दूरभाषी ः TELEPHONE : 2559 तार १ बार्कमुम्बई चेम्बुर TELEGRAMS : BARC-MUMBAI, CHEMBUR टेलेक्स ३ TELEX: 011-61017 / 011-61022 फेक्स संख्या FAX NUMBER : 91-22-550 5150 / 91-22-551 9613 e-mail : sunilks@barc.gov.in



भारत सरकार **GOVERNMENT OF INDIA** भाभा परमाण अनसंधान केंद्र BHABHA ATOMIC RESEARCH CENTRE रिएक्टर इंजीनियरिंग प्रभाग REACTOR ENGINEERING DIVISION

Ref .: - RED/PP&ESS/RRS/ 36/3FS/ AMC/2022/ P-66835

26. Oct'2022.

हरून - 7,

मुंबई - 400 085,

HALL No. 7,

TROMBAY, MUMBAI - 400 085

टॉम्बे

Sub: Invitation to quote.

Non-Comprehensive AMC of MCCs & PCCs

Dear Sirs

Sealed quotations (in two Parts) are invited by undersigned for and on behalf of the 1. President of India from the experienced contractors for "Non-Comprehensive AMC of Motor Control Centres & Power Control Centres" as per details given below.

Quotation should be submitted in the following manner:-2.

- Attested copies of two Experience Certificates, showing satisfactory completion of (i) similar works (Electrical Panel, PCC, Distribution boards), issued by GOI/PSU.
- (ii) Letter of authorization, if required.
- (iii) Valid Goods & Services Tax number.
- (iv) Each paper of bid document duly signed by the authorized signatory.
- Schedule of rates duly filled and signed. (v)

The tender, which is not accompanied by the requisite documents, shall be summarily rejected. Tender will not be received after expiry of date and time. Purchaser reserves the right to reject any or all the guotation without assigning any reason. If it happens to be a holiday on any of the dates above, next working day shall be applicable.

Tender should be in a sealed cover (containing two envelopes, one for technical and 3. another for Price bid) and super-scribed as "Quotation for Non-Comprehensive AMC of MCCs & PCCs". The quotation shall be complete in all respects with regard to price, specifications, completion period, validity of the offer, etc. and must reach on or before 10/11/2022 by 16.00 Hrs. The quotation shall be on printed letter head mentioning complete address, Phone numbers, fax number, PAN number/ GST registration/TIN etc., without these details, quotation will be liable for rejection. The envelope should indicate this office Ref. No. and due date clearly. The sealed quotation should be addressed to undersigned and should be sent through Speed Post Only so as to reach his office before due date.

- 4. **Duration of Contract** : <u>One year from the date</u> of award of contract with an option of extension for a further period of two year progressively on year after year on the same rates, terms & conditions.
- 5. Rates should be quoted in figures as well as in words and should be genuine & reasonable. Rates should include all types of taxes, duties etc. The evaluation of bids shall be done on overall basis irrespective of item-wise rate.
- 6. There should be no over writing/correction in rates. Corrections *if any*, must be initialed. Conditional & incomplete quotations are liable for rejection.

The accepted rates will be operative for one year from the date of work order. The competent authority may extend the period further up to two years progressively year after year, if necessary taking in view of satisfactory performance of the contractor on same terms & conditions of the contract as per administrative convenience.

- 7. The work will be done as per directions/specification given by the *Engineer in-charge* concerned.
- 8. The contractor will be responsible and liable to make good any losses which may be caused to the department due to the negligence of the contractor.
 - (i) The contractor shall submit his quarterly Bills duly verified by the Engineer In-charge.
 - (ii) The payment shall be made after submitting the bills, deducting penalty etc. If any imposed/due.
 - (iii) The contractor will pay the GST & paid-up slip (undertaking against GST payment to concerned authority) will be submitted to the purchaser within along with the bill.

