



Gujarat Mineral Development Corporation Limited

Tender Document For

The Work of Supply of Manpower

With Tools and Tackles

**For Pre-Commissioning, Commissioning Activities along with Preventive,
Predictive, Breakdown, Shutdown & General Routine Maintenance of
Akrimota Thermal Power Station**

Tender Number: GMDC/POWER/ATPS/02/24-25

**General Manager (Power)
Gujarat Mineral Development Corporation Ltd.
(A Govt. Of Gujarat Enterprise)**

CIN : L14100GJ1963SGC001206, GST : 24AAACG7987P1ZT

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TENDER NOTICE

Tender Number GMDC/POWER/ATPS/02/24-25

Place of work	2x125 MW Akrimota Thermal Power Station, village Nani Chher, Taluka Lakhpat, district Kutch, Gujarat.
Brief Description of work	The Work of Supply of Manpower With Tools and Tackles For Pre-Commissioning , Commissioning Activities along with Preventive, Predictive, Breakdown, Shutdown & General Routine Maintenance of Akrimota Thermal Power Station
Period of contract	The period of contract will be of Three Month from the date of commencement of work. However period of contract may be extended up to another required period on the same terms and conditions of the contract subject to the entire satisfaction of GMDC.
Estimated Contract Value	Approximately Rs. 81,00,000.00/- (Rupees Eighty one Lakh only) for total work excluding GST.
EMD (Earnest Money Deposit)	<p>Rs. 2,00,000.00/- (Rupees Two lakh Only) in any one of following form</p> <ul style="list-style-type: none"> ➤ DD in favor of GMDC Ltd. Payable at Ahmedabad. ➤ Fixed Deposit from Banks approved by Govt. Of Gujarat (except Co-operative Bank) duly pledged in favor of GMDC for a period of not less than 3 (Three) months from the last date of submission of bid and shall be renewed from time to time in case of requirement. ➤ Bank Guarantee issued by banks approved by Govt. Of Gujarat from time to time (except Co-Operative bank) in the form and manner acceptable to GMDC (Govt. GR is annexed at Annexure-B for approved bank). It should be valid for a period of not less than 6 (six) months from the last date of submission of bid. ➤ Digital Mode, Please note if payment is made through Digital Mode kindly submit the receipt of the same in the attached documents. RTGS details for payment (Annexure-B) ICICI Bank, Ahmedabad Branch, Ahmedabad Account Number: 002405019379 ➤ IFSC: ICIC0000024 <p><i>Relaxation in terms of submission of EMD shall be given to the bidder who is holding valid Certificate issued under the MSME Act, 2006 on the date of submission of Tender.</i></p>
Tender Processing Fee	<p>Rs. 5000/- (Rupees Five Thousand Only) plus GST @18% aggregating to Rs. 5900/-payable by Demand Draft/ FD / BG drawn in favor of “GMDC Ltd.” payable at Ahmedabad.</p> <p><i>Relaxation in terms of submission of Tender Processing Fee shall be given to the bidder who is holding valid Certificate issued under the MSME Act, 2006 on the date of submission of Tender.</i></p>
Commencement of tender	20 th September 2024



Last date for download the tender document.	11 th October 2024 up to 18.00 Hours
Last date of submission of bid through online	11 th October 2024 up to 18.00 Hours
Last date of submission of physical documents i.e. EMD, Tender Processing Fee etc.	11 th October 2024 up to 18.00 Hours at Corporate Office, GMDC Ahmedabad
Date and time for online opening of preliminary bid.	11 th October 2024 at 18.10 Hours onwards
General and Important Terms and Conditions	<ol style="list-style-type: none">1. GMDC reserves absolute right/discretion to accept and/or reject any or all the tenders received or invite fresh bid at any stage or split the work between more than one Bidders as the case may be.2. The Bidders are required to quote the rate strictly as per the terms and conditions mentioned in the Tender document. Conditional tender shall not be entertained and will be rejected summarily without assigning any reasons, whatsoever.3. GMDC may issue amendments/corrigendum in the tender documents, schedule, forms etc. at any time during the period between publication of notice and submission of bids of the tender on website. The Bidders in their own interest are advised to visit the website regularly till the last date of submission of the bid. No separate newspaper advertisement will be released for amendments/corrigendum.4. GMDC reserves the rights to modify or alter any Condition of the Tender.5. The Bidders are advised to submit their price bid online on https://gmdctender.nprocure.com only. Physical price bid shall not be accepted and shall be rejected summarily without assigning any reasons, whatsoever.6. Failure to submit bid online in stipulated time due to any reason whatsoever by any Bidder shall result in disqualification of bid. In such circumstances, bid submitted physically along with supporting documents, tender processing fees, EMD amount etc. shall not be considered as bid submitted and the same will be returned back to the Bidder without opening the same. GMDC reserves the right to take suitable decision in this regard.

1 Purpose of the Document

The Tender document floated by GMDC (Gujarat Mineral Development Corporation Limited), A Government of Gujarat Enterprise is to select a Successful bidder which would be responsible to Supply Of Supply of Manpower With Tools and Tackles For Pre-Commissioning, Commissioning Activities along with Preventive, Predictive, Breakdown, Shutdown & General Routine Maintenance of 2x125 MW Akrimota Thermal Power Station at the quoted commercials and executed contract terms & conditions.

2 About GMDC

Gujarat Mineral Development Corporation Limited herein after referred to as GMDC, a Government of Gujarat Enterprise, is a pioneer company in the field of mining for more than five decades, catering to the needs of the minerals and solid fuel for the industries based in Gujarat. GMDC's mining activities are spread all over Gujarat. It is currently dealing in minerals like Lignite, Bauxite, Fluorspar, Ball Clay, Silica sand and Manganese. GMDC has also set up a 250 MW lignite based Thermal Power Station at Nani Chher in Kutch, Wind power plant of 200 MW at Maliya, Jodiya, Godsar, Bhanvad, Bada, Varvada, Rojmal and Solar Power plant of 5 MW at Panandhro Project.

3 Location of Work

The work to be carried out at Akrimota Thermal Power Plant Station (ATPS), located at Village Nani Chher of Lakhpat Taluka in Kutch District of the Gujarat State. The project is located about 150 kms from Bhuj. The nearest Railway Station and Airport is at Bhuj.

4 About ATPS

GMDC has 2 X 125 MW Thermal Power Project called ATPS. Both the units have been in commercial operation since March, 2005. It is getting Lignite from its own mines located at Mata no Madh and Umarsar. The water requirement for the power plant is taken from the nearest Kori Creek through a 1.4 KM long sea water intake channel. The CFBC boiler is used here as it is environment friendly and controls sulphur in the flue gas emission. A 100 meter thick green belt surrounds the entire site. The state of the art technology DCS has been used.

5 General Instructions to Bidder

The section aims to provide guidelines/Instructions for Bidders, to be used while submitting the Proposals.

5.1 Cost of Bidding

The Bidder will bear all costs associated with the preparation and submission of its bid and GMDC LTD., will in no event or circumstance be held responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

5.2 Due Diligence

The Bidder is expected to and shall be deemed to have examined all instructions, forms, terms and specifications and other information in this Tender Document. The bid should be precise, complete and in the prescribed format as per the requirement of the Tender Document. Failure to furnish all information required by the Tender Document or submission of a bid not responsive to the Tender Document in every respect will be at the Bidder's risk and may result in rejection of the bid. GMDC LTD. shall at its sole discretion be entitled to determine the adequacy/ sufficiency of the information provided by the Bidder.

5.3 Clarification of Bidding Documents

GMDC LTD. shall make best efforts to respond to any request for clarification of the Tender Document. The response/clarification shall to the extent possible be made in writing.

5.4 Amendment of Tender Document

At any time before the deadline for submission of bids, GMDC LTD may modify the tender Document for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Tender Document by amending, modifying and/or supplementing the same. Any amendments/modifications in the tender document would be displayed on GMDC Web Site/nprocure website and all such amendments shall be binding on the Bidder without any further act or deed on GMDC LTD part. In the event of any amendment, GMDC LTD reserves the right to extend the deadline for the submission of the bids, in order to allow prospective Bidder reasonable time in which to take the amendment into account while preparing their bids. GMDC LTD may at its sole discretion, extend this deadline for submission of bids by amending the bid documents.

5.5 Contact Details

All inquiries concerning this procurement are to be addressed to the following:

General Manager (Power)
Gujarat Mineral Development Corporation Ltd.
KhanijBhavan, 132' Ring Road, University Ground,

Vastrapur, Ahmedabad 380 052
☎EPABX :079-27913501, 27913200Extn.No :1760
E-mail : gm.power.co@gmdcltd.com

5.6 Language of Bid

All Proposals and various documents related to these Proposals should be in English Language. All correspondence between GMDC LTD., and the Bidder would also be in English Language. Supporting Documents and Printed Literature furnished by the Bidder may be in another Language provided the same are accompanied by an accurate translation in English Language.

5.7 Late Bids

Any bid received by GMDC LTD., after the deadline for submission of bids prescribed by GMDC LTD., summarily rejected. GMDC LTD. shall not be responsible for any postal delay or non-receipt /non-delivery of the documents. No further correspondence on this subject will be entertained.

5.8 Right to Accept Proposal

GMDC LTD., reserves the right to accept or reject any Proposal, and to annul the Proposal process and reject all Proposals at any time prior to award of contract, without thereby incurring any liability to the affected Bidder or any obligation to inform the affected Consortium of the grounds for such decision.

5.9 Site Visit

5.9.1 Bidders advised to visit the site to study the actual working conditions, before submission of the bid and shall have to submit the site visit declaration in the prescribed format. The information/details given in the tender document are only to describe the magnitude of work and are for mere guidance to the Bidders.

5.9.2 Any neglect or failure on the part of the Bidder in obtaining necessary and reliable information upon the foregoing or any other matters affecting the contract shall not relieve him from any risks or liabilities or the entire responsibility from completion of the work at the contracted rates and time in strict accordance with the contract documents.

5.10 Period of Validity of Bids

Bids shall remain valid for 180 days after the date of bid opening prescribed by GMDC LTD, pursuant to the Tender schedule mentioned in this document. In exceptional circumstances, GMDC LTD. may solicit the Bidder's consent to an

extension of the period of validity. The request and the response thereto shall be made in writing. Extension of validity period by the Bidder shall be unconditional.

5.11 Sub Contract

The Successful bidder shall not assign or sub-contract any portion of this work without prior written consent of GMDC.

5.12 Consortium / Joint Venture

Consortium / Joint Venture are not allowed.

5.13 Change in Law

Nothing in this contract shall entitle the Bidder to claim additional payment against the work executed or being executed or likely to be executed upon the change in law by Government of India or State of Gujarat as regards any taxes, liabilities arising out of work contract, judgments of court etc. That nothing under the said laws shall create any additional liability on the GMDC over and above that set out herein. That unforeseen circumstances in the working of the said contract shall not entitle Successful Bidder to abandon or demand additional payment under a different head not originally mentioned herein and hence nothing except what is contained in the present contract shall constitute binding obligations between parties.

5.14 Interpretation

That no communication preceding or following the present tender shall have any bearing on the terms and conditions set out herein. That no contract, promise or obligation shall arise out of the said communication, over and above what is set out herein above. That the terms contained herein constitute the entire bargain between the parties and shall not be interpreted in the light of commercial correspondence between the parties.

5.15 Declaration

The Bidder should submit the declaration regarding unconditional acceptance of all the terms and conditions of the Tender document including Annexure and corrigendum if any and it has not enclosed any conditional offer as per FORM PD provided in the Tender Document.

GMDC is authorized to take suitable decision and action in case of requirement to amend/alter the contract conditions/quantities of the works/ extension of the contract

period/allotment of additional works/revision of the rates of the work etc. if necessary in the interest of GMDC.

The Successful bidder shall not change the constitution of the firm/name during the currency of the contract without prior approval of GMDC. Upon such change in constitution and/or name, Supplementary agreement to that effect shall be executed and if the SD is submitted in form of BG/FD than fresh BG in the name and/or constitution shall be submitted failing which necessary action as deemed fit by GMDC shall be taken.

6 Earnest Money Deposit

A non-interest bearing Earnest Money Deposit Rs. 2,00,000/- (Rupees Two lakh Only) in any one of following form

- Demand Draft in favor of GMDC Limited Payable at Ahmedabad.

OR

- Fixed Deposit from Banks approved by Govt. Of Gujarat (except Co-operative Bank) duly pledged in favor of GMDC for a period of not less than 3 (Three) months from the last date of submission of bid and shall be renewed from time to time in case of requirement.

OR

- Bank Guarantee issued by banks approved by Govt. Of Gujarat from time to time (except Co-Operative bank) in the form and manner acceptable to GMDC (Govt. GR is annexed at "B" for approved bank). It should be valid for a period of not less than 6 (six) months from the last date of submission of bid.

OR

- Digital Mode, Please note if payment is made through Digital Mode kindly submit the receipt of the same in the attached documents. RTGS details for payment (Annexure-B)
ICICI Bank, Ahmedabad Branch, Ahmedabad
Account Number: 002405019379
IFSC: ICIC0000024

Relaxation in terms of submission of EMD shall be given to the bidder who is holding valid Certificate issued under the MSME Act, 2006 on the date of submission of Tender.

7 Tender Processing Fee

The Tender Processing Fee is to be paid at the time of submission of supporting document of technical bid in the form of demand draft/ Pay Order of Rs. 5,000/- plus GST @ 18% aggregating Rs 5,900/- as mentioned in tender notice in the sealed technical bid cover. If the amount mentioned in the DD/ Pay Order is found short, the tender will not be considered for scrutiny and will be out rightly rejected.

Relaxation in terms of submission of Tender Processing Fee shall be given to the bidder who is holding valid Certificate issued under the MSME Act, 2006 on the date of submission of Tender.

8 Security Deposit

8.1 Security Deposit is measure of liquidated damages sustained by GMDC for not performing the contract satisfactorily. Nothing herein above shall disentitle GMDC from claiming the damages actually sustained in the value over and above the Security Deposit.

8.2 The successful bidder shall submit security deposit of 10% of the total contract value excluding Goods & Service Tax (GST) at within 10 days from the date of receipt of LOI in any one of following form

- Demand Draft in favor of GMDC Limited Payable at Ahmedabad.

OR

- Fixed Deposit from Banks approved by Govt. Of Gujarat (except Co-operative Bank) duly pledged in favor of GMDC for a period of not less than 18 (Eighteen) months from the date of receipt of LOI and shall be renewed from time to time in case of requirement.

OR

- Bank Guarantee issued by banks approved by Govt. Of Gujarat from time to time (except Co-Operative bank) in the form and manner acceptable to GMDC (Govt. GR is annexed at “B” for approved bank). It should be valid for a period of not less than 18 (Eighteen) months from the date of receipt of LOI and shall be renewed from time to time in case of requirement.

OR

- Digital Mode, Please note if payment is made through Digital Mode kindly submit the receipt of the same in the attached documents. RTGS details for payment (Annexure-B)
ICICI Bank, Ahmedabad Branch, Ahmedabad
Account Number: 002405019379
IFSC: ICIC0000024

8.3 It shall be refunded to the Successful bidder, within a period of six months after satisfactory completion of the work and removal of equipment, tools tackles, campsite etc, and the due fulfillment of all the terms and conditions of the contract.

8.4 The Successful bidder shall obtain “No Dues Certificate” and “Site Clearance “certificate to this effect from the General Manager [Project] / Project-in-Charge and shall submit the same to the General Manager [Power] at HO, who after verification of the fact will arrange for refund of SD.

8.5 The successful bidder will also have to submit “NO DEMAND CERTIFICATE” along with the above mentioned certificate.

- 8.6** The SD deposited by the Successful bidder may be forfeited if the successful bidder fails to adhere to fulfill the conditions of work order.
- 8.7** Security deposit shall not bear any interest under any circumstances. Security Deposit is a measure of liquidated Damages sustained by GMDC for not providing the manpower, tools and tackles as required as per the contract.
- 8.8** GMDC will reserve the right to recover the charges or the liquidated damages from the Security Deposit in the following circumstances-
- 8.8.1** If the successful bidder or its employees causes any damage or destroy any property belonging to GMDC.
- 8.8.2** The shortfall amount of all compensations, penalties and other sums of money payable by the successful bidder or recoveries to be made under the terms of this contract which is due but not paid by the successful bidder in full, etc.
- 8.8.3** Any other dues on account of statutory compliance.

9 Procedure for Submission of the Bid

- 9.1** Offers prepared in accordance with the procedures enumerated below.
- 9.2** Bid should be submitted **online** at www.nprocure.com on or before the last date and time as prescribed in this tender.
- 9.3** The Bidder should submit their bids in THREE parts, these are
- 9.3.1** Pre qualification bid (Details of EMD and Tender Processing Fee),
- 9.3.2** Technical Bid
- 9.3.3** Price Bid.
- 9.4** Manual price bids or the bids submitted by telex/ telegram/ fax/ e-mail etc. will not be accepted under any circumstances. No correspondence will be entertained on this matter.
- 9.5** Bidders are advised to follow the ‘Instructions for Bids Submission’ given annexure “A” for e-submission of the bids online through n-procure.
- 9.6** Documents should be submitted as per check list given in form “PA” through off-line in the sealed cover super-scribed as “Technical Bid for Tender Number GMDC/POWER/ATPS/02/24-25 and Name of work:” The Work of Supply of Manpower With Tools and Tackles For Pre-Commissioning, Commissioning Activities along with Preventive, Predictive, Breakdown, Shutdown & General Routine Maintenance of Akrimota

Thermal Power Station". Bids must be submitted as per the schedule (date & time) indicated in tender notice.

10 Eligibility and Qualification Criteria of Bidder

10.1 Experience

10.1.1 The Bidders should have following minimum experience of having successfully completed similar works during last 7 (seven) years ending on last day of August 2024 (i.e. period from 01.09.2017 to 31.08.2024)

A. Three similar completed works each having amount of Rs 32,40,000.00/- (Rupees Thirty Two Lacs Forty Thousand Only) or more during last 7 (seven) years.

OR

B. Two similar completed works each having amount of Rs 40,50,000.00/- (Rupees Forty Lacs Fifty Thousand Only) or more during last 7 (seven) years.

OR

C. One similar completed work having amount of Rs 64,80,000.00/- (Rupees Sixty Four Lacs Eighty Thousand Only) or more during last 7 (seven) years.

Similar works means the Bidders should have experience in

- AMC of Thermal Power Plant for any area Boiler Maintenance Department, Turbine Maintenance Department , Material Handling Department ,Sea Water and carried out under the single LOI/Work Order/Agreement

OR

- ARC of O & M of Thermal Power Plant for any area Boiler Maintenance Department, Turbine Maintenance Department , Material Handling Department , Sea Water and carried out under the single LOI/Work Order/Agreement

OR

- Supply of technical manpower for Thermal Power Plant for any area Boiler Maintenance Department, Turbine Maintenance Department , Material Handling Department , Sea Water and carried out under the single LOI/Work Order/Agreement

OR

- O & M of Power Plant and carried out under the single LOI/Work Order/Agreement as per example.

Bidder shall have valid special Class Repairer recognition from competent authority as per India Boiler Regulation 1950

If Bidder is not having a special class Repairer recognized by competent authority, then bidder has to arrange all IBR works through IBR approved special class boiler repairer as per IBR 1950.

Bidder shall have to submit the notarized copy of valid special class repairer certificate and consent letter of special class boiler repairer from whom he wants to arrange the IBR works of this tender, failing in which, the offer shall be liable to be rejected

Bidder shall submit the details of work completed in FORM PC as provided in the Tender Document. Statement of experience with work orders and work executed certificates duly certified by the certificate issuing authority shall be submitted as supporting documents.

10.2 Financial

10.2.1 Bidder must have an average positive Net Worth for financial year of 2021-22, 2022-23 and 2023- 24.

10.2.2 Bidder must have a Minimum Average Turnover of Rs 24,30,000/- (Rupees Twenty Four Lacs Thirty Thousand Only) for financial year of 2021-22, 2022-23 and 2023- 24.

A certificate from Chartered Accountant regarding financial capacity shall be submitted as per format provided in FORM PC of the Tender Document.

10.3 Site Visit Certificate

The Bidder should give a declaration of site visit as per the format provided in FORM PG of the Tender Document.

10.4 Blacklisting of the Bidder

The Bidder or its directors have not been blacklisted by any Government Organization. The Bidder will submit a declaration to this effect as per the format provided in FORM PD of the Tender Document. If at any time such declaration is found false, the bid will be rejected or if the contract work is already awarded, it will be terminated forthwith without payment of any compensation and the EMD/SD will be forfeited.

11 Evaluation of Bids

11.1 Completeness of Bids

GMDC, will examine the bids to determine whether they are complete, whether they meet all the conditions of the Tender Document and Technical Specifications, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the Bid Documents are substantially responsive to the requirements of the Tender Document.

11.2 Tender Clarifications

The GMDC may at its discretion, seek from any or all bidders, clarifications on his/their bids, including technical information, documents and materials after technical bid opening but before opening of commercial bid.

11.3 Rejection of Bid

A bid that does not meet all eligibility criteria or is not responsive shall be rejected by GMDC. Submission of false or incorrect information, history of delayed work, reports of unprofessional conduct, among other things, shall be sufficient grounds for disqualification in technical bid.

11.4 Opening of Bids

Technical bids will be opened after verification of receipt of payment towards Tender Processing Fee and EMD. The eligible bidders will be able to view the technical bids after opening of technical bid. On verification of the supporting documents; technical qualification of the bidders will be assessed. The eligible bidders will be communicated the date and time of on line opening of price bids by fax or telephone or email or SMS. However, all successful the bidders will be able to view the price bids online on their computers after opening of price bid.

11.5 Selection of Bidder

The contract will be awarded to the bidder who stands L1 in total price. The GMDC reserves its right to reject any or all tenders or split the job between more than one bidders without assigning any reason and thereby without incurring any liability to the affected successful bidder or Bidders or any obligation to inform the affected successful bidder or successful bidder's of the grounds for GMDC Ltd., action/decision.

11.6 Negotiation

It is absolutely essential for the successful bidders to quote the lowest price at the time of making the offer in their own interest. GMDC, however, will have the discretion to choose to enter into any price negotiations or not.

11.7 Acceptance of LOI

11.7.1 GMDC, on acceptance of the offer, will issue Letter of Intent to the successful bidder; who will be required to confirm its acceptance of the LOI within 10 days from the date of receipt. If he does not accept the LOI within stipulated time period, the amount of the EMD paid will be forfeited and necessary further actions may be initiated as may be deemed fit by the GMDC.

11.7.2 The Successful bidder shall have to submit the Security Deposit with 10 days from the date of LOI. The Successful bidder shall submit the Security Deposit in the manner prescribed in this Tender Document. In case of failure to submit the security deposit, the amount of EMD will be forfeited and necessary further actions may be initiated as may be deemed fit by the GMDC.

12 Scope of Work

Under the scope of this contract, the successful bidder is required to provide qualified manpower for Pre-Commissioning, Commissioning Activities along with Preventive, Predictive, Breakdown, Shutdown & General Routine Maintenance of Akrimota Thermal Power Station with tools and tackles.

12.1 Total Manpower Required Everyday:75 No. (As per Annexure- "C")

1. The Bidder shall keep one or more nominated person(s) as a Supervisor to manage its manpower supply and tools and tackles maintenance at site for which no additional payment shall be made by GMDC. The nominated person shall maintain daily attendance of the manpower provided by the successful bidder and submit the same to EIC of GMDC. The nominated person shall also have to submit weekly status of tools and tackles list to EIC of GMDC.
2. The distribution of manpower shall be as per instruction of EIC.GMDC may use manpower & tools and tackles at any area & any department of power plant.
3. The successful bidder shall provide above-mentioned manpower as per the requirement of GMDC. Moreover, in case of weekly off / public holidays, absenteeism due to sickness / leave,

the Successful bidder shall have to ensure the availability of above required manpower. Failure to provide the above-mentioned manpower to GMDC, liquidated damages shall be leviable.

12.2 Supply of Manpower in Odd Hours

1. The successful bidder shall depute above-mentioned manpower on odd hours as directed by E-I-C.
2. Manpower shall be deputed in odd hours as required by EIC GMDC for any emergency job that may come up at odd hours.
3. For the sake of clarity, Odd hours means the working hour starts after completion of normal/specified scheduled duty hours which excludes normal/specified scheduled duty hours on Weekly off and Public Holiday.
4. The successful bidder shall be responsible to provide all the facilities like snacks, foods, transportation etc. to the manpower deployed by them during normal duty hours as well as odd hours and for which no payment shall be made by GMDC.
5. However, GMDC shall make payment on account of supplying man power for odd duty hours after normal duty hours. The payment for odd hour duty shall be paid twice the rate finalized for the respective manpower.
6. The successful bidder shall have to provide additional manpower as and when required by GMDC if any, within 48 hours at the same terms and conditions of the Tender.
7. For all the manpower mentioned above, physical fitness shall be ascertained from Medical center of GMDC or from any medical officer specified by GMDC.

12.3 The Work of Supply of Manpower With Tools, Tackles, consumables For Pre-Commissioning , Commissioning Activities along with Preventive, Predictive, Breakdown, Shutdown & General Routine Maintenance of Akrimota Thermal Power Station.(As per Annexure- “C” ,“D” and “G”)

12.3.1 Boiler and auxiliaries

The scope of work of the successful bidder involves maintenance of boiler system and its auxiliaries (including Aux. Boiler) through qualified and knowledgeable manpower including housekeeping with all terms and conditions as mentioned in scope of work.

1. Boiler pressure parts

- a) Attending boiler tube leakages (BTL) in all zones of both boilers and auxiliary boiler along with all works including installation of scaffolding with required materials. Leakages in both units/auxiliary boiler and/or locations to be attended in parallel by

deploying separate groups as per requirement and as instructed by GMDC EIC for unit availability and defects attending for running/shut down unit.

- b) Liaisoning with Boiler Director during BTL / AOH / COH / License Renewal etc. of boiler 1, 2 & Auxiliary boiler and those falling under IBR, shall be in successful bidder's scope.
- c) Other than BTL works during shutdown (overhaul or opportunity based), resources to be mobilized for other preventive maintenance works. Works to be carried out in parallel with BTL works (in case both units at a time) as instructed by the GMDC EIC.
- d) During running units, defects of high-pressure lines, like soot blower line, headers, drain line, vent line leakages, etc., for which isolation can be provided, defects shall be attended by the successful bidder and to attend to these defects, the required workforce skill set (e.g., grinder, rigger, fitter, HP welder (IBR approved), etc.) shall be arranged by the successful bidder.
- e) Water washing of entire boiler and second pass whenever opportunity arises.
- f) Super heater and reheater exfoliation inspection and problem related repair works – extra bend cutting and cleaning work and re-welding of bends as per drawings. FSH / FRH / Water Wall (WW) tube, headers repair works, SR test, radiography, hydro test with safety procedures. Safety nets shall be fitted before start of work. Scaffolding to be installed as per requirements.
- g) Sky climber inspection / repair work to be carried out in boiler first pass during every opportunity.
- h) During opportunity shut-down Air Tightness Test (ATT) to be done for all ducts, Furnace, Flue gas path and associated systems, along with their defect rectification.
- i) De-metering / thickness Survey of high-pressure Part lines and their welding healthiness to be checked as instructed by GMDC EIC. Tubes to be replaced and defective weld joints to be repaired at every year as per discretion of GMDC team.
- j) After completion of works, all hopper (ex. Economizer hopper), ESP, TAPH, Second pass furnace, Ash cooler etc. inspections to be done and any foreign material available inside the equipments to be removed to avoid any blockage during unit running condition.

2. Valves servicing

- a) Servicing and maintenance (including satellite in-situ machining & blue matching) of all types of valves (IBR/Non IBR) and defective / passing high pressure valves including safety valves identified in thermography reports and defect notifications.
 - b) Valve replacement to be carried out for all defective valves, including cutting / removal of defective valve and installation / welding of new valves. IBR approved welder is required for welding and installation of valves. Valves for replacement would be provided by employer and replacement work will be carried out as per requirement and instruction of EIC.
 - c) Preparatory work for all type of valves (MOV, CV, Manual, Pneumatic, NRV) servicing will be in successful bidder's scope. This includes scaffolding installation, hook welding / beam installation for valve dismantling, induction heating, and jacking arrangement for valve bonnet dismantling etc.
3. Servicing and regular maintenance works for all oil burners / guns, fans, and soot blowers are under successful bidder's scope as per the instruction of EIC.
 4. All works related to FOPH maintenance (pumps, heaters / tank / oil & steam line / valves/ mechanical seal / strainer, etc.)
 5. Penthouse internal repairs and cleaning work, buckstay cleaning in boiler area will be in the successful bidder's scope.
 6. Boiler piping and hanger supports scope for boiler area covers all the piping coming from TG house towards boiler and return up to TG house inlet.
 7. Lignite drag link conveyor, gravimetric feeder, RALF, TAPH, bellow (non-metallic and metallic) cyclone, ash cooler, loop seal, ducts, fans, L-valves, RC line and furnace fabrication related all works.
 8. Liasioning for renewal of boiler license for validity through boiler regulatory office and other TBR office related works will be in successful bidder's scope. The successful bidder must ensure availability of certificate on time for use of boilers. This includes 2 Nos. boiler and 1 No. auxiliary boiler. Regular inspections of boilers from boiler directorate regarding certificate renewal and BTL are covered in successful bidder's scope.
 9. Insulation removal and installation of work will be in the successful bidder's scope.

10. CW, CCW pipelines and headers, support defect identification and repair/replacement work will be in the successful bidder's scope.
11. Instrument, service air lines and headers, support defect identification and repair/replacement work will be in the successful bidder's scope.
12. SWASS Panel defect identification and repair/ replacement work will be in the successful bidder's scope.

13. NDT

- a) Radiographic inspection/Phased Array Ultrasonic Testing (PAUT) analysis of boiler tubes and header joints during routine maintenance, opportunity shutdown & boiler tube leakages. It excludes radiography during unit overhaul.
- b) The successful bidder must ensure presence of qualified radiography staff throughout the year and one dark room to be established within plant as per Govt norms. Also, ensure availability of radiography source not less than 10 Curie, (in the range of 10 to 20 Curie) all the time throughout year as per the requirement & instructions of GMDC's EIC.
- c) During opportunity shutdown 2 to 3 sources are to be mobilized as per the requirement and instructions of EIC.
- d) Skill set requirement for radiography work:
 1. In-charge of radiography team should have minimum 7 to 10 years of experience in the relevant field / boiler pressure parts with NDT Level II certificate from BARC.
 2. Radiography technicians should have minimum 5 to 8 years of experience with relevant field/ boiler pressure parts, NDT Level-II and valid Thermo Luminescent Device (TLD) for radiography.
 3. The successful bidder must arrange for source identification and authorization letter from BARC, Mumbai or any other approved source along with authorized list of technicians for use of source.

14. Boiler rotary/stationary parts

- a) Regular maintenance and all other related works for air preheater, fabric, and metallic bellows as per defects identified and repair/ replacement as per requirement at discretion of GMDC team.

- b) Servicing and maintenance work of lignite / lime mills, lignite / lime feeders, and associated systems.
- c) Lignite / lime mill overhauls – replacement of mill grinding elements and internals, arrangement of hearting coil and insulation material for grinding roll replacement, gearbox replacement, and other related works.
- d) Lignite / lime pipe and bends patching and repair works, choking removal and pipe replacement work during running as per requirement.
- e) Lignite / lime mill top and ducts cleaning (accumulated material).
- f) Repair and replacement of various fabric and metallic bellows during opportunity shutdowns as per defects identified.
- g) Air and flue gas duct inspection and repair work as per defects identified.
- h) Repair and maintenance of hoists in boiler area including lime mills, FOPH and fans (preventive, routine, break-down maintenance) and assistance in load testing.
- i) Servicing and maintenance work of ash draglink / ash rotary / L-valves and related works.
- j) Ash cooler / vessel valve / L-valves choking removal and repair, replacement work during running as per requirement.
- k) Isolation gate maintenance repair/ replacement work as per defects identified.
- l) PHEs defect identification and rectification as per instruction of EIC.
- m) Pump maintenance, servicing and repair/replacement work as per instruction of EIC.
- n) Furnace, loop seal, ash cooler internal cleaning and damaged parts repair/ replacement work as per defects

15. TAPH short shutdown works

- a) External and internal cleaning of tubes and plugging of leaky tubes and water washing by jet cleaning as and when required.
- b) SA and PA inlet damper / outlet dampers, flue gas Guillotine gates freeness checking and repair or replacement if required.
- c) APH hot PA damper, SA outlet damper, and flue gas inlet damper freeness checking.

- d) Flue gas gates, diverter plates, duct plate, bracing repairs, anti-wear angle installation.
- e) Deluge line and fire extinguishing line nozzle removal and cleaning work.
- f) All ducts' leakages should be identified and attended wherever required.
- g) All related works (inspection/repair/replacement), if required by system as per instruction of GMDC's EIC.

16. Inspection and repair work of ducts and their supports (TAPH and ESP inlet, ESP hoppers, ESP roof, outlet ducts up to chimney)

- a) Cleaning of all ducts – ash and debris.
- b) Inspection, identification and defect rectification of damaged parts.
- c) Duct bracings, protective angles/shields, duct diverter plates inspection and replacement work. Scaffold erection for approach of all parts of ducts.
- d) Manhole cutting and restoration for lifting and shifting of material as per requirement.
- e) Cutting and renewal of all damaged parts like ducts, bracing pipers, guide channels, damper stopper plates and other damaged plates.
- f) Welding and repairing work of all damaged parts like support bracing pipes, guide channels, dampers and plates.
- g) All refractory works in required areas i.e. furnace, ash cooler, cyclone, loop seal, return leg, down comer, COD, auxiliary boiler, L- valves, RC line, bellows etc. as per defects.
- h) Removal and shifting of scrap from workplace to designated area as per GMDC's EIC's instructions.
- i) Cleaning, visual inspection, and repair work of ducts as directed by EIC.
- j) Proper illumination arrangement and their sustainability at work site will be in the successful bidder's scope.
- k) Any access / approach required at workplace to be erected as per requirement. Site register to be maintained for site day to day activity with signature of EIC on daily basis. Also, protocols of major activities to be prepared as per EIC instructions.
- l) Steel structural fabrication and erection as per requirements will be in successful bidder's scope.

m) Insulation removal and installation work as per defect identified.

17. ID/FA/PA/SA/ash cooler fan corrective/breakdown maintenance

- a) Internal inspection and rectification of all fans – ID, FA, PA, SA, Ash cooler etc. Fans during opportunity shut down.
- b) Repair and maintenance of all fans – ID, FA, PA, SA, Ash cooler etc. fans including fan rotor, servomotor replacement during opportunity shut down.
- c) Damper servicing, APH ducts and dampers, all fans (ID, FA, PA, SA, Ash cooler etc.) ducts and dampers.
- d) Fan top casing dismantling, fan rotor and servomotor repair / replacement, alignment, box up, oil top up and housekeeping of entire area.
- e) Servomotor feedback and command rod removal, inspection, and servicing work.
- f) Fan lube oil tank draining, oil cooler, filter cleaning defect rectification and refilling.
- g) All components dismantling, inspection, servicing, repair / replacement as per requirement.
- h) Repair/ replacement of bearing, impeller shaft, impeller, couplings, voith coupling, pulley, gear fluid coupling maintenance, alignment, journal bearing, lube oil pump repair/reconditioning, fan assembly replacement and balancing work etc.
- i) Lube oil pipeline, lube oil pump defect attending, dismantling, flushing, and gasket / seals replacement.
- j) Fan blade inspection and repair / replacement as required.

18. ESP

- a) All works related to ESP, i.e., water washing, profile correction, gear box service, hopper cleaning, internal parts repair / replacement, fabrication and erection of steel and structure work, air ingress arrest and all other ESP related work.

19. Lime grinding and dosing system

- a) All work related lime grinding and dosing system i.e. rotary feeder, bag filter, screen, chain conveyor, pneumatic pump, pneumatic conveyor, compressor, fans, blower, gear box, HAG system, weigh feeder, mill, Lime bunker, day pin de-chocking and cleaning, dampers, lube oil system maintenance work etc.

20. Auxiliary Boiler

- a) Servicing, repair, and preservation works of auxiliary boiler area – pressure parts, feed pump, FD fan, furnace, dosing pumps, valves, oil burner, ducts, dampers, IGV, oil /air/steam line and all related parts.
- b) Hydro testing, attending of leaky tubes and putting boiler under preservation. And making ready for light up.

21. Refurbishment works

1. Refurbishment of spares in boiler and aux. area will be in the successful bidder's scope and material required for refurbishment will be provide by GMDC.
 - a) Burner tip / nozzle, valves, oil gun, all baffles, mill assemblies, gear boxes, spares, mottos, and other parts refurbishment.
 - b) All types of soot blowers.

22. Miscellaneous works

- a) All audit compliances – safety, technical, quality, cleaning etc. and other observations.
- b) Support for all OEMs and experts' services.
- c) Assistance for boiler and service building lift servicing.
- d) Scheduled load testing of all lifting tools and tackles and keeping records.
- e) Replacement and top-up (replenishment) of lubricants as per schedule and maintain records of the same.
- f) Installation and fitting of insulation material as per drawing at various locations in boiler and auxiliaries in running unit. During running plant maintenance work, insulation removed at necessary location shall be reinstalled by the successful bidder.
- g) Carrying out modifications / innovations / kaizen / changes in the boiler and auxiliary area, wherever required related to system as per the instruction of GMDC EIC.
- h) Housekeeping of all boiler and auxiliaries work area, including ash and coal powder removal from confined spaces, tunnels, furnace, cyclone area, penthouse, second pass and scrap removal. Shifting of scrap material, waste oil, grease to designated store areas.
- i) Records of performing all tasks should be recorded on regular basis.

- j) Maintenance and repair of permanent and movable (trolley) type dewatering and submersible pumps.
- k) Anti-rust painting of repaired / serviced equipment in boiler area and auxiliary boiler.
- l) Fabrication and erection of platform, ladder, staircase, handrail, toe guard, etc., along with anti-rust painting wherever required for maintenance purpose and erection of minor approaches for safe working shall be in the successful bidder's scope.
- m) Transport of required material from stores to site and vice versa by any mechanized arrangement, i.e., truck, tractor trolley, hand trolley, hydra, etc. will be in the scope of the successful bidder. Required vehicle will be arranged by the successful bidder without any financial implication to the employer / owner.
- n) Scaffolding work for running plant and opportunity shutdown defects.
- o) The T&P required to execute work at height, work at confined place, hot work etc.
- p) All works related to hoists, cranes, and other lifting tools.
- q) Cleaning and anti-rust painting of equipment, structures, etc.

