GUJARAT INDUSTRIES POWER COMPANY LIMITED
(Surat Lignite Power Plant)

AT & POST NANI NAROLI, TALUKA: MANGROL, DIST: SURAT, PIN 394110 (GUJARAT)
Phone Nos.: EPABX (02629) 261063 to 261072, fax Nos.: (02629) 261112, 261080

TENDER DOCUMENTS FOR;

4X125 MW, Surat Lignite Power Plant, Unit # I to IV: Biennial Maintenance Contract for Turbine & Its Auxiliaries and Balance of Plant Equipments for two years 2025-27

Bid No.: *SLPP/MECH/TG-BOP/BMC/2025-27*

INSTRUCTIONS TO BIDDERS & CONDITIONS OF CONTRACT

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NOTE: All the Bidders should study entire Tender documents carefully & may carry out Plant visit before quoting & submitting their online Bid to understand scope of work and its importance.

NOTICE INVITING TENDER (NIT)
TENDER NO.: SLPP/MECH/TG-BOP/AMC/2025-27

Name of work	4X125 MW, Surat Lignite Power Plant, Unit # I to IV: Biennial Maintenance Contract for Turbine & Its Auxiliaries and Balance of Plant Equipments for two years 2025-27
Place of work	Surat Lignite Power Plant, Village: Nani Naroli, Taluka: Mangrol, Dist.: Surat - 394110 (Gujarat).
Quantity	The successful Bidder will be awarded this contract involving total quantities of various items as mentioned against item descriptions in BOQs.
Contract period	02 years.
EMD	**Rs 2.23 Lac** by RTGS/NEFT/IMPS/Net Banking/Online Mode or RTGS or Bank Guarantee in favor of GIPCL from approved Banks mentioned in this tender in subsequent clauses..
Cost of tender document / tender fee	**Rs 2950** by RTGS/NEFT/IMPS/Net Banking/Online Mode
Availability of online e-Tender document	On website: https://tender.nprocure.com from **31.03.2025** **OR** On GIPCL's website: http://gipcl.com/ from **31.03.2025** (only for viewing and downloading Tender Document)
Last date of online submission of offer	**30.04.2025** up to 17:30 hrs. on website: https://tender.nprocure.com
Submission of EMD, Tender fee and other supporting documents for technical Bid in physical form.	On or before **30.04.2025** during office hours at office of Surat Lignite Power Plant, Nani Naroli, Dist. Surat.
E-Reverse Auction	E-Reverse Auction will be executed through website: https://e-auction.nprocure.com (Schedule will be intimated later on to eligible bidders).

NOTES:

1. Amendment / corrigendum of the tender document, forms, schedules, etc... may be done any time by the GIPCL during the period of publication of tender in the website. The Bidders are required to visit the website regularly till the last date & time of Bid submission.

2. GIPCL reserves the right to reject any or all the tenders or split the work among the Bidders without assigning any reason thereof.

3. The Bidders are required to quote the rate strictly as per the terms and conditions mentioned in the tender document, adhering to technical specifications as well.

4. The conditional tender will not be entertained and shall be liable for rejection.

5. The Bidders are required to submit their Bids online only through the website https://tender.nprocure.com

6. Bidders are advised to upload the tender well in advance to avoid delay in submission of tenders due to n-procure site related issues. In case of any issues /difficulties cropping up during on line uploading / submission of documents, bidders are requested to inform these well in advance (at least two days before closing of tender) to (n) Code Solutions as mentioned in Section-B of tender and as well as to GIPCL mail to bggajjar@gipcl.com.

7. The EMD, Tender fee & other supporting documents are to be submitted in physical form only at the following address: -

Addl. General Manager (O&M)
Gujarat Industries Power Company Limited
Surat Lignite Power Plant
At Village: Nani Naroli,
Taluka: Mangrol,
Dist.: Surat - 394110, Gujarat.
Phone: (02629) 261063-72.
E-Mail: bggajjar@gipcl.com

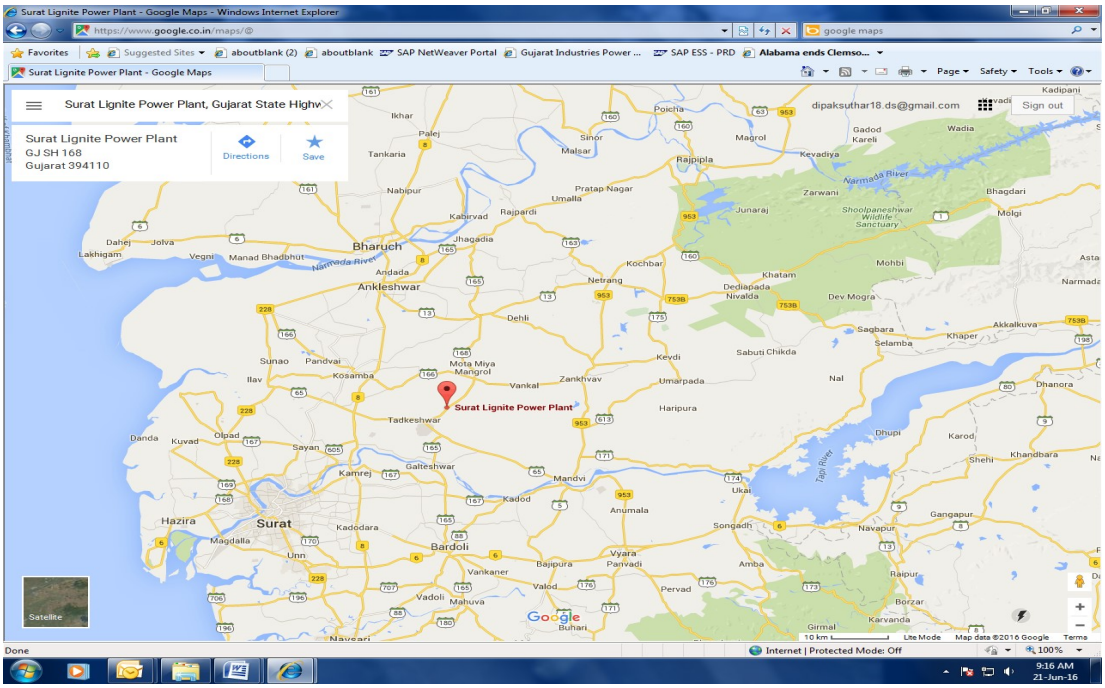
SECTION-A
INSTRUCTIONS TO BIDDERS

1. PLANT SYNOPSIS

Gujarat Industries Power Company Limited (GIPCL) (henceforth be named Company/GIPCL), is a Premier Power Utility in the State of Gujarat with an installed capacity of 1184.4 MW. GIPCL has Commissioned total capacity of 374.4MW of Renewable Capacity comprising of 112.4 MW Wind and 262 MW of Solar Power Projects as on date in its portfolio. The company has commissioned Solar Project of 5 MW at SLPP, Mangrol location in January 2012. The company has also commissioned a unique Distributed Agri Solar pilot project of 2 x 1 MW in April & May, 2016. The Company has successfully commissioned a 2 x 40 MW Solar Project in September, 2017 as well as a 75 MW Solar Power Project in June, 2019 at Gujarat Solar Park, Village Charanka, Dist.: Patan. The Company has commissioned the 100 MW Solar Project at the Raghanesda Solar Park, Banaskantha, Gujarat on 10.08. 2021.The Company has also been allotted land for development of a 2375 MW Renewable Energy Park at Khavda in the Kutch district of Gujarat.

Surat Lignite Power Plant (SLPP) with four units of 125 MW capacities each is located at Village: Nani Naroli, Taluka: Mangrol, District: Surat in Gujarat. GIPCL has also operating its own captive Lignite and Lime Stone Mines close to the Power Plant. The Power Plant is based on Circulating Fluidized Bed Combustion (CFBC) technology for the Boilers, where Lignite is burnt along with Lime Stone in the Combustor of the Boiler.

Surat Lignite Power Plant (SLPP) is accessible by road from Kim and Kosamba, which are on Mumbai-Ahmedabad highway. From Kosamba, SLPP is around 32 KM, out of which 27 KM is part of the National & State Highway and balance 5 KM is District Road. From Kim, SLPP is around 18 KM, out of which 13 KM is the State Highway and balance 5 KM is District Road. The nearest Broad Gauge Railway Line is at Kim, which is around 21 KM from the SLPP. Surat is approximately 50 KM from the SLPP. Location Map for SLPP is as under.



The Company intends to award Biennial Maintenance Contract for Unit # I to IV: Turbine & Balance of Plant Equipments for two years of contract period (2025-27) at SLPP and is therefore inviting open tenders online (https://tender.nprocure.com) from experienced & resourceful contractors.

2. SCOPE OF WORK

2.1 The scope of work under this tender enquiry covers total mechanical maintenance (preventive, breakdown and annual shutdown job) of Turbine & its auxiliaries and Balance of Plant Equipments at 4 x 125 MW Surat lignite power plant.

The details of scope of work with technical activity estimate sheet is given in enclosed Section-E as under:

1. **Package-1 (For Phase-1 UNIT # 1 & 2 Turbine & Its Auxiliaries).**
2. **Package-2 (For Phase-2 UNIT # 3 & 4 Turbine & Its Auxiliaries).**
3. **Package-3 (For Phase-1 UNIT # 1 & 2 Balance of Plant)**
4. **Package-4 (For Phase-2 UNIT # 3 & 4 Balance of Plant)**

2.2 The bid submitted by the bidder not covering the total scope of work and services as detailed out in the tender document shall be liable for rejection.

2.3 Quantum of job mentioned against all items in the price bid are indicative only & may vary as per site requirement & not to be construed as maximum or guaranteed quantity. The quantities shown in the price bid are approximate quantities for the contract period and they may vary as per job requirements.

2.4 All the miscellaneous activities pertaining to specific work to be executed for satisfactory performance is in the scope of contractor in his quoted rates.

Detail scope of work shall be as per clause no. 1 of following Section-D.

3. GENERAL INSTRUCTIONS

3.1 The Bidders who are interested in participating in the tender must read and comply with the instructions and the Terms & Conditions contained in the tender documents.

3.2 The Bids shall be filled in by the Bidders clearly, neatly and accurately. Any alteration, erasures or overwriting would be liable to make the tender invalid unless the same is neatly carried out and attested over the full signature of Bidder. The decision of the Company to interpret the information and rates filled in by the Bidder shall be final and binding on the Bidder.

3.3 The Bidders are requested to make themselves fully conversant with the General Conditions of Contract, Special Conditions of Contract, Technical Specifications, Site conditions, Safety & Health Aspects and Norms to be observed etc. before submitting their bids so that no ambiguity arises in these respects subsequent to submission of the Bids.

3.4 Before quoting the rates, the Bidder must visit the site and should go through the specifications, scope of work etc. and get himself fully conversant with them. The Bid should include cost of mobilization and cost to adhere to all Safety Norms as described in the tender. No relaxation or request for revision of quoted/accepted rates shall be entertained subsequent to the opening of Bid on account of mobilization or Safety costs.

3.5 Bidder has to quote for both Turbine & its Auxiliaries and Balance of plant area.

3.6 Bids received for only one Area shall not be considered.

3.7 GIPCL reserves the rights to allot all the four units' work to a single Bidder or GIPCL may split the contract between two parties, Phase-1 and Phase-2 work separately as it may deem appropriate. In case of splitting of the contract between two parties, the L2 Bidder shall match the rate with L1 Bidder.

3.8 Bidder has to submit all the information as per required Bid document. Failure to furnish all the information as per required Bid documents or submission of a Bid containing deviations from the contractual terms and conditions, specifications and requirements, shall be rejected.

3.9 The Bids shall be submitted within the time frames set out in the Notice Inviting Tender ('**NIT**') and Bids submitted thereafter shall not be accepted and considered.

3.10 The tender documents shall not be transferable.

3.11 The Bidders are expected to examine all instructions, forms, terms & specifications in the Bid documents and to get fully acquainted themselves with all the conditions and matters which may affect the subject matter of the work/tender or the cost thereof. If any Bidder finds any discrepancies or omissions in the specifications and documents or any doubt in true meaning or interpretation of any part, he shall seek necessary clarifications in writing if required.

3.12 Conditional offers shall not be considered and liable to be rejected.

3.13 The Company reserves the right to extend the deadlines for submission of the Bids by giving amendments.

3.14 During evaluation of Bids the Company may, at its discretion ask the Bidder (s) for clarification of their Bid. The request for clarification and the response shall be in writing and no change in prices or substance of the Bid shall be sought, offered or permitted.

3.15 The Company reserves the right to amend/ modify the Bidding documents at any time prior to the deadline for submission of Bids, either at its own discretion or in response to the clarification requested by a prospective Bidder. In such case, the Company may in its discretion extend the deadline for submission of Bids in order to facilitate the prospective Bidders for incorporating the effect of the amendment in their Bids.

3.16 The Bidders shall bear all costs and expenses associated with the preparation and submission of their respective Bids, to attend meetings or conferences, if any, including any pre award discussion with the successful Bidder, technical and other presentations etc. and the Company shall not be liable for any expense thereof.

3.17 If the successful Bidder is consortium / joint deed of undertaking of company, the consortium leader / Bidder shall accept joint and several responsibilities and liabilities for all obligations under the Contract.

3.18 Timely and satisfactory completion of the work and strict adherence to the allotted time frames for jobs shall be the essence of the contract.

3.19 The Company reserves the right to qualify/disqualify any applicant without assigning any reason.

3.20 The Bidder shall be disqualified if any untrue statement or misrepresentation is made in the Bid forms, attachments and other supporting documents submitted by the Bidder.

4. PLANT VISIT

It is advisible for all interested bidders to visit the Surat Lignite Power Plant (SLPP) after downloading the tender copy from website: https://tender.nprocure.com to understand the actual working conditions, compliance related to labour, safety etc., before submitting their offer. Failing which, any consequential liabilities arising will be to bidder's account. The

bidders shall examine the site of works and its surroundings at his own responsibility. The bidders shall collect information that may be necessary for preparing the bid and entering into a contract. All costs and liabilities arising out of the site visit shall be at bidder's account.

