ORISSA POWER TRANSMISSION CORPORATION LTD

OFFICE OF THE SR. GENERAL MANAGER
CENTRAL PROCUREMENT CELL
JANAPATH, BHUBANESWAR-751022
TEL NO. 0674-2541801 FAX NO. 0674-2542964

TENDER SPECIFICATION NO.
SR.G.M.[C.P.C.]- 79 /2011-12

FOR

SUPPLY,INSTALLATION,TESTING & COMMISSIONING OF 1NO. 10 PASSENGER ELEVATOR FOR OERC BUILDING, KALAYNI COMPLEX, UNIT-VIII, OPTCL, BHUBANESWAR

DATE OF OPENING OF TENDER PAPER- **02 .12 .2011**

COST OF TENDER PAPER- **Rs. 6000.00 + 4% VAT**

ORISSA POWER TRANSMISSION CORPORATION LTD

REGD. OFFICE, JANAPATH, BHUBANESWAR –751022
ORISSA.

EMC- 95 /2011 dt……

TENDER NOTICE NO. 70 / 2011-12

For and on behalf of Orissa Power Transmission Corporation Ltd., Sr.G.M. (C.P.C.) invites sealed tender for Supply, Installation, Testing & Commissioning of 1No. 10Passenger gearless Elevator for G+3 floors with AC-V3F drive control for constant load of 680Kgs traveling @1.0MPS complete with all accessories including Annual Maintenance Contract (AMC) for 5(five) years after expiry of the guarantee period for OERC building, Kalayni Complex, Unit-VIII, OPTCL, Bhubaneswar.(Make: OTIS, KONE, THYSSENKRUPP, MITSHUBISI, SCHINDER) with an estimated cost of ` 18.72 lakhs from Original Equipment Manufacturer(OEMs)/ their authorized distributors having five years experience in Govt./ Quasi Govt. / Corporate House Projects. Tender papers shall be sold from dt. 16.11.2011 to 02 .12.2011. Interested firms may visit OPTCL's official website /http://www.OPTCL.co.in for detail specifications.

OPTCL also reserves the right to accept or reject the tender without assigning any reasons thereof, if the situation so warrants. OPTCL shall not be responsible for any postal delay at any stage.

SR. GENERAL MANAGER [C.P.C.]
Memo No. Dated:

Copy forwarded to the DM (CR), OPTCL, Bhubaneswar for favour of information & necessary action. He is requested to publish the tender call notice in one issue of one Oriya & one English dailies for wide circulation. A copy of publication may pl. be send to this office for reference & record.

SR. GENERAL MANAGER [C.P.C.]
Memo No. Dated:

Copy forwarded in duplicate to the GM (F) C&B / AGM(F)CPC, OPTCL / SE (Civil) / EE(Civil), OPTCL, Bhubaneswar for kind information & necessary action.

SR. GENERAL MANAGER [C.P.C.]
Memo No. Dated:

Copy submitted to the CGM (C), OPTCL, Bhubaneswar for kind information & necessary action.

SR. GENERAL MANAGER [C.P.C.]
Memo No. Dated:

Copy submitted to the CGM (IT), OPTCL, Bhubaneswar for kind information & necessary action. He is requested to hosted the tender schedule in the OPTCL's Website for wide circulation.

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

NOTICE INVITING TENDER
ORISSA POWER TRANSMISSION CORPORATION LTD
JANPATH, BHUBANESWAR – 751 022,

TENDER NOTICE NO. 70 / 2011-12

For and on behalf of the Orissa Power Transmission Corporation Limited, the undersigned invites bids under single-part bidding system in sealed cover, for the works as mentioned below, duly super scribed with Tender Specification No. & Date of opening, from reputed manufacturer for Supply, Installation, Testing & Commissioning of 1No. of 10 Passenger Elevator for OERC building, Kalayni Complex, Unit-VIII, OPTCL, Bhubaneswar, Orissa.

Sl No.	Tender Specification No.	Description of Work	Earnest Money Deposit (in `)	Cost of Tender specification documents	Last Date of receipt of Tender.	Date of opening of Tender.
1.	Sr.G.M. CPC - 79 /2011-12	Supply, Installation, Testing & Commissioning of 1No. 10Passengers Elevator for OERC building, Kalayni Complex, Unit-VIII, OPTCL, Bhubaneswar	10,000.00	6000/- + 4% VAT	02.12.2011 upto 1.00PM	02.12.2011 at 4.00PM

The tender specification documents can be had 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 3 P.M. during 16.11.2011 to 02 .12.2011 (both days inclusive) on any working day either in person or by remitting demand draft payable to Drawing & Disbursing Officer, OPTCL, Regd. Office: Janpath, Bhubaneswar- 751 022. No other mode of payment is acceptable. No tender documents will be sold on any other day except as indicated.

The specification can also be downloaded from OPTCLs official web site and the same may be submitted alongwith 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. Incase any deviation is found in the tender document submitted by the Tenderers from the content mentioned in our web site and/ or non submission of cost of tender documents, the tender shall liable to be rejected at any stage of the contract. The Tenderers has to indemnify OPTCL for any loss accruing due to such alteration in the terms and conditions of the tender document & / or for such alteration, 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/- over and above the cost of the tender specification, mentioned under heading “Cost of tender specification”. Complete bid for

the works will be received upto 1 P.M. only and the same will be opened at 4.00 P.M. on the date mentioned against above Tender Specification. 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 upto the appointed times on the next working day. Only one representative of the bidder will be allowed to participate in the bid opening.

OPTCL also reserves the right to accept or reject the tender without assigning any reasons thereof, if the situation so warrants. OPTCL shall not be responsible for any postal delay at any stage.

Minimum qualification criteria of bidders:

The bidder must have executed similar type of work previously on turnkey basis during last three years. They should be willing to furnish at least one of the performance certificate from central /state Govt. or their undertakings. The contractor should regd. with PAN,VAT & Service tax.

SR. GENERAL MANAGER
CENTRAL PROCUREMENT CELL

OPTCL
Lifeline of Orissa

SECTION – I

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COMMERCIAL SPECIFICATION

P A R T – I
S E C T I O N - I
INSTRUCTIONS TO TENDERER

1. Submission of Bids:-

Sealed tenders in triplicate on single part basis, each complete in all respect, in the manner hereinafter specified are to be submitted in the office of Sr. General Manager (Procurement), 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 sealed envelopes superscribed on each of the covers the relevant tender Specification number and the due date of opening of the bids on the right hand top side of the envelopes. On the left top sides original/duplicate/triplicate as is relevant, shall be written.

2. **Division of Specification**:

The Specification is mainly divided into single part.

Consists of

(i) Section-I : Instructions to Tenderers.

(2) Section-II : General conditions of supply (commercial)

(iii) Section-III : Schedules and forms etc.

(iv) Section-IV : Technical Specification.

(v) Abstract of price components as per Annexure-IV.

(vi) Schedule of prices as per Annexure-V.

3. Tenders shall be in single Part

The Tenderers are required to submit the tenders in single part in sealed covers.

4. Opening of Bids.

(a) The tender shall be opened in the office of the Sr. General Manager (Procurement) in presence of such of the Tenderers or their authorized representatives (limited to one person only) on the due date of opening of tender and after scrutiny of the technical particulars and other commercial terms, clarifications as may be required, shall be sought for from the bidders. The Tenderers 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 proposals requires modification to make them comparable, discussion will be held with the participating bidders.

(c) The bidders are required to furnish sufficient information to the Purchaser to establish their qualification/capability 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.

(d) The bidders are also required to furnish details of availability of appropriate technical staff and capability to perform after sales service where applicable. The above information shall be considered during the first stage of scrutiny and evaluation of bids

(e) 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 order for lesser quantity with full freedom to place extension orders for further quantity under similar terms and conditions of the original orders. Order may also be split among more than one Tenderer for any particular item if considered necessary in the interest of the Purchaser.

6. **Procedure & Opening Time of Tenders**:

Tenders will be opened in the office of the Sr. General Manager (Procurement) on the specified date and time in presence of such of the Tenderers or their authorized representatives (limited to one person only) in case of each bidders who may desire to be present, at the time of opening the bids. The Sr. General Manager (Procurement) or his authorized representatives will, on opening each bid, read aloud the name of the bidder. He shall also read aloud the attested and un-attested corrections and shall record the number of such corrections on each page of the technical bid over his dated initials and also initial all such corrections.

7. **Bidder's Liberty to Deviate from Specification**:

The Tenderer may deviate from the Specification while quoting if in his opinion such deviation is in the 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**.

Tenderers who have purchased the Specification from the office or downloaded from the official website of OPTCL & deposited the tender cost while submitting the tender will only be considered.

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 Bids**.

(A) Bids, complete in all respect shall be submitted in person or by registered Post with A.D. Any other mode shall not be accepted. When delivered in person, the tenders shall be received by a responsible officer of the office of the Sr. General Manager (Procurement), OPTCL who shall officially acknowledge the receipt of the same. Tenders received after due date and time shall be returned un-opened.

(B) **Telegraphic, Telephonic or FAX Tenders** shall not be accepted under any circumstances.

11.

(i) Earnest Money Deposit.

The tender shall be accompanied by Earnest Money Deposit of value specified in the notice inviting tenders against each lot/bid. Tenders without the required E.M.D. will be rejected outright.

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 (Hrs. Office, Bhubaneswar-751022.

(b) Bank Draft: To be drawn in favour of the Drawing & Disbursing Officer, OPTCL (Hqrs. Office), Bhubaneswar-751022.

(c) Bank Guarantee from any nationalized/scheduled Bank strictly as per enclosed proforma vide Annexure-VI to be executed on non-judicial stamp paper of appropriate value worth Rs.29/- to be accompanied by the confirmation letter of the issuing Bank.The validity of the E.M.D. Bank Guarantee shall be 240 days from the date of opening of tender, failing which the tender will be liable for rejection.

(i) No adjustment towards Earnest Money Deposit shall be permitted against any outstanding amount with the OPTCL.

(ii) In the case of un-successful Tenderer the Earnest Money will be refunded Immediately after the tender is decided. In the case of successful tenderer,EMD will be refunded only after furnishing of security money referred to at Clause-19 of 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 Orissa extends.

(iii) Earnest Money will be forfeited if the Tenderer fails to accept the letter of intent and /or purchase orders issued in his favour.

Tenders not accompanied by Earnest Money shall be summarily rejected.

12. **Validity of the Bids**

The tenders should be kept valid for a period of 180 days from the date of opening of the tender as notified in the tender notice failing which the tenders will be rejected.

13. **PRICE** Tenderers are requested to quote FIRM price only.

14. **Revision of Tender Price By Bidders**

(a) After opening of tenders and within the validity period, no reduction or Enhancement in price will be entertained. If there is any change in price, the tender shall stand rejected and E.M.D. deposited shall be forfeited. In case of bidders who are exempted from depositing E.M.D. and who revise their price within the validity period, the bids for similar items against subsequent tender call notice of OPTCL, may not be considered.

(b) If required, the Tenderers 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 Tenderers are free to change any or all conditions of their bids.

15. **Tenderers to be fully Conversant with the Clauses of the Specification.**

Tenderers 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 Tenderer may seek clarification in writing from the Sr. General Manager (Procurement) OPTCL. This however, does not entitle the Tenderer to ask for time beyond due date fixed for receipt of tender.

16. **Documents to Accompany Bids**

Tenderers are required to submit tenders in the following manner :-

Tender shall Contain the following Documents

(I) Declaration Form. (As per Annexure –I)

(ii) Earnest Money /Documents in support of exemption from Earnest Money Deposit if any.(As per Annexure-VI)

(iii) Technical Specification and Guaranteed Technical Particulars conforming to the Purchaser's Specification along with drawings and literature.

(iv) Photostat copies of latest type test certificate of materials/equipments offered. (Type tests should have been conducted within 5 years prior to the dated tender opening and not earlier).

a. Abstract of Terms & Conditions in prescribed Proforma as per Annexure-II.
b. General Terms & Conditions of supply offer as per Section-II of specification.
c. List of orders executed for similar items during preceding four years indicating the customer's name & P.O. copies.
d. Data on past experience as per Clause-7 of Section –II of the Specification.
e. Sales Tax, Income Tax clearance certificates, for the previous year.
f. Audited Balance Sheet & Profit Loss Accounts for the previous two years.
g. Schedule of quantity and delivery in the prescribed proforma vide Annexure-III.

h. Orders in hand to be executed.

i. Abstract of Price Components, as per Annexure-IV.

j. Schedule of prices in the prescribed proforma as per Annexure – V.

