

TENDER FOR “MANNING AND OPERATION AND COMPREHENSIVE ANNUAL MAINTENANCE OF CARRIER MAKE SCREW CHILLER PLANT ALONG WITH ITS ASSOCIATED LOW SIDE EQUIPMENT AT PRITHVI BHAWAN, LODHI ROAD, NEW DELHI”

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SIGNATURE OF CONTRACTOR

DATED: 27/05/2022



Rep of MoES
Director (Admin)
Tele:24669515

रणधीर के. बी. पटेल / Randhir K. B. Patel
निदेशक / Director
भारत सरकार / Government of India
पृथ्वी विज्ञान मंत्रालय / Ministry of Earth Sciences
पृथ्वी भवन, लोदी रोड, नई दिल्ली 110003
Prithvi Bhawan, Lodi Road, New Delhi - 110003

M/S _____

NAME OF WORK: OPERATION AND COMPREHENSIVE ANNUAL MAINTENANCE OF CARRIER MAKE SCREW CHILLER PLANT ALONG WITH ITS ASSOCIATED LOW SIDE EQUIPMENTS AT PRITHVI BHAWAN, LODHI ROAD, NEW DELHI

Dear Sir(s),

1. Tender documents in respect of above work are uploaded on the site **eprocure.gov.in**. The tender is on single stage two cover/ two stage two cover/ three cover e-tendering system. The contents of Cover I & Cover II are specified in NOTICE OF TENDER.
2. Bids will be received online by ACCEPTING OFFICER up to the date and time mentioned in the **NOTICE INVITING TENDER (NIT)**. No tender/bid will be received in physical form and any tender/bid received in such manner will be treated as non bonafide tender/bid.
3. Bid will be opened on due date and time fixed for opening in the presence of tenderers/ bidders or their authorised representatives, who have uploaded their quotation bid and who wish to be present at the time of opening the bids.
4. Your attention is also drawn to instruction on filing and submission of tender attached herewith. You may forward your points on tender documents and/or depute your technical representative for discussion on tender/ drawings and to clarify doubts, if any, on or before 03/06/2022. You are requested not to write piece meal points and forward your points duly consolidated before due date viz.03/06/2022.
5. Un-enlisted contractors are required to submit the scanned copies (in pdf file) of documents required as per eligibility criteria mentioned in instructions for filling the tender documents and Appendix 'A' to NIT along with EARNEST MONEY DEPOSIT (EMD) and tender fee on e-procurement portal and submit the physical documents in the office of Director (Admin) MoES within time limit specified in NIT. Inadequacy/deficiency of documents shall make the bid liable for rejection resulting in disqualification for opening of financial bid.
6. (a) Contractor shall upload scanned copy of EARNEST MONEY DEPOSIT (EMD) mentioned in NOTICE of Tender and shall ensure receipt of hard copy of EMD in the office of tender issuing authority before date & time fixed for this purpose. In case of failure to abide by any these two requirements, the finance bid will not be opened.
6. (b) Contractor would be required to deposit individual security deposit on acceptance of tender which will be calculated with reference to the tendered cost as per scales laid down by MoES for calculation of "EARNEST MONEY".
7. Contractors shall submit the scanned copies (pdf file) of documents to qualify the technical criteria, and such other documents as mentioned in Appx 'A' to NIT on e-procurement portal and submit physical documents in the office of Director (Admin) MoES before date & time fixed for this purpose.

Yours Faithfully,

Director (Admin) MoES

Encls : As Above
Signature of Contractor
Dated: -

रणधीर के. बी. पटेल / Randhir K. B. Patel
निदेशक / Director
भारत सरकार / Government of India
पृथ्वी विज्ञान मंत्रालय / Ministry of Earth Sciences
पृथ्वी भवन, लोदी रोड, नई दिल्ली 110003
Prithvi Bhawan, Lodi Road, New Delhi - 110003

INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER

1. EARNEST MONEY DEPOSIT (EMD)

Contractor(s) shall submit Earnest Money Deposit as detailed in Notice of Tender in one of the followings forms, along with their tender/bid:

(a) FDR from a Scheduled Bank in favour of DDO, MoES.

NOTES: Earnest Money Deposit (EMD) in the form of cheque etc will not be accepted. NON-SUBMISSION OF EARNEST MONEY DEPOSIT (EMD) (scanned copy along with Technical Bid & hard copy before the date & time fixed for opening of BOQ) WILL RENDER THE BID DISQUALIFIED FOR OPENING OF COVER II (FINANCIAL BID).

2. PERFORMANCE SECURITY DEPOSIT

PERFORMANCE SECURITY DEPOSIT @ 3 % of tender cost is required to be deposited within 30 (thirty) days of the receipt by the contractor of notification of acceptance of tender/bid

3. GENERAL INSTRUCTIONS FOR COMPLIANCE

3.1. The bids received only in the electronic form will be considered. All bids shall be submitted on 'eprocure.gov.in' portal. Documents should be scanned and forwarded in 'pdf' form and 'xls' form as indicated.

3.2 Bids shall be uploaded on 'eprocure.gov.in' portal on or before the bid closing date mentioned in the tender. No tender/bid in any other electronic or physical form like email/fax/by hand/ through post will be considered.

3.3 Bid should be DIGITALLY signed using valid DSC. All pages of tender documents, corrections/ alterations shall be signed / initialed by the lowest bidder after acceptance.

3.4 The tender shall be signed, dated and witnessed at all places provided for in the documents after acceptance. All corrections shall be initialed. The Contractor shall initial every page of tender forming part of the tender. Any tender/bid, which proposes alterations to any of the conditions whatsoever, is liable to be rejected.

3.5 Hard copies of all above document should be sent by the contractor to the Tender issuing authority well in advance to be received before the date & time fixed for the same.

3.6 Bid (Cover 1 & 2) shall be uploaded online well in time.

3.7 The contractor shall employ Indian Nationals after verifying their antecedents and loyalty.

3.8 Tenderers/bidders who uploaded their priced tenders/bids and are desirous of being present at the time of opening of the tenders/bids, may do so at the appointed time.

3.9 The tenderer/bidder shall quote his rate on the BOQ file only. No alteration to the format will be accepted, else the bid will be disqualified and summarily rejected.

