/other departments (Govt./Semi Govt.), DTL shall have the right to reject the offer.

32. **Risk Purchase**: Delhi Transco Limited reserves the right to cancel the order, if found unsatisfactory performance and will have the right to procure material/services from other party at the Risk and Cost of the contractor.

33. **Technical support**: Successful bidder shall be liable to provide all technical support, as and when required, for usage of material at site.

34. In case of opening day is holiday/closed day, opening date may be treated as the next working day or can be postponed by the officer opening authority.

35. **Detail scope of work:-**
   - Scope includes supply of 33kV Outdoor type PTs as per DTL Specifications and delivered at site.
   - Test certificates of material to be supplied shall be required to be submitted at sub-station for approval prior to complete supply.

Manager (T) O&M E-II,

**Signature of the contractor with stamp**
TECHNICAL SPECIFICATION FOR 33 KV POTENTIAL TRANSFORMERS

1.0 SCOPE
This specification is intended to cover the design, manufacturing, assembly, testing at manufacturer’s works, supply and delivery of 33KV Potential Transformers for metering purposes required for installation at various Sub-stations of DTL.

2.0 GENERAL
2.1 The Potential Transformer furnished under this specification shall conform to the standards specified in this specification.

2.2 Material and components not specifically stated in this specification but which are necessary for satisfactory operation of the equipment are deemed to be included in the scope of specification and no extra amount is payable for the same.

2.3 The tenderer shall furnish all necessary internal/external drawings, leaflet and instruction and maintenance manuals for the Potential Transformers offered.

3.0 STANDARDS
The design, manufacturer and performance of the Potential Transformers shall comply with the latest editions of the following Indian Standards specifications:

IS: 3156 Part-I to III : Specifications for Potential Transformer.
IS: 4146 : Application guide for Potential Transformer

Equipment complying with any other authoritative standards will also be considered if it ensures performance equivalent or superior to Indian Standards specifications detailed above.

In the event of supply equipment conforming to any other international standards, the salient features of comparison shall be brought out and furnished along with the offer and a copy of the standard along with English Translation shall be furnished.

4.0 CLIMATIC CONDITIONS
4.1 The equipment covered under this specification is for outdoor installation and the climatic conditions that are prevailing at the sites in Delhi.

4.2 a) TEMPERATURE:
The reference ambient temperature be taken as 43.3°C as per IS: 9676.

b) RELATIVE HUMIDITY:
Maximum : 100%
Minimum : 10%

Signature of the contractor with stamp
c) Average annual rainfall : 750mm

d) Average No of rainy day per annum. : 50

e) Average No of thunder storm days per Annum. : 40

f) Altitude (As per IS 3156) : Not exceeding 1000mtrs.
g) Rainy months : June to October.
h) Wind Pressure : 195kg/m² upto 30 meter elevation as per IS:875-1975

4.3. The atmosphere is generally laden with mild acid and dust in suspension during the dry months and is subjected to fog in cold months. Heavy lightning occurs in the area during rainy months (June to October).

4.4. All equipments shall be designed to withstand seismic forces, corresponding to an acceleration of seismic zone - IV.

5.0 CONSTRUCTION TYPE AND RATING

5.1. The Potential Transformers shall be single phase, oil immersed and self cooled outdoor type. These shall be suitable for over voltage of electrically exposed installation and for the specified service indicated in specification. The Potential Transformer shall be complete in all respect, and manufactured in accordance with best engineering practice, design and workmanship.

5.2. It shall be suitable for operation in humid atmosphere, in tropical sun with temperature up to 50°C and areas subject to heavy lightning strokes and under climatic conditions.

5.3. The core shall be high grade non-ageing, electrical silicon grain oriented laminated steel of low hysteresis loss and high permeability to ensure high accuracy.

5.4. Bushing and terminal insulator, where provided shall conform to IS: 2099. Bushing shall be preferably condenser type of reputed make.

5.5. The Potential Transformers shall be hermetically sealed to eliminate breathing and prevent air and moisture from entering the tank. These shall be provided with oil level gauge and a pressure relieving device capable of releasing abnormal internal pressure. Necessary arrangement for replacing of top of oil shall be provided.