17. **Conditional Offer**

Conditional offer shall not be accepted.

18. **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 Tenderer.

iv) For evaluation the price mentioned in words shall be taken if there is any difference in figure 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 E.M.D. if any) shall be returned to the bidders unopened.

PART - I

SECTION - II

GENERAL TERMS & CONDITIONS OF CONTRACT (G.T.C.C)

1. **Scope of the Contract**

The scope of the contract shall be to manufacture supply of materials as per the Specification at the consignee's store, and rendering service in accordance with the enclosed **Technical Specification** and bill of quantity/materials.

2.0 **Definition of Terms**

For the purpose of this Specification and General Terms & Conditions of Contract (G.T.C.C.) the following words shall have the meanings hereby indicated, except where otherwise described or defined.

2.1 "The Purchaser" shall mean the Sr. General Manager (Procurement) for & on behalf of ORISSA POWER TRANSMISSION CORPORATION LTD., Bhubaneswar.

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

2.2 "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.

2.3 "The Contractor" shall mean the Bidder whose bid has been accepted by the Purchaser and shall include the Bidders' executives, Administrators, Successors and permitted assignees.

2.4 "Equipment" shall mean and include all machinery, apparatus, Materials, articles to be provided under the contract by the Contractor.

2.5 "Contract Price" shall mean the sum named in or calculated in accordance with the provisions of the contract as the "Contract Price" which shall include packing, forwarding, freight, insurance excise duty, sales tax, Octroi and other taxes and duties as applicable at the time of opening of bids.

2.6 "General Conditions" shall mean these General Terms and Conditions of Contract.

2.7 "The Specification" shall mean the Specification annexed to or issued with G.T.C.C. and shall include the schedules & drawings attached thereto as well as all samples and pattern, if any.

2.8 "Month" shall mean "Calendar month".

2.9 "Writing" shall include any manuscript, type written, printed or other statement re-production in any visible form and whether under seal or under hand.

2.10 "F.O.R. Destination Costs" shall mean the cost of equipment and material at the consignee's stores. The cost is exclusive of Excise duty, Sales Tax and other Local Taxes, but is inclusive of packing, forwarding and insurance and freight charges.

2.11 The term "Contract documents" shall mean and include G.T.C.C., Specifications, Schedules, Drawings, Form of Tender, Covering Letter, Schedule of Price of the final successful bidder any special conditions applicable to the particular contract, Specifications and drawings and the purchase order & the agreement to be entered into.

2.12 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 contractor will conduct the statuary inspection by the Electrical inspector from ELBO, Bhubaneswar at their own cost after completion of installation, commissioning & testing of Elevator. The required inspection fee will deposited by the firm accordingly.

ii) Where the contract provides for test on the Premises of the Contractor or of any of his Sub-Contractors, the Contractor 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 test effectively & efficiently. The Contractor is required to produce Routine Test Certificate before offering their materials for inspection.

iii) After completion of the tests, the Purchaser's representative shall forward the test results to the Purchaser. If the test results are satisfactory, the purchaser shall communicate the same to the Contractor in writing. The Contractor shall provide at least three copies of the test certificates to the Purchaser.

iv) The Purchaser has the right to have the tests carried out at his own cost by an independent agency whenever there is a dispute regarding the quality of supply.

5. **Training Facilities**

The Contractor shall provide all possible facilities for training of Purchaser's Technical personnel, where applicable when deputed by the Purchaser for acquiring first hand knowledge in operation of the elevator and for it's proper operation and maintenance in service if required.

6. **Rejection of Materials**

In the event any of the materials/equipment supplied by the Contractor 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 materials/equipment or ask the Contractor in writing to rectify the same. The Contractor on receipt of such notification shall either rectify or replace the defective equipment free of cost of the Purchaser. If the Contractor fails to do so, the Purchaser may :-

(a) As its option, replace or rectify such defective equipment and recover the extra costs so involved from the Contractor 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 furnished information regarding experience particularly on the following points:-

i) Name of the Manufacture.

ii) Standing of the firm and manufacture of equipment quoted:

iii) Description of equipment similar to the quoted, supplied and installed during the last four years with the name(s) of the party(s) to whom supplies were made:

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 executed during the last four years along with user's certificate.

viii) Equipment capability & upto calibration certificate(s) .

Bids may not be considered if the past manufacturing experience is found to be un-satisfactory or is of less than 4 years on the date of opening of the bid.

8. **Language and Measures**

All documents pertaining to the contract including Specifications, Schedule, Notices, Correspondence, Operating & 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, drawing etc. specified in the tender schedule thoroughly before tendering so that, if any deviations are made by the Tenderers the same are prominently brought out on a separate sheet under heading "Deviations".

A list of deviation shall be enclosed with the Tender. Unless deviation 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 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 the above action(s).

11. **Contractor to inform himself fully**

The Contractor 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 additional allowances except as otherwise provided therein will be levied. The Purchaser shall not be responsible for any misunderstanding or incorrect information obtaining by the Contractor other than the information given to the Contractor in writing by the Purchaser.

12. **Patent Rights Etc.**

The Contractor shall indemnify the Purchaser against all claims, actions, suits and proceedings for the infringement or alleged infringement of any patent design or copy right protected either in the country of origin or in India by the use of any equipment/ materials supplied by the Contractor. But such indemnity shall not 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 essence of the contract, the equipment shall be supplied within the delivery date 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 or Intent/Purchase order as may be specified in the Purchase order.

(b) i) The desired delivery including installation & commissioning period shall not exceed more than 3 (Three)months.

ii) The quantity offered for inspection should tally with the lots prescribed for delivery in the purchase order.

14. **Despatch instructions**.

i) The materials should be securely packed and dispatched directly to the consignee at the Contractor's risk by Lorry Transport only.

ii) **Loading & Unloading of Ordered Materials**.

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

15. **Contractor's Default Liability**.

i) The Purchaser may, upon written notice of default to the Contractor, terminate the contract in circumstanced detailed hereunder.

(a) If in the judgement of the Purchaser, the Contractor fails to make delivery of equipment within the time specified in the contract or within the period for which extension has been granted by the Purchaser in writing in response to written request of the Contractor.

(b) If in the judgment of the Purchaser, the Contractor 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 equipment/ material similar to those terminated and the Contractor will be liable to the Purchaser for any additional costs for such similar equipment and/or for penalty for delay as defined in Clause-23 of this section until such reasonable time as may be required for the final supply of equipment.

iii) In the event the Purchase does not terminate the contract as provided in Clause 15(i) of this Section, Contractor shall continue executing the contract, in which case he shall be liable to the Purchaser for penalty for delay as set out in Clause-23 of this Section until the equipment is accepted. This shall be based only on written request of the supplier and written willingness of Purchaser.

16. **Force Majeure**:

The Contractor 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, provided that the Contractor shall within ten (10) days from the beginning of such delay notify the Purchaser in writing of the cause of delay, upon which, the Purchaser shall verify the facts and grant such extension as facts justify.

17. **Extension of Time**.

If the delivery of equipment/materials is delayed due to reasons beyond the control of the Contractor, the Contractor 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 agree

to extend the contract delivery date as may be reasonable but without prejudice to other terms and conditions of the contract.

18. **Guarantee Period**.

i) The stores covered by this Specification should be Guaranteed for satisfactory operation and against defects in design, materials and workmanship for a period of at least 18 (eighteen) months from the last date of delivery or 12 (twelve) months from the date of commissioning whichever is earlier. The above Guarantee Certificate shall be furnished in triplicate to the purchaser for his approval. Any defect noticed during this period should be rectified by the Contractor free of cost to the Purchaser provided such defects are due to faulty design, bad workmanship or bad materials used, upon written notice from the Purchaser.

ii) Equipment/material failed or found defective during 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 after such repair/replacement which ever is earlier.

Date of delivery as used in this Clause shall mean the date on which the materials are received in OPTCL stores in good condition, which are released for despatch by the Purchaser after due inspection.

iii) Free Maintenance : This offer includes 12 months free maintenance serviceof the elevator. This free maintenance periodwill deemed to have commenced on the date of handing over of elevator in satisfactory running condition. During that period your service engineer will visit the elevator at least once in a month to do the complete servicing of elevators for smooth running. Any materials found defective during that period shall also have to be repaired and /or replaced free of cost.

19. **Bank Guarantee towards Security Deposit, 100% Payment and performance Guarantee.**

A Composite Bank Guarantee as per the proforma enclosed at Annexure-VII of the specification for 10%(Ten percent) of the total FOR Destination cost of the order, shall be furnished from any Nationalised/ Scheduled Bank to the office of Sr. General Manager (Procurement), OPTCL within 15 (Fifteen) days of issue of purchase order. The Bank Guarantee shall be executed on non-judicial stamp paper worth of Rs.29/- or as applicable, 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 order will be liable for cancellation without any further written notice. The said Bank Guarantee should be accompanied or followed by a confirmation letter from the concerned Bank, before the Bank Guarantee is accepted and all concerned intimated. The BG should have provision for encashment at BBSR. You are requested to extend the BG as & when required to cover the entire guarantee period.

No interest is payable on any kind of Bank Guarantee.

In case of non-fulfillment of contractual obligation as required in the detailed purchase order/specification, the composite Bank Guarantee/Permanent Registration Fee shall be forfeited.

The Composite/Performance Bank guarantee amount on the full order value shall be deducted from the first claim of the supplies made in cases where no Composite Bank Guarantee/Performance Bank Guarantee is furnished.

B: CBG for AMC: 10% of AMC Value for each year shall be submitted in form of CBG before expiry of Guarantee period & commencement of AMC period.

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. Terms of Payment.

a) 70% of the material cost shall be paid on receipt of all materials at site in good condition in complete shape and verification thereof, subject to approval of @10% CP BG & test certificate & guarantee Certificate by the purchaser.

b) 20% of cost of materials alongwith 90% of erection/installation cost shall be paid after successfully installation of the Elevator.

c) 10% of the cost of material alongwith 10% of erection / installation cost shall be released after successfully testing, commissioning, statuary inspection and handing over of the elevator.

d) AMC shall be paid proportionately at the end of each quarters subject to receipt of performance certificate from the engineer-in-charge.

22. Penalty for Delay in Completion of Contract.

If the Contractor fails to complete the work within the completion period schedule specified in the contract including delivery time extension, if any, granted thereto, the Purchaser shall recover from the Contractor penalty for a sum of one half of one percent (0.5 per cent) of the Ex-works price of the undelivered equipment for each calendar week of delay or any part thereof. For this purpose the date of receipted challans shall be reckoned as the date of delivery. The total amount of penalty shall not exceed five per cent (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, parts are also delivered. If certain components are not delivered in time, the equipment will be considered as delayed until such time as the missing parts are delivered.

23. Insurance

Insurance of stores covered by this specification shall be done by the Suppliers 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 materials at destination, without awaiting for the settlement of their claim with the carriers and underwriters.

24. Payment Due from the Contractor.

All costs and damages, for which the Contractor is liable to the Purchaser, will be deducted by the Purchaser from any money due to the Contractor under any of the Contract(s).

25 Sales Tax & Income Tax Clearance, Balance sheet and Profit & Loss Account.

(i) Sales Tax and Income Tax clearance certificates valid upto the date of opening of Tender, should be enclosed with tender.

(ii) Balance sheet and profit and loss account of the bidder duly certified by the Chartered Accountant for the previous 2 years should be enclosed to assess the financial soundness.

26. Certificate for 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.

27. Contractor's Responsibility.

Not withstanding anything mentioned in the Specification or subsequent approval or acceptance by the Purchaser, the ultimate responsibility for design, materials used and satisfactory performance shall rest with the Tenderers.

28. Validity.

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

29. Evaluation & Comparison of Bids.

(i) Weightage shall be given to the following factors in the Evaluation & Comparison of Bids.

(a) Early Delivery.

(b) Past track record in delivery of similar items to OPTCL.

(c) Track record in manufacture & supply of similar items to other utilities other than OPTCL.

(d) Deviation in the bid vis-à-vis in the stipulation in the Bid Specification both in Technical and Commercial.