9. GENERAL INSTRUCTIONS

- (i) Please note that the goods/works proposed to be carried based on this NIT (Notice Inviting Tender) is meant for the Research Institution under the *Dept. of Atomic Energy.* The purchaser will make available (*if required and applicable*) to the successful bidder, with whom a work order is placed, the *Concessional GST Certificate* duly signed by the authorized officer in the *Dept. of Atomic Energy* well before the dispatch of the goods/completion of work by the supplier.
- (ii) Place of work: Engineering. Hall No. 3 & 7, Trombay, Mumbai-400085.
- (iii) Inspection as per specification shall be carried out departmentally after the completion of the work to the satisfaction of the *Engineer in-charge*. Inspection regarding the work according to specification, checking of the site etc. will be carried out continuously by the *Engineer in-charge* or his authorized representative.
- (iv) The contractor shall have to maintain the area assigned to him for the work, very clean and shall follow the instructions of *Engineer in-charge* in this regard. All equipment/tools etc. are to be removed and cleaned the area after the end of the day's work.
- (V) The bidders, who wish to inspect the site before quoting, may do so with prior appointment with our engineer *Shri R. R. Singh* through email *rrsingh@barc.gov.in*.
- (vi) Payment will be made by cheque/ECS after satisfactory completion of the work (on quarterly basis) as per Government rules. Income TAX/TDS on GST/Surcharge, as applicable will be deducted on the gross amount payable for the work done.

- (vii) Bidder shall note that BARC is final consumer of the goods/services procured and does not intends to make any outward supply. BARC will not avail the benefits of input tax credit and hence, the good can be supplied without quoting the GSTIN of BARC, Mumbai on invoice. The invoices taxed under GST, as per rates applicable under the GST schedule of rates, will be admitted for payment.
- (viii) **GSTN Invoice**: The invoice raised by the registered supplier of taxable goods/services along with other details specifically indicating: GSTN, PAN, Location of supply, tax component to be separately indicated.
- (ix) An undertaking shall be furnished by the registered supplier that the GST has been promptly deposited with the authorities.
- (x) With your offer please furnish the detailed information regarding whether an *ex-employee of BARC is working* in your organization or whether any of your *relatives is working in DAE/BARC* or you are *an ex-employee of DAE/BARC*. In absence of such information or wrong information, the quotation or contract is likely to be rejected/cancelled.
- (xi) **Confidentiality:** No party shall disclose any information to any third party concerning the matters under this contract generally. In particular, any information identified as proprietary in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party. This clause shall apply to the sub contractors, consultants, advisers or the employees engaged by the party with equal force.
- (xii) Restricted information categories under section 18 of the Atomic Energy Act, 1962 and "**Official Secrets**" under section-5 of the **official secret act**, **1923** : Any contravention of the above mentioned provisions by any contractor, sub contractor, consultant, adviser or the employees of a contractor will invite penal consequences under the aforesaid legislation.
- (xiii) **Prohibition against use of BARC's** name without permission for publicity purposes: The contractor or sub contractor, consultant, adviser or the employees engaged by the contractor shall not use BARC's name for any publicity purpose through any public media like press, radio, T.V. or Internet without prior approval of BARC.
- (xiv) **Safety Precautions:** The contractor will follow all the good industrial safety rules required during the execution of work. He will have to compulsorily follow other safety instructions issued by *Engineer-in-charge* from time to time. The contractor shall provide all safety gears to their workmen at site and all safety rules shall be strictly followed. Any injury/ accident caused to their persons while working inside BARC shall be the full responsibility of the contractor.
- (xv) The tool, ladders, testing instruments, software and other equipment required for the maintenance work shall be brought by the contractor and security of the same will be the responsibility of the contractor.
- (xvi) **Police Clearance:** The bidder shall note that entry inside BARC is restricted and it is compulsory for contractor to get police clearance (as prescribed by security section of BARC) for all his staff who will be entering BARC for work.

- (xvii) The work can be carried out on all working days (except Saturday, Sunday & Public Holidays) between 9.30 hrs to 17.30 hrs,. For breakdown maintenance on holidays, special permissions shall be obtained from the competent authority.
- (xviii) The offer shall be kept valid for a period of 60 days from the date of opening of the quotation.
- (xix) The department has option of terminating the contract either partially or wholly at any stage without assigning any reason by giving one-month notice in writing to that effect.
- (xx) In case the work is not carried out to the satisfaction of the department or damage caused due to negligence, the contractor will be liable to pay damage charges. All such matter will be decided by the department and the decision in the matter will be final.
- (xxi) The successful bidder shall be personally responsible for compliance of all provisions of labour, EPF, Income Tax, GST etc. as applicable from time to time & will give the documentary proof of having complied with all such provisions.

Ind ho 25/10/2022

(S. K. Sinha) Head, Reactor Engineering Division *(For and on* behalf of President of India)

(Annexure-I) Technical Specification

Non - Comprehensive Annual Maintenance Contract Motor Control Centres & Power Control Centres

I. SCOPE OF WORK

Non-Comprehensive Annual Maintenance Contract (AMC) for 20 Nos. of Motor Control Centres (MCCs) and Power Control Centres (PCCs) of different make & ratings installed at Engineering Hall No.-3 & 7, BARC, Trombay, Mumbai-85.