The Bidder is deemed to have examined and understood the tender document, obtained his own information in all matters whatsoever that may affect the works to be carried out especially mentioned or works which may have to be carried out to fulfill his contractual obligation within the scheduled rates and to have satisfied himself to the sufficiency for his offer.

The submission of tender by a contractor implies that he has read these instructions, conditions of the contract etc. and has himself aware of the scope, nature of works & specifications of the works to be done. GIPCL will not, therefore after acceptance of contractor's rate, pay any extra charges for any other reason in case the contractor is found later on to have misjudged the site conditions.

Any error in description or quantity or omission in the contract document shall not vitiate the contract or release the contractor from executing the work comprised in the contract according to scope of works, magnitude of the works, requirement of materials, equipment, tools & tackles, labour, etc. Contractor has to complete the work in accordance with the contract documents irrespective of any defects, omissions or errors that may be found in the contract documents.

BIDDER shall inspect the site, examine and obtain all information required and satisfy himself regarding matters such as access to site, communication, transport, working condition including constraint of work place, confined area, quantum of dusting, running equipment, importance of work, round the clock working conditions, safety requirements, right of way, high flood level in River, flow of water during monsoon/dry season in the River/Nallah, the type and number of equipment and facilities required for the satisfactory completion of work, the quantity of various items of the work, the availability of local labour, availability and rates of material, local working conditions, uncertainties of weather, obstructions and hindrances that may arise, etc which may affect the work or cost thereof, before submission of his Bid. Ignorance of site conditions shall not be accepted by the GIPCL as basis for any claim for compensation.
The submission of a Bid by the BIDDER will be construed as evidence that such an examination was made. Any later claims / disputes in regard to rates quoted shall not be entertained or considered by the GIPCL.
The rates quoted by BIDDER shall be based on his own knowledge and judgment of the conditions and hazards involved and shall not be based on any representations of the Engineer.

5. ELIGIBILITY CRITERIA

The following criteria will be adopted for qualifying the Bidders for consideration of the Bid for the further proceeding.

5.1 Bidder should possess minimum **Three years of experience during last Five years** (as per following Cl. No.5.2) in maintenance of either

100 MW and above Steam Turbine & its auxiliaries and complete overhauling & bearings inspection of 100 MW & above steam Turbine - Generator

OR

100 MW and above Steam Turbine & its auxiliaries along with Balance of plant equipment, multistage centrifugal pumps, vertical turbine pumps, water & effluent treatment plant, DM plant, Cooling towers, blowers, fans & piping, valves etc.

Bidder shall submit necessary evidence for the same like self attested copies of work orders/Work Execution/work completion certificates from clients and should enclose proof of the same. The work completion certificate shall comprise of Order value & Executed value. Bidders should have executed the work directly. The work executed as a sub-contractor or subletting agency shall not be taken in to consideration.

5.2 Bidder should produce evidence of having experience of successfully completed similar works as defined hereunder during last five years ending last day of the month previous to the one in which tender is invited, satisfactory progress of ongoing works etc. secured from clients along with self attested copies of documentary evidence preferably photo copies of work experience. The experience should be either of the following:

a. One similar completed work each costing not less than the amount equal to **Rs 89.18 Lac** excluding GST or other applicable taxes.

OR

b. Two similar completed works each costing not less than the amount equal to **Rs 59.45 Lac** excluding GST or other applicable taxes.

OR

c. Three similar completed works each costing not less than the amount equal to **Rs 44.59 Lac** excluding GST or other applicable taxes.

Bidder should specifically mention fulfilling of above criteria in his offer along with details of work orders / work completion / execution certificates issued by clients.

5.3 Tender fee: The tender fee of **Rs 2950** shall be accompanied in form RTGS/NEFT/IMPS/Net Banking/Online Mode", - **Proof to be attached**.

5.4 EMD: The EMD of **Rs 2.23 Lac** shall be accompanied in the form of RTGS/NEFT/IMPS/Net Banking/Online Mode", - or Bank Guarantee given by Bank as described in subsequent clause no. 7 of tender Documents. **Proof to be attached**

5.5 Bidder should have separate Employees Provident Fund code number towards registration of firm with RPF commissioner.

5.6 Attested copies of relevant documents duly signed & seal on each & every page shall be submitted. The above documents will be analyzed and after satisfaction, the Price Bid will be open. GIPCL may verify the documents, experience certificates issued by concern authority. After opening of technical Bid, if any required attested documents found missing in the Technical Bid submitted by the Bidder, the tender inviting authority may inform to that Bidder by E-mail to submit the missing required documents within stipulated time limit. If Bidder/Bidders fail to submit within stipulated time, their Bid will be declared technically disqualified and no further correspondence will be entertained.

5.7 Bidder should have average annual turnover of **Rs 44.59 Lac** for last three financial years (FY: 21-22, FY: 22-23 & FY: 23-24). Bidder shall furnish annual audited financial statement duly certified by Chartered Accountant for the last three financial years to demonstrate the financial healthiness of the company. The balance Sheet

and Profit & Loss Account must be in the name of the company. Any type of MOU for this purpose will not be entertained.

Note: 1. In case, the annual turnover is less than the statutory guideline which does not require audit, the bidder shall submit the turnover certificate from Chartered Accountant.

5.8 The Net worth of the bidder should be positive as evidenced from the audited accounts of last financial year (FY:23-24).

5.9 The Bidder has to submit INCOME TAX Permanent Account Number (PAN), GST Registration Number. Copies of the same shall be submitted.

5.10 In case Bidder is Consortium / Joint deed of undertaking of company, the above requirements / credential of consortium leader / bidder shall be considered unless otherwise specifically mentioned in the tender.

5.11 If Bidder or its Partner(s) or Director(s) is /are/was Black Listed / Deregistered / Stopped or banned from dealing in the past by any Govt, of Gujarat Undertakings / Depts. / Authorities and Govt. of Gujarat supported companies / undertakings / organizations, Bid of that party will be liable to be rejected. Bidder agrees and undertakes to accept decision of GIPCL in this regards as final and binding on the Bidder without any demur and that no further correspondence shall be done in this regard at any stage. Bidder shall have to submit the "Declaration for Contractual Disputes/Litigations" as amended in Annexure-N attached.

5.12 Bidder shall have to submit the "Declaration-cum-Undertaking for Compliance of Safety Laws and Regulations" as amended in Annexure -M attached.

a. If any Major Violation of any safety law(s) / Rule(s) is / are found during the preceding Three (3) years, Bid of that party will be liable to be rejected. Bidder agrees and undertakes to accept decision of GIPCL in this regards as final and binding on the Bidder without any demur and that no further correspondence shall be done in this regard at any stage.
b. If any of the details submitted in the prescribed Annexure / Form to the Bid is/are found to be false, incorrect at any time in future, then the Contract awarded to that Bidder / Contractor shall be liable to be terminated forthwith without any notice / correspondence and Bidder agrees and undertakes to accept decision of GIPCL in this regards as final and binding on the Bidder without any demur and that no further correspondence shall be done in this regard at any stage. Further, Performance / Security Deposit will also be liable to be forfeited. Any dues to GIPCL from the Bidder / Contractor shall be recovered from the pending bills or any other dues payable to the Bidder / Contractor, if any or otherwise through any other recourse available under the Laws.

The Bidder shall submit all the evidences, documents, attested copies of work orders & work completion certificates etc… as a proof with EMD & Tender Fee and also provide the requisite details online for meeting the prequalification requirements. GIPCL will verify the experience, performance, capability & strength of Bidders, independently for executing the job. GIPCL may visit the site & consult the owner of the industry/property where similar job is executed by Bidder. GIPCL reserves the right to accept/split/cancel/reject any/all Bids without assigning any reason thereof. The tenders of qualified Bidder/Bidders shall only be considered for further evaluation.

6. LANGUAGE OF BID

The Bid prepared by the Bidder, and all correspondence and documents relating to the Bid exchanged by the Bidder and the Company, shall be written in the English language. Any printed literature furnished by the Bidder, written in another language shall be accompanied by an English translation for the purpose of interpretation of the Bid.

7. EARNEST MONEY DEPOSIT (EMD) and TENDER FEE

7.1. An EMD of Rs. 2.23 Lac shall accompany with Bid and Non-refundable Tender fee Rs. 2950/- (Rupees Two Thousand Nine Hundred fifty only) shall be submitted through RTGS/NEFT/IMPS/Net Banking/Online Mode.

7.2. EMD & Tender fee shall be submitted through RTGS/NEFT/IMPS/Net Banking/Online Mode as per following details:

1. Name of account holder: Gujarat Industries Power Co. Ltd.
2. A/c. No. : 33514692834
3. Name of Bank : State Bank of India
4. Address of Bank : Utility Building, Nani Naroli, Taluka Mangrol, Dist. Surat.Pin 394 110
5. IFSC code : SBIN0013423
6. MICR code : 394002513

7.3. The EMD, in alternative, may be submitted in the form of irrevocable Bank Guarantee in favor of Gujarat Industries Power Company Limited from follwing banks as per Performa of BG enclosed with this e-tender under Section-F.

- All Nationalized Banks
- Axis Bank
- ICICI Bank
- HDFC Bank
- Kotak Mahindra Bank
- IndusInd Bank
- Federal Bank
- Bandhan Bank
- IDBI Bank
- Karur Vysya Bank

7.4. In case EMD is paid in the form of BG, the same shall be valid for a period of 180 days after the due date for submission of the bid

7.5. The EMD of the successful bidder will be returned after payment of Security Deposit by successful bidder.

7.6. The earnest money deposit will be refunded to the unsuccessful BIDDER as soon as the tender is finalized and after award of LOI / Work Order.

7.7. Any bid not accompanied with EMD and Tender fee will be rejected. Tender fees and EMD should be submitted to GIPCL.

7.8. No interest shall be payable on EMD.

7.9. The EMD will be forfeited if the BIDDER (i) withdraws his tender after acceptance or (ii) withdraws his tender before the validity date of the tender.

7.10. **SCHEDULE OF EMD & TENDER FEES**

EMD &Tender fee and other documents to be submitted in physical form on or before due date of closing of the tender	Address for Submission: **AGM – (O&M)** **GUJARAT INDUSTRIES POWER CO. LTD.,** **(Surat Lignite Power Plant)** **Village – Nani Naroli, Taluka – Mangrol** **District – Surat 394 110, Gujarat** **Phone: 02629-261063 (10 lines)** **Fax : (02629) 261073 / 261074**

8. SUBMISSION OF BIDS

A: MODE OF SUBMISSION

The bids shall be submitted online at https://tender.nprocure.com within the dates specified in the NIT along with the details of tender fees, EMD in two parts as under:

(a) Pre qualification and Techno-commercial Bid without price.
(b) Price Bid.

Note: Tender fee and EMD shall be submitted in physical form on or before due date of closing of the tender.

(a) Pre qualification and Techno-commercial Bid without price:

The tender document duly signed in all pages without price bid along with techno-commercial deviations, if any, shall accompany the bid. The following Information shall be provided in the techno commercial bid:

1. Qualification and experience of site in charge.
2. Schedule of deviation (Annexure-J) Technical as well as commercial, if any.
3. Qualification & experience of Supervisors/Engineers.

The following supporting documents shall also be submitted along with EMD & Tender Fee in physical form:

1. The tender documents dully signed in all pages without price bid along with techno-commercial deviations, if any.
2. Proof of experience meeting the minimum eligibility criteria
3. All the Document as required in eligibility criteria
4. Performance certificate issued by clients.
5. Previous work order copies.
6. Details of present work order (if any)
7. Turn over for the last three years, audited annual accounts/financial statements i.e. profit and loss account and balance sheet duly certified by a practicing CA will be required.
8. Annexures and forms as per Section F.
9. Annexure M (Declaration cum Undertaking for Safety Laws and Regulations Compliance) & Annexure N (Declaration for Contractual Disputes/ Litigations) on Company's Letter Head.
10. P.F Number and Allotment Letter.
11. PAN Number.
12. GST registration number/certificate copy.

13. E-Auction USER ID

(b) Price Bid:

1. Price Bid shall be submitted only in soft form through https://tender.nprocure.com.
   Note: Estimate includes cost of all manpower, supervision, equipments, vehicles, consumables, tools & tackles, transportation, Safety statutory compliance, mobilization and GST etc...
2. **Bidder shall have to quote the rates in the form of %age. i.e. "At Estimated Value OR _____%age below the estimated value OR_____%age above the estimated value with GST in online price bid."**
3. After considering quoted % on Base Estimated rates with GST@18%, total quoted amount will be derive by applying (below / above) % quoted by vendor.
   Total quoted price = Base Estimated rates with GST@18% + Quoted % (+ /- or equal on Base Estimated rates)
4. To participate in E-Reverse Auction, bidders have to create E-Auction USER ID on https://e-auction.nprocure.com and it is mandatory to submit the same along with physical Technical-Commercial Bid; so that the bidder shall be allowed to participate the e-Reverse Auction.
5. For conducting e-Reverse Auction, lowest 50% out of total eligible Bidders (rounded to the next higher whole number) or up to Three (03) nos. of eligible bidders L1 to L3 (whichever is higher) will be invited.
6. L1 price (including GST) will be declared through nProcure's e-Auction Portal: https://e-auction.nprocure.com to start e-Reverse auction process and final received lowest auction price in the value by e-Reverse auction process will be the final L1 rate.
7. Minimum decremental value for the e-Reverse auction will be set by GIPCL prior to start of e-Reverse auction and this will be applicable during each reverse Bid hit.
8. Duration for the e-Reverse Auction shall be 1 hour (60 Minutes) with extension of 15 Minutes at every single reverse bid received during the last **5 Minutes,** till there is no further reverse bid entry by the participating Bidders.
9. After e-Reverse Auction process, L1 bidder shall be decided on lowest rate quoted in e-Reverse Auction.
10. Prorata reduction will be applied in the quoted rates for all the items of SoR of all packages after price discovery through e-Reverse Auction.
11. The quantities shown in the price Bid are approximate for the contract period and may vary as per job requirement.
12. The Bidder shall fill the Bid documents with utmost care in consonance with the instructions contained in the Bid documents.
13. GST shall be paid at actual as per prevailing rates as declared by Central Government on submission of documentary evidence.
14. Rates will remain firm throughout the contract period or any extension thereof. There will not be any escalation / compensation to the contractor against any revision in MWR (Minimum Wage Rates).