(e) In comparing bids and in making awards, the Purchaser may consider such factors as compliance with Specification, 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 can only be considered for evaluation if they had supplied at least equal quantity earlier. Bids not fulfilling these criteria are liable for rejection.

31. Jurisdiction of the High Court of Orissa.

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

32. Correspondences.

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

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

33. Official Address of the Parties to the Contract.

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

(i) **Purchaser**: Senior General Manager (Procurement) (CPC),
ORISSA POWER TRANSMISSION CORPORATION LTD,
Bhubaneswar-751022.

(ii) **Supplier:**

Address:

Telephone No.

FAX No.

34. **Outright Rejection of Tenders**.

Tenders shall be outsight rejected if they are not complying with the following requirements:

i) Tenderer should have purchased/obtained the Bid specification document from the office of the Purchaser or down loaded from the website of OPTCL but shall deposit the tender cost while submitting the tender.

ii) Tenders shall be submitted in person or by **Registered Post with A.D.**

iii) Tenders shall not be submitted telegraphically or by FAX.

iv) Tenders shall be accompanied by the prescribed Earnest Money Deposit unless otherwise qualified for exemption from furnishing of EMD., wherever EMD is submitted in shape bank guarantee , it should be kept valid for 240days from the date of opening of tender.

v) Tender shall be kept valid for a period of 180 days from the date of opening of Tender.

vii) 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.

viii) Tenderer should quote FIRM price and the price should be kept valid for a period of 180 days from the date of opening of the tender.

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

The Contractor shall treat the details of the Specification and other Tender documents as private and confidential and they shall not be reproduced without written authorization from the Purchaser.

36. **Scheme/Projects**.

The materials/equipments covered in this Specification shall come under capital works of OPTCL.

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TECHNICAL SPECIFICATIONS FOR SUPPLY, INSTALLATION OF THE ELEVATORS

1. **General**

These specifications are intended to cover the technical requirements of the complete Elevator installation work of one No. elevator at OERC Building, Bhubaneswar, its component, safety devices, various types of controls and method of operation for 10 passengers normal Elevator of capacity of minimum 680 Kg.

The installations shall generally be carried out in conformity with the requirements of Indian Electricity Act, 1910 as amended up to date and Indian Electricity Rules, 1956 framed there under, the relevant regulations of the Electric Supply Authority concerned and also with the specifications laid down in the Indian Standard IS:732 /1963 “Code of Practice (Revised) for Electrical Wiring Installations (System Voltage not exceeding 650V)”. The work shall be executed as per National Electrical Code and if any item is not covered there under or there is any doubt, the specification approved by the engineer-in charge will be final and binding.

Ambient Conditions

All Electrical installations and equipments shall be suitable to work in following ambient conditions.

Maximum Temperature	:	50 degree Celsius
Relative Humidity	:	100%
In the vicinity of	:	Bhubaneswar city

2.0 Drive Machinery

2.1 Electric Supply

The Electrical installations and equipments shall be suitable for operation in following system condition.

Supply Voltage	:	433 Volts + 10% to -20%
Supply Frequency	:	50 Hz +/- 5%
Number of Phases	:	Three

2.2 Gearless Machine

The Elevator machine shall be gearless and consist of a motor, fraction sheave and brake drum / disc completely aligned on a single shaft. The gearless machine shall be A.C. gearless with the V V V F (Variable Voltage Variable Frequency)drive.

2.3 Controller :

2.3.1. An AC Closed Loop, Variable Frequency, motion control and velocity profile shall be provided. The micro-computer based speed control system shall incorporate a digital closed loop feedback system ensuring the actual elevator speed is in line with a dictated pattern during all phases of travel, namely acceleration, full running speed and deceleration. All phases of travel shall be controlled regardless of load or direction of travel. The design of the controller

should be such that it can be mounted on a wall and is dust protected, providing sufficient protection against lizards, rodents, etc. The V VVF controller shall have the following features :

a. Total control at all stages of the motion cycle.

b. A consistent fully adjustable smooth ride.

c. Better leveling accuracy under all condition.

d. A higher power factor.

e. Lower starting current.

f. Energy saving through the reduced power consumption.

The system should monitor critical aspects of system health, self help diagnostic capability as built in, control system to speed up trouble shooting. It shall have constant voltage transformer for trouble free operation.

2.3.2 The control switchgear shall comprise mini-relays and solid-state devices. It shall incorporate the following :-

a. Smooth acceleration and deceleration.

b. Smooth start / stop.

c. Accurate floor leveling of ± 5 mm.

d. Landing floor position.

e. Adjustable timer for car doors.

f. Automatic re-leveling.

g. Car overload cut-out.

h. Over load device.

i. Fireman's Switch at main Lobby with Stainless Steel Signal Fixtures.

j. Speed Governor System for Over Speeding.

2.3.3 VVVF Inverter Drive :

Fully digital VF inverter incorporating Flux Vector Control, technique of Pulse Width Modulation (PWM) for directly controlling the current of the elevator motor and providing constant speed control over the entire frequency range under all conditions to achieve considerable power saving thereby reducing the overall power consumption reduction in generator capacity and improvement in power factor and high speed switching device – the IGBT (Insulated Gate Bipolar Transistor) embedded in the inverter for smooth and quite operation.

2.3.4 The acceleration and deceleration values shall be easily adjustable on site by qualified personnel and shall be initially set at 1.2 m/s square.

2.3.5 The stopping accuracy shall be no more than +/- 5 mm before loading or unloading the car. The mechanical brake shall not be operative before the car has been electrically stopped and at speed zero.

2.3.6 To compensate for rope stretch under various load conditions, an automatic re-leveling system is to be furnished to ensure the car stays within the floor leveling zone at all times.

2.4 Sheaves :

Sheaves and pulley shall be of hard alloy, cast iron, SG iron or steel and free from cracks, sand holes and other defects. They shall have machined rope grooves. The traction sheaves shall be grooved to produce proper traction and shall be of sufficient dimension to provide for wear in the groove. The deflector sheave shall be grooved so as to provide a smooth bed for the rope. The deflector or secondary sheave assemblies where used shall be mounted in proper alignment with the traction sheaves, such deflectors sheaves shall have grooves larger than rope diameter as specified in clause 8 of IS 14665 (Part – 4 sec 3): 2000. The size of all the sheaves shall be in accordance with clause 8.4 of IS 14665 (Part 4 –sec 3): 2000. Wherever necessary suitable protective guards may be provided.

2.5 Shaft Keys

Shafts which support sheave, gears, coupling and other members which transmit torque shall be provided with tight fitting keys of sufficient strength and quality.

2.6 Brake

The Elevator drive machinery shall be provided with an electro-magnetic brake or motor operated brake normally applied by means of springs in compression when the operating device is in off position. The brake shall be suitably curved over the brake drum or brake disc and provided with fire proof friction lining. The operation of brake shall be smooth, gradual and with minimum noise. The brake shall be designed to be of sufficient size and strength to stop and hold the car at rest with rated load. The brake should be capable of operation automatically by the various safety devices, current failure and by the normal stopping of the Car. The brake shall be released electrically. It shall also be possible to release the brake manually, such releases requiring the permanent application of manual forces so as to move the Elevator car in short stops. For this purpose suitable brake release equipment wherever necessary shall be supplied with each Elevator installation and the same shall be kept in safe custody to prevent misuse.

2.6.1 Hand winding wheel on handle

A suitable hand winding wheel or handle mounted on the end of motor shaft for manual operation to move the Elevator car up or down to bring it to nearest landing manually. The up or down direction of the movement of car should be clearly marked on the motor / at suitable location. A warning plate written in bold signal red letters advising the maintenance staff to switch off the mains supply before releasing the brake and operating the wheel is to be prominently displayed

3.0 Installation Aspects :

3.1 Installation in Machine Room :

Elevator machine room to accommodate the drive machinery, controller etc. shall be on top of the Elevator shaft. Equipment layout in machine room should allow free movement of the maintenance staff. Vibration Isolation arrangement shall be provided in machine room to

prevent transmission of vibrations to the building and structure. Provision of lighting and ventilation as required shall be provided by the electrical contractor.

3.2 Guide Rails :

The guide rails for Elevator car and counter weight shall be in accordance with clause 3 of IS 14665 (Part – 4, Section-2) 2000. The Guide rails supported by brackets secured to hoist-way at each floor shall be continuous throughout the entire travel and shall withstand without any deformation the action of safety care with a fully loaded car.

3.3 Guide Rails Shoes :

To prevent car shaking automatic adjustable guide shoes should be used. The firm should use Teflon guide gibs on lubricated guide rails

4.0 Elevator Car :

4.1 The Elevator shall be suitable for carrying 10 passengers i.e. minimum 680 Kg at a speed of 1.0-mps. It shall travel from Ground floor to 3rd floor. Each floor height is approximately 3.8 m. It shall have four stops and four openings. All the openings shall be on same side. The machine room shall be located on the top. **The elevator should be suitable for installation in the building's existing shaft size of 1920 X 2030mm.**

4.2 Car frame

The car frame shall be in accordance clause 4 of IS 14665 (part-4, Section-3) 2000 made of Hot Dipped or Spray galvanized Cold Rolled Steel of rigid construction to withstand without permanent deformation the operation of safety gear with adequate bracing to support the platform and car enclosures. The car safety shall be integral with car mounted on the bottom members of the car frame and shall be with flexible guide clamp type designed to stop and hold a fully loaded car and withstand without permanent deformation the operation of safety gears. The Deflection of the Members carrying the Platform shall not exceed 1/1000th of their Span under Static Conditions with the rated Load Uniformly distributed over the Platform. It shall not transfer Load to Enclosure. The Safety Factor of the Frame shall not be less than 5. Special precautions shall be observed so that drumming is eliminated by use of the application of anti-drumming paint to the outside of the car wall panels

4.3 Car Platform :

The car platform shall be of framed construction and designed on the basis of rated load evenly distributed confirming to IS 14665 (Part-1) 2000. A load plate along with overload alarm, giving the rated load and permissible maximum number of passenger should be fitted in each Elevator car in a conspicuous position.

4.4 Car Body:

Car body shall be made of Vandal / **scratch proof** Resistant Stainless Steel of Min. Thickness 1.5 mm. The Design of Final Finishes of the walls, ceiling and Floor is Subject to the acceptance of the Employer. It shall be insulated to prevent the transmission of Noise and Vibration from the car Frame. The car shall be enclosed on all sides by a metallic enclosure. The enclosure

including the door shall withstand without deformation a thrust of 35 Kg applied normally at any point and as per IS 14665 (Part-4/Sec-3) 2001. Ventilation openings if specified shall be as per IS 14665 (Part-4/Sec-3)-2001. The car shall be enclosed on all sides by a metallic enclosure in case of passenger normal Elevator.

4.5 One 18-watt CFL lamp luminary with louvers and one 300-mm sweep ceiling fan shall be provided in the car.

4.6 An **emergency alarm** unit shall be located within the Elevator-well at the main level served, the push for which should be clearly labeled in the car operating panel.

4.7 Car doors :

4.7.1 Car doors shall have the minimum clear opening of 900 wide x 2100 high and during travel the car door shall be mechanically locked. Doors shall be scratch proof stainless steel, not less than 16 s.w.g. to En 81, Part-1,2 or 3 as appropriate and shall be silent in operation.

4.7.2 All doors shall be fitted with a combined mechanical and electrical interlock, to EN 81, Part-1,2 or 3 as appropriate, with dust protection screen and with inspection panel.

4.7.3 The landing door lacks shall be configured such that it shall not be possible to open the doors form the landing side, unless the car is at the particular landing level. Nor shall it be possible to start the elevator or keep it in motion, unless all landing doors are closed.

4.7.4 Provision shall be incorporated for opening the landing doors by emergency key, irrespective of car position. The key shall comply the En 81, Part-1,2 or 3 as appropriate.

4.7.5 An electric infrared screen curtain type detector shall be provided (Curtain of light). This shall provide protection across the full width and height of the entrance. Interruption of the curtain beams shall cause the doors to reopen. An adjustable timer shall be provided, to adjust the opening and closing time of the car and of the landing doors.

4.7.6 The landing doors, at each level, shall be two hour fire rated, two panel, center opening power operated fully automatic.