II. SCHEDULE OF QUANTITIES

| Sr. No. | Description of items | | |
|---------|---|---------|--|
| 1. | LT Motor Control Centres & Power Control Centres of different make and rating (from 150A-800A), fixed/draw-out type, floor mounted, free standing with outgoing feeders (2-10Nos.) of 32A-400A, 415V, 3-phase. | 20 Nos. | |

III. DESCRIPTION OF WORK

1. System Description:

The installed *Motor Control Centres* and *Power Control Centres* are floor mounting, freestanding, cubicle type of draw-out and non draw-out assemblies. These panels are of various configuration & rating and catering electrical power supply to experimental facilities and distribution system components/equipments. LT Motor Control Centres and Power Control Centres catering to various types of electrical loads viz. heaters, motors, lighting, air-conditioning system etc. The incoming and outgoing cables connected to panels are PVC/XLPE insulated and armoured type. The panel/switchboard installation is as per the requirement of IS-8623. All the panels are located in accessible area and on various floors with cable trays and on cable trenches. The location of panels is spread over the buildings and panels are not in a single place. MCCs and PCCs are floor mounting type and cable entry is from top and bottom. These panels comprising of SDF, contactor, HRC fuse, indicating lamps, measuring/indicating meters, selector switches etc. MCCs and PCCs are in working condition and feeding electrical power to the loads.

| System details | : System Voltage: 415V, 50Hz, 3-Phase, Neutral solidly Grounded Type of Panels: Fixed Modular & Draw-out modular freestanding. Current Rating: 100-800A Type of Feeders: DOL, Star-Delta, MCB-DB and Only SDF Connected Cable: Armoured, PVC/XLPE insulated. |
|----------------|--|
| Place of work | : Engineering Hall No. – 3 & 7, BARC, Trombay, Mumbai – 400085 |

The above mentioned MCCs & PCCs were, installed and commissioned 15-20 years ago, since then, no major breakdown/fault has occurred.

During the currency of Non-Comprehensive maintenance contract, the firm shall perform and carry out the following works related as per applicable code and instructions issued by Engineer in-charge:

2. Scope of Work/Maintenance Schedule:

The breakdown call shall be attended on the immediately on same day, however, breakdown call placed at night time may be attended on the following business morning. Maintenance services shall be provided during department's normal working hours, 9:00AM to 5:00PM Monday through Friday as well as on public holidays (*as per the instruction and requirement of Engineer in-charge*). The periodic maintenance (preventive & planned) **every 3 months** with equal intervals making 4 calls in the contract period of one year shall be carried out.

Before taking the system/panel for maintenance & servicing, contractor shall ask for written permission from the department's engineer in-charge. The system shall be maintained as per the guidelines of IEC & IEE, NEMA/NETA.

- **A. Daily Inspection:** During the currency of the contract. Contractor shall depute his personnel to visit the site <u>every day</u> to carry out the following inspection and maintenance related works.
 - a). Entries in the log book, since the previous inspection visit should be checked and any necessary action, *if required* shall be taken accordingly.
 - b). The system shall be inspected for confirmation of power supply parameter and availability on demand. The current and other parameters of the panel shall be noted.
 - c). The panel's indication and display shall be checked for the system information and general faults shall be rectified as per the instruction of Engineer in-charge.
 - d). The panels shall be checked for their physical conditions viz. earthing connection, doors etc.
 - e). Thermography shall be carried on loaded panels.
 - f). Mechanical anchorage and fasteners shall be checked
 - g). The LED indications of the system shall be visually checked.
 - h). Provision shall be made for trip and alarm testing of experimental facilities from electrical panel as and when requirement arise/work order placed.
- **B.** Monthly Inspection and Maintenance. The following check-list and work related with periodic maintenance shall be carried out every month:
 - a). Thorough Cleaning of panel from outside with due precaution and as per the instruction of Engineer in-charge.
 - b). Checking, testing and calibration of space heater and thermostats installed inside the panel cable alleys.
 - c). Insulation resistance measurement of assemblies and components as per applicable code and instruction issued by Engineer in-charge.