B: METHOD OF TENDERING/SIGNATURE ON BIDS

(i) The Bid must contain the postal address like name, residence and place of business of the person or persons submitting the Bid and must be signed and

sealed by the Bidder with his usual signature. The name of all persons signing should also be typed or printed below the signature on each page.

(ii) Bid by a consortium / joint deed of undertaking of company / partnership firm must be furnished with full names of all partners and be signed with the partnership name, followed by the signature and designation of one of the authorised partners or other authorised representative(s). A certified copy of the power of attorney authorizing such partner or representative shall also be submitted.

(iii) Bids by a Corporation/Company must be signed with the legal name of the Corporation/Company by the President, Managing Director or by the Secretary or other person or persons authorised to Bid on behalf of such Corporation/Company. A certified copy of the board resolution/power of attorney authorizing such partner or representative shall also be submitted.

(iv) The Bidder's name stated on the proposal shall be the exact legal name of the firm.

(v) Erasures or other changes in the Bid Documents shall be initialed by the person signing the Bid.

(vi) Bids not conforming to the above requirements of signing may be disqualified.

9. MODIFICATION AND WITHDRAWAL OF BIDS

a. The Bidder may modify or withdraw its bid prior to the deadline prescribed for submission of bids.
b. No Bid shall be modified subsequent to the deadline for submission of Bids.
c. No Bid shall be withdrawn in the interval between the deadline for submission of Bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form.

10. POLICY FOR BIDS UNDER CONSIDERATION

a. Bid shall be deemed to be under consideration immediately after opening of the bid and till official intimation of award/rejection made by the Company to the Bidders.
b. While the Bids are under consideration, Bidders and / or their representative or other interested parties are advised to refrain from contacting by any means, the Company. The Engineer, if necessary, will obtain clarifications on the Bids by requesting for such information from any or all the Bidders, in writing as may be necessary. The Bidder will not be permitted to change the price or substance of the Bid after the Bid has been opened.

11. EFFECT AND VALIDITY OF THE BID

a. The Bid should be kept valid for acceptance for a period of one hundred and eighty (180) calendar days from the date set for opening of Bids.
b. The submission of any Bid along with the required documents and specifications shall constitute an agreement that the Bidder shall have no cause of action or claim, against the Company for rejection of his Bid. The Company shall always be at liberty to reject or accept any Bid or Bids at his sole discretion and any action will not be called into question and the Bidder shall have no claim in that regard against the GIPCL.

12. OPENING OF BIDS

12.1 The GIPCL will open the pre-qualification/Technical Bid/price Bid, as the case may be, in presence of Bidder's representatives whenever such a procedure

has been specified. Otherwise the tender will be opened by the authorised officers of GIPCL.

12.2 **Preliminary Examination:**

12.2.1. The Company will examine the Bids for any computational errors, for sureties furnished by bidder, for authentication of documents submitted and completeness of the Bids.

12.2.2. Arithmetical errors will be rectified on the following basis:

(a) If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price will be corrected & will be binding to the bidders.

(b) If there is a discrepancy between the Total Bid Amount and the sum of total prices, the sum of total prices shall prevail and the Total Bid Amount will be corrected & will be binding to the bidders.

13. EVALUATION & COMPARISON OF BIDS

13.1 GIPCL shall evaluate the Bids received and accepted by it to ascertain the lowest evaluated Bid in conformity with the specifications of the tender documents.

13.2 The Technical Bids will be examined for minor matters regarding qualification of bids. Subsequent to correspondence with the respective bidders, the decision of Tender Committee will be final.

13.3 All responses to requests for clarifications shall be in writing and shall be presented to the Company through e-mail or in a sealed envelope on or before the given date requested by the Company. If the Technical clarifications sought by the Company do not reach the Company on or before due date, the Bid will be rejected.

13.4 The comparison of all the Bids shall be carried out with reference to the scope of work as per the technical specification. Any deviation/omission shall be evaluated at highest quoted price of the deviation/omission quoted by any of the Bidder. In case a separate price (for omission) is not given by any other Bidder, a reasonable price of the same shall be taken & the same shall be binding to the Bidders.

13.5 The commercial deviation, if any, shall be loaded to bring all the Bids at par. The loading shall be carried out at an interest rate of 2% above PLR of SBI.

13.6 A Bid to be substantially responsive shall be one which on evaluation confirms to all the terms, conditions and specifications of the Bid documents without any material deviation or reservation.

13.7 For the above referred purpose, a 'material deviation' shall be one which:

(a) Which affects in any substantial way the scope, quality or performance of the contract, or

(b) Which limits in any substantial way and in a manner inconsistent with the Bid documents, GIPCL's right or the Bidder's obligations, under the contract, or

(c) Whose rectification would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.

14. RIGHT OF REJECTION OF TENDERS

14.1 GIPCL reserves the right to accept or reject any Bid or to cancel the Bidding process and reject all Bids at any time prior to award of contract, without

thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders regarding the same.

14.2 Any Tender without EMD and Tender fee will be treated as non-responsive and shall be rejected at the outset & no further correspondence shall be entertained regarding this.

14.3 GIPCL reserves the right to debar any Bidder from participation in future Bids if such Bidder has quoted an abnormally low rate in the Bid document/price Bid.

15. AWARD OF CONTRACT

15.1 GIPCL will award the contract to that bidder whose quotation has been determined to be substantially responsive and evaluated as the lowest quotation in conformity with the requirements of the specifications and documents contained herein, provided further that the bidder is determined and evaluated to be qualified to perform the contract satisfactorily.

15.2 The successful bidder shall be intimated of his selection through the Letter of Intent or Letter of Award/ Work Order which shall be sent to him through e-mail, courier, fax or registered mail.

15.3 GIPCL reserves the right to cancel / short close the contract during the contract period without assigning any reason.

15.4 GIPCL reserves the right to spit the contract quantities between vendors.

16. CONTRACT PERIOD

16.1 The contract will be for a period of 2 years from the date of actual commencement of operation of the contract as stated in the Work Order ('Contract Period').

16.2 GIPCL reserves the right to extend the Contract Period up to 3 months on the same rates and terms and conditions without any price escalation and entering into any new contract.

16.3 The said Contract Period can be extended if mutually agreed upon by both the parties up to one year and in such a case a revised work order shall be issued at the same rates and terms & condition or at negotiated rates acceptable by both parties i.e. the Company & the Contractor.

17. ASSIGNMENT AND SUB-LETTING

The Contractor shall not directly or indirectly assign or sub-let total/any part of the contract to any other party or agency.

18. CONTRACTOR'S OBLIGATIONS

A: DEPLOYMENT & RESPONSIBILITY OF MANPOWER

(i) The Contractor shall deploy suitably qualified and required manpower for timely & satisfactorily execution of the works under the contract.

(ii) The Contractor shall deploy required skilled, Semi-skilled and Un-skilled manpower separately for phase 1 & 2 to properly complete the job in given/scheduled time.

(iii) The Contractor shall deploy required skilled, Semi-skilled and Un-skilled manpower separately for Turbine & its Auxiliaries and Balance of plant area to properly complete the job in given/scheduled time.

(iv) The Contractor shall depute its own workmen/labour with proper identification to enter the plant premises after ensuring that the jobs are scheduled.

(v) At the time of deploying manpower, the Contractor shall strictly comply all the applicable labour laws/Acts norms including but not restricted to the age of the workers, women workers and shall also ensure that a police verification and security check for all the workmen/labour engaged at the GIPCL site is done and necessary documents regarding the same shall be submitted to the GIPCL's authorized representative/officer-in-charge. Any default in complying with the same or any misrepresentation regarding compliance of the same shall compel GIPCL to initiate appropriate civil or criminal proceedings regarding the same.

(vi) The Contractor shall also comply with the safety requirements and provide his workmen/labour with safety equipment like helmets, masks, gum boots, a uniform and other necessary PPEs for properly undertaking the operations involved under this contract. Following are also to be issued:

a) Safety shoes
b) Goggles / face shield.
c) Ear plug / Ear muff.
d) Hand gloves like electrical hand gloves / cotton hand gloves / Chemical hand gloves

(vii) Contractor shall nominate / authorize senior experienced person with in-depth knowledge of standard maintenance practices in writing as site in charge to co-ordinate with GIPCL engineer and who shall bear overall responsibility for performance of the contract. Such person shall remain always available at site or site office allotted to the contractor at SLPP site. Contractor has to submit the authority letter and documentary proof for the same.

(viii) The Contractor shall mobilize separate supervisors for Turbine & Its Auxiliaries and Balance of Plant area who shall co-ordinate with GIPCL's Engineer In - Charge for daily entrusted job.

(ix) The Contractor shall mobilize separate supervisors in Phase-I & II who shall co-ordinate with GIPCL's Engineer In - Charge for daily entrusted job. They have to maintain daily records dully signed for the works carried out and duly certified by Engineer-In-Charge. The Contractor in co-ordination with the Engineer-In-Charge shall ensure the availability of adequate manpower to carry out the job satisfactorily on a daily basis. As per the instruction of Engineer-In-Charge they have to allot the work and execute the same in specified time limit.

(x) Contractor has to furnish the qualification, certificate, other documents and/or proof of on hand experience, job & site experience of all skilled & semiskilled workmen and supervisors. All the details of supervisor & workmen will be reviewed by EIC and Supervisor & Workmen will be mobilized after clearance of EIC based on work requirement & suitability. Workmen deputed shall be experienced and capable of performing the quality job.

(xi) During execution of the works, one or more jobs may be required to be done simultaneously and the Contractor shall mobilize additional resources accordingly as per the requirement and as directed by EIC.

(xii) During emergency or similar situations the Contractor shall be required to mobilize resources as per the requirment within the period of 24 hours as directed by GIPCL. If the contractor fails to mobilize required manpower to complete the job in time, GIPCL will execute the job through other agency at the risk and cost of the contractor with 10% supervision charges & the same will be recovered from the Contractor's bill.

(xiii) ***Important Note:*** **Whenever any of the Unit at SLPP remains under outage due to any reason, the contractor shall mobilize required work force at site as per the instruction of EIC within a period of twenty-four hours from the time of intimation to the site-in-charge or via mail to your office. Generation loss occurred due to insufficient manpower as well as resources will be viewed very seriously and will invite appropriate punitive measures as decided by competent authority.**

(xiv) During working in high risk area like hot lines of steam/ water/ oil the workman must wear a suitable safety apron, safety belt, safety hand gloves and goggles. It is the contractor's/contractor's supervisor's responsibility to ensure it without fail.

(xv) During unit overhauling, the contractor has to enhance the site manpower as per the requirement and as directed by EIC to ensure the timely completion of work (During overhauling period quantum of work increases substantially). For this, enhanced work shall be completed by deploying additional manpower with separate supervisor. Payment will be made on item rate basis only. The work during the overhauling period is to be carried out round the clock. Contractor should mobilize required number of manpower and execute the work in all shifts with independent manpower. Contractor should not continue the same manpower more than 16 hours.

B: TOOLS & TACKLES

(i) All tools and tackles required to execute the contract are in the scope of the contractor. The contractor should ensure that tools and tackles are in healthy & working condition. All consumable items i.e. cloth, cotton waste, kerosene oil, gases (Oxygen, D/A, Argon), welding electrode, etc. would be in the scope of the contractor.
Note: the welding electrode should be approved make i.e. Advani-Oerlikon, ESAB, D&H, L&T.

(ii) The tentative list of such tools & tackles is enclosed as **ANNEXURE-G1 & G2**. The contractor should note that this list is not exhaustive and if any additional tools and tackles are required for proper performance of the contract, the same shall also be arranged by the contractor immediately with no extra cost to GIPCL.
Note: If work is suffered due to want of sufficient manpower, tools & tackles, vehicles, equipments and/or required consumables then **25%** of the total job cost will be levied as a penalty for each and every instance.

(iii) For proper execution of the scope of work, the contractor is required to maintain sufficient quantity of tools & tackles with tractors, hydra & hydraulic trolleys in good working condition at site as per day to day work load, transportation of material and emergency situations to complete the work in stipulated time. Tractor, hydra will be provided to contractor on chargeable basis, based on availability with GIPCL. Contractor has to arrange the same if not available with GIPCL to avoid any delay during work. If work suffered due to unavailability of resources penalty will be levied as per tender.

(iv) In case of breakdown of equipment, the contractor should work round the clock for putting back the area in service immediately within minimum time. In case of any work requirement (normal / emergency) arising during Sunday / holidays & night hours the contractor should be in a position to mobilize the manpower immediately within minimum time as per the instruction of EIC. Unavailability of manpower as well as resources will be viewed very seriously and will invite appropriate punitive measures as decided by competent authority.

(v) Arrangement for lighting at the work spot has to be made by the contractor. Contractor has to arrange all lighting equipment such as power cable, hand

lamps. The contractor has to take prior approval for taking electrical power supply. The contractor should keep hand lamps of 24Volt for confined space and sufficient quantity of 240 Volt and halogen lamp for other area ensuring safety at work place.

(vi) Pin sockets of IS standards should be used for all electrical connections. For any accident take place & any damage to the equipment and/or injury to human due to carelessness in loose connection, contractors will be held responsible & liable for any recovery/actions.

19. Clarification of Bidding Documents

If any Bidder requires any further information or clarification in the Bidding Documents, may notify the Company before one week of last date of submission of online Bid, in writing or by E-mail at the GIPCL's mailing address bggajjar@gipcl.com as indicated in the 'Invitation to Bids'. The GIPCL's response (including an explanation of the query) will be sent in writing or by E-mail to all prospective Bidders who have received the Bidding Documents.

20. TIME SCHEDULE

The basic considerations and the essence of the 'Contract' shall be the strict adherence to the time schedule for performing the specified 'Works'.

21. UNDERSTANDING AND CLARIFICATION ON DOCUMENTS AND SPECIFICATION

The Bidder is required to carefully examine the specifications and documents, all the conditions and matters work wise & cost wise. If any Bidder finds any discrepancies or omissions in the specifications and documents or is in doubt for any meaning of any part, he shall request in writing for an interpretation/ clarification to the GIPCL.

All such interpretations and clarifications shall form a part of the Bid documents.