4.8 Car Roof:

The roof of the car shall be capable of supporting a weight of at least 140 Kg and as per IS 14665 (Part-4, Sec-3):2001. The car Roof shall be suitably Constructed with Galvanized Sheet Steel & reinforced to permit the Maintenance & Inspection of the Elevator Shaft equipment to be carried out by Maintenance Personnel standing on the Car Roof. Perforated with Mesh Construction of the Roof or Wooden Platform on the Car Roof shall not be acceptable. The Car Roof shall be fitted with Guard Rails set as at a height and of suitable dimensions and strength to Protect Maintenance Personnel.

4.9 Car Floor :

A Granite tile floor covering shall be provided in the Elevator car.

4.10 Operating Panels inside the car :

4.10.1 The car **operating** panel shall be of metal, flush mounted and duly finished to match the car interior décor and shall contain all the devices as may be specified depending upon the type

of operation required, in addition separate illuminated panel for indication the floor and direction may be provided on the top or the door way. A digital dot matrix display shall be incorporated; Character heights shall be 25 mm. All switches shall be fade proof and the devices shall be of suitable quality. Each device and its operating position shall be legible fade proof and marked. Car equipment, mounted in a stainless steel finish, flush panel, shall comprise :-

- Call pushes, illuminated, for each floor.
- Car position indicator, illuminated, for each floor, to indicate car position.
- Alarm push.
- A door open push to re-open the doors when closing.
- Key operated Priority call in the car.

4.10.2 The car Operating Panel shall be of convex design located within the car wall in accordance with the requirements of the Building Regulations to ensure it is also suitable for use by disabled persons.

4.10.3 The car panel shall include circular (micro movement) halo illumination of the button, which will indicate that it has been pressed. Buttons (Tactile in compliance with Building regulations) shall be provided for entering floor calls, door open and alarm.

4.10.4 A position indicator providing a digital display shall be included. The panel shall also include:

- Emergency Car Lights.
- Passenger inter-communication units.
- Independent service key switch.
- Car overloaded indicator.

5.0 Elevator control:

5.1 The operation shall be Simplex Full Collective Automatic, with one button in the car for each landing and one button at each landing. All stops registered by the momentary pressure of the car buttons shall be made in the order in which the landings are reached after the buttons have been pressed but irrespective of the sequence in which calls were registered.

5.2 Stops registered by the momentary pressure of the buttons at the landings shall be made in the order in which the landings are reached in the down direction of travel after the buttons have been pressed. All landing calls shall be answered when the car is traveling in the down direction, except in the case of the terminal floor calls which shall be answered as soon as it is reached.

5.3 Load Non-Stop Option – The landing calls shall be by passed but not cancelled if the load in the car is approximately 80% of the contract load.

5.4 Buffers:

The suitable heavy-duty spring buffers shall be placed below the car and counter weight arranged to sustain and shock, should the elevator over travel past the terminal limits. Buffer

shall be designed of design speed + 15%. Clearance from under side of car resting on a fully compressed buffer shall not be less than 1.20 m.

5.5 Ropes:

These will be self lubricated and manufactured from high grade steel and material special flexible and the combine breaking strength will be calculated with a minimum factor of safety of 10 times the combine weight of car with full load.

5.6 Traveling Cables :

All wiring and electrical interconnections shall comply with governing codes. Insulated wiring shall have flame retardant and moisture proof outer covering and shall run in metal conduit tubing or approved electrical raceways. Traveling cables shall be flexible and suspended to relieve strain on individual conductors. A minimum of 10% spare conductors shall be provided in traveling cable.

5.7 Threshold :

The threshold to be provided should be aluminium grooved, with self-supporting sill angle.

5.8 Hall Buttons:

For passenger and freight elevators, these shall be provided at each terminal landing. A single micro movement push button shall be provided at top most and landing floors, two micro movement buttons on a single plate shall be provided at each intermediate floor. When a hall call is registered by momentary pressure on a landing button, that button shall become illuminated until the call is answered. Passenger and freight elevators call buttons shall be as per manufacturers standard selection. The catalogues of the buttons offered shall be submitted along with the tender.

5.9 Motor:

The make and type of hoisting motors and capacity should be mentioned. The motor should be suitable for elevator service (S4 duty) with high starting torque and starting current should be mentioned.

5.10 Alarm Bell :

A battery operated emergency alarm bell, including wiring to be provided and connected to a properly marked push button in the car operating panel. The alarm bell shall be located at the ground floor, at the floor landing outside and adjacent to hoist way.

5.11 Hoist way Gate Interlocks:

Each host way gate shall be provided with interlock and which shall prevent the movement of the car away from the landing unless all are closed and locked. The interlock shall also prevent opening of gate except at the landing where the car is stopping or has stopped.

5.12 Counter Weight :

The counter weight shall consist of cast iron weight containing structural steel frame and shall be equal to the weight of the complete elevator car and approximately 50% of the contract load. Counterweight is to be provided with over speed safety in case of passenger elevators.

5.13 Hitches Plates :

Self aligning (with isolation cushion) hitches plates of better roping shall be provided.

5.14 Speed Governor:

The car safety shall be operated by a mechanical centrifugal speed governor located at the top of the hoist way. The governor shall actuate a switch when excessive descending speed occurs disconnecting power to the hoist motor and applying the break prior to deployment of the safeties.

5.15 Reverse Phase Relay :

Reverse phase relays should be provide on the controller, which should be designed to protect the elevator equipment against phase reversal and single phasing and phase failure.

5.16 Digital Hall Position indicator :

A digital position indicator shall be provided on all landings indicating the position of the car in the hoist way at all times. Illuminating direction arrows shall indicate the direction of the travel.

5.17 Digital Car Position indicator :

A digital car position shall be provided in elevator car which shall indicate the landing at which the car has stopped or is passing illuminating direction arrows shall indicate the direction of travel.

5.18 Car Door Operator :

An electrical A.C / D.C. door operator shall be provided on the car to automatically operate and close the car door in the following manner.

When the car stops at a landing the car door shall be opened by the electric operator. After the hoist way door has been closed, the pressing of either a car button or landing operating button at other landing shall cause the car door to close. An electric contact shall be provided to prevent the operation of the elevator unless the door is in the position.

5.19 Full Collective Automatic Operation:

a) The operation shall be full collective automatic type with one button in the car for each landing level served and up and down buttons at the intermediate landings and a single button at each terminal landing. All stops registered by the momentary pressure of the car button shall be made in the order in switch the landings are reached after the buttons have been pressed but irrespective of the sequence in which the calls were registered.

b) All up landing calls shall be answered when the car is travelling in the up direction and all down landing calls shall be answered when the car is traveling in the down direction, except in the case of the uppermost or lowermost calls which shall be answered as soon as it is reached.

5.20 Infra red road safety :

Car doors should have infrared safety device. When any beam is interrupted, an electronic circuit shall be actuated and door operating mechanism shall returned the doors to the open position and when the entrance is again clear, the elevator door closes automatically.

5.21 Fire man drive:

Fireman drive shall be provided for elevator. The operation of the fireman drive shall be in two phases.

In the first phase it shall cancel all the calls and bring the passengers to the parking floor. All the floor buttons shall remain ineffective till the button is reset.

In the second phase the fireman shall use its. In second phase operation the elevator door should open by continuous pressure on the door open buttons and the door shall close if the button is released before the door full open. And all buttons giving car calls indication shall cause the door to close and the elevator should run on slow speed. Doors should be fire rated for one hour and shall be provided with jam panels.

6.0 Additional Features available which add Safety, Security and Passenger Comfort:

6.1 Safety :

Safety features protect passengers from experiencing any danger or discomfort due to failures in the elevator or power supply system or due to external emergencies such as earthquake or fire. Some safety features provide means of communication for passengers in the car during emergency situations.

6.2 Emergency battery drive (EBDA):

The feature is intended to move automatically the can to the nearest floor when the car has stopped between floors because of the failure of power supply. The car emergency operation is performed at low speed and all safety functions are working. The resetting into normal operation is made automatically when the power supply returns. Both battery unit (36V) and control module are located in the shaft.

6.3 Fire detection of the whole building, doors open/closed (FID BC/BO):

The Fire detection feature returns all the elevators to a specified floor and lets passengers out of the car when there is a fire detected in the building. The elevators remain on the specified floor until the fire situation is resolved. The fire signal can come to the elevator either from the fire protection system of the building or from a separate switch.

The fire signal should be a potential-free contact and it should be wired to the machine room by the builder or by the fire protection company.

The detection concerns fire in the whole building. The elevator returns non-stop to the Fireman's floor (or to the main floor, if no fireman's floor is specified) and is available at that floor for fireman's use, if an FRD feature is specified. The doors are first opened at the specified floor, then closed and kept closed (DOB remains operative).

6.4 Water sensor Contact (WSCO):

When this contact has been activated, the car will not serve the top and bottom floors to avoid the car or the counterweight coming into contact with water. IF the car is standing at the bottom or top floor, it will move away from that floor and move to the main floor with the doors closed.

6.5 Emergency intercom from car to MAP (Maintenance Access Panel) and lobby (ISE C) :

Intercom telephone connection between the car, the MAP and the lobby for further connection to control station, door keeper.

6.6 PASSENGER COMFORT (Entering and Exiting):

Passenger comfort features improve the interface between passengers and elevator equipment to make the elevator journey (entering/traveling / exiting) more comfortable. Some features classified as passenger comfort are parallel safety measures and improve the transportation capacity of the elevator group. A superior ride comfort is built in. Most passenger comfort features are concerned with entering and exiting, some are supervision to avoid inconvenience caused by vandalism and misuse of elevators.

6.7 Voice Announcer & Speaker :

This feature within the control panel enables a computerized voice to inform passengers of floor arrivals and car departures.

To comply with the Building regulations there is a requirement that the Elevator car should provide both visual and voice indication of the floor reached if it serves more than three floors.

6.8 Advanced Door Opening (ADO)

Advanced door opening ensures that it is safe to start opening the doors when coming to a floor while the elevator is still moving at a very slow speed (0,3 m/s, 140 mm default).ADO offers the passengers a chance to exit the car immediately after landing. Opening of the door while still moving at a slow speed enhances the transportation capacity. The passenger pushes the Door Open Button, the door will be re-opened. The Quick Close feature saves time especially if only one passenger enters the car.

6.9 Nudging Service, Shortened time (NUDS):

The doors are closed with limited speed and a buzzer is operated if some one has been standing in between the car doors for a long period of time. The buzzer sound is intended to warn people that they are preventing the doors from closing. The doors are naturally closed in a safe manner. The closing force is limited to a safe level (150N) and the nudging time is shortened depending on how may times this feature is used

6.10 Quick Close from Car Call (QCC):

To save passengers time, doors will start to close when a passenger inserts a car call. IF any of the door devices (safety ray, curtain of light) detects another passenger entering or exiting or a passenger pushes the Door Open Button, the door will be re-opened. The Quick Close feature saves time especially if only one passenger enters the car.

6.11 Curtain of Light (SRC RNC) :

The curtain of Light consists of a series of invisible light beams across the car door entrance. The curtain of light detects if there are passengers between the doors and so prevents the doors form closing. The Curtain of Light is used for the same function as the Safety ray but the Curtain of Light has the advantage of detecting an obstacle in any location between the door opening.(Included as standard

6.12 False Car Call Canceling (FCCC):

The option is used to cancel can calls if there is nobody entering or leaving the elevator car or if the elevator car is empty. It protects elevator service against abuse, done by for example playing children pushing a lot of car calls and then leaving the car. The detection of false car calls is based on either the load in the car or passengers cutting the safety ray or both.

6.13 Automatic rescue Device :

Automatic (Emergency) battery device should come into operation in case of power failure it should sense the direction of motor and stop the elevator at the nearest floor landing and door should open. The automatic rescue device (drive) should be base on maintenance free batteries of suitable capacity.

7. SECURITY & PRIORITY SERVICE :

Security features assist the building management and tenants to secure their property against unauthorized use by restricting the access to specified floors only the specified people. Some special features assist guards to prevent unwanted people entering the building.

7.1 Provision for Card Reader :

We can provide the wire in the elevator car, traveling cable and option board for the client's software company to install a swipe card or card reader in the car to restrict access to certain floors.

7.2 Compulsory Stopping at Main Floor (CSM):

This feature allows the guard at the main floor to check the passengers who are traveling past that floor to check the passengers who are traveling past the floor in the elevator. The elevator can either continue its travel automatically after stopping on the floor or the guard can let the elevator continue by pressing a release button

7.3 Locking of Car Calls (LOC E) :

This feature prevents the entering of a car call to the locked floor. E = re-opening devices are inoperative in closed doors. The feature LOA is used to keep doors locked mechanically. Locking control device can be key switch or badge reader unit (badge reader unit by others).

7.4 Corridor Illumination Control (CIC):

When the car has started to decelerate, a signal is given to illuminate the stopping hall in the floor where the Elevator will be stopping. A separate potential free contact per floor is required.

7.5 Door Open with Extended Door Time (DOEB):

The extended door open time is used in elevators where loading situation are common. The extended door open time can be initiated by a button. When the button is used the doors will stay open for a specified period of time allowing loading of the elevator car.

7.6 Parking at Main Floor, Doors Closed (PAMC):

When the elevator becomes free, it will be automatically dispatched to the main floor. At the main floor the elevator remains with doors closed. In a group only the first vacant car will be dispatched to main floor parking. The PAM parking is used to give better service for incoming

passengers at all times of the day during low traffic, there will be in practice, one elevator parked at the main floor at all times.

7.7 Priority Operation (PRC):

The Priority operation can be used to drive the elevators from car call buttons only. The landing calls are not served. Possible situations where this might be useful are bringing VIP persons directly to their destination floor in a hotel without stopping on the way Another situation might be transporting bulky goods directly to the correct floor. A key witch inside the elevator car can initiate the priority service. The switch sets the particular elevator to priority service for as long as the switch is on.

7.8 Disturbance Alarm (DAL GP):

Disturbance monitoring of elevator. G = Disturbances are:

- Power failure
- Drive time supervision.
- Emergency stop
- Not able to start.

8.0 **STANDARD:-**

8.1 Unless otherwise specified, all materials covered under this specification shall be designed, manufactured, tested and installed in conformity with the latest Indian Standard Specifications. In case such Indian Standard Specifications are not published equivalent British Standard Specifications shall be followed. All equipments shall confirm to latest Indian Electricity Rules, PWD and Local/State laws over byelaws as regards to safety, earthing and other essential provisions specified therein.

8.2 All equipments and materials selected shall also be supplied and installed taking into consideration the Factories Act, Fire Regulations and Local laws or byelaws. All light fittings and equipments selected shall be of well tried out design. All materials used in the assembly of fittings and their accessories shall be of high quality and manufactured in accordance with the best modem practice.

8.3 All the materials supplied by the contractor according to the contract conditions will be subject to inspection and approval by the Consultant or/and Engineer-in-charge or their authorized representative from time to time. The contractor shall extend all required facilities for such inspection free of cost. At the time of inspection, the inspecting officer shall have full liberty to reject any such material, which does not confirm to specifications or the requirements. The owner shall not entertain any claim for the rejected materials. The contractor shall remove all rejected materials from the site at his own cost.

8.4 The owner shall not accept any surplus material procured by the contractor.

8.5 The contractor will be responsible to get electric installations inspected by the Electrical Inspector of the State Government and to obtain the statutory clearance for energisation. The required inspection fee will be deposited by the contractor accordingly.

8.6 The contractor should possess valid electrical contract license and labour license issued by the appropriate statutory authority of the State Government during the execution of the contract.

8.7 The contractor shall be registered with Provident Fund Department for engagement of Labours / Employees.

9.0 Inspection and Approval.

10.0 The contractor shall put up samples of all major items for inspection and testing by the Consultant and/or Engineer-in-charge for which the contractor shall furnish minimum 10 days clear notice in advance to enable them to depute their Inspecting Officer. Similar procedure shall be adopted for the approval of samples of minor materials/accessories to be used for the work.

11.0 Maintenance And Service during Defect Liability Period.

11.1 The Contractor shall provide Free Comprehensive Maintenance service during Defects Liability Period. The Maintenance Services rendered by the contractor shall include All kinds of Routi8ne and Preventive Maintenance and Breakdown Maintenance. Breakdowns shall be attended on 24 hrs. X 365 days basis. Routine and preventive Maintenance shall be carried out during Non-Operational hours.

11.2 Maintenance service consisting of regular examinations and adjustment of the elevator equipment shall be provided by the elevator contractor for a period of twelve (12) months after the elevator has been turned over for the customer’s use. The service shall not be subcontracted but shall be performed by the elevator contractor. All work shall be performed by competent employees during regular working hours of regular working days and shall include emergency 24 hours callback service. This service shall not cover adjustments, repairs or replacement of parts due to negligence, misuse, abuse or accidents caused by persons other than the elevator contractor. Only genuine parts and supplies as used in the manufacturer and installation of the original equipment shall be provided.

11.3 The periodic lubrication of elevator components shall not be required, including: Sheaves, Rails, Belts, Ropes, Car and CWT guides, etc.

11.4 The elevator control system must:

a. Provide in the controller the necessary devices to run the elevator in inspection operation.
b. Provide on top of the car the necessary devices to run the elevator in inspection operation.
c. Provide in the controller an emergency stop switch. This emergency stop switch when opened disconnects power from the brake and prevents the motor from running.
d. Provide in the event of a power outage, means from the controller to electrically elevator and control the elevator brake to safely bring the elevator to the nearest available landing.
e. Provide the means from the controller to reset the governor over speed switch and also trip the governor.

11.5 Provide the means from the controller to reset the emergency brake when set because of an unintended car movement or ascending car over speed.

11.6 ROUTINE AND PREVENTATIVE MAINTENANCE

Program of routine and preventive maintenance during the Defects Liability Period as also during the tenure of annual maintenance contract shall comply with minimum requirements as below:

11.6.1 Fortnightly

This shall include the following:-

- To check all bearing oils, oil rings, oil chains, etc. All machines should be carefully checked and repaired for abnormal temperature rise.
- To check and repair all relays and contacts as wells as their movements and repair as necessary.
- To clean traction machines, relays panels, control panel, starter panels, selector, governors, car top. Car gates, sills and pits.
- To check brake action and adjust if necessary.
- To check and repair movement of door switches, gate switches and emergency stop switches.
- To check and repair indicator lamps and indicator.
- To check and repair anunciator lights, buzzer and car lights.
- To check and adjust leveling differences, brake slippage, acceleration, deceleration and riding comfort.
- To check and repair movements of car control buttons, switches and the like.
- To check and repair operation of weighting devices.

11.6.2 Monthly (In additional to all Fortnightly Checks)

- To turn grease cups for speed governors and compensating pulleys.
- To check oil selectors.
- To top up rail lubricators
- To clean ropes oil if necessary.
- To clean traction motor brushes, brush holders and internal frame. adjust slip rings if necessary. Check commuters.
- To oil electric brake pins.
- To oil all pins of door operation and door opening mechanisms.
- To clean hoist way, beams slow down cams, outside cages, rails and counterweight rails.
- To clean, oil and adjust door closer and levers.
- To clean main sheave, secondary sheaves and rope sheaves on car top and counterweight top
- To clean and repair brake wheels and shoes.
- To oil compensating rope tensioning pulleys.

11.6.3 **Every Two months (In additional to all Monthly Checks.)**

- To clean and oil door hangers, door rails, interior of hanger case. If necessary adjust eccentric rollers, car door hangers, door connecting ropes and chains.
- To check and repair door shoe.
- To clean and oil safety fears.
- To clean and oil car and counterweight guide shoes. Adjust if necessary.
- To clean and oil interior of terminal limit switches and position switches.
- Check rubber rollers of terminal limit switches.
- To check oil clean and repair interior of door switches, gate switches. Replace worm parts if necessary.
- To check and repair flexible cable.
- To check and repair movement of limit switches.
- To clean and oil interior of car control switches.
- To clean and check push buttons of care control panels.
- To check, clean and repair the sleeve and plungers of the electromagnetic brakes.

11.6.4 Quarterly(In additional to all Two monthly Checks.)

- To check and repair the operation of terminal limit switches and final limit switches.

- To check and repair the governor switches.
- To clean the brush holders and commutators of the door motors.
- To check and repair the traction ropes for broken wire, wear elongation and even tension. Adjust if necessary.
- To remove the dust inside the traction machines and controls panels using electric blower.
- To clean and repair the indicator lamps
- To check the voltage of rectifiers and thyristors.

11.6.5 **Half yearly (In additional to all Quarterly Checks)**

- To check and repair the operation of safety gears.
- To check oil for oil buffers.
- To check and clean the hall buttons and contacts.
- To check and repair the compensating chains or ropes.
- To check and oil the bearing of door motors.
- To grease the secondary sheaves, car top sheaves and counterweights.
- To check the wear of guide shoes of cars and counterweights.

11.6.6 Annual (in additional to all Half Yearly Checks)

This shall include the following:

- To clean the wire connection box of every landing and car cages. Tighten all screws and check the conditions of cables at conduit inlets and outlets.
- To check and repair the conditions of worm gear and thrust bearing of the gear boxes.
- To check and tighten screws of control panels, starters panels and relay panels.
- To remove the dust inside the landing indicator switches by electric blower.
- To test all safety devices.
- To dismantle, clean and adjust the electro magnetic brake of gearless machines.
- To charge gear oil and motor oil.
- To check and tighten screw and foundation bolts of traction machine, secondary sheaves, exterior of Elevator frame, guide rail, guide rail clamps and bracket etc.
- To test the over current relays.
- To provide all labor, materials, tools and transport to carry out annual inspection and load test according to the requirement of the employer

All the scheduled maintenance services described above shall be properly programmed and agreed with the Engineer-in charge in order not to affect operation of the Elevator systems. The Maintenance Check sheets shall be suitably made & Upgraded in order to achieve the Highest Order of Reliability & Availability.

11.7 BREAK DOWN MAINTENANCE:

The Contractor shall also undertake to provide a comprehensive breakdown service whereby qualified Technical Personnel shall attend to each breakdown as soon s practicable after a breakdown is reported and carryout immediate remedial work at a reasonable speed according to the nature of the breakdown. Any faulty equipment or components shall be quickly replaced. In circumstances such that the Contractor fails to attend the breakdown within four normal working hours after notification of the breakdown and where remedial work is interrupted during normal working hours for purposes other than obtaining replacement parts, the employer reserves the right to order such action as may be necessary to expedite completion of remedial work which shall be at the Contractors expense without abrogation of the Contractors responsibilities.

11.8 Extension of Defects Liability period:

The Defects Liability Period of any item (Component/Assembly/Sub Assembly/equipment/PCBs) etc. which fails during Defects Liability period shall deemed to be extended from the date of failure of such item for the full defects Liability period.

11.9 Contractor to keep sufficient spare parts:

The Contractor shall keep sufficient spare parts & consumables during the maintenance period to ensure that replacement work for defect can be carried out immediately.

A competent engineer shall be provided to investigate the fundamental cause of a fault & Remedial actions are taken accordingly. Temporary quick fix solution will not be accepted. The employer shall at his discretion, take action to recover all losses incurred rising from the failure of the contractor to perform the duties either wholly or in part as detailed in this section.

12.0 **Performance Guarantee:**

The supplied equipment shall be guaranteed for a trouble free operation against any bad workmanship, bad quality of material used and/or faulty design for a minimum period of 12 months from the date of commissioning by the owner or 18 months from the date of supply, whichever is earlier. The supplier shall rectify the defects, if any, found during this period and replace all faulty material free of cost.

APPROVED SPECIFICATION & MAKE OF PASSENGER ELEVATOR

Contract load	10 Person
Elevator speed	1.0 m/s
Number of floors served	G+3 floors
Stops & Openings	4 Stops 4 Openings (All opening on same side)
Door opening size	900 (w) x 2100 (h)
Control System	Full collective automatic
Elevator machine	Gearless with integral drive sheave & brake disk
Elevator motor	3 phase permanent magnet type
Drive	Variable Voltage Variable frequency
Power supply	433 V, 3 phase, 50 Hz AC
Clear internal lift well dimensions	To be submitted.
Pit depth	To be submitted
Headroom	To be submitted
Power supply	415/230V (+/-6%)3 phase and Neutral 50 Hz
Elevator Car Specification	
Front wall	Brushed stainless steel
Side & Rear walls	Brushed stainless steel
Car operating panel	Full height stainless steel cabinet
Car flooring	Granite tile.
Car ceiling	Suspended modular panels finished in white skin plate or brushed stainless steel.
Lighting	Fluorescents or Halogen spotlights.
Other features to be included	
Ventilation	Natural, ventilation at high & low levels.
Handrail	Brushed stainless steel to real wall
Car operating panel	Digital Dot matrix with direction Indicators
	Micro movement pushes
	Door open push
	Alarm push
	All pushes to have tactile indication
	Emergency light unit
	Auto dialer Unit
	Dedicated phone line to be provided by others
Car door finish	Brushed stainless steel
Landing door & Surround finish	Brushed stainless steel
Car and landing entrances	Power operated doors with full height pressure sensitive door reversal
	Curtain of light, full height safely edge
	Two-hour fire certified entrance at All floors.
	Stainless steel landing pushes, with Tactile indication, to be located within the door frame.
	Audible alarm to be located within the lift well at the main level served.
	Pit ladder
	Sound insulation
	Buffer steel work
	Tactile pushes to both car and landing pushes.
	12 month warranty.
Hoist-way entrance	Central opening sliding stainless steel doors opening 900 mm wide x 2100 mm high

Door operator	Automatic with AC-Door operator having VF-Controls VF
Signals	√ Combined luminous hall buttons and digital hall position indicator with directional arrow √ Full length panel Dot Matrix indicates. √ Integral full height car operating panel with luminous buttons √ Digital car position indicator combined with directional arrow √ Battery operated alarm bell and emergency light with batteries as required. √ Overload warning and service cabinet. √ Auto fan On/OFF feature. √ Compact Florescent tube in the car. √ Fireman's switch at ground floor √ Intercom system in car (in built) (for 3 position in built feature) √ All plates should be of stainless steel.
Door safety	√ Mechanical & infrared door protection system √ Face plate in hair line finish of stainless steel and of rectangular shape.
ARD	Automatic Rescue Device
APPROVED MAKES	OTIS, KONE, THYSSENKRUPP, MITSHUBISI, SCHINDLER.

(Signature of Contractor)

GUARANTEED TECHANICAL PARICULARS

Sl.No.	Particulars of Details.	Guaranteed data. (To be furnished by Bidder)
A	**General**	
1	Name of Manufacturer	
2	Country of manufacturer	
3	Capacities (persons/weight)	
4	Service	
5	Speed of Travel	
6	Height of Travel	
7	No. of Floors served	
8	No. of opening	
9	Position of counterweight	
10	Type of Leveling method	
B	**Machine:**	
1	Position of Machine.	
C	**Motor**	
	a). Type	
	b) Make	
	c) Horse Power	
	d) Standards conforming to	
	e) Electric supply particulars for which it is Suitable for operation.	
D	**Drive:**	
	a) Number & diameter of ropes	
	b) Make and Type No.of Reduction gear unit	
	c) Reduction ratio of gear unit.	
E	**Brake:**	
	1. Type	
	2. Make	
	3. Construction and Electrical particulars (Operating voltage, current etc)	
F.	**Car:**	
1	Outside dimensions of car.	
2	Inside clear dimensions	
3	Construction of car	
4	Design/Type of enclosure of car	
5	Details of flooring	
6	Attachments and fitting inside the car	

7 Car Doors:

a) Size

b) Construction, design & finish

c) Details of runners & suspension

8 **Landing Doors**:

a) Size

b) Operation

c) Construction, design & finish

d) Details of runners & suspension

9 Leveling Method:

G. **Guides & guide Shoes:**

1. For Car.

a) Size

b) Weight per metre run

H **Safety Service:**

1 Car safety type

2 Counter weight safety type

3 Door interlocks in carry-type

4 Door locks in landing type

5 Details of door ledge

6 Limit switches:

a) Type

b) Location

c) Function

d) Number at each location.

e) Make.

f) Rating (Amps).

I Buffers:

1. For Car:

a) Type

b) Construction

c) Material

2. For counterweight

a) Type

b) Construction

J Electrical Particulars of Alarm Bell:

Other safety devices included in the offer.

K Controller.

1. Type

2. Location

3. Manufacturer name, type and electrical particulars

4. Operating coils of relays.

5. Particulars of type make etc of relays and contractors

6 Any other particulars of construction.

L Signaling System:

a) In Car:

i) Door Button

ii) Call indicator

iii) Direction and position indicator

iv) Emergency button

v) Door button

vi) Alarm bell button

vii) Changeover switches

viii)Light and fan switches.

b. At landing:

i) Call button

ii) Direction and car position indicators.

Note: Full and comprehensive details are o be given by the tenderer.

M Inter Communication System:

1. Make & Model

2. Technical Data Manufacturers

(Please enclose literature)

N. Emergency Power pack:

1. Type of Battery and Capacity.

2 Detail of Flat / Boast Change (Make/Model)

O Automatic Rescue Device

a) Make

b) Capacity

c) Battery make and capacity in ampere hour and quantity.

P Any other data.

Date:

Name of the Firm:

Signature of Bidder:

Designation & Seal

Schedule of Programme for Manufacturer, Supply and Installation.

Sl.No.	Details.	Month
	Preliminary Drawings	
1	General arrangement drawing.	
2	Electrical drawing	
3	Foundation and other details	
4	Any other drawings as per specification.	
5	Bringing materials to site	
6	Scaffolding	
7	Alignment Checking	
8	Guide Rails	
9	Hoist way work	
10	Door work in landings	
11	Car assembly	
12	Machine Room machinery installation.	
13	Controller installation.	
14	Wiring Work	
15	Adjustment	
16	Commissioning.	
17	Testing.	

Date:

Name of the Firm:

Signature of Bidder:

Designation & Seal

Test of Elevator Installations:

1. Test of Elevator Installation

1.1 Tests at site:

a) **Leveling Test:**

Accuracy of the floor leveling shall be tested with the Elevator empty, fully loaded.

The Elevator shall be run to each floor while traveling both in upward and downward directions and the actual distance of car floor above/below landing floor shall be

measured. In each case there shall not be any appreciable difference in these measurements for leveling at the floors when the car is empty and when it is fully loaded. The tolerances for leveling shall be specified and guaranteed by the tendered.

b) **Safety Gear Tests:**

With the contract load still in the car, the safety gear may now be tested, if the Elevator operates from a D.C. supply the excess speed necessary to operate the gear may be obtained by field weakening, but if A.C. motor is installed the gear may be sent to operate at the contract speed or alternatively tripped by hand at the contract speed.

Instantaneous safety gear controlled by a governor should be tested with contract load and a contract speed, the governor being operated by hand. Two tests should be made, however, with wedge clamp or flexible clamp safeties, one with contract load in the car and other stopping distance obtained should be compared with the specified figures and the guides, car platform, and safety gear should be carefully examined afterwards for signs of permanent distortion. Note:- if there is sufficient cable left on the safety drum after the gear has operated. Counterweight safety gear should be tripped by the counter weight governor and the stopping distance noted. In this case, however the governor tripping speed should exceed that of the car safety governor but by more than 10%.

During the safety gear tests an inspector with a tachometer should determine the car speed (from the governor or the main sheave) at the instant or tripping speed with that stated in IS. The governor jaws and rope should be examined for any undue wear.

c) Contract Speed:

This should be measured with contract load in the car, with half load and with no load, and should not vary from the contract speed by more than 10%. The convenient method is by counting the number of revolutions, made by the sheave of drum in a known time, chalk mark on the sheave or drum and stop switch will facilitate timing but care must be exercised to ensure that no acceleration or retardation periods are included, if the roping is 2 to 1 the sheave speed is twice the car speed. Alternatively, the speed can be measured by a tachometer applied directly to shaft immediately below the sheave.

d) Elevator balance:

After the above test, some of the weight shall be removed until the remaining weights represent the figures specified by the tenderer. With this condition car at half way travel the effort required to move the Elevator car in either direction with the help of winding wheel shall be as nearly, be the same as can be judged.

e) Car and landing doors interlocks:

The Elevator shall not move with any door open. The car door relay contact and the retiring release contact must be tested. The working of the door operation and the safety edges and light equipment if any provided shall also be examined.

f) Controllers:

The operation of the contactors and interlock shall be examined and it shall be ascertained whether all the requirements laid down in the specification have been met.

g) Normal terminal stopping switches:

These shall be tested by letting the car run to each terminal landing in turn, first with no load and then with contract load and by taking measurements, top and bottom over travels can be ascertained.

h) Final terminal stopping switches:

The normal terminal stopping switches shall be disconnected for this test. It shall be ensured that these switches operate before the buffers are engaged.

i) Insulation Resistance:

This shall be measured between power and control lines and earth and shall not be less than 5 mega-ohms when measured with D.C. voltage of 500 volts. The test shall be carried out with contactors so connected together as to ensure that all parts of every circuit are simultaneously tested.

j) Earthing:

All conduits, switches, casing and similar metal work shall have earthing continuity.

k) Ropes:

The size, number construction and fastenings of the ropes should be carefully examined and recorded.

l) Buffers:

The car should be run on to its buffers at contract speed and with contract load in the car to test whether there is any permanent distortion of the car or buffers. The counter weight buffers should be tested similarly.

1.2 Tests at Manufacturer's works:.

a) High voltage test:

The dielectric or electrical apparatus (excluding motors, generators and instruments which are tested in accordance with the appropriate Indian Standards wherever they exist) shall be capable of withstanding a test voltage of ten times the working voltage with a maximum of 2000 volts when applied

i) Between the live parts and case or frame with all circuits completed

ii) Between main terminals or equivalent parts with all circuits open and

iii) Between any live parts of independent circuits.

Notes:- Owing to the impracticability of applying tests (ii) & (iii) mentioned above on controllers and similar apparatus after controller wiring has been completed, these tests may be made at convenient stage or manufacture.

b) Method of applying high voltage:

The test shall be made with alternating voltage of any convenient frequency, preferably between 49 and 60 cycles per second. The test voltage shall be of approximately sine-wave from and during the application of voltage with peak value, as would be determine by spark gap by orcillograph or by any other approved method shall of the applied voltage shall be measured by means of a transformer or by mean of a voltmeter used in connection with a special calibrated voltmeter winding or testing transformer by any other suitable voltmeter connected to the output side of the testing transformer.

List of Indian Standards Connected with elevator Installations.

1	Code of Practice for installation, operation & maintenance of electric passenger and goods Elevator (1st Revision.	IS 1860-1980 Reaffirmed 1991
2	Code of practice for installation, operation & maintenance of electric service Elevator	IS. 6620-1972
3	Specification for Electric passenger and goods Elevators.	IS.4666-1971 Reaffirmed 1991
4	Electric Service Elevator	IS.6383-1971 Reaffirmed 1991
5	Outline dimensions for electric Elevators (under revision draft finalized)	IS.3534-1976 Reaffirmed 1991
6	Code of practice for installation and maintenance of escalators	IS.4591-1968 Reaffirmed 1991
7	Specification for steel wire suspension ropes for Elevators and hoists (with amendments).	IS.2365-1977 Reaffirmed 1991
8	Glossary of terms relating to wire ropes	IS.2363-1981 Reaffirmed 1983
9	Specification for Elevator cables.	IS.4289-1984 Reaffirmed 1983
10	Glossary of terms for electrical cables and conduits	IS.1885 Part 32
11	Specification for rubber insulated cable.	IS: 9968 (Part) 1988
12	Specification for varnished, cotton cloth & tape for electrical purpose.	IS. 3352-1965 Reaffirmed 1990
13	Specification for Elevator door locking device and contacts.	IS. 7759-1975
14	Specification for hot rolled and slit steel bars	IS. 11731978 Reaffirmed 1978
15	Method of load rating of worn gear	IS. 7443-1974 Reaffirmed 1991
16	Code of practice for selection of standard worm and helical gear box.	IS. 7403-1974 Reaffirmed 1991
17	Isometric screw threads	IS.4218 (Part II) 1976 –do- 1991
18	Degree of protection provide by enclosures	IS. 2147-1962

	for low voltage switchgear and control gear	
19	Classification of Insulating material for electrical	1271.
20	Code of practice for earthing.	IS. 3043-1987
21	Electrical installation for safety of building	IS 1646-1997
22	Code of practice for the protections of building and allied structures against lighting.	IS-2309-1989.

23. Type and method of operation of car and landing doors.
24. Method of proper fastenings.
25. Type of safety gear with name of manufacturer.
26. Type of buffers indicating also the name, stroke, certified maximum load and certified maximum striking speed and whether buffer has been tested.
27. Door locks whether these have been tested for satisfactory submitted by the firm.
28. Whether alarm bell and emergency door lock release operating key and associated. Safety and other safety included.
29. Whether all wiring in the machine room and the host way etc, properly identified by plastic metallic identification tags.
30. What auxiliary switches have been provided.
31. Whether earthing has been done properly also the extra wires provided as per requirement mentioned.
32. Whether the controllers casing is insect proof with hinged doors and gaskets and foundation facilities.
33. Whether the Elevator supplier has recommended common spare required for maintenance and trouble free operation.

Certified the Elevator installation and components confirm to IS: 4666-1980, 1860-1980,2365-1977, 4289-1984, 7759-1975, 732-1983 and another relevant standards local Elevator Act and Rules, Indian Electricity Act and Rules and CPWD general Specifications of Electrical Works(2000) amended up to date.

Instructions to be displayed in English inside & outside the Elevator car
(Passenger Elevator for non-residential buildings)

INSTRUCTION TO BE DISPLAYED IN HINDI/ ENGLISH IN THE ELEVATOR CAR AND ELEVATOR LANDINGS

PASSENGER ELEVATOR

Sl.No.	Inside the car	Sl.No.	Outside the car.
1.	Elevator Number …….	1.	Elevator Number ……
2.	Capacity…..Kg…… Person	2.	Capacity…..Kg…… Person
3.	No Smoking	3	Please stand in 'Q'
4.	Operator push buttons/ switches correctly.	4	Smoking not permitted inside the Car.
5.	Do not lean against Elevator door	5	Please keep the elevator neat & clean.
6.	Watch before stepping door	6.	Do not force open the landing doors.
7.	Do not panic in the event of break down. Press alarm button/use in terms available in the Elevator and follow instruction of authorized staff.	7.	Watch before you step into and out of the elevator car.
		8.	Heavy articles/luggage not allowed
		9.	Avoid use of Elevator during fire.
		10.	Complaints if any may be sent to
		11.	Hours off operation.

Note:- This is only a Draft. Successful Tenderer shall submit the appropriate instructions and obtain approval of the Employer.

CHECK LIST FOR JOINT INSPECTION OF ELEVATORS BY EMPLOYER'S REPRESENTATIVES REF. TESTING OF ELEVATOR INSTALLATIONS.

1. Place of inspection

2. Date of Inspection.

3. Name of the Firm.

4. Verify visually particulars as per agreement description and completeness of work to be executed as per contract.

5. Verify layout as per drawing and record discrepancies if any.

6. Whether a plate with work ELEVATOR and instruction to be displayed / provided on each landing and in Elevator Car.

ELEVATOR WITH EQUIPMENT

a) Depth of pit and Provision of ladder Provided.

b) Arrangement for lighting in the pit.

c) Arrangement for lighting in the Elevator shaft.

d) Whether adequate tie rods provided for Counterweights

e) Whether all wiring has been in conduit pipes/ Troughs properly fixed and earthed.

f) Guard for counterweights in the pit.

g) Provision of check nuts and split pins in rope Fastenings and terminations.

h) Whether rope tension equal for all ropes.

i) Whether buffers symmetrically positioned.

j) Top car clearance.

k) Bottom car clearance.

l) Top counterweight clearance

m) Bottom car run by

n) Bottom counterweight run by

o) Availability of Multi criteria Detectors on Top Of Elevator Shaft. (To be provided by Electrical Contractor).

p) Any other item.

7. Machine room check provision for:

i) Arrangement for hand lamp with Flexible cord.

ii) A plug and socket

iii) Adequate Air-Conditioning (To be provided by HVAC Contractor).

iii) A danger plate on door.

v) Trap door.

vi) Main switch.

vii) Circuit diagram on wall

viii) Provision of Multi Criteria Detectors in Machine Room & Response Indicators Outside the Room.

ix) Any other.

8. **Earthing**

Whether machine body controller, car frame, limit switches, and conduit properly Earthed and check earthing continuity.

9. **Machine and controller:**

i) Oil leakage if any.

ii) Abnormal temp. rise of oil, bearing and motor

iii) Abnormal noise or vibrations.

iii) Whether UP and DOWN (direction arrows on motor or fly wheel marked).

v) Whether rubber pads provided under machine and its bed plates.

vi) Whether Control Circuits have independent fuses/MCBs.

vii) Whether protection against breakage of rope or taps exist.

viii) Whether cable ferrules marked.

ix) Gap between the car and landing sill

x) Any other.

10. **Operation:**

i) Operation of all floor buttons from within the car in up and down direction on both attendant and auto control.

ii) Operation of car by calls given from landing buttons in up and down direction on both attendant and auto control.

iii) Operation of door close and door open button

iii) Emergency alarm.

v) Emergency stop.

vi) Light and fan.

vii) Emergency key opening.

viii) Operation on type of control stipulated in contract.

ix) Operation of care top safety switches to make the Elevator in operative from within the car and speed of operation.

w) Door locking as checked from each floor.

xi) Any abnormal noise vibration jerk internal and stopping.

xii) Sideway play if any in the car.

xii) Working of position and direction indicators in car and at each landing.

xiv) Functioning of sensitive reopening arrangements on moving edge of doors.

xv) Smooth sliding movement of car and landing doors.

xvi) Whether car is stopped in between the floor and whether the doors can be opened manually from inside.

xvi) Opening of landing or car door when elevator is in operation to see that the movement of Elevator stops.

xviii) Operation of fireman switch.

xix) Check for brake release device and hand winding provisions.

11. **Safety Devices:**

i) Functioning of protection for single phasing and phase reversal.

ii) Function of protection for automatic power cut off device before the car and counterweight load on buffers.

iii) Function of overload relays.

iv) Operation of safety gear and also see for undue deformation of guide fails and stopping distance.

v) Check operation of safety switches.

vi) Operation of upper limit switch & positions.

vii) Operation of upper limit switch & positions

vii) Operation of electrical protection against opening of emergency door

ix) Any other item.

12 Checking of rope slip after 3 complete trips by putting a reference mark on the sheave and rope 60mm/12mm, 600mm/20mm.

13. `Test to see that the Elevator does not start in upward direction on no load and down direction on full load and on single phasing.

14. Check application of brake on full load in down direction at full speed by switching off the power supply and for over heating.

15. Load Test: Elevator No. _____

No Load		Full Load	
UP	Down	UP	Down

Starting Current: AC (Amp)
Running Current: (Amp) Travel
(Meters) Speed: Meter/ Sec.

16 Any other test

i) Size of the Elevator well

ii) Internal depth of car platform

iii) Size of the car door

iv) Rope protection against breakage have been carried out and test results are found.

v) Insulation resistance test & high voltage test.
I.R. is found _____ M ohm (Requirement 0.5 ohm minimum) and HV test with stood/not with stood.

NOTE:- This is only a Draft Check Sheet. Successful tenderer shall submit check Sheet for Employer's Approval.

TECHNICAL SPECIFICATION FOR ANNUAL MAINTENANCE CONTRACT (AMC)

FOR GEARLESS PASENGER ELEVATORS

1. To maintain the elevator in proper and safe working condition as per clause no.11.6 of **TECHNICAL SPECIFICATIONS FOR SUPPLY, INSTALLATION OF THE ELEVATORS –PART-I**

2. To regularly examine, lubricate and adjust the equipment and carry out planned maintenance in systematic and controlled manner by employing only qualified, trained and skilled persons.

3. the renew all wire ropes and chains (where fitted) as required) as required to maintain an adequate factor of safety to equalities the tension on all joisting ropes, repair replace conductor cables and hoist way and machine room elevator wiring.

4. To furnish lubricants as per manufacturers specification.

5. To examine periodically all safety device and governors and make all customary safety tests and to submit a certificate regarding the safety.

6. To systematically examine and adjust the following components:- Machine, Worm, Gear Trust Bearing, Drive Sheave bearings, break contract, linings and components, Motor generator, Motor Windings, Rotating Element's Commutation, Brushes, Brush Holders Bearings Coil Resistance for operating and motor circuits magnet frames and other mechanical part, Controller, Selector Leveling devices cames relays solid state components eg. PCB;s Transducers, Resistors, Condensers, Power Amplifiers transformers, Contacts, lads Daspots, Timing Devices, Steel Selector Tapes and Mechanical and Electrical Driving Equipments, Governor, Sheave, Shaft Assembly, Bearings, Contacts and Governor Jaws Car and Hall Mechanical Buttons, Car and Hall Position Indicators, Hal Lantems, Car Direction Indicators and all other Car and Landing Signal Fixtures as installed by Manufacturer

7. Deflector or secondary sheave, bearing car and counterweight guide rails and buffers top and bottom limit switches govenor tension sheave assembly compensating sheave assembly car counter weight and counterweight guide shoes including rollers and gibes. Interlocks on hoist way door hangers, guides automatic power operated door operator car door contact safety shoe. Load weighing equipment car frame. Car safety mechanism and platform.

PENALTY will be levied as follows:

i. Rate of penalty

	Period	Penalty
Maintenance Response time	Below 3 hours & upto 6 hours	Warning but no penalty
	Above 6 hours & upto 24 hours	Warning but no penalty
	Above 24 hours & upto 96 hours	Penalty of 1% of the contract amount for the annual payment.
	Above 96 hours & upto 168 hours	Penalty of 2% of the contract amount for the annual payment.
	Above 168 hours	Penalty of 5% of the contract amount for the annual payment for each week of non-operation.

SECTION - III

(LIST OF ANNEXURES)

The following Schedules and proforma are annexed to this Specification and contained in Section - III as referred to in the relevant Clauses.

i)	Declaration Form	ANNEXURE-I
ii)	Abstract of Terms & Conditions to accompany Section – II of Part – I	ANNEXURE-II
iii)	Schedule of Quantity & Delivery	ANNEXURE-III
iv)	Abstract of Price Component (to accompany Part – II of this Specification).	ANNEXURE-IV
v)	Schedule of prices to accompany Part – II	ANNEXURE-V
vi)	Bank Guarantee form for Earnest Money Deposit.	ANNEXURE-VI
vii)	Composite Bank Guarantee form for security Deposit, Payment & Performance.	ANNEXURE-VII
viii)	Bank Guarantee Form for Performance Guarantee.	ANNEXURE-VIII
ix)	Bank Guarantee form for 100%.	ANNEXURE-IX

ANNEXURE – I
DECLARATION FORM

To

Sir,

1. Having examined the above specification together with Tender conditions referred to therein I/We the undersigned hereby offer to supply the materials covered thereon 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 delivered within the time specified in the Tender.
3. I/We here guarantee the technical particulars given in the Tender supported with necessary reports from concerned authorities.
4. I/We certify to have purchased/down loaded 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 No._____ Dated_____
5. In the event of Purchase order being decided in my/our favour, I/We agree to furnish the Security Deposit in the manner acceptable to ORISSA POWER TRANSMISSION CORPORATION LTD. and for the sum as applicable to me/us 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.

Signed this _____ day of _____20_____

Yours faithfully,

Signature of Tenderer
With Seal of the Company

(This form should be fully filled up by the Tenderer and submitted along with the original copy of Tender)

ANNEXURE – II

ABSTRACT OF GENERAL TERMS & CONDITIONS OF CONTRACT (COMMERCIAL) TO ACCOMPANY PART –I

1	Earnest Money Furnished	(a) Cash (b) Bank Guarantee (c) Bank Draft
2	Manufacturers/supply experience including user's certificate furnished or not.	Yes/No
3	Deviations to the Specification in any (list enclosed or not.	Yes/No
4	Delivery: (a) Date of Commencement	
5	Guarantee: Whether agreeable to OPTCL's terms	Yes/No
6	Whether agreeable to furnish Security Deposit in case his tender be successful.	Yes/No
7	Whether agreeable to furnish Performance Guarantee	Yes/No
8	Terms of Payment: Whether agreeable to OPTCL's standard terms of payment or not.	Yes/No
9	Nature of Price: Firm.	Yes/No
10	Penalty: Whether agreeable to OPTCL's terms or not	Yes/No
11	Whether ITCC/STCC/P&L A/C. for the required period are furnished as per Clause-26 of Section –II	Yes/No
12	Validity: - Whether agreeable to OPTCL's terms or not.	Yes/No
13	Whether recent type test certificate from any Govt. approved laboratory is furnished or not.	Yes/No
14	Whether guaranteed technical particulars are furnished or not.	Yes/No
15	Whether dimensional design/drawings furnished or not.	Yes/No
16	Whether materials are I.S.I/I.S.O marked	Yes/No
17	Manufacturer's name and it's trade mark.	Yes/No

Place _____
Date _____

Signature of the Tenderer
With Seal of the Company

ANNEXURE – III

SCHEDULE OF QUANTITY AND DELIVERY

Sl. No	Description	Quantity Required	Desired Delivery	Destination.
1.	10 Passenger Elevator as per the technical Specification including supply, erection, testing and commissioning	1 Set	Within three months.	OERC building at Kalyni Complex, Unit-VIII, Bhubaneswar

NB : The details delivery programme and quantity to be delivered will be intimated at the time of placement of the Purchase Order.

ANNEXURE – IV

(ABSTRACT OF PRICE COMPONENT (TO ACCOMPANY PRICE BID)

1. Price Basis	F.O.R Purchaser's Destination Stores
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. Nature of Price	FIRM

Place :_____ Signature of the Tenderer
Date :_____ With Seal of Company

ANNEXURE – V

SCHEDULE OF PRICE. TENDER SPECIFICATION NO._____

A. Equipment Cost:

Item No.	Description	Qnty.	Unit Ex-factory Price (in `)	Unit Packing & Forwarding (in `)	Unit Freight (in `)	Unit Insurance (in `)	Unit Landing Cost at Destination Store Excluding S.T., E.D., and Octroi (in `)	Unit E.D (in `)	Unit S.T (in `)	Unit Entry Tax (in `)	Unit any other Tax. (in `)	Unit Landing Cost including All Taxes & Duties (in `)	Total Landing Cost including All Taxes & Duties (in `)
1	2	3	4	5	6	7	8	9	10	11	12	13=(8+9+10+11+12)	14=(3x13)
1	Supply of 1No. 10Passengers Elevator for OERC building, Kalayni Complex, Unit-VIII, OPTCL, Bhubaneswa with all accessories.	1											

B. Installation, Testing, Commissioning charges of the Elevator :

C. AMC Charges per Year:

Place :

Signature of Tenderer
With Seal of the Company

Date :

N.B. :

1. The Tenderers should fill up this schedule properly & in full. The tender may be rejected if the schedule of price is submitted in incomplete form. No post tender correspondence will be entertained on break up of prices. No columns should be left blank. It has either to be filled up with specific figures or N.A. or Nil.
2. In case where F&I components are not specifically indicated in this schedule, 5% of the Ex-works price shall be taken towards F&I components for the purpose of comparison of price.
3. The Tenderer has to certify in the Price Bid that MODVAT benefit, if any, has been fully passed on to the Purchaser while quoting the tender price.
4. Conditional offers will not be acceptable.
5. The Bidders are to clearly, indicate the period up to which the Tax Holidays are available to them.
6. Price Bid in any other format will not be acceptable and the offer will be rejected.

ANNEXURE – VI
PROFORMA FOR BANK GUARANTEE FORM FOR EARNEST MONEY DEPOSIT

Ref : Date : Bank Guarantee No:

1. In accordance with invitation to Bid No._____Dated _____of ORISSA POWER TRANSMISSION CORPORATION LTD (OPTCL) (hereinafter referred to as the OPTCL) for the purchase of _____
Messers_____
__Address_____
_____
wish/wished to participate in the said tender and as a Bank Guarantee for the sum of Rs. (Rupees_____) valid for period of 240 days (Two Hundred Forty Days) is required to be submitted by the Tenderer. We the _____

(*Indicate the name of Bank*)

(hereinafter referred to as 'the Bank') at the request of M/s_____ (hereinafter referred to as Contractor(s) do hereby unequivocally and Un-conditionally guarantee and undertake to pay during the above said period, on written request by the Sr. General Manager (Procurement) ORISSA POWER TRANSMISSION CORPORATION LTD. _____

(*Indicate designation of the Purchaser*)

An amount not exceeding Rs._____ to the said OPTCL, without any reservation. The guarantee would remain valid up to 4.00 P.M. 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 the 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 Contractor(s) of any of the terms or conditions or failure to perform 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 not withstanding any dispute or disputes so raised by the Contractor(s)/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 Contractor(s)/Supplier(s) shall have no claim against us for making such payment.

4. We the _____ further agree that the guarantee here-in
(Indicate the Name of the Bank)

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 to the OPTCL under or by virtue of the said Bid have been fully paid and its claims satisfied or discharged or till Chairman-Cum-Managing Director, ORISSA POWER TRANSMISSION CORPORATION LTD. certifies that the terms and conditions of the said Bid have been fully and properly carried out by the said Contractor(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 Contractor(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 Contractor(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 Contractor(s) or for any forbearance act or omission on the part of the OPTCL or any indulgence by the OPTCL to the said Contractor(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 reliving us.

6. This guarantee will not be discharged due to the change in the name, style and constitution of the Bank or the Contractor(s).

7. We _____ lastly undertake not to revoke this
(Indicate the Name of the Bank)
guarantee during its currency except with the previous consent of the OPTCL in writing.

Dated the _____ Date of _____

Witness :(With signature, name & address)

1.

2.

For _____
(Indicate the name of Bank)

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. _____ Dist. _____ State _____.

1. WHEREAS the ORISSA POWER TRANSMISSION CORPORATION LTD a body corporate constituted under the Electricity (Supply) Act, 1948 (hereinafter called "the OPTCL") has placed orders No. _____ date _____ (hereinafter called "The Agreement") on M/s_____ (hereinafter called "The Contractor") for supply of materials.

   AND WHEREAS the Contractor has agreed to supply materials to the OPTCL in terms of the said agreement, AND

   WHEREAS the OPTCL has agreed (1) to exempt the Contractor 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 Contractor to the OPTCL, a Composite Bank Guarantee of the value of 10% (Ten percent)/8.5%(Eight & Half percent) of the contract price of the said agreement.

   NOW THEREFORE in consideration of the OPTCL having agreed (1) to exempt the Contractor from making payment of Security (2) releasing 100% payment to the Contractor 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 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 Contractor(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 Contractor(s) of any of the terms or conditions contained in the said agreement or by reason of the Contractor's failure to perform the said agreement. Any such demand made on the Bank shall be conclusive as regards the amount due any payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs._____ (Rupees_____).

3. We the _____(Bank) also undertake to pay to the OPTCL any money so demanded not withstanding any dispute or disputes raised by the 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 Contractor(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 affect 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, ORISSA POWER TRANSMISSION CORPORATION LTD. Certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said Contractor(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 Contractor(s) and we shall not be relieved from our liability by reason of any such variations or extension being granted to the said Contractor(s) or for any forbearance, act or omission on the part of the OPTCL or any indulgence by the OPTCL to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would but this 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 Contractor(s).
7. We, (_____ Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the OPTCL in writing.

Date at _____ the _____ Day of _____ _____ Two thousand _____

For _____

(Indicate the name of the Bank)

Witness: (with signature, names and addresses)

1.

2.

A N N E X U R E – V I I I
PROFORMA FOR PERFORMANCE GUARANTEE.

1. In consideration of the Chairman-cum-Managing Director, ORISSA POWER TRANSMISSION CORPORATION LTD. (Hereinafter called 'The OPTCL') having agreed to exempt M/s._____ hereinafter called 'the said Contractor(s) from the demand under the terms & conditions of an agreement No._____ dated _____ made between _____ _____and_____for _____ (hereinafter called 'the said Agreement') for security Deposit for satisfactory performance of materials (as detailed in the said agreement) during the guarantee period (as detailed in the said agreement) and for the due fulfillment by the said Contractor(s) of the terms and conditions contained in the said agreement on production of Bank Guarantee for Rs._____ (Rupees_____ _____) only. We _____

(*Indicate the name of the Bank*)

Bank limited (hereinafter referred to as 'the Bank') at the request of _____ _____Contractor(s) do hereby undertake to pay to the OPTCL an amount not exceeding Rs._____ (Rupees _____ only) against any loss or damage caused to or suffered or would be caused to suffered by the OPTCL by reasons any of breach by the said Contractor(s) of any of the terms or conditions contained in the said agreement.

2. We _____ Bank Limited do hereby undertake to (***Indicate the name of the Bank***)
Pay the amount 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 damaged caused to or would be caused to or suffered by the OPTCL by reasons of any breach by the said Contractor(s) of any of the terms or conditions contained in the said agreement or by reasons of the Contractor'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 Limited further agree to pay the OPTCL any money so demanded not withstanding any dispute or disputes raised by the Contractor(s)/Suppliers(s) in any suit or proceeding instituted/pending before any Court or Tribunal relating thereto, out liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be valid discharge of our liability for payment thereunder and Contractor(s)/Supplier(s) shall have no claim against us for making such payment.

4. We the _____ Bank Limited further agree that the ***(Indicate the name of the Bank)***
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 be so enforceable till all the dues of the OPTCL under or by virtue of the said agreement, have been full paid and its claims satisfied or discharged or until Managing Director, ORISSA POWER TRANSMISSION CORPORATION LTD. Certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said Contractor(s) and accordingly, discharges this guarantee. Unless a demand or claim under the guarantee is made on us in writing on or before the expiry of Eighteen months from the last delivery of materials or Twelve months from its use whichever is earlier we shall be discharged from all liabilities under this guarantee thereafter.

5. We the _____ Bank Limited further agree with the ***(Indicate the name of the Bank)***

OPTCL 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 Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reasons of any such variation, postponement, or extension being granted to the said Contractor(s) or by any such matter or thing what so ever 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 Contractor(s)/Supplier(s).
7. We the _____ Bank Limited lastly undertake not to
(Indicate the name of the Bank)
revoke this guarantee during its currency except with the previous consent of the OPTCL in writing.
8. This performance Bank Guarantee will remain in force up to _____ Dated the _____ Day of _____ 20 _____.

Witness with signature, names & address:

1.

2.

For _____ Bank Limited.
(***Indicate the name of the Bank***)

A N N E X U R E – IX
PROFORMA FOR BANK GUARANTEE FOR 100% PAYMENT.

1. In consideration of the Chairman-cum-Managing Director, ORISSA POWER TRANSMISSION CORPORATION LTD (hereinafter called 'The OPTCL') having agreed to allow M/s. _____ (hereinafter called the 'said Contractor(s), 100% payment on proof of verification of the materials delivered under the terms and conditions of an agreement No._____ Dated_____ made between ORISSA POWER TRANSMISSION CORPORATION LTD., Bhubaneswar and M/s. _____ _____ for supply of materials (as detailed in the said agreement) and for the due fulfillment by the said Contractor(s) of the terms and conditions contained in the said agreement, on production of a Bank Guarantee for Rs._____ (Rupees) _____ _____. 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 reasons of any breach by the said Contractor(s) of any of the terms and conditions contained in the said agreement.
2. We (the _____ Bank) do hereby under take 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 suffered by the OPTCL by reasons of any breach by the said Contractor(s) of any of the terms or conditions contained in the said agreement or by reason of the Contractor(s) failure to perform the said agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs._____ (Rupees _____).
3. We the _____ Bank also undertake to pay to the OPTCL any money so demanded not withstanding any dispute or disputes raised by the Contractor(s)/Suppliers(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 thereunder and the Contractor(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 be 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, ORISSA POWER TRANSMISSION CORPORATION LTD. Certificates that the terms & conditions of the said agreement have been fully and properly carried out by the said Contractor(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 the _____ Bank Limited further agree with the OPTCL 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 Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reasons of any such variation, postponement, or extension being granted to the said Contractor(s) or by any such matter or thing what so

ever which under the law relating to sureties would but for this provision have effect of so relieving us.

7. This guarantee will not be discharged due to the change in the name, style and constitution of the Bank or the Contractor(s)/Supplier(s).

7. This guarantee will not be discharged due to the change in the name, style & constitution of the Bank or the contractors/suppliers.

8.We, (_____ Bank) lastly undertake not to revoke this guarantee during its currency except with previous consent of the OPTCL in writing.

This performance Bank Guarantee will remain in force up to _____

Date at _____ the _____ Day of _____ _____ Two thousand _____

Witness with signature, names & address:

1.

2.

For _____ Bank Limited.

(***Indicate the name of the Bank)***