- d). Connection tightening at terminals as well as conditions evaluation of terminating lugs with insulation shall be checked and rectified, particularly with regard to overheating and discrepancies shall be record in the cards.
- e). Entries in the log book shall be made and updated, since the previous inspection.
- f). The alarm function of control and indicating devices shall be checked by the operation of a trigger device as per OEM guidelines.
- g). Tightening of panel hardware and joints shall be carried out and hardwares found defective or rusted shall be replaced and tightened fasteners shall be marked as per the instruction of Engineer In-charge.
- h). Cleaning of all devices as specified by manufacturer shall be carried out.
- i). Replacement of defective devices and components with new ones, if found damaged/defective (no repairing).
- **C.** Quarterly Inspection and Test. The following check-list, maintenance and test sequence shall be carried out in <u>every three months</u> (4 times in a year on equal interval) as per schedule issued by the engineer in-charge:
 - a). Use drawings and specifications to compare the equipment nameplate data & details and connected load details.
 - b). Examine the physical and mechanical condition of the MCCs & PCCs.
 - c). Examine anchorage, alignment, and grounding. Ensure the MCCs & PCCs meets the requirements of connected loads and equipments, if any alteration is found, shall be correct to meet the system requirement.
 - d). Ensure the unit is clean check for dust buildup or residual moisture, or condensation.
 - e). Examine bolted electrical connections for high resistance by utilizing at least one or more of the following methods:
 - Use of a low-resistance ohmmeter analogously with Section 7.16.1.2.B.1 of the NETA publication.
 - Check the tightness of accessible bolted electrical connections using a calibrated torque wrench to comply with the manufacturer's recommendations.
 - Complete a thermographic survey per Section 9 of the NETA publication
 - f). Test all electrical and mechanical interlock systems to ensure proper sequencing and operation.
 - g). Confirm the correct barrier and shutter installation and operation.
 - h). Utilize and examine all active components and confirm the correct operation of all signifying devices.
 - i). Examine and evaluate the contactors, switchgears and control gears.
 - j). Check the mechanical operation and lubricate with appropriate and approved lubricant.
 - k). Check that the contact gap, wipe, alignment, and pressure comply with the manufacturer's recommendations or as per engineer in-charge's instructions.
 - I). Check that the overload protection rating is accurate for its application. Set the alterable or programmable devices as guided by the protective device coordination scheme.

m). Check that there is the proper lubrication on mobile current-carrying components and any sliding surfaces to ensure smooth function.

Same

- n). Entries in the log book/history Card, since the previous inspection and maintenance shall be checked and necessary action shall be taken with regard to observation and entries made in the cards.
- o). The alarm function of control and indicating devices shall be checked by the operation of a trigger device as per manual of OEM. All fault indicators and their circuits should be checked preferably by simulation of fault conditions. The Control and Indicating devices shall be visually inspected for signs of deterioration and if found unsuitable, shall be replaced with new devices.
- p). Replacement of defective devices and components with new ones, *if found damaged/defective/worn-out* (no repairing). Components and devices required for the replacement will be provided by department.
- q). Insulating mat provided in-front of electrical panels shall checked and arranged as per the instruction of engineer in-charge.
- r). All the maintenance/replacement records *w.r.t* component replacement, busbar, contact resistance, insulation measurement, earthing etc. shall be entered systematically in the logbook and if any observation is lodged by the department in the logbook shall be checked and remedial action shall be taken
- D. Annual Inspection, maintenance & Tests: The following checks, maintenance and test sequence shall be carried out once in a year along with last quarterly maintenance:
 - a). Visual inspection should be made to confirm that all cable fittings and equipment are secure, undamaged and adequately protected. Any defect should be recorded in log book and suitable remedial action should be taken. On completion of the annual inspection, the entry should be made in register in respect of defects found. After the defects are rectified, the entries should then again be made.
 - b). Execute resistance measurements through the bolted connections using a lowresistance ohmmeter, if pertinent, in compliance with Section 7.16.1.2.A.S.1. of NETA.
 - c). Carry out insulation-resistance (ohm) tests on all contactor(s), phase-to-ground, phase-to-phase, as well as across the open contacts for sixty seconds in compliance with Table 100.1. of NETA.
 - d). Complete a dielectric withstand voltage test in compliance with the manufacturer's or Engineer in-charge's instruction. If the manufacturer's published data is unavailable or inaccessible, use Table 100.9. of NETA
 - e). Calculate and measure the resistance of the power fuses.
 - f). Calibration of measuring instruments *viz.* Ammeter, Voltmeter Multi-Function meter etc.
 - g). Evaluate the control power transformers in compliance with Section 7.2.1. of NETA.
 - h). Evaluate the motor protection devices in compliance with the manufacturer's datasheet. If the manufacturer's published datasheet is unavailable or inaccessible, use Section 7.9. of NETA.
 - i). Thermography records (obtained daily/monthly/quarterly) shall be analyzed and evaluated in consultation with engineer in-charge to locate the flaws and potential safety hazards.