5.6. The Potential Transformer shall be suitable for 120% rated voltage for continuous working. The Potential Transformers shall have the following technical particulars:

5.6.1 33 kV PT’s

<table>
<thead>
<tr>
<th></th>
<th>Nominal system voltage (rms)</th>
<th>33 kV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Highest system voltage (rms)</td>
<td>36 kV</td>
</tr>
<tr>
<td>2</td>
<td>Frequency</td>
<td>50 Hz.</td>
</tr>
<tr>
<td>3</td>
<td>Earthing of the system</td>
<td>Solidly grounded.</td>
</tr>
</tbody>
</table>

Signature of the contractor with stamp
Basic insulation level (peak impulse withstand voltage). | 170 KVP
---|---
Power frequency voltage withstand Level (rms). | 70 KV
Transformation ratio | $\frac{33 \text{kV}}{\sqrt{3}} / \frac{110 \text{V}}{\sqrt{3}}$
Minimum creepage distance | 900 mm

**CORE-I**

<table>
<thead>
<tr>
<th></th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Secondary voltage</td>
<td>$\frac{110 \text{V}}{\sqrt{3}}$</td>
</tr>
<tr>
<td>2</td>
<td>Purpose</td>
<td>Indicating instrument and metering</td>
</tr>
<tr>
<td>3</td>
<td>Rated Output</td>
<td>5 VA (Accuracy class be tested for 0, 25 and 100 percentage of VA burden)</td>
</tr>
<tr>
<td>4</td>
<td>Accuracy class</td>
<td>0.2 (Accuracy class should be maintained from 0 to 100% VA burden)</td>
</tr>
</tbody>
</table>

### 6.0 CORE AND WINDING

**6.1.** The Potential Transformer core to be used for metering and instrumentation shall be of accuracy class specified and suitable for commercial and industrial metering.

**6.2.** The rating of the secondary winding shall be as specified. The secondary terminals shall be brought out in a weather proof terminal box confirming to IP 54 of IS 2147 on one side of the Potential Transformer and shall be accessible through a removable cover. The secondary tap shall be adequately reinforced to withstand normal handling without damage. Suitable cable glands along with cable supporting strip and clamps shall be provided to accommodate purchaser’s control cables of suitable size.

**6.3.** The secondary terminals shall be provided with isolating and earthing arrangements at the terminal block.

**6.4.** The maximum permissible temperature rise of the windings over the ambient shall be 55°C.

### 7.0 EARTHING

**7.1.** The assembly comprising of the chassis, framework and the fixed parts of the metal casing, where used, of the Potential Transformer, shall be provided with two separate earthing terminals of lavish size. These terminals shall be provided over and above all other means provided for securing and earthing metallic enclosures (armour or other metallic coverings) of current-carrying cables.

**7.2.** The earthing terminals shall be readily accessible and so placed that the earth connection of the Potential Transformer is maintained even when the cover or any other movable part is removed.

**Signature of the contractor with stamp**
7.3. The earthing terminals shall be of lavish size, be protected against corrosion and shall be metallically clean. Under no circumstances shall a movable metal part of the enclosure be insulated from the part carrying the earthing terminals when the movable part is in place.

7.4. The earthing terminal shall be identified by means of the earthing symbol marked in a legible and indelible manner on or adjacent to the terminals.

8.0 INSULATION
The Potential Transformer shall withstand satisfactorily the dielectric test voltage corresponding to basic insulation level specified.

9.0 INSULATING OIL
The quality of insulating oil in each Transformer shall be best available and the complete specifications of the oil shall be furnished in the tender. The Potential Transformers offered shall be hermetically sealed completely filled with insulating oil. The insulating oil shall conform to the latest Indian Standard Specification No.335 and shall be of reputed make.

10.0 TERMINAL CONNECTORS
The Potential Transformers offered shall be supplied with indigenous rigid type bimetallic terminal connectors suitable for A.C.S.R. Zebra Conductor.

11.0 DRAWINGS
As part of the tender offer, the tenderer shall furnish relevant descriptive and illustrative literature on the Potential Transformer offered and the following drawings for preliminary study:

a) Complete assembly drawing of the PT showing plan, elevation.
b) Typical connection diagram & winding connections.
c) Structural drawing and PT mounting arrangement.
d) Foundation plan showing position of anchor bolt and anchor.
e) Type test certificate.
f) Leaf-lets and instruction manuals.

12.0 TESTS
12.1 The copies of certificates of all type tests as stipulated in IS: 3156 shall be furnished along with the tender.

12.2 Each Potential Transformer shall be subjected to routine tests as specified in IS: 3156 in the presence of Purchaser’s representative if so desired by the Purchaser. All test reports should be submitted and should be approved by the purchaser before dispatch of the equipment.
12.3 **Special Test:** The potential transformer is subjected to special test for accuracy at 0, 25 & 100% VA burden i.e. 0, 1.25 & 5 VA and 80%, 100% & 120% voltage. Test certificates to be submitted along with Supply.

13.0 **MARKING**

13.1 Rating Plate : As per IS 3156 (Part-I)

13.2 Terminal marking : As per IS 3156(Part-I)