Signature of Contractor
Dated:


Director (Admin) MoES

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निदेशक / Director
भारत सरकार / Government of India
पृथ्वी विज्ञान मंत्रालय / Ministry of Earth Sciences
पृथ्वी भवन, लोदी रोड, नई दिल्ली 110003
Prithvi Bhawan, Lodi Road, New Delhi - 110003

(NOTICE OF TENDER)

1. A tender is invited for the work as mentioned in Appendix 'A' to this NOTICE INVITING TENDER (NIT).
2. The work is estimated to cost as indicated in aforesaid Appendix 'A'. This estimate, however, is not a guarantee and is merely given as a rough guide and if the work costs more or less, a tenderer/bidder will have no claim on that account.
3. The contract shall initially be for one year and liable to be extended by another two years on same terms and conditions subject to satisfactory performance.
4. The Technical Bid and Financial Bid (Cover-1 and Cover-2) shall be uploaded by the contractor on or before the date & time mentioned in NIT. A scanned copy of DD with experience details and other documents as specified in Appendix A shall be uploaded as Cover-1 (Technical bid) of the tender on e-tendering portal. DD is refundable in case the contractor is not considered eligible in technical evaluation of Cover 1 resulting in non-opening of Cover1. The applicant contractor shall bear the cost of bank charges for procuring and en-cashing the DD including revalidation of DDs and shall not have any claim from Government whatsoever on this account.
5. Tender details and conditions of contract and other necessary documents shall be available on website 'eprocure.gov.in' portal and www.moes.gov.in for download and shall form part of contract agreement in case the tender/bid is accepted.
6. In case of successful contractor i.e. the lowest contractor having submitted EMD, he shall have the option of converting the EMD instrument into part of the Performance Security to be deposited by him within 28 days from the receipt of intimation of acceptance of tender.
7. Sample of materials and stores brought by the contractor will made be available for inspection by the bidder at the office of Director (Admin) MoES during working hours. The bidder is advised to visit the site of work by making prior appointment with Director (Admin) MoES, who is the Executing Agency of the work (see Appendix 'A'). The bidder shall be deemed to have full knowledge of all relevant documents, samples, site etc whether he has inspected them or not.
8. The uploading of bid by a bidder implies that bidder has read this notice and the conditions of contract and has made himself aware of the scope and specification of work to be done and local conditions and other factors having bearing on the execution of the work.
9. Accepting Officer does not bind himself to accept the lowest or any tender/bid or to give any reason for not doing so.
10. The Notice Inviting Tender (NIT) including **Appendix 'A'** shall form part of the contract agreement.

(Signature of Contractor)
Dated:


Director (Admin) MoES
रणधीर के. बी. पटेल / Randhir K. B. Patel
निदेशक / Director
भारत सरकार / Government of India
पृथ्वी विज्ञान मंत्रालय / Ministry of Earth Sciences
पृथ्वी भवन, लोदी रोड, नई दिल्ली 110003
Prithvi Bhawan, Lodi Road, New Delhi - 110003

APPENDIX 'A' TO NOTICE INVITING TENDER (NIT)

1	Name of work	MANNING AND OPERATION AND COMPREHENSIVE ANNUAL MAINTENANCE OF CARRIER MAKE SCREW CHILLER PLANT ALONG WITH ITS ASSOCIATED LOW SIDE EQUIPMENTS AT PRITHVI BHAWAN, LODHI ROAD, NEW DELHI",
2	Estimated Cost	Rs. 50 Lakhs
3	Contract period	12 Months
5	Website/portal address	www.eprocure.gov.in and www.moes.gov.in
6	(a) Bid submission start date (b) Bid submission end date (c) Date of bid opening	Refer critical dates.** Refer critical dates.** Refer critical dates.**
7	For All Contractors	Contractor will not be allowed to execute the work by subletting or through power of attorney holder on his behalf to a third party/another firm except sons/ daughters /spouse of proprietor/partner/ Director and firms own employees, Director, Project Manager. This shall be subject to certain conditions which will be prescribed in the Notice of Tender forming part of the tender document.
8	Tender issuing and Accepting Officer	Director(Admin) MoES
9	Earnest Money	Rs.2,50,000/- in the form of DD/Bankers Cheque from any Scheduled/ Nationalised Bank in favour of DDO, MoES

****CRITICAL DATES**

- | | |
|--|---|
| (a) Publishing date of tender documents | 27/05/2022 |
| (b) Starting date and time for downloading of tender documents | 27/05/2022 at 1500 hrs |
| (c) Starting date and time of bid submission (Cover 1 & 2) | 27/05/2022 at 1500 hrs |
| (d) Closing date and time of bid submission (Cover 1 & 2) | 17/06/2022 at 1500 hrs |
| (e) Date and time of bid opening (Cover 1) | 20/06/2022 at 1100 hrs or subsequently |
| (f) Date and time of bid opening (Cover 2) | Will be intimated online after completion of evaluation of tech bids / applications (cover No. 1) |

NOTES:

- (a) contractor shall be considered provided he meets the criteria. Foreign firms shall not be eligible for this tender.
- (b) Contractors will upload following documents in Cover-1 for checking eligibility:

- (i) Application for tender on Firm's letter head
- (ii) Scanned copy of DD /Bankers Cheque toward cost of tender and EMD
- (iii) Scanned copy of GST Registration Number.
- (iv) Scanned copy of EPF Registration Number.
- (v) OEM certification/Certificate of authorized vendor of OEM namely, Voltas/Hitachi/Blue Star/Carrier
- (vi) Details of works executed
- (vii) Scanned copy of GST Registration Number.
- (viii) Scanned copy of ESIC Registration Number.
- (ix) Any other document required as described in this Appendix.
- (c) Tenders not accompanied by scanned copies of requisite DD towards cost of tender and earnest money (as applicable) in Cover-1 shall not be considered for validation of 'T' bid and their Financial Bids will not be opened.
- (d) Contractors should ensure that their original physical DDs and Earnest Money Deposit (EMD) instruments (as applicable) reach the office of Accepting Officer within 05 (Five) days of bid submission end.
- (e) After opening of Cover-1 and during its technical evaluation, in case any deficiency is noticed in the documents required to be uploaded by the tenderers as per NIT, a communication in the form of e-mail/SMS/Speed Post etc. shall be sent to the contractor to rectify the deficiency within a period of 07 (seven) days from date of communication failing which their financial bid (Cover 2) shall not be opened and contractor shall not have any claim on the same.
- (f) Invitation for e-tender does not constitute any guarantee for validation of Technical bid and subsequent opening of financial bid of any applicant/bidder merely by virtue of enclosing DD. Accepting Officer reserves the right to reject the Technical bid and not to open the financial bid of any applicant/bidder. Technical bid validation shall be decided by the Accepting Officer based on eligibility of the firm as per criteria given in this Appendix. Tenderer/bidder will be informed regarding non-validation of his Technical bid assigning reasons therefore through tender evaluation report which shall be uploaded on the website.

Signature of Contractor



Director (Admin) MoES

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निदेशक / Director
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GENERAL CONDITIONS OF TENDER

The under mentioned remarks shall be deemed to have been considered against each item of BOQ: (a) Refer note No. 11 of Schedule 'A' Notes. (b) Refer Notes to Schedule 'A'.

2. The unit rates quoted by the Contractor in S.No. 5 shall be net & inclusive of charges such as:

- | | |
|--|--|
| (a) Service Tax or any other tax to be paid. | (b) Insurance employees, if any. |
| (c) Transport and delivery. | (d) Packing and unpacking. |
| (e) Labour Welfare Cess | (f) ESIC |
| (g) EPF, etc. as applicable. | (h) Any other statutory taxes such as GST etc. |

3. The contractor's quoted rates shall be deemed to be inclusive of all taxes/cess viz GST, duties, royalties, octroi and other levies payable under respective statutes as applicable on the date of receipt of tender. It may be noted that any tenderer imposing any condition in this regard or on any other account shall be treated as a conditional tender and the same shall be liable to be rejected.