22. PAYMENTS

All the payments against the work order shall be in Indian currency and payable through cheque only.

23. POINTS TO BE CONSIDERED DURING QUOTING ONLINE PRICE BID

a. The schedule of rates shall be read in conjunction with Instructions to Bidders, General conditions of contract, Special conditions of contract and Technical specifications.
b. The quantities given in the schedule of rates are estimated and will be made as per actual work carried out as per the rates of work order.
c. The method of measurement of completed work for payment shall be in accordance with the method of measurement specified in the tender.
d. No separate amount shall be payable for use of auxiliary equipment incidental to or in day to day operation in the course of fulfillment of contractual obligation of the supplier.

Note: Interested bidders are requested to submit the online tender at least two days in advance from the due date set for on line submission of bid in order to avoid non-participation of e-tender due to probable technical problem in nprocure system.

24. QUANTITIES

The quantities specified are estimated and for tendering purpose only. Payment will be made, based on actual work done as certified by Engineer-in-charge of GIPCL.

Quantities of individual items may be revised during the course of contract period based on site requirement. Contractor shall not be entitled for any compensation on ground of such alteration in scope of work. GIPCL reserves the right to operate or increase/decrease quantities in each item or omit any item included in Schedule of Quantity at his discretion. Contractor shall have no claim, whatsoever, on grounds of loss of anticipated profit etc. on account of the same.

After commencement of the work, GIPCL, for any reason may not require to be carried out the whole/part of the work as specified in the tender, the ENGINEER-in-charge shall inform the fact for thereof to the CONTRACTOR and contractor shall have no claim for any payment or compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not derive in consequence of the full amount of the work not having been carried out nor shall he have any claim for compensation by reason of any change having been made in the original specifications and instructions which shall involve any curtailment of the work as originally contemplated.(to be reviewed with legal and to be incorporated in special conditions only)

SECTION-B
INSTRUCTIONS TO BIDDERS FOR ONLINE TENDERING

1. Tender documents are available only in electronic format. Bidders can download free of cost from the web site - https://tender.nprocure.com and can also be viewed from http://gipcl.com/.

2. All Bids (technical and price Bid) should be submitted online through the website https://tender.nprocure.com only. No physical submission of price and technical Bid will be entertained as it should be furnished online only. Also, no fax, e-mail, letters will be entertained for the same.

3. Following should be submitted 'off-line' in sealed covers separately during dates & time set in NIT at our office at Village: Nani Naroli, Taluko: Mangrol, Dist.: Surat - 394 110, Gujarat.
   [1] Tender Fee, [2] E.M.D. covers [3] Supporting Documents for Technical Bid.

4. To participate in e-Reverse Auction, Bidders have to create e-Auction USER ID on https://e-auction.nprocure.com and it is mandatory to submit the same along with physical Techno-commercial Bid; so that the Bidder shall be allowed to participate in the e-Reverse Auction.

5. Bidders who wish to participate first time in online tenders will have to register their firm at https://tender.nprocure.com. GIPCL will not be held responsible in case of late submission for vendor registration.

6. Bidders who wish to participate in this tender will have to procure or 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

7. Bidder may go through the e-tendering instruction for online Bid participation through n-procure platform for further details and guidance for participation in the tendering process through e-tendering. In case of any queries related to e-tendering system, Bidder may write/contact at following details:

   (n) Code Solutions – A division of GNFC Ltd.
   301, GNFC Info tower, Bodakdev, Ahmedabad – 380 054 (India)
   Tel: +91 79 26857316 / 17 / 18
   Fax: +91 79 26857321
   E-mail: nprocure@gnvfc.net
   website: https://tender.nprocure.com, Toll Free: 1800-233-1010(Ext. 501,512,517)

8. Bidder may visit https://tender.nprocure.com for information regarding e-tendering registration process.

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SECTION-C
GENERAL CONDITIONS OF CONTRACT

1. CONTRACT SECURITY DEPOSIT/ PERFORMANCE BANK GUARANTEE

As a Contract Security, the successful Bidder, to whom the work is awarded, shall be required to furnish a Performance Bank Guarantee (PBG)/Contract security deposit in favour of Gujarat Industries Power Company Limited for guarantee amount at Ten percent (10%) of the “Annual Contract Price excluding taxes & duties” from any Nationalized Banks, Axis Bank, ICICI Bank, HDFC Bank, Kotak Mahindra Bank, IndusInd Bank, Federal Bank, Bandhan Bank, IDBI Bank, Karur Vysya Bank in the format attached in SECTION-F, and it shall guarantee the faithful performance of the 'Contract' in accordance with the terms and conditions specified in these documents and specifications. Contract security deposit shall be submitted strictly within twenty-one days from the date of LoI or work order, whichever is earlier. The Performance Bank Guarantee shall be valid up to **retention period of four months** from the contract completion date. The Guarantee amount shall be payable to the Company in Bidder's home currency without any condition whatsoever.

GIPCL reserves the right to forfeit Performance Bank Guarantee (PBG) / Contract security deposit.

The Performance Bank Guarantee (initial security deposit) will be returned to the Vendor/Contractor without any interest at the end of the ‘Retention Period' after completion of contract and on fulfilling contractual obligations throughout the retention period. However, any delay in submission of initial SD will result in equivalent late release of entire SD after guarantee period.

Bid security / EMD should be refunded to the successful bidder on receipt of Performance Security.

2. RECOVERY CLAUSE

(i) In case of any damage of equipment/machinery due to negligence of contractor or any other reasons attributed to contractor the decision of Engineer-in-charge regarding the amount of recovery shall be final and binding subject to a maximum of 10% of contract value. Recovery will be affected from the monthly bills and/or retention money/security deposit.

(ii) If the contractor fails to execute the work as per directions of Engineer (I/c) within the time frame given in work order and as per day to day instructions by Engineer-in-charge, GIPCL shall get the work done by third party at the risk & cost of the contractor with 10% additional overhead charges of GIPCL.

(iii) Party shall preserve the materials like pipes, bends, flanges, valves, piping fittings, bolts, paints, spares and lubricants of the auxiliaries etc. Issued for execution of the job & shall guard it properly against theft or pilferage. In case of theft of materials issued to the party, appropriate amount (equivalent to the cost of the pilferage material) will be recovered from their bill.

3. ASSIGNMENT AND SUBLETTING OF THE CONTRACT

The contractor shall not assign or sub-let any part of the contract to any other party or agency without written permission from GIPCL.

4. DEDUCTIONS FROM CONTRACT PRICE

All costs, charges or expenses that GIPCL may have paid, for which, under the contract the contractor is liable, shall be recovered by the GIPCL. The contractor shall pay all such claims within 15 days of claim failing which the same shall be deducted from the bills of contractor.

5. TERMINATION OF CONTRACT BY GIPCL

Contractor shall be responsible to complete the jobs within agreed time schedule and in case contractor fail to complete the job, GIPCL shall recover from his bill, Security Deposit and / or whatsoever for expenses incurred to complete the job with additional 10% overhead charges.

In case if contractor's services are not found satisfactory with respect to mobilization, time bound completion of work, workmanship & safety (OHSAS policy of GIPCL) then GIPCL has right to terminate the contract at any time by giving him 15 days advance notice without assigning any reason and will make the alternate arrangement at the risk & cost of contractor.

GIPCL may terminate the contract after due recoveries of pending jobs/damages after giving 15 days advance notice to the contractor if any of the following events occur –

i. Contractor is adjudged as insolvent.
ii. Contractor has abandoned the contract.
iii. Contractor fails to proceed with the work with due diligence as per requirements of the contract.
iv. Contractor has neglected or failed persistently to observe or perform any of the acts, matters or things, which as per the contract are to be observed and performed by the contractor.
v. Contractor repetitively violating the safety norms for more than three incidents.
vi. Any major contradiction of applicable labour laws.
vii. Any major deviations from contractual terms and conditions including quality of job.
viii. GIPCL reserves the right to terminate the contract without giving any reason
i. whatsoever and forfeit the PBG

6. FAILURE & TERMINATION

If the CONTRACTOR after receipt of written notice from the GIPCL/ ENGINEER requiring compliance, with such further drawings and / or the GIPCL /ENGINEER instructions fails within seven days to comply with the same, the GIPCL /ENGINEER may employ and pay other agencies to execute any such work whatsoever as may be necessary to give effect thereto and all costs incurred in connection therewith shall be recoverable from the CONTRACTOR by the GIPCL on a certificate by the GIPCL/ENGINEER as a debt or may be deducted by him from any money due or to become due to the CONTRACTOR.

If the contractor fails to execute the work or fails to mobilize the resources and equipments as per directions of GIPCL / ENGINEER within the time frame given and/or violating the GIPCL's safety rules & regulations, ENGINEER/ GIPCL shall get the work done by third party at the risk & cost of the CONTRACTOR with additional 10% overhead charges of GIPCL and all costs incurred in connection therewith shall

be recoverable from the CONTRACTOR by the GIPCL /ENGINEER as a debt or may be deducted by him from any money due or to become due to the CONTRACTOR.

In case if contractor's services are not found satisfactory with respect to mobilization, time bound preventive / breakdown maintenance, workmanship & safety (OHSAS policy of GIPCL) then GIPCL has rights to terminate the contract at any time by giving you 15 days advance notice without assigning any reason and will make the alternate arrangement at cost and risk of the Contractor.

7. SETTLEMENT OF DISPUTES

a. Any disputes or difference of opinion between parties arising out of the contract to the extent possible shall be settled amicably between the parties. If amicable settlement cannot be reached all the disputed issues shall be resolved through arbitration before a Sole Arbitrator appointed by Managing Director, GIPCL according to the provisions of The Arbitration & Conciliation Act, 1996. The place of arbitration shall be at Surat/Vadodara or any other place within state of Gujarat.
b. Work under the contract shall be continued by the contractor during arbitration proceedings unless GIPCL shall order suspension thereof or any part thereof in writing or unless the matter in such work cannot possibly be continued unless the decision of the Arbitration proceedings is obtained.

8. INTERPRETATION OF CLAUSE

In case of disputes as regards interpretation of any of the clauses or specification, the decision of Chief General Manager (RE & SLPP) - GIPCL will be final and binding on the contractor.

9. EMPLOYEE'S COMPENSATION INSURANCE

Contractor shall take all risk Insurance Policy to cover all his workmen/employees, staff applicable under the Employee Compensation Act 1923 or any amendment thereof as also insurance cover for third party liability. The contractor shall keep the GIPCL indemnified from all liabilities arising out of his action in pursuance of this contract. The E. C. Policy should be obtained from Surat Jurisdiction and shall be assigned to GIPCL. EC policy should cover the specified contract period.

Contractor shall also obtain additional off-duty coverage insurance policy for all his workers.

10. STATUTORY REQUIREMENTS

a. COMPLIANCE OF LABOUR LAWS

1. The contractor shall at his own cost comply with the provision of labor laws, rules, orders and notifications whether central or state or local as applicable to him or to this contract from time to time. These Acts/Rules include without limitation of the followings.
2. Contractor shall be solely responsible and shall fully comply with all the provisions of all the labor laws applicable such as the Minimum Wages Act, 1948, Contract Labor (Regulation & Abolition) Act 1970, Factories Act, 1948, Payment of Bonus Act 1965, Employees Provident Fund and Miscellaneous Provision Act 1952, Industrial Dispute Act 1947, Workmen Compensation Act 1923, Payment of Gratuity 1972, Interstate

Migrant Workmen Act 1979, Equal Remuneration Act with Rules, Order and Notifications issued/made there under from time to time.

3. All other Acts, Rules/Bye-Laws, Orders, Notifications etc. present of future applicable to the contractor from time to time for performing the contract job.

3.1 The Contractor shall provide and be responsible for payment of Wages, Salaries, Bonus, Social charges, Insurance, Food, Accommodation, Transport, Medical and Canteen facilities and other statutory privileges and facilities to his personnel as per law/rules/regulations and orders of the Central Government, State Government, Local Authorities or other authorities as are in force from time to time. All employees of the Contractor shall be employee of the Contractor.

3.2 The contractor shall have a valid license obtained from Licensing Authority under the Contract Labor (Regulation & Abolition) Act-1970 at the time of execution of the contract covering all his employees working at SLPP site and furnish the same failing which GIPCL may terminate the contract at its sole discretion.

3.3. The Contractor shall at the time of execution of the contract have a EPF Code Number obtained from the Authorities concerned under the Employees Provident & Miscellaneous Provisions Act, 1972 and remit contributions in respect of the employees employed by him at SLPP Site to the P.F office concerned every month failing which GIPCL will recover from the outstanding payment to the contractor from GIPCL.PF code of Gujarat region should be taken.

3.4. The Contractor shall maintain all records/registers required to be maintained by him under various labor laws mentioned above and produce the same before the Statutory Authorities whenever required.

3.5 The Contractor shall also submit periodical reports / returns to the various statutory authorities such as the Contract Labour (Regulation & Abolition) Act-1970, Employees Provident Fund Act etc. Under intimation to HR&Admn.Dept.

3.6 The Contractor shall not pay less than the Minimum Wages notified by the Government from time to time to his employees of corresponding categories.

3.7. The Contractor shall be responsible for payment of overtime wages to his workmen, if any, in case they are required to work beyond the prescribed hours under law as per applicable rates.

3.8 The contractor shall take Workmen Compensation Insurance Policy for all his employees working at SLPP. The contractor shall indemnify the company against any liability due to any work injury or accident to any of its employees.

3.9 The Contractor shall in the event any of his workmen / employee sustains any injury or disablement due to an accident arising out of and in the course of his employment, provide necessary medical treatment and pay compensation as applicable, required under the Employees Compensation Act, 1923.

3.10 If any of the persons engaged by the Contractor misbehave with any of the officials or the Company or commit any misconduct with regard to the property of the Company or suffer from any serious communicable disease, the Contractor shall replace them immediately.

3.11 The Contractor shall not engage / employ persons below the age of 18 years. Employment of women shall be strictly according to applicable laws.

3.12 GIPCL will have right to deduct and disburse the claims of the individual / parties being a principal employer on any account whatsoever in relation to their employment with the contractor. The Security deposit will be released to the contractor at the end of the contractual tenure subject to an undertaking by the contractor that in the event any of his workmen or the heirs of workmen puts up a claim for recovery of money due to him from the contractor before

the appropriate authority under the I.D.Act 1947 or under any other labor laws or for compensation under the Employees Compensation Act, 1923 and the appropriate authority has given a direction for making payment the contractor will meet the same or indemnify GIPCL if in the event GIPCL pays it as Principal Employer.

3.13 The contractor shall make payment of wages to his employees on fixed date within the period specified under the applicable Law, in presence of representative of the company. He will submit a true copy of wage sheet, attendance register and P.F. remitted challans along with ECR on monthly basis to HR&A dept. for verification and record.

3.14 The Contractor shall provide Safety items / kits to his employees such as safety shoes, goggles, ear plugs, hand gloves, safety belts etc., if any, required under the law.

3.15 The contractor shall conduct pre-induction and periodic medical checkup of his workmen as per applicable laws.

4. The contractor shall be solely responsible for any accident caused to his workers and should adhere to all rules / regulations as per labor laws of Government and other statutory laws as applicable.
5. The contractor should register himself under the Contract Labor Act, Employee Compensation Act and PF Act (Code no. to be mentioned) and submit the copy of registration certificate and should possess the same from the date of commencement of work, failing which the contract is liable to be cancelled. The E.C. Policy copy should be submitted to the GIPCL before commencement of the work and Labor License should be obtained within one week from the date of issue of form-V. Contractor should apply for Form-V immediately after receipt of LOI. A copy of Labour License shall be submitted to GIPCL, HR & A Department.
6. Contractor shall have to insure his workmen /supervisors etc. under Group Insurance scheme.
7. The Contractor shall be responsible for compliance of all statutory rules, regulation, act enforced from time framed by the government such as Factory Act, Employee Compensation Act, payment of 'Wages Act', Minimum Wages Act', Provident Fund Act, All Labor Laws Act in respect of employees engaged by him for the work and shall have to maintain necessary records. In case any amount becomes due to be payable by him to his employees or to the Government under the above rules, regulation, Acts, GIPCL reserves the right to recover the same from the running bill of the contract.
8. Documentary evidence of deposit of PF paid shall have to be produced by the contractor along with the next bill.
9. Records as per the provisions of various statutory Acts will have to be maintained by the contractor and submitted as and when required.
10. All employees of contractor should maintain due discipline and respect local sentiments. GIPCL reserves the right to direct the contractor to remove any such person who does not comply with it.

    The list is indicative in nature and not an exhaustive one. Any amendment/alteration/Notifications or addition to the existing Law or a new statute shall automatically and immediately become applicable.

b. LEGAL ASPECTS

1. Contractor shall maintain all register required under the Labour Laws and make the payment as per the Minimum Wages Act to the workers employed by him. Payment should be deposited in Workers saving bank account on or before 7th of the month.

2. Contractor shall obtain requisite license to carry out this contract under the provisions of Contract Labour Act, 1970 and maintain necessary records and registers under the said Act.
3. Contractor shall submit a copy of each of the registration certificates with respect to Employees Provident Fund and Employee Compensation Act within one-week time, from the date of award of this contract.
4. Contractor’s employees, agent or sub-agent shall not smoke or light anything within the premises of the GIPCL and carry match box / lighter or any other explosive and /or inflammable material inside the plant.
5. Contractor shall abide by all the statutory rules and regulations like P.F, Labour Laws etc.
6. Contractor shall issue an appointment order to each casual labourer stating therein the nature of job to be performed by him and fix time for which the concerned labourers are likely to be deployed. Contractor shall also issue a temporary identity card specifying the period for which the labourer has been deployed.
7. Contractor is fully liable for the persons engaged by him for above work; however, GIPCL reserves the right to deduct any amount legally justified towards any liability not fulfilled.
8. Contractor shall indemnify GIPCL from any liabilities arising out of the employment of the manpower.
9. If the contractor fails to complete the allocated job within specified time frame, GIPCL shall get the work done by third party at the risk and cost of contractor.

11. PAYMENT OF WAGES

Contractor shall be responsible for compliance of all statutory rules, regulation, act enforced from time framed by the government such as Factory Act, Employee Compensation Act, payment of ‘Wages Act’, Minimum Wages Act’, Provident Fund Act, Payment of Bonus Act, Labor Law Act, maternity benefit act in respect of employees engaged by him for the work and shall have to maintain necessary records. In case any amount becomes due to be payable by him to his employees or to the Government under the above rules, regulation, Acts.

12. ACCIDENT TO WORKMEN

Contractor shall be fully responsible for injury or death of any of your or third-party workmen due to any act omission / indiscretion on your part while undertaking the work and contractor shall fully abide by the statutory requirements of the employee's compensation act. GIPCL shall not be liable for any compensation due to accident, death or injury to any of contractor’s workmen or any third party due to negligence, act or omission on your part.

13. LIGHTING

Necessary illumination at works area will be provided by GIPCL.

14. NIGHT/SUNDAY/HOLIDAY SHIFT

The contractor shall depute qualified and adequate resources in night shift/Sunday/holidays for any emergency job, which may come up at night/Sunday/holiday.

15. SAFETY ASPECT

Contractor shall observe all the safety and security rules and regulation of the GIPCL which are at present in force and which may come into force during the pendency of

the contract. Any violation of any rules and regulations will entail immediate termination of the contract.

When contractor moves his lifting tools and tackles to the plant area, required test certificates as per the Factory Act 1948 and the state factories rules has to be submitted to safety Deptt. Safety Deptt. will check the certificates and if found okay, then only materials will be allowed to enter inside the plant. Material inward gate pass will be made only after certification from Safety Deptt. Security Deptt. will inform to Safety Deptt., as & when such tools and tackles brought at the gate for making entry in the maintenance site.

The contractor has to submit the list of required safety gears along with safety equipments available with him to safety Deptt. Safety Deptt will check for quantity and quality of the safety gears and then allowed permission of work. Poor quality material will not be allowed to take inside the Plant. If quantity of required safety equipments is not satisfactory, contractor will not be allowed to carry out the work using such safety gears inside the Plant for the work.

16. GENERAL SAFETY CLAUSES:

1. The Contractor shall observe and comply, with regard to his workmen working at the SLPP site, the safety norms as per the safety operating standards.
2. The Contractor shall ensure that his workmen are informed and trained regarding the safety standards to be adopted while operating within the SLPP Plant & Mines premises and the Contractor shall brief them regarding the same and use of the Personal Protective Equipment ('PPE').
3. The Contractor shall issue safety shoes and safety helmet of IS standard to all his workmen immediately on execution of the work and the contractor shall ensure that his workmen wears the protective equipments at all times during the work operation. Brand name for safety shoe & safety helmet shall be suggested by safety representative of SLPP site. Such as:

Helmet:

Sr No.	Model	Company	Specifications
01	Tough Hat, HP-TH	Sure Safety	IS : 2925 – 1984, ANSI / ISEA Z89.1-2009
02	V-Gard	MSA	
03	PN 521 - Shelmet	Karam	

Safety shoes:

Sr No.	Name of Manufacturer	Model	Specifications
01.	Acme Fabrik plast Co.	SSTEELE (Strom) – Double Density	IS : 15298 – 2011
		TRIMAX(Adjacent) – Double Density	
02.	Favourite Safety Products.	Waves Nile D/D	
		FSP Nile DD	

4. Other safety gears like ear plug, dust mask, hand gloves, safety goggles, gum boots, full body safety uniform and belts, safety net etc. shall be issued and used as per the job requirements. Safety helmet shall be of YELLOW COLOUR ONLY. Contractor will procure safety shoes & safety helmet from a reputed company with at least 12 months' guarantee and shall produce the guarantee certificate and IS standard certificate to the safety department. Contractor should purchase safety shoes of

reputed brands. Safety shoes will be issued every year. IS certificate and guarantee certificate must be obtained from the vendor and submitted to the Safety department. Safety shoes should be heat, water, oil and chemical resistant, having an anti-slippery sole of 15298- 2002 make.

5. It is the duty of contractor to ensure that his workmen are wearing required PPEs as per work requirement. Contractor should ensure that their workers are wearing Safety helmet, safety shoes, dust mask, goggles, ear plug etc. at all times when they are at work throughout the contract period. The contractor has to maintain the PPE issue register with signature of workmen.
6. Contractor will reissue these PPEs in case of damage or misplacement of the same. Replacement shall be made immediately.
7. The contractor shall be responsible for providing first aid or emergency medical help and treatment to his workmen in the event of any accident or injury.
8. If it is observed that contractor is not issuing required PPEs timely and that of required quality, GIPCL will issue the required PPEs to contract workers and back charge the same with 25% overhead charges of GIPCL.
9. All lifting tools and tackles shall be duly certified by competent person in conformity with the statutory requirements and certificate in form no. 10 as per rule 60 of Gujarat Factories Rules, 1963 and section 29 of the Factories Act, 1948 shall be submitted every year before using such tools and tackles. In case of purchase of new lifting tools and tackles, form no. 10 as per the said rules shall be submitted before they are taken into use. All lifting tools and tackles shall be of reputed make having International manufacturing standard and shall be maintained in proper and workable condition.
10. The Contractor shall nominate one Safety Officer with required qualification for supervising the daily job/ shutdown jobs for observing and maintaining the safety aspects at site. He is solely responsible for any safety measures during maintenance work. He has to ensure that all the workmen working at site are equipped with essential PPE’s and proper safety arrangement is made at the SLPP site.
11. After mobilization of any tools & tackles to site, which includes chain pulley blocks, D-shackles, wire ropes, winch machines, Mobile crane, Hydra etc. shall be offered for inspection with all above statutory test certificate before using at site for any work. They should use all tools and tackles only after certification by GIPCL representative/safety officer.
12. When working at height, working on ceiling or roof covered with fragile materials, full body harness safety belt, ladders and crawling boards shall be used to prevent accident. Further, during working on height, contractor should arrange proper scaffolding of still pipes, safety net, full body safety belt, fall arrestor system etc. Advice and instructions of engineer in charge/ safety in charge shall be strictly complied with in this regard. All necessary safety precautions shall be taken by the contractor to prevent accident and personnel injuries while working on height.
13. Flash back arrestors made of reputed manufacturer shall be provided on cutting torch, on DA cylinders and on O2 cylinder. Cylinder caps also required for handling the cylinders at the work at height area. Gas cylinders shall be transferred through gas cylinder trolley only with cylinder cap and stored up right (vertical) position only. All gas cylinders shall be hydro tested / certified as per gas cylinder rules 2004. Gas cylinders shall be stored, handled as per gas cylinder rules 2004.
14. All vehicles shall be operated by licensed drivers only. All vehicles’ PUC to be tested as per Government approved RTO guidelines. All Vehicles must be parked in Parking space designated by GIPCL. If any vehicle is found inside the plant premises other than the parking area such vehicles shall be handed over to Security dept. and their entry shall be cancelled for movement inside the plant premises with immediate effect.
15. All electrical equipment shall be in good condition and free from any defect. Electrical tools & equipments i.e. welding machine, grinding and drill machine etc. may be

checked by the electrical engineer of the contractors regularly, every six month at least and report to be submitted to concerned HOD and safety depts.

16. During hot work, contractor will use fire curtains like asbestos sheets or fire blankets to prevent falling and spreading of sparks and hot material on and around the work area. Contractor will procure and use such items. ELCB / RCCB shall be provided with rating of 9-30 milli ampere on welding machine and all portable power tools.
17. The contractor shall fill – up Incident notification form (S-I), Incident Investigation form (S-II) and near miss report within time limit as specified in forms, if any accident, Incident, near miss occurred while working at SLPP site.
18. Major AMC / ARC contractor (Where the man power strength is more than 40 and above) should appoint / nominate one qualified safety officer and he shall be responsible for addressing all the safety related aspects of execution of contract jobs and he will in close co ordination with safety officer of SLPP and attend all safety related meeting such as safety committee, on job safety training etc. Where the contractual man power is less than 50, the site in charge of the contractor will act as a safety officer and he will perform all the duties of safety officer as mentioned above.
19. No loose connection / joints allowed in electrical cables during performance of any kind of job.
20. All the electrical apparatus including welding machine (either 3-phare or single phase) should be provided with Earth Leakage Circuit Breaker (ELCB/RCCB/RCBO) of 30mA rating.
21. Bidder should ensure periodic checking of ELCB provided in their electrical apparatus.
22. Bidder should ensure that there should not be any joint in the power supply cable of any machine. All cables should be in good condition with no bare insulation or frayed wires
23. Any power supply switchboard/extension boards brought by Bidder should have ELCB of 30mA rating and it should have sockets along with 3-pin plug
24. Any type of cable brought by Bidder should not have any joint and should be of sufficient capacity for the respective job.
25. Bidder to bring their own 24V rating portable hand lamps along with cable of (apparatus should be having 230V / 24V transformer) for the temporary lighting arrangement required at site for the respective jobs.
26. Bidder should bring sufficient qty no. of temporary light fixtures (230V or 24 V as per requirement of job/contract) , extension boards, cables to draw supply from nearest power point.
27. Hand-held and portable machines shall be equipped with a built-in switch to switch off power in case of emergency
28. Bidder to ensure healthiness of their electrical equipment whenever brought to GIPCL site and get them tested / verified by GIPCL Electrical Department representatives before start using.
29. Bidder to ensure - All portable electric apparatus shall be regularly examined, tested and maintained to ensure that the apparatus and leads are in good order.
30. Only three-core cable shall be used for single phase operated tools with the third core connected to earth.
31. Ensure that all metallic portable appliances are provided with 3 pin plug and socket connections with third pin be connected to the ground terminal where ever possible. Also, the metal work of the apparatus is effectively earthed.
32. All cables and connections should be sound and of adequate capacity and properly insulated while using any welding machine and other power connections.
33. The earthing arrangements should be properly made with earthing clamps or a bolted terminal while using any welding machine
34. Electric holders when not in use, should be placed on an insulated hook or the holders should be fully insulated while using any welding machine

35. Whenever the welder stops or leaves work for any appreciable time, the power supply to welding machine shall be effectively disconnected while using any welding machine
36. GIPCL will provide either single phase OR 3-phase 3 wire power supply from the nearby point at job site. Bidder to supply the required cable between GIPCL power supply point to equipment brought by Bidder for the specified job. Further, if Bidder's equipment requires 3-ph 4 wire supply then they should derive 3-ph 4 wire supply from GIPCL 3-ph 3 wire supply system by incorporating sufficient capacity transformer. Like for hydro jet cleaning system, mixer machine, induction heating machine, SR machine etc., GIPCL will provide 3-ph 3 wire power supply.
37. Cable between welding machine to GIPCL power supply point should have cable TOP plug towards GIPCL power supply point of Make BALS having rating as 63 Amp.
38. Safety shoes to be issued to female employees also.
39. All the vehicles shall be fit as per RTO guidelines and valid fitness certificate is required as per RTO guidelines.
40. The Contractor's nominated safety officer shall be imparted regular on-job safety training like tool-box talk etc. and submit a record of such training in safety dept, respective dept and HR&A dept.
41. Contractors not following above safety points at any point of time are liable to penalty and their machine / apparatus shall be seized by GIPCL.
42. The Contractor shall comply all the new requirements related with safety as informed by the HOD / Safety department from time to time.
43. Penalty to be imposed for Violation of safety norms is proposed as follows: -

The Contractor & Contract workmen shall strictly adhere to Safety standards / Guidelines as per practices. The list provided below is an indicative list to explain the principles behind safety practice. If the contract workmen fail to comply with safety standards as per category A, B, C & D below, penalty shall be levied on the contractor as per the table mentioned below:

Category	Classification	Examples / Cases	Penalty
A	PPEs Related	Working without helmet, shoes, safety belt, gloves etc.	Rs. 100 /- per instant.
B	WI Related	Failure to adhere to HSE guidelines/plans, careless attitude in material handling, Machine being used with damaged machine guard, unsafe electrical work - workout plug top/improper electrical joints/cables lying on ground, electrical equipment working without proper earthing, machine being used without machine guard, Welding machine without ELCB / RCCB of proper rating, Gas cylinder without test certificate, Cylinder cap, NRV / Flash back arrester, Cylinder trolley etc.	• Rs. 500 /- per instant. • After three incidences, Per incidence Rs. 2500/-
		Unsafe working practices at height more than 3 meters	• Continuous unsafe acts will disqualify

		Working without permit or non-compliance with permit conditions like hot work, height work etc. as applicable, lifting tools and tackles being used without third party inspection certificates in form no. 9/10 as per Factory Act – 1948 etc.	the contractor from further participation in tender of GIPCL-SLPP.
C	Unsafe Practices	Breach of safe practices by a particular person repeatedly for three times.	• Suspend the entry gate pass for one week. • After two suspensions his gate pass will be cancelled.

Penalty so levied against the contractors and company employees will be used during the observation of National Safety Day.

The contractor, workmen following good safety practices in their work area continuously will be rewarded / honored on National safety day.

17. REJECTION OF WORK:

If, as a result of inspection, examination or testing, the GIPCL's Representative/Engineer decides that any materials, work or workmanship is defective or otherwise not in accordance with the Contract, the GIPCL/Engineer/ GIPCL's Representative may reject such plant, materials, work or workmanship and shall notify the CONTRACTOR promptly, stating his reasons. The CONTRACTOR shall then promptly make good the defect and ensure that the rejected item complies with the Contract. If Contractor failed to rectify the rejected work or workmanship, GIPCL/Engineer reserves the right to deduct or withhold amount against rejected work or Workmanship. CONTRACTOR shall not entitle for any claim or release of hold payment until rectify the defect up to satisfactory of GIPCL. If Contractor failed to rectify any such defective work or workmanship, GIPCL reserve the right to rectify at risk and cost of the CONTRACTOR and deducted by the GIPCL from any amount due, or to become due, to the CONTRACTOR's dues.

If the GIPCL/Engineer/GIPCL's Representative requires such materials, work or workmanship to be retested, the tests shall be repeated under the same terms and conditions. If such rejection and retesting cause the GIPCL additional costs for the traveling and lodging costs of GIPCL/Engineer's personal for attending the retest, such costs shall be recoverable from the CONTRACTOR by the GIPCL and may be deducted by the GIPCL from any amount due, or to become due, to the CONTRACTOR.

18. GENERAL TERMS AND CONDITIONS:

a. All tools & tackles, labours, equipments, vehicles, tractors, etc… to execute the contract are in the scope of the contractor. The contractor should ensure that tools & equipments are in healthy condition.
b. The decision of the Engineer-in-charge shall be final and binding on the contractor for defining the terms and condition included in this contract.

c. If the work is not found satisfactory, Engineer-in-charge reserves the right to take suitable action.
d. Contractor shall depute one no. full time independent experienced site-in-charge having in-depth knowledge of standard Maintenance practices and four nos. of independent site supervisors at site, one for each Location/Package (each at Phase-1 & Phase-2, each at TG & BOP Separately). They shall co-ordinate with GIPCL engineer and shall bear overall responsibility of contract including joint measurement, billing etc. Such person shall function from site office of contractor at SLPP.
e. Contractor shall also nominate one safety supervisor at site and shall submit nomination of safety supervisor in writing before commencement of contract. Safety supervisor shall arrange small safety talk on every day morning or whenever required with all workers working under this contract. He shall coordinate with concern department’s Engineer-in-charge on daily basis and report daily observations, tool-box talk records etc. The work shall not be allowed without deploying safety supervisor and a penalty equal to Rs. 1,000/- per day absent of safety supervisor shall be levied from Contractor.
f. Contractor has to furnish the qualification, certificate, other documents and/or proof of on hand experience, job & site experience of all skilled & semiskilled workmen and supervisors. All the details of supervisor & workmen will be reviewed by EIC and Supervisor & Workmen will be mobilized after clearance of EIC based on work requirement & suitability. Workmen deputed shall be experienced and capable of performing the quality job.
g. Contractor shall strictly follow the existing work permit system of the GIPCL and any future revisions.
h. The contractor has to take EC insurance policy for their workmen. The contractor has to submit labor license and PF account number to the Engineer-in-charge before start the work.
i. The contractor has to do the job timely. GIPCL shall not compromise in delay. In case of delay of work without any valid reason, the GIPCL reserves the rights to carry out the work by deploying other agencies at the risk & cost of contractor with additional 10% overhead charges.
j. Contractor shall mobilize the resources as per requirment and as directed by EIC within the period of twenty-four hours. If the contractor fails to mobilize required resources to complete the job in time, GIPCL will execute the job through other agency at the risk and cost of the contractor with additional 10% overhead charges.
k. Contractor should mobilize all resources for efficient & smooth execution of contract within seven days from the date of issue of Letter of Intent/Work Order.
l. The prices / item rates quoted shall remain firm till completion of the contract and any agreed extensions thereafter and shall not be subject to any escalation, idle charges for labor, machinery, overhead expenses etc… due to any reason whatsoever. No price escalation / idle charges shall be entertained due to delay in work on unavailability of work front, non-issue of work permit, holding of work permit for any reason, unavailability of contractor’s supervisor, unavailability of contractor’s safety supervisor, violation of safety rules, unsafe act by any of contractor’s worker, negligence & ignorance of safety & quality instructions of GIPCL Engineer-in-charge or any other reason whatsoever.
m. Contractor must fulfill all the safety regulations and to take safety measures to avoid hazards. Contractor shall arrange all standard adequate healthy safety PPEs like but not limited to approved quality safety shoes & safety helmets, standard dust masks, safety goggles, etc… as required and shall use exclusively under this contract for all the time during working at specified locations failing which, the Engineer-in-charge may hold the work and will take necessary action including penalty as decided. If the contractor repeatedly violates safety rules/regulations (more than three successive incidents), Engineer-in-charge may take necessary action against the contractor,

including appropriate financial penalty (Maximum of Rs. 1,000/- per incident per man-day) and/or termination of contract.

n. One or more jobs may be required to be done simultaneously and contractor shall mobilize additional resources as per the requirement and as directed by EIC.
o. Timely completion of all jobs and works shall be the essence of this Contract. Contractor should closely monitor each activities and complete the jobs as per the time given by and under the supervision of the Engineer-In-charge and shall ensure that required manpower is deployed for the same.
p. The contractor has to complete the works as per the planning schedule and their respective supervisor has to interact with Engineer In Charge for PTW (Permit to work), work instruction, Return of permit.
q. The contractor has to submit daily reports showing work carried out with details of available manpower, tractors etc.
r. Any job other than the listed jobs in work order shall be executed by the contractor on instruction from GIPCL and payment shall be made to the contractor on respective item rate only.
s. The Government of India has enacted the Micro, Small and Medium Enterprises Development Act, 2006 (the "Act") and the Act has come into force from October 2, 2006. The Bidder shall confirm whether your organization is registered under the Micro, Small and Medium Enterprises Development Act, 2006. If your organization is registered under the Act, please specify the category i.e., Micro Enterprise, Small Enterprise or Medium Enterprise under which it is registered and kindly attach a copy of your registration certificate.
t. The Bidder shall provide details of registration along with copy of the registration certificate issued by the District Industries Centre/Department of Industries, etc of the respective State Government. It is to be noted that large scale industries and trading firms have been excluded from the purview of the Act.
u. GIPCL is an ISO 9001, ISO 14001, OHSAS 18001 & ISO 50001:2011 (EnMS) certified company, and GIPCL gives extreme importance to maintain these global standards. Contractor shall be required to observe these standards while working with GIPCL. Contractor should ensure that his workmen/labour work in accordance with them.

19. CONTRACTOR'S SUPERVISION

The contractor shall, during the whole time the work is in progress, employ a qualified experienced site-in-charge of the works with adequate experience in handing of jobs of this nature and with the prior approval of the GIPCL / ENGINEER. Such in-charge shall be constantly in attendance at the site during working hours. During CONTRACTOR'S supervisory engineer absence during working hours, if unavoidable, and also beyond working hours, when it may be necessary to give directions, orders may be given by the ENGINEER / GIPCL and shall be received and obeyed by the CONTRACTOR'S superintendent or Foreman who may have charge of the particular part of the work in reference to which orders are given. If requested to do so, the ENGINEER /GIPCL shall confirm such orders in writing. Any directions, instructions or notices given by the ENGINEER / GIPCL to him, shall be deemed to have been given to the CONTRACTOR. The representative of the CONTRACTOR shall have all necessary powers to receive materials from the GIPCL, issue valid receipts for the same, engage labour or purchase materials and proceed with the work as required for speedy execution.

None of the CONTRACTOR'S Superintendents, engineers, supervisors or labour should be withdrawn from the work without due notice being given to the GIPCL / ENGINEER; further no such withdrawals shall be made if in the opinion of the GIPCL

/ ENGINEER such withdrawals will jeopardize the required pace of progress / successful completion of the work.

The CONTRACTOR shall employ in or about execution of the work only such persons as area careful, skilled and experienced in their respective trades, and the GIPCL shall be at liberty to object to and require the CONTRACTOR to remove any person employed by the CONTRACTOR in or about execution of works who in the opinion of the ENGINEER misconducts himself or is incompetent or negligent in the proper performance of his duties and all such persons shall not again be employed upon the works without the prior permission of the GIPCL.

Neither the CONTRACTOR and the PURCHASER nor the ENGINEER shall hire or employ any employee of the other party except by mutual consent.

20. CONTRACTOR TO REMOVE ALL OFFENSIVE MATTER IMMEDIATELY AND CLEAN-UP.

All loose materials, wastage, packing materials, cut pieces or other matter of an offensive nature shall not be deposited on the surface, but shall at once be carted away by the CONTRACTOR to some pit or place provided by him away from the site of work and approved by local authorities.
As a part of the work included in this contract, the CONTRACTOR shall completely remove and satisfactorily dispose of all temporary works to the extent directed. He shall tear down and dispose of all temporary works, shall remove or grade, to the extent directed, all plant and equipment, shall satisfactorily dispose off all rubbish resulting from the operations under this contract and shall do all work necessary to restore the territory embraced within the site of his operations to at least as good order and conditions as at the beginning of the work under this contract.

21. FACILITIES TO BE PROVIDED BY GIPCL

A. The Company shall provide the following facilities to the Contractor at the site:

a. Electricity & water at nearest available one point. Further distribution to be done by contractor at their cost.
b. Quarter(s) for supervisor/ engineers on chargeable basis in GIPCL's township at discretion of GIPCL if available.
c. Workshop facility as available at site only. However, contractor may visit the workshop to ensure the existing facility. For the facilities other than available, contractor has to carry out the job outside at their own cost.
d. Site office without furniture & accessories shall be provided at site.
e. First aid facilities as available on chargeable basis.

Apart from the above, no other facilities shall be provided by GIPCL.

B. GIPCL shall also conduct an orientation program appraising the workmen regarding the safety norms and measures to be observed during work operations at the plant site.

22. WORK MEASUREMENT/CERTIFICATION

a. The work to be performed being a specialized nature, the contractor should be fully conversant with modern practices and should be able to carry out works independently of large thermal power plant. The contractor shall therefore be required to engage qualified/ experienced personnel to undertake the work as per specifications and requirement.

b. Contractor should maintain one computer with printer for keeping daily records and maintain the data.
c. All the work measurements shall be jointly recorded in a measurement sheet/register/relevant documents by the contractor / authorized representative of the contractor and the Engineer-in-charge. The measurements shall be clearly written indicating date of measurement, location, reference to drawings, if any, and jointly signed.
d. The Contractor shall be required to furnish satisfactory job completion report to GIPCL. The submission of report should be on daily basis, the monthly bill payment shall be released based on the certified reports of the works.
e. Inspection of work will be done by Engineer in Charge or his authorised representative. If the work is not found satisfactory engineer in charge reserves the right to take suitable action and shall be binding to the contractor.

23. PUBLIC HOLIDAYS

The Contractor shall be responsible for giving benefit to all his employees, employed in whatsoever capacity, 09 Public/Paid holidays and the same shall be notified in advance and due communication thereof shall be made to the Management.

24. BENEFIT PAYABLE IN CASE OF ACCIDENT OCCURRING OUTSIDE PREMISES OR BEYOND THE COURSE OF EMPLOYMENT

The contractor shall provide off-duty insurance coverage (Medical + Death Benefit) sum of Rs. One Lac (Nagrik Suraksha Policy or Equallent) to all its workmen deployed at GIPCL-SLPP site for the accident taking place outside the Company premises anywhere in any capacity and in whatsoever may be the manner. Premium amount would be around Rs.95/- plus GST per person per year.

25. Uniform:

The contractor shall issue three pairs of stitched uniform to contract workmen (Pant-Shirt for men and Sari-Blouse to women workers). However brand of fabric will be MAFATLAL. The color of the uniform shall be as indicated by GIPCL. The uniform should be issued to workmen within one month from the date of commencement of the Contract, otherwise penalty will be imposed.

26. Adhoc Allowance:

Considering the inflation and financial conditions prevailing in the market, to compensate the contractor towards the benefits of adhoc allowance. Contractor shall pay additional adhoc allowances to the specified workmen per month.

27. Legal matters pending before the Court:

In case, in any litigation pertaining to labour employed through contractor, if any direction or order is issued by court at any point of time, the contractor shall comply with and implement such direction or order whether passed at the time of award of contract or during the pendency of contract.

28. Annual Health Check-up:

As per Statutory requirement Contractor has to inform workmen deployed at Site for Annual health check-up as per schedule prepared by HR&A Dept .

29. FORCE MAJEURE

The performance of the obligations herein contemplated may be suspended without incurring the penalty in the event of the subsistence of Force Majeure conditions.

If a Force Majeure situation arises, the affected Party shall promptly notify the other Party in writing of such conditions and the performance shall be suspended as per mutual agreement.

For the purposes of this clause, ‘Force Majeure’ means an event beyond the control of the Party and not foreseeable by the Party and shall include events of floods, explosions, riots, wars, hurricane, epidemics, any other Act of God, quarantine restrictions, terrorism, government actions and provided always that such acts result in the impossibility of the further performance of the contract.

30. INDEMNITY

The Contractor shall indemnify and keep harmless GIPCL from and against all actions, proceedings, claims, demands, losses, costs, damages and expenses whatsoever which may be brought against or suffered by GIPCL which it may sustain, pay or incur as a result of or in connection with the performance/ purported performance/ non-performance of the contract by the Contractor.

In case, in any litigation pertaining to labour employed through contractor if any direction or order is issued by court at any point of time the contractor shall comply with and implement such direction or order whether passed at the time of award of contract or during the pendency of contract. Further, the Contractor shall indemnify the GIPCL against all consequences arising and affecting GIPCL owing to the compliance of the orders by the Contractor.

31. GOVERNING LAW AND JURISDICTION

This tender document and contract shall be governed by the laws of India and the Courts at Surat shall have jurisdiction regarding the same.

32. Where any portion of the General Condition of Contract is repugnant to or at variance with any provisions of the Special Condition of Contract, then unless a different intention appears, the provision of the Special Conditions of Contract shall prevail to the extent of such repugnancy of variance.

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SECTION-D
SPECIAL CONDITIONS OF CONTRACT

1. DETAIL SCOPE OF WORK

The scope of work under this tender enquiry covers total mechanical maintenance (preventive, breakdown and annual shut down job) of the following equipment of 4 x 125 MW Unit Turbine & its auxiliaries and Balance of plant equipments at Surat Lignite Power Plant (SLPP). Details of the equipments specifications are mentioned in the **Annexure-I (I1& I2 and I3 & I4).**

The details of scope of work with technical activity estimate sheet is given in enclosed Section-E as under:

1. Package-1 (For Phase-1 UNIT # 1 & 2 Turbine & Its Auxiliaries).
2. Package-2 (For Phase-2 UNIT # 3 & 4 Turbine & Its Auxiliaries).
3. Package-3 (For Phase-1 UNIT # 1 & 2 Balance of Plant)
4. Package-4 (For Phase-2 UNIT # 3 & 4 Balance of Plant)

1.1. During any emergencies, contractor shall have to carry out the work round the clock by deploying additional force within four-hour notice period failing which GIPCL reserves the right to carry out this work by engaging other party. The expenditure occurred due to such situations, the Contractor will be held responsible & the same will be recovered from the Contractor's monthly bill / any other pending bills along with 10% overhead charges. For repetitive failure of such work for more than two incidents, GIPCL reserve the right to terminate the entire contract by forfeiting all pending dues, Security Deposit & other retention money, if any, after giving 15 days notice to the contractor & this will be binding to the contractor.

1.2. SCOPE OF CONTRACTOR

1. All tools & tackles, tractors, required vehicles to execute the contract will be in the scope of the contractor. The contractor should ensure for healthiness / working conditions of tools, tackles & vehicles.
2. All consumable items like cloth, cotton waste, kerosene, gas, diesel, lubricants, etc will be in the scope of the contractor.
3. All safety/PPEs required during work at site are to be arranged by the contractor.
4. The Contractor shall have to provide necessary facilities including accommodation for their labour at their own cost.
5. The contractor has to arrange Hydra, tractor with trolleys for lifting/shifting the materials of their own. Howeveve, during executon of work as per SOR, wherever lifting arrangement of installed / running equipment is not provided in open areas Hydra shall be provided by GIPCL.
6. Contractor has to depute their full time experienced overall site-in-charge & independent Location/Package wise supervisors for work execution as per specification and for day to day work planning & coordination with respective department's Engineer-in-charge, to obtain day to day Location/Package wise work permits, to get daily location wise work supervision, to record Location/Package wise joint work done reports/measurements/trip certification, to

prepare Location/Package wise separate bills, to prepare & apply Location/Package wise manpower gate pass, to maintain Location/Package wise statutory & legal compliance records, etc…

1.3. TO REMEDY DEFECTIVE WORK

If the work or any portion thereof shall be damaged in any way excepting by the acts of the GIPCL, or if defects not readily detected by proper inspection shall develop before the final completion and acceptance of the whole work, the CONTRACTOR shall forthwith make good, without compensation, such damage or defects in a manner satisfactory to the ENGINEER / GIPCL. In no case shall defective or imperfect work be retained even if contractor followed all technical specifications. GIPCL will not compromise for quality of materials, works & workmanship.

The CONTRACTOR shall remain liable under the provisions of this clause notwithstanding the passing by the GIPCL of any certificate, final or otherwise or the passing of any accounts.

1.4. DAILY DIARY AND PROGRESS REPORT:

A daily diary register will be kept in the ENGINEER’S office. The CONTRACTOR will supply all detailed information every day at 9:00 hours for the day preceding and the diary will be jointly signed by the ENGINEER and the CONTRACTOR’S representatives, every day in token of its correctness. A works instruction book, serially numbered will also be kept in the ENGINEER’S office and all day to day instructions will be given in that book. The CONTRACTOR’S representative shall report every day to see these instructions and sign them at the bottom in token of his having seen them.

The CONTRACTOR shall supply all information regarding procurement of materials and progress of work, as is required by the ENGINEER for compiling the weekly progress reports. This information shall be supplied by 9:00 hours on every Monday, for the preceding week.

2. PRICE & RATES

The rates quoted by the Bidder in the online Price Bid /Reverse E- auction shall be inclusive of cost of all labor, supervision, cost of safety supervisor, shifting, transportation, loading, unloading, equipment, all tools & tackles, safety equipments & PPEs, Royalties, Rents, Excise duty, Sales Tax, Stamp Duties, Central or State Government or Local body or Municipal Taxes or Duties, Turn over Tax, Work Contract Tax, VAT, Octroi duty and / or any other duty / tax (excluding GST), levied by the Central, State Government or other Public bodies etc…and such other costs that are not specifically mentioned herein but will be incurred by the contractor for the satisfactory and timely completion of the work. The quoted rates shall be deemed to include for everything mentioned in the specification, all leads & lifts, contractor’s overheads & profits for due performance of the work under this contract and such other costs that are not specifically mentioned herein but will be incurred by the contractor for the satisfactory and timely completion of the work. The rates shall also include cost for mobilization / demobilization of manpower, equipments, materials, etc...

The rates shall be firm for entire contract period and also during extension, if required and shall not be subject to any escalation in prices, idle charges for labor, machinery, overhead expenses etc. There shall not be any escalation/compensation to the

contractor against any revision in MWR (Minimum Wage Rates). No price escalation / idle charges shall be due to any reason whatsoever.

The prices / item rates quoted by Bidder shall remain firm till completion of the contract period and any agreed extensions thereafter and shall not be subject to any other escalation, idle charges for labor, machinery, overhead expenses etc. No price escalation / idle charges shall be payable due to delay in work by contractor or due to non-availability of work front by GIPCL or any reason whatsoever.

The price/rate quoted by CONTRACTOR shall be considering mobilization of all required manpower, tools & tackles, materials, equipment for timely and satisfactory completion of all scope of work.

The Contractor shall not pay less than the Minimum Wages notified by the Government from time to time to his employees of corresponding categories.

Contractor shall at his expense comply with all labour and industrial laws and such other acts and statues as may be applicable to the contract in respect to pay etc. On account of any default in respect of all liabilities and in case of non-compliance of the above, the company can withhold their payments till all legal liabilities are discharged.

In case activity / items is not mentioned in the package, Item Rate quoted by contactor for similar nature of works / system in any other package of Turbine & BOP shall be applicable for all the four packages.

Actual quantity may vary during contract execution, but the overall contract value will be considered for billing purpose. If estimated quantity in any item exceeds during contract execution, then contract value of other items will be utilized without exceeding the total contract value. The payment will be done as per actual execution of quantity.

Any Unforeseen / contingency works shall be executed by contractor as per the requirement and instruction of engineer incharge. Payment for such works shall be as per Manpower rates given in Annexure-F.

The value and/or quantum of work may be increased or decreased depending upon day to day requirement. However, item rates remains unchanged and the payment shall be made as per the actual quantity executed as informed & certified by GIPCL representatives.

3. CONTRACT PERIOD & MOBILIZATION PERIOD

a. The contract will be for a period of 2 years from the date of actual commencement of operation of the contract as stated in the Work Order (‘Contract Period’).

b. GIPCL reserves the right to extend the Contract Period up to 3 months on the same rates and terms and conditions without any price escalation and entering into any new contract.

c. The said Contract Period can be extended if mutually agreed upon by both the parties up to one year and in such a case a revised work order shall be issued at the same rates and terms & condition or at negotiated rates acceptable by both parties i.e. the Company & the Contractor.

d. Mobilization period will be 07 to 15 days from the date of intimation from GIPCL.

4. TERMS OF PAYMENT

A. Conditions of Payment:

The contractor shall raise the location (Package) wise separate running invoices in duplicate every month in respect of the work performed or completed during the month along with the documents as hereinafter provided. On receipt of the invoice complete in all respects and with all the said documents, the payment in respect of the same shall be made within 21 days of such receipt of a complete invoice as per the following terms of payment:

(i) 100% of monthly RA bill along with 100% taxes shall be released against the work executed duly certified by GIPCL Income Tax (IT) will be deducted at source from monthly RA bills as per the rules in force.
(ii) Security deposit at 10% of Annual contract value excluding taxes & duties shall be submitted as per clause no.: 1 of Section-C.
(iii) GST shall be paid along with bills after fulfillment of following terms.
  (a) Submission of copy of registration certificate issued by GST Authority (to be furnished only once).
  (b) Citing GIPCL GST no. (I.e. 24AAACG7277Q1Z0) along with Bidder GST registration no. And the date of issue of registration certificate on invoices.
  (c) Claim of GST amount with percentage (%) separately shown on the invoices.
  (d) The contractor shall be required to submit the proof of payment of GST of previous month/quarter, as may be applicable as & when demanded by GIPCL/Owner/company.
  (e) The Bidder shall inform the Owner in the event of its registration certificate is cancelled or discontinued for whatsoever reason.
(iv) At the time of submission of the first monthly RA Bill, the Contractor shall submit a certificate from Engineer-in-charge regarding availability of tools & tackles, equipments, vehicles etc at site**.** The Contractor shall also furnish the checklist as per **ANNEXURE-A** enclosed with the Section-F of tender document along with the RA bill of respective month.
(v) While making running account payment, the following deductions may be made by GIPCL, if applicable:
  1. Cost of materials issued, if any, by GIPCL and to the extent consumed in the work.
  2. Security deposit recoverable if any.
  3. Advance on materials / work progress advance payments, if any.
  4. LD / Penalty for delayed delivery, penalty for delayed execution of work, recovery of charges for the work done by other contractor due to delay or any other reason, if applicable
  5. Any other dues recoverable by GIPCL from the contractor under the contract.
(vi) The contractor along with monthly RA Bill shall submit copy of P.F. Challan, Xerox copies of wages register of previous month, Xerox copies of attendance sheet of respective month & copy of ECR statement indicating the employee and employer's P.F contribution of previous month with respect of employees employed by him for the contract at GIPCL site.

(vii) The Contractor shall submit his Final Bill within a period of four months of the expiration or earlier termination of the contract or any extensions that may be granted by GIPCL to the Contractor. GIPCL shall not entertain any bill for any work item after expiration of period of four months.

(viii) The Contractor shall include all his claims in the Final Bill submitted by him and accordingly the final bill submitted by the Contractor shall be deemed to be inclusive of all and whatsoever the claims that the Contractor may have from GIPCL. The Contractor shall not be entitled to claim any amounts which are not mentioned in the Final Bill and the Contractor shall be deemed to have waived any claims not mentioned in the Final Bill and shall not be entitled to recover the same from GIPCL subsequent to the submission of the Final Bill on any account and GIPCL shall stand absolved of all its liabilities in respect of any such claims not raised by the Contractor in his Final Bill.

B. Validity and Uniformity of Rates

The rates shall be firm for entire contract period and also during extension, if required and shall not be subject to any escalation in prices, idle charges for labor, machinery, overhead expenses etc. There shall not be any escalation/compensation to the contractor against any revision in MWR (Minimum Wage Rates). No price escalation / idle charges shall be due to any reason whatsoever.

C. Deductions from Contract Price

All costs, charges or expenses payable by the Contractor under the terms of the contract or as per the applicable laws, in respect of which he makes default in payment, shall be the liability of the Contractor. Such amount or due may be paid by the Company and the Company shall be entitled to recover the same from the Contractor by deducting the said amounts from the Contractor's monthly RA bills and from security deposite if required.

5. SUBMISSION OF TECHNICAL DOCUMENTS TO THE ENGR-IN-CHARGE

Contractor shall submit following documents to the Engineer-in-charge for verification purpose of the bill: -

(i) **Measurement sheet along with joint record of work done in the form of joint inspection report** duly signed by authorized representative of contractor and GIPCL Engineer.

The bill will not be entertained without submission of above documents.

6. SUBMISSION OF STATUTORY COMPLIANCES WITH EACH BILL

Contractor shall submit each RA bill of work carried out along with following documents.

(i) Copy of statutory compliance like labour license, wages payment register, EC Policy, PF paid Challan with ECR, etc… along wage certificate pertaining to respective bill period.
(ii) Notarized Indemnity Bond as per Performa, in case of Final bill.
(iii) No claim - No arbitration certificate as per Performa, after releasing final bill payment.

Bill submitted without any of the above documents shall not be processed for payment.

7. MOBILIZATION AND EXECUTION

a) Contractor shall mobilize the resources at site within 04 hours from the time the intimation given by GIPCL.
b) Contractor shall appoint Package wise separate & independent site supervisors who will be responsible for supervision and execution of job in specified time with respect to quality, specifications, site preparations, safety, co ordination with GIPCL, issue of work permits, joint measurements, etc... The supervisors shall coordinate with the Engineer-in-charge of GIPCL for proper execution of the job.
c) Contractor shall depute one no. full time independent experienced site-in-charge having in-depth knowledge of standard Maintenance practices and four nos. of independent site supervisors at site, one for each Location/Package (each at Phase-1 & Phase-2, each at TG & BOP Separately). They shall co-ordinate with GIPCL engineer and shall bear overall responsibility of contract including joint measurement, billing etc. Such person shall function from site office of contractor at SLPP.
d) Contractor shall also nominate one safety supervisor at site and shall submit nomination of safety supervisor in writing before commencement of contract. Safety supervisor shall arrange small safety talk on every day morning or whenever required with all workers working under this contract. He shall coordinate with concern department's Engineer-in-charge on daily basis and report daily observations, tool-box talk records etc. The work shall not be allowed without deploying safety supervisor and a penalty equal to Rs. 1,000/- per day absent of safety supervisor shall be levied from Contractor.
e) Minimum 4 teams for TG area and Minimum 3 teams for BoP area (minimum total 7 teams) to be deployed at site during non-AOH period. Each team must contain manpower covering all sets of skills required (Mill Wright/Mechanical Fitter, Welder, Rigger, Grinder / Gas cutter, Helper etc.) to carry out the work / activity at different locations.
f) contractor shall also mobilize / keep 1 No. Crane operator and 2 no. machinist as specified in tender Section-E schedule of quantities & rates Annexure: O1 (TG Misc Job).
g) During unit overhauling, the contractor has to enhance the site manpower as per the requirement and as directed by EIC to ensure the timely completion of work (During overhauling period quantum of work increases substantially). For this, enhanced work shall be completed by deploying additional manpower with separate supervisor. Payment will be made on item rate basis only. The work during the overhauling period is to be carried out round the clock. Contractor should mobilize required number of manpower and execute the work in all shifts with independent manpower. Contractor should not continue the same manpower more than 16 hours.
h) During execution of the works, one or more jobs may be required to be done simultaneously and the Contractor shall mobilize additional resources accordingly as per the requirement and as directed by EIC.
i) In case of breakdown of equipment, the contractor should work round the clock for putting back the area in service immediately within minimum time. In case of any work requirement (normal / emergency) arising during Sunday / holidays & night hours the contractor should be in a position to mobilize the manpower immediately within minimum time as per the instruction of EIC. Unavailability of manpower as well as resources will be viewed very seriously

and will invite appropriate punitive measures as decided by competent authority.

j) Contractor has to furnish the qualification, certificate, other documents and/or proof of on hand experience, job & site experience of all skilled & semiskilled workmen and supervisors. All the details of supervisor & workmen will be reviewed by EIC and Supervisor & Workmen will be mobilized after clearance of EIC based on work requirement & suitability. Workmen deputed shall be experienced and capable of performing the quality job.

k) The resources required for execution of above jobs will vary from time to time, hence contractor shall mobilize the resources as per requirement and as directed by EIC.

l) Contractor shall provide accommodation for the persons deployed by him for the work at his own cost.

8. QUANTITY OF WORK

The estimated quantities of work required to be carried out by the contractor are as given in the Section-E (Schedule of Quantity) and shall vary according to the exigencies of work at site. However, the rates quoted by Bidder shall remain firm irrespective of any variation in estimated quantities. Contractors shall engage required nos. of labors along with required tools & tackles as per work load and emergency situations throughout the contract period to perform his contractual duties.

In case, contract quantity/amount exhausted before completion of contract period, GIPCL reserve the rights to increase the quantities or contract amount for successful completion of entire contract period. Contractor shall responsible to complete the particular job up to entire satisfaction of Engineer-in-charge. The item rates remain firm & unchanged till completion of the contract and any agreed extensions thereafter and shall not be subject to any escalation, idle charges for labor, machinery, overhead expenses etc… for any reason whatsoever. The quantum of work of individual item may be up to any extent depending upon requirement. However, item rate remains unchanged. Under this contract, contractor has to execute all work as per the Plant requirement.

9. OTHER GENERAL CONDITIONS OF CONTRACT

1. Provision of scaffolding along with scaffolding material for maintenance work will be in the scope of the contractor for safety & completion of specified job. The scaffolding shall be with pipe and clamps, metallic jallies. No separate rate shall be provided for such scaffolding work.

2. Contractor has to do the scaffolding work for other agencies or wherever required as per GIPCL instruction. For such extra scaffolding work, Rate shall be provided as per activity item rate of Scaffolding in price schedule.

3. Provision of removal & application of Insulation with cladding during maintenance work will be in the scope of the contractor. No separate rate shall be provided for such insulation work.

4. Contractor has to do the removal & application of insulation with cladding wherever required as per GIPCL instruction. For such extra insulation with

cladding work, Rate shall be provided as per activity item rate of insulation in price schedule.

5. If any equipment or part are found damaged due to negligent / faulty maintenance the equipment cost of such damages shall be recovered from the contractor’s monthly bill/retention money/security deposit.

6. The contractor has to shift spares, lubricant etc in required quantity duly approved by GIPCL engineer whenever necessary from GIPCL store / warehouse to site or site store as per the instruction of engineer in charge. Contractor has to arrange transportation for above. The cost of transportation will be on contractor’s account. The contractor is responsible for safe transportation, handling and storage. If equipment fails due to improper lubrication or intermixing the cost of such damages shall be recovered from contractor’s bills. It is the responsibility of contractor to keep various lubricants separately to avoid intermixing. The failure /defects of equipment due to improper method of maintenance, equipment assembly due to contractor negligence, and the losses will be recovered from contractor’s bills.

7. In case of breakdown of equipment, the contractor should work round the clock for putting back the area in service immediately within minimum time. In case of any work requirement (normal / emergency) arising during Sunday / holidays & night hours the contractor should be in a position to mobilize the manpower immediately within minimum time as per the instruction of EIC. Unavailability of manpower as well as resources will be viewed very seriously and will invite appropriate punitive measures as decided by competent authority.

8. All new replacements either spare parts or any other shall be inspected and approved by GIPCL engineer in charge before its actual use in work. It is the supervisor responsibility to ensure this without failure.

9. The time schedule given in the standard time required for respective activities of work as mentioned in **Annexure-K**.

10. In case of failure to adhere to the time schedule by the contractor penalty will be levied at the discretion of Engineer in charge considering extent of delay in particular job. LD of 1% of contract value per hour for the delayed job shall be deducted from the contractor’s bill subject to a maximum of 10% of the value of that particular job.

11. The contractor has to do quality job. GIPCL shall not compromise in quality. In case of poor quality of work the contractor may be asked to rework the job at free of cost.

12. In case of any emergency in boilers/steam line/valves where there is a risk of hot media like steam/hot feed water/oil, workmen should wear anti fire apron, mask & helmet before attending the job. This is the responsibility of the supervisor to ensure it without failure.

13. Immediately after completion of maintenance job, work area has to be cleaned by removing all the tools, scrap, cotton waste, oil, grease etc,. All the scrap/waste oil generated should be disposed off to the scrap yard or any other designated place as instructed by Engineer in Charge. In case of heavy weight items, if required transportation may be arranged by the GIPCL at the discretion of the engineer in charge.

14. Insulation scrap materials like glass wool, ceramic wool etc. should be collected in gunny bags with proper care and then disposed it at suitable location as per the instruction of engineer in charge.

15. Defect liability period: The defect liability period for respective job has been detailed in **Annexure-K**. All defects occurring in attended job during defect liability period must be rectified by the contractor free of cost.

16. The contractor has to complete the preventive maintenance (PM) as per the planning schedule and their respective supervisor has to interact with Engineer In-Charge for PTW (Permit to work), work instruction, Return of permit and successful trial run. Contractor must carry out the Preventive maintenance jobs as per the equipment survey sheet (ESS) provided by the GIPCL, also after completion of the PM jobs, this ESS is to be submitted duly signed to Engineer in charge.

17. Any job other than the listed jobs in work order shall be executed by the contractor on instruction from GIPCL and payment of the same shall be made to the contractor as per **ANNEXURE-F**.

18. <u>HP-Welding:</u>
    All the repair works in HP piping / pressure parts, which comes under IBR is to be taken up as per IBR norms. The HP welders engaged in HP-Piping should be duly endorsed by the boiler inspector. All the formalities for obtaining IBR approval from the office of Director of Boiler falls in the scope of contractor, if required.

19. If contractor fails to mobilize/keep supervisors as specified above or supervisor are absent for more than seven days, Penalty of Rs. 750/- per supervisor per day will be deducted in RA bill.

    If contractor fails to mobilize / keep Crane operator and machinist as specified in tender or Crane operator and machinist are absent for more than three days, Penalty of Rs. 750/- per person per day will be deducted in RA bill.

    Permission of leave of site in charge and supervisors is to be taken from E-I/C well in advance. Additional Workmen deputed at site for shutdown / emergency work shall not leave the site without intimation to EIC.

    Power Industry runs round the clock for 365 days. In case of emergency during odd hours or on P.H. or Weekly off, party shall arrange the manpower within one hour after intimation. Loss of generation in case of

delay in arranging the manpower will be viewed very seriously and penalty as decided by competent authority will be imposed and same shall remain binding to the contractor.

20. **Contractor must ensure supervisors and technicians deputed for Turbine-Generator work and TG bearing inspection work are having complete knowledge of the equipments and work. Proof to be submitted regarding skill of the persons deployed for above work.**

21. **The Government of India has enacted the Micro, Small and Medium Enterprises Development Act, 2006 (the “Act”) and the Act has come into force from October 2, 2006.Bidder to confirm whether your organization is registered under the Micro, Small and Medium Enterprises Development Act, 2006. If your organization is registered under the Act, please specify the category i.e., Micro Enterprise, Small Enterprise or Medium Enterprise under which it is registered and kindly attach a copy of your registration certificate. Provide us details of registration along with copy of the registration certificate issued by the District Industries Centre/Department of Industries, etc of the respective State Government. It is to be noted that large scale industries and trading firms have been excluded from the purview of the Act.**

GIPCL is an ISO 9001:2015, ISO 14001:2015, ISO 450001:2018 and ISO 50001:2018 certified company, and GIPCL gives extremely importance to maintain these global standards. Contractor has to follow these standards while working with GIPCL. Contractor should make awareness among their entire workman about these standards & maintain all records with utmost care.

SECTION-E
SCHEDULE OF QUANTITIES & RATES

PACKAGE - I :- Surat Lignite Power Plant - 4X125 MW, Surat Lignite Power Plant, Unit # I & II: Biennial Maintenance Contract for Turbine & Its Auxiliaries for two years 2025-27.

ANNEXURE A1							
BOILER FEED PUMP & ITS AUXILIARIES							
Item No.	**Item of Work**	**Scope of work**	**Nature of Mntc.**	**Qty for 2yr**	**Unit**	**Estimated Unit cost (in Rs)**	**Total estimated cost (in Rs)**
1	Removal and insertion of BFP cartridge. Model FK6D30 Make: BHEL.	Ensure PTW & Isolation, Shift fixture from stores to site. Decouple the pump. Dismantle all its accessories from water and oil system. Remove the old cartridge and insert new cartridge. Check the pump float, both the bearings, mechanical seals & if required replace or rectify them. Box-up all fittings. Alignment and couple. Take trial for smooth operation. Clean the area after completion of work	BD	1	No.	40153.47	40153.47
2	Over hauling of Booster Pump. MODEL FA1B56 MAKE BHEL.	Ensure PTW & Isolation, before dismantling check the free float of pump. Dismantle the pump. Check the dimension of casing and impeller wear ring, if require replace it. Inspect the shaft/impeller/casing/bearings for any abnormalities and replace/rectify. If errosion is noticed in pump casing, it is to be rebuilt up by welding with appropriate electrode by heating. Then it is to be grinded to obtain smooth surface. Internal surface to be painted with ceramic coating after surface preparation. Flush the pump casing after dummying the discharge flange. Restore the pump, check all the clearances & floats, align, couple and ensure healthy trial. Clean the area after completion of work	BD	3	No.	37047.99	111143.97

3	PM of BFP (including BP & Hydraulic coupling) MODEL: R15K.2 Make VOITH.	Ensure PTW & Isolation, Thoroughly clean equipment/base, from oil and dirt. Check tightness of all bolts of casing, foundation bearing housing and connected pipings. Check coupling condition for any cracks on bolts, holes etc. Check the quality of oil in lab. Dismantle the strainer. Replace the strainer element with spare cleaned strainer element if required. Inspect the removed strainer element for any damage/clogging.Store in its place after cleaning. Check bearings for oil leakage, arrest any oil leakage by replacing oil guards, etc./rectifying and oil line for any leakage of oil and rectify. Check seal cooling line for any choking/leakage attend if any. Check for any flange or gland leakage and attend it by replacing/tightening. Tighten all the fastners. Inspect the hydraulic coupling internals through inspection cover. Check the fusible plugs condition if required replace by new one. Lubricate all the required points of the hydraulic coupