GOVERNMENT OF INDIA

INDIAN RAILWAYS

SOUTH EASTERN RAILWAY

LETTER OF ACCEPTANCE

FOR

ANNUAL MAINTENANCE CONTRACT OF EOT CRANES OF ELECTRIC LOCO SHED, SANTRAGACHI, SOUTH EASTERN RAILWAY.


To,
M/S. Kanhaiya Engineering,
ORN type, New cable town, Golmuri,
Jamshedpur-831003.

Dear Sirs,

Ref: - Your offer No. KE/12, Dt.25.06.2011.

1. The offer submitted by you and opened on 27.06.2011 for the above mentioned work has been accepted by the railway administration for and on behalf of the President of India. The terms and condition as incorporated in the tender documents issued for the work will be included in the formal agreement to be executed by you for carrying out the works.

2. The total value of work considering your offer is Estimated ₹11,43,492/- (Rupees Eleven Lakhs forty three thousand four hundred ninety two only) i.e. 16% below the DV for Annual Maintenance Contract of EOT Cranes of Electric Loco Shed, Santragachi, Quantity – 03 Nos. including all charges for two years.

3. The amount of security deposit works (at the rate of 5% contract value) to ₹57,175/- (Rupees fifty-seven thousand one hundred seventy five only).

4. You have submitted earnest money along with tender in the form of TDR no. TN/HTDO 541127, dt.d.24.06.11, for ₹27,230/- in favour of FA & CAO/S.E.Rly./GRC, Kolkata-43 issued by INDIAN Bank, Golmuri Road Branch, which has been kept as part of initial Security deposit. You may deposit the balance amount of Security deposit for ₹29,945/- (Rupees Twenty-nine thousand nine hundred forty five only) in cash or DD/Pay Order/FDR in favour of FA & CAO/S.E.Railway/GRC or it will be recovered @ 10% of the bill amount from the running bills of contract till the full security deposit is recovered.

5. **PERFORMANCE GUARANTEE (P.G.):**
   a) The successful bidder shall have to submit a performance guarantee within 30 (thirty) days from the date of issue of Letter of Acceptance (LOA). Extension of time for submission of PG beyond 30 (thirty) days and up to 60 days from the date of issue of LOA may be given by the Authority who is competent to sign the contract agreement. However a panel interest of 15% per annum shall be charged for the delay beyond 30 (thirty) days, i.e. from 31st day after the date of issue of LOA. In case the contractor fails to submit the requisite PG even after 60 days from the date of issue of
LOA, the contract shall be terminated duly forfeiting EMD and other dues, if any payable against that contract. The failed contractor shall be debarred from participating in re-tender for that work.

b) The successful bidder shall submit the performance guarantee in any of the following forms, amounting to 5% of the contract value:
   i) A deposit of cash;
   ii) Irrevocable Bank Guarantee;
   iii) Government Securities including State loan Bonds at 5% below the market value;
   iv) Deposit Receipts, pay orders, Demand Drafts and Guarantee Bonds. These forms of performance guarantee could be either of the State Bank of India or of any Nationalized Banks;
   v) Guarantee Bonds executed or Deposits receipts tendered by all scheduled banks;
   vi) A deposit in the post office saving bank;
   vii) A deposit in the national savings certificates;
   viii) Twelve years national Certificates;
   ix) Ten years Defence Deposits;
   x) National Defence Bonds and
   xi) Unit Trust Certificates at 5% below market value or at the face value whichever is less.

Also FDR on favour of FA & CAO (free from any encumbrance) may be accepted.

Note:- The instruments as listed above will also be acceptable for Guarantee in case of Mobilization Advance.

c) The Performance Guarantee shall be submitted by the successful bidder after the letter of Acceptance (LOA) has been issued, but before signing of the contract agreement. This P.G. shall be initially valid up to the stipulated date of completion plus 60 days beyond that. In case, the time for completion of work gets extended, the contractor shall get the validity of P.G. extended to cover such extended time for completion of work plus 60 days.

d) The value of PG to be submitted by the contractor will not change for variation up to 25% (either increase or decrease). In case during the course of execution, value of the contract increase by more than 25% of the original contract value, an additional performance Guarantee amounting to 5% (five percent) for the excess value over the contract value shall be deposited by the contractor.’’

e) The Performance guarantee (PG) shall be released after physical completion of the work based on ‘Completion Certificate’ issued by the competent authority stating that the contractor has completed the work in all respect satisfactorily, The Security Deposit shall, however, be released only after expiry of the maintenance period and after passing the final bill based on ‘No Claim Certificated’ from the contractor.
f) Whenever the contract is rescinded the Security Deposit shall be forfeited and the Performance Guarantee shall be encased. The balance work shall be got done independent without risk & cost of the failed contractor. The failed contractor shall be debarred from participating in the tender for executing the balance work. If the failed contractor is a JV or a partnership firm, then every member/partner of such a firm shall be debarred from participating in the tender for the balance work in his/her individual capacity or as a partner of any other JV/partnership firm.

  g) The engineer shall not make a claim under the performance guarantee except for amounts to which the President of India is entitled under the contract (notwithstanding and/or without prejudice to any other provision in the contract agreement) in the event of:

  i) Failure by the contractor to extend the validity of the performance guarantee as described herein above, in which event the Engineer may claim the full amount of the performance guarantee.

  ii) Failure by the contractor to pay President of India any amount due, either as agreed by the contractor or determined under any of the clauses/conditions of the Agreement, within 30 days of the service of notice to this effect by Engineer.

  iii) The contract being determined or rescinded under provision of the GCC, the Performance Guarantee shall be forfeited in full and shall be absolutely at the disposal of the President of India.

6. **Scope of work**: As per Annexure “A” with A-I & A-II.

7. **Consignee**: SSE/M6/ELS/SRC.

8. The contractor shall be responsible for the Annual Maintenance of 3(Three) Nos. Complete EOT Cranes for two years at ELS/SRC. In order to ensure reliable functioning of 3 Nos. EOT Cranes (2 Nos. 50 ton, 1 No. 25 ton) as per scope of work attached in Annexure “A” with A-I & A-II as well as to improve their working life.

9. The total value of the subject work ₹11,43,492/- . The details of rates for each subjected work is enclosed Annexure ‘B” (Schedule of rates).

10. All the works to be carried out in the premises of Electric Loco Shed, Santragachi in such a manner that will not cause any hindrance to the normal working of Railway. Apart from this you have to depute your service engineer, with technicians daily on compulsory basis to monitor the performance of EOT cranes overhauled under maintenance contract till the completion of warranty period.

11. The contractor shall have to arrange necessary tools, jigs, fixture and other infrastructure required for maintenance of the EOT cranes at their own cost. The Railways will provide electricity, welding machine, gas welding, compressed air but pipe is to arranged by the contractor. No assistance from the Railway side will be extended to carryout the contract.

12. During maintenance contract the released materials from the EOT cranes should be handed over to custody Stores of ELS/SRC jointly signed by SSE/M6 which will be stored and disposed as scrap.
13. The firm shall make necessary arrangement to impart training to 03 (three) staffs of ELS/SRC about maintenance procedure of EOT Cranes during the currency of contract on Free of cost basis.

14. No Free passes or transport will be arranged by the Railways for the movement of contractor or his staff.

15. In case of any dispute of any nature arises during the execution of the contract the decision of SR.DEE/TRS/SRC will be final & binding on the contractor.

16. The period of maintenance contract will be for a period of 02(two) years from the date of signing the acceptance letter.

17. Log book to be maintained to record daily attendance of the contractor’s staff and the details of Equipment/Spare/Replaced in the service contract and should be recorded jointly by the firm and the engineer-in-charge of ELS/SRC with countersigned of Gazetted Officer.

18. The contractor shall be required to execute an agreement with the president of India acting through the Sr.Divl.Elect.Engineer/ TRS/Santragachi for carrying out the work according to the General Conditions of Contract and Specification for works and materials as given in Part III & IV of the schedule rates (1994) of the Edition of South Eastern Railway with all correction slip up to date.

19. The following amendment for the general contract shall be effective.
   a. New Clause 64(3)(a)/III – The Arbitrator / Arbitrators / Umpire so appointed as the case may be shall give the award on all matters referred to arbitration indicating there in break up to the sums awarded separates on each individual item of dispute.
   b. The word “Person “appearing in the first sentence of Clause 64(3) of the General conditions of the contract should be substituted by the “Gazetted Rly. Officer”.

20. The contractor implies that he has read and abides by the conditions stated there in this LOA and the S.E.Railway schedule of Labour and material rates 1999 Vol.-I & the General conditions of contract of standard specification 1994 Vol.-II with all correction slip up to date.

21. The contractor shall comply with the provision of Contract Labour (Regulation and Abolition) Act 1970 and the Contract Labour (Regulations and Abolitions) General rules 1971 as modified from time to time, where ever applicable and shall also indemnify the Railways from and against any claim under the aforesaid act and the rules.

22. **Inspection:** The work awarded to contractor shall be inspected after completion of each unit by Engineer-in-charge under control of SR.DEE/TRS/SRC or his authorised representative at the site.

23. **Payment:**
   (a) 100% payment will be arranged in favour of the firm by EFT system. The firm is advised to submit the format duly filled in the Bank details and payment will be made after filling the measurement book with Sr.DEE/TRS/ SRC. The contractor should submit bills for labour charges and the cost of spares parts.
(b) Income tax, Sale Tax as per prevailing rates on the bill value is recoverable from the contract bills, if required. Conservancy charge & Education Cess of IT will be applicable for the above contract @ 1% of contract value and 2% EC of IT or other charges as applicable.

24. **Prices:**
The complete cost of Annual Maintenance Contract of 3 Nos. EOT Cranes as per scope of work for a period of 2 (two) years should be inclusive of all activities to be carried out & indicated in the scope of work.

25. **Guaranty:**
The quality of work should be guaranteed for a period of 12 months from the date of successful completion and handing over the work to the railway, during the course of guarantee period. In case and any defect is noticed due to faulty workmanship necessary replacement/repair has to be arranged to the entire satisfaction of the Railway and such works will be carried out at your risk and cost.

26. **Variation of Quantity:**
“1. In case an increase in quantity of an individual item by more than 25% of the agreement quantity is considered unavoidable, the same shall be got executed by floating a fresh tender. If floating a fresh tender for operating that item is considered not practicable, quantity of that item may be operated in excess of 125% of the agreement quantity subject to the following conditions:
   (a) Operation of an item by more than 125% of the agreement quantity needs the approval of an officer of the rank not less than S.A.Grade;
   (i) Quantities operated in excess of 125% but up to 140% of the agreement quantity of the concerned item, shall be paid at 98% of the rate awarded for that item in that particular tender;
   (ii) Quantities operated in excess of 140% but up to 150% of the agreement quantity of the concerned item shall be paid at 96% of the rate awarded for that item in that particular tender;
   (iii) Variation in quantities of individual items beyond 150% will be prohibited and would be permitted only in exceptional unavoidable circumstances with the concurrence of associate finance and shall be paid at 96% of the rate awarded for that item in that particular tender.
   (b) The variation in quantities as per the above formula will apply only to the Individual items of the contract and not on the overall contract value.
   (c) Execution of quantities beyond 150% of the overall agree mental value should not be permitted and, if found necessary, should be only through fresh tenders or by negotiating with existing contractor, with prior personal concurrence of FA & CAO/FA & CAO(C) and approval of General Manager,

2. In cases where decrease is involved during execution of contract:
(a) The contract signing authority can decrease the items up to 25% of individual item without finance concurrence.
(b) For decrease beyond 25% for individual items or 25% of contract agreement value, the approval of an officer not less than rank of S.A.Grade may be taken, after obtaining ‘No claim Certificate’ from the contractor and with finance concurrence, giving detailed reasons for each such decrease in the quantities.
(c) It should be certified that the work proposed to be reduced will not be required in the same work.

3. The aspect of vitiation of tender with respect to variation in quantities should be checked and avoided. In case of vitiation of the tender (both for increase as well as decrease of value of contract agreement) sanction of the competent authority as per single tender should be obtained.”

Accordingly, on the subject of ‘Variation in Quantities of Items of Contracts’ Clause 42(4) to the General Conditions of Contract is incorporated as detailed mentioned below:

The procedure detailed below shall be adopted for dealing with variations in quantities during execution of works contracts:
1. Individual NS items in contracts shall be operated with variation of plus or minus 25% and payment would be made as per the agreement rate. For this, no finance concurrence would be required.
2. In case an increase in quantity of an individual item by more than 25% of the agreement quantity is considered unavoidable, the same shall be got executed by floating a fresh tender. If floating a fresh tender for operating that item is considered not practicable, quantity of that item may be operated in excess of 125% of the agreement quantity subject to the following conditions:
   (a) Operation of an item by more than 125% of the agreement quantity needs the approval of an officer of the rank not less than S.A.Grade:
      (i) Quantities operated in excess of 125% but up to 140% of the agreement quantity of the concerned item, shall be paid at 98% of the rate awarded for that item in that particular tender;
      (ii) Quantities operated in excess 140% but up to 150% of the agreement quantity of the concerned item shall be paid at 96% of the rate awarded for that item in that particular tender;
      (iii) Variation in quantities of individual items beyond 150% will be prohibited and would be permitted only in exceptional unavoidable circumstances with the concurrence of associate finance and shall be paid at 96% of the rate awarded for that item in that particular tender.
   (b) The variation in quantities as per the above formula will apply only to the Individual items of the contract and not on the overall contract value.
   (c) Execution of quantities beyond 150% of the overall agreemental value should not be permitted and, if found necessary, should be only through fresh tenders or by negotiating with existing contractor, with prior personal concurrence of FA & CAO/FA & CAO(C) and approval of General Manager.
3. In cases where decrease is involved during execution of contract:
   (a) The contract signing authority can decrease the items up to 25% of individual item without finance concurrence.
   (b) For decrease beyond 25% for individual items or 25% of contract agreement value, the approval of an officer not less than rank of S.A. Grade may be taken, after obtaining ‘No Claim Certificate’ from the contractor and with finance concurrence, giving detailed reasons for each such decrease in the quantities.
   (c) It should be certified that the work proposed to be reduced will not be required in the same work.

4. The limit for varying quantities for minor value items shall be 100% (as against 25% prescribed for other items). A minor value item for this purpose is defined as an item whose original agreement value is less than 1% of the total original agreement value.

5. No such quantity variation limit shall apply for foundation items.

6. As far as SOR items are concerned, the limit of 25% would apply to the value of SOR schedule as a whole and not on individual SOR items. However, in case of NS items, the limit of 25% would apply on the individual items irrespective of the manner of quoting the rate (single percentage rate or individual item rate).

7. For the tenders accepted at Zonal Railways level, variations in the quantities will be approved by the authority in whose powers revised value of the agreement lies.

8. For tenders accepted by General Manager, variations up to 125% of the original agreement value may be accepted by General Manager.

9. For tenders accepted by Board Members and Railway Ministers, variations up to 110% of the original agreement value may be accepted by General Manager.

10. The aspect of vitiation of tender with respect to variation in quantities should be checked and avoided. In case of vitiation of the tender (both for increase as well as decrease of value of contract agreement), sanction of the competent authority as per single tender should be obtained.

27. **Arbitration**: In view of promulgation of the Arbitration and conciliation ordinance, 1996 ad as approved by Ministry of Railway, the Clause No.63 & 64 of General conditions of contract (GCC) as revised shall be applicable for the purpose of arbitration.
Accepted the letter of acceptance is issued with six copies, five copies of the same may please be returned duly accepted and stamped to the effect as a token of your acceptance of the work enclosures are as per list given Scope of work in Annexure ‘A” with A-I & A-II and Annexure ‘B” Schedule of rates.

Yours faithfully,

[Shamim Ahmad]
Sr.Divl.Elect.Engineer (TRS)
Electric Loco Shed/ Santragachi
South Eastern Railway
For On behalf of The President of India

ACCEPTED

---------------------------------------------
Signature of authorised person of the
Contractor with designation and stamp.

Copy to: Sr.DFM/KGP for kind information please.
Copy to: Divl. Audit Officer/KGP for information please.
Copy to: Dy.CVO/S.E.Railway/GRC for kind information please.
Copy to: ADEE/TRS/SRC for information please.
Copy to: SSE/M-6/ELS/SRC for information please.
SCOPE OF WORK

The AMC for two years for total three Nos. of cranes, two cranes of the 50T-MUKUND Make and one crane 25 T- REVA Make. During AMC, a group of staff (One Service Engineer and two technicians) qualified and trained regarding maintenance and operation of EOT crane will be manned at ELS/SRC in every working day for doing maintenance activities & attending breakdown. They should start their work well before the starting of crane operation by Section. Crane should be keeping ready always to work in all respect. During AMC period they should also perform the maintenance and repairing of the following machinery:

Bombay Lathe at E-3 Section:

a) Monthly servicing of the machine,
b) Cleaning & lubricating of the machine regularly.

A. The following works to be carried out during AMC in daily schedule:

Visual Checking Daily:
Checking for any abnormality, leakage of grease or oil from any portion of the crane, condition of crane body, wheel, hook rope drum, pulley and strand cut in rope, inspection of all foundation and fixing bolts.

Operation:
Function of all brakes and adjustment, if required, function of limit switches operation, travel operation, working of bell, cabin fan, light, function of motors (with coupling & brakes) function of control panel, working of controllers.

Every day before starting the crane work all safety related items along with the above items will be checked in all respect and readiness will be given in written to start the crane work.

A group of qualified staff (one supervisor/highly skilled and two skilled) well trained regarding maintenance and operation of EOT crane will be manned at ELS/SRC in every working day. Daily schedule checking should be start well before the working hours of the shed and crane should be ready in all respect at 09.30 hrs.

B. Monthly schedule checking:
1. Checking of oil level of thrusters and gear boxes of LT, CT and hoist. Filling of oil, if required.
2. Checking the coupling bolts of LT, CT hoist and foundation bolt of gear boxes and changing, if required.
3. Checking of brake unit LT,CT and hoist as follow:
a) If brake liners thickness worn out more than 50% of its original thickness, it should be replaced with new one.
b) Maintaining of brake liners clearance 1.5mm uniformly and adjustment accordingly, if required.
c) Checking the slackness of pin and replacement, if necessary.
d) Checking the adjustment screw and screw rod, replacement, if necessary.
e) Checking the foundation bolt tightness and replacement, if necessary.
4. Checking the fastening of wire rope ends with hoist drum and tightening, if necessary.
5. Raise the snatch block slowly to check the function of limit switch and replace, if necessary.
6. **Lubricant:**
   a) Open gear and pinion teeth,
   b) Drum pinion and gear teeth,
   c) Limit switch cam
   d) Top and equalizer sleeve bearings.
   e) Main and auxiliary hoist hook block and all sleeve bearings.
   f) Master switches, gear and springs.
   g) All wheel bearings.
   h) All motors.
   i) Cross shaft Plummer blocks.

7. **Resistance Box:**
   Dust on resistances to be cleaned especially at the insulators insulated between grids and earth by hard blowers & cleaning brush. Check for any crack, flash/burning of resistance grid, mica tube, connections, fixations, attention/replacement accordingly.

8. **Motors:**
   Checking tightness of all fixing bolts and coupling of motors. Checking condition of slip rig, carbon brushes and sulfation of terminal stud and sockets checking of temperature, sound, vibration of motor by hand filling bearing. Attention & repair accordingly.

9. **Control cabinets:** Visual checking for any abnormalities and cleaning.

10. **Master controller:** Checking cam, contacts & spring and replacement accordingly.

11. **Collectors & DSL:** Checking the collectors are correctly line up with main conductors and adjustment, if required. Visually check for any damage or crack on DSL insulator. Check wear of collector wheel and brush shoes and replacement accordingly, if wear more than 50%.

12. **Control panel of CT, LT and hoist:** Checking the condition of timer, contactors, fuses, relays and panel door. Attention/repair/cleaning accordingly.

13. **Electrical connection:** Check through out the crane.

14. **Crossed shaft Plummer blocks:** Clean out greases, check sheets and pack out fresh grease.

15. **Bridge and trolley wheels:** Inspects for wear flake spot and crack in flange. Ensure driving wheels are of same dia. Flange thickness should not reduce more than 40%.

16. **Run way:** Checking alignment and elevation and attention accordingly.

17. All motor brushes, brush holder & IR valve checking and attention accordingly.

18. All mechanical fixation bolts tightness checking and attention accordingly.

19. Pendant system of 25 Ton crane – Full overhauling, contact changing, indication light holder, bulb changing, if required. Push bottom switch full overhauling required in every month.

20. Special attention/checking/repair/changing of any other part of the crane as decided by the railway during initial joint inspection.

(C) **SPECIAL CHECKING:**
In addition to the above monthly schedule, followings are to be checked in every onth:

1. **Check the wire rope visually, after cleaning by cloth piece of entire length for the following:**
a) If strands in the wire rope are found more than 10% cut over 300mm length, then it should be replaced.
b) Lubricate with grease servo gem 3 or LLS or RRS.
c) If rope diameter reduced by 15% or more than 15% due to wear, then it should be replaced.
d) Load test of all ropes are to be done by some competent testing laboratories and documents of testing to be submitted.

2. **Lower the snatch block and clean the block & check the following:**
   a) Where there is any excessive wear on particular portion on hook which may cause failure of hook, dismantle the hook for repair or test.
   b) Rotate the hook to see whether it is rotating freely or bearing obstructed for damage of thrust bearing or other wise replace the bearing, if necessary.
   c) Check whether the hook properly locked/keyed with nut and repair, if necessary.
   d) D.P. test & load test of hook and snatch block.

3. Special checking has been scheduled accordingly, so that the contractor may repair and assess the quantum of work.
   
   In addition to the monthly schedule, following checking should be done for all the crane.
   
   i) Gear box oil draining checking and refilling after checking.
   ii) Control panel of LT, CT and hoist: Overhauling of all contactor and relay with overhauling kit.
   iii) Changing of all carbon brush holders’ assembly with carbon brush of all motors.

**(D) MATERIAL SUPPLIED BY RAILWAY DURING AMC IF REQUIRED:**

a) Break drum (if requires changing)
b) Shaft (if required changing)
c) Steel rope (if required changing)
d) Driving wheel (if required changing)
e) Driving wheel bearing (if required changing)
f) Gear box pinion (if required changing)
g) LL3 grease for greasing.
h) Gear box oil if any for gear box.

**(E) SPECIAL ATTENTION DURING AMC BY CONTRACTOR:**

1. Booms are to be checked thoroughly and overhauling to be done and D.P. testing to be done once in a six month.
2. Load testing of all hooks, snatch blocks and ropes are to be carried out from any authorized testing agencies once in a six month.
3. Must change items in Annexure-‘A-I’ shall be supplied and changed by the contractor within first six months from the date of issue of LOA. The activity of replacement of must change items preferably be carried out on Sundays/holidays.
4. Materials supplied and changed by the contractor on conditional basis are given in Annexure-‘A-II’.
5. All the materials supplied shall be from standard sources as specified.

**(F) PENALTIES:**

1. If contractor failed to supply and change the must changed items within six months from the date of issue of LOA then a penalty will be imposed @ 2% of the total tender
value and will be recovered i.e. @ 10% of the bill amount from the running bills of the contract till the full amount of penalty recovered.

2. In case of absence of skilled staff and highly skilled staff/supervisor, a penalty will be imposed @ ₹300/- per day for each absentee staff. In case of absence of the group, penalty @ ₹2000/- per day will be imposed in addition to the above.

3. In case the contractor failed to complete the scheduled maintenance work of the crane in time, penalty will be imposed for delay to undertake the work @ ₹ 500/- for every one day delay from first day after giving 4 day notice/ massage.

4. Whenever break down of the crane occurs then supervisors and skilled technicians shall soon report to the railways Representative within ½ an hours after receipt of the breakdown information from the representative of the Sr.DEE/TRS/SRC, failing which they will be declared absent and penalty as per clause -2 above will be imposed.

5. The contractor will try his best to give the crane fit for the service as soon as possible so that it does not hamper the work of the ELS/SRC.

**Annexure-‘A-I**

**Must change item required to be supplied and changed by the contractor:**

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Items Description</th>
<th>Make</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Transformer-1.5 KVA-415 V Input/240 Output</td>
<td>Siemens</td>
<td>1 Nos.</td>
</tr>
<tr>
<td>2.</td>
<td>Heavy Duty Main switch-3 KA 25.3-660 V, 50 HZ, 250 Amps</td>
<td>Siemens</td>
<td>1 Nos.</td>
</tr>
<tr>
<td>3.</td>
<td>Heavy Duty Main switch-3 KL 25.3-660 V, 50 HZ, 250 Amps</td>
<td>Siemens</td>
<td>1 Nos.</td>
</tr>
<tr>
<td>4.</td>
<td>Contactor 3 TF 46 coil voltage-220 V</td>
<td>Siemens</td>
<td>5 Nos.</td>
</tr>
<tr>
<td>7.</td>
<td>ON Timer-KRTTN-coil voltage-220 V with NO/NC</td>
<td>BCH</td>
<td>04 Nos.</td>
</tr>
<tr>
<td>8.</td>
<td>OFF Timer-KRTTN-coil voltage-220 V with NO/NC</td>
<td>BCH</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>9.</td>
<td>Auxiliary contactor Block-3TH 82- coil voltage-220 V</td>
<td>Siemens</td>
<td>04 Nos.</td>
</tr>
<tr>
<td>10.</td>
<td>Auxiliary contactor Block-3TH 80- coil voltage-220 V</td>
<td>Siemens</td>
<td>04 Nos.</td>
</tr>
<tr>
<td>12.</td>
<td>Over Load Relay 50 Amps-70 Amps-660 V</td>
<td>Siemens</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>15.</td>
<td>Over Load Relay(C.T.) 3 UA 52-10 Amps-16 Amps-660 V</td>
<td>Siemens</td>
<td>01 Nos.</td>
</tr>
<tr>
<td>16.</td>
<td>Over Load Relay 3 UA 52-1.25 Amps-1.8 Amps-660 V</td>
<td>Siemens</td>
<td>01 Nos.</td>
</tr>
<tr>
<td>17.</td>
<td>Control Switch 32 AO2-500 V-50 HZ.</td>
<td>Siemens</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>18.</td>
<td>Fuse Link-NS Type- 4 Amps , 10 Amps ,16 Amps, 20 Amps, each-220 V</td>
<td>Siemens</td>
<td>12 Nos each</td>
</tr>
<tr>
<td>19.</td>
<td>75 mm²“4 core copper cable,750V</td>
<td>Hawells</td>
<td>100 mts.</td>
</tr>
<tr>
<td>20.</td>
<td>Gang Bell-9”-220 V coil voltage</td>
<td>BCH</td>
<td>04 Nos.</td>
</tr>
<tr>
<td>21.</td>
<td>Long travel gear box Reva make EOT crane</td>
<td>Reva</td>
<td>01 sets.</td>
</tr>
<tr>
<td>22.</td>
<td>L.T – Gear coupling – 8” diameter for Reva make crane</td>
<td></td>
<td>1 No.</td>
</tr>
<tr>
<td>23.</td>
<td>Brake Liner- 8”x3/8” &amp; 6”x3/8”</td>
<td></td>
<td>8 feet</td>
</tr>
</tbody>
</table>
## Annexure-‘A-II

### Items to be supplied and changed by the contractor on conditional basis:

<table>
<thead>
<tr>
<th>SL.No.</th>
<th>Items Description</th>
<th>Make</th>
<th>Qnty.</th>
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</thead>
</table>
| 1.     | a) Contact tips / overhauling kit of contractor as per requirement.  
        b) Resistance element, mica tube or resistance box as per requirement.  
        c) Nuts, studs & bolts of any size as per requirement.  
        d) Brake liner: As per the requirement.  
        e) Petty repair and machining of items as per requirement.  
        f) D.P. testing kit as per requirement.  
        g) Fuses, bimetallic relays, limit switches and timers contactors as per requirement.  
        h) Carbon brush, carbon brush holder, carbon brush spring of all motors as per requirement.  
        i) Thrusters and coupler of CT, LT and hoist as per requirement.  
        j) Other consumable items: ‘O’ ring, current collectors, gaskets, packing, etc. which does not over Srl. No. a to j.  
        k) Pulley for rope (if required changing).  
        l) Motors (if rewinding/require changing).  
        m) Spares of Bombay Lathe value below Rs.5000/- will be replaced by tenderer if required.  
        n) Different types of lugs which will required changing for over heating.  
        o) Different type coupling nut bolt  
        p) C.T. – Gear coupling for motor to gear box-6” diameter (Both side gear)-Reva make | From standard sources | As per requirement |
## RATE SCHEDULE

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description of Works</th>
<th>Job/Months</th>
<th>Cost for two years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Material cost of must change items as per Annexure-A-I.</td>
<td>1 Job</td>
<td>₹4,67,748.96/-</td>
</tr>
<tr>
<td>2.</td>
<td>Material supply and change by the contractor as per requirement on conditional basis as per Annexure-II.</td>
<td>1 Job</td>
<td>₹1,14,912.00/-</td>
</tr>
<tr>
<td>3.</td>
<td>Labour charges for AMC of cranes</td>
<td>₹23,367.96/-</td>
<td>₹5,60,831.04/-</td>
</tr>
</tbody>
</table>

**TOTAL**: ₹11,43,492/-

{Total Rupees Eleven Lakhs forty three thousand four hundred ninety two only}