- j). Intelligent device to predict where maintenance may be necessary our hour meters (for recording of equipment running status) are not available in our system and plant. However, energized and de-energized period of MCCs and PCCs shall be evaluated (which were recorded during the daily checks).
- k). MCCs & PCCs exterior and interior shall be checked for the condition of painting. Chipped and rusted portion shall be touched up with same colour of shade or as per the instruction of Engineer in-charge.

3. Job description

The bidder should familiarize himself fully with the job before quoting the rates.

- (i) The Annual Maintenance Contract is non-comprehensive *i.e.* the major parts (switchgears, cables, terminals, meters and indications etc.) required to be replaced during the scope of work will be supplied <u>by the department (free of cost</u>) & replaced by the contractor at his own cost.
- (ii) The consumable material supplied <u>(by the contractor- free of cost)</u> and used (*cleaning spray, lubricants etc. consumables required for maintenance*) by the contractor should be of standard make as per approved quality and make.
- (iii) Contractor shall provided qualified technicians (Skilled -04 Nos. and Unskilled 01 No.) during the course of AMC to carry out the day to day maintenance works on daily basis <u>as per the working hours of department and site location</u>. The maintenance and other scope of work defined above. The contractor has to maintain the attendance of the technicians and the work carried out by them regularly. Technician provided by the contractor will be subjected to *test at site and liable for rejection*, if found unsuitable for the job. The technicians selected/approved for the work cannot be replaced without prior approval from the engineer in-charge. Procedure & protocol provided by the department shall be followed strictly as per the instruction and guidelines of engineer in-charge.
- (iv) The *consumables* found to be of inferior quality and or not being according to the requirement of engineer in-cjharge, will be rejected at the cost of contractor.
- (v) Contractor shall have to maintain a logbook of maintenance of each system/site and make entry of all their site visits with a mention of inspection made by them and their comments *if any*.
- (vi) All the works are to be carried out as per manufacturer's specification and to the entire satisfaction of *Engineer in-charge* of the unit.
- (vii) No skilled/unskilled staff will be provided by the department to the contractor for carrying out the maintenance/servicing.
- (viii) **System Disconnection**: During maintenance and servicing, care should be taken to minimize the disruption/interruption of the electrical distribution and control system. If panels are removed for testing or servicing, alternate power supply should be provided, if the requirement arises.
- (ix) **Procedure, checklist** shall be prepared and submitted for approval from engineer in-charge to carry out servicing and maintenance work along with schedule.
- (x) **Breakdown maintenance/repair:** Breakdown maintenance as and when arises shall be attended without any delay. Before attending the problem, cause shall be indentified and removed with prior approval from *Engineer in-charge*. After rectification, entire necessary electrical test shall be performed and recorded, then

only permission shall be obtained for energizing the system. Test and other parameters including replacement of parts shall be recorded in the logbook/history cards and duly signed. After handing over, performance of the system shall be observed for at least one hour and vigil near the system shall be maintained by the contractor's personnel.

Inclusion: If the load side found defective than it shall be removed and rectified for restoration of system.

4. Liabilities of the contractor.

- (i) The bidder shall be responsible to visit the site at his own cost.
- (ii) Bidder should supply all the consumables viz. lubricant, testing instruments, tools etc.
- (iii) On the expiry of contract, the contractor will hand over the system/site in perfect working conditions to the entire satisfaction of *Engineer in-charge*. The contractor will be personally responsible for the safe working condition of the system, till these are in his custody or in custody of his own staff during the whole period of AMC.
- (iv) Any damage/loss done to the building, any equipment, or any theft of related item thereof etc. during the contract shall be the contractor's liability. It shall be made good by them. If there is any human loss or injury, the contractor shall be liable to pay the compensation and to abide by the competent authority's decision.
- (v) Scope of maintenance.
 - To ensure that complete MCCs & PCCs are always clean and in healthy working condition.
 - To perform tasks subsequent to a fault, interruption and trip conditions/situation.
 - Familiarize the maintenance personnel with the MCCs & PCCs and their responsibility in-consultation with *Engineer in-charge*.
 - Inspect the complete system for proper functioning. Any shortcoming noticed should be recorded and brought to the notice of *Engineer-in-charge*.
 - Follow cleaning, maintenance and testing schedule.
 - **Exclusions**: control and power cable replacement, batteries replacement, shifting of the system.

5. Penal Clause: For AMC of MCCs & PCCs.

- (i) In case any system/site gets damaged during repairing or maintenance, the contractor shall be responsible to pay the original cost of the system or make the damage good by replacement. If the contractor fails to make up the damages caused to the department a penalty not exceeding double the cost of the system may be imposed and recovered from the contractor.
- (ii) The contractor will be responsible and liable to make good any losses which may be caused to the department due to the negligence of the contractor.

IV. General Terms & conditions

- 1. Maintenance and servicing shall be carried out as per the instruction manual of manufacturer.
- 2. Bidder shall provide along with their offer following documents/details-.
 - (i) License related with electrical works
 - (ii) Provident fund.
 - (iii) Insurance/ESIC.
 - (iv) Wage/emolument statement.
 - (v) Qualification details
 - (vi) Police Verification Certificate.
 - (vii) Past experience.

If the above stated documents are not available with the offer, offer will be liable for rejection without giving any reason.

- 3. The service contract will be for a period of one year.
- Firm shall carry out the work as mentioned above, daily, monthly, quarterly and yearly basis on mutually agreed dates and keep the system in good operating condition, during the currency of the contract.
- 5. In addition to routine services, the firm also will attend to breakdown calls free of charge basis immediately on receipt of intimation from the department.
- 6. The service contract covers free replacement of spare parts, if found defective, during maintenance, service or breakdown calls in the currency of the contract. However, department will provide all the spare parts required. The bidder shall maintain the record of spare parts replaced in the documents.
- 7. Before taking system/equipment for maintenance, firm shall ask for written permission from the department.
- During the currency of the contract, firm shall be responsible for maintaining up to date record of breakdown calls and service carried out on the MCCs & PCCs.
- 9. A visual inspection shall be made to confirm that all cable fittings (incoming and outgoing) and equipment are secure, undamaged and adequately protected.
- 10. Note: All consumables such as CRC contact cleaner, cotton clothes, blower/vacuum cleaner, hot air blower, solder etc. shall be supplied/brought by the contractor as per the site conditions and requirement.

Price Schedule Non-Comprehensive AMC for MCCs & PCCs.

| Description of work | No. of | Annual rates per system/site | |
|---------------------------------------|--------------|------------------------------|----------|
| • | system/Units | In figures | In words |
| Non-Comprehensive Annual | - | | |
| Maintenance Contract (AMC) for Draw- | | | |
| out/Fixed type, Motor Control Centres | 20 | Rs | Rs |
| (MCCs) and Power Control Centres | | | |
| (PCCs) of different make & ratings. | | | |

Note:

- 1. Specification along with terms & conditions must be signed by the bidder.
- 2. Specific rates should be quoted. Bare statement like "At scheduled rate", At actual cost, as decided by you *etc.* should not be quoted.
- 3. Overwriting & cutting should be avoided.
- 4. The quoted rates should include all types of expenses & transportation charges etc.
- 5. Taxes, duties, *if any*, applicable shall be indicated separately.
- 6. The quantum of work may also vary as per requirement.

| | Description | Unit | Rate per item | |
|-----|---|------------|---------------|---------|
| | | Unit | Words | Figures |
| 1 | HRC Fuse, 32A, gG, 36kA, DIN | Per piece | Rs | Rs |
| 2 | HRC Fuse, 63A, gG, 36kA, DIN | Per piece | Rs | Rs |
| 3 | HRC Fuse, 100A, gG, 36kA, DIN | Per piece | Rs | Rs |
| 4 | Contactor, AC3-16A, 3P, 415V | Per piece | Rs | Rs |
| 5 | Contactor, AC3-32A, 3P, 415V | Per piece | Rs | Rs |
| 6 | Contactor, AC3-63A, 3P, 415V | Per piece | Rs | Rs |
| 7 | LED Indicating Lamp, Size- 22.5mm | Per piece | Rs | Rs |
| 8 | Push Button, Size- 22.5mm | Per piece | Rs | Rs |
| 10. | Brass cable Gland -35mm | Per piece. | Rs | Rs |
| 11. | Melamine terminal block – 32mm ² | Per piece. | Rs | Rs |

Rate of spare parts For reference only (*not required under AMC*).

Certified that the above quoted rates are inclusive of all taxes & FOR at site.