23. Assistance works

- a) Assistance for non-destructive tests like video boroscopy, exfoliation inspection works during BTLs and short shutdowns.
- b) Assistance in preservation of spare at stores and site.
- c) Rotary Equipment's Vibration data collection, analysis, remedial measures along with vibration Data Collection Instrument(s) and their record keeping.
- d) Assistance works for operations department like soot-blowing, furnace temperature mapping, boiler oil gun trial, valve operations, etc.
- e) Assistance in coal feeder calibrations work, dirty air velocity test, fan balancing, motor de-coupling, shifting, reinstallation, and alignment works.
- f) Assistance in actuator, power cylinder decoupling / replacement.
- g) Scaffolding and approach preparation for any other works related to the system for any other department.
- h) Shifting and installation of panel, analyzer, and other instruments in position as per requirement.

- i) Assistance and proactive action in case of Emergencies like Black-Out & Fire etc.

A non-exhaustive list of major equipment has been attached in Annexure-G for ready reference.

Note: Any other maintenance work related to boiler and auxiliaries which is not specifically mentioned in the scope of work above but required for job completions / performance of the contract, shall be in the scope of the successful bidder.

12.3.2 Turbine and auxiliaries & Balance of Plant (BoP)

1. HP/IP/LP Turbine:

- a) Overhauling/repairing/rectification of mainstream valve & control valve, combined reheat valves, lubrication system, control / jacking oil system, generator cooling air system etc.
- b) Daily checking up of steam leakage, glands leakage, oil leakage, etc. inclusive of repair / replacement /rectification of the equipment.
- c) Maintenance of associated all valves, pumps, accumulators, filters, strainers, nozzles, and repair / replacement / rectification of hydraulic / pneumatic units.
- d) Inspection, repair / replacement /rectification of each size of steam line at turbine area.
- e) Inspection, repair/replacement/rectification of connected cooling water lines, heat exchangers etc.

2. Turbine auxiliaries:

- a) Preventive / breakdown maintenance of equipment of auxiliaries' such as feed water system, condensate system, extraction system, HP/LP bypass system, cooling water system, Debris filter etc.
- b) Regular maintenance/repairing /rectification of all types of manual valves, motorized valves, diaphragm valves, gear boxes, pressure relief valve& vacuum breakers etc.
- c) Successful bidder must carry out outage job in CW/ACW/CCW/Ash cooler system like butterfly valves and pump's overhauling, all rubber lining / coro-coating piping inspection, Plate type heat exchanger/shell & tube heat exchanger overhauling (dismantling, acid cleaning, and assembly), defect attending and any required modification.
- d) During outages debris filter and associated valves overhauling will be in the successful bidder's scope.

- e) Overhauling of HP and LP bypass valves and its spray control valve will be in the successful bidder's scope as and when required.
- f) During outages, inspection work, cleaning, repair and modification of HP/LP heaters, deaerator internals and system valves, condenser water box, hot well etc. will be in successful bidder's scope.
- g) The successful bidder will be liable for carrying out all outages related activities within stipulated time frame.
- h) Maintaining operating vacuum in system by attending / rectifying leakage of joints, condenser tube cleaning by hydro-jetting and replacement / plugging of defective tubes, pipes and pipe fitting, if any.
- i) Maintenance of all equipment and systems incorporated in the auxiliary system.
- j) Maintenance of all relevant equipment, lines and sub-systems of cooling water system.
- k) Operational assistance for oil top-ups, greasing, valve operations due to jamming or approach, providing access platform etc. will be the successful bidder's scope.
- l) Various other activities like assistance for online sealing job, platform/scaffolding (with material) for another department will be in successful bidder's scope.
- m) Online sealing service required for any flange, valve, clamp etc. will be in successful bidder's scope.
- n) Installation and fitting of insulation material as per drawing at various locations in Turbine and auxiliaries in running unit. During running plant maintenance work, insulation removal at necessary locations shall be reinstalled by the successful bidder.
- o) Maintenance of TG and its hoist/crane is in successful bidder's scope.
- p) All safety PPE should be arranged by successful bidder with prior approval of GMDC safety officer.

3. Rotary Equipment:

- a) Maintenance and overhauling (routine, breakdown & annual) of ACW pumps, CCW pumps, boiler feed pump, condensate extraction pumps, steam ejectors, booster pumps, BFP, seal water pumps, main oil pump, AOP, JOP, de-watering pumps / submersible pump in CEP / condenser and various pits etc.

- b) During outages or as required, overhauling of all rotary equipment is successful bidder's responsibility.
- c) Regular maintenance of all pumps such as topping of oil and greasing, attending gland leakages from pump, system pipe / flanges and valves.
- d) Repair / replacement / rectification of all pumps including overhauling work (routine & annual).
- e) Required stand by equipment should be kept in working condition for immediate use whenever required.
- f) Any pump taken out for overhauling to be made ready, in case of emergency work to be carried out on round the clock basis and equipment should be made available within a stipulated timeline as per decision of EIC.
- g) All the routine and preventive measures to be taken and overhauling procedure is laid down in detail as per OEM manual and same shall be' adopted invariably, to ensure optimum performance of equipment.
- h) All works in all areas of turbine and its auxiliaries, CEP and its auxiliaries, BFP and its auxiliaries, condenser; deaerator, HP LP heaters, MOT, HP LP bypass system, piping, valves, GSC fan, lube and control oil system, steam jet ejector, safety valves, PRDS etc. are under the successful bidder's scope.

4. Balance of Plant (BoP)

- a) Maintenance of BoP equipment viz. sea water intake pumps, CW pumps, CT make-up water pump, vertical turbine pumps, miscellaneous horizontal pump, jockey pump, fire water and spray water pumps, firefighting system sump pump and submersible pumps, booster pumps, horizontal pumps, dosing pumps, fire hydrant and sprinkler systems of plant, diesel generators, diesel driven fire pump / dewatering pump (Hydrant and spray)cooling towers (including riser pipes and valves, CT fans, gear box repair / replacement / adjustments of blade angles / repair / replacement of CT spray nozzles etc.)HP/LP piping, LP valves, induced draft cooling tower, all air compressors (instrument and service), all valves/pumps/pipes/joints/gear boxes of BoP area, cranes, hoists, and allied equipment, RO plant and system, clarification, pre-treatment and chlorination plant, desalination plant, MED acid cleaning, DM plant, reject water system, switchyard etc.

5. General Activities:

- a) The works required to work at height, work at confined space, Hot work, chemical work etc.
- b) Lifting and shifting, replacement of various mechanical equipment, tools and tackles.
- c) All works related to turbine & generator and TG and BoP miscellaneous job etc.
- d) All works related to STG/BOP or any miscellaneous work to be carried out round the clock as per GMDC EIC.
- e) All works related to PPE (safety shoes, helmets, safety mask, gum boot, hand gloves, safety belts etc.) as per MSDS (for Chemical Handling) and GMDC EIC.
- f) All works related to hoists, cranes, and other lifting tools.
- g) Cleaning and anti-rust painting of equipment, structures, etc.
- h) The maintenance of TG and Auxiliaries + BoP system work involves replacement of damaged / worn out / broken spares by new ones, necessary site repairing job whenever necessary or repairing of critical spares or minor repair in new spares. The repairing of replaced spare parts in case they are repairable at site in opinion of concerned EIC or during non-availability of spares will be in the successful bidder's scope.
- i) The successful bidder shall supply manpower as and when required even after normal working hours/ odd hours / public holiday in short notice (2 hours, immediately in case of emergency), which is required to carry out departmental / essential works.
- j) The successful bidder shall be responsible for any damage of the equipment due to improper operation improper fitting, misalignment, lack of supervision, improper tools, and negligence/ incompetency of maintenance staff.
- k) All other works including cleaning/housekeeping etc. to facilitate the above works as instructed by EIC.
- l) All tools & tackles (as described in tool list) with tool keeper required to available round the clock.
- m) All types of transportation and lifting and shifting shall be in bidder's scope. Hydra, crane if required to be arranged by successful bidder.
- n) All type of underground pipeline leakage attending shall be in bidder's scope. All scope of work which includes digging, dewatering by required dewatering pumps, leakage identification & attending & again refilling. Dewatering pump shall be provided by owner.
- o) All PPE should be checked and verified by GMDC's safety officer.

A non-exhaustive list of major equipment has been shown in **Annexure- G** for ready reference.

Note: Any other maintenance work related to turbine and auxiliaries with BoP which is not specifically mentioned in the scope of work above but required for job completions / performance of the contract shall be in the scope of the successful bidder.

11.3.4 Electrical Maintenance

1. All electrical maintenance works in all areas of Boiler, Turbine, Generator, BOP, Switchyard including cable dressing, cable tray stiffening, Trench Cleaning and all area lighting maintenance etc.
2. All electrical maintenance works related to ESP, i.e., transformer maintenance, discharge electrode insulators, rectifiers, motors, etc.
3. The works required at height and at confined place etc.
4. The works include 220 KV switchyard, hot spot attending, 220 KV lines, GT bays maintenance, Bus coupler bay maintenance, 220KV switchyard insulators cloth cleaning, 220KV equipment replacement, etc.
5. Lifting and shifting, replacement of electrical equipment, tools and tackles, etc.
6. All works related to HT/ LT Motors, Feeders, Breakers, MOVs, Actuators, Transformers, VFDs, Panels, MCCs, PCC, Boards, Battery and Battery chargers, ACBDs, DCDBs, PDBs, NLDB etc. except motor rewinding shall be under successful bidder's scope. In case of motor rewinding work, dismantling and removal of motors and re-installation will be under successful bidder's scope. Actual rewinding work will be under GMDC's scope.
7. All works related to 11 KV, 6.6KV, 415V, 230V, etc. 3phase and single phase power and control supply auxiliaries, etc.
8. All breakdown / corrective / preventive maintenance work of electrical and electronics equipment including fault finding, rectification will be under successful bidder's scope.
9. All area illumination including, Boiler, FOPH, TG, SY, BOP, Auxiliary Boiler, Store, RO Plant, etc, all buildings of the plant area including service building, admin building, all areas MCC room, Cable gallery, etc.
10. Illumination of street lights and boundary lights including supply and replacement of lighting material like lamp, ballast, cables, igniters etc. shall be in bidders scope.
11. If any expertise/ outsourcing agency required to carry out for smooth operation, breakdown attending of the electrical ,electronics system, that also shall be under scope of the bidder.
12. Calibration of Energy meters at line main and check rack, GT, UAT panels and Colony outgoing feeder at MHP MCC shall be carried out.

13. Switchyard, MCC, Feeder protection schemes shall be tested as per requirement.
14. The bidders supplied tools and tackles shall bear statutory compliances.
15. All works related to cable laying, termination, manual fault finding, HT and LT jointing including supply of new jointing kits, lugs, connectors etc. If outside jointer is required, it shall be under successful bidder's scope.
16. All works related to hoists, cranes, and other lifting tools, etc.
17. Cleaning and anti-rust painting of equipment, structures, etc.
18. The successful bidder shall ensure deployment of suitable and sufficient manpower as and when required even after normal working hours immediately.
19. All other works including cleaning/housekeeping etc. to facilitate the above works as instructed by EIC.
20. All manpower shall be ready to work at anywhere of the plant including areas at height and areas at confined places as per prescribed safety norms including 24V power supply.
21. Specially there shall be at least four technicians and four helpers, 2 engineers/supervisors who can work at any height at 220KV switchyard and ESP inside and other areas.
22. All HT areas engineers, supervisors shall hold electrical supervisory license essentially.

12.3.5 C&I Maintenance

1. All C&I related works in all areas of Boiler, Turbine, Generator, BOP, Switchyard, auxiliary boiler, FOPH, Ro Plant, ESP (controllers), DCS (Distributed Controlled System) etc.
2. Calibration and maintenance of transmitters, switches and gauges like pressure, temperature, flow, level, conductivity and all other such instruments that form an integrated part of the power plant and its auxiliary units. The successful bidder must adhere to the calibration schedule and instructions as directed by GMDC EIC.
3. Calibration and maintenance of hydraulic/pneumatic and electric valves (24V and below), actuators and power piston-cylinders used for moving dampers, gates, valves, positioners, solenoid valves, etc.
4. The successful bidder must support the C&I engineer in checking of control loop from DCS end and proceed up to field instrument through every junction box or control panel according to respective loop-checking procedure.
5. Instrument tubing, cable laying (from device to nearby JB), cable terminations, JB installation and all such activities needed to install/ refit new instruments, detect and rectify faults during signal transmission from field instrument to control room DCS. Dressing / redressing of

- cables, cable trays, cable tray cleaning in JBs or Panels shall be part of the maintenance activity being performed.
6. Overhaul of control valves, pneumatic actuators, when found necessary shall be done. All the necessary precautions like checking bench set of pneumatic valves, replacement of internals, changing gland packing etc. and all such activities needed for the overhaul shall be performed.
 7. Overhaul of devices like solenoid valves, air filters, level glass etc.; setting of limit switches for all instruments, taking instruments in and out of service, venting & flushing of instrument tapping lines, identification of cable path from instrument via junction boxes to control room marshalling and all other activities required to complete the maintenance activities shall be performed, taking into consideration the safety of the working personnel, equipment, and the power plant as a whole.
 8. Preventive maintenance of C&I of running equipment as per the agreed schedule shall be carried out.
 9. The works are required to be carried out at height and/ or in confined space as per site situation.
 10. Lifting and shifting, replacement of C&I equipment, tools and tackles, etc.
 11. All works related to cable laying, termination, manual fault finding, jointing, etc.
 12. Cleaning and anti-rust painting of equipment, cabinets, junction boxes, impulse line, structures, etc.
 13. The successful bidder shall supply manpower as and when required even after normal working hours immediately including engineer/supervisor.
 14. All other works including cleaning/housekeeping etc. to facilitate the above works as instructed by EIC.
 15. All type of actuators / valves servicing and seal kit / diaphragm repair/replacement work.
 16. Measuring instruments mention in tool list must be calibrated and certified by NABL / NABL traceable certificate.
 17. In case of any fault in DCS or UPS, service engineer required for fault addressal will be in successful bidder's scope.
 18. All consumables, necessary tools, tackles, and equipment etc. required for the job shall be in the successful bidder's scope.
 19. All safety measures of manpower, machines, etc. will be in the successful bidder's cope.

12.3.6 MHP Maintenance of Lignite, Lime, and Ash Handling Plants

12.3.6.1 Mechanical maintenance of Lignite, Lime, and Ash Handling Plants

1. Scope of work for mechanical maintenance work includes breakdown, predictive, and preventive maintenance work of all equipment in lignite and lime handling plant.
2. Following are some of major equipment maintenance activities for to be carried out for lignite and lime handling plants:

a) Apron feeder:

Major mechanical maintenance activities like pan replacement work, pan conveyor chain replacement, chain link repairing/replacement, gear and pinion replacement, guide roller repairing/replacement, drive gear box replacement and alignment, drive and driven sprocket repairing/replacement work, drive chain tension giving work, chain guide repairing work, all bearing checking/replacement work etc. to be carried out.

b) Dribble conveyor:

Major mechanical maintenance activities like scraper repairing/replacement, scraper chain repairing/replacement, drive sprocket repairing/replacement, bottom and side plate repairing/replacement, drive gearbox repairing/replacement, all bearing checking/replacement, drive alignment work etc. to be carried out.

c) Sizers:

Major mechanical maintenance activities like sizer picks, sleeves, pick-boxes rearing/replacement, rotor assembly repairing/replacement, all bearing checking/replacement, pure gears checking/replacement, wear plate checking/replacement, rotor seventh tooth segment checking/replacement/repairing, side combs repairing/replacement, side wear plates checking adjustment/replacement etc. to be carried out.

d) Impactors:

Major mechanical maintenance activities like rotor assembly repairing/replacement, beater head replacement, beater arms replacement, grinding wall repairing/replacement, grinding gib repairing/replacement, drive belts replacement, drive belt alignment and tension giving, main body repairing, all bearing checking/replacement, drive alignment, drive main foundation bolts replacement, fluid coupling checking/replacement etc. to be carried out.

e) Ultra flow feeder:

Major mechanical maintenance activities like support spring replacement, gear box repairing/replacement, universal joint repairing/replacement, etc. to be carried out.

f) Vibrating screen:

Major mechanical maintenance activities like sieve mats repairing/replacement, rubber block replacement, screen support repairing/replacement, Drive v belt checking/replacement, sieve clamping piece repairing/replacement, hood cover repairing/replacement, all bearing checking/replacement, etc. to be carried out.

g) Unbalance motor feeder:

Major mechanical maintenance activities like support spring replacement, motor counterweight adjustment work, etc. to be carried out.

h) Reversible shuttle conveyors:

Major mechanical maintenance activities like gear box repairing/replacement, conveyor belt repairing/replacement, all rollers checking/replacement, drive alignment, coupling checking/replacement, all bearing checking/replacement, all pulley and lagging checking/replacement, drive rail checking/alignment/replacement, etc. to be carried out.

i) Traveling tippler:

Major mechanical maintenance activities like gear box repairing/replacement, all rollers checking/replacement, drive alignment, coupling checking/replacement, all bearing checking/replacement, all pulley and lagging checking/replacement, drive rail checking/alignment/replacement, drive chain for CRD checking/alignment/replacement, traveling tippler main drive wheel checking/repairing/replacement work, etc. to be carried out.

j) All conveyor belts (600, 1000, 1200 mm width etc.):

Major mechanical maintenance activities like belt replacement work, belt joint/patching work, all conveyors all roller, frame, deck sheet checking/repairing/replacement, all conveyors' bearing checking/replacement, all types pulley and lagging repairing/replacement, all bearing checking/replacement, drive alignment, all coupling checking/replacement, etc. to be carried out.

k) Stacker Re-claimer machine:

Major mechanical maintenance activities like stacker re-claimer machine, all bearing checking/replacement, all drive checking/alignment, all coupling checking/alignment/replacement work, all fluid coupling checking/replacement, bucket checking/repairing/replacement, hydraulic system all pipe checking/repairing/replacement, hydraulic system checking/repairing/replacement, drive rail checking/repairing/replacement, CCRD & PCRD system checking/repairing/replacement, UBF main support checking/replacement, etc. to be carried out.

l) All types of receiving, discharge, hoppers, coffin box:

Major mechanical maintenance activities like liner checking/repairing/replacement, main mother plate checking/repairing/replacement, leakage attending, etc. to be carried out.

m) Telescopic chutes:

Major mechanical maintenance activities like wire rope and pulley checking/replacement, telescopic chute all sell checking/repairing/replacement, etc. to be carried out.

1. Note: The above list is indicative only. Successful bidder must also carry out mechanical maintenance (predictive, preventive, breakdown) of all other equipment within battery limits of lignite and lime handling systems to ensure smooth plant operations.

3. Following are some of major equipment maintenance activities to be carried out for ash handling plant:

a) Air compressor:

Major mechanical maintenance activities shall include air suction filter checking/cleaning/replacement, all kit (BDV, MPV kit, etc.) timely checking/servicing /replacement, hydraulic oil checking/replacement, all types of valve checking/repairing/replacement work, separator element checking/replacement, oil and air cooler checking/cleaning/replacement, main air end unit checking/repairing/replacement, coupling checking/replacement, etc.

b) Blowers:

Major mechanical maintenance activities shall include air suction filter cleaning/replacement, drive v-belt checking/alignment/replacement, drive and driven pulley checking/replacement, all bearings checking/replacement, twin lob checking/alignment/replacement work, etc.

c) Pumps:

Major mechanical maintenance activities shall include coupling checking/replacement, gland checking/replacement, pump dismantling and servicing/replacement, etc.

d) All types of fly and bottom ash transporters:

Major mechanical maintenance activities shall include bottom disc checking/servicing/spares replacement, all types of valve checking/repairing/replacement, etc.

e) Fly/bottom ash silos:

Major mechanical maintenance activities shall include bag filter house checking/repairing and spares replacement, air purging line checking and repairing/replacement, fluidizing panel checking, repairing/replacement, under/over pressure valve checking and repairing/replacement, knife gate valve checking and repairing/replacement, bag filter house vent fan servicing with balancing, silo internal de-choking, etc.

f) Rotary ash conditioner:

Major mechanical maintenance activities shall include long baffle plate alignment/replacement, short baffle plate repairing/replacement, spray nozzle cleaning/replacement, guide and thrust roller servicing/replacement, main drum repairing/replacement, drive chain repairing/replacement, drive assembly servicing/replacement, drive sprocket & driven sprocket checking/replacement, input and output teflon seal checking/replacement, etc.

g) Bed ash bypass belt:

Major mechanical maintenance activities shall include belt replacement work, belt joint and patching, all roller checking, repairing/replacement, conveyor drive servicing work/replacement work, drive chain and sprocket checking /replacement work, all pulley and bearing checking, repairing/replacement, etc.

h) Air Dryer:

Major mechanical activities shall include all cooler checking/repairing/replacement, all system leakage checking/replacement, all valve servicing/replacement, gas pressure checking, gas filling (if required post gas checking), all parts checking/repairing/replacement, etc.

i) All ash discharges pipe and airline pipes:

Major mechanical activities shall include all pipe thickness checking/repairing/replacement, leakage attending work, line basalt bend checking, repairing/replacement, etc.

Note: The above list is indicative only. Successful bidder must also carry out mechanical maintenance (predictive, preventive, breakdown) of all other equipment within battery limits of ash handling system to ensure smooth plant operations.

12.3.6.2 Electrical maintenance of Lignite, Lime, and Ash Handling Plants

1. The scope of work for electrical system in lignite and lime system shall include from AS-1C, AS-2C breaker out going cable termination to all incomer and outgoing HT/LT equipment which is connected to MHP main MCC directly and indirectly including main MCC, stacker, reclaimer, lignite and lime dump hopper, TP#1,2,3,4, PCH, SCH, screen house, lime crusher house, lime reclaimer and lignite and lime conveying system up to lignite and lime bunker.
2. The scope of work however shall not include beyond HT cable termination after MHP 6.6 KV breaker for the colony electrical supply. The scope of work also shall not include beyond LT cable termination after JB termination in TP#4 house for the weigh bridge electrical supply.
3. The scope of work for electrical system in AHP shall include from AS-1C, AS-2C breaker out going cable termination to all incomer and outgoing HT/ LT equipment which is connected to AHP main MCC directly and indirectly including compressor house, AHP conveying system from buffer hopper after the ash rotary seal up to the silo discharge.
4. Lighting system of the above area including high masts shall be in successful bidder's scope.

5. Some of the major electrical equipment are 6.6 KV HT breaker and motors upto 1100KW, LT feeder / breaker upto 160KW, Dry transformer upto 2500KVA, LT VFD, metal detectors, ILMS, Ventilation, etc.
6. The detailed scope of electrical maintenance works under the successful bidder are as follows:
 - a) The successful bidder shall make necessary arrangements for regular cleaning and maintenance.
 - b) The successful bidder shall take preventive maintenance work on transformers, air circuit breaker panel, MCC, H.T. & L.T. motors, fan, pumps, metal detector, in-line magnetic separator, chute vibrator, ventilation system, dry fog system, flap gates & different safety switches and their power supply module and also the lighting system of MHP so that all the equipment are covered, and each equipment is cleaned periodically.
 - c) The successful bidder should have sufficient experience of operation & maintenance of coal plant & stacker re-claimer with latest technology.
 - d) In addition to preventive maintenance & breakdown maintenance work, Interlocking & Protection testing of equipment shall also as & when required is to be done. This work is to be taken up during general shift hours.
 - e) All types of cable connection, disconnection and laying out, electrical equipment installation, removal and shifting to designated places like workshop / main store etc. shall be in bidder scope.
 - f) If any equipment is damaged due to any cause that can be attributed to the bidder, then repairing the equipment like motor rewinding and / or repairing, cards repairing, etc. shall be in bidder's scope.
 - g) If expert / any service engineer is required to be called for making any electrical equipment available for normal operation, then that shall be in bidder's scope.
 - h) All types of material issuing, shifting including scarp returning to main store shall be in bidder's scope.

- i) All the requirements for making all electrical system available for normal operation like preventive, breakdown and corrective maintenance, overhauling, etc., submission of maintenance sheets, test reports to GMDC shall be in bidder's scope:

1. 6.6 KV/415 V TRANSFORMER-

External cleaning of transformers

Cleaning & tightness checking of marshalling JBs of transformers.

Rectification / replacement of defective parts.

Relay Testing (Voltamp-7570), etc

2. LT SWGR PANEL:

External cleaning of panels, cleaning and tightness checking of ACBs, replacement of defective parts, checking of module alignments, tightness checking for outgoing power and control cables, Control scheme checking and rectification, opening /closing time checking of breakers, lubricating the moving parts etc. is coming under the scope of the successful bidder.

3. LT MOTORS:

AT SWITCHGEAR: Cleaning and tightness checking of breaker & SFU modules, replacement of defective parts, checking of module alignment, tightness checking of outgoing powers and control cables.

AT FIELD: Cleaning and tightness checking of LPB stations, JBs, motor TB and field switches. Rectification/replacement of defective parts. External cleaning and greasing of field motors.

Control scheme checking and rectification.

Applying sealing compound for terminal boxes, if required.

Bearing replacement, if required, etc.

4. HT MOTORS:

AT SWITCHGEAR: Cleaning and tightness checking of breaker modules, replacement of defective parts, checking of module alignment, tightness checking of outgoing powers and control cables.

AT FIELD: Cleaning and tightness checking of LPB stations, JB's, motor TB, CT terminal box, RTD box and field switches. Rectification/replacement of defective parts. External cleaning and greasing of field motors.

Control scheme checking and rectification.

Applying sealing compound for terminal boxes if required.

Maintenance of electrical parts of local control panel.

Bearing replacement, if required etc.

5. LIGHTING MAINTENANCE:

Cleaning of fittings including high masts.

Replacement of lighting accessories whenever required.

Fault rectification in circuit and lighting accessories.

Cleaning & fault rectification / replacement of MLDB and SLDB.

Periodical checking of all lighting transformers.

Maintenance of welding sockets, etc.

6. DC SYSTEM & DCDB:

Cleaning and tightness checking of module, replacements of defective parts & tightness checking for cables.

Locating & removal of earth fault in DC system, etc.

7. IN LINE MAGNETIC SEPARATOR:

AT SWITCHGEAR: Cleaning and tightness checking of SFU modules, replacement of defective parts, checking of module alignment and actuation of limit switches, tightness checking of power and control cables, checking of relays, checking of space heaters, and motor winding heaters.

AT FIELD: Cleaning and tightness checking of LPB stations, JB's, motor TB, Transformer and field switches. Rectification/replacement of defective parts. External cleaning and greasing of field motors.

Applying sealing compound for terminal boxes if required.

Control scheme checking and rectification.

Checking of opening and closing time of the breakers, if required.

Maintenance of electrical parts of local control panels etc.

8. METAL DETECTOR:

AT SWITCHGEAR: Cleaning and tightness checking of SFU modules, replacement of defective parts, checking of module alignment and actuation of limit switches, tightness checking of power and control cables, checking of relays, checking of space heaters.

AT FIELD: Cleaning and tightness checking of LPB stations, JBs, and field switches. Rectification/replacement of defective parts.

Applying sealing compound for terminal boxes if required.

Control scheme checking and rectification.

Maintenance of electrical parts of local control panels, etc.

9. CHUTE VIBRATES & HOISTS:

AT SWITCHGEAR: Cleaning and tightness checking of SFU modules, replacement of defective parts, checking of module alignment and actuation of limit switches, tightness checking of power and control cables, checking of relays, checking of space heaters.

AT FIELD: Cleaning and tightness checking of LPB stations, JBs and field switches. Rectification/replacement of defective parts.

Applying sealing compound for terminal boxes if required.

Control scheme checking and rectification.

Checking of opening and closing time of the breakers, if required.

Maintenance of electrical parts of local control panels, etc.

10. FLAP GATES:

AT SWITCHGEAR: Cleaning and tightness checking of SFU modules, replacement of defective parts, checking of module alignment and actuation of limit switches, tightness checking of power and control cables, checking of relays, checking of space heaters, and motor winding heaters.

AT FIELD: Cleaning and tightness checking of LPB stations, JB's, motor TB, and field switches. Rectification/replacement of defective parts. External cleaning and greasing of field motors.

Applying sealing compound for terminal boxes if required.

Control scheme checking and rectification.

Checking of opening and closing time of the breakers, if required.

Maintenance of electrical parts of local control panels, etc.

11. HT SWGR PANEL:

External cleaning of panels, cleaning and tightness checking of VCBs, replacement of defective parts, checking of module alignments, tightness checking for outgoing power and control cables.

Control scheme checking and rectification,

Opening /closing time checking of breakers, if required.

Lubricating the moving parts, relay Testing etc.

12. TESTING OF ELECTRICAL EQUIPMENTS:

The scope of testing includes transport of materials and necessary equipments to site and back, preparation, supervision, execution and normalizing. The successful bidder shall conduct all the required test with his team of skilled and unskilled labour and qualified supervisors in presence of GMDC Engineer. Work shall be carried out without causing any damage to the test specimen or adjacent equipments. Damage if any so caused shall be rectified / replaced by the successful bidder.

The following testing equipments will be provided by GMDC free of cost on request for testing. Any damage / loss of equipment during transportation or due to improper handling by the successful bidder or his work man shall be borne by the successful bidder.

- a. Transformer winding resistance meter.
- b. Transformer ratio meter.
- c. Tan delta meter to measure tan delta of transformer winding.

- d. Relay testing kit.
- e. HV test kit, etc.

The successful bidder must make his own arrangement of all other test kit & instruments such as tongue tester, multi meter, MV/LV breaker test kit. Timers, contact resistance meters etc. and tools and tackles required for execution of testing. The instrument used for testing shall be of requisite class of accuracy and with valid calibration certificate. The report shall be furnished in the prescribed format approved by GMDC Engineer.

13. REPLACEMENT OF MOTORS/ OTHER ELECTRICAL EQUIPMENTS:

Replacement of Motor including transportation to and from the GMDC store and related other jobs in the event of breakdown is to done by the successful bidder.

14. BREAKDOWN CONDITION:

If any type of breakdown occurs due to careless handling by working people, the cost of breakdown will be barred by successful bidder.

After any type of breakdown, the breakdown occurrence report will be submitted by successful bidder within a day.

In case the successful bidder fails to execute the jobs as assigned to satisfaction of GMDC, reserve the right to execute the job through a third party at the cost and risk of the successful bidder.

1. The successful bidder or his associates should have valid electrical license grade ESA for carrying out of the electrical scope of works.
2. The successful bidder shall maintain a register for works done in general shift and regular shift.
3. External cleaning of transformers, bus ducts, control panels, switchgear panels shall be done before taking up breakdown maintenance/running maintenance. All works shall be carried out after taking proper line clear/work permit. The successful bidder shall assist operation staff in isolating power supply and carrying out other precautionary work for taking the line clear/work permit.

4. Cleaning of cable trays and transformer yard in connection with maintenance. Work shall be arranged by the successful bidder.
5. Painting of electrical equipment, if required, shall be in bidder's scope.
6. Greasing of equipment shall be carried out periodically as per requirements/GMDC's instructions.
7. GMDC will have the right to divert the successful bidder's manpower to other areas within the scope of the contract to avoid idle hours.
8. The successful bidder shall arrange for wheelbarrows, trolleys, scaffoldings required for maintenance and display the necessary safety boards at the area of maintenance works.
9. Cable tracing, dressing, jointing, and lugging if required shall be done by the successful bidder.
10. Any wiring modification work required for safety and trouble-free operation of the system will be in the scope of successful bidder.
11. The successful bidder shall maintain a separate register for daily consumption of spares. He shall furnish the future requirement of spares well in advance. Spares will be procured and supplied by GMDC.
12. In the event of an emergency the successful bidder shall mobilize work in general shift by redeploying his staff from regular shifts, as per the requirement of GMDC officials.
13. The following items are also under the successful bidder's scope: -
 - a. Megger
 - b. Multimeter & clip on meter
 - c. Toolbox
 - d. Crimping tool
 - e. Cable dressing material
 - f. Emery paper, all chemicals required for cleaning of electrical parts (excluding grease, diesel.)
 - g. Dungy cloth, gada cloth, waste, cotton and soap.
 - h. Safety items like gloves, shoes, helmets and safety belts.

- i. Hydrometer
- j. Induction heater
- k. Bearing puller
- l. Air blower & hot air gun
- m. Halogen fixers with tube, insulation tap rolls
- n. Lifting and shifting arrangements like chain block, nylon belt, chain rope, D cycle, pulley, etc.

Note: The above list of tools and tackles is not exhaustive and indicative only, if any other tools and tackles is required to complete the job, it shall also be in successful bidder's scope.

14. Any other work which are not covered in the above list but are essentially required for the reliable operation shall be under the successful bidder's scope.
15. The waste material/scrap material generated during maintenance shall be properly stored and disposed off as per the instruction of the GMDC EIC to the places identified.
16. The successful bidder shall maintain all types of reports like PM sheet, equipment maintenance history, formats as per GMDC etc. and submit a set of copy to GMDC every month.
17. All drawing and manuals shall be maintained by the successful bidder. If xerox copy of any documents like drawing, flowchart, blank/filled format, manual shall be required, then that shall be in bidder's scope.
18. Each deployed manpower of the bidder shall wear safety PPEs and carry electrical line tester with them.
19. Any electrical work if required during odd hours i.e., after or before general shift, shall be arranged and carried out by the bidder without any extra financial burden to GMDC.

12.3.6.3 C&I maintenance of Lignite, Lime, and Ash Handling Plants

1. ATPS has ABB make AC 800 M PLC systems supplied by M/s. ABB to control the process parameters of lignite & limestone handling system having 4 RIO panel, PP-320 touch screen, GE Fanuc (CPUE05) PLC system at stacker reclaimer machine area,

workstations, remote I/O panel, dry fog system & dust suppression systems. ALLEN BRADLY 1756 PLC (ROCKWELL) make PLC System at AHP. The field instruments contain electronic belt weighers, switches, etc.

2. Successful bidder must provide services for ABB AC800M, ROCKWELL PLC system and GE Fanuc make PLC system with the OEM for smooth, trouble free and breakdown attending services.
3. The scope of the work for the vendor/successful bidder is to maintain the control and instrumentation system and equipment by deploying qualified & experienced manpower for smooth & safe maintenance of system.
4. Scope of work includes routine, breakdown, shutdown and preventive maintenance of entire instrumentation works in lignite, limestone and ash handling system. PM reports, incident investigation report regarding failure of instruments needs to be submitted regularly:
 - a) PLC system checking of interlocks, inputs, outputs in the PLC through the functional block diagram and rectification of the faults, interconnection wiring trouble shooting, wiring checking in field junction boxes and field equipment. In future any modification required in wiring, SCADA or PLC (M/s ABB and M/s GE Fanuc) logic will be in successful bidder's scope.
 - b) Routine maintenance of limit switches, vibration monitoring system, field switches like zero speed switches, pull cord switches, belt sway switches, SOV, pneumatic cylinder, level switch, ELGI make compressor and dryer instruments, selector switch, UPS, marshalling panels, PLC panels, remote I/O Panels, bunker level indicators, local panels, RTs, computers and printers etc.
 - c) If required control and communication cable lying of various sizes and termination of above cables with glanding, ferruling and lugging.
 - d) Successful bidder must provide services for IPA make belt weighers for correctness, calibration and breakdown if any. Preventive, routine and breakdown maintenance of total 09 Nos. IPA makes belt weighers will be done by successful bidder. This covers PCB checking, connectors checking, calibration with standard weights, load cell voltage, tacho voltage checking and total troubleshooting of beltweigher system.

- e) Preventive, routine and breakdown maintenance of 06Nos,bunkerlevel transmitters which covers indicator checking, simulation mode checking, if required to bring level sensor from bunker to outside for further checking and calibration.
- f) C&I related maintenance and calibration and fault troubleshooting of dry fog system that includes belt load monitors, solenoid valves, pressure switches, and pressure gauges etc.
- g) Any material required for plant use from ATPS stores will be collected by successful bidder from ATPS Stores and if any damaged equipment, spare parts etc. is to be submitted to ATPS stores by successful bidder.
- h) At stacker reclaimer machine area preventive and breakdown maintenance of GE Fanuc PLC system that includes I/O checking, interconnection wiring troubleshooting if any, DI,DO,AI,AO.
- i) Module and module channels healthiness checking of PLC panel and remote I/O panel, touch panel. Any modification in SCADA or ladder logic in future if any will be in successful bidder's scope. Also, preventive and breakdown maintenance of belt weighers, calibration. if required, limit switches, anemometers, encoders, field control junction boxes, two Nos. RF type level switches etc.
- j) However, for annual overhauling and for regular/breakdown visits successful bidder will enter into a separate AMC. Successful bidder will provide AMC to the OEM.
- k) Cable tray, cable gallery cleaning and dressing work at lignite, lime, ash system.

The instruments/equipment listed above are only indicative. All the instruments and equipment: that are not listed but are part of the lignite, limestone and ash handling systems are covered under the scope of the successful bidder.

- 5. The successful bidder shall maintain a register for works done in general shift ®ular shift.
- 6. External cleaning of, control panels, shall be done before taking up breakdown maintenance/running maintenance. All works shall be carried out after taking proper line clear / work permit. The successful bidder shall assist operation staff in isolating power supply and carrying out other precautionary work for taking the line clear/work permit.

7. Cleaning of cable trays in connection with maintenance. Work shall be arranged by the successful bidder.
8. Painting of C&I equipment, if required, shall be in bidder's scope.
9. GMDC will have the right to divert the successful bidder's manpower to other areas within the scope of the contract to avoid idle hours.
10. The successful bidder shall arrange for wheelbarrows, trolleys, scaffoldings required for maintenance and also display the necessary safety boards at the area of maintenance works.
11. Cable tracing, dressing and jointing, lugging if required shall be done by the successful bidder.
12. Any wiring modification work required for safety and trouble-free operation of the system will be in the scope of successful bidder.
13. The successful bidder shall maintain a separate register for daily consumption of spares. He shall furnish the future requirement of spares well in advance. Spares will be procured and supplied by GMDC.
14. In the event of an emergency the successful bidder shall mobilize work in general shift by redeploying his staff from regular shifts, as per the requirement of GMDC officials.
15. The following items are also under the successful bidder's scope:
 - a) Megger
 - b) Tool box
 - c) Cable dressing material
 - d) Emery paper, all chemicals required for cleaning of electrical parts (excluding Grease, diesel.)
 - e) Dungy cloth, Gada cloth, waste, cotton and soap.
 - f) Safety items like Gloves, Shoes, Helmets and Safety belts.

Note: The above list of tools and tackles is not exhaustive, if any other tools and tackles is required to complete the job, it shall also be in successful bidder's scope.

16. Any other work which are not covered in the above list but are essentially required for the reliable operation shall be under the successful bidder's scope.

17. The waste material/scrap material generated during maintenance shall be properly stored and disposed of as per the instruction of the GMDC EIC to the places identified.
18. The successful bidder shall maintain all types of reports like PM sheet, equipment maintenance history, formats as per GMDC etc. and submit a set of copy to GMDC every month.
19. All drawing and manuals shall be maintained by the successful bidder. If xerox copy of any documents like drawing, flowchart, blank / filled format, manual shall be required, then that shall be in bidder's scope.
20. Each deployed manpower of the bidder shall wear safety PPEs.
21. Any electrical and C&I work if required during odd hours i.e., after or before general shift, shall be arranged and carried out by the bidder without any extra financial burden to GMDC.
22. C&I equipment needs to be repaired and install during maintenance new spare will be provided by GMDC with proper justification and evidence report.

11.3.6.4 Maintenance of weighbridges

1. The successful bidder must operate and maintain 3 Nos. weighbridges installed at power project.
2. The maintenance of complete weighbridge system includes weighbridge cabin computers, printers, UPS and other related all accessories/equipment/spares/plates required for operating of the weighbridge. If required new installation of weighbridge in future instead of existing weighbridge, it will be installed by successful bidder at their cost and contract will be considered as BOOM (built, own, operate and maintain) type without any extra payment. The existing weighbridge scrap/spares will be given to GMDC.
3. The material like load cells provided by successful bidder shall be of reputed/branded make of ISI/CE/NTEP mark only and compatible with existing GMDC software.
4. Section used in the maintenance of weighbridge platform shall have adequate strength and size.
5. The successful bidder shall have to operate and maintain all the weighbridge as in good conditions.

6. Testing and stamping from concerned authority will be the responsibility of bidder.
7. The weighbridges at project shall be calibrated fortnightly and to be certified by GM (Project).
8. Daily cleaning of the weighbridge including above the platform and underneath the platform is essential and submit the report to GMDC officer in-charge.
9. The weighbridge system should have capacity of 50MT and suitable to weigh at least 22 and 27 MT net weight capacity of dumper/truck.
10. Successful bidder will have to make necessary arrangements to get minimum 95% machine output per month.
11. The successful bidder must have a valid license by weights & measurement department. Copy of the same duly attested should be submitted. License from department of metrology, Government of Gujarat for manufacturing/repairing/servicing of electronic lorry weighbridge in their name. License should be possessed for repairing and servicing for the weigh bridges as per the standards of weight and measure act in the state.
12. Successful bidder shall have to supply all tools, tackles, consumables and required spares, software etc. for maintenance of whole system of weighbridges.
13. General Terms & Conditions:
 - a) All types of hoist maintenance are to be done regularly and maintained in a healthy condition.
 - b) The successful bidder must arrange for services of specialists (i.e., vibration experts, etc.), if required.
 - d) The running maintenance team should be available in the system round the clock to attend the defects when informed by the operations team. The rectification process of any defects/faults should be initiated immediately upon identification/reporting.
 - e) Permit to work system is to be followed to carry out maintenance job. All maintenance activities are to be carried out by the successful bidder as directed by GMDC EIC.
 - f) The successful bidder should analyze breakdown and maintenance schedule and update preventive maintenance schedule and overhauling of equipment with PERT and CPM charts for mechanical, electrical, and C&I systems in consultation with GMDC site team.

- g) Successful bidder must plan and prepare the schedule for oil filling in gearboxes and fluid couplings etc. based on the running hours and manufacturers' recommendation.
- h) The successful bidder must follow the routine and preventive maintenance schedule strictly as per the updated and agreed PM schedule. The preventive maintenance checklist for every equipment is to be followed and submitted to GMDC daily after completion of job as mentioned in the next clause.
- i) The successful bidder shall have to submit daily report showing maintenance work carried out, spare parts/consumables etc. replaced, operational running hours, status of availability of system /equipment of lignite and lime feeding system.
- j) Equipment history register is to be maintained as per instruction of GMDC and to be submitted weekly for review.
- k) The maintenance scope includes analysis of failures and to implementation of corrective actions for improvement in plant performance.
- l) For addressing unplanned/breakdown maintenance, successful bidder must deploy maximum manpower immediately so that the break down equipment is revived as soon as possible. Incident investigation/Root Cause Analysis (RCA) report must be submitted for major breakdowns to EIC.
- m) Successful bidder must arrange belt jointer service with hot vulcanizing machine, vulcanizing solution, and all consumables for hot vulcanizing of conveyor belts, pulley lagging replacement work as and when required. Vulcanizing solution should be of reputed quality brand like, Thejo, Om, Continental etc. approved by EIC.
- n) Bidder must carry out chute repair work periodically as per requirement which includes replacement/repair of MS mother plates and SS liners plate. MS and SS plate shall be provided by GMDC.
- o) Any kind of maintenance work which requires workshop will be in bidder's scope. For example, wear shaft built up and machining, repair of gear box, gear box bearing replacement, replacement of fluid coupling bearings and casing, fabrication chute liners and mother plates, fabrication of coffin box, skirt frames, drilling and thread tapping work, etc.

- p) If any damage occurs due to negligence of the successful bidder, they must bear the entire cost of repair/replacement of equipment/machinery to the satisfaction of GMDC. Decision of EIC shall be final and binding to successful bidder.

13 Period and Duration of Work

1. The duration of the contract is for a period of Three month from the date of commencement of work. However period of contract may be extended up to another required period on the same terms and conditions of the contract subject to the entire satisfaction of GMDC.
2. In case of any reason including adverse working conditions during execution of the contract that may compel suspension/closure of the contract, GMDC shall be at liberty to conclude/postpone/complete/terminate/foreclose this contract. No compensation or payment shall be made on account of non-completion of the balance qty. work or for whole contract quantity. Decision of GMDC in this regard shall be final and binding to Bidder
3. All the activities arising under the scope of the works shall be complied with various statute/laws/Rules/Regulations etc. including Environmental laws and if the Successful Bidder fails to comply the laws; it will be done at the risk and cost of the Successful Bidder and expenses will be recovered from RA Bills of the Successful Bidder.
4. The Successful Bidder shall submit a daily report of deployed manpower details in the format as provided by GMDC EIC. The Successful Bidder shall submit a weekly report of tools and tackles and status thereof to the GMDC E-I-C.
5. The Successful Bidder shall have to follow all safety norms. The Successful Bidder shall be responsible for safety of equipments and plants. If any damages occur then the Successful Bidder shall be responsible for repairing the damages made to the equipments and plant of GMDC and compensate for the cost of damages.
6. GMDC shall not be made liable for any damage and /or compensation for the manpower and/or tools and tackles provided by the Successful Bidder.
7. GMDC reserves the right to review and assess the performance of the work at any time during the contract period. In case of poor or unsatisfactory performance and/or breach of any terms and conditions of the contract, GMDC shall have discretion to take appropriate action including termination of the contract.

14 Liquidated Damages (L.D.)

- 14.1** If the Contractor fails to start the actual work within 14 days from the date of acceptance of LOI, a liquidated damages @ Rs.15, 000/- per day shall be leviable, for a maximum period of 20 days. If the Contractor fails to start work even after 20 days, the GMDC will be free to forfeit the EMD and/or SD, or both the EMD and SD and take action stipulated.
- 14.2** The successful bidder has to engage manpower mentioned as per list provided in scope of work section. If the deployment is less than the number mentioned in the contract on daily basis, then a penalty equivalent to one and half(1.5) the rate of supply of manpower against absenteeism/ shortage/ not deployed on daily basis will be recovered from the monthly RA bill of the successful bidder. However, a maximum of 3 days in respective month absenteeism of 20 % of respective manpower is allowed.
- 14.3** The successful bidder shall have to maintain 100% availability of healthy tools and tackles for carrying out departmental works smoothly. The list of such equipment is given at scope of work section., The Contractor shall have to submit the available tools and tackles list and status on weekly basis. Any shortfall, if found shall be considered as non-fulfillment of availability of tools and tackles and shall be liable to levy of liquidated damage at the rate of entire quoted rate on daily basis for the non-available period.
- 14.3.1** Example: Suppose the contractor shall have to provide tools list consists of A, B, C, D, E.
- 14.3.2** Out of them, if tools-A not available & healthy for any day of the week, Then GMDC shall deduct the total quoted price for tools (A, B, C, D, E) for the day for non-availability of tools.
- 14.3.3** Amount of deduction= Quoted price for tools and tackles x Nos. of days of non-availability of any tools /365
- 14.3.4** However, If nos. of particular tools required is more than 2 nos./ sets, and the successful bidder maintains at least 80% of that particular tools / tackles, There shall be no penalty / LD in that case.
- 14.4** The Successful bidder shall ensure that deployed manpower shall not go on strike in any case. In case any of the supplied manpower goes on strike, for such period of strike, liquidated damages at the rate equivalent to five times of the per day rate of supply shall be deducted from the monthly RA bill of the successful bidder.
- 14.5** Under any circumstances GMDC shall not be liable to pay any compensation to the Contractor.
- 14.6 Overall cap on the total LD shall be 5% of the contract value.**

15 Insurance

- 15.1** Insurance –The Successful bidder shall take full responsibility to take all precautions to prevent loss or damage to the works or part thereof for any reasons whatsoever (except for reasons which are beyond control of the Successful bidder or act of God, e.g. flood, riots, war, earthquake, etc.) and shall at his own cost, repair and make good the loss/damage to the work so that on completion, the work shall be in good order and condition and in conformity with the requirements of the Contract and instructions of the Project Authority, if any.

- 15.2** The Successful bidder shall, at all times during the pendency of the Contract, indemnify the GMDC against all claims, damages or compensation under the provisions of the Employee's Compensation Act and shall take insurance policy covering all risk, claims, damages or compensation payable under the Employee's Compensation Act or under any other law relating thereto.
- 15.3** The Successful bidder shall ensure that the insurance policy/policies are kept alive till full expiry of the Contract by timely payment of premiums and shall not be cancelled without the approval of the GMDC. The cost of premiums shall be borne by the Successful bidder and it shall be deemed to have been included in the tendered rate.
- 15.4** In the event of the Successful bidder's failure to effect or to keep in force the insurance referred to above or any other insurance which the Successful bidder is required to effect under the terms of the Contract, the GMDC may effect and keep in force any such insurance and pay such premium/premiums as may be necessary for that purpose from time to time and recover the amount thus paid from any moneys due by the Successful bidder.

16 Goods & Service Tax

- 16.1** All bidders are required to submit their GST number and date in the bid. Bid received from unregistered bidder will not be considered and out rightly rejected.
- 16.2** Bidders are requested to quote their rates without GST. GST will be paid/adjusted/reimbursed to the Successful bidder as per prevailing rates and rules to the extent directly related to the services rendered OR Goods supplied by the Successful bidder under the said contract subject to production of documentary proof and Successful bidder will mention the GST amount separately in the invoice/bill along with SAC/HSN Code under GST.

17 Payment Terms

- 17.1** The Successful Bidder shall submit bill for the after completing the mentioned work in all respect including removal shifting and submitting the old spares, scraps to designated place / main store, cleaning of the location.
- 17.2** Payment shall be done only after completion of total work.
- 17.3** Bill shall be submitted to the office of the General Manager (Power Project), ATPS with following documents:
- Duly Certified Date wise report of manpower supplied with their category.
 - Duly Certified list of Healthy tools and tackles available at site for BMD, TMD & BOP work.

- Copies of Muster Roll and Payment sheets showing the amount of PF deducted from salaries of the labour and employees, PF No. of labour and employee, amount of contribution of the Contractor.
- Copy of the challans for the PF amount deposited in RPFC for the previous month, in respect of PF deduction related exclusively to this contract as well as copies of monthly returns i.e. 3A and yearly 6A.
- Check List.
- Compliance of all law relevant with the work carried out by Contractor such as Labour, and Factories Act etc.

17.4 Bill, submitted at the office of Head (PP & Admin) will be processed there considering following deductions.

- Income tax as per provision of Income Tax Act, and other Taxes (and surcharges) applicable in force from time to time
- Cost of any other services provided / material supplied plus 15% administrative charge, if any, by the GMDC.
- Liquidated damages,
- Other deductions, if any.
- An ad-hoc payment @ 80% of the payable amount arrived after considering above deduction, will be paid by office of the G.M. [Project], within 30 days of submission of the bill along with its details
- The bill shall then be sent to GMDC's Corporate Office at Ahmedabad for verification, auditing and approval. Balance 20% payable amount of Running account bills shall become payable by Project only within two weeks of the receipt of the approved bill from Corporate Office

17.5 Payable amount arrived after considering above deduction, will be paid by office of the GM Head (PP & Admin), within 30 days of submission of the bill along with its details.

18 Statutory Obligations

- That the Successful Bidder shall pay wages and benefits in accordance with the applicable laws and shall not pay less than as notified by the Government Authorities from time to time and shall maintain the employment records as required under applicable laws.

- That the Successful Bidder shall get his own License under Contract Labour (Regulation and Abolition) Act. It shall be binding to get the same renewed from time to time and shall maintain all the records as per the act.
- That the Successful Bidder shall be responsible to enroll his employees, deduct, add and deposit in the relevant accounts the contributions as required under the Employees State Insurance Act, 1952 and the Employees Provident Funds and Miscellaneous Provisions Act 1952 and any other enactment's covered under the various applicable labour laws as well as maintain all books of records for the staff and employees deputed by it for this contract such as required under any laws applicable. The Successful Bidder shall also furnish a copy of such statements as documentary proof to the GMDC.
- That if the Successful Bidder is not covered under the Employees State Insurance Act, 1952 then it shall be the duty of the Successful Bidder to take appropriate insurance cover under the Workmen Compensation Act and take Group Personal Accident Policy for all the employees deputed at the project site.
- The Successful Bidder has to issue to the employee's Identity card with their photos and shall also maintain relevant register.
- That the Successful Bidder shall give leave/holiday to its workforce as per the provisions of labour laws applicable.
- Every person deployed by the Successful bidder in a plant must wear safety gadgets to be provided by the Successful bidder.
- Any statutory clearance, permission required for the work, it's completion, commissioning shall be in bidder's scope.
- The Successful bidder will be required to obtain License from the office of the Labour Commissioner for the required strength of labour, before commencement of work at site and the same shall be maintained updated and valid throughout the currency of the contract.
- That the Successful Bidder would obey with all applicable laws and maintain all such necessary records as necessitated under such enactments.
- The Successful bidder shall comply with other statutory provisions of Law. The Successful bidder shall comply with all applicable laws, ordinances, approved standards, rules and regulations, and shall procure all necessary municipal and governmental permits, licenses and inspection and shall pay all fees and charges in connection with the items covered by the contract. The Successful bidder shall serve GMDC harmless as a result of any in factions thereof. Successful bidder will be solely liable for all non-compliances. The following are

some of the major Government of India Acts and Regulations to be complied with by the Successful Bidder. The List is illustrative and not exhaustive.

- The Indian Factories Act of 1948 (63 to 1948) and Amendments and Rules (Amended up to date)
- The Electricity Act, 2003 and rules made there under
- The Indian Boiler Regulation Act, 1950 and rules made there under
- The Minimum Wages Act, 1948
- The Employees Compensation Act 1923 and Amendment Act 2010
- The Payment of Wages Act 1936 and Amendment Act 2012
- Payment of Bonus Act 1965 and Amended up to date
- Contract Labour Regulations & Abolition Act 1970
- Interstate Migrant Workmen (Regulations) Act 1979

18.1 The Successful bidder shall also indemnify the GMDC against any claims, compensations, damages, loss, liquidated damages etc. for breach and / or non-fulfillment of the prevailing Rules and Regulations and other statutory provisions in force from time to time and applicable to the work during the currency of contract.

18.2 If any amount becomes payable by GMDC as a result of any claim or application in terms of the provisions or non-compliance of provision of the any Acts and the Rules and Regulations, By-laws or the Orders made there under, applicable from time to time, such amounts shall be recoverable from the Successful bidder for which GMDC will not be responsible for any compensation.

19 Bankruptcy

If the Successful bidder commits an act of Bankruptcy or goes into liquidation except for construction purposes, or if its business is carried on by a receiver, such receiver, liquidator or any person in whom the contract may become vested shall forthwith give notice thereof in writing to GMDC and in reasonable time during which he shall take all reasonable steps to prevent stoppage of performance of the contract, have the option of carrying out the contract subject to his or their providing such guarantees as may be required by GMDC but not exceeding the value of the work for the time being remaining unexecuted.

In the event of stoppage of performance under the contract, the period of option under this clause shall be decided by GMDC considering the situation, provided that the above option is

not exercised, GMDC may terminate the contract by serving notice in writing to the Successful bidder. The power and provision so reserved to GMDC on taking of the work out of the Successful bidder's hands shall apply as far as they may be when the contract is so terminated.

20 Notice

Written notice shall be deemed to have been duly served if delivered to the individual or to Successful bidder or to the Signing Authority of the GMDC from whom it is intended, or if delivered at or sent by mail or post, to the last business address known to him who gives the notice.

21 GENERAL CONDITONS

- Medical examination of all persons to be employed by the Contractor in the power project shall have to be conducted as per law.
- All the tools, tackles and equipment proposed to be used in the power project shall be physically examined by GMDC's Engineers for verifying its use-worthiness in the plant.
- All consumable items like cotton west, diesel, petrol, gases (Oxygen/DA/LPG) and General Purpose welding electrodes, cutting & grinding wheels (AG4,AG5,AG7) are in bidder's scope.
- All the persons of the Contractor engaged inside the power project area must wear Helmet and Shoes. As and when required other personal protective wears shall also be provided to them.
- The Contractor shall take adequate statutorily prescribed insurance cover for all men and machinery engaged by him/it for performance of the work at site. Any insurance claim brought against the GMDC by an individual or by customers or by any such other persons who suffered damage due to negligence of the Contractor or his employees, the same shall be settled by the Contractor at his cost.
- The Contractor has to ensure supervision of the work through duly qualified and competent persons and also has to make sure that a responsible Manager/ Engineer is full time available on work site to whom GMDC can issue the instruction and who can fulfill such instructions. Contractor shall appoint qualified Manpower.
- The Contractor shall not change the constitution of the firm/name during the currency of the contract without prior approval of GMDC. Upon such change in constitution and/or name, Supplementary agreement to that effect shall be executed and if the SD is submitted in form of BG/FD than fresh BG in the name and/or constitution shall be submitted failing which necessary action as deemed fit by GMDC shall be taken.

- All the staff members of the Contractor shall carry Photo Identity Card while on duty.
- Contractor shall have to work in three shifts and by three different relays compulsory(Mandatory). The time of commencement of work and of the end of the work for each relay will be in accordance with the timings of GMDC's own workings. Duration of each shift will be Eight hours, with at least half-an hour rest interval in between. The Contractor shall ensure that the attendance of all the supplied manpower shall be taken through biometric attendance machine.
- The Contractor shall have to open Bank accounts of their workers and shall be required to deposit the wages, advance payment, welfare payments, bonus and all other payments in their accounts. Contractor's bill shall be released only after receiving detailed statement showing name wise wages and all other payments if any having deposited in the accounts of contractor's workers.
- The Contractor shall provide necessary arrangement for transportation of manpower from Township or other locations to work site with all the required safety provisions/devices enforced by statutory authority and other applicable laws/rules or as directed by GMDC authority.
- All the equipment to be deployed by the Contractor must be maintained in proper working order and be fitted with all the required safety devices enforced by statutory authority e.g. Audio Visual Alarms, fire extinguisher etc.
- In case of any Central/State Government directives regarding Power Plant operation and execution of work related thereto, the same shall have to be strictly adhered to and binding upon the Contractor for implementation, for which GMDC will not be responsible for any compensation.
- The Contractor shall abide by the provision of the Motor Vehicle Act for machinery. Any consequences arising out of non-compliance of said Provisions will be at the Contractor sole risk and cost, for which GMDC will not be responsible for any compensation.
- To meet the exigencies arising out of natural calamities or disaster or during any emergency, GMDC reserves the right to take away any of the equipments/machineries deployed at the project site with a mutually consented rate. A separate agreement will be made to this effect.
- MD-GMDC is authorized to take suitable decision and action in case of requirement to amend/alter the contract conditions/quantities of the works/ extension of the contract period/allotment of additional works/revision of the rates of the work etc. if necessary in the interest of GMDC.

22 Canvassing Not Permitted

- 22.1 Bidder should not canvass their offer personally or otherwise by approaching the Chairman or the Member of GMDC. If any Bidder wants to make any representation regarding his offer, he should write to the General Manager (Power), if he desires, but personal and oral representations are not permitted.
- 22.2 In spite of the above clear instructions, any Bidder is found to canvass his offer or against his competitor's offer through personal approach to the competent authority or the officials of GMDC, their offer will be rejected without assigning any reason and the firm even is black listed.

23 Non Fulfillment of Terms And Condition of The Contract

- 23.1 If the Successful bidder fails to carry out the work as per terms and conditions of the contract to the satisfaction of the GMDC, GMDC shall be entitled to forfeit the security deposit paid by the Successful bidder. This however, shall not absolve the Successful bidder from his obligation to fulfill the contract. In such event, the GMDC shall have a right to complete and / or to get the work completed at the cost & risk of the Successful bidder and the Successful bidder shall be responsible to pay such cost incurred by the GMDC to complete the work and / or to get the work completed.
- 23.2 Likewise, if the Successful bidder does not fulfill the terms and conditions of the contract and does not carry out the work up to the entire satisfaction of GMDC, GMDC has the right to forthwith terminate the contract at its sole discretion, without assigning any reason, Under such events, the GMDC shall be entitled to forfeit the security deposit paid by the Successful bidder and the GMDC shall have a right to complete the work and / or to get the work completed at the risk and cost of the Successful bidder.
- 23.3 For any reasons, if it is required, the GMDC reserves rights to cancel, terminate, amend and / or alter the contract and / or bifurcate and / or reduce the contract work at any time without giving any notice or reason to the Successful bidder and without incurring any responsibility. For such cases, Successful bidder shall have to take away his labour, tools, tackles, machinery, equipment etc. and shall leave the site at once or shall have to carry out the instructions of the GMDC.

24 Termination Of Contract

- 2.7. If at any time during the currency of this contract, if any breach occurs due to the reasons attributed to the Successful bidder, GMDC shall be at liberty to terminate this contract without assigning any reasons, whatsoever, for such termination and any losses and/or damages

occurring due to such termination shall be borne by the Successful bidder. GMDC shall be entitled to forfeit Security deposits as Liquidated damages.

25 Governing Law

This Tender and subsequent Contract shall be construed and interpreted in accordance with and governed by the laws of India.

26 Jurisdiction

The matter related to any dispute or difference arising out of this Tender and subsequent contract shall be subject to the exclusive jurisdiction of Court at Ahmedabad only.

27 Arbitration

2.8. All questions, disputes, differences whatsoever which may at any time arises between the parties to this Tender and subsequent contract in connection with the Tender and subsequent contract or any matter arising out of or in relation thereto, shall be referred to Sole Arbitrator as per the provisions of Arbitration and Conciliation Act, 1996 and subsequent amendment thereto and the venue of arbitration proceedings shall be at Ahmedabad only. The Language of the Arbitration shall be in English only.

28 Completion Of Work

28.1 Upon the Successful bidder fulfilling the entirety of its obligations under the Contract to the satisfaction of GMDC and subject to terms and conditions of the Contract, it shall become eligible to apply for a Completion Certificate. The General Manger (Power Project) of GMDC shall formally issue the Completion Certificate, after verifying from the completion documents and satisfying himself that the Works under the Contract have been completed in accordance with all the provisions of this Contract. The Successful bidder, after obtaining the Completion Certificate shall become eligible to present the final bill for the Works executed by it under the Contract.

28.2 Upon completion of Works under the Contract and before the application for the Completion Certificate, the Successful bidder shall clear the project of GMDC of all rubbish, dirt, structures, scrap, oily rags etc. Failure to clear the project may constrain GMDC to clear the said site at the risk and cost of the Successful bidder.

28.3 The Successful bidder shall provide GMDC with any and all documents/records/proofs that may be demanded before issuance of Completion Certificate.

29 Accident and Responsibilities of Bidder

- 29.1** The entire responsibility on account of any accidents, damage or personal injury which may occurred to any of the Successful bidder's vehicles/ equipments or his/its employees or any outside party shall be exclusively that of the Successful bidder and no claim whatsoever shall be entertain by the GMDC on this account. The Successful bidder shall keep the GMDC indemnified from all the consequence.
- 29.2** In the event of any breakdown or accident during the course of any operation, the Successful bidder shall notify the facts to the Project Authority or any other officer immediately present there of such incidence and shall simultaneously make adequate remedial arrangements on his/its own cost and risk and as per the instruction of the Project Authority.
- 29.3** The Successful bidder shall pay all claims, damages and compensation with cost arising out of or resulting there from to the third party(s) and in case the GMDC would be required to face any proceedings all to pay any amount on the aforesaid account, it shall be deemed to have been discharge on behalf of the Successful bidder, the same amount shall be recovered half-an hour rest interval in between. The Successful bidder shall ensure that the attendance of all the supplied manpower shall be taken through biometric attendance machine.

30 Foreclosure

In case of any necessity arising due to local working conditions or any unforeseen reason not in the control of the GMDC or any reason what so ever GMDC shall be at liberty to Fore close the contract without assigning any reasons or notice there for.

31 Force Majeure

- 31.1** Force majeure is herein defined as any cause which is beyond the control of the Successful bidder or the GMDC as the case may be which they could not foresee or with a reasonable amount of diligence could not have foreseen and which substantially affect the performance of the contract, such as:
- 31.2** Natural phenomena such as flood, draughts Cyclone, earthquake and epidemics, declaration of war.
- 31.3** Acts of any government, including but not limited to war, declared or undeclared priorities, quantities, embargoes, providing either party shall within fifteen (15) days from the occurrence of such a cause notify the other in writing of such cases.

- 31.4** The Successful bidder will advise, in the event of his having resort to this clause by a registered letter duly certified by the statutory authorities, the beginning and end of the cause of delay, within fifteen days of the occurrence and cessation of such Force Majeure condition. In the event of delay lasting over two months, if arising out of Force Majeure, the contract may be terminated at the discretion of the GMDC.
- 31.5** For delay arising out of Force Majeure, the Successful bidder will not claim extension in completion date for a period exceeding the period of delay attributable to the causes of force Majeure and neither company nor the Successful bidder shall be liable to pay extra costs (like increase in rates, remobilization, advance, idle charges for labour and machinery etc.) provided it is mutually established that the Force Majeure conditions did actually exist.
- 31.6** If any of the Force Majeure conditions exists in the place of operation of the Successful bidder even at the time of submission of bid, he will categorically specify them in his bid and state whether they have been taken into consideration in their quotations.
- 31.7** The Successful bidder or the GMDC shall not be liable for delays in performing his obligations resulting from any force majeure cause as referred to and/ or defined above. The date of completion will, subject to hereinafter provided, be extended by a reasonable time.

Annexure "A"

Instruction to Bidders for Online Tendering

- 4.1 All Bidders must submit their bid online through the website <https://gmdctender.nprocure.com>.
- 4.2 Bidders who wish to participate in online tenders will have to procure / should have legally valid Digital Certificate (Class III) as per Information Technology Act-2000, using which they can sign their electronic bids. Bidders can procure the same from any of the license certifying Authority of India or can contact (n) code solutions- a division of GNFC Limited, who are licensed Certifying Authority by Government of India at address mentioned below at clause 5.
- 4.3 All bids should be digitally signed. For details regarding digital signature certificate and related training involved at the below mentioned address should be contacted:

Address:

(n)Procure Cell

(n)Code solutions A division of GNFC

403, GNFC Info-Tower, Bodakdev, Ahmedabad- 380 054 (India)

Tel: +91 26857316/17/18 Fax: +91 79 26857321, Toll Free: 1800-233-1010

E-mail : nprocure@gnfc.net

- 4.4 Kindly take note that, valid Digital Signature Certificates is a must for all the interested Bidders. Online tendering process is not possible without a valid digital signature certificate.
- 4.5 Interested Bidders are also requested to complete their procedure for taking digital signature certificate in respect to filling of application form, supporting documents with necessary fees at least 3 days before last date of tender submission.
- 4.6 (n) code solutions reserves the rights to issue digital signature certificate after verification of application forms / supporting documents submitted by Bidder. (n) code solutions is fully authorized to issue digital signature certificate to Bidders.
- 4.7 Bidders who have no facility to participate in on-line tenders are requested to contact (n) code solutions for the same.
- 4.8 Free vendor training camp will be organized every Saturday between 4.00 to 5.00 P.M. at (n) code solutions- A Division of GNFC Ltd. at address mentioned . Bidders are requested to take benefit of the same.
- 4.9 All the correspondence in respect to training, support or digital signature certificate should be addressed to (n) code solutions directly on the above mentioned address. In case the Bidders face any difficulty, they may contact the officials of the GMDC or GNFC on the below mentioned details:

a. GMDC:

Contact Person: General Manager (Power)

Contact numbers: 079-27913200/3501 Ext No 1760

E-Mail: gm.power.co@gmdcltd.com

b. GNFC:

Contact Number: 079- 26857316/17/18

E-Mail: nprocure@gnfc.net

Annexure "B"

Annexure I.

Finance Department, GR. No.: FD/MSM/e-file/4/2023/4020/D.M.O.

Date: 11/03/2024

(A) Guarantees issued by the following banks will be accepted as SD/EMD on permanent basis:

❖ **All Nationalized Banks**

(B) Guarantees issued by the following Banks will be accepted as SD/EMD for the period up to March 31, 2025. The validity cut-off date in the GR is with respect to the date of issue of Bank Guarantee irrespective of the date of termination of Bank Guarantee.

Sr No	Name of Banks	Sr No	Name of Banks
1	AXIS Bank	19	Kotak Mahindra Bank
2	AU Small Finance Bank	20	South Indian Bank
3	Bandhan Bank	21	Tamilnadu Mercantile Bank
4	City Union Bank	22	Utkarsh Small Finance Bank
5	CSB Bank	23	Ahmedabad Mercantile CO-op. Bank
6	DBS Bank India Limited	24	Nutan Nagrik Sahkari Bank Ltd.
7	DCB Bank	25	Rajkot Nagarik Sahakari Bank Ltd.
8	Equitas Small Finance Bank	26	Saraswat Co-Operative Bank Ltd
9	FEDERAL Bank	27	SVC Co-Operative Bank Ltd.
10	HDFC Bank	28	The Cosmos Co-op Bank Ltd.
11	HSBC Bank	29	The Gujarat State Co-operative Bank
12	ICICI Bank	30	The Mehsana Urban Co-Op. Bank
13	IDBI Bank	31	The Surat District Co-op Bank
14	IDFC First Bank	32	The Surat People's Co. Op. Bank Ltd
15	IndusInd Bank	33	The Kalupur Commercial Co-op. Bank
16	Jana Small Finance Bank	34	Baroda Gujarat Gramin Bank
17	Karnataka Bank	35	Saurashtra Gramin Bank
18	Karur Vysya Bank		

All the eligible banks are instructed to collect the original documents/papers of guarantee from the concerned tendering authority.


(Bhavya Verma)

Deputy Secretary (Budget)
Finance Department

-----XXXXX-----

Bank Details for RTGS

VALID FOR THREE MONTHS ONLY

D	M	Y	Y	Y	Y	Y	Y	Y	Y

OR ORDER

₹

FOR GUJARAT MINERAL DEVE CORP LTD

ICICI Bank
Ahmedabad Branch
Jmc House, Opp. Parimal Garden, Ahmedabad - 380006.
RTGS/NEFT IFSC Code : ICIC0000024

RIVILEGE
REWARDS

James V. V.

Pay Rupees

Account No. 002405019379

CBS
BUSINESS BANKING - NEW CURRENT ACCOUNT
Payable at par at all branches of ICICI Bank Limited in India

28/12/12

1 4 9 1 0 9 9 0 3 8 0 2 2 9 0 0 2 0 0 1 9 3 7 9 2 9

AUTHORISED SIGNATORIES
Please sign above

Annexure "C"

Total manpower required everyday :(EMD/BMD/TMD/C&I/SWTP/MHP): 75 Nos

Sr. No.	Category of manpower	Nos. Manpower Required							Qualification	Experience
		EMD	BMD	TMD	C&I	SWTP	MHP	Total		
1	Engineer	2	1	1	2	0	4	10	BE/DIPLOMA (Mech/Elect/C&I)	4-6/8-10 years relevant experience in plant maintenance execution and planning
2	Technician	3	0	0	5	0	1	9	ITI (Electrician)/ Instrument mechanic course pass out from recognized institute	At least 3 years post qualification with 03 years relevant experience in plant
3	Helper	3	4	4	5	2	5	23	ITI (Fitter) course pass out from recognized institute	At least 03 years post qualification
4	M/w Fitter	0	1	1	0	0	1	3	ITI (M/w Fitter) course pass out from recognized institute	At least 10 years post qualification
5	IBR Welder	0	1	1	0	0	0	2	IBR Certificate course	At least 05 years post qualification
6	Structure Welder	0	1	1	0	0	0	2	ITI (Welder / Arc Welder) course pass out from recognized institute	At least 05 years post qualification
7	Grinder-man	0	2	2	0	0	0	4	ITI (M/w Fitter) course pass out from recognized institute	At least 10 years post qualification
8	Rigger	0	3	3	0	0	2	8	7th Pass	At least 05 years post qualification
9	Machinist	0	1	0	0	0	0	1	ITI (Tuner Certificate) course pass out from recognized institute	At least 05 years post qualification
10	Fitter	0	1	1	1	0	2	5	ITI (Fitter) course pass out from recognized institute	At least 07 years post qualification
11	Field operator	0	0	0	0	0	6	6	Diploma	Mech 3 years
12	Stacker Operator	0	0	0	0	0	2	2	ITI 3 years	ITI 3 years
Total								75		

Note:

The above qualification and experience shall be required for all the manpower. However, For the manpower who had worked at ATPS with same role and responsibility as designated shall be exempted from above.