4. **UNIT RATE:** The tenderer shall calculate his own details and insert unit rates in against each item of Schedule 'A'. It is an express condition of this contract that the rates quoted by the tenderer in the tender for various items shall be deemed to include for the entire and final completion of the items of work in accordance with provision of the tender. Government shall not entertain any claim whatsoever on account of inaccuracies/misunderstanding, if any in the aforesaid rates.

5. Unit rates of all the items shall be inclusive of supply & fixing, material & labour, laying, jointing, testing etc. (as applicable) unless mentioned specifically.

6. Tenderers shall be deemed to include in his unit rate for each item for the provision of all materials, labour, operations, tools/plants as required and other requirements as detailed in the Particular Specifications irrespective of whether these appear as specific item or mentioned in the description of items in Schedule 'A' or not and the tenderer shall not be paid anything extra for the same.

7. Site of work lies in **Restricted Area** and security clearance/issue of passes is mandatory which can only be issued by the concerned issuing authority based on the documents submitted and subsequent verification of documents in respect of individuals intended to be deployed. Working hours may be restricted by the authority controlling the Director (Admin) MoES. This aspect shall be deemed to be included in the quoted rates by the tenderer and nothing extra shall be admissible on this account.

8. Applicant shall be in possession of '**provident fund code number**', **Employees State Insurance Corporation number**, **Goods & Service Tax Registration number** copy of the same shall be uploaded in cover 1 (T-bid). Applicant not in possession of above documents shall be disqualified in T-bid (cover 1) evaluation and his financial bid (cover 2) shall not be opened.

9. **PERIOD OF CONTRACT:** The contract shall initially be for one year and liable to be extended by another two years on same terms and conditions subject to satisfactory performance.

10. **SAFETY MEASURES, PRECAUTIONS, RISKS, ETC.:**

(i) The work shall be carried out with utmost care to ensure that no damage to Existing/ Adjoining work is done failing which the damage, if any done shall be rectified by the Contractor to match with the Existing/ Adjoining work to the entire satisfaction of Director (Admin) MoES under Contractor's own arrangement and at his own expenses.

(ii) Suitable Tools, Plants, Equipment, Mechanism, etc., as considered necessary shall be adopted during execution of the work. The Contractor shall take all Precautions, Safety Measures, etc., to avoid a Damage,

Miss-happening, Accident, etc., to the Workmen engaged by him to carry out the work. The UNIT RATES quoted by Contractor/ bidder shall be deemed to have included the element of adopting of safety measures, precautions and also the risks, etc. involved in work and nothing extra shall be admissible on this account.

11. The manning & operation and comprehensive maintenance under this contract is open to any manufacturer provided they have signed an agreement with M/s Carrier Air Conditioning And Refrigeration or its authorized vendor for the maintenance of Carrier chiller Plant . The contractor will have to submit MoU on stamp paper of Rs 100/- duly notarized, as specified in Performa, within twenty-eight days from date of Acceptance of tender, failing which the contract will be liable to be cancelled and work shall be executed as per policy in vogue.

12. Manufacturers are exempted from production of MoU, if they participate in bidding directly, subject to fulfilling requirements as mentioned in the tender. It may also be noted that, if the Manufacturer's issues MoU for participation of other bidder than Manufacturer's bid will be rejected upon his direct participation in the tendering process.

13. It is deemed that the contractor had inspected the AC Plant for comprehensive maintenance along with Manufacturer and rates have been quoted accordingly to keep the AC Plant in working condition. It may be noted that the AC Plant shall be made fully functional in all respect to the entire satisfaction of Director (Admin) MoES. New parts so replaced shall be similar makes of existing parts, which shall be fully compatible/ functional with the equipment/ AC Plant all as directed by Director (Admin) MoES. After the repair being carried out the same AC Plant should not get off again & again. The following penalty will be imposed in case of non-operation of Chiller Plant:

(a) Out of 03 Chiller Plant, 02 Chiller Plant should be in operational and third one is in standby. In case, if 02 Chiller Plants are not in operation for more than 24 hours, penalty @ Rs.5,000/- (Rupees Five Thousand only) per day per chiller plant will be charged from the service provider subject to maximum of 10% of the contract value.

(b) If Chiller Plant is unserviceable for more than 05 (Five) days, no payment will be made for the unserviceable period and also Rs.5,000/- (Rupees Five Thousand only) per day per Chiller Plant will be recovered for the unserviceable period subject to maximum of 10% of the contract value.

14. **SITE VISIT:** The bidder, at the bidder's own responsibility and risk shall be encouraged to visit at their own cost and examine the site of required services and its surrounding and obtain all information for outsourcing services of subject works.

15. **Electrical License:** In terms of IE Rule 1956, Rule No 45, the contractor shall have Electrical License holder issued by State Govt. under his establishment.

16. **PERFORMANCE SECURITY DEPOSIT:** Within 28 days of receipt of the letter of Acceptance, the successful contractor shall deliver to the Accepting Officer a Performance Security in the form of Bank Guarantee {Issued by National/ Schedule Bank as per Appx 2.1 to Manual of Contract 2020 with modifications with respect to Performance Security in place of Security Deposit}, Govt Security, FDR for an amount equivalent to **3%** of the contract sum. The same shall be valid for 2 months beyond the completion date of tender.

17. **STATUTORY PROVISIONS:**

(i) All statutory provisions such as Contract Labour (Regulation & Abolition) as per the CODE on Wages, 2019 No. 29 of 2019 dt. 08 Aug 2019. The Employees Provident Funds & Miscellaneous (EPF & MP) Act 1952. The Building & other Construction Workers Welfare Cess Act 1996, Payment of Wages as per the CODE on Wages, 2019 No. 29 of 2019 dt. 08 Aug., 2019 and ESIC Act, shall be strictly complied with.

- (ii) No contractor shall be permitted to take advantage of ignorance of above provisions.

18. Manpower:

The following staff will be employed for manning and operation of Chiller plant and its connected low side equipments:

Operators: Two number

Minimum qualification: Diploma in Electrical Engg.

Experience in running AC Plant: 3 years

Helpers: Two number

Minimum qualification: ITI

Experience in running AC Plant: 3 years

The contractor shall pay minimum wages fixed by the Government of India / State Government whichever is higher including EPF, ESIC, Bonus, etc. as applicable.

Whenever revision in minimum wages is notified by the Government, the contractor is liable to pay the revised wages.

19. HEALTH ADVISORY / PRECAUTIONS AGAINST COVID-19.

- (i) The contractor shall follow National directives for COVID-19 Management as per Govt of India,
- (ii) Ministry of Home Affairs directions issued from time to time as prescribed in the Disaster Management Act 2005 along with the following instructions:
- (a) All work places shall have adequate arrangements for temperature screening and provide sanitizers at convenient places.
- (b) Use of Arogya Setu shall be encouraged for all the employees.
- (c) Wearing of face cover is compulsory and thermal scanning of the employee shall be done on daily.
- (d) Spitting is prohibited and shall be penalized as per Govt's instructions.
- (e) There shall be strict ban on consuming of liquor, gutka, tobacco and any other drugs to maintain the safe health of self and surroundings.
- (f) Frequent hand washing shall be advised and the materials required to be supplied by the contractor to the attendants / rep of OEMs / or any other staff employed at work by the contractor.
- (g) Intensive communication and training on good hygiene practices shall be given to the employees.
- (j) In case any employee is found to be a victim of COVID-19, then the contractor shall immediately inform the department and the employee to be directed to report to any government hospital. Also, that individual shall not be employed further till he gets clearance from the hospital.
- (k) The cost for the above provisions shall be borne by the contractor and nothing extra is admissible on this account.


Director (Admin) MoES

(Signature of Contractor)

Dated:

SCHEDULE OF MINIMUM WAGES

It is hereby agreed that the “Schedule of minimum wages” as published vide Government of India/ State Govt./ Govt. Local authorities/Union Territory/Govt. of NCT of Delhi, whichever is highest and which specify minimum rates of wages for various categories of workmen shall be paid by the contractor. The wages will be revised twice a year as per wage revision notified by GoI/State Govt.

SPECIAL CONDITION

1. SECURITY AND PASSES

The contractor shall employ only Indian Nationals after verify their antecedents and loyalty. The contractor shall, on demand by the Director (Admin) MoES, submit list of his agents, employees and work people concerned and shall satisfy the Director (Admin) MoES as to the bonafides of such people.

Passes should be returned at any time on demand by Director (Admin) or the authorities concerned and in any case on completion of work.

The contractor and his agents, employees and work people shall observe all the rules promulgated by the authority controlling the installation/area in which the work is to be carried out e.g. prohibition of smoking and lighting, fire precautions, search of persons on entry and exit, keeping to specific routes, observing specified timing etc. Nothing extra shall be admissible for any man hours etc. lost on this account.

2. EMPLOYMENT OF PERSONNEL

The contractor shall employ only Indian Nationals as his representatives, servant, workmen after verifying their antecedents and loyalty. He shall Ensure that no person of doubtful antecedents and nationality is in any way Associated with the work. If for reasons of technical collaboration or other Consideration the employment of a foreign national is avoidable, the Contractor shall furnish full particulars to this effect to the Accepting Officer at the time of submission of tender. As a proof that the contractor has employed only Indian nationals, he shall render a certificate to the Director (Admin) Admin within one month from the date of acceptance of the tender of this effect.

3. CONDITIONS FOR WORKING

The work lies in '**RESTRICTED AREA**'. The restrictions for entry to work site and conditions of working in restricted area shall be as under:

ENTRY AND EXIT: The contractor/ his agents/ representatives/ workmen etc. and his materials, Cars, Trucks or other means of transportation etc will be allowed to enter through or leave from only such gate or gates as intimated to him.

IDENTITY CARD OR PASSES: The contractor, his agents and representatives are required individually to be in possession of an identity card or pass which will be examined by the security staff at the time of entry into or exit from the restricted area at any time or number of times inside restricted area.

SEARCH: Thorough search of all personals and transport shall be carried out at each gate and for as many times the gate is used for entry or exit and may also be carried out at any number of times at the site within restricted area.

WORKING HOURS

The units controlling restricted area, usually work during six days in a week and remain closed on the 7th day. The working hours will be from 8:00 AM to 8:00 PM.

The contractor shall not carry out any work on Gazetted Holidays, weekly holidays and other non-working days except when he is specially authorized to do so by Director (Admin).

4. MINIMUM WAGES PAYABLE

The following staff will be employed for manning and operation of AC plant and its connected low side equipments.

Operators: Two nos

Minimum qualification: Diploma in Electrical Engg

Experience in running AC Plant: 3 years

Helpers: Two nos

Minimum qualification: ITI

Experience in running AC Plant: 3 years

The contractor shall pay minimum wages fixed by the Government of India/State Govt. whichever is higher including EPF, ESIC, Bonus, etc. as applicable.

Whenever revision in minimum wages is notified by the Govt, the contractor is liable to pay the revised wages.

5. SAMPLES INDIAN STANDARD

All the material stores procured and incorporated in the work by the contractor shall be new and as per make /specifications matching with the item to be replaced.

6. DAMAGE TO EXISTING ROAD STRUCTURE ETC.

The contractor shall ensure that no damage is caused to existing roads, paths etc in the area where work is to be carried out. In case of any damage caused to existing structure, road etc, the contractor shall make good the same to match with the existing specifications and to the entire satisfaction of the Director (Admin) without any extra cost to the Government.

Rectification reinstatement, replacement, making good and touching up etc shall conform to the standard workmanship and materials originally used and the finished work shall match with the existing work all in respect to the entire satisfaction of the Engineer- in- Charge without any extra payment.

7. RECORD OF MATERIAL

The contractor shall, on demand, produce to the Director (Admin) original receipted vouchers/ invoices in respect of the supplies. The vouchers/invoices so produced and verified shall be defaced and stamped by Director (Admin) indicating contract number under his dated signature. The contractor shall ensure that the materials are brought to site, in original sealed containers/packing, bearing manufacturer's marking except in the case of the requirement of material(s) being less than smallest packing.

8. CLEANING DOWN The contractor shall clean all floors, walls, and carryout all other necessary items of work in connection therewith and have the whole premises in clean and tidy to the entire satisfaction of Director (Admin) before handing over the items / works No. No extra payment shall be admissible to the contractor for this operation.

9. Taxes

The tendered rates shall be deemed to be inclusive of all "taxes directly related to Contract value" with existing percentage rates as prevailing on last due date for receipt of tenders. Any increase in percentage rates of "taxes directly related to Contract value" with reference to prevailing rates on last due date for receipt of tenders shall be reimbursed to the Contractor and any decrease in percentage rates of "taxes directly related to Contract value" with reference to prevailing rates on last due date for receipt of tenders shall be refunded

by the Contractor to the Govt/deducted by the Govt from any payments due to the Contractor. Similarly, imposition of any new "taxes directly related to Contract value" after the last due date for receipt of tenders shall be reimbursed to the Contractor and abolition of any "taxes directly related to contract value" prevailing on last due date for receipt of tenders shall be refunded by the Contractor to the Govt/deducted by the Govt from the payments due to the Contractor.

10. VALIDITY OF TENDER

The tender shall remain open for acceptance for a period of **60 (sixty) days** from the next day of bid submission end date.

11. SUB-LETTING OF CONTRACT

The contractor's special attention is drawn to the fact that sub-letting of contract is strictly prohibited. Any lapse in this regard if found shall be accounted as breach of contract and the contract agreement shall be liable for cancellation along with other suitable action as deemed fit by Accepting Officer.

(Signature of contractor)

Dated:


Director (Admin)
रणधीर के. बी. पटेल / Randhir K. B. Patel
निदेशक / Director
भारत सरकार / Government of India
पृथ्वी विज्ञान मंत्रालय / Ministry of Earth Sciences
पृथ्वी भवन, लोदी रोड, नई दिल्ली 110003
Prithvi Bhawan, Lodi Road, New Delhi - 110003

PARTICULAR SPECIFICATION

1.SCOPE OF WORK: The work under this contract comprises of manning and operation and comprehensive annual maintenance (CAMC) of Carrier make screw chiller plant along with its associated low equipment. The contract for Chiller Plant and AHU units will be under Comprehensive Annual Maintenance Contract (CAMC). The details of Chiller Plant and its associated low equipment's for quoting CAMC price are given below:

S. N.	Details of Machinery	Amount (in Rupees)
1.	<p>Charges for annual comprehensive annual maintenance (CAMC) of Carrier make screw chiller plant (Model 30 HXC190AH S. No. HK2423, HK2424 & HK2425) along with its associated low equipment 3Nos. @190 TR each. The details of equipment installed and put on for CAMC is given below:</p> <p>a. Chiller Plant 190 TR Capacity make "Carrier" – 03 Nos.</p> <p>b. Condenser Unit 25 HP/15kW make "Crompton Greaves" – 03 Nos.</p> <p>c. Primary Pump and Motor 7.5 HP/5.50 kW make "Crompton Greaves" – 03 Nos.</p> <p>d. Secondary Pump & motor 20 HP with VFD Panel – 02 Nos. make Armstrong, AND ABB Drive.</p> <p>e. AHU of capacity 17000 CFM - 12 Nos., make Blue Star. 12000 CFM - 02 Nos., make Blue Star. 5200 CFM – 01 No., make Blue Star.</p> <p>f. CHU of capacity 5000 CFM - 04 Nos., make Blue Star. 2000 CFM - 01 No., make Blue Star.</p> <p>g. Electric Panel for Chiller/Secondary Motor/ Primary Motor - 01 No., make Armstrong, and E-FAB Power Control.</p> <p>h. Hot Water Generator Capacity 150kW make Rapid Cool - 02 Nos., make RAPID Cool.</p> <p>i. Cooling tower with motor 7.5 HP Capacity Make of Cooling tower "MIHIR" - 03 Nos., make MIHIR – Crompton.</p>	
2.	Annual Charges along with breakup for providing manpower (02 operators and 02 helpers)	
3.	Total Charges excluding GST	
4.	Goods & Service Tax @ -----%	
5.	TOTAL CHARGES	

Note: The quoted prices/rates are valid for 120 days from the due date of opening of the tender.

This contract covers maintenance of existing AC Plant and associated low equipment by regularly and systematically examining adjusting fabricating as required and repair including renewals/ replacement of any electrical and mechanical parts for smooth and efficient functioning of AC Plant using only genuine parts as per the make of AC Plant. All the parts which warrant repair/ replacement shall be deemed to be inclusive in the comprehensive maintenance and shall be replaced by the contractor at his own cost, the rates for which are deemed to have been included in the relevant item of works. However, it is specifically brought out that rate for Item includes repair/replacement of defective parts of the AC Plant including Gas, compressor Oil, lubricant, rewinding of all type of electric motors and pumps, de scaling and over hauling of compressor, cleaning of cooling tower, all consumables such as grease, cleaning of complete AC plant, required for maintenance of AC Plant is also deemed to be inclusive.

The necessary T&P required for repair/testing etc shall be arranged by the contractor and cost of the same shall be deemed to be included in the quoted rates.

In the event of any damage/destruction of any part of the equipment during the process of maintenance and if it is proved that the same is due to wrongful or negligence on the part of the mechanic, the agency will be indemnified.

2. WORKMANSHIP

The contractor shall be responsible for proper functioning of electrical and mechanical fittings of the AC Plant and maintenance of the same in sound condition. The contractor shall stock sufficient parts/major assembly to ensure putting the AC Plant in working condition in shortest possible time to avoid inconvenience to users. The tenderer's rate shall be deemed to include cost for the above such contingencies

3. MAINTENANCE

A tentative periodical maintenance schedule of the plants is given under for the guidance of the contractor. The contractor shall ensure by preventive maintenance. Any possible break down are avoided & the plant are kept its serviceable condition at all times. The maintenance shall be carried out in such a way that out of three Nos plant installed in each plant room two Nos are operated at a time & the third plant is kept standby. All store required for schedule maintenance given below shall be provided by the contractor at his cost & expense.

Schedule of Maintenance

(a) Daily

- (i) Cleaning of the equipment, plant room, AHU room, electric Panels etc.
- (ii) Maintenance of log sheet for keeping records of every moving part of machinery, Live temp, motor pumps blower etc. every day sheet to render prompt record as per normal day.
- (iii) To arrange for the necessary tools, plants gaskets etc, require for operating & maintenance.
- (iv) Checking the machinery recording instrumental for the reliability & accuracy.
- (v) All consumable store like lubricating oil, petrol Kerosene / cotton waste & other small Items required for day to day maintenance of plant & equipment shall be provided by the contractor.
- (vi) To check lubricant oil level in the sight glass & top up, if necessary.
- (vii) To check that all the light fittings are serviceable & if required chokes, starters, bulbs etc. to be replaced at his own cost.
- (viii) Check pressure & temp differ between inlet & outlet of condenser water.
- (ix) Check proper spray of water through nozzles in the cooling tower & clean if necessary.
- (x) Check for proper tension of the compressor driving bolts & adjust if necessary.
- (xi) Carry out the "Bleed off" of cooling water near entrance of cooling of cooling tower to avoid excessive concentration of salts.
- (xii) Check for loose elect connection & tighten where necessary.

- (xiii) Check level of water in cooling tower tray.
- (xiv) Clean the plants of all accumulated dust & kept them neat & tidy.

(b) Weekly (Starting from 1st Week)

- (i) Check leakage from glands & joints of pumps, valve etc.
- (ii) Check system controls for proper functioning.
- (iii) Check contractor for electric motor/ starters for any loose connections.
- (iv) Check for proper functioning of all instruments on electric control panel & adjust / rectify if necessary.
- (v) Carry out leak test for refrigerant leakage of any using proper leak detectors & take remedial measures & top up the refrigerant to requisite pressure including plugging of leakage by way of brazing & replacement of gasket 'O' ring etc.
- (vi) Plant room proof to be cleaned to remove any water standing over the roof & also remove vegetation.
- (vii) Clean tube the surrounding of the plant room & kept neat & tidy.

(c) Monthly (Starting from 1st Day of the Month)

- (i) Clean air filter in AHU room.
- (ii) Drain out cooling tower tank & clean the tank & sump of cooling tower.

(d) Quarterly (Starting from 1st day of Operation)

- (i) Lubricate all the Bearing.
- (ii) Check for sufficient quantity of refrigerant in the system & charge, if necessary.

(e) Half Yearly (Starting from 1st day of operation)

- (i) Change Lubricant oil of compressors.
- (ii) Carryout pressure testing.
- (iii) Cleaning of cooling coil externally with sulphuric powder.

Detailed maintenance check-list is at Annexure-1

4. MAINTENANCE OF RECORDS

The contractor or his representative shall maintain the following record & these record shall be kept with Sub- Division.

- (a) Daily log sheet
- (b) Record of maintenance carried out periodically a register shall be maintained by the contractor showing date- wise periodically maintenance task carried out & the entries shall be signed by both the contractor & Rep of Director (Admin)

Maintenance and supervision shall be done by trained men for the safe operation of AC Plant. Contractor shall carryout servicing including adjustment, lubrication, repair or replacement of parts if necessary. In addition to servicing Manufacturer/OEM's senior mechanic or foremen shall carryout the inspection as per maintenance schedule for AC Plant and make necessary entries in the maintenance Performa and also entered in log sheet of AC Plant as applicable kept in the Plant room for this purpose. It will be the responsibility of the contractor to see that the maintenance schedule book is maintained properly by their supervisor. They shall promptly attend and periodical service shall not be kept pending for more than one day unless it has the prior approval of the Director (Admin). for the delayed reasons.

The record documents repair/replacement of parts/components/accessories should be maintained daily containing the instructions given Director (Admin).

The taking down shall be done with extreme care to avoid damage to the existing structure/Plant.

5. MATERIAL: The parts/components/accessories to be repaired/replaced by contractor through OEM in lieu of old one shall be conforming to latest IS or of make as fitted in the equipment. Original purchase vouchers shall be provided from OEMs/authorized dealers/stockiest as applicable when demanded. Carrier make AC Plant/chillers shall be got repaired through Carrier OEM or their authorized vendor and proof of same shall be submitted to C

5A. GUARANTEE: During currency of work, if any replaced part becomes defective, the contractor shall be liable to replace that part without any extra cost to department. Original purchase vouchers shall also be produced by contractor in support of genuineness of the part so replaced. Along with every inspection report, the contractor shall submit the details of spares replaced in the comprehensive maintenance along with purchase vouchers.

5A.1. Accepting Officer reserves the right to order on the contractor to carryout repairs as and when required for effective functioning of the Plants. Contractor shall carryout the necessary repairs and put the plant in running condition to the satisfaction of Director (Admin) all as specified here-in-before. If it is found that some major parts are required to be repaired/replaced these shall be carried out within 1 to 2 days' time for major repairs and obtain certificate to this effect from Director (Admin).

5A.2. The contractor shall be solely responsible for all the person deputed for the jobs and all transport as required.

5A.3. Any other work or order, instructions from Director (Admin) shall be attended to which are considered essential for efficient functioning of plant.

6. STORES SPARES AND T&P ARRANGEMENTS: All consumable stores & spares such as, Gas, oil, bulbs, Fluorescent tubes, chokes, sulphuric powder etc. shall be main activities and shall be arranged by the contractor & rates quoted by the contractor and any other store required for carrying out deemed to have included in the cost of such provisions.

7. DISPLAY OF CONTACT NOS: The contractor shall display the following information at places such as inside and outside of the plant as notified by Director (Admin).

- (i) Name of contractor/mechanic with contact No who has been detailed for attending complaints.
- (ii) Telephone Nos to contact in case of emergency or malfunctioning of AC plant.
- (iii) Safety precaution to be followed by users.
- (v) Any other information directed by Director (Admin) for user's convenience.

8. DETAILING OF TECHNICAL STAFF.

The contractor/Manufacturer/OEM shall provide services to monitor any defects in equipment's, if any, to inform any type of shortfalls & users encumbrances at site. All efforts must be made to repair & upkeep all the equipment's/ plant in working/ running condition and uninterrupted services to users are provided.

The contractor/Manufacturer/ OEM shall carryout in situation maintenance repairs immediately at site and make the plant/ equipment's fully functional to the entire satisfaction of Director (Admin). Additional manpower/staff shall be provided as and when required & as directed by Director (Admin). The mechanic & additional staff will be provided irrespective of Holidays.

9. DESCALING AND CLEANING OF COOLING TOWER

Descaling of condenser and cleaning of cooling tower sump shall form part of periodical maintenance schedule, the contractor shall intimate the department well in advance.

10. BLEED OFF: Due to constant evaporation of water in the cooling tower, the concentration of solid in the water is likely to increase. The contractor shall ensure by regular "Bleed off" of circulating water & adding fresh water to the sump so that such concentration of solid is kept to the minimum.

11. STAND BY EQUIPMENTS: In each of the plant room 50% stand by equipment is provided. Out of two sets of plants one sets are required to function continuously & to offset the load, one set should be kept ready as stand by. The contractor shall plan running of these two sets in such a way that all the two sets are kept in running condition.

12. LEAKAGE OF REFRIGERANT: The contractor shall ensure that refrigerant gas is not wasted through leakage. He shall regularly check for leakage in the system using appropriate leak detector & shall take remedial action to stop such leakages.

13. UP KEEPING ALLOTTED ACCOMMODATION

Plant room handed over to the contractor for contract period. Surrounding area of plant room upto 10 mtrs radius shall also be maintained in a clean condition, seasonal bushes for grass shall be cut & removed to make the site clean & neat. In clean condition light & water shall be make available & workability shall be maintained.

Fixed electric bulbs etc. shall replace by the contractor immediately at his own cost in case these have been fused. Light connection shall be kept functional round the clock.

14. HANDING/TAKING OVER: Inventory of fitting & fixture will be made & signed by both Engineer –in- Charge or his representative & contractor or his representative before the installation are handed over & taken over.

15. PENALTY

The following penalty will be imposed in case of non-operation of Chiller Plant:

(a) Out of 03 Chiller Plant, 02 Chiller Plant should be in operational and third one is in standby. In case, if 02 Chiller Plants are not in operation for more than 24 hours, penalty @ Rs.5,000/- (Rupees Five Thousand only) per day per chiller plant will be charged from the service provider subject to maximum of 10% of the contract value.

(b) If Chiller Plant is unserviceable for more than 05 (Five) days, no payment will be made for the unserviceable period and also Rs.5,000/- (Rupees Five Thousand only) per day per Chiller Plant will be recovered for the unserviceable period subject to maximum of 10% of the contract value.

16. ACCIDENT/ INJURY: The operating personal/mechanic shall be provided with protective equipment. In case of any accident, injury or partial disability, contractor shall be solely responsible for setting all claims/compensation. The contractor will have to depute only experienced and qualified operators/Mechanic and they should possess valid license from the concerned authority. No operator/mechanic without proper license will be accepted /entertained.

17. INSULATION OF PIPE LINE: Insulation shall be rectified wherever required and cost of same is deemed to be included in quoted rates.

18. **BUTTER FLY VALVE**: The Cast Iron Butter Fly Valve shall be carefully examined and cleared of all foreign matter. The joints between Cast Iron Butter Fly Valve and pipe shall be made leak- proof when tested to a pressure of 21 Kg/sq cm

19. **REMOVAL/SITE CLEARANCE**: Old demolished materials considered under Schedule of credit shall be the property of the contractor and will be removed by the contractor from the site. Debris and other materials if any shall be disposed off and sites to be cleared to the entire satisfaction of the Director (Admin).

(Signature of contractor) For Accepting Officer
Dated:

PARTICULAR SPECIFICATION (Contd..)
MAINTENANCE CHECKLISTS

S. N.	Timeline	AIR HANDLING UNITS
1.	Weekly	Check for damage specially to coil and filters.
2.	Weekly	Cleaning of AHU pre-filters
3.	Weekly	Check for air and water leakage
4.	Weekly	Check condensate drain for any blockage, clean if required.
5.	Weekly	Check drain pan for any blockage.
		FAN COIL UNITS
1.	Weekly	Check the water leakage.
2.	Weekly	Clean air filters.
3.	Weekly	Check drain pan for any blockage.
		COOLING TOWER
1.	Weekly	Check the operating oil level and oil leakage in gear box.
2.	Weekly	Inspect basin for clogging.
		CHILLER
1.	Weekly	Check delta for condenser fouling
2.	Weekly	verify proper water treatment
3.	Weekly	check oil return system
4.	Weekly	inspection of starter
		PUMP
1.	Weekly	Check the cable for Heating
2.	Weekly	Check for any leakage.
		AIR HANDLING UNITS
1.	Monthly	Follow Weekly Checks
2.	Monthly	Check fan Belt for correct tension and sign of wear and alignment of fan and motor.
3.	Monthly	Inspect coils and clean if required
4.	Monthly	Check functioning of lights and limit switch interlocking & proper illumination
5.	Monthly	Check for bearing of motor and blower
6.	Monthly	Check for tightness of V-belts and pulleys.
7.	Monthly	Check looseness of any bolt in fan casing motor base etc
8.	Monthly	Check for vibration in blower and motors
9.	Monthly	Check access doors and hinges for easy operation.
10.	Monthly	Check cleanliness of the filters and clean if required.
11.	Monthly	Check the looseness of any bolt in the fan or casing etc.,
12.	Monthly	Check the associated damper flap movement and apply grease for the bearing housing if required.
13.	Monthly	Check running current of the motor.
		FAN COIL UNITS
1.	Monthly	Follow the Weekly check
2.	Monthly	Clean the filter & Y-strainer, if required.
3.	Monthly	Check the fan belt tension, abnormal noise and rectify if required.
4.	Monthly	Check any water leakage from unit.
5.	Monthly	Inspect the condensate drain pan and ensure that it is clean and water is freely flow.
6.	Monthly	Check the condition of access door hinges for proper fixing.
7.	Monthly	Check the unit is secured.
8.	Monthly	Check the operation of inlet/outlet isolation valve.
9.	Monthly	Check looseness of any bolts in fan casing motor base etc.

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MAINTENANCE CHECKLISTS

S. No.	Timeline	FAN COIL UNITS
10.	Monthly	Check associated damper movement and apply grease for bearings.
COOLING TOWER		
1.	Monthly	Check for unusual noise/vibration in fan and fan guard, motor drive shaft and guards, gear reducer.
2.	Monthly	Inspect for clogging in eliminator, fills and water basin
3.	Monthly	Check operating and static oil level in gear reducer.
4.	Monthly	Check oil seals of gear reducer.
5.	Monthly	Check oil for water and sludge in gear reducer.
6.	Monthly	Check water level in water basin.
7.	Monthly	Check and adjust float valve if required.
8.	Monthly	Check AMP of motor
9.	Monthly	Check for any leakage in gear reducer, water basin and float valve.
10.	Monthly	Check gear-reducer oil for water and sludge.
11.	Monthly	Inspect eliminator and fills for clogging
12.	Monthly	Check motor winding for over heating
13.	Monthly	General cleaning for inside and outside.
14.	Monthly	Drain cooling tower twice in a month along with condenser pipe line water.
PUMP		
1.	Monthly	Check for any leak in motor and pump connections
2.	Monthly	Check bearings temperature with thermometer or hand test that bearing is not running excessively hot are not running excessively hot.
3.	Monthly	Check for any abnormal noise and vibrations during running (If observed then rectify).
4.	Monthly	Check for leaks in isolation of valves, strainers, and flexible connections.
5.	Monthly	Clean pump exterior
CHILLER		
1.	Monthly	follow the weekly check
2.	Monthly	check oil heater operation
3.	Monthly	refrigerant leak check
4.	Monthly	check oil pump discharge pressure
5.	Monthly	clean all sensors
6.	Monthly	measure oil filter pressure drop
7.	Monthly	measure and log the sub cooling and superheat
AIR HANDLING UNITS		
1.	Quarterly	Follow Monthly Checks
2.	Quarterly	Check/Add grease or lubricate to the Fan shaft bearing, motor bearing blower bearing. if required
3.	Quarterly	Check the alignment of Fan and Motor. If necessary, correct the same.
4.	Quarterly	Inspect the condensate drain pane and ensure that it is clean and water is freely flow.
5.	Quarterly	Inspect the coils for cleanliness. If necessary, Hose the coil down with a low pressure water hose or low pressure air.
6.	Quarterly	Observe all dampers for proper operation.
7.	Quarterly	Check tightness of electrical connections
8.	Quarterly	Check flexible connections spool piece for leakage
9.	Quarterly	Check for condition of inlet strainers and clean(if required)

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MAINTENANCE CHECKLISTS

S. N.	Timeline	FAN COIL UNITS
10.	Quarterly	Follow the Monthly check
11.	Quarterly	Inspect cooling coil and clean if required.
12.	Quarterly	Clean strainers for FCU.
		COOLING TOWER
1.	Quarterly	Follow Monthly Checks
2.	Quarterly	Check access door work properly
3.	Quarterly	Check the staircase ladder & interior walkway of wooden decay or steel corrosion
4.	Quarterly	Check the distribution basin for corrosion, leaks and sediments
5.	Quarterly	Check the drift eliminator louvers for scale build up
6.	Quarterly	Adjust belts and pulleys for proper tension and alignment
7.	Quarterly	check the fan blades for dirt/scale deposits and condition of fan cylinder
8.	Quarterly	check the mechanical parts of motor supports (cracks)
9.	Quarterly	Check the distribution spray nozzles to ensure even distribution of water over the fill
10.	Quarterly	Check sludge in gear box
11.	Quarterly	Check motor winding for overheating.
12.	Quarterly	Clean cooling tower from inside and outside.
13.	Quarterly	Check and top up oil in gear box
14.	Quarterly	Cleaning of sump and check for any leakage
15.	Quarterly	Clean Fan & Fan Guard, motor shaft, gear reducer, eliminator, fills, water basin, float valve, control valves etc.
16.	Quarterly	Rebalance of fan & fan guard, driveshaft & guards
17.	Quarterly	Check insulation resistance.
18.	Quarterly	Clean nozzle & clean if required.
19.	Quarterly	Check the water distribution system including the nozzles
		PUMP
1.	Quarterly	Follow Monthly Checks
2.	Quarterly	Check pumps lubrication as necessary.
3.	Quarterly	Check & clean pump, strainers & motor casings
4.	Quarterly	Check shaft or shaft sleeve for scoring
5.	Quarterly	Tight & clean all electrical terminals, electrical connections, conduits, insulation, flexible connection.
6.	Quarterly	Check & record motor running current
		CHILLER
1.	Quarterly	follow Monthly checks
2.	Quarterly	verify proper operation/setting/calibration of safety controls
3.	Quarterly	check & tighten all electrical connections
4.	Quarterly	clean & water strainers in both chilled & condenser line
		AIR HANDLING UNITS
1.	Half Yearly	Follow Quarterly Checks
2.	Half Yearly	Check in motors full load current, fan motor running current and tightness of Terminals
3.	Half Yearly	Check blower shaft, scroll, impeller and bearing.
		FAN COIL UNITS
1.	Half Yearly	Follow Quarterly Checks
2.	Half Yearly	Check blower, motor unit etc. Clean lubricate.
3.	Half Yearly	Check and receive the vibration value and compare with recommended values.
4.	Half Yearly	Check tightness of electrical connections.

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PARTICULAR SPECIFICATION (Contd..)
MAINTENANCE CHECKLISTS

S. No	Timeline	FAN COIL UNITS
5.	Half Yearly	Add water and flush condensate drain pan, trap and drain line.
6.	Half Yearly	Check the condition of inlet strainers and clean if required.
7.	Half Yearly	Check the proper functioning of the 3 way and 2way valve.
8.	Half Yearly	Check the interconnection, copper piping, canvas and cooling coils.
9.	Half Yearly	Check grease, clean and lubricate bearing of motor.
10.	Half Yearly	Check full load current of motor.
11.	Half Yearly	Check motor running current.
		COOLING TOWER
1.	Half Yearly	Inspect Keys, keyways and set screws of fan and fan guard, motor, gear reducer, drive shaft and guards.
2.	Half Yearly	Inspect the general condition of fan & fan guard, motor, shaft, gear reducer, fills, control valves, structural members, fan cylinder, stairs ladders etc.
3.	Half Yearly	Tighten loose bolts of fan, fan guard, motor, shaft, gear reducer if any.,
4.	Half Yearly	Check the working of control valve.
5.	Half Yearly	Check completely open and close operation of float valve. Repair as reqd.,
6.	Half Yearly	Clean all nozzles & replace if damaged.
7.	Half Yearly	Check grease, clean and re-lubricate bearings of motor
		PUMP
1.	Half Yearly	Follow Quarterly Checks
2.	Half Yearly	Check & clean all contact surfaces of Circuit breaker, enclosures switches & push buttons.
		AIR HANDLING UNITS
1.	Yearly	Follow Half-Yearly checks
2.	Yearly	Check/clean cooling coils & fins.
3.	Yearly	Clean interiors and check for corrosion, check tightness of all sections
4.	Yearly	Check anti-vibration mounting & flexible connections
5.	Yearly	Check operation & condition of all electrical connections.
6.	Yearly	Check alignment of drive pulleys, adjust the same if required
7.	Yearly	Combing of fins to be done after coil cleaning (if required)
8.	Yearly	Check all bellows, replace if any crack/water leakage observed
9.	Yearly	Check insulation resistance (Megger) of motor
		FAN COIL UNITS
1.	Yearly	Follow Half-Yearly checks
2.	Yearly	Check blower, motor unit etc clean & lubricate.
3.	Yearly	Check electrical control & connection.
4.	Yearly	Check and clean cooling coil with water, if necessary.
5.	Yearly	Check 2/3-way valve for proper operation.
6.	Yearly	Check insulation resistance (Megger) of motor.
7.	Yearly	Check/clean cooling coils and fins.
		COOLING TOWER
1.	Yearly	Tighten loose bolts of FRP, gear box, structure bolt connection and motor.
2.	Yearly	Check and change nozzles, if required.
3.	Yearly	Complete cleaning the whole parts of CT (Louvers drift eliminators & fill surface)
		PUMP
1.	Yearly	Follow Half-Yearly checks
2.	Yearly	Check condition of seals & bearing (Adjust or replace if required).

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PARTICULAR SPECIFICATION (Contd..)
MAINTENANCE CHECKLISTS

S. No.	Timeline	CHILLER
1.	Yearly	replace oil filter & oil return filter, if required
2.	Yearly	clean or back flush heat exchanger of ss starter
3.	Yearly	replace coolant after cleaning heat exchanger
4.	Yearly	perform descaling of condensers
5.	Yearly	high pressure cut off
6.	Yearly	low pressure cut off
7.	Yearly	low oil pressure switch
8.	Yearly	oil pump timers
9.	Yearly	flow switches
10.	Yearly	pump interlocks
11.	Yearly	system monitor timer
12.	Yearly	system freeze stats
13.	Yearly	vane closing switches
14.	Yearly	temperature control stats
15.	Yearly	motor load limit controls
16.	Yearly	megger motor winding
17.	Yearly	compressor oil analysis

AGE (Contracts)

(Signature of contractor) For Accepting Officer
Dated:

PARTICULAR SPECIFICATION (Contd..)

PROFORMA OF MOU

_____ Manufacturer/OEM _____

___ agrees to maintain Purchaser's equipment (AC plant make carrier) as outlined in this contract.

We will provide all technical support & manpower for manning & operation, maintenance cover & maximize the performance, safety and life span of your equipment.

Purchaser:

(Contractor)
"Purchaser"

Hereafter referred to as

Location: AS PER BOQ Hereafter referred to as "Premises"

By: (Manufacturer/OEM) Manufacturer/OEM

PARTICULAR SPECIFICATION (Contd..)
PROFORMA OF MOU (contd../)

1. PREVENTIVE MAINTENANCE

The Manufacturer/OEM shall provide trained, qualified and certified technicians for all technical support the manning & operation, maintenance of the plant. The preventive maintenance shall be undertaken as per maintenance check list.

2. BREAKDOWN MAINTENANCE

The breakdown maintenance shall be attended to within 45 minutes of lodging of complaint at call centre by any user/ representative of Director (Admin). The Plant has to be made functional within two hours of lodging of complaint. If there is any major defect, the same will be informed to Director (Admin) within two hours of complaint registration and is to be rectified within eight working hours.

3. COMPREHENSIVE REPAIR/ REPLACEMENT

For the entire duration of this agreement, Manufacturer/OEM /authorized vendor shall replace or repair, free of cost all the components.

4. SUBMISSION OF ORIGINAL VOUCHERS / SERVICE DOCUMENTS

Manufacturer/OEM shall provide original vouchers for spares/ service documents to purchaser and other requisite documents like gate passes, maintenance slips and challans to verify the authenticity of the parts for submission to Director (Admin) to enable payment to the contractor.

5. EQUIPMENT ACCESS

Director (Admin) shall permit Manufacturer/OEM and its employees and contractors, access to the equipment and the landings, lobbies and machine rooms to ensure fulfillment of all obligations for running the plant efficiently.

**SIGNATURE AND STAMP
OF CONTRACTOR**

**SIGNATURE AND STAMP OF
MANUFACTURER/OEM**