Annexure "D"

LIST OF TOOLS AND TACKLES REQUIRED TO BE MAINTAINED (LOT)

Mechanical Maintenance

S. No.	Tool / Tackle	Description	Unit	Qty
1	CHAINBLOCK - 1T	HAND OPERATED CHAIN PULLEY BLOCK,LIGHT WEIGHT, CHAIN LENGTH : 6 MTR, MODEL- KP1, KEPRO MAKE 1 T CAPACITY, COMPACT SIZE, EASY TO CARY,	NOS	4
2	CHAINBLOCK- 2T	HAND OPERATED CHAIN PULLEY BLOCK, 2 T CAPACITY, COMPACT SIZE, EASY TO CARY,LIGHT WEIGHT, CHAIN LENGTH : 6 MTR, MODEL- KP2, KEPRO MAKE	NOS	4
3	CHAINBLOCK- 2T	HAND OPERATED CHAIN PULLEY BLOCK, 2 T CAPACITY, COMPACT SIZE, EASY TO CARY,LIGHT WEIGHT, CHAIN LENGTH : 26 MTR, MODEL- KP2, KEPRO MAKE	NOS	2
5	CHAINBLOCK-5T	HAND OPERATED CHAIN PULLEY BLOCK, 5 T CAPACITY, COMPACT SIZE, EASY TO CARY, LIGHT WEIGHT, CHAIN LENGTH : 6 MTR,MODEL- KP3, KEPRO MAKE	NOS	2
6	CHAINBLOCK-5T	HAND OPERATED CHAIN PULLEY BLOCK, 5 T CAPACITY, COMPACT SIZE, EASY TO CARY, LIGHT WEIGHT, CHAIN LENGTH :26 MTR,MODEL- KP3, KEPRO MAKE	NOS	2
7	CHAINBLOCK-5T	MODEL- KP3, KEPRO MAKE,COMPACT SIZE, EASY TO CARY, LIGHT WEIGHT, CHAIN LENGTH : 40 MTR,	NOS	2
8	CHAINBLOCK-10T	HAND OPERATED CHAIN PULLEY BLOCK, 10 T CAPACITY, COMPACT SIZE, EASY TO CARY, LIGHT WEIGHT, CHAIN LENGTH : 10 MTR,MODEL- KP3, KEPRO MAKE	NOS	2
9	SLING BELT	25MM NYLONE SLING BELT,01 MTR,CAPACITY-01 TON	NOS	05
10	SLING BELT	50MM NYLONE SLING BELT,02MTR,CAPACITY-02 TON	NOS	05
11	SLING BELT	NYLONE SLING BELT,CAPACITY-05TON,03MTR	NOS	05

12	SLING BELT	NYLONE SLING BELT,CAPACITY-05TON,10MTR	NOS	5
13	SLING BELT	NYLONE SLING BELT,CAPACITY-10TON,03MTR	NOS	4
14	SLING BELT	NYLONE SLING BELT,CAPACITY-10TON,10MTR	NOS	4
15	SLING BELT	NYLONE SLING BELT,CAPACITY-10TON,05MTR	NOS	4
16	4" ANGLE GRINDER	PDA 100M, 715-870 WATT, 12000 RPM, MAKE:HITACHI KOKI WITH 10 NOS OF CARBONE BRUSH	NOS	5
17	5" ANGLE GRINDER	PDA 125M, 715-870 WATT, 12000 RPM, MAKE: HITACHI KOKI WITH 10 NOS OF CARBONE BRUSH	NOS	2
18	7" ANGLE GRINDER	7" ANGLE GRINDING MACHINE,MAKE-HITACHI WITH 10 NOS OF CARBONE BRUSH	NOS	2
19	AIR BLOWER	AIR BLOWER, RPM -16000, 550 WATT, MODEL:RB40SA, MAKE : HITACHI KOKI	NOS	2
20	SPANNER	RING SPANNER SET,MAKE-TAPARIA(6-32)	SET	5
21	SPANNER	OPEN ENDED SPANNER(6-32)	SET	5
22	STAR SPANNER	STAR SPANNER SET (6-32)	SET	2
23	SPANNER	S14HXL 1/2" SQUARE DRIVE SOCKET SET,FORGED HIGH GRADE CHROME VANADIUM STEEL,44-50 HRC, MAKE-TAPARIA(MM SET)	SET	3
24	SLODGING RING	SIZE-30MM,32MM,34MM,36MM,38MM,41MM,46MM,48 MM,55MM,MAKE-GRIPHOLD	SET	4
25	SLODGING FIX	SIZE-46MM,55MM,65/75MM,MAKE-GRIPHOLD	SET	4
26	BOX SPANNER	BOX SPANNER SET,MAKE-TAPARIA(6-32) WITH TOMMY BAR	SET	4
27	PIPE SPANNER	PIPE SPANNER SET,MAKE-TAPARIA(6-32)	SET	2
28	RATCHET SPANNER	SIZE-17-19MM	NOS	06
29	RATCHET SPANNER	SIZE-24-27MM	NOS	06
30	RATCHET SPANNER	SIZE-34-36MM	NOS	4
31	RATCHET SPANNER	SIZE-32-34MM	NOS	4
32	RATCHET SPANNER	SIZE-34-36MM	NOS	4
33	PLASMA MACHINE	3 PHASE PLASMA MACHINE WITH ACCESSARIE NOZZLES	NOS	1
34	INDUSTRIAL	WITH 3 SWITCH & 3 SOCKET WITH 30	NOS	10

	SWITCH BOARD	METER CABLE		
35	TOOLBOX WITH SPANNER	COMPLETE TOOL BOX WITH RING-FIX SPANNER SET -01 EACH (6 TO 32MM), HAMMER 500GM-01NO., SCREW SPANNER-12"-01NO., SCREW DRIVER-10 X 200MM-01 NO., PIPE WRENCH-350MM -01NO., CENTRE PUNCH-01 NO. FLAT FILE -12: X 01 NO., ROUND FILE-01NO. 6" CHISEL - 01NO., ALLEN KEY MM SET -01NO, COPPER ROD 25MM - 01NO, CIRCLIP PLIER -1SET,RIGHT ANGLE 6" -01NO	SET	05
36	SCREW DRIVER	SCREW DRIVER SET,MAKE-TAPARIA	NOS	4
37	SCREW DRIVER	SCREW DRIVER, SIZE:18", MAKE: TAPARIA	NOS	4
38	PIPE WRENCH	450 MM,HEAVY DUTY,MAKE-TAPARIA	NOS	4
39	PIPE WRENCH	600 MM,HEAVY DUTY,MAKE-TAPARIA	NOS	4
40	ADJUSTABLE WRENCH	SIZE-6" ,TAPARIA MAKE	NOS	4
41	BELT WRENCH	BELT WRECH,200MM	NOS	2
42	CHAIN PIPE WRINCH	CHAIN PIPE WRINCH ,250MM	NOS	2
43	NIDDLE DIMOND FILE	NIDDLE FILE, DIAMOND COATED TYPE(ROUND,FLATE & HALF ROUND)	SET	4
44	ALLEN KEY	SIZE : INCH, UNBREKO MAKE	SET	4
45	ALLEN KEY	SIZE : MM, UNBREKO MAKE	SET	4
46	ALLEN KEY	SIZE : STAR, UNBREKO MAKE	SET	2
47	ALLEN KEY	SIZE-14MM,17MM,19MM,22MM,UP TO 36 MM MAKE-TAPARIA	SET	4
48	ROTARY CUTTER MACHINE WITH CUTTER	TUNGSTON CARBIDE BURR HEAD ROTARY CUTTER MACHINE SET (FF2) MAKE : GENERIC	SET	2
49	WELDING MACHINE	3 PHASE WELDING MACHINE, MAKE-ESAB	NOS	2
50	WELDING MACHINE	SINGLE PHASE WELDING MACHINE,MAKE-ESAB,MODEL NO. BUDDY ARC-200	NOS	4
51	ARGON SET	ARGON SET COMPLETE	NOS	2
52	MEASURING TAPE	03 MTR STEEL MEASURING TAPE	NOS	10
53	MEASURING TAPE	05 MTR STEEL MEASURING TAPE	NOS	06
54	DRILLING MACHINE	HAMMER DRILL,TYPE-B101,710 W,MAX13 MM DRILL,0-2800 RPM,MODEL NO. KR704RE,MAKE-BLACK & DECKER	NOS	3

55	GREASE GUN	CAPACITY-01 KG	NOS	4
56	GREASE GUN	CAPACITY-05 KG	NOS	3
57	CIRCLIP PLIER	INSIDE CIRCLIP PLIER (0 TO 300MM),MAKE-TAPARIA	NOS	4
58	CIRCLIP PLIER	OUTSIDE CIRCLIP PLIER (0 TO 300MM),MAKE-TAPARIA	NOS	4
59	COMBINATION PLIER	COMBINATION PLIER,MAKE-TAPARIA	NOS	4
60	CHIESEL	CHIESEL,SIZE-12"	NOS	6
61	SHIM CUTTER	SIZE-10"	NOS	4
62	CHOPSAW MACHINE	14"	NOS	2
63	WIRE SLING	10MMX1MTR	NOS	4
64	WIRE SLING	10MMX2MTR	NOS	4
65	WIRE SLING	10MMX3MTR	NOS	4
67	WIRE SLING	13MMX2MTR	NOS	8
68	WIRE SLING	13MMX3MTR	NOS	4
69	WIRE SLING	13MMX6MTR	NOS	4
70	WIRE SLING	15MMX1MTR	NOS	4
71	WIRE SLING	15MMX2MTR	NOS	8
72	WIRE SLING	15MMX3MTR	NOS	8
73	WIRE SLING	15MMX6MTR	NOS	8
74	WIRE SLING	25MM X 3 MTR	NOS.	8
75	WIRE SLING	25MM X 6 MTR	NOS	4
76	D-SHACKEL	SIZE-3/4" X4TON	NOS	12
77	D-SHACKEL	SIZE-1/2" X2TON	NOS	12
78	D-SHACKEL	SIZE-1" X8TON	NOS	12
79	D-SHACKEL	SIZE-1" X10TON	NOS	8
80	3 JAW PULLER	MECHANICAL PULLER	NOS	2
81	HAMMER	2700GM,MAKE-TAPARIA	NOS	6
82	HAMMER	5000GM,MAKE-TAPARIA	NOS	6
83	HAMMER	1000GM, MAKE-TAPARIA	NOS	6
84	FILLER GAUGE	0.01-1MM,	NOS	3
85	INSIDE CALIPER	SIZE-10"	NOS	2
86	OUTSIDE CALIPER	SIZE-10"	NOS	2
87	OUTSIDE CALIPER	SIZE-24"	NOS	2
88	INSIDE CALIPER	SIZE-16"	NOS	2
89	OUTSIDE CALIPER	SIZE-16"	NOS	2
90	HYDRAULIC PUMP	MODEL NO. P-39,MANKE-ENARPAC,SINGLE SPEED,700BAR WITH OIL CAPACITY 770 CM3,WEIGHT 6.2KG	NOS	3
91	HYDRAULIC RAM	MAKE-ENARPAC,50 TON	NOS	2

92	HYDRAULIC HOLLOW RAM	MAKE-ENARPAC,30 TON	NOS	2
93	SPIRIT LEVEL	10"	NOS	4
94	MASTER LEVEL	0 TO 150MM	NOS	2
95	NYLONE ROPE	16MM	MTR	150
96	NYLONE ROPE	12MM	MTR	150
97	MANILA ROPE	16MM	MTR	150
98	HACK SAW BLADE FRAME	12"	NOS	4
99	PNEUMATIC WRENCH	1/2",MAKE-INDERSOL RAND	NOS	4
100	PNEUMATIC WRENCH	3/4" MAKE-INDERSOL RAND	NOS	2
101	PNEUMATIC WRENCH	1" MAKE-INDERSOL RAND	NOS	2
102	BOX SPANNER WITH 1" SQUARE	1",SPANNER-55MM FOR PHE	Nos	2
103	SCISSOR	8"	NOS	4
104	HOLE PUNCH	SET UP TO 24MM	SET	2
105	NUMBER PUNCH	SET 0 TO 9	SET	2
106	STEEL RULE	STEEL RULE 1000MM	NOS	2
107	STEEL RULE	STEEL RULE 300MM	NOS	6
108	TAPE HANDLE	TAP HANDLE.SIZE-10",MAKE-TAPARIA	NOS	2
109	TAPE HANDLE	TAP HANDLE.SIZE-12",MAKE-TAPARIA	NOS	2
110	TAPE SET	SIZE-6MM,HSS,MAKE-TAPARIA	NOS	3
111	TAPE SET	SIZE-8MM,HSS,MAKE-TAPARIA	NOS	3
112	TAPE SET	SIZE-10MM,HSS,MAKE-TAPARIA	NOS	3
113	TAPE SET	SIZE-12 MM,HSS,MAKE-TAPARIA	NOS	3
114	TAPE SET	SIZE: 12X1.5MM HSS, MAKE TAPARIA	NOS	3
115	TAPE SET	SIZE-14 MM,HSS,MAKE-TAPARIA	NOS	3
116	TAPE SET	SIZE-16 MM,HSS,MAKE-TAPARIA	NOS	3
117	TAPE SET	SIZE : 20MM,HSS,MAKE:TAPARIA	NOS	3
118	TAPE SET	SIZE : 22MM,HSS,MAKE:TAPARIA	NOS	3
119	TAPE SET	SIZE-24MM,HSS,MAKE-TAPARIA	NOS	3
120	TAPE SET	SIZE-1/2" BSP,HSS,MAKE-TAPARIA	SET	3
121	TAPE SET	SIZE-3/4" BSP,HSS,MAKE-TAPARIA	SET	3
122	TAPE SET	SIZE-1" BSP,HSS,MAKE-TAPARIA	SET	3
123	DRILL BIT	SIZE-3,3.5,4.5,5,5.5,6.8,7.5,8,8.6,10,10.5,11.11.5, 12 MM	SET	4
124	DRILL BIT	SIZE-14,16,18,20,22,24,30,32, 36MM	SET	4

125	BEAIRNG HEATER	INDUCTION BEARING HEATER	NOS	1
126	OVEN	OVAN FOR WELDING ELECTRODE HEATING	NOS	2
127	PULLER - 3 JAW	HYDRAULIC PULLER	NOS	4
128	PULLER - 4 JAW (BIG)	HYDRAULIC PULLER	NOS	4
129	SCRAPPER	BEARING SCRAPPER TRIANGLE	NOS	2
130	SCRAPPER	BEARING SCRAPPER HALF ROUND	NOS	2
131	SCAFFOLDING PIPE	6 MTR	NOS	100
132	SCAFFOLDING PIPE	3MTR	NOS	100
133	JALI	JALI 400MM X 3000MM	NOS	60
134	SCAFFOLDING PIPE CLAMP	STANDARD -MOVABLE	NOS	300
135	BOX SPANNER	34MM, 36MM, 38MM,41MM,46MM,55MM WITH TOMMY BAR	SET	3
136	CLAMP	C- CLAMP 6"	NOS	06
137	KNIEF	UTILITY KNIEF , 19MM, MAKE: TAPARIA	NOS	3
138	COPPER TUBE CUTTER	UP TO 1"	NOS	1
139	TUBE EXPANDER	UP TO 2"	NOS	1
140	RIGHT ANGLE	6"	NOS	4
141	COPPERROD	SIZE:25MM X 200MM LONG	NOS	3
142	COPPERROD	SIZE : 50MM X 200MM LONG	NOS	3
143	SAFETY BELT	STANDARD	NOS	10
144	MAGNETIC DRILL MACHINE	UPTO 20MM DRILLING	NOS	1
145	OIL STONE MEDIUM,FINE	MEDIUM, FINE	NOS	04
146	CUTTING TORCH	CUTTING TORCH WITH HOSE PIPE AND REGULATOR	SET	05
147	REGULATOR	OXEYGEN REGULATOR	NOS	4
148	REGULATOR	DA REGULATOR	NOS	4
149	REGULATOR	ARGON REGULATOR	NOS	4
150	CYLINDER KEY	CYLINDER KEY	NOS	06
151	TUBE BENDER	SIZE UP TO 2"	SET	01
152	CYLINDER TROLLY	FOR DA/OXYGEN	NOS	3
153	TROLLY	FOR MATERIAL SHIFTING	NOS	2
154	LED LIGHTING FIXTURE WITH CABLE	INDUSTRIAL LED LIGHTING FIXTURE LAMP WITH CABLE APPROX.30 METER	NOS	12
155	HAND LAMP WITH	INDUSTRIAL HAND LAMP	NOS	06

	CABLE			
156	RCC BREAKER	MAKE-HILTI	NOS	2
157	HYDRO TEST DUNKEY	UP TO 20BAR PRESSURE	NOS	01
158	SCAFFOLDING FIX CLAMP	FIX CLAMP	NOS	100
159	CARBIDE BORING TOOL, TYPE:RH, GRADE:P30,SIZE:3/8" X3/8"	MAKE: ADDISION/TOTEM/MIRINDA/BORMER.	NOS	06
160	CARBIDE BORING TOOL, TYPE:RH, GRADE:P30, SIZE:16X16	MAKE: ADDISION/TOTEM/MIRINDA/BORMER.	NO.	06
161	CARBIDE BORING TOOL, TYPE:RH, GRADE:P30, SIZE:25X25	, MAKE: ADDISION/TOTEM/MIRINDA/BORMER	NO.	06
162	CARBIDE BORING TOOL, TYPE:RH, GRADE:P30,SIZE:12X 12	MAKE: ADDISION/TOTEM/MIRINDA/BORMER	NO.	06
163	CARBIDE V TOOL, SIZE:5/8", GRADE-P30 CARBIDE CRANKED CUTTING TOOL, TYPE:LH, GRADE- P30,	MAKE: ADDISION/TOTEM/MIRINDA/BORMER	NO.	06
164	CARBIDE CRANKED CUTTING TOOL, TYPE:LH, GRADE- P30,SIZE:16X16	MAKE:ADDISION/TOTEM/MIRINDA/B ORMER.	NO.	06
165	4 FLUTE TUNGUSTEN CARBIDE END MILL CUTTER, SIZE:6 MM,8MM,10MM,12M M	MAKE:ADDISION/TOTEM/MIRINDA/B ORMER.	SET	6
166	CARBIDE CRANKED CUTTING TOOL, TYPE:RH, GRADE- P30,SIZE:16X16	MAKE:ADDISION/TOTEM/MIRINDA/B ORMER.	NO.	06
167	CARBIDE CRANKED CUTTING TOOL, TYPE:RH, GRADE- P30, SIZE:20 X 20	MAKE:ADDISION/TOTEM/MIRINDA/B ORMER.	NO.	06
168	CENTER DRILL,	IS 6708-1977 TYPE-A	SET	6

	MOC:HSS, SIZE:6.3 MM,8MM,10MM,12MM			
169	DIAL GAUGE WITH MAGNETIC STAND	0-10MM,MAKE MITUTOYO (02 NOS. OF DIAL GAUGE)	NOS	06
170	TEMPERATURE GUN	TEMPERATURE GUN	NOS	02
171	VERIER CALIPERS	0-300MM,MAKE-MUTUTOYO	NOS	3
172	VERIER CALIPERS	0-200MM,MAKE-MUTUTOYO	NOS	2
173	MICRO METER OUTSIDE	0-300MM,MAK-MUTUTOYO	NOS	2
174	MICRO METER INSIDE	0-300MM,MAK-MUTUTOYO	NOS	2
175	MICRO METER OUTSIDE	0-100MM,MAK-MUTUTOYO	NOS	2
176	MICRO METER OUTSIDE	0-25MM,MAK-MUTUTOYO	NOS	2
177	BORE GAUGE	35-60MM,MAKE-MUTUTOYO	NOS	2
178	BORE GAUGE	50-150MM,MAKE-MUTUTOYO	NOS	2
180	D METER	ULTRASONIC THICKNESS MEASUREMENT	NOS	1
181	CIRCLIP PLIER	NAIL PULIER	NOS	2
182	FASTNER KIT MACHINE	MSRT MACHINE SIZE: 60", MAKE:FLEXO	NOS	1
183	BELT CUTTER	BELT CUTTER	NOS	2
184	FUNNEL	FUNNNEL	NOS	4
185	CONTAINER	OIL CONTAINER 5 LTR	NOS	4
186	CONTAINER	OIL CONTAINER10LTR	NOS	4
187	CONTAINER	OIL CONTAINER20LTR	NOS	4
188	OIL GUN	OIL GUN	NOS	2
189	TORQUE WRINCH	TOURQU WRINCH 350NM	NOS	2
239	OIL PUMP	OIL PUMP MANUAL	NOS	2
240	OIL PUMP	OIL PUMP MOTOR OPERATED	NOS	2
241	HOSE	WIRE BRAIDED FLEXIBLE HOSE 1", PRESSURE 12KG/CM2	MTR	250
244	DRILLING MACHINE	DRILLING MACHINE , CHARGEABLE	NOS	1
245	FF TO ROTARY GRINDER	FF TO RORARY GRINDER WITH METTALIC TOOLS	NOS	2
246	BEVEL PROTECTOR	BEVEL PROTECTOR WITH WATER LEVEL FOR COOLING TOWER BLADE ANGLE ADJUSTMENT	NOS	2
247	WELDING CABLE WITH COPPER CORE APPROX 30 METER	WELDING CABLE WITH COPPER CORE APPROX 30 METER	NOS	5
248	BUTTON JACK	BUTTON JACK 30 TR	NOS	2

249	DC LIGHT	24 VOLTS LIGHTING WITH PANLE & CABLE	NOS	08
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Electrical Maintenance Tools List

S. No.	Item	UOM	Quantity
1	Pipe spanner set (6-7mm to 18-19mm), Make Taparia	Set	6
2	Combination plier,Size-8inch,Make-Taparia	Nos.	6
3	Nose plier-6 Inch	Nos.	6
4	Long nose plier-8 Inch	Nos.	6
5	Industrial Electric Air blower, Min 650W, Standard Make like Hitachi, Bosch, etc.	Nos.	6
6	Screwdriver,905-I, Make-Taparia	Nos.	6
7	Heavy Screwdriver, DES177211	Nos.	6
8	Box spanner set,(6mm to 32mm) with ratchet handle, Standard make likeTaparia, etc.	Set	6
9	Ring spanner set(6-7mm to 30-32mm), Make Taparia	Set	6
10	Fix Spanner set(6-7mm to 30-32mm), Make Taparia	Set	6
11	Fix ring combo spanner set, size-(6mm to 32mm), Make: Taparia	Set	6
12	T-spanner set, size-(6mm to 24mm),	Set	6
13	Outside circlip plier,Size-6,8,10 inch (1 each)	Set	6
14	Inside circlip plier,Size-6,8,10 inch (1 each)	Set	6
15	Hydraulic Jacking oil pump, 30 Ton for industry use, Botton Type	Nos.	1
16	Hydraulic Jacking oil pump, 50 Ton for industry use, Botton Type	Nos.	1
17	Hydraulic puller- Big,3-jaw type, max. spread-200mm,output 5 ton	Nos.	2
18	Three arm Bearing puller,size-300mm,Arm Length-240mm,Force- 50KN,Torque-160Nm,Make-Any standard	Nos.	6
19	Hex Press big size crimping tool suitable for crimping of lug upto 630Sq	Nos	1
20	Hydraulic Hex Press big size crimping tool suitable for crimping of lug upto 630Sq	Nos	1
21	Hex Press Medium size crimping tool,Size-16 to 50sqmm,Make- TAPARIA	Nos.	6
22	Hex Press Medium size crimping tool,Size-0.5 sq mm to 16sqmm,Make- TAPARIA	Nos.	6
23	Allen key set, in mm	Set	6
24	Allen key set, in Inch	Set	6
25	Allen key set, T- type,in mm	Set	6
26	Electrical Knife	Nos.	6
27	Bearing induction heater,TMBH-1 with heating clamp medium size	Nos.	1
28	Bearing induction heater, with heating clamp, Big, TIH030m/230V,	Nos	1
29	Screwdriver set, Heavy screwdriver set with insulation	Set	6

	sleeve, in the set screw driver no.- 713,922,725,828,912,712,937, Make-Taparria		
30	Tap die set with handle, (2 mm to 16 mm) inner and outer	Set	3
31	Pipe Wrench -300mm	Nos.	6
32	Grinding Machine AG4, Bosch or any standard make, With face shield	Nos.	4
33	Double speed Drill machine with bits, up to 16 mm Drill bits, Bosch or any standard make for concrete and RCC use.	Set	4
34	Safety Belt with anti-skidding lock and double hook type. IS standard certified	Nos.	10
35	Cutter, 6-inch, 8-inch	Set	5
36	Chisel	Nos.	5
37	Hammer medium, 500g weight	Nos.	5
38	Teflon Hammer medium size 500g	Nos.	4
39	Bearing inserting fitting kit,	Nos.	1
40	Hexo Frame WITH BLADE MEDIUM SIZE	Nos.	6
41	Copper Bar, 500Gram	Nos.	4
42	Nylon belt, 10 Tonne	Nos.	4
43	Wire Stripper	Nos.	5
44	Digital climp on cum multi meter	Nos	6
45	Analog LT insulation tester battery operated, 2KV	Nos	6
46	Digital Multi meter for 4-20m Amp measurement (True RMS)	Nos	5
47	Digital HT insulation tester 5KV with PI measurement	Nos	1
48	15 Tonne ceiling wire rope with 2 nos. D cycle	Set	2
49	Hot air blower, 1000 Watt	Set	2
50	File set- round and flat	Set	2
51	Paint spray Gun	Nos	4
52	LED Long Distance Torch 1 KM, Chargeable	Nos	5
53	11 KV electrical hand gloves	Pair	4
54	Rubber Gloves for battery maintenance work	Pair	10
55	Hydro meter for Battery maintenance	Nos.	5
56	Nylon Rope-30mm, 5 tons - 30 mtr	Nos.	6
57	Tree Cutting Saw machine	Nos.	1
58	HoleShaw Cutter 5mm to 55mm	set	3
59	Chain Block :2Tonne capacity with 30 mtr chain	Set	2
60	Extension Board with 6ASwitch Socket-4nos. and 16A-Switch Socket-1 Nos. With 20 Meter Cable	Set	5

C&I Maintenance Tools List

S. No.	Item	UOM	Quantity
1	Ring spanner set 6-7mm to 30-32mm	Set	13
2	Fix spanner set 6-7mm to 30-32mm	Set	13
3	Fix-ring spanner set 6-7mm to 30-32mm	Set	13
4	Box spanner set 6 to 32 mm with handle	Set	13
5	Adjustable Screw spanner 6"	Nos.	13
6	Adjustable Screw spanner 8"	Nos.	13

7	Adjustable Screw spanner 10"	Nos.	13
8	Adjustable Screw spanner 12"	Nos.	13
9	Crimping tool set size 0.5 to 5 sqmm	Set	1
10	High speed Electrical drill machine with up to 16mm drill bit (RCC& HHS)	Nos.	2
11	Soldering iron with soldering wire & flux	Nos.	3
12	Pipe wrench 300mm	Nos.	13
13	Pipe wrench 500mm	Nos.	3
14	Pipe wrench 750 mm	Nos.	3
15	File set	Set	13
16	Hex saw with blade (6 inch)	Nos.	13
17	Hex saw with blade (12 inch)	Nos.	13
18	Chisel	Nos.	13
19	Metal tube cutter for S S& Copper	Nos.	2
20	Metal tube bender S S& Copper tube 6mm	Nos.	1
21	Metal tube bender S S& Copper tube 8mm	Nos.	1
22	Metal tube bender S S& Copper tube 12mm	Nos.	1
23	Allen key set- in mm	Set	13
24	Allen key set- in inch	Set	13
25	Allen key Set T-type	Set	4
26	Screwdriver set, Taparia 812	Set	13
27	Heavy Screw driver set with insulation cover, Taparia, 713 , 922, 725, 828, 912, 712, 937	Set	4
28	Small size screwdriver set (watch maker set), Taparia precision, Model- PSFP6	Set	13
29	Number Punch for making cable gland holes	Set	2
30	RJ 45and RJ 11 Crimping tool	Nos.	2
31	Digital Vernier caliper, make –Mitiyoto Measuring Length 300 mm.	Nos	1
32	Grinding machine A4 size	Nos.	2
33	Air blower variable speed, make – Bosch	Nos.	3
34	Hot blower,make – Bosch	Nos.	2
35	Tester, taparia	Nos.	13
36	Long nose plier 8" size	Nos.	13
37	Long nose plier 6" size	Nos.	13
38	Combination Plier size- 8"	Nos.	13
39	Wire stripper	Nos.	13
40	200gm Teflon Hammer	Nos.	5
41	500gm Hammer	Nos.	5
42	Inside Circlip plier	Nos.	3
43	Outside Circlip plier	Nos.	3
44	Industrial application Vacuum cleaner	Nos.	1
45	Ratchet spanner set 6-7 m to 30-32mm	Nos.	2
46	Multimeter with Auto range facility & true RMS type including 4-20 mA.	Nos.	13
47	Highway Addressable Remote Transducer (HART)	Nos.	3
48	Safety Belt with anti-skidding lock and double hook type. IS standard certified	Nos.	2

49	Current & MV source & sink (two in one)	Nos.	4
50	Nylon rope 10Tonne with D-cycle	Nos.	2
51	knife for cutting wire	Nos.	13
52	LED Torch 1 Watt rechargeable	Nos.	13
53	Extension Board with 6A Switch Socket-4nos. and 16ASwitch Socket -1nos. With 20 Meter Cable	Set	3
54	Wire cutter (06 inch)	Set	13
55	Measuring tape	Set	3
56	Pointer puller	Set	13

MHP TOOLS & TACKLES

Sr. No	Item	Unit	Qty.
1	Welding Machine Single Phase(portable)-5nos & 3phase-5nos	Nos	10
2	Grinding Machine AG 7	Nos	3
3	Grinding Machine AG 4	Nos	1
4	Cutting Set With Nozzles And Regulators	Set	1
5	Welding Cable-Copper Only	Mtr	50
6	Right Angle 12" 6"	Nos	2
7	Hammer 3 Kg	Nos	5
8	Hammer 1.5 Kg	Nos	5
9	Hexo Frame With Blade	Nos	2
10	Half Round File	Nos	2
11	Round File	Set	2
12	Flat File	Set	2
13	Triangle File	Set	2
14	Pipe Wrench 24"	Nos	4
15	Pipe Wrench 12"	Nos	4
16	Pipe Wrench 18"	Nos	4
17	Grease Gun 10kg	Nos	2
18	Grease Gun 5 Kg	Nos	3
19	Grease Gun 2 Kg	Nos	2
20	Safety Belt	Nos	08
21	D Shackle 5 Ton	Nos	5
22	D Shackle 3 Ton	Nos	5
23	D Shackle 3 Ton	Nos	5
24	D Shackle 1 Ton	Nos	5
25	Hammer Wrench Ring 60	Nos	2
26	Hammer Wrench Ring 55	Nos	2
27	Hammer Wrench Ring 50	Nos	2
28	Hammer Wrench Ring 46	Nos	2
29	Hammer Wrench Ring 30	Nos	2
30	Hammer Wrench Ring 36	Nos	2
31	Hammer Wrench Ring 65	Nos	2

32	Hammer Wrench Ring 75	Nos	2
33	Hammer Wrench D-Fix 60	Nos	2
34	Hammer Wrench D-Fix 55	Nos	2
35	Hammer Wrench D-Fix 50	Nos	2
36	Hammer Wrench D-Fix 46	Nos	2
37	Hammer Wrench D-Fix 41	Nos	2
38	Hammer Wrench D-Fix 36	Nos	2
39	Lifting Belt 5 Ton 3mtr	Nos	4
40	Lifting Belt 3 Ton 1.5mtr	Nos	4
41	Wire Sling 5 Ton 3mtr	Nos	5
42	Wire Sling 3 Ton 3mtr	Nos	5
43	Wire Sling 1 Ton Mtr	Nos	5
44	Chain Block 10 Ton	Nos	2
45	Chain Block 5 Ton	Nos	3
46	Chain Block 3 Ton	Nos	5
47	Chain Block :2Tonne capacity with 30 mtr chain	Nos	6
48	Chain Block 1 Ton	Nos	3
49	Combination plier,Size-8inch,Make-Taparia	Nos	6
50	Screw Driver Set	Set	2
51	Screw Driver 12inch	Nos	5
52	Measuring Tape 3 Mtr	Nos	5
53	Slide Wrench 8	Nos	5
54	Slide Wrench 12	Nos	5
55	Box spanner set,(6mm to 32mm) with ratchet handle, Standard make like Taparia, etc.	Set	3
56	Water Level	Nos	1
57	Spirit Level	Nos	1
58	Cotton Rope Around 20mm	Mtr	50
59	Wire rope Pulley suitable for 12mm wire rope.	Nos	5
60	Rope pulley	Nos	2
61	Chisel 25x150	Nos	4
62	Chisel 25x300	Nos	4
63	Hole Punch	Set	3
64	Marking punch(A-Z,0-9)	Set	2
65	Belt Cutter(industrial)Taparia make	Nos	10
66	Dial Indicator(Mitutoyo only) With Magnetic Stand	Nos	4
67	Nose plier-6 Inch	Nos	5
68	Outside circlip plier,Size-6,8,10 inch (1 each)	set	2
69	Inside circlip plier,,Size-6,8,10 inch (1 each)	set	2
70	Oxygen cylinder Key	Nos	3
71	Heavy Duty Shim Cutter	Nos	3
72	Allen Key Up to 17mm	Nos	3 Nos Each
73	Hand Lamp	Nos	10
74	Industrial Extension Board With 30mtr Cable	Nos	10

75	Portable Drill Machine	Nos	2
76	Hot blower	Nos.	1
77	Box Spanner 14 MM	Nos	2
78	Box Spanner 15 MM	Nos	2
79	Box Spanner 16 MM	Nos	2
80	Box Spanner 17 MM	Nos	2
81	Box Spanner 18 MM	Nos	2
82	Box Spanner 21 MM	Nos	2
83	Box Spanner 27 MM	Nos	2
84	Box Spanner 36MM	Nos	2
85	Box Spanner 38MM	Nos	2
86	Box Spanner 41MM	Nos	2
87	Box Spanner 46MM	Nos	2
88	Box Spanner Handle With Extension Bar	Nos	3
89	Screw Operated Coupling & Bearing Pullers- 18"	Set	2
90	Bore Gauge	Nos	1
91	External Micrometers(0-150mm)	Nos	1
92	External Micrometers (up to 500mm)	Nos	1
93	Internal Micrometers (0-150mm)	Nos	1
94	Internal Micrometers (up to 500mm)	Nos	1
95	External Clipers	Nos	2
96	Internal Calipers	Nos	2
97	Divider	Nos	1
98	VernierCaliper-Digital (150mm)	Nos	1
99	VernierCaliper (300mm)	Nos	1
100	RachetHandlefor Box Spanners Upto 32mm	Nos	3
101	Rachet For Box Spanners Above 32mm	Nos	3
102	Torque Wrench	Nos	2
103	Steel Wire Brush	Nos	25
104	Die For External Thread Cutting Size:Upto 32mm	Nos	1
105	Hydraulic Jacking oil pump, 50 Ton for industry use, Botton Type	Nos	2
106	Hydraulic Jack Cylidner 10ton	Nos	2
107	Hydraulic Jack Cylidner 25ton	Nos	2
108	Hydraulic Jack Cylidner 50ton	Nos	2
109	Hollow cylinder 25ton	Nos.	2
110	Heavy duty Torch	Nos	10
111	Temperature Gun	Nos	2
112	Steel Scales	Nos	2
113	Steel wire rope 12mm	Mtr	250
114	Bearing heater suitable for bearing ID 160mm	Nos	1
115	Rotary hand grinder	Nos.	2
116	Filler gauges	Nos	5
117	Wire Sling 10 Ton Mtr	Nos	4

118	D Shackle 10 Ton	Nos	4
119	Vibration Meter, Make:-Masibus	Nos	1
120	Complete set of tool box(ring spanner set(6-32),D spanner set(6-32),right angle, measuring tape, center punch, plier,Hammer-500gm, allenkey set mm, shim cutter 10inch,screw driver, tapariaknife,slide wrench 6",)	Set	4
121	Pneumatic wrench ½'	Nos	1
122	Pneumatic wrench 1"	Nos	1
123	Hydraulic puller 3 jaw 20ton with hydraulic pump	Nos	1
124	Pipe spanner set (6-7mm to 18-19mm), Make Taparia	Set	2
125	Long nose plier-8 Inch	Nos	2
126	Industrial Electric Air blower, Min 650W, Standard Make like Hitachi, Bosch, etc	Nos	2
127	Screw driver,905-I,Make-Taparia	Nos	2
128	Heavy Screw driver, DES177211	Nos	2
129	Ring spanner set(6-7mm to 30-32mm), Make Taparia	Set	5
130	Fix Spanner set(6-7mm to 30-32mm), Make Taparia	Set	5
131	Fix ring combo spanner set, size-(6mm to 32mm), MakeTaparia	Set	4
132	T-spanner set, size-(6mm to 24mm),	Set	2
133	Hydraulic puller- Big,3-jaw type, max. spread-200mm,output 5 ton	Nos	1
134	Three arm Bearing puller,size-300mm,Arm Length-240mm,Force- 50KN,Torque-160Nm,Make-Any standard	Nos	2
135	Hex Press big size crimping tool suitable for crimping of lug upto 630Sq	Nos	1
136	Hydraulic Hex Press big size crimping tool suitable for crimping of lug upto 630Sq	Nos	1
137	Hex Press Medium size crimping tool,Size-16 to 50sqmm,Make- TAPARIA	Nos	2
138	Hex Press Medium size crimping tool,Size-0.5 sq mm to 16sqmm,Make- TAPARIA	Nos	2
139	Allen key set, in mm	Set	4
140	Allen key set, in Inch	Set	4
141	Allen key set, T- type ,in mm	Set	3
142	Electrical Knife	Nos	2
143	Bearing induction heater, with heating clamp , Big, TIH030m/230V,	Nos	1
144	Screw driver set, Heavy screw driver set with insulation sleeve, in the set screw driver no.- 713,922,725,828,912,712,937,Make-Taparia	Set	4
145	Tap die set with handle, (2 mm to 16 mm) inner and outer	Set	1
146	Double speed Drill machine with bits, up to 16 mm Drill bits, Bosch or any standard make for concrete and RCC use	Set	1
147	Safety Belt with anti-skidding lock and double hook type.	Nos	12

	IS standard certified		
148	Cutter, 6 inch, 8 inch	Set	1
149	Hammer medium, 500g weight	Nos	2
150	Teflon Hammer medium size 500g	Nos	2
151	Bearing inserting fitting kit,	Nos	1
152	Copper Bar, 500Gram	Nos	1
153	Nylon belt, 10 Tonne	Nos	2
154	Wire Stripper	Nos	5
155	Digital climp on cum multi meter	Nos	3
156	Analog LT insulation tester battery operated, 2KV	Nos	3
157	Digital Multi meter for 4-20m Amp measurement (True RMS)	Nos	1
158	Digital HT insulation tester 5KV with PI measurement	Nos	1
159	15 Tonn ceiling wire rope with 2 nos. D cycle	Set	2
160	Hot air blower, 1000 Watt	Set	3
161	File set- round and flat	Set	1
162	Paint spray Gun	Nos	2
163	LED Long Distance Torch 1 KM, Chargeable	Nos	1
164	11 KV electrical hand gloves	Pair	1
165	Rubber Gloves for battery maintenance work	Pair	2
166	Hydro meter for Battery maintenance	Nos	2
167	Nylon Rope-30mm, 5 tons – 30 mtr	Nos	5
168	HoleShaw Cutter 5mm to 55mm	set	1
169	Extension Board with 6ASwitch Socket-4nos. and 16A-Switch Socket-1 Nos. With 20 Meter Cable	Set	7
170	Paint spray gun with flexible air pipe	Set	2
171	Flexible air hose pipe 1” dia.	Mtr	100
172	Adjustable Screw spanner 6"	Nos	2
173	Adjustable Screw spanner 10"	Nos	2
174	Crimping tool set size 0.5 to 5 sqmm	Set	1
175	High speed Electrical drill machine with up to 16mm drillbit(RCC& HHS)	Nos	1
176	Soldering iron with soldering wire & flux	Nos	2
177	File set	Set	2
178	Hex saw with blade (6 inch)	Nos	3
179	Hex saw with blade (12 inch)	Nos	3
180	Screw driver set, Taparia 812	Set	2
181	Small size screw driver set (watch maker set), Taparia precision, Model- PSFP6	Set	2
182	Number Punch for making cable gland holes	Set	1
183	RJ 45and RJ 11 Crimping tool	Nos	1
184	Air blower variable speed, make – Bosch	Nos	2
185	Tester, taparia	Nos	6
186	Long nose plier 8" size	Nos	2
187	Long nose plier 6" size	Nos	2

188	200gm Teflon Hammer	Nos	1
189	Industrial application Vacuum cleaner	Nos	1
190	Fix & Ring type spanner 36 mm	Nos	2
191	Multimeter with Auto range facility & true RMS type including 4-20 mA.	Nos	6
192	RJ- 45 LAN Tester.	Nos	1
193	knife for cutting wire	Nos	8
194	LED Torch 1 Watt rechargeable	Nos	10
195	Box Spanner 10-11, 32-36	Set	2
196	Shovel (belcha)	Nos	10
197	Basket (Tegedi)	Nos	10
198	Phavda	Nos	10
199	Vaccum cleaner(wet and dry)	Nos	2
200	Trikam for digging	Nos	4

Note: The above list is indicative only. If any tools and tackles, except the list mentioned hereinabove, is required to carry out any job, the successful bidder shall arrange the same to ensure the smooth operations of the entire BMD/TMD/EMD/C&I/MHP/AHP. If successful bidder cannot arrange the same, then GMDC shall arrange the same at the cost of the successful bidder.

Annexure “E”

ATPS STG BOP EQUIPMENT LIST (TMD)

SR.NO	EQUIPMENT NAME	MAKE	SPECIFICATION / CAPACITY	QTY
STG				
1	BOILER FEED PUMP	KIROLSKAR EBRA PUMPS LTD.	256 M ³ /HR	6
2	BOOSTER PUMP	KIROLSKAR EBRA PUMPS LTD.	288 M ³ /HR	6
3	BFP OIL CENTRIFUGE	EMMI OIL CLEANING SYSTEM	200 LTR/HR	6
4	CONENSATE EXTRACTION PUMP	KIROLSKAR BROTHERS LTD.	203.8M ³ /HR	6
5	HP HEATER	BHEL	21.873KG/HR(SHELL)- 369.612T/HR(TUBE)	2
6	HP HEATER	BHEL	21.413KG/HR(SHELL)- 369.612T/HR(TUBE)	2
7	LP HEATER	LARSEN & TOUBRO LIMITED	4.212M ³ (SHELL)- 1.080M ³ (TUBE)	2
8	LP HEATER	LARSEN & TOUBRO LIMITED	5.850M ³ (SHELL)- 1.663M ³ (TUBE)	2
9	LP HEATER	LARSEN & TOUBRO LIMITED	4.15M ³ (SHELL)- 1.40M ³ (TUBE)	2
10	CONDENSER	STF S.p.A.COSTRUZIONE IMPIANTI IND-ITALY	6173 M ³	2
11	EJECTORS	SCAM TORINO	165KG/HR, 15-BAR	4
12	DEAERATOR UNIT	GEA ENERGY SYSTEM (I) LTD.	115.815 KG/SEC	2
13	MAIN OIL TANK UNIT	LUBISYSTME	15250 LTR	2
14	MOT OIL CENTRIFUGE UNIT	VERONESI SEPARATORI S.P.A.	2500 LTR/HR	2
15	MAIN OIL COOLER UNIT	FLOVEX S.P.A-ITALY	334 OIL/342 WATER	4
16	MOT VAPOUR EXTRACTION FAN	CAT BLOWER	820 M ³ /HR	4
17	JACKING OIL PUMP-AC DRIVEN	REXORTH BOSCH	1.5M ³ /HR	2
18	JACKING OIL PUMP DC DRIVEN	REXORTH BOSCH	1M ³ /HR	2
19	LUB OIL PUMP UNIT	COLFAX PUMP S.P.a.-	64.8 M ³ /HR	4



		ITALY		
20	TURNING GEAR OIL PUMP	REXORTH BOSCH	39 M/MIN-250 BAR	2
21	EOP UNIT	COLFAX PUMP S.P.a.- ITALY	25.9M3/HR	2
22	GLAND STEAM CONDENSER UNIT	FLOVEX S.P.A-ITALY	221 LTR SHELL/152 LTR TUBE	2
23	GLAND STEAM BLOWER	CHICAGO BLOWER S.P.A.	1160 M ³ /HR	4
24	HP-LP BYPASS SERVO OIL TANK UNIT	SCODA	500 LITR	2
25	HYDRULIC OIL PUMP	ALLWEIR	3 L/SEC-40 BAR	4
26	CLEAN OIL TRANSFER PUMP	TUSHAKO	2 M ³ /HR	1
27	DIRTY OIL TRANSFER PUMP	TUSHAKO	2 M ³ /HR	1
28	CLEAN & DIRTY OIL CENTRIFUGE	VERONESI SEPARATORI S.P.A.	2500 LTR/HR	1
29	CST UNIT	ALSTOM	350 M ³	2
30	UNIT DRAIN TANK	ANSALDO	10 M ³	1
31	UDT TRANSFER PUMP	SULZER	5 M ³ /HR	2
32	CLEAN OILTANK	LUBISYSTME	15M3	1
33	DIRTY OIL TANK	LUBISYSTME	15M3	1
34	HOTWELL MAKE UP	SULZER PUMPS INDIA LTD.	15M3/HR	6
35	CCW PUMP	BEACON WEIR LTD.	1375M3/HR	3
36	ACW PUMP	BEACON WEIR LTD.	1850M3/HR	3
37	ASH COOLER PUMP	BEACON WEIR LTD.	850M3/HR	3
38	PLATE TYPE HEAT EXCHANGER	IDMC LTD.	DESAL WATER-42- 36/SEA WATER-34-39	3
39	SUMP PUMP	BEACON WEIR LTD.	30M3	8
40	DG SET	CATERPILLAR	625 KVA	2
PTP				
41	FLASH MIXTURE	CEECONS CHENNAI,INDIA	3600 M ³ /HR	1
42	FLOCCULATOR	VATECH WABAG LTD	900 M ³	8
43	AIR BLOWER- GRAVITY SAND FILTER	KEY INTERNATION LTD.	1200 NM ³ /HR	3
44	SEA WATER INTAKE PUMP	KIRLOSKER BROTHER LTD.	1800 M ³ /HR	3
45	TWS SPRAY PUMP	JHONSON INDIA LTD	60 M3	2
46	CT MAKE UP PUMP	KIRLOSKER BROTHER LTD.	1550M ³ /HR	3
47	DESALINATION FEED PUMP	KIRLOSKER BROTHER LTD.	417M ³ /HR	3



48	EC FEED PUMP	KIRLOSKER BROTHER LTD.	40M ³ /HR	4
49	BACKWASH RECIRCULATION PUMP	KIRLOSKER BROTHER LTD.	300M ³ /HR	2
50	FILTER BACKWASH PUMP	KIRLOSKER BROTHER LTD.	1000M ³ /HR	3
51	CENTRIFUGE FEED PUMP	TUSHACO PUMPS	20M ³ /HR	4
52	CENTRIFUGE-A	HUMBOLDT WEDG INDIA LTD.	20M ³ /HR	3
53	ALUM TANK AGITATOR	CEECONS	12.1 ³ /HR	2
54	LIME SOLUTION TANK AGITATOR	VATECH WABAG LTD	5.28M ³ /HR	2
55	PE TANK AGITATOR	CEECONS	5.38M ³ /HR	2
56	DWPE TANK AGITATOR	CEECONS	5.38M ³ /HR	2
57	ALUM DOSING PUMP	SWELORE ENGINEERING PVT.LTD	2160 LPH	2
58	PE DOSING PUMP	SWELORE ENGINEERING PVT.LTD	550 LPH	2
59	DWPE DOSING PUMP	SWELORE ENGINEERING PVT.LTD	653 LPH	4
60	SLUDGE THICKENER	VATECH WABAG LTD	4320 M ³ /HR	4
61	BIOCIDE DOSING PUMP	SWELORE ENGINEERING PVT.LTD	50M ³ /HR	2
62	POLYPHOSPHATE DOSING PUMP	SWELORE ENGINEERING PVT.LTD	50M ³ /HR	2
63	BOICIDE TANK AGITATOR	CEECONS	0.628 M ³ /HR	2
64	POLYPHOSPHATE TANK AGITATOR	CEECONS	0.628 M ³ /HR	2
DM PLANT				
65	COLONY POTABLE WATER PUMP	KIRLOSKER BROTHER LTD.	30 M ³ /HR	2
66	DM WATER SUPPLY PUMP	KIRLOSKER BROTHER LTD.	40 M ³ /HR	3
67	CHEMICAL CONTIONING DOSING PUMP	SWELORE ENGINEERING PVT.LTD	150 LPH	2
68	ACID UNLOADING PUMP	RAJE-DIA PUMPS PVT. LTD.	10 M ³ /HR	2
69	AKALI UNLOADING PUMP	RAJE-DIA PUMPS PVT. LTD.	10 M ³ /HR	2
70	ACID DOSING PUMP	SWELORE ENGINEERING PVT.LTD	380 LPH	2
71	ALKALI DOSING PUMP	SWELORE ENGINEERING	500 LPH	2



		PVT.LTD		
72	EFFLUENT DISOSAL PUMP	KIRLOSKER BROTHER LTD.	50 M ³ /HR	2
73	DM WATER TRANSFER PUMP	KIRLOSKER BROTHER LTD.	42 M ³ /HR	3
74	POTABLE SERVICE WATER PUMP	KIRLOSKER BROTHER LTD.	20 M ³ /HR	2
75	POTABLE WATER CONDITIONING TANK AGITATOR	CEECONS	2 M ³ /HR	1
76	MIXED BED EXCHANGER AIR BLOWER	KAY INTERNATIONAL LTD.	210 NM ³ /HR	2
77	DESALINATION WATER STROAGE TANK	VATECH WABAG LTD	1500 M ³	3
78	ACID BULK STORGE TANK	VATECH WABAG LTD	15 M ³	1
79	ALKALI BULK STORGE TANK	VATECH WABAG LTD	15 M ³	1
80	DM WATER STORGE TANK	VATECH WABAG LTD	500 M ³	2
DESALINATION PLANT				
81	ANTISCALANT DOSING PUMP	SWELORE ENGINEERING PVT.LTD	21 LPH	4
82	ANTIFOAM DOSING PUMP	SWELORE ENGINEERING PVT.LTD	40 LPH	4
83	SBS DOSING PUMP	SWELORE ENGINEERING PVT.LTD	40 LPH	3
84	BRINE PUMP	KIRLOSKER BROTHER LTD.	280 M ³ /HR	4
85	DISTILLATE PUMP	KIRLOSKER BROTHER LTD.	50 M ³ /HR	4
86	CONDENSATE PUMP	KIRLOSKER BROTHER LTD.	10 M ³ /HR	4
87	ACID CLEANING PUMP	RAJE-DIA PUMPS PVT. LTD.	13.5 M ³ /HR	2
88	MOTIVE WATER PUMP	KIRLOSKER BROTHER LTD.	90 M ³ /HR	4
89	ANTISCALANT TANK AGITATOR	CEECONS	0.628 M ³	2
90	ANTI FOAM TANK AGITATOR	CEECONS	0.628 M ³	2
91	SBS TANK AGITATOR	CEECONS	0.628 M ³	2
CW SYSTEM				
92	CW PUMP#A	KIRLOSKAR BROTHERS LTD.	14000M3/HR	5
93	SEAL WATER PUMP	KIRLOSKAR BROTHERS LTD.	50M3/HR	3
94	DEWATERING PUMP	KIRLOSKAR BROTHERS LTD.	51M3/HR	2

95	SEAL WATER TANK FILLING PUMP	KIRLOSKAR BROTHERS LTD.	51M3/HR	1
96	REJECT WATER PUMP#A	BEACON WEIR LTD.	1000M3/HR	3
97	AIR COMPRESSOR	ELGI COMPRESSOR	0.5 M3	1
98	COOLING TOWER FAN	BDT LTD.	3111M ³ /HR/CELL, 41°C-34°C	1 8
FIRE				
99	JOCKY PUMP 101	FLOMORE PVT LTD	30 M ³ /HR	2
100	HYDRANT PUMP 301(Motor driven)	FLOMORE PVT LTD	410 M ³ /HR	2
101	HYDRANT PUMP 303(Engine driven)	FLOMORE PVT LTD	410 M ³ /HR	1
102	SPRAY PUMP 201(Motor driven)	FLOMORE PVT LTD	410 M ³ /HR	1
103	SPRAY PUMP 202(Engine driven)	FLOMORE PVT LTD	410 M ³ /HR	1
104	FIRE BOOSTER PUMP 501	FLOMORE PVT LTD	140 M ³	2
105	AIR COMPRESSOR 401	KHOSLA AIR COMPRESSOR	2 M ³	1
106	DIESEL ENGINE	CUMINNS	231HP	2

Note: All above equipment list is indicative only and not exhaustive

BOILER MAINTENANCE MAJOR EQUIPMENT LIST

SR. NO.	AREA	SYSTEM	EQUIPMENT	TOTAL QTY (NOS)	SPECIFICATION (TYPE, CAPACITY, MODEL, MAKE)
1	BOILER	FANS	ID FAN	4	TYPE:BACKWARD CURVED LAMINAR,SIZE &MODEL:2990MM DIBCB-42,TIP SPEED M/S:111.15,SHAFT POWER:718KW,FAN RPM:710,SHAFT DIA AT BEARING:190.5MM,.DIA AT IMPELLER:405MM,MATERIAL:EN 8,BEARING TYPE:JOURNAL SIZE: 190.5",MAKE:ANDREW YULE&CO.LIMITED
2			PA FAN	4	TYPE:BACKWARD CURVED AEROFOIL,SIZE &MODEL:2350MM DIBAB-11,TIP SPEED M/S:183.33,SHAFT POWER:1040KW,FAN RPM:1490,SHAFT DIA AT BEARING:125MM, .DIA AT IMPELLER:315MM,MATERIAL:EN 8,BEARING TYPE:JOURNAL 5", MAKE:ANDREW YULE&CO.LIMITED
3			SA FAN	4	TYPE:BACKWARD CURVED AEROFOIL,SIZE &MODEL:2030MM DIBAB-11,TIP SPEED M/S:158.37,SHAFT POWER:742KW,FAN RPM:1490,SHAFT DIA AT BEARING:101.6MM, .DIA AT IMPELLER:290MM,MATERIAL:EN 8, BEARING TYPE:JOURNAL SIZE: 4", MAKE:ANDREW YULE&CO.LIMITED
4			FA FAN	6	FAB NO.0202962, DP:590 MBAR,MODEL NO. K -145- R-LP,CAPACITY:100 M3/MIN, POWER:129.1 KW,RPM:1360, MAKE:RKR VERDICHTTECHNIK GMBH.
5			ASH COOLER FAN	4	TPPE:BACKWARD CURVED LAMINAR,SIZE AND MODEL:1270MM SIPSC-05,TIP SPEED M/S:198.16,SHAFT POWER 120KW,FAN RPM:2980,BEARING TYPE:BALL/ROLLER,SIZE OF BEARING :70/80MM,FAN NO.01021, MAKE:ANDREW YULE & CO. LIMITED
6		BED ASH DRAINING	ASH DRAGLINK CONVEYOR	2	TYPE:R-01,MANUFACTURE YEAR:2002,SR NO.01/00188-0201,MAKE:SMD FORDERTECHNIK GMBH

7			ASH ROTARY SEAL	04	ASH ROTARY SEAL
8			HOT WATER PUMP	6	DISCHARGE:205 M3/H,N-2800RPM,MAKE:KSB
9			ASH DRAGLINK	2	TYPE:R-01,MANUFACTURE YEAR:2002,SR NO.01/00188-0201,MAKE:SMD FORDERTECHNIK GMBH
10		FILL PUMP	BOILER FILL PUMP	2	FLOW: 100 M3/HR, PRESSURE: 15 KG/CM2 MAKE: SULZER
11		LIGNITE FEEDING SYSTEM	GR. FEEDER	4	MODEL NO.LPG30,FEEDER CAPACITY:127TPH(MAX) &12.7 TPH(MIN),BELT DRIVE MOTOR:14.9 KW(20HP),MAKE:STOCK EQUIPMENTCOMPANY.
12	LIGNITE DRAGLINK		4	MAKE:IEM	
13	ROTARY AIR LOCK FEEDER		8	MAKE:IEM	
14		BOILER CHEMICAL DOSING SYSTEM	HP DOSING PUMP	4	MULTI FLOW PUMP,MODEL NO.PR-35,CAPACITY:72 LITER/HOUR,PRESSURE:183.5 KG/CM2,RATIO:5-1,SR NO.N07117785,MAKE:V.K.PUMP INDUSTRIES PVT.LTD.
15			LP DOSING PUMP	4	CAPACITY:06 LPH,WORKING PRESSURE:5 KG/CM2,PRV SET PRESSURE:7 KG/CM2,IR NO.PIL 156,SR NO.CDS/157/02-03,MAKE:POSITIVE METERING PUMP(I) PVT.LTD.
16		SOOT BLOWING SYSTEM	TAPH ROTARY SOOT BLOWER	18	MODEL NO.G9B,MAKE:ALSTOM
17			HR-SOOT BLOWER	18	MODEL NO.IK 300,MAKE:ALSTOM
18			LR-SOOT BLOWER	12	MODEL NO.IK 300,MAKE:ALSTOM

19	LIME MILL	LIME FEEDING SYSTEM	LIME CONVEYING SCREW PUMP	4	SCREW WITH SOLID SHAFT FOR 235MM PNEUMATIC SCREW PUMP, DRG NO. B SHE-16612, MAKE: ALSTOM
20			LIME COMPRESSOR	4	TYPE: RECIPROCATING, BELT DRIVE, MODEL NO. 1HA4Q, SET NO. 7733, PRESSURE: 2 KG/CM ² , COMPRESSOR RPM: 750, MOTOR KW: 225, PRIMOVR/RPM: BHEL/1479, MAKE: KG KHOSLA
21		LIME GRINDING SYSTEM	CHAIN CONVEYOR	2	TYPE: ENMASSE CHAIN CONVEYOR SIZE: 800X606, CONVEYOR NO. CC-1B, CAPACITY: 140TPH, LENGTH: 30 MTR. MAKE: ENVIRO ABRASION RESISTANT ENGINEERS PVT. LTD,
22			DILUTION AIR BLOWER	2	VOLUME CAPACITY: 25000 KGS/HR, TYPE: CENTRIFUGAL, DISCHARGE PRESSURE: 108MM WG, KW/RPM: 11KW/4 POLE, TEMP: 30 DEGREE CENTIGRAT
23			HAG	2	TYPE OF GENERATOR: HORIZONTAL DOUBLE SHELL, OVER ALL SIZE: 1916 MM DIA X 4820 MM LONG, TURN DOWN RATIO: 4:1, HEAT RELEASE: 5.25 M KCALS/HR, HOT AIR QUANTITY: 36800 KGS/HR, TYP OF GUN: CONSTANT PRESSURE AIR ATOMISING, MODE OF BURNER LIT UP: LPG PILOT, MAKE: COEN BHARAT LIMITED.
24			BAG FILTER	2	TYPE: PULSE JET, CAPACITY: 60,000 M ³ /HR, I/L DUST BURDEN: 150 GMS/NM ³ , O/L DUST BURDEN: 50 MGM/NM ³ FAN NO-01080, WORK ORDER NO-K060C
25			COMBUSTION BLOWER	2	VOLUME CAPACITY: 14,000 KGS/HR, TYPE: CENTRIFUGAL, DISCHARGE PRESSURE: 130MM WG, KW/RPM: 7.5/4 POLE, TEMP-30 DEGREE CENTIGRAT,
26			MILL RC FAN	2	LIME MILL RE-CIRCULATION FAN
27	FOPH	FUEL OIL PUMP HOUSE	LDO UNLOADING PUMP	2	MAKE-TUSHACO, TYPE-TS 105/045.000.40.1K, DISCHARGE(Q)-250 L/MIN, DIFF PRESSURE-3.50 KG/M ² , VELOCITY (V)-2.50-15.7 MM/SEC, SPEED-1415 RPM, POWER-5.50 KW.
28			LDO TRANSFER PUMP	2	CITADEL-MAKE

29			HFO UNLOADING PUMP	3	TUSHACO MAKE,TYPE-TDSH 088/040.100.40.1BK,DISCHARGE (Q)-417 L/MIN., DIFF PRESSURE-3.50 KG/CM2, VELOCITY (V)-90-300 MM2/SEC,SPEED-1450 RPM,POWER-7.50 KW.
30			HFO TRANSFER	4	MODEL NO. T3S 70/40 NHSBF S2RNJE BALC,CAPACITY:328LPM,RPM:1480,DIFF .PRESSURE:30 KG/CM2,VELOCITY:80MM2/SEC, POWER:23.1KW,DRG NO.D001-3922/1, MAKE:TUSHACO PUMPS PVT.LTD
31			CONDENSATE TRANSFER PUMP	2	TYPE: HORIZONTAL CENTRIFUGAL BACK PULL-OUT, MODEL: TCH + N 25 / 200-I.MAKE: SAM TURBO IND., COIMBATORE.
32	AUXILIARY BOILER	AUXILIARY BOILER	FD FAN	1	MACHINE NO. 02.109,I0B NO. APC 132 031, MODEL NO. ATKH -063-3-S,CAPACITY:29511 CMH,FAN SPEED:1300RPM, MOTOR:56.25KW, STATIC PRESSURE:450 MM/WG,IMPELLER DIA:1259MM,SHAFT DIA:75MM,MAKE:AIROTEK
33			BOILER FEED PUMP	2	TYPE:65X50MSS9M,SR NO.020112 1-911,PUMPING HEAD:282 MTR,RATE OF FLOW:24 M3/HR, DRIVER:37 KW,SPEED:2960 RPM,MAKE:KIRLOSKAR EBARA PUMPS LIMITED
34			LDO PUMP	2	PUMP MODEL:RDRX100L,PUMP SPEED:1440RPM,CAPACITY:50LPM,DISCHARGE PRESSURE:10 KG/CM2,MAKE:ROTODEL
35			LP DOSING PUMP	1	CAPACITY:06 LPH,WORKING PRESSURE:5 KG/CM2,PRV SET PRESSURE:7 KG/CM2,IR NO.PIL 156,SR NO.CDS/157/02-03, MAKE:POSITIVE METERING PUMP(I) PVT.LTD.
36		ESP	ESP	02	MODEL NO.FAA-7X 30H-96-150-A2,2 PASS IN EACH ESP AND EACH PASS HAVING-07 FIELD

MHP Equipment List :

Location	System details	Make	Model	Brief Details
MHP	PLC/SCADA	ABB	AC800M	4 nos. of RIO panel, 3 nos. of work station, 2 nos. of HMI
STACKER RECLAIMER	PLC	GE FANUC	CPUE05	With one RIO panel & touch panel.
AHP	PLC/SCADA	ALLENBRADLEY	LOGIX 1756	With two PLC panel, 2 nos. of work station one engineering work station

				& one operating work station with MIMIC panel.
MHP CCR	UPS	DB Power		2 x 5 KVA UPS
MHP-Stacker Reclaimer	UPS	BPE		1 KVA UPS
AHP	UPS	LIEBERT		2X10 KVA
AHP	Compressor	ELGI		7 nos. of compressor with two nos. of Air Dryer
MHP	Compressor	Kirloskar		(3 nos. of different type for Dry fog system)
MHP/LIME	Belt weigher	IPA	BCW-DS	Total 9 nos. of belt weigher including Lime system.(5 nos. Lignite, 3 nos. Lime & 1 no. at Stacker)

EMD EQUIPMNET LIST

Sr.	U NIT	KKS NUMBER	Equipment
1			S/Y -48 V BANK ,350 AH PLCC
2			S/Y -48 V BANK ,350 AH PLCC,charger
3			24 V BATTERY BANK for DG set1 &2 & FW pump
4			BATTERY BANK U#-1 ,220VDC,1300AH(170 cells)
5			BATTERY BANK -U#2 ,220VDC,1300AH(170 cells)
6			S/Y BATTERY BANK -1 ,220VDC,410AH (73 cells)
7			S/Y BATTERY BANK -2 ,220VDC,410AH (73 cells)
8	2	2HTS21AN001	Conveying compressor A limestone - 1&2
9	2	2HTS22AN001	Conveying compressor B limestone - 1&2
10			220V CHARGER UNIT# 1,1300AH
11			220V CHARGER UNIT# 2,1300AH
12		ACWP-A	ACW - A, Motor, Butter fly v/v
13		ACWP-B	ACW - B, Motor, Butter fly v/v
14		ACWP-C	ACW - C, Motor, Butter fly v/v
15	2	2HHQ10AN001	Ash cooler fan 2A
16	2	2HHQ20AN001	Ash cooler fan 2B
17	1	1HHQ20AN001	Ash cooler fan 1B
18	1	1HHQ10AN001	Ash cooler fan 1A
19		1PGA10AP001	ASH COOLER PUMP MOTOR - A, WITH

			I/O VALVES
20		1PGA20AP001	ASH COOLER PUMP MOTOR - B WITH I/O VALVES
21		1PGA02AP001	ASH COOLER PUMP MOTOR -C WITH I/O VALVES
22	2	2HDA10AF001	ASH DRAG LINK CONVEY 2A
23	1	1HDA10AF001	ASH DRAG LINK CONVEY 1A
24	2	2HDA20AF001	ASH DRAG LINK CONVEY 2B
25	1	1HDA20AF001	ASH DRAG LINK CONVEY 1B
26			BAY - 1 LINE-1,BMK-1
27			BAY - 2 GT-1, BMK-2
28			BAY - 3 LINE-2, BMK-3
29			BAY - 4 BUS COUPLER, BMK-4
30			BAY - 5 LINE-3, BMK-5
31			BAY - 6 GT-2, BMK-6
32		CCWP-C	CCW - C, Motor
33		HCP-203A/B	CONDENSATE PUMP - 1&2
34		HCP-203C/D	CONDENSATE PUMP - 3&4
35	2	2PGA02AP001	Cooling water pump for ash cooler- A
36	2	2PGA10AP001	Cooling water pump for ash cooler -C
37	2	2PGA03AP001	Cooling water pump for ash cooler-B
38		VTPC-103A/B	CT MAKE UP PUMP-1
39		VTPC-103A/B	CT MAKE UP PUMP-2
40		VTPC-103C	CT MAKE UP PUMP-3
41		VTPC-105A	DESAL FEED PUMP-1
42		VTPC-105B	DESAL FEED PUMP-2
43		VTPC-105C	DESAL FEED PUMP-3
44			DISTILLATE PUMP-1&2(HCP-202A&B)
45			DISTILLATE PUMP-3&4(HCP-202C&D)
46	2	2EMA11AN001	E1haust air fan bag filter bed material silo
47	1	2EMA11AN001	E1haust air fan bag filter bed material silo
48		VTPC-102A/B	FILTER BACK WASH PUMP-1&2
49		VTPC-102C	FILTER BACK WASH PUMP-3
50	2	2HCB10AT111	FULLY RECT SB
51	2	2HCB10AT112	FULLY RECT SB
52	2	2HCB10AT113	FULLY RECT SB
53	2	2HCB10AT121	FULLY RECT SB
54	2	2HCB10AT122	FULLY RECT SB
55	2	2HCB10AT123	FULLY RECT SB
56	1	1HCB10AT111	FULLY RECT SB
57	1	1HCB10AT112	FULLY RECT SB
58	1	1HCB10AT113	FULLY RECT SB
59	1	1HCB10AT121	FULLY RECT SB
60	1	1HCB10AT122	FULLY RECT SB
61	1	1HCB10AT123	FULLY RECT SB
62	2	2MAW30AN001	Gland Condenser Blower - A

63	1	1MAW30AN001	Gland Condenser Blower - A
64	2	2MAW30AN002	Gland Condenser Blower - B
65	1	1MAW30AN001	Gland Condenser Blower - B
66	1	1HTN52AN001	HAG COMBUSTION AIR BLOWER
67	2	2HTN52AN001	HAG COMBUSTION AIR BLOWER
68	2	2HTN51AN001	HAG DILUTION AIR BLOWER
69	1	1HTN51AN001	HAG DILUTION AIR BLOWER
70	2	2HCB10AT131	HALF RECT SB
71	2	2HCB10AT132	HALF RECT SB
72	2	2HCB10AT133	HALF RECT SB
73	2	2HCB10AT141	HALF RECT SB
74	2	2HCB10AT142	HALF RECT SB
75	2	2HCB10AT143	HALF RECT SB
76	1	1HCB10AT131	HALF RECT SB
77	1	1HCB10AT132	HALF RECT SB
78	1	1HCB10AT133	HALF RECT SB
79	1	1HCB10AT141	HALF RECT SB
80	1	1HCB10AT142	HALF RECT SB
81	1	1HCB10AT151	HALF RECT SB
82	1	1HCB10AT152	HALF RECT SB
83	1	1HCB10AT153	HALF RECT SB
84	2	2HJF10AP001	HFO PUMP (Pressuring pump) UNIT-2
85	1	1HJF10AP001	HFO PUMP (Pressuring pump) UNIT-1
86	1	1HJF20AP001	HFO PUMP(pressuring pump) UNIT-1
87	2	2HJF20AP001	HFO PUMP(pressuring pump) UNIT-2
88	1	1LDN45AP001	HYD DOSING PUMP-1
89	2	2LDN45AP002	HYD DOSING PUMP-2
90		HP-301	HYDRANT PUMP-1
91		HP-302	HYDRANT PUMP-2
92		IAC-A	INSTRUMENT AIR COMPRESSOR - A, Motor
93		IAC-B	INSTRUMENT AIR COMPRESSOR - B, Motor
94		IAC-C	INSTRUMENT AIR COMPRESSOR - C, Motor
95		IAC-D	INSTRUMENT AIR COMPRESSOR - D, Motor
96		JP-101	JOCKY PUMP-1
97		JP-102	JOCKY PUMP-2
98	2	2HTS06AN001	Mill Air Recirculation Fan
99	1	1HTS06AN001	Mill Air Recirculation Fan
100	2	2HTS08AN001	Mill Bag Filter Fan
101	1	1HTS08AN001	Mill Bag Filter Fan
102	1	1HTS21AN001	MILL COMPRESSOR MOTOR - 1A
103	2	2HTS21AN001	MILL COMPRESSOR MOTOR - 2A
104	2	2HTS22AN001	MILL COMPRESSOR MOTOR - 2B

105	1	1HTS22AN001	MILL COMPRESSOR MOTOR -1B
106	2	2HTS02AU001	MILL MAIN MOTOR - 2A
107	2	2HTS10AN002	Positive Displacement Blower For Lime Day Bin
108	1	1HTS10AN002	Positive displacement blower for lime day bin
109	2	2HTS21AP001	Screw pump A limestone
110	1	1HTS21AP001	Screw pump A limestone
111		VTPC-101A	SEA INTAKE PUMP-A
112		VTPC-101B	SEA INTAKE PUMP-B
113		VTPC-101C	SEA INTAKE PUMP-C
114	2	2HTS10AN001	Silo feeding P.G. Conveyer Blower
115	1	1HTS10AN001	Silo feeding P.G. Conveyer Blower
116		SAC-A	STATION AIR COMPRESSOR - A, Motor
117		SAC-B	STATION AIR COMPRESSOR - B, Motor
118		SAC-C	STATION AIR COMPRESSOR - C, Motor
119		SAC-D	STATION AIR COMPRESSOR - D, Motor
120		SAC-E	STATION AIR COMPRESSOR - E, Motor
121		TWS-1	TRAVELLING WATER SCREEN-1,2&3
122			TUBE SETTLER CUM MECH. THICKNER-1&2(TST-101A&B)
123			UPS & BATTERY
124			WASH WATER PUMP-1&2
125		0HJF31AP001	HFO DRAIN OIL PUMP 1
126		0HJF31AP002	HFO DRAIN OIL PUMP 2
127			220V STANDBY CHARGER 1300AH
128			48V S/YARD PLCC CHARGER 1
129			48V S/YARD PLCC CHARGER 2
130			ACID CLEANING PUMP - 1&2 (HCP-503A&B)
131		DOP-301A/B	ACID DOSING PUMP-1&2
132			AHU MOTOR-1
133			AHU MOTOR-2
134			AHU MOTOR-3
135		DOP-302A/B	ALKALI DOSING PUMP-1&2
136		AGT-101A	ALUM DOSING TANK AGITATOR-1&2 WITH PUMP-4
137			ANTI FOAM DOSING PUMP - 1&2 (DOP-202A&B)
138			ANTI FOAM DOSING PUMP - 3&4 (DOP-202C&D)
139		DOP-202A/B	ANTI FOAM DOSING TANK AGITATOR - 1&2
140			ANTI SCALENT DOSING AGITATOR (AGT-201-A&B) PUMPS - (HCP-201-A, B, C&D.)
141			AU1ILIARY COOLING WATER PUMP - 1&2&3

142	2	2HTS02AU003	AUILLIARY MILL MOTOR
143			AUX DB - TRANSFORMER-1 AT CW PUMP.
144	1	1HTS02AU003	AUXILIARY MILL MOTOR
145		VTP-106A	BACK WASH RECIRCULATION PUMP-1
146		VTP-106B	BACK WASH RECIRCULATION PUMP-2
147	2	2HTS08AF001	Bag Filter Rotary Air Lock Motor
148	2	2HTS08AF002	Bag Filter Rotary Air Lock Motor
149	1	1HTS08AF001	Bag Filter Rotary Air Lock Motor
150	1	1HTS08AF002	Bag Filter Rotary Air Lock Motor
151			BATTERY CHARGER- VATECH PUMP HOUSE 220VDC
152	2	2LAB50AP001	BOILER FILL PUMP
153	1	1LAB50AP001	BOILER FILL PUMP
154			BOOSTER PUMP - 1&2
155		HCP-201A	BRINE PUMP - 1&2 (HCP-201A&B)
156		HCP-201B	BRINE PUMP - 3&4 (HCP-201C&D)
157		CCWP-A	CCW - A, Motor,
158		CCWP-B	CCW - B, Motor
159		SCP-101A	CENTRIFUGE FEED PUMP-1 & 2
160		SCP-101C	CENTRIFUGE FEED PUMP-3 & 4
161		CFG-101A/B	CENTRIFUGE-1&2,
162		CFG-101C/D	CENTRIFUGE-3&4
163	2	2HTS05AF001	CHAIN CONVEYER (LIME)
164	1	1HTS05AF001	CHAIN CONVEYER (LIME)
165			CHILLER,COMPRESSOR - 1&WATER CIRC.PUMP-1
166			CHILLER,COMPRESSOR - 2&WATER CIRC.PUMP-2
167			CHILLER,COMPRESSOR - 3&WATER CIRC.PUMP-3
168			CHILLER,COMPRESSOR - 4&WATER CIRC.PUMP-4
169		ABL-501A	CHLORINE AIR BLOWER - 1
170		ABL-501B	CHLORINE AIR BLOWER - 2
171			CONDENSATE TRANSFER PUMP-1
172			CONDENSATE TRANSFER PUMP-2
173	1		CT U#1 -- Fan no-1
174	1		CT U#1 -- Fan no-2
175	1		CT U#1 -- Fan no-3
176	1		CT U#1 -- Fan no-4
177	1		CT U#1 -- Fan no-5
178	1		CT U#1 -- Fan no-6
179	1		CT U#1 -- Fan no-7
180	1		CT U#1 -- Fan no-8
181	1		CT U#1 -Fan no-9

182	2		CT U#2 -Fan no-1
183	2		CT U#2 -Fan no-2
184	2		CT U#2 -Fan no-3
185	2		CT U#2 -Fan no-4
186	2		CT U#2 -Fan no-5
187	2		CT U#2 -Fan no-6
188	2		CT U#2 -Fan no-7
189	2		CT U#2 -Fan no-8
190	2		CT U#2 -Fan no-9
191	1	1LBA01CG051	CTRL-V STANDSTILL COOLING
192	2	2LBA01AA051	CTRL-V STANDSTILL COOLING
193			CW DEWATERING PUMP-1&2
194	2	2HTS04AF001	CYCLONE ROTARY AIR LOCK-A
195	1	1HTS04AF001	CYCLONE ROTARY AIR LOCK-A
196	1	1HTS04AF002	CYCLONE ROTARY AIR LOCK-B
197			DG-1 & 2 Charger
198		HCP-301C	DM WATER SUPPLY PUMP-3
199		HCP-302A/B	DM WATER TRANSFER PUMP-1&2
200		HCP-302C	DM WATER TRANSFER PUMP-3
201		AGT-104A	DWPE dosing agitator-1 & 2 with pump motor-4
202		DOP-103A	DWPE DOSING PUMP-1(DOP-103A)
203		DOP-103B	DWPE DOSING PUMP-2(DOP-103B)
204		DOP-103C	DWPE DOSING PUMP-3(DOP-103C)
205		DOP-103D	DWPE DOSING PUMP-4(DOP-103D)
206	2	2HTS11AN001	E1haust air fan bag filter limestone day bin
207	2	2HTS11AN001	E1haust air fan bag filter limestone day bin
208		VTP-104A	ELECTROCHLORINATION FEED PUMP-1&2(VTP-104A&B)
209		VTP-104B	ELECTROCHLORINATION FEED PUMP-3&4(VTP-104C&D)
210			ELECTROCHLORINATION PANEL-2
211			ELECTROCHLORINATION PANEL-3
212			EOT CRANE AT CW PUMP HOUSE
213	1	1HTS11AN001	Exhaust air fan bag filter limestone day bin
214		ABL-101A	FILTER AIR BLOWER-1&2
215		FLR-101A	FLOCULATOR- 1 TO 4
216	1	1HTN10AP001	HAG oil pump motor
217			HFO UNLOADING PUMP-A
218			HFO UNLOADING PUMP-B
219			HFO UNLOADING PUMP-C
220	1		HOT WELL MAKE UP PUMP - 1C
221	2		HOT WELL MAKE UP PUMP - 2B
222	1		Hot well makeup pump-1A
223	1		Hot well makeup pump-1B
224	1		Hot well makeup pump-1C

225	2		Hot well makeup pump-2A
226	2		Hot well makeup pump-2B
227	2		Hot well makeup pump-2C
228			HYDRANT & SPRAY DIESEL PUMP CHARGING PANEL & 24 V D.C BATTERY CHARGER.
229			HYDRANT DIESEL PUMP
230	1	1LDN45AP001	HYDRAZINE DOZING PUMP-A
231	2	2LDN45AP001	HYDRAZINE DOZING PUMP-A
232	2	2LDN45AP002	HYDRAZINE DOZING PUMP-B
233		DOP-501A	HYPOCHLORITE DOSING PUMP FOR POTABLE WATER, SEA WATER, COOLING TOWER- EACH-2.
234			INDOOR DCDB - 4 NOS
235			INDOOR ELDB - 3
236			INDOOR ELDB - 1&2
237			INDOOR NLDB - 1&2
238			INDOOR NLDB - 3&4
239			INDOOR NLDB - 5&6
240			INDOOR NLDB -7&8
241			INDOOR NLDB -9
242			LDO TRANSFER PUMP-A
243			LDO TRANSFER PUMP-B
244			LDO UNLOADING PUMP-A
245			LDO UNLOADING PUMP-B
246		AGT-102A	LIME DOSING TANK AGITATOR-1&2
247	2	2HTV01AP001	LIME Mill DE& NDE bearing lube oil pump-1&2 (4 NOS)
248	1	1HTV01AP001	LIME Mill DE& NDE bearing lube oil pump-1&2 (4 NOS)
249		ABL-301A/B	MI1ED BED BLOWER -1&2
250	2	2HTV03AP001	Mill bearing oil pre jacking pump
251	1	1HTV03AP001	Mill bearing oil pre jacking pump
252	2	2HTV04AP001	Mill Gear bo1 lube oil pump 1 & 2
253	1	1HTV04AP001	Mill Gear bo1 lube oil pump 1 & 2
254			MLDB TRANSFORMER AT VATECH PLANT
255			OUTDOOR NLDB - 1&2
256			OUTDOOR NLDB - 3&4
257			PDB TRANSFORMER AT VATECH PLANT
258		DOP-102A	PE DOSING PUMP-1&2
259	1	1LDN35AP001	PH DOSING PUMP
260	2	2LDN35AP001	PH DOSING PUMP
261	2	2LDN35AP002	PH DOSING PUMP
262	1	1LDN35AP001	PH DOSING PUMP-1
263	2	2LDN35AP002	PH DOSING PUMP-2



264	1	1LDN35AP002	PH DOSING PUMP-2
265	1	1LDN10AM001	PH DOSING TANK AGITATOR
266	1	1LDN11AM001	PH DOSING TANK AGITATOR
267	2	2LDN11AM001	PH DOSING TANK AGITATOR
268	2	2LDN10AM001	PH DOSING TANK AGITATOR
269	2	2LDN10AM001	PH DOSING TANK AGITATOR-1
270	1	1LDN10AM001	PH DOSING TANK AGITATOR-1
271	2	2LDN11AM001	PH DOSING TANK AGITATOR-2
272	1	1LDN11AM001	PH DOSING TANK AGITATOR-2
273	2	2LDN35AP001	PH DOZING PUMP-A
274	2	2LDN35AP002	PH DOZING PUMP-B
275	1	1LDN35AP002	PH DOZING PUMP-B
276			PORTABLE WATER CONDITONING PUMP -1&2
277			REJECT WATER PUMP-1
278			REJECT WATER PUMP-2
279			REJECT WATER PUMP-3
280			RO Plant HT Motor-1 and its breaker
281			RO Plant HT Motor-2
282			RO Plant LT Motor-1 motor and feeder.
283			RO Plant LT Motor-10 motor and feeder.
284			RO Plant LT Motor-11 motor and feeder.
285			RO Plant LT Motor-12 motor and feeder.
286			RO Plant LT Motor-13 motor and feeder.
287			RO Plant LT Motor-14 motor and feeder.
288			RO Plant LT Motor-15 motor and feeder.
289			RO Plant LT Motor-16 motor and feeder.
290			RO Plant LT Motor-17 motor and feeder.
291			RO Plant LT Motor-18 motor and feeder.
292			RO Plant LT Motor-19 motor and feeder.
293			RO Plant LT Motor-2 motor and feeder.
294			RO Plant LT Motor-20 motor and feeder.
295			RO Plant LT Motor-21 motor and feeder.
296			RO Plant LT Motor-22 motor and feeder.
297			RO Plant LT Motor-23 motor and feeder.
298			RO Plant LT Motor-24 motor and feeder.
299			RO Plant LT Motor-25 motor and feeder.
300			RO Plant LT Motor-26 motor and feeder.
301			RO Plant LT Motor-27 motor and feeder.
302			RO Plant LT Motor-28 motor and feeder.
303			RO Plant LT Motor-29 motor and feeder.
304			RO Plant LT Motor-3 motor and feeder.
305			RO Plant LT Motor-30 motor and feeder.
306			RO Plant LT Motor-31 motor and feeder.
307			RO Plant LT Motor-32 motor and feeder.
308			RO Plant LT Motor-33 motor and feeder.

309			RO Plant LT Motor-34 motor and feeder.
310			RO Plant LT Motor-35 motor and feeder.
311			RO Plant LT Motor-36 motor and feeder.
312			RO Plant LT Motor-37 motor and feeder.
313			RO Plant LT Motor-38 motor and feeder.
314			RO Plant LT Motor-39 motor and feeder.
315			RO Plant LT Motor-4 motor and feeder.
316			RO Plant LT Motor-40 motor and feeder.
317			RO Plant LT Motor-41 motor and feeder.
318			RO Plant LT Motor-42 motor and feeder.
319			RO Plant LT Motor-43 motor and feeder.
320			RO Plant LT Motor-44 motor and feeder.
321			RO Plant LT Motor-45 motor and feeder.
322			RO Plant LT Motor-46 motor and feeder.
323			RO Plant LT Motor-47 motor and feeder.
324			RO Plant LT Motor-48 motor and feeder.
325			RO Plant LT Motor-5 motor and feeder.
326			RO Plant LT Motor-6 motor and feeder.
327			RO Plant LT Motor-7 motor and feeder.
328			RO Plant LT Motor-8 motor and feeder.
329			RO Plant LT Motor-9 motor and feeder.
330	2	2HCB20AT231	ROTARY SB
331	2	2HCB20AT232	ROTARY SB
332	2	2HCB20AT233	ROTARY SB
333	1	1HCB20AT211	ROTARY SB
334	1	1HCB20AT212	ROTARY SB
335	1	1HCB20AT213	ROTARY SB
336	1	1HCB20AT221	ROTARY SB
337	1	1HCB20AT222	ROTARY SB
338	1	1HCB20AT223	ROTARY SB
339	1	1HCB20AT231	ROTARY SB
340	1	1HCB20AT232	ROTARY SB
341	1	1HCB20AT233	ROTARY SB
342	2	2HCB20AT211	ROTARY SB
343	2	2HCB20AT212	ROTARY SB
344	2	2HCB20AT213	ROTARY SB
345	2	2HCB20AT221	ROTARY SB
346	2	2HCB20AT222	ROTARY SB
347	2	2HCB20AT223	ROTARY SB
348		AGT-203A	S B S TANK AGITATOR -1&2 WITH PUMP(DOP-203A,B,C&D)
349			S/Y 220V CHARGER UNIT# 1,410AH
350			S/Y 220V CHARGER UNIT# 2,410AH
351			S/Y BATTERY BANK
352			SEAL WATER TANK MAKE UP PUMP
353			SPRAY DIESEL PUMP

354		SP-201	SPRAY PUMP
355		S/y Dewatering Pump	Switchyard Dewatering Pump
356		0LCM65AP001	UNIT DRAIN PUMP-A
357		0LCM75AP001	UNIT DRAIN PUMP-B
358			Unit-1 Battery Bank-1300 AH,220 V DC
359			Unit-2 Battery Bank-1300 AH,220 V DC

Annexure F: Preventive maintenance schedule

Boiler and auxiliaries: (Both unit # 1 & 2)

S. No.	Equipment (Both units)	Frequency
1	ID Fan - A	Monthly
2	ID Fan - B	Monthly
3	PA Fan - A	Monthly
4	PA Fan - B	Monthly
5	SA Fan - A	Monthly
6	SA Fan - B	Monthly
7	Ash Cooler Fan - A	Monthly
8	Ash Cooler Fan - B	Monthly
9	FA Fan - A	Monthly
10	FA Fan - B	Monthly
11	FA Fan - C	Monthly
12	Bed Ash Conveyor - A	Weekly
13	Bed Ash Conveyor - B	Weekly
14	Hot Water Pump - A	Monthly
15	Hot Water Pump - B	Monthly
16	Hot Water Pump - C	Monthly
17	Lignite Feeder - A	Fortnightly
18	Lignite Feeder - B	Fortnightly
19	Drag Link Conveyor - A	Fortnightly
20	Drag Link Conveyor - B	Fortnightly
21	Lignite RALF - AA	Fortnightly
22	Lignite RALF - AB	Fortnightly
23	Lignite RALF - BA	Fortnightly
24	Lignite RALF - BB	Fortnightly
25	CRM / GDRM gear box - A1	Quarterly
26	CRM / GDRM gear box - A2	Quarterly
27	CRM / GDRM gear box - A3	Quarterly
28	CRM / GDRM gear box - A4	Quarterly
29	CRM / GDRM gear box - A5	Quarterly
30	CRM / GDRM gear box - A6	Quarterly
31	CRM / GDRM gear box - A7	Quarterly
32	CRM / GDRM gear box - B1	Quarterly
33	CRM / GDRM gear box - B2	Quarterly
34	CRM / GDRM gear box - B3	Quarterly
35	CRM / GDRM gear box - B4	Quarterly



36	CRM / GDRM gear box - B5	Quarterly
37	CRM / GDRM gear box - B6	Quarterly
38	CRM / GDRM gear box - B7	Quarterly
39	ERM gear box - A1	Quarterly
40	ERM gear box - A2	Quarterly
41	ERM gear box - A3	Quarterly
42	ERM gear box - A4	Quarterly
43	ERM gear box - A5	Quarterly
44	ERM gear box - A6	Quarterly
45	ERM gear box - A7	Quarterly
46	ERM gear box - B1	Quarterly
47	ERM gear box - B2	Quarterly
48	ERM gear box - B3	Quarterly
49	ERM gear box - B4	Quarterly
50	ERM gear box - B5	Quarterly
51	ERM gear box - B6	Quarterly
52	ERM gear box - B7	Quarterly
53	Servicing of ESP Gates (Inlet / outlet).	Quarterly
54	HFO Transfer Pump - 1	Quarterly
55	HFO Transfer Pump - 2	Quarterly
56	HFO Transfer Pump - 3	Quarterly
57	LDO Transfer Pump - 1	Quarterly
58	LDO Transfer Pump - 2	Quarterly
59	HFO Unloading Pump - 1	Quarterly
60	HFO Unloading Pump - 2	Quarterly
61	HFO Unloading Pump - 3	Quarterly
62	LDO Unloading Pump - 1	Quarterly
63	LDO Unloading Pump - 2	Quarterly
64	Drain Oil Tank Pump - 1	Quarterly
65	Drain Oil Tank Pump - 2	Quarterly
66	Drain Oil Tank Pump - 3	Quarterly
67	HP Dosing Pump - A	Monthly
68	HP Dosing Pump - B	Monthly
69	LP Dosing Pump - A	Monthly
70	LP Dosing Pump - B	Monthly
71	Soot blower-second pass-111	Quarterly
72	Soot blower-second pass-112	Quarterly
73	Soot blower-second pass-113	Quarterly
74	Soot blower-second pass-121	Quarterly
75	Soot blower-second pass-122	Quarterly
76	Soot blower-second pass-123	Quarterly

77	Soot blower-second pass-131	Quarterly
78	Soot blower-second pass-132	Quarterly
79	Soot blower-second pass-133	Quarterly
80	Soot blower-second pass-141	Quarterly
81	Soot blower-second pass-142	Quarterly
82	Soot blower-second pass-143	Quarterly
83	Soot blower-second pass-151	Quarterly
84	Soot blower-second pass-152	Quarterly
85	Soot blower-second pass-153	Quarterly
86	Soot blower-TAPH-211	Quarterly
87	Soot blower-TAPH-212	Quarterly
88	Soot blower-TAPH-213	Quarterly
89	Soot blower-TAPH-221	Quarterly
90	Soot blower-TAPH-222	Quarterly
91	Soot blower-TAPH-223	Quarterly
92	Soot blower-TAPH-231	Quarterly
93	Soot blower-TAPH-232	Quarterly
94	Soot blower-TAPH-233	Quarterly
95	Boiler fill pump	Quarterly
96	Ash rotary seal - A	Quarterly
97	Ash rotary seal - B	Quarterly
98	Aux. Boiler with all auxiliaries	Quarterly

Turbine and auxiliaries: (Both Unit # 1&2)

S. No.	Description	Units	Frequency
1	Cleaning of HP/ LP bypass unit	Both	Weekly
2	General cleaning of BFP, BP and hydraulic coupling area.	Both	Fortnightly
3	Cleaning of tray and drain oil collector	Both	Fortnightly
4	Bowl cleaning	Both	Monthly
5	Oil centrifuge of MOT	Both	Monthly
6	General Cleaning of TG set, its stop & control valves with HP & LP bypass valves	Both	Bi-monthly
7	BFP - A (including BP & Hydraulic coupling)	Both	Quarterly
8	Working oil / lube oil cooler of BFP - A	Both	Quarterly
9	Hot well make-up pump - A	Both	Quarterly
10	BFP - B (including BP & Hydraulic coupling)	Both	Quarterly
11	Working oil / lube oil cooler of BFP - B	Both	Quarterly
12	Hot well make-up pump - B	Both	Quarterly
13	TG Building Cranes (70 T / 20 T)	BoP	Quarterly

14	Diesel Engine - 1	BoP	Quarterly
15	Diesel Engine - 2	BoP	Quarterly
16	BFP - C (including BP & Hydraulic coupling)	Both	Quarterly
17	Working oil / lube oil cooler of BFP - C	Both	Quarterly
18	Hot well make-up pump - C	Both	Quarterly
19	GSC exhaust fan - A	Both	Four months
20	SAC - A	BoP	Four months
21	SAC - E	BoP	Four months
22	IAC - D	BoP	Four months
23	ACW pump - A	BoP	Four months
24	GSC exhaust fan - B	Both	Four months
25	UDT condensate pump - A	BoP	Four months
26	SAC - B	BoP	Four months
27	IAC - A	BoP	Four months
28	ACW pump - B	BoP	Four months
30	Ash water cooler pump - A	BoP	Four months
31	SAC - C	BoP	Four months
32	IAC - B	BoP	Four months
33	ACW pump - C	BoP	Four months
35	CCW pump - A	BoP	Four months
36	Ash water cooler pump - B	BoP	Four months
37	SAC - D	BoP	Four months
38	IAC - C	BoP	Four months
39	CCW pump - B	BoP	Four months
40	Ash water cooler pump - C	BoP	Four months
41	SAC - A	BoP	Four months
42	SAC - E	BoP	Four months
43	IAC - D	BoP	Four months
44	CCW pump - C	BoP	Four months
46	UDT condensate pump - B	BoP	Four months
45	Clean and dirty oil transfer pump	BoP	Yearly
47	CEP - A	Both	Yearly
48	Suction strainer of CEP - A	Both	Yearly
49	Cleaning of all the water box of condenser	Both	Yearly
50	Cleaning of hot well	Both	Yearly
51	Inspection of AC/DC lube oil pump coupling-one no.	Both	Yearly
52	CEP - B	Both	Yearly
53	Suction strainer of CEP - B	Both	Yearly
54	Cleaning of Deaerator	Both	Yearly

55	CEP - C	Both	Yearly
56	Suction strainer of CEP - C	Both	Yearly
57	Turbine last stage blade inspection	Both	Yearly
58	Hogging Ejector	Both	Yearly
59	Main Ejector - A, B	Both	Yearly
60	Generator cooler hydrotest	Both	Yearly
61	HP/ LP - Bypass system	Both	Yearly
62	Condenser fill test	Both	Yearly
63	Condenser spring inspection	Both	Yearly
64	Inspection of Hydraulic Oil Pump (control oil pump) coupling-one no.	Both	Yearly

Balance of Plant: (Both Unit # 1 & 2)

S. No.	Description	Units	Frequency
1	Back wash recirculating pump #A	BoP	Four Months
2	Back wash recirculating pump #B	BoP	Four Months
3	Cooling tower fan & cell#1	1&2	Four Months
4	Cooling tower fan & cell#2	1&2	Four Months
5	Cooling tower fan & cell#3	1&2	Four Months
6	Cooling tower fan & cell#4	1&2	Four Months
7	Cooling tower fan & cell#5	1&2	Four Months
8	Cooling tower fan & cell#6	1&2	Four Months
9	Cooling tower fan & cell#7	1&2	Four Months
10	Cooling tower fan & cell#8	1&2	Four Months
11	Cooling tower fan & cell#9	1&2	Four Months
12	CW pump #A	BoP	Four Months
13	CW pump #B	BoP	Four Months
14	CW pump #C	BoP	Four Months
15	CW pump #D	BoP	Four Months
16	CW pump #E	BoP	Four Months
17	Flash mixer Gear box	BoP	Four Months
18	Polyelectrolyte dosing pump #B	BoP	Four Months
19	Reject water pump #A	BoP	Four Months
20	Reject water pump #B	BoP	Four Months
21	Reject water pump #C	BoP	Four Months
22	Sea water intake pump #A	BoP	Four Months
23	Sea water intake pump #B	BoP	Four Months
24	Sea water intake pump #C	BoP	Four Months
25	Seal water pump for CW pump #A	BoP	Four Months
26	Seal water pump for CW pump #B	BoP	Four Months
27	Seal water pump for CW pump #C	BoP	Four Months

28	Dewatering Polyelectrolyte dosing pump #A	BoP	Six Months
29	Dewatering Polyelectrolyte dosing pump #B	BoP	Six Months
30	Gear box in Flocculators & Flocculator assembly #A	BoP	Six Months
31	Gear box in Flocculators & Flocculator assembly #B	BoP	Six Months
32	Gear box in Flocculators & Flocculator assembly #C	BoP	Six Months
33	Gear box in Flocculators & Flocculator assembly #D	BoP	Six Months
34	Gear box in Flocculators & Flocculator assembly #E	BoP	Six Months
35	Gear box in Flocculators & Flocculator assembly #F	BoP	Six Months
36	Gear box in Flocculators & Flocculator assembly #G	BoP	Six Months
37	Gear box in Flocculators & Flocculator assembly #H	BoP	Six Months
38	Acid cleaning pump #A	BoP	Six Months
39	Acid cleaning pump #B	BoP	Six Months
40	Acid dosing pump #A	BoP	Six Months
41	Acid dosing pump #B	BoP	Six Months
42	Acid unloading pump #A	BoP	Six Months
43	Acid unloading pump #B	BoP	Six Months
44	Air Compressor for musifire system	BoP	Six Months
45	Alkali dosing pump#A	BoP	Six Months
46	Alkali dosing pump#B	BoP	Six Months
47	Alkali unloading pump#A	BoP	Six Months
48	Alkali unloading pump#B	BoP	Six Months
49	Alum dosing pump#A	BoP	Six Months
50	Alum dosing pump#B	BoP	Six Months
51	Anti-foaming dosing pump#A	BoP	Six Months
52	Anti-foaming dosing pump#B	BoP	Six Months
53	Anti-foaming dosing pump#C	BoP	Six Months
54	Anti-foaming dosing pump#D	BoP	Six Months
55	Anti-scalant dosing pump#A	BoP	Six Months
56	Anti-scalant dosing pump#B	BoP	Six Months
57	Anti-scalant dosing pump#C	BoP	Six Months
58	Anti-scalant dosing pump#D	BoP	Six Months
59	Brine pump#A	BoP	Six Months
60	Brine pump#B	BoP	Six Months
61	Brine pump#C	BoP	Six Months
62	Brine pump#D	BoP	Six Months
63	Centrifuge feed pump #A	BoP	Six Months
64	Centrifuge feed pump #B	BoP	Six Months
65	Centrifuge feed pump #C	BoP	Six Months
66	Centrifuge feed pump #D	BoP	Six Months
67	Colony potable water pump#A	BoP	Six Months
68	Condensate pump#A	BoP	Six Months

69	Condensate pump#B	BoP	Six Months
70	Condensate pump#C	BoP	Six Months
71	Condensate pump#D	BoP	Six Months
72	CT make up pump#A	BoP	Six Months
73	CT make up pump#B	BoP	Six Months
74	CT make up pump#C	BoP	Six Months
75	CW pump house Crane	BoP	Six Months
76	Desal Feed pump#A	BoP	Six Months
77	Desal Feed pump#B	BoP	Six Months
78	Desal Feed pump#C	BoP	Six Months
79	Diesel Engine (mulsifire pump)	BoP	Six Months
80	Distillate pump#A	BoP	Six Months
81	Distillate pump#B	BoP	Six Months
82	Distillate pump#C	BoP	Six Months
83	Distillate pump#D	BoP	Six Months
84	DM Water Supply pump#A	BoP	Six Months
85	DM Water Supply pump#B	BoP	Six Months
86	DM Water Supply pump#C	BoP	Six Months
87	DM water transfer pump#A	BoP	Six Months
88	DM water transfer pump#B	BoP	Six Months
89	DM water transfer pump#C	BoP	Six Months
90	Effluent disposal(neutralizing sump) pump#A	BoP	Six Months
91	Effluent disposal(neutralizing sump) pump#B	BoP	Six Months
92	ElectroChlorination Feed Pump#A	BoP	Six Months
93	ElectroChlorination Feed Pump#B	BoP	Six Months
94	ElectroChlorination Feed Pump#C	BoP	Six Months
95	ElectroChlorination Feed Pump#D	BoP	Six Months
96	Filter back wash water pump#A	BoP	Six Months
97	Filter back wash water pump#B	BoP	Six Months
98	Filter back wash water pump#C	BoP	Six Months
99	Fire Water booster pump (MD)#A	BoP	Six Months
100	Fire Water booster pump (MD)#B	BoP	Six Months
101	Gravity Filter Backwash blower#B	BoP	Six Months
102	Gravity Filter Backwash blower#A	BoP	Six Months
103	Gravity Filter Backwash blower #C	BoP	Six Months
104	Hydrant pump(engine driven)	BoP	Six Months
105	Hydrant pump (Motor Driven)#301	BoP	Six Months
106	Hydrant pump (Motor Driven)#302	BoP	Six Months
107	Hypochlorite dosing pump for drinking water#A	BoP	Six Months
108	Hypochlorite dosing pump for drinking water#B	BoP	Six Months
109	Hypochlorite dosing pump for sea water#A	BoP	Six Months

110	Hypochlorite dosing pump for sea water#B	BoP	Six Months
111	Intake pump house Crane	BoP	Six Months
112	jockey pump (MD)#101	BoP	Six Months
113	jockey pump(MD)#102	BoP	Six Months
114	M B blower#A	BoP	Six Months
115	M B blower#B	BoP	Six Months
116	Motive water pump#A	BoP	Six Months
117	Motive water pump#B	BoP	Six Months
118	Motive water pump#C	BoP	Six Months
119	Motive water pump#D	BoP	Six Months
120	Plant potable & service water pump#A	BoP	Six Months
121	Plant potable & service water pump#B	BoP	Six Months
122	Plant potable & service water pump#B	BoP	Six Months
123	Polyelectrolyte dosing pump#A	BoP	Six Months
124	potable water conditioning pump#A	BoP	Six Months
125	potable water conditioning pump#B	BoP	Six Months
126	Sea water intake screen backwash pump#A	BoP	Six Months
127	Sea water intake screen backwash pump#B	BoP	Six Months
128	Sludge Thickening mechanism#A	BoP	Six Months
129	Sludge Thickening mechanism#B	BoP	Six Months
130	Sludge Thickening mechanism#C	BoP	Six Months
131	Sludge Thickening mechanism#D	BoP	Six Months
132	Sodium Meta Bi-sulphite dosing pump#A	BoP	Six Months
133	Sodium Meta Bi-sulphite dosing pump#B	BoP	Six Months
134	Sodium Meta Bi-sulphite dosing pump#C	BoP	Six Months
135	Sodium Meta Bi-sulphite dosing pump#D	BoP	Six Months
136	Spray pump (Engine Driven)	BoP	Six Months
137	Spray pump(MD)#201	BoP	Six Months

Electrical Maintenance: (Both Unit # 1 & 2)

Sr.	UNIT	KKS NUMBER	Equipment	Frequency
1			S/Y -48 V BANK ,350 AH PLCC	Bi-monthly
2			S/Y -48 V BANK ,350 AH PLCC,charger	Bi-monthly
3			24 V BATTERY BANK for DG set1 &2 & FW pump	Bi-monthly
4			BATTERY BANK U#-1 ,220VDC,1300AH(170 cells)	Bi-monthly
5			BATTERY BANK -U#2 ,220VDC,1300AH(170 cells)	Bi-monthly
6			S/Y BATTERY BANK -1 ,220VDC,410AH (73 cells)	Bi-monthly

7			S/Y BATTERY BANK -2 ,220VDC,410AH (73 cells)	Bi-monthly
8	2	2HTS21AN001	Conveying compressor A limestone - 1&2	Four months
9	2	2HTS22AN001	Conveying compressor B limestone - 1&2	Four months
10			220V CHARGER UNIT# 1,1300AH	Six months
11			220V CHARGER UNIT# 2,1300AH	Six months
12		ACWP-A	ACW - A, Motor, Butter fly v/v	Six months
13		ACWP-B	ACW - B, Motor, Butter fly v/v	Six months
14		ACWP-C	ACW - C, Motor, Butter fly v/v	Six months
15	2	2HHQ10AN001	Ash cooler fan 2A	Six months
16	2	2HHQ20AN001	Ash cooler fan 2B	Six months
17	1	1HHQ20AN001	Ash cooler fan 1B	Six months
18	1	1HHQ10AN001	Ash cooler fan 1A	Six months
19		1PGA10AP001	ASH COOLER PUMP MOTOR - A, WITH I/O VALVES	Six months
20		1PGA20AP001	ASH COOLER PUMP MOTOR - B WITH I/O VALVES	Six months
21		1PGA02AP001	ASH COOLER PUMP MOTOR -C WITH I/O VALVES	Six months
22	2	2HDA10AF001	ASH DRAG LINK CONVEY 2A	Six months
23	1	1HDA10AF001	ASH DRAG LINK CONVEY 1A	Six months
24	2	2HDA20AF001	ASH DRAG LINK CONVEY 2B	Six months
25	1	1HDA20AF001	ASH DRAG LINK CONVEY 1B	Six months
26			BAY - 1 LINE-1,BMK-1	Six months
27			BAY - 2 GT-1, BMK-2	Six months
28			BAY - 3 LINE-2, BMK-3	Six months
29			BAY - 4 BUS COUPLER, BMK-4	Six months
30			BAY - 5 LINE-3, BMK-5	Six months
31			BAY - 6 GT-2, BMK-6	Six months
32		CCWP-C	CCW - C, Motor	Six months
33		HCP-203A/B	CONDENSATE PUMP - 1&2	Six months
34		HCP-203C/D	CONDENSATE PUMP - 3&4	Six months
35	2	2PGA02AP001	Cooling water pump for ash cooler- A	Six months
36	2	2PGA10AP001	Cooling water pump for ash cooler -C	Six months
37	2	2PGA03AP001	Cooling water pump for ash cooler-B	Six months
38		VTPC-103A/B	CT MAKE UP PUMP-1	Six months
39		VTPC-103A/B	CT MAKE UP PUMP-2	Six months
40		VTPC-103C	CT MAKE UP PUMP-3	Six months
41		VTPC-105A	DESAL FEED PUMP-1	Six months
42		VTPC-105B	DESAL FEED PUMP-2	Six months
43		VTPC-105C	DESAL FEED PUMP-3	Six months
44			DISTILLATE PUMP-1&2(HCP- 202A&B)	Six months
45			DISTILLATE PUMP-3&4(HCP- 202C&D)	Six months

46	2	2EMA11AN001	E1haust air fan bag filter bed material silo	Six months
47	1	2EMA11AN001	E1haust air fan bag filter bed material silo	Six months
48		VTPC-102A/B	FILTER BACK WASH PUMP-1&2	Six months
49		VTPC-102C	FILTER BACK WASH PUMP-3	Six months
50	2	2HCB10AT111	FULLY RECT SB	Six months
51	2	2HCB10AT112	FULLY RECT SB	Six months
52	2	2HCB10AT113	FULLY RECT SB	Six months
53	2	2HCB10AT121	FULLY RECT SB	Six months
54	2	2HCB10AT122	FULLY RECT SB	Six months
55	2	2HCB10AT123	FULLY RECT SB	Six months
56	1	1HCB10AT111	FULLY RECT SB	Six months
57	1	1HCB10AT112	FULLY RECT SB	Six months
58	1	1HCB10AT113	FULLY RECT SB	Six months
59	1	1HCB10AT121	FULLY RECT SB	Six months
60	1	1HCB10AT122	FULLY RECT SB	Six months
61	1	1HCB10AT123	FULLY RECT SB	Six months
62	2	2MAW30AN00 1	Gland Condenser Blower - A	Six months
63	1	1MAW30AN00 1	Gland Condenser Blower - A	Six months
64	2	2MAW30AN00 2	Gland Condenser Blower - B	Six months
65	1	1MAW30AN00 1	Gland Condenser Blower - B	Six months
66	1	1HTN52AN001	HAG COMBUSTION AIR BLOWER	Six months
67	2	2HTN52AN001	HAG COMBUSTION AIR BLOWER	Six months
68	2	2HTN51AN001	HAG DILUTION AIR BLOWER	Six months
69	1	1HTN51AN001	HAG DILUTION AIR BLOWER	Six months
70	2	2HCB10AT131	HALF RECT SB	Six months
71	2	2HCB10AT132	HALF RECT SB	Six months
72	2	2HCB10AT133	HALF RECT SB	Six months
73	2	2HCB10AT141	HALF RECT SB	Six months
74	2	2HCB10AT142	HALF RECT SB	Six months
75	2	2HCB10AT143	HALF RECT SB	Six months
76	1	1HCB10AT131	HALF RECT SB	Six months
77	1	1HCB10AT132	HALF RECT SB	Six months
78	1	1HCB10AT133	HALF RECT SB	Six months
79	1	1HCB10AT141	HALF RECT SB	Six months
80	1	1HCB10AT142	HALF RECT SB	Six months
81	1	1HCB10AT151	HALF RECT SB	Six months
82	1	1HCB10AT152	HALF RECT SB	Six months
83	1	1HCB10AT153	HALF RECT SB	Six months
84	2	2HJF10AP001	HFO PUMP (Pressuring pump) UNIT-2	Six months
85	1	1HJF10AP001	HFO PUMP (Pressuring pump) UNIT-1	Six months

86	1	1HJF20AP001	HFO PUMP(pressuring pump) UNIT-1	Six months
87	2	2HJF20AP001	HFO PUMP(pressuring pump) UNIT-2	Six months
88	1	1LDN45AP001	HYD DOSING PUMP-1	Six months
89	2	2LDN45AP002	HYD DOSING PUMP-2	Six months
90		HP-301	HYDRANT PUMP-1	Six months
91		HP-302	HYDRANT PUMP-2	Six months
92		IAC-A	INSTRUMENT AIR COMPRESSOR - A, Motor	Six months
93		IAC-B	INSTRUMENT AIR COMPRESSOR - B, Motor	Six months
94		IAC-C	INSTRUMENT AIR COMPRESSOR - C, Motor	Six months
95		IAC-D	INSTRUMENT AIR COMPRESSOR - D, Motor	Six months
96		JP-101	JOCKY PUMP-1	Six months
97		JP-102	JOCKY PUMP-2	Six months
98	2	2HTS06AN001	Mill Air Recirculation Fan	Six months
99	1	1HTS06AN001	Mill Air Recirculation Fan	Six months
100	2	2HTS08AN001	Mill Bag Filter Fan	Six months
101	1	1HTS08AN001	Mill Bag Filter Fan	Six months
102	1	1HTS21AN001	MILL COMPRESSOR MOTOR - 1A	Six months
103	2	2HTS21AN001	MILL COMPRESSOR MOTOR - 2A	Six months
104	2	2HTS22AN001	MILL COMPRESSOR MOTOR - 2B	Six months
105	1	1HTS22AN001	MILL COMPRESSOR MOTOR -1B	Six months
106	2	2HTS02AU001	MILL MAIN MOTOR - 2A	Six months
107	2	2HTS10AN002	Positive Displacement Blower For Lime Day Bin	Six months
108	1	1HTS10AN002	Positive displacement blower for lime day bin	Six months
109	2	2HTS21AP001	Screw pump A limestone	Six months
110	1	1HTS21AP001	Screw pump A limestone	Six months
111		VTPC-101A	SEA INTAKE PUMP-A	Six months
112		VTPC-101B	SEA INTAKE PUMP-B	Six months
113		VTPC-101C	SEA INTAKE PUMP-C	Six months
114	2	2HTS10AN001	Silo feeding P.G. Conveyer Blower	Six months
115	1	1HTS10AN001	Silo feeding P.G. Conveyer Blower	Six months
116		SAC-A	STATION AIR COMPRESSOR - A, Motor	Six months
117		SAC-B	STATION AIR COMPRESSOR - B, Motor	Six months
118		SAC-C	STATION AIR COMPRESSOR - C, Motor	Six months
119		SAC-D	STATION AIR COMPRESSOR - D, Motor	Six months
120		SAC-E	STATION AIR COMPRESSOR - E, Motor	Six months
121		TWS-1	TRAVELLING WATER SCREEN-	Six months

			1,2&3	
122			TUBE SETTLER CUM MECH. THICKNER-1&2(TST-101A&B)	Six months
123			UPS & BATTERY	Six months
124			WASH WATER PUMP-1&2	Six months
125		0HJF31AP001	HFO DRAIN OIL PUMP 1	Yearly
126		0HJF31AP002	HFO DRAIN OIL PUMP 2	Yearly
127			220V STANDBY CHARGER 1300AH	Yearly
128			48V S/YARD PLCC CHARGER 1	Yearly
129			48V S/YARD PLCC CHARGER 2	Yearly
130			ACID CLEANING PUMP - 1&2 (HCP-503A&B)	Yearly
131		DOP-301A/B	ACID DOSING PUMP-1&2	Yearly
132			AHU MOTOR-1	Yearly
133			AHU MOTOR-2	Yearly
134			AHU MOTOR-3	Yearly
135		DOP-302A/B	ALKALI DOSING PUMP-1&2	Yearly
136		AGT-101A	ALUM DOSING TANK AGITATOR-1&2 WITH PUMP-4	Yearly
137			ANTI FOAM DOSING PUMP - 1&2 (DOP-202A&B)	Yearly
138			ANTI FOAM DOSING PUMP - 3&4 (DOP-202C&D)	Yearly
139		DOP-202A/B	ANTI FOAM DOSING TANK AGITATOR -1&2	Yearly
140			ANTI SCALENT DOSING AGITATOR (AGT-201-A&B) PUMPS - (HCP-201-A, B, C&D.)	Yearly
141			AU1ILIARY COOLING WATER PUMP -1&2&3	Yearly
142	2	2HTS02AU003	AU1ILIARY MILL MOTOR	Yearly
143			AUX DB - TRANSFORMER-1 AT CW PUMP.	Yearly
144	1	1HTS02AU003	AUXILIARY MILL MOTOR	Yearly
145		VTP-106A	BACK WASH RECIRCULATION PUMP-1	Yearly
146		VTP-106B	BACK WASH RECIRCULATION PUMP-2	Yearly
147	2	2HTS08AF001	Bag Filter Rotary Air Lock Motor	Yearly
148	2	2HTS08AF002	Bag Filter Rotary Air Lock Motor	Yearly
149	1	1HTS08AF001	Bag Filter Rotary Air Lock Motor	Yearly
150	1	1HTS08AF002	Bag Filter Rotary Air Lock Motor	Yearly
151			BATTERY CHARGER- VATECH PUMP HOUSE 220VDC	Yearly
152	2	2LAB50AP001	BOILER FILL PUMP	Yearly
153	1	1LAB50AP001	BOILER FILL PUMP	Yearly
154			BOOSTER PUMP - 1&2	Yearly

155		HCP-201A	BRINE PUMP - 1&2 (HCP-201A&B)	Yearly
156		HCP-201B	BRINE PUMP - 3&4 (HCP-201C&D)	Yearly
157		CCWP-A	CCW - A, Motor,	Yearly
158		CCWP-B	CCW - B, Motor	Yearly
159		SCP-101A	CENTRIFUGE FEED PUMP-1 & 2	Yearly
160		SCP-101C	CENTRIFUGE FEED PUMP-3 & 4	Yearly
161		CFG-101A/B	CENTRIFUGE-1&2,	Yearly
162		CFG-101C/D	CENTRIFUGE-3&4	Yearly
163	2	2HTS05AF001	CHAIN CONVEYER (LIME)	Yearly
164	1	1HTS05AF001	CHAIN CONVEYER (LIME)	Yearly
165			CHILLER,COMPRESSOR - 1&WATER CIRC.PUMP-1	Yearly
166			CHILLER,COMPRESSOR - 2&WATER CIRC.PUMP-2	Yearly
167			CHILLER,COMPRESSOR - 3&WATER CIRC.PUMP-3	Yearly
168			CHILLER,COMPRESSOR - 4&WATER CIRC.PUMP-4	Yearly
169		ABL-501A	CHLORINE AIR BLOWER - 1	Yearly
170		ABL-501B	CHLORINE AIR BLOWER - 2	Yearly
171			CONDENSATE TRANSFER PUMP-1	Yearly
172			CONDENSATE TRANSFER PUMP-2	Yearly
173	1		CT U#1 -- Fan no-1	Yearly
174	1		CT U#1 -- Fan no-2	Yearly
175	1		CT U#1 -- Fan no-3	Yearly
176	1		CT U#1 -- Fan no-4	Yearly
177	1		CT U#1 -- Fan no-5	Yearly
178	1		CT U#1 -- Fan no-6	Yearly
179	1		CT U#1 -- Fan no-7	Yearly
180	1		CT U#1 -- Fan no-8	Yearly
181	1		CT U#1 -Fan no-9	Yearly
182	2		CT U#2 -Fan no-1	Yearly
183	2		CT U#2 -Fan no-2	Yearly
184	2		CT U#2 -Fan no-3	Yearly
185	2		CT U#2 -Fan no-4	Yearly
186	2		CT U#2 -Fan no-5	Yearly
187	2		CT U#2 -Fan no-6	Yearly
188	2		CT U#2 -Fan no-7	Yearly
189	2		CT U#2 -Fan no-8	Yearly
190	2		CT U#2 -Fan no-9	Yearly
191	1	1LBA01CG051	CTRL-V STANDSTILL COOLING	Yearly
192	2	2LBA01AA051	CTRL-V STANDSTILL COOLING	Yearly
193			CW DEWATERING PUMP-1&2	Yearly
194	2	2HTS04AF001	CYCLONE ROTARY AIR LOCK-A	Yearly
195	1	1HTS04AF001	CYCLONE ROTARY AIR LOCK-A	Yearly
196	1	1HTS04AF002	CYCLONE ROTARY AIR LOCK-B	Yearly



197			DG-1 & 2 Charger	Yearly
198		HCP-301C	DM WATER SUPPLY PUMP-3	Yearly
199		HCP-302A/B	DM WATER TRANSFER PUMP-1&2	Yearly
200		HCP-302C	DM WATER TRANSFER PUMP-3	Yearly
201		AGT-104A	DWPE dosing agitator-1 & 2 with pump motor-4	Yearly
202		DOP-103A	DWPE DOSING PUMP-1(DOP-103A)	Yearly
203		DOP-103B	DWPE DOSING PUMP-2(DOP-103B)	Yearly
204		DOP-103C	DWPE DOSING PUMP-3(DOP-103C)	Yearly
205		DOP-103D	DWPE DOSING PUMP-4(DOP-103D)	Yearly
206	2	2HTS11AN001	E1haust air fan bag filter limestone day bin	Yearly
207	2	2HTS11AN001	E1haust air fan bag filter limestone day bin	Yearly
208		VTP-104A	ELECTROCHLORINATION FEED PUMP-1&2(VTP-104A&B)	Yearly
209		VTP-104B	ELECTROCHLORINATION FEED PUMP-3&4(VTP-104C&D)	Yearly
210			ELECTROCHLORINATION PANEL-2	Yearly
211			ELECTROCHLORINATION PANEL-3	Yearly
212			EOT CRANE AT CW PUMP HOUSE	Yearly
213	1	1HTS11AN001	Exhaust air fan bag filter limestone day bin	Yearly
214		ABL-101A	FILTER AIR BLOWER-1&2	Yearly
215		FLR-101A	FLOCULATOR- 1 TO 4	Yearly
216	1	1HTN10AP001	HAG oil pump motor	Yearly
217			HFO UNLOADING PUMP-A	Yearly
218			HFO UNLOADING PUMP-B	Yearly
219			HFO UNLOADING PUMP-C	Yearly
220	1		HOT WELL MAKE UP PUMP - 1C	Yearly
221	2		HOT WELL MAKE UP PUMP - 2B	Yearly
222	1		Hot well makeup pump-1A	Yearly
223	1		Hot well makeup pump-1B	Yearly
224	1		Hot well makeup pump-1C	Yearly
225	2		Hot well makeup pump-2A	Yearly
226	2		Hot well makeup pump-2B	Yearly
227	2		Hot well makeup pump-2C	Yearly
228			HYDRANT & SPRAY DIESEL PUMP CHARGING PANEL & 24 V D.C BATEERY CHARGER.	Yearly
229			HYDRANT DIESEL PUMP	Yearly
230	1	1LDN45AP001	HYDRAZINE DOZING PUMP-A	Yearly
231	2	2LDN45AP001	HYDRAZINE DOZING PUMP-A	Yearly
232	2	2LDN45AP002	HYDRAZINE DOZING PUMP-B	Yearly
233		DOP-501A	HYPOCHLORITE DOSING PUMP FOR POTABLE WATER, SEA WATER, COOLING TOWER- EACH-	Yearly

2.				
234			INDOOR DCDB - 4 NOS	Yearly
235			INDOOR ELDB - 3	Yearly
236			INDOOR ELDB - 1&2	Yearly
237			INDOOR NLDB - 1&2	Yearly
238			INDOOR NLDB - 3&4	Yearly
239			INDOOR NLDB - 5&6	Yearly
240			INDOOR NLDB - 7&8	Yearly
241			INDOOR NLDB - 9	Yearly
242			LDO TRANSFER PUMP-A	Yearly
243			LDO TRANSFER PUMP-B	Yearly
244			LDO UNLOADING PUMP-A	Yearly
245			LDO UNLOADING PUMP-B	Yearly
246		AGT-102A	LIME DOSING TANK AGITATOR-1&2	Yearly
247	2	2HTV01AP001	LIME Mill DE& NDE bearing lube oil pump-1&2 (4 NOS)	Yearly
248	1	1HTV01AP001	LIME Mill DE& NDE bearing lube oil pump-1&2 (4 NOS)	Yearly
249		ABL-301A/B	MILLED BED BLOWER -1&2	Yearly
250	2	2HTV03AP001	Mill bearing oil pre jacking pump	Yearly
251	1	1HTV03AP001	Mill bearing oil pre jacking pump	Yearly
252	2	2HTV04AP001	Mill Gear bo1 lube oil pump 1 & 2	Yearly
253	1	1HTV04AP001	Mill Gear bo1 lube oil pump 1 & 2	Yearly
254			MLDB TRANSFORMER AT VATECH PLANT	Yearly
255			OUTDOOR NLDB - 1&2	Yearly
256			OUTDOOR NLDB - 3&4	Yearly
257			PDB TRANSFORMER AT VATECH PLANT	Yearly
258		DOP-102A	PE DOSING PUMP-1&2	Yearly
259	1	1LDN35AP001	PH DOSING PUMP	Yearly
260	2	2LDN35AP001	PH DOSING PUMP	Yearly
261	2	2LDN35AP002	PH DOSING PUMP	Yearly
262	1	1LDN35AP001	PH DOSING PUMP-1	Yearly
263	2	2LDN35AP002	PH DOSING PUMP-2	Yearly
264	1	1LDN35AP002	PH DOSING PUMP-2	Yearly
265	1	1LDN10AM001	PH DOSING TANK AGITATOR	Yearly
266	1	1LDN11AM001	PH DOSING TANK AGITATOR	Yearly
267	2	2LDN11AM001	PH DOSING TANK AGITATOR	Yearly
268	2	2LDN10AM001	PH DOSING TANK AGITATOR	Yearly
269	2	2LDN10AM001	PH DOSING TANK AGITATOR-1	Yearly
270	1	1LDN10AM001	PH DOSING TANK AGITATOR-1	Yearly
271	2	2LDN11AM001	PH DOSING TANK AGITATOR-2	Yearly
272	1	1LDN11AM001	PH DOSING TANK AGITATOR-2	Yearly

273	2	2LDN35AP001	PH DOZING PUMP-A	Yearly
274	2	2LDN35AP002	PH DOZING PUMP-B	Yearly
275	1	1LDN35AP002	PH DOZING PUMP-B	Yearly
276			PORTABLE WATER CONDITONING PUMP -1&2	Yearly
277			REJECT WATER PUMP-1	Yearly
278			REJECT WATER PUMP-2	Yearly
279			REJECT WATER PUMP-3	Yearly
280			RO Plant HT Motor-1 and its breaker	Yearly
281			RO Plant HT Motor-2	Yearly
282			RO Plant LT Motor-1 motor and feeder.	Yearly
283			RO Plant LT Motor-10 motor and feeder.	Yearly
284			RO Plant LT Motor-11 motor and feeder.	Yearly
285			RO Plant LT Motor-12 motor and feeder.	Yearly
286			RO Plant LT Motor-13 motor and feeder.	Yearly
287			RO Plant LT Motor-14 motor and feeder.	Yearly
288			RO Plant LT Motor-15 motor and feeder.	Yearly
289			RO Plant LT Motor-16 motor and feeder.	Yearly
290			RO Plant LT Motor-17 motor and feeder.	Yearly
291			RO Plant LT Motor-18 motor and feeder.	Yearly
292			RO Plant LT Motor-19 motor and feeder.	Yearly
293			RO Plant LT Motor-2 motor and feeder.	Yearly
294			RO Plant LT Motor-20 motor and feeder.	Yearly
295			RO Plant LT Motor-21 motor and feeder.	Yearly
296			RO Plant LT Motor-22 motor and feeder.	Yearly
297			RO Plant LT Motor-23 motor and feeder.	Yearly
298			RO Plant LT Motor-24 motor and feeder.	Yearly
299			RO Plant LT Motor-25 motor and feeder.	Yearly
300			RO Plant LT Motor-26 motor and feeder.	Yearly
301			RO Plant LT Motor-27 motor and feeder.	Yearly



302			RO Plant LT Motor-28 motor and feeder.	Yearly
303			RO Plant LT Motor-29 motor and feeder.	Yearly
304			RO Plant LT Motor-3 motor and feeder.	Yearly
305			RO Plant LT Motor-30 motor and feeder.	Yearly
306			RO Plant LT Motor-31 motor and feeder.	Yearly
307			RO Plant LT Motor-32 motor and feeder.	Yearly
308			RO Plant LT Motor-33 motor and feeder.	Yearly
309			RO Plant LT Motor-34 motor and feeder.	Yearly
310			RO Plant LT Motor-35 motor and feeder.	Yearly
311			RO Plant LT Motor-36 motor and feeder.	Yearly
312			RO Plant LT Motor-37 motor and feeder.	Yearly
313			RO Plant LT Motor-38 motor and feeder.	Yearly
314			RO Plant LT Motor-39 motor and feeder.	Yearly
315			RO Plant LT Motor-4 motor and feeder.	Yearly
316			RO Plant LT Motor-40 motor and feeder.	Yearly
317			RO Plant LT Motor-41 motor and feeder.	Yearly
318			RO Plant LT Motor-42 motor and feeder.	Yearly
319			RO Plant LT Motor-43 motor and feeder.	Yearly
320			RO Plant LT Motor-44 motor and feeder.	Yearly
321			RO Plant LT Motor-45 motor and feeder.	Yearly
322			RO Plant LT Motor-46 motor and feeder.	Yearly
323			RO Plant LT Motor-47 motor and feeder.	Yearly
324			RO Plant LT Motor-48 motor and feeder.	Yearly
325			RO Plant LT Motor-5 motor and feeder.	Yearly
326			RO Plant LT Motor-6 motor and feeder.	Yearly
327			RO Plant LT Motor-7 motor and feeder.	Yearly
328			RO Plant LT Motor-8 motor and feeder.	Yearly

329			RO Plant LT Motor-9 motor and feeder.	Yearly
330	2	2HCB20AT231	ROTARY SB	Yearly
331	2	2HCB20AT232	ROTARY SB	Yearly
332	2	2HCB20AT233	ROTARY SB	Yearly
333	1	1HCB20AT211	ROTARY SB	Yearly
334	1	1HCB20AT212	ROTARY SB	Yearly
335	1	1HCB20AT213	ROTARY SB	Yearly
336	1	1HCB20AT221	ROTARY SB	Yearly
337	1	1HCB20AT222	ROTARY SB	Yearly
338	1	1HCB20AT223	ROTARY SB	Yearly
339	1	1HCB20AT231	ROTARY SB	Yearly
340	1	1HCB20AT232	ROTARY SB	Yearly
341	1	1HCB20AT233	ROTARY SB	Yearly
342	2	2HCB20AT211	ROTARY SB	Yearly
343	2	2HCB20AT212	ROTARY SB	Yearly
344	2	2HCB20AT213	ROTARY SB	Yearly
345	2	2HCB20AT221	ROTARY SB	Yearly
346	2	2HCB20AT222	ROTARY SB	Yearly
347	2	2HCB20AT223	ROTARY SB	Yearly
348		AGT-203A	S B S TANK AGITATOR -1&2 WITH PUMP(DOP-203A,B,C&D)	Yearly
349			S/Y 220V CHARGER UNIT# 1,410AH	Yearly
350			S/Y 220V CHARGER UNIT# 2,410AH	Yearly
351			S/Y BATTERY BANK	Yearly
352			SEAL WATER TANK MAKE UP PUMP	Yearly
353			SPRAY DIESEL PUMP	Yearly
354		SP-201	SPRAY PUMP	Yearly
355		S/y Dewatering Pump	Switchyard Dewatering Pump	Yearly
356		0LCM65AP001	UNIT DRAIN PUMP-A	Yearly
357		0LCM75AP001	UNIT DRAIN PUMP-B	Yearly
358			Unit-1 Battery Bank-1300 AH,220 V DC	Yearly
359			Unit-2 Battery Bank-1300 AH,220 V DC	Yearly

Controls and Instrumentation:: (Both Unit # 1 & 2)

S. No.	Equipment Name	Frequency
1	ID Fan Instruments-Unit1, Ash Cooler Fan Instruments-Unit1,Deaerator Instruments-Unit1, SWTP Control Panel	Monthly

2	ID Fan Instruments-Unit2, Ash Cooler Fan Instruments-Unit2, Deaerator Instruments-Unit2	Monthly
3	Burner / Igniter instruments-Unit1, HP bypass system, OSU instruments-Unit1, Uninterrupted Power Supply System-Unit1	Monthly
4	Burner / Igniter instruments-Unit2, HP bypass system, OSU instruments-Unit2, Uninterrupted Power Supply System-Unit2, Instrument/ Service Air Compressor instruments	Monthly
5	C. Cooling water Pumps instruments-Unit1, Aux PRDS Instruments/ Valves Unit1, Servers and Operator Work Station-Unit1	Monthly
6	C. Cooling water Pumps instruments-Unit2, Aux PRDS Instruments/ Valves Unit2, Servers and Operator Work Station-Unit2	Monthly
7	FA Fan Instruments-Unit1, Gravimetric feeder A Instruments-Unit1, LP Bypass system, OSU instruments-Unit1, Aux Boiler instruments	Monthly
8	FA Fan Instruments-Unit2, Gravimetric feeder A Instruments-Unit2, LP Bypass system, OSU instruments-Unit2,	Monthly
9	Fuel oil Instruments-Unit1, Drum Level Instruments-Unit1, Auxiliary cooling Water Pumps inst-Unit1, CW Pump Control Panel instruments	Monthly
10	Fuel oil Instruments-Unit2, Drum Level Instruments-Unit2, Auxiliary cooling Water Pumps inst-Unit2	Monthly
11	Bed Material feeding system instruments-Unit1, Control Room DCS System panels -Unit1, Fire Hydrant Pump Instruments	Monthly
12	Bed Material feeding system instruments-Unit2, Control Room DCS System panels -Unit2	Monthly
13	PA Fan Instruments-Unit1, Gravimetric feeder B Instruments-Unit1, BFP Instruments-Unit1, CW Pump instruments	Monthly
14	PA Fan Instruments-Unit2, Gravimetric feeder B Instruments-Unit2, BFP Instruments-Unit2	Monthly

15	Hotwell Instruments-Unit1, HP Heater Instruments/Valves-Unit1, Superheater Valves-Unit1, Reject Water System Instruments-Unit1	Monthly
16	Hotwell Instruments-Unit2, HP Heater Instruments/Valves-Unit2, Superheater Valves-Unit2	Monthly
17	Steam Extraction system valves-Unit1, Soot Blower Instruments-Unit1, Condenser End Control Panel Instruments	Monthly
18	Steam Extraction system valves-Unit2, Soot Blower Instruments-Unit2	Monthly
19	SA Fan Instruments-Unit1, Oxygen Analyser-Unit1, CEP Instruments-Unit1, Desalination System MED 1, 2 inst -Unit1	Monthly
20	SA Fan Instruments-Unit2, Oxygen Analyser-Unit2, CEP Instruments-Unit2	Monthly
21	Ash cooling water pumps instruments-Unit1, LP Heater Instruments/Valves-Unit1, Reheater Valves-Unit1, Intake Water pump / Travelling water Screen instruments	Monthly
22	Ash cooling water pumps instruments-Unit2, LP Heater Instruments/Valves-Unit2, Reheater Valves-Unit2	Monthly
23	CST Tank instruments-Unit1, Lime System Instruments-Unit1, Air Conditioning System Instruments	Monthly
24	CST Tank instruments-Unit2, Lime System Instruments-Unit2	Monthly

Additionally, **yearly one time calibration** of the following instruments would be required to be done by the successful bidder as instructed by GMDC EIC.

S. No.	Description of material	UOM	Quantity
1.	Weigh balance Make: - Mettler Toledo & Shimadzu, Mettler Toledo: - 0 to 6.1 kg Shimadzu: - 0.0 to 220 gm, Accuracy: <0.05 %.	Nos.	2
2.	Flash point analyzer HPF-360, 30 to 300 degree, Accuracy < 2.0 degree diff.	Nos.	1
3.	Furnace Make: - Ambassador, 0 to 1100 degree, Accuracy < 5.0	Nos.	1

	degree diff.		
4.	Ovan Make: - Pro- Tech,0 to 200 degree,Accuracy< 2.0 degree diff.	Nos.	1
5.	ELECTRICAL LOOP CALIBRATOR,TCS 4050M,Sr. no.16253884	Nos.	1
6.	ELECTRICAL LOOP CALIBRATOR,TCS 4050M,Sr. no.16274230	Nos.	1
7.	PRESSURE LOOP CALIBRATOR,DPI 802.Sr no.8020011216	Nos.	1
8.	HANDHELD PRESSURE CALIBRATOR,DPI 705, Sr no. 70548002	Nos.	1
9.	HANDHELD PRESSURE CALIBRATOR,DPI 610,Sr no.61056483	Nos.	1
10.	MASTER GAUGE (0 TO 40 KG/CM2)	Nos.	1
11.	MASTER GAUGE (0 TO 250 KG/CM2)	Nos.	1
12.	MASTER GAUGE (-1 TO 0 KG/CM2)	Nos.	1
13.	Pressure calibrator (0 to 40 BAR),MPCE40,Sr no.MPCE08060210A12	Nos.	1
14.	TEMPERATURE CALIBRATOR- MP 650,Sr no.MP-08080385 A4	Nos.	1
15.	TEMPERATURE CALIBRATOR- MP- 40 R, Sr. noMP-08080394 B3	Nos.	1
16.	Dead weight tester, H6000-DP-350-2, Sr no.1380	Nos.	1
17.	TEMPERATURE BATH DBC 650 TS, Sr no.30484	Nos.	1
18.	TRX - II, Sr no.9068	Nos.	1
19.	DPI - 104,Sr. no.2940085	Nos.	1
20.	pH Meter, Make: - Systronic	Nos.	1
21.	Conductivity Meter, Make: - LABMAN	Nos.	1

Note:

1. Successful bidder has to intimate to Engineer In-Charge of GMDC the details of work to be performed during preventive maintenance prior to undertaking the equipment for maintenance.
2. All the above works shown are indicative. If any additional work required to operate the plant efficiently, the same is required to be carried out by the successful bidder.
3. Apart from the above list, for any LT equipment, PM periodicity shall be of every three months and for any HT equipment, PM periodicity shall be every six months.

Preventive maintenance schedule for MHP equipments

MECHANICAL		
S. No.	Description	Monthly Frequency
Lignite Handling System		
1.	Apron Feeder & Dribble Conveyor	2
2.	Sizers	2
3.	Stacker-cum-Re-claimer all equipment	1
4.	Belt Conveyors	2
5.	Belt Feeders & Shuttle Conveyors	2
6.	Flip Flop Screens	2
7.	Impactors	2
8.	Vibrating Feeders	2
9.	Traveling Tripper	2
10.	Magnetic Separators	1
11.	Flap Gates	1
12.	RPG and Rod Gates	1
13.	Dry Fog System	1
14.	Sump Pumps	1
15.	Dust Suppression System	1
16.	Hoppers and chutes inspection	1
Lime Handling System		
1.	Apron Feeders & Dribble Conveyor	2
2.	Sizer	1
3.	Belt Conveyors	2
4.	Telescopic chute	1
5.	Impactor	2
6.	Vibrating Feeders	2
7.	Traveling Tripper	2
8.	Magnetic Separators	1
9.	Flap Gates	1
10.	RPG and Rod Gates	1
11.	Dry Fog System	1
12.	Sump Pumps	1
13.	Hoppers and chutes inspection	1
Ash Handling Plant		
1	Air Compressors	2
2	Air Dryers	2
3	Vibrating Screens	1
4	Screw feeders	1
5	OTR system (i.e-OTR-1,2,3,4,5,6)	1
6	ESP-01 & 02: Transporters and discharge lines.	1
7	Rotary ash conditioners	1
8	Rotary feeder	1
9	Fly ash silo with bag filter house	1
10	Bottom ash silo with bag filter house	1
11	Silo and ESP blower	1

12	Dust conditioner pumps	1
13	Buffer hopper to IMBA Silo bottom ash discharge line.	1
14	Buffer hopper with vent fan	1
15	Telescopic chute for dry ash unloading system	1
16	By pass belt system for Bottom ash	1
17	Fly ash dry unloading system	1
Weighbridges		
1	Complete maintenance of electrical, mechanical and instrumentation parts	1
ELECTRICAL and C&I		
S. No. Description Frequency		
Transformers		
1.	External cleaning of transformers	Monthly
2.	Tightness checking of marshalling JB's	Quarterly
Cables		
1	Cleaning of cable Galleries	Quarterly
2	Cables laying & tracing	As & when required.
L T Motors		
1.	External cleaning of motors	Monthly
2.	Tightness checking of power terminals	Quarterly
3.	Greasing of motors	Monthly
H T Switch Gear Breaker Modules		
1.	External cleaning of the panels	Monthly
2.	Routine maintenance of the breakers (Cleaning, Tightness checking, Contacts cleaning)	Monthly
3.	Lubricating the moving parts	Monthly
4.	Modules alignment checking	Half yearly
5.	Alignment of Limit switches	Quarterly
6.	Checking of Breakers operating time	Annually
7.	Testing of Relays, meters	Annually
8.	Tightness checking of outgoing Power & Control cables	Monthly
9.	Checking of space heaters and motor winding heaters	Half yearly
10	Control scheme checking and rectification	Annually
L T Switch Gear Breaker Modules		
1.	External cleaning of the panels	Monthly

2.	Routine maintenance of the breakers (Cleaning, Tightness checking, Contacts cleaning)	Monthly
3.	Lubricating the moving parts	Quarterly
4.	Modules alignment checking	Half yearly
5.	Alignment of Limit switches	Quarterly
6.	Checking of Breakers operating time	Annually
7.	Testing of Relays, meters	Annually
8.	Tightness checking of outgoing Power & Control cables	Monthly
9.	Checking of space heaters and motor winding heaters	Half yearly
10	Control scheme checking and rectification	Annually
	MCC Modules and PDB modules	
1.	External cleaning of panels	Monthly
2.	Preventive maintenance Of the modules (Cleaning, Tightness checking, Contacts cleaning	Quarterly
3.	Module alignment checking	Quarterly
4.	Tightness checking for outgoing power and control cables	Monthly
5.	Control scheme checking and rectification	Annually
	Valves & Dampers	
1.	External cleaning of the valves & dampers	Quarterly
2.	Topping up of oil & Greasing of motors	
	Lighting	
1.	Cleaning of Light fittings	Quarterly
2.	Cleaning of MLDBs, SLDBs	Monthly
3.	Cleaning and tightness checking of Lighting transformers	Monthly
	HT Motors	
1.	External cleaning of motors	Monthly
2.	Tightness checking of power terminals	Quarterly
3.	Greasing of motors	Monthly
4.	Checking of CT& RT D box	Monthly
	DCDB& ACDB SYSTEM	
1.	Cleaning and tightness checking of module	Monthly
	IN LINE MAGNETIC SEPARATOR	Monthly
1.	Cleaning and tightness checking of module	Monthly

2.	Control scheme checking and rectification.	Monthly
	FLAP GATES	Monthly
1.	Cleaning and tightness checking of module	Monthly
2.	Control scheme checking and rectification.	Monthly
	METAL DETECTOR	
1.	Cleaning and tightness checking of module	Monthly
2.	Control scheme checking and rectification.	Quarterly
	CHUTE VIBRATOR	
1.	Cleaning and tightness checking of module	Monthly
2.	Control scheme checking and rectification.	Quarterly
	AHP System	
1	Compressors	Half yearly
2	ESP blower	Quarterly
3	Screen	Quarterly
4	Screw Feeder-	Quarterly
5	Vent Fan Intermediate Silo	Quarterly
6	Silo Vent Fan	Quarterly
7	Ash Conditioner Water Pump-	Quarterly
8	Rotary Feeder	Quarterly
9	Silo Blower	Quarterly
10	Ash Conditioner	Quarterly
11	Bypass Conveyer	Quarterly
12	buffer hopper vent fan	Quarterly
13	MLDB	Quarterly
14	ACDB	Quarterly
15	DCDB	Quarterly
16	X'mer	Quarterly
17	LT MCC	Quarterly
18	HT MCC	Quarterly
19	Air Dryer	Quarterly
20	ESP air heater	Quarterly
21	Silo air heater	Quarterly
22	LP	Quarterly
23	Exhaust fan	Quarterly
	Lighting equipment including high mast	

1	Indoor and outdoor lighting equipment	Quarterly
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Note:

4. Successful bidder has to intimate to Engineer In-Charge of GMDC, the details of work to be performed during preventive maintenance prior to undertaking the equipment for Maintenance.
5. All the above works shown are indicative. If any additional work is required to operate the plant efficiently, the same is required to be carried out by the successful bidder.
6. Apart from the above list, for any LT equipment, PM periodicity shall be every three months and for any HT equipment, PM periodicity shall be every six months.

Annexure - "G"

List of Consumables Items

Mechanical Maintenance:

S.No.	Description	Specification	Unit	Quantity
1	SILICONSEALANT	200GRAMM	NOS	40
2	EMERYPAPER	ROUGH	METER	100
3	EMERYPAPER	MEDIUM	METER	100
4	EMERYPAPER	FINE	METER	100
5	EMERYPAPER	800GRITSIZE	NOS	50
6	EMERYPAPER	1000GRIT SIZE	NOS	50
7	EMERYPAPER	1500GRIT SIZE	NOS	50
8	LAPPINGPASTE	ROUGH,400GMCAN	NOS	12
9	LAPPINGPASTE	MEDIUM,400GMCAN	NOS	12
10	LAPPINGPASTE	FINE,400GM CAN	NOS	12
11	WD40 SPRAY	WD40 SPRAY	NOS	150
12	TAFELONTAPE	TAFELONTAPE	NOS	120
13	RUSTOLINE	RUSTOLINE	LITER	500
14	ANABOND-666	ANABOND-666	NOS	60
15	WIREBRUSH	WIREBRUSH	NOS	75
16	MOLYCOATGREASE	MOLYCOTE1000,HIGH TEPERATUREGREASE1000°C	KG	20
17	ACETYLENENOZZLE	MAKE- MOREX,ANME1/16"TIG WELD	NOS	10
18	ACETYLENENOZZLE	MAKE- MOREX,ANME1/64"TIG WELD	NOS	10
19	DA CYLINDER	DA CYLINDER	NOS	60
20	OXYGENCYLINDER	OXYGENCYLINDER	NOS	120
21	ARGONCYLINDER	ARGONCYLINDER	NOS	24
22	TUNGSTENWIRE	2.4MMX100MM	PKT	4



23	E-6013	3.15MM*350MM	KG	600
24	E-6013	2.5MM*350MM	KG	600
25	E-7018	2.5MM*350MM	KG	600
26	E-7018	3.15MM*350MM	KG	750
27	E-7018	04MM*350MM	KG	100
28	CUTT ROD	4*350MM	KG	100
29	WELDINGROD8018-B3		KG	50
30	WELDINGROD9018-B3		KG	50
31	CASTIRONWELDING ROD		KG	10
32	CASTSTEELWELDING ROD		KG	10
33	ALUMINIUMROD		KG	5
34	STERLITEFILLERWIRE		KG	5
35	FILLERROD70S		KG	20
36	FILLERROD80S		KG	20
37	FILLERROD90S-B9		KG	20
38	FILLERRODSS304		KG	10
39	FILLERRODSS310		KG	10
40	FILLERRODSS316		KG	10
41	LOCTITE406		NOS	06
42	LOCTITE278THREADLOCKER		NOS	10
43	BEARINGRETAINER		NOS	10
44	METALLICPUTTY		KG	5
45	PETROL	FORFILTERCLEANING	LTR	300
46	DIESEL		LTR	450
47	MARKINGCLOTH		METER	50
48	GUMBOOT		PAIRS	12
49	LEATHERHANDGLOVES (GOOD QUALITY)		PAIR	12
50	AG-4CUTTINGWHEEL	1MM-YURIMAKE	NOS	600
51	AG-5CUTTINGWHEEL	1.5MM-YURIMAKE	NOS	600

52	AG-7CUTTINGWHEEL	3MM-BOSCHMAKE	NOS	300
53	AG-4GRINDINGWHEEL	6MM-BOSCHMAKE	NOS	200
54	AG-5GRINDINGWHEEL	6MM-BOSCHMAKE	NOS	150
55	AG-7GRINDINGWHEEL	8MM-BOSCHMAKE	NOS	100
56	AG-4BUFFINGWHEEL	BOSCHMAKE	NOS	100
57	WELDING HELMETWITHGLASS		NOS	06
58	WELDINGHOLDERHEAVY DUTY		NOS	12
59	GRINDING HELMET		NOS	06
60	WELDINGGLASS	WHITE	NOS	25
61	WELDINGGLASS	BLACK	NOS	25
62	SODIUMSILICATE	SODIUMSILICATE	KG	200
63	FEVICOL	SR-998	LTR	150
64	COTTONWASTE	COTTONWASTE	KG	500
65	BELTDRESSER	BELTDRESSER	NOS	05
66	HACKSAWBLADE	HACKSAWBLADE,12"	NOS	20
67	POWERHACKSAWBLADE		NOS.	20
68	FEVIQUICK	FEVIQUICK,5ML	NOS	20
69	OILPAPERSHEETSIZ:0.5MM THICK AND STANDARD DIMENSION	OILPAPERSHEETSIZ:0.5MM THICK AND STANDARD DIMENSION	NOS	40
70	OILPAPERSHEETSIZ:1.0MM THICK AND STANDARD DIMENSION	OILPAPERSHEETSIZ:1.0MM THICK AND STANDARD DIMENSION	NOS	40
71	OILPAPERSHEETSIZ:2.0MM THICK AND STANDARD DIMENSION	OILPAPERSHEETSIZ:1.0MM THICK AND STANDARD DIMENSION	NOS	20
72	RUBBERHANDGLOVES14" ACID RESISTANCE	RUBBERHANDGLOVES14" ACID RESISTANCE	PAIR	12
73	HAND GLOVES - HEAT RESISTANCEASBEST OS	HAND GLOVES - HEAT RESISTANCEASBES TOS	PAIR	12

74	TEFLONESHEET;SIZE:1MM THICK	1MM,PTFE	KG	20
75	TEFLONESHEET;SIZE:2MM THICK	2MM;PTFE	KG	20
76	TEFLONEBAR;SIZE-25MM	500MMLONG	NOS	8
77	TEFLONEBAR;SIZE-50MM	500MMLONG	NOS	8
78	TEFLONEBAR;SIZE-75MM	500MMLONG	NOS	8

Electrical Maintenance

Sr.No.	Material Description/Specification	UOM	Qty.
1	Smokegraypaint(4LtrTin)ref.Make:Asianpaint/bergerpaint/Nerolac	Liter	200
2	REDOXIDE,ZINCRICHPRIMER,REF:IS2074(4LtrTin)ref.Make:Asian paint/bergerpaint/Nerolac	Liter	200
3	THINNER800(5Ltrs)suitableto ref.Make:Asianpaint/bergerpaint/Nerolac paint.	Liter	150
4	CRC-2/26,SPRAYBOTTLE500ml,APPLICATION:CONTACT CLEANING, MAKE: STANVAC	Nos.	100
5	SPRAYBOTTLE-WD-40,420Ml(AEROSOL)FORLULTIPURPOSE USE.	Nos.	100
6	RUSTOLINEANTICORROSIVE1LTR TIN	Liter	100
7	HTTAPEROLL :SCOTCHHTSELFONDINGElectricalvynyletape, 3MSCOTCH,Size-WIDTH-19MMxLENGTH-66Feet,StrongselfadhesiveFor HT joint.	Roll	100
8	PVCINSULATIONTAPE:Size ref.:1.8cmX6.5mX125mmRef.MAKE: STEEL GRIP, ANCHOR, (RED-500nos , YELLOW-500nos,BLUE-500nos,BLACK-500noseachCOLOR)	Nos.	2000
9	ALLUMINIUMFOILTAPESIZE2INCHWITHADHESIVE:size:48mmX 50Mtr.	Roll	50
10	COTTONWASTE(50Kgeach)	Kg.	400
11	TBCONNECTOR,KUT10SIZE-10SQMMFORC&L-TYPECHANNEL Ref.MakeElmex.	Nos.	500

12	TBCONNECTOR:ELEMEXCONNECTOR16SQ.MM,KUT16,500V,	Nos.	500
13	TBCONNECTOR:ELEMEXCONNECTOR35SQ.MM,KUT35,500V	Nos.	500
14	M-SEALADHESIVE:REGULAREPOXYCOUMPOUNDFOR INDUSTRY USE (100GM PKT)	Kg.	2
15	HacksawBlade:HIGHSPEEDHSSPOWERHACKSAWBLADE12":SIZ E: 300 x25 X1.25.	Nos.	20
16	AG-4BUFFINGWHEEL4",Ref.MAKE:BOSCH	Nos.	200
17	CUTTINGWHEELFORAG-4M/C,SIZE:100X3X16MMA24-R5-BFW, MAKE:CARBORENDOM ONLY	Nos.	100
18	GRINDINGWHEEL,100X4X16MM(MAXRPM.13.745)	Nos.	20
19	PAINTINGBRUSH25MM 1"	Nos.	50
20	PAINTINGBRUSH50MM2"	Nos.	50
21	PAINTINGBRUSH100MM,4"	Nos.	10
22	STEELWIREBRUSH:Stainlesssteelheavydutywirebrushforru st removing- industry use, For Manual Rust removing.	Nos.	20
23	EMERYPAPERRoll(SIZE0.4MM):EmeryclothpaperrollGrits60mm, 50Mtr	Nos.	2
24	EMERYclothPAPERROUGHRoll:EmeryclothpaperrollGrits100mm, 50Mtr	Nos.	4
25	WASHINGPOWDER-Ref.NIRMA/RIN ETC.	Kg.	20
26	C-TYPEMildsteelchannel:DINRailMildsteelCTypeslottedchannel(35x 7.5 mm, 1Mtr/each) FOR MCB MOUNTING ARRANGEMENT	Meter	50
27	LOCTITE-638,BEARINGRETAINERCOMPOUND,50ml.	Nos.	5
28	LOCTITE-641,BEARINGRETAINERCOMPOUND,50ml.	Nos.	5
29	CABLETIE,100MMNylonstandardcabletie	Nos.	400
30	CABLETIE,200MMNylonstandardcabletie(200mmX3.6mm)	Nos.	1000
31	CABLETIE,300MMNylonstandardcabletie(300mmX4.8mm)	Nos.	1000
32	CABLETIE,600MMNylonstandardcabletieforheavydutyindustry use.	Nos.	300

33	SILICON SEALANT: General Purpose 260ML/280ml for heavy duty industry use.	Nos.	50
34	WIRE COPPER FLEXIBLE CABLE 2.5SQ.X3 CORE Ref. Make Polycab/Finolex.	Meter	600
35	Transparent plastic sheet: PLASTIC TRANSPARENT SHEET DOUBLE LAYER TYPE. For Rapping and Equipment covering.	Kg.	200
36	TARPOLINEDUCK POLITHINE 12X6FT, GSM 150	Nos.	10
37	PLASTIC ROLL FOR RAPPING, LENGTH: 100 MTR, SIZE: 1.5 MTR	Roll	10
38	Canvas Tarpaulin waterproof type, : Heavy duty Canvas waterproof tarpaulin 300GSM, width: 2.5Mtr, Length 3Mtrs, Hole for Fixing distance suitable to covering, hole both side, dia 12mm.	Nos.	5
39	Canvas Tarpaulin waterproof type, : Heavy duty Canvas waterproof tarpaulin 300GSM, Width: 2.5Mtr, Length 3.5Mtrs, Hole for Fixing distance suitable to covering, hole both side, dia 12mm.	Nos.	5
40	Tarpaulin: Water Proof Heavy duty Tarpaulin duck Polithine: size: 12X6Ft. 200GSM.	Nos.	5
41	8480 CARBON CLEANER FOR QUICK FLASH OVER CLEANING FOR ELECTRICAL EQPT. MAKE - STANVAC	Nos.	30
42	4 Amp HRC Fuse: Type; NH000, 4-Amp, Breaking Cap:- 690V Ac/120KA, As per IEC 60 269-2, IS; 13703, Make: Siemens.	Nos.	100
43	6 Amp HRC Fuse: Type; NH000, 6-Amp, Breaking Cap:- 690V Ac/120KA, As per IEC 60 269-2, IS; 13703, Make: Siemens.	Nos.	100
44	10 Amp HRC Fuse: Type; NH000, 6-Amp, Breaking Cap:- 690V Ac/120KA, As per IEC 60 269-2, IS; 13703, Make: Siemens.	Nos.	100
45	16 Amp HRC Fuse: Type; NH000, 16-Amp, Breaking Cap:- 690V Ac/120KA, As per IEC 60 269-2, IS; 13703, Make: Siemens.	Nos.	100
46	20 Amp HRC Fuse: Type; NH000, 20-Amp, Breaking Cap:- 690V Ac/120KA, As per IEC 60 269-2, IS; 13703, Make: Siemens.	Nos.	100
47	40 Amp HRC Fuse: Type; NH000, 40-Amp, Breaking Cap:- 690V Ac/120KA, As per IEC 60 269-2, IS; 13703, Make: Siemens.	Nos.	100
48	63 Amp H.R.C. FUSE: Type; NH000, Breaking Cap:- 690V Ac/120KA, As per IEC 60 269-2, IS; 13703, MAKE : L & T, Siemens	Nos.	100
49	80 Amp HRC Fuse: Type; NH000, 80-Amp, Breaking Cap:- 690V	Nos.	100

	Ac/120KA, Siemens.		
50	100AmpHRCFuse:Type;NH000,80-Amp,BreakingCap:-690V Ac/120KA, Siemens.	Nos.	50
51	160AmpHRCFuse:Type;NH-1,160-Amp,BreakingCap:- 690VAc/120KA, Siemens.	Nos.	50
52	315AmpHRCFuse:Type;NH-1,160-Amp,BreakingCap:- 690VAc/120KA, Siemens.	Nos.	50
53	Fuse:-Type:4AmpType:HF,Size:(14x51),IEC-269-2.	Nos.	100
54	Fuse:-Type:6AmpType:HF,Size:(14x51),IEC-269-2.	Nos.	100
55	Fuse:-Type:10AmpType:HF,Size:(14x51),IEC-269-2.	Nos.	100
56	Fuse:-Type:16AmpType:HF,Size:(14x51),IEC-269-2.	Nos.	100
57	Fuse:-Type:20AmpType:HF,Size:(14x51),IEC-269-2.	Nos.	100
58	Fuse:-Type:32AmpType:HF,Size:(14x51),IEC-269-2.	Nos.	100
59	2AmpNSTypeFuse:-2Amp,NS-TypeControlFuse,MakeSiemens.	Nos.	100
60	4AmpNSTypeFuse:-4Amp,NS-TypeControlFuse,MakeSiemens.	Nos.	100
61	6AmpNSTypeFuse:-6Amp,NS-TypeControlFuse,MakeSiemens.	Nos.	100
62	10AmpNSTypeFuse:-10Amp,NS-TypeControlFuse,MakeSiemens.	Nos.	100
63	10AmpTIATypeHBCFuse:-10Amp(TIA10),TIA Type HBC Fuse Link, Breaking Capacity; 660Vac/80KA, as per IS 9224, Ref: IS 13703, IEC 269. Make: GE Power controls.	Nos.	100
64	16AmpTIATypeHBCFuse:-16Amp(TIA16),TIA Type HBC Fuse Link, Breaking Capacity; 660Vac/80KA, as per IS 9224, Ref: IS 13703, IEC 269. Make: GE Power controls.	Nos.	100
65	25AmpTIATypeHBCFuse:-25Amp(TIA25),TIA Type HBC Fuse Link, Breaking Capacity; 660Vac/80KA, as per IS 9224, Ref: IS 13703, IEC 269.	Nos.	100

	Make: GE Power controls.		
66	63AmpTIATypeHBCFuse:-63Amp(TIA63),TIA Type HBC Fuse Link, Breaking Capacity; 660Vac/80KA, as per IS 9224, Ref: IS 13703, IEC 269. Make: GE Power controls.	Nos.	100
67	100AmpTIATypeHBCFuse:-100Amp(TIA100),TIA Type HBC Fuse Link, Breaking Capacity; 660Vac/80KA, as per IS 9224, Ref: IS 13703, IEC 269. Make:GEPowercontrols.	Nos.	50
68	MCB,10AMP,4POLE,CHARACTERISTICOFMCB-"C",Un-415 VOLT,50HZ,MAKE -ANY STANDARD	Nos.	50
69	MCB,25AMP,4POLE,CHARACTERISTICOFMCB-"C",Un-415VOLT,50HZ,MAKE -ANY STANDARD	Nos.	50
70	MCB,63AMP,4POLE,CHARACTERISTICOFMCB-"C",Un-415 VOLT,50HZ,MAKE-ANY STANDARD	Nos.	50
71	MCB,32AMP,4POLE,CHARACTERISTICOFMCB-"C",Un-415 VOLT,50HZ,MAKE-ANY STANDARD	Nos.	50
72	MCB,10AMP,2POLE,AC,MAKE-ANYSTANDARD	Nos.	50
73	MCB,16AMP,2POLE,AC,MAKE-ANYSTANDARD	Nos.	50
74	MCB,10AMP,2POLE,DC,MAKE-ANYSTANDARD	Nos.	50
75	MCB,16AMP,2POLE,DC,MAKE-ANYSTANDARD	Nos.	50
76	MCB,2AMP,2POLE,DC,MAKE-ANYSTANDARD	Nos.	50
77	MCB,4AMP,2POLE,DC,MAKE-ANYSTANDARD	Nos.	50
78	MCB,6AMP,2POLE,DC,MAKE-ANYSTANDARD	Nos.	50
80	DIGITALTIMERFORSTREETLIGHT,INPUT:200-250VAC,OUTPUT: 200-250VAC, SINGLE POLE, MIN 30AMP, 250VAC, 50HZ	Nos.	30
82	Contactora: Make: MICROELETTRICA SCIENTIFICA MILANO ITALY, Type:LTNS00602*B01,U(V)-750,Ith(A)-80,VoltBob-220Vcc(220V	Nos	1

	dc),Spec.,Cod.,Conf.Comm-232/02,Sett./Anno-07/02N*003,2-pole,Auxilliary Contacts Type-3 NO+3NC,220 V DC coil		
84	Contactotr: Make:MICROELETTRICASCIENTIFICAMILANO ITALY,Type:N190/FS,2PN/CSINT,Aux.Contacts-1NO+5NC,Coil voltage:220 V dc,	Nos	1
86	Contactotr: Make: MICROELETTRICA SCIENTIFICA MILANO ITALY,Type:LTNS01252*A00,U(V)-750,Ith(A)-150,VoltBob-220Vcc(220 Vdc),Spec.,Cod.,Conf.Comm-1805/1,Sett./Anno-36/01N*002	Nos	1
88	CONTACTOR,TYPE:SC-N3,Z408,MAKE-FE(FUJIELECTRIC),COIL VOLTAGE:220 V AC,AUXILLIARY CONTACT:2NO+2NC,AC-1=Ith=100A,Uimp=8 KV,Ui=1000V(Main)	NOS.	10
90	L.T.CONTROLSWITCHREVERSING,MAKE:ANYSTANDARD,CAT NO:5IT/1,16 AMP.:415 V,3-PH,50 Hz	NOS.	10
92	CONTACTOR,AUX.CONTACTOR,TYPE:K22E,COILVOLTAGE:110V AC,MAKE:ABB	NOS.	10
94	BIMETALLICRELAY,CURRENTRANGE-48to65AMP.,TYPE-LR2D3359,MAKE - SCHNEIDER ELECTRIC	NOS.	10
96	MCB,MAKE:-ABB,TYPE:S282UC,2-POLE,K2AAC400,DC440,T15 6000,WITH SLIDING CONTACT:NO 13 -14,NC 21-22	NOS.	10
98	MCB,MAKE:ABB,TYPE:S282UC,2-POLE,K6AAC400,WITHSLIDING CONTACT:NO 13 -14,NC 21-22	NOS.	10
100	MCB,MAKE:ABB,TYPE:S271C6,1-POLE,WITHSLIDINGCONTACT:NO 13 -14,NC 21-22	NOS.	10
81	DCCONTACTORWITHADDONBLOCK,TYPE-CM400D,Ith-600A,Vi- 660V,400AC3,300hp,220KW,415VOLT,50Hz,COIL VOLTAGE-220V DC,MAKE-CGL	NOS.	10
82	MCCB,3-POLE,60A,WITHOVERCURRENTSETTINGRANGE-25to35 A, WITH E/F & S/C PROTECTION	NOS.	10
83	CONTACTOR:MAKE:MICROELETTRICA SCIENTIFICA MILANO ITALY,TYPE:LTNS01252*A00,U(V)-750,Ith(A)-150,VOLTBob-220Vcc (220Vdc),Spec.,Cod.,Conf.Comm-1805/1,Sett./Anno-36/01N*002	NOS.	10
84	PowerContactor,Make:Siemens,Type:3TF34-00-0A,coilvoltage:110V	No.	1

	AC.		
85	PowerContactor,Make:Siemens,Type:3TF32-00-0A,coilvoltage:110V AC.	No.	5
86	PowerContactorwithslidingcontact2NO+NCMake:Siemens,Type:3TF52 , coil voltage: 110V AC.	No.	2
87	Aux.Contactor,Make:Siemens,Type:3TH30-22E-OBG4,Coilvoltage:220V DC with surge voltage protector.	No.	10
88	Aux.Contactor,Make:Siemens,Type:3TH30-31E,Coilvoltage:110V AC.	No.	10
89	Aux.Contactor,Make:Siemens,Type:3TH30-22E,CoilVoltage:110V AC.	No.	5
90	AuxiliaryContactor:-Siemens3TH3040E220VDC4NO,MakeSiemens	No.	5
91	POWER CONTACTOR: Make : SEIPL - TELEMECANIQUE, TYPE:LC1- D18F7,AUX.CONTACT:1NO+1NC,COILVOLTAGE: 110V, CURRENT RATING : 18 AMP,	No.	7
92	ADDON BLOCK, MAKE:TELEMECHANIC,TYPE: PE: LADN 22,CONTACT : 2NO+2NC,	No.	15
93	POWER CONTACTOR, Make : SEIPL - TELEMECANIQUE, TYPE:LC1- D50F5,AUX.CONTACT:1NO+1NC,COILVOLTAGE: 110V, CURRENT RATING : 50 AMP,	No.	3
94	POWER CONTACTOR, Make : SEIPL - TELEMECANIQUE, TYPE:LC1- D65F5,AUX.CONTACT:1NO+1NC,COILVOLTAGE: 110V, CURRENT RATING : 65 AMP,	No.	3
95	POWER CONTACTOR, Make : SEIPL - TELEMECANIQUE, TYPE:LC1- D95F5,AUX.CONTACT:1NO+1NC,COILVOLTAGE: 110V, CURRENT RATING : 95 AMP,	No.	1
96	POWER CONTACTOR, Make : SEIPL - TELEMECANIQUE, TYPE:LC1- D1115F55,AUX.CONTACT:1NO+1NC,COILVOLTAGE :110V,CURRENTRATING:115AMP,	No.	1

97	POWER CONTACTOR, Make:SEIPL-TELEMECANIQUE, TYPE : LC1 - F150, AUX. CONTACT : 1 NO + 1 NC, COIL VOLTAGE : 110V, CURRENT RATING : 150 AMP,	No.	1
98	POWER CONTACTOR, Make:SEIPL-TELEMECANIQUE, TYPE : LC1 - F185, AUX. CONTACT : 1 NO + 1 NC, COIL VOLTAGE : 110V, CURRENT RATING : 185 AMP,	No.	1
99	POWER CONTACTOR, Make : SEIPL - TELEMECANIQUE, TYPE:LC1-D25F7,AUX.CONTACT:1NO+1NC,COIL VOLTAGE: 110V, CURRENT RATING : 25 AMP,	No.	1
100	AUXILIARY CONTACTOR MAKE:C&S,TYPE:CAD32MD, COIL VOLTAGE : 220 VDC, CONTACT :2 NC	No.	2
101	AUXILIARY CONTACTOR MAKE:TELEMECHANIC,TYPE: CAD32MD, COIL VOLTAGE : 220 VDC, CONTACT : 3 NO + 2 NC,	No.	2
102	AUXILIARY CONTACTOR MAKE:TELEMECHANIC,TYPE: CAD32BD, COIL VOLTAGE : 24 VDC, CONTACT : 3 NO + 2 NC,	No.	10
103	AUXILIARY CONTACTOR MAKE:TELEMECHANIC,TYPE: CAD50MD, COIL VOLTAGE : 220 VDC, CONTACT : 5 NO,	No.	2
104	AUXILIARY CONTACTOR MAKE:TELEMECHANIC,TYPE: CAD32F7, COIL VOLTAGE : 110 VDC, CONTACT : 3 NO + 2 NC	No.	2
105	PowerContactor, Make:TC,Type:LC1F115A,Ith:200A,CoilVoltage:110VAC	No.	1
106	AuxiliaryContactor:-TypeLA6-DK01220VDC2NO+2NC,Make TC	No.	15
107	AuxiliaryContactor:-TypeCA2-DN-1229AC114A415/440A1-A22NO 2NC 110V CONTROL VOLTAGE Ith 10A Ui 660v AC 114A, Make TC	No.	5
108	Power Contactor:- Type-LC1 D323-A60,AC 3 32A,Ith 50A,Ui 660V,V 415V KW15HP20,V660KW18.5HP25,Coilvoltage:110VAC,Make-C&S(TC)	No.	3

109	Auxiliary Contactor:-Type-LC1D803-A60,AC380A,Ith10A,Ui660V,V 415V37KW60HP,V66045KW60HP,Coil voltage:110VAC,Make-C&S (TC)	No.	2
110	BMR,MAKE:TELEMECHANIC,TYPE:LRD3355,RANGE:30-40AMP,	No.	4
111	BMR,MAKE:TELEMECHANIC,TYPE:LRD3359,RANGE:48-65AMP,	No.	4
112	BMR,MAKE:TELEMECHANIC,TYPE:LRD4365,RANGE:80-104 AMP,	No.	1
113	BMR,MAKE:TELEMECHANIC,TYPE:LRD-3357,RANGE:37-50AMP	No.	4
114	BMR,MAKE:TELEMECHANIC,TYPE:LRD-3363,RANGE:63-80 AMP	No.	1
115	BMR,MAKE:TELEMECHANIC,TYPE:LR9-F5369,RANGE:90-150 AMP	No.	1
116	BMR,MAKE:TELEMECHANIC,TYPE:LRD-21,RANGE:12-18AMP	No.	6
117	BMR,MAKE:TELEMECHANIC,TYPE:LR9-F5371,RANGE:132-220 AMP,	No.	1
118	BMR,MAKE:TELEMECHANIC,TYPE:LRD-10,RANGE:4-6AMP	No.	10
119	BMR,MAKE:TELEMECHANIC,TYPE:LRD-08,RANGE:2.5-4AMP	No.	6
120	BMR,MAKE:TELEMECHANIC,TYPE:LRD-16,RANGE:9-13AMP	No.	10
121	BMR,MAKE:TELEMECHANIC,TYPE:LRD-12,RANGE:5.5-8AMP	No.	6
122	Bi-Metalic Relay, Make:TC,Type:LR1D09314,Current Range:7A to 10A	No.	1
123	Power Contactor, Make:TC,Type:LC1F115A,Ith:200A,Coil Voltage:110VAC	No.	1
124	CT operated Bi-Metalic Relay, Make:TC,Type:LR1F(M)105,Current Range:65A to 105A	No.	1
125	Bi-Metalic Relay, Make:TC,Type:LR1D66359,Current Range:48A to 57A	No.	3
126	Bi-Metalic Relay, Make:TC,Type:LR1D16321,Current Range:13A to 18A	No.	4
127	Bia Metalic Relay:-Type:LR1-D09312,Range:10-13A,Make TC	No.	5
128	Bimetalic relay (BMR):-TYPE-LR1-D09310,RANGE-4TO6AMP,Ith- 10A, Ui-660vac,Fuse(max)-16A,Make:Telemechanic.	No.	10

129	BimetalicrelayBimetalicrelay(BMR):-TYPE-LR1-D25322,RANGE-18TO 25 AMP,Ith -10A, Ui-660v ac,Fuse(max)-16A, Make: Telemecanic.	No.	6
130	BimetalicrelayBimetalicrelay(BMR):-TYPE-LR1-D16321,RANGE-13TO 18 AMP,Ith -10A, Ui-660v ac,Fuse(max)-16A, Make: Telemecanic.	No.	2
131	Bimetalicrelay(BMR):-TYPE-LR1-D12316,RANGE-10TO13AMP,Ith-10A,Ui-660vac,Fuse(max)-16A,Make:Telemecanic.	No.	6
132	Bimetalicrelay(BMR):-TYPE-LR1-D09308,RANGE-2.5TO4AMP,Ith-10A,Ui-660vac,Fuse(max)-16A,Make:Telemecanic.	No.	2
133	Bimetalicrelay(BMR):-TYPE-LR1-D09305,RANGE-0.63TO1AMP,Ith-10A,Ui-660vac,Fuse(max)-16A,Make:Telemecanic.	No.	2
134	Power Contactor With Coil & Aux.side contact: Power ContactorCM 400, Ith 600Amp,Ui660V,Range:400Amp,AC3,300HP,CoilVolt:415VAC,Ref.IS 13947-4&IEC-947-4,MakeCG.	Nos.	1
135	Coil:CoilVoltage110VAC,For,PowerContactorCM400,Ith600Amp,Ui 660V, Range: 400Amp, AC3, 300HP, Coil Volt: 415V AC, Ref.IS 13947-4 & IEC-947-4 , Make CG.	Nos.	1
136	LED100Wattfitting	Nos	100
137	LED150Wattfitting	Nos	100
138	LED200Wattfitting	Nos	100
139	LED250Wattfitting	Nos	100
140	LED350Wattfitting	Nos	100
141	2.5Sqmmx4CoreCupperflexiblecable	Mtr	500
142	CFL/LEDLIGHT, WATT :23,V:240,HZ:50,COLOUR TEMP:6500 K,LUMEN:1350,BASE:E27,SCREWTYPE,AMP:175MA,Make:Havells,bajaj	Nos	30
143	TubelightElectronicsBallast:-For1x36W,DoubleT8Type,230VACTube light	Nos	150
144	TubelightElectronicsDoubleTypeBallast:-For2x36W,DoubleT8Type, 230V ac Tube light	Nos	100
145	LEDTUBELIGHTFITTING,240VAC,BATTEN20WATT,MODEL R20PBC,ISO STANDARD MAKE :Syska,Bajaj	Nos	300

146	TUBELIGHTSIDEHOLDERFOR2x36WATT	Nos	150
147	CABLE,SINGLESTRANDCABLE,SIZE-0.5SQMM,MAKE:ANY REPUTED	Meters	90
148	TUBELIGHTSTICK,WATT:36W,VOLTAGE:230V,POWERSAVER STAR RATING: AT LEAST 3 STAR	Nos	300
149	LEDLIGHTFITTING30WATT,FLOODLIGHTTYPE,Make:Oreva,Bajaj	Nos	50
150	70WHPSVLamp,Type-SV70E,E-27,Make-CGL,Bajaj	Nos.	300
151	70WballastforHPSV/MHLamp,Type/Cat.Ref:HDBL07S/MH,Make- CGL,Bajaj	Nos.	300
152	Capacitor,10mfd,250VACFor70WHPSVlamp	Nos.	150
153	IGNITER'S:-30K,220-240VAC,50HZ,IGNSuitablefor70/150/250/400W HPSVfitting	Nos.	150
154	Bi- Metallic Relay, Make : Siemens, Type:3AU50-00- 1D, Current Range : 6.3A to 10A	No.	5
155	Bimetalicrelay(BMR):-TPYE:-3UA5500-2C,Range:- 16TO25AMP,Make- SIEMENS	No.	3
156	Bimetalicrelay(BMR):-TPYE3UA5500-2B,Range12.5TO20AMP,Make- SIEMENS	No.	3
157	Bimetalicrelay(BMR):-TYPE:-3UA5200-2F21Range:- 32TO50 AMP,Make-SIEMENS	No.	3
158	Bimetalicrelay(BMR):-TYPE-3UA5000-1JRange-6.3TO10AMP,Make- SIEMENS	No.	3
159	Bimetalicrelay(BMR):-TYPE-3UA5200-1JRange-8TO12.5AMP,Make- SIEMENS	No.	3
160	Bimetalicrelay(BMR):-TYPE:-3UA5000-0K,Range2TO3.2AMP,Make- SIEMENS	No.	3
161	Bimetalicrelay(BMR):-TYPE-69KW3UA5000-5BRange-4TO6.3AMP ,Make-SIEMENS	No.	3

C&I Maintenance

S.no.	Material description	Qty	UOM
1	Teflontape(1/2"SIZE)	200	Nos
2	AC90,MakeStanvac,RustRemoval	60	Nos
3	WD-40	100	Nos

4	ContactcleanerOKS2621	60	Nos
5	Rustoline(ltr)	30	Ltr
6	CRC-2/26,Spraybottle	20	Nos
7	Siliconsealant	16	Nos
8	locktite406	10	Nos
9	cabletie(300mm)(1pack-100nos.)	30	Packet
10	Hacksawblade(Mirinda)	20	Nos
11	PLASTICPACKINGWIREROLL(1Kg/Roll)	30	kg
12	PLASTICTRANSPARENTSHEETDOUBLELAYERTYPE (WIDTH: 25 FEET APPROX.) KG	400	kg
13	AluminumfoilTap	100	Nos
14	MSEAL	20	kg
15	Insulationtape	200	Nos
16	Cottonwaste	200	kg
17	AAbattery cell	100	Nos

Chemistry Lab

Sr.No.	Fine Chemical Name	Quantity	UOM
1	2-PROPANOL (ISO-PROPANOL)	10ltr	ltr
2	ACETONE	5ltr	ltr
3	PETROLIUM ETHER	10ltr	ltr
4	CHLOROFORM	5ltr	ltr
5	pH Standard Solution (pH -4.0 , 7.0 , 10.0)	1 set	set
6	CONDUCTIVITY CALIBRATION STANDARD Solution Set	1 set	set
7	SILICA STANDARD SOLUTION (1 ppm)	500ml	ml
8	PHOSPHATE STANDARD SOLUTION (100 ppm)	500ml	ml
9	Hydrazine Standard Solution (200 ppm)	500ml	ml
10	Ammonia Standard Solution (1 ppm)	500ml	ml
11	HYDROGEN PEROXIDE 50%	1ltr	ml
12	NESSLERS REAGENT Bottle	5 btl	btl

13	O - TOLIDINE Bottle (Capacity:- 500ml)	5 btl	btl
14	OXALIC ACID	500gm	gm
15	SILICA GEL For Moisture Absorption	2000 gm	gm
16	SILVER NITRATE CRYSTAL AR/LR (01BTL=100GMS)	200 gm	gm
17	SODIUM HYDROGEN SULPHITE	200gm	gm
18	Bleaching Powder	25kg	kg
19	SODIUM HYDROXIDE PELLETS	1000g m	gm
20	Wide Mouth Bottle Capacity:- 500ml , Tarson	30	Nos
21	TOLUENE	5 ltr	ml
22	TISSUE PAPER ROLL	25	nos
23	UNIVERSAL PH INDICATOR (500ml bottle)	5 btl	Btl

MHP Consumables

Sr. No.	Item	Unit	Qty
1	Cotton west	Kg	400
2	Grinding wheel - AG-4	Nos	60
3	Grinding wheel - AG-7	Nos	30
4	Cutting Wheel –AG-4	Nos	60
5	Cutting wheel –AG-7	Nos	20
6	Buffing wheel –AG-4	Nos	30
7	Welding cable holder	Nos	8
8	Welding helmet	Nos	5
9	Cutting helmet	Nos	5
10	Gas cutting torch	Nos	2
11	Gas cutting torch nozzle	Nos	12
12	Gas cutting torch nozzle cleaner	Nos	12
13	Gas cutting pipe (both-DA & Oxy)	Mtr	40
14	Gas cutting pipe clamp	nos	10
15	Welding Electrodes -6013 ,2.5 MM	Kg	40
16	Welding Electrodes -6013 ,3.15 MM	Kg	100
17	Welding Electrodes -6013 ,4 MM	Kg	20
24	Welding Electrodes -7018 ,2.5 MM	Kg	40
25	Welding Electrodes -7018 ,3.15 MM	Kg	100
26	Welding Electrodes -7018,4 MM	Kg	20
27	Welding Electrodes 9018G MM,3.15MM	Kg	40
28	Welding Electrodes 9018G MM,4MM	Kg	40
29	Welding Electrodes 680CGS 2.5MM	Kg	5
30	Welding Electrodes Zed Alloy 550 4.00mm	Kg	10
31	Anabond paste 666	Nos	20
32	WD-40	Nos	24
33	Valve lapping compound (silicon carbide) -fine	Kg	1
34	Valve lapping compound (silicon carbide) -rough	Kg	1
35	Rustoline	Ltr	40
36	Silicon sealant RTV compound, loctite 596 superflex red high temp. rtv	Nos	20
37	Araldite paste	Nos	16
40	Taflon tape 1/2 in size.	Nos	40
41	Emery paper roll -Rough	Mtr	20
42	Emery paper roll -Fine	Mtr	20

43	M-seal	Kg	20
44	Fevicol SR 998	Ltr	4
45	Loctite adhesive 406	Nos	5
46	Hylomer oil jointing compound.(parting plane sealing compound)	Nos.	1
47	Loctite-638,bearing retainer compound	Bottle	1
48	Loctite 246 thread locker, part no. 29515,bottle 250 ml	Bottle	1
49	Petrol	Ltr	20
50	Paint brush 50mm	Nos	24
51	High speed hexo blade size: 12"	Nos	10
52	Flexible hose wire breaded pipe-3/4"	Mtr	50
53	Diesel	Ltr	16
54	Oxygen for cutting	Bottle	50
55	Acetylene for cutting	Bottle	25
56	Asbestos Rope -6 MM	Kg	10
57	asbestos Rope -8 MM	Kg	10
58	Vulcanizing solution(cold joint work/patch up work)	Ltr	16
59	2.5 sq mmx3 core copper flexible cable	Meter	100
60	CRC 2-26 Power Spray : For, Electro maintenance and protection	Nos	4
61	Carbon cleaner	Nos.	4
62	Cable Tie (V100)	Packet	5
63	Cable Tie (V200)	Packet	5
64	Cable Tie (V300)	Packet	1
65	HT rubber tape, width 20mm	Meter	10
66	PVC Insulation tape , standard make	Nos	50
67	Silicon Sealant, 200Gram	Nos	15
68	Wire Brush	Nos	2
69	Detergent powder, Wheel	Kg	1
70	1.5 sqmm pin type copper lug	Nos	50
71	2.5 sqmm pin type copper lug	Nos	25
72	4 sqmm pin type Aluminum lug	Nos	10
73	6 sqmm pin type Aluminum lug	Nos	10
74	10 sqmm pin type Aluminum lug	Nos	10
75	16 sqmm pin type Aluminum lug	Nos	10
76	2.5 sqmm Straight type copper lug	Nos	10
77	4 sq mm Straight type copper lug	Nos	10
78	2.5 sq mm ring type copper lug	Nos	5
79	4 sqmm ring type copper lug	Nos	5
80	6 sqmm ring type copper lug	Nos	5

81	10 sqmm ring type copper lug	Nos	5
82	16 sqmm ring type copper lug	Nos	5
83	4 sqmm ring type Aluminum lug	Nos	10
84	6 sqmm ring type Aluminum lug	Nos	20
85	10 sqmm ring type Aluminum lug	Nos	20
86	16 sqmm ring type Aluminum lug	Nos	20
87	Aluminum Foil Tape	Nos	15
88	500W Halogen fitting with 30 mtr long cables	Set	5
89	EP#3 Grease	Kg	10
90	Moly coat grease	Kg	1
91	Petroleum jelly	Kg	0.5
92	Nuts and bolts upto 10mm dia (bolt inner dia)	Kg	1
93	All types of fuses up to 16Amp	Nos	150
94	LT winding varnish spray 250ml bottle	Nos	2
95	Contact Cleaner-2621 OKS Make	Nos	2
96	9 Volt Battery For Multimeter	Nos.	5
97	Rubber hose pipe (size 1"x25 Mtr.)	Nos	15
98	Empty polythene bags (capacity-50 kg /bag	Nos	200
99	Gum boot	10	10

Note

1. If any consumables items, except the list mentioned herein above, if required to carry out any job, shall then be arranged by your entity for which the payment shall be done by GMDC team at mutually agreed rates.
2. All the unused consumables on completion of the contract shall be handed over to the GMDC.
3. Your entity must maintain above consumables items in own store and day to day update.

FORM – PA

CHECK LIST OF DOCUMENTS ENCLOSED WITH TENDER

TECHNICAL BID

Sr. No.	Document	Declaration (Strike out whichever is not applicable)
1.	Tender Processing Fee	Yes/No
2.	EMD	Yes / No
3.	Form PA (check list of documents enclosed with tender)	Yes / No
4.	Form PB (Status of the Bidder)	Yes / No
5.	Form PC (CA Certification for Financial Details and work carried out during the last seven years of bidder)	Yes / No
6.	Form PD (Declarations)	Yes / No
7.	Form PE (Undertaking of Genuineness of Document)	Yes / No
8.	Form PF (Undertaking of Indemnity)	Yes / No
9.	Form PG (Site Visit)	Yes / No
10.	Power of Authority to sign the documents (Duly Notarized on Stamp paper of Rs. 300)	Yes / No

PRICE BID

1	Online Price bid submission in Form PP	Yes / No
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FORM - PB

STATUS OF THE BIDDER

Particulars	Details
Name of the Bidder:	
Address :	
Registered office :	
For correspondence :	
Telephone No.	
Fax No.	
E-mail Address	
Attested copies of Deeds, Articles of association to be enclosed	
Name & contact number of person holding power of attorney (Attested copy of power of attorney to be enclosed)	
Names of Partners with their Present and permanent address	
Name of Bankers with full address and Telephone No& Bank Account Details (Cancelled Cheque to be enclosed)	
PAN of Bidder	
GST Registration No. of Bidder	
PF Registration No.	
Whether enlisted in other dept., if yes, then furnish the details pertaining to class and the amount qualified to tender	
Was the applicant or its partners or Directors black listed in past by any Govt. or any other body.	
Details pertaining to the work incomplete, if any	
Details of the litigation, court cases and arbitration either completed or under progress during last 10 years by the GMDC entity or any partner/proprietor of present entity GMDC was associated in any capacity.	

Signature and Stamp of the Bidder

FORM PC

1. Turnover and Net Worth

On the basis of the **audited books of accounts** produced before us by M/s. _____, we certify that as per the books of account Net worth and Turn Over of the firm M/s _____ are as under:

1.1 Net Worth= Rs. _____ for the Year 2021-22
Rs. _____ for the Year 2022-23
Rs. _____ for the Year 2023-24

1.2 Turn Over = Rs. _____ for the Year 2021-22
Rs. _____ for the Year 2022-23
Rs. _____ for the Year 2023-24

Average Turnover of Rs. _____

2. Details of Work Carried Out During the Last Seven Years by the Bidder

Sr. No.	Description of work with Work place	Name of client with postal address	Work Order number and date	Contract Period		Actual Quantity worked	Amount without GST of work order	Work experience certificate attached
				From (Date)	To (Date)			
								Yes/No
								Yes/No
								Yes/No
								Yes/No

Signature and Stamp of the Bidder

Signature and Stamp of the CA

TO BE CERTIFIED BY CHARTERED ACCOUNTANT SHOWING

MEMBERSHIP NO/ FIRM REGISTRATION NO



FORM PD

Declaration

(On letter head of the Bidder)

DATE:

To,
The General Manager (Power),
Gujarat Mineral Development GMDC Ltd.,
“KhanijBhavan”, 132 ft. Ring Road,
University Ground, Vastrapur,
Ahmedabad-380015

Dear Sir,

I/we here by solemnly declare that

1. Any of our Directors or Partners, jointly or severally and/or individually or our firm/GMDC have not been black listed by the Central Govt. or the State Govt. or its undertakings.
2. We have not put any condition in our offer with respect to Tender No. _____,
3. We have accepted all the terms and conditions, including Annexure, Corrigendum if any, as specified in the Tender Document No. _____ unconditionally.

I/we here by further declare that, if the declaration is found untrue, the GMDC shall be entitled to take any action against us severally and/or individually or our firm/GMDC in this regard in any manner that may be deemed fit by GMDC.

Yours faithfully,

Signature and Stamp of the Bidder

FORM PE
(Format for Affidavit)

A F F I D A V I T

Undertaking Regarding Geniuses Of Documents
(On Non-Judicial Stamp Paper Of Rs 300/-)

I/We, _____, Partner/Director/Legal Attorney/Accredited
Representative of M/s. _____ solemnly declare that:

1. I/We are submitting Tender for the work _____
_____ against Tender No. _____
2. None of the Partners/Directors of our firm/GMDC is relative of employee of GMDC.
3. All information furnished by us in respect of fulfillment of eligibility criteria and qualification information of this Tender is complete, correct and true.
4. All documents/credentials submitted along with this Tender are genuine, authentic, true and valid.
5. If it is found at any point of time that our documents are not genuine then in that case our tender will be rejected, earnest money deposited by us will be forfeited and we will be debarred from participating in further/future GMDC tenders and/or any action as deemed fit by GMDC may be taken against us, including termination of the contract, forfeiture of all dues including Earnest Money / Security deposit and banning/delisting of our entity and all related persons etc.

SIGNATURE OF THE BIDDER
WITH SEAL

Dated

FORM PF
Undertaking Of Indemnity
(On Letter head of the Bidder)

To,

The General Manager (Power)
Gujarat Mineral Development Corporation Ltd.
Khanij Bhavan
132' Ring Road, University Ground,
Vastrapur,
Ahmedabad.

Dear Sir,

We M/s. ----- hereby undertake that, we shall at all times, indemnify and keep indemnified that GMDC Limited from any and all liability for damages resulting from or arising out of or in any way connected with the operations covered by the Tender No. _____. We shall be responsible for all risk arising in connection with or on account of the operations covered by the contract covered by the above tender and shall make good all losses and damages arising there from. In case, the GMDC Limited shall incur any cost or expense or suffer any loss on account of any claim demand or course of action brought against us and arising out of the operations covered by the Bidder/tender, the GMDC Limited shall have the power (without being bound to do so) to define, contest or compromise any such claim demand or cause of action. Any amount that may become payable by GMDC Limited and any cost expense etc. that may be incurred by the GMDC Limited in this behalf, shall also be recoverable from us, without prejudice to your other rights.

Yours faithfully,

For -----

(Signature & Stamp of the Bidder)



FORM PG

Declaration

(On letter head of the Bidder)

Site Visit

We _____ hereby certify that we have fully understood the site condition in respect of Tender No. _____ for all the works mentioned above at _____. We have obtained all relevant details, information, data, existing working conditions, existing industrial environment etc. We have also studied the working conditions as proposed in the tender and availability of power supply, water supply, man power, machineries, transportation facility etc.

We hereby agree and undertake not to raise any dispute and/or objection at any stage on any ground whatsoever, during the currency of the contract if awarded to us.

SIGNATURE OF THE BIDDER WITH SEAL

Dated

PRICE BID FORM – PP
(To be submitted online)

Table-A

Sr. No.	Description	Nos. Manpower Required							Rate in Rs. Per Manpower per day	Total Rate in Rs. Per day
		EMD	BMD	TMD	C&I	SWTP	MHP	Total		
1	Engineer	2	1	1	2	0	4	10		
2	Technician	3	0	0	5	0	1	9		
3	Helper	3	4	4	5	2	5	23		
4	M/w Fitter	0	1	1	0	0	1	3		
5	IBR Welder	0	1	1	0	0	0	2		
6	Structure Welder	0	1	1	0	0	0	2		
7	Grinder-man	0	2	2	0	0	0	4		
8	Rigger	0	3	3	0	0	2	8		
9	Machinist	0	1	0	0	0	0	1		
10	Fitter	0	1	1	1	0	2	5		
11	Field operator	0	0	0	0	0	6	6		
12	Stacker Operator	0	0	0	0	0	2	2		
Total of A (EXCLUDING GST)										

Table-B

Sr. No.	Description	Required Qty. Per Day	Unit	Amount in Rs per day
1	Providing and maintaining Tools tackles for Pre-Commissioning , Commissioning Activities along with Preventive, Predictive, Breakdown, Shutdown & General Routine Maintenance	As mentioned in Scope of work section	Lot	
Total of B (EXCLUDING GST)				
Total of A &B (EXCLUDING GST)				



Please note the following details for Compulsory e-confirmation for Bank Guarantee through ICICI Bank through SFMS under our:
IFS Code: ICIC0000024 and UIC GMDC530265584 for Field 7037.
Bank Name: ICICI BANK LTD.

FORMAT OF BANK GUARANTEE FOR EARNEST MONEY DEPOSIT (EMD)

(On Non-judicial Stamp paper to be submitted along with submission of bids)

..... (Name of the Bank)

Address.....

Guarantee No.....

A/C Messrs..... (Name of Bidder)

Date of Expiry.....

Limit to liability (currency & amount).....

Invitation for Tender No..... Dated..... (biddingdocument)

For..... (Name of Facilities)

Subject: Earnest Money Deposit Bank Guarantee.

Date.....20

To,

Gujarat Mineral Development Corporation Ltd.
132 Ft Ring Road,
Near University Ground
Vastrapur,
Ahmedabad.

Dear Sir,

In consideration of Gujarat Mineral Development Corporation (hereinafter called “GMDC”) which expression shall unless repugnant to the subject of context include his successors and assigns having agreed to exempt M/s..... (herein after called “Bidder”) from demand under the terms and conditions of “Technical Bid Document” (hereinafter called the said “Bidding Document”) issued by the GMDC vide TenderNo. _____ for _____ the work _____



(Name of the facilities) from Earnest Money Deposit (EMD) of Bid for the due fulfillment by the Bidder of the terms and conditions contained in the said Bidding Document on production of Bank Guarantee for INR _____

(_____ only) (figure in words).

- 1.** We the _____ (Name of Bank) hereinafter referred to as “Bank” having our registered office at _____ (address of Bank) do hereby undertake and agree to indemnify and keep indemnified GMDC to extent of INR _____ (_____ only) (figures in words) against any losses, damage cost, charges and expenses caused to or suffered by or that may be caused or suffered by GMDC by reason of any breach or breaches by the Bidder of any of the terms and conditions contained in the said Bidding Document and unconditionally pay the amount claimed by GMDC on demand and without demur to the extent aforesaid.
- 2.** We _____ (Name of Bank) do hereby undertake to pay the amounts due and payable under the guarantee without any demur merely on a demand by you stating that the amount claimed is due by way of loss or damage caused to or would be caused or suffered by you by reason of any breach by the said Bidder of any of the terms or conditions contained in the said Bidding Document by reason of the Bidder’s failure to fulfill the conditions of said Bidding Document. Any such demand on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding INR _____.
- 3.** We _____ (Name of Bank) further agree that GMDC shall be the sole judge of and as to whether the Bidder has committed any breach or breaches of terms and conditions of the said Bidding Document and the extent of loss, damages, costs, charges and expenses caused to or suffered by or that may caused to or suffered by GMDC on account hereof to the extent of the Bid Security required to be deposited by the Bidder in respect of the said document and the decision of GMDC that the Bidder has committed such breach or breaches and as to the amount or amounts of loss, damages, costs, charges, and expenses caused to or suffered by or that may be caused to or suffered by GMDC shall be final and binding on us.
- 4.** We _____ (Name of Bank) further agree that guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance on the said Bidding Document and that it shall continue to be enforceable till you certify that terms and conditions of the said Bidding Document have been fully and properly carried out by the said Bidder and accordingly discharge the guarantee. Unless a demand or claim under this guaranteed is made on us in writing on or before the (date) _____ we shall be discharged from all liability under this guarantee.
- 5.** We _____ (Name of Bank) further agree with you that you have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Bidding Document or to extend time of performance by the said Bidder from time to time or to postpone for any time or from time to time any of the powers exercisable by you against the said Bidder and to forbear or enforce any of the terms and conditions relating to the said Bidding Document and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said Bidder or for any forbearance act or omission on your part or any indulgence by you to the said Bidder or any such matter or thing whatsoever under the law relating to sureties would but for this provision have effect of so relieving us.



6. It shall not be necessary for GMDC to proceed against the Bidder before proceeding against the Bank and the Guarantee herein contained shall be enforceable against the Bank, notwithstanding any security which GMDC may have obtained from the Bidder at this time when proceeding are taken against Bank hereunder be outstanding or unrealized.
7. We _____ (Name of Bank) further undertake to unconditionally pay the amount claimed by GMDC merely on demand and without demur to the extent aforesaid.
8. We, the said Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of GMDC in writing.
9. This Guarantee will not be discharged due to the change in the constitution of the Bank or the said bidder.
10. The Bank has under its constitution power to give this guarantee _____ and _____ Mr. _____ who has signed it on behalf of the Bank have authority to do so.

Yours faithfully

For.....

(Name of the Bank)

Notwithstanding anything contained hereinabove

- (I) Our liability under this Bank Guarantee shall not exceed **Rs _____/- (Rupees _____ only)**
- (II) This Bank Guarantee is valid up to _____ (Date).
- (III) We are liable to pay the guarantee amount or any part thereof under this bank Guarantee only and only if you serve upon us a written claim or a demand on or before _____ (date).
- (IV) This bank guarantee is operative only when accompanied with SFMS advice from us.

Yours faithfully

For _____ (Name of the Bank)

Yours faithfully

For.....

(Name of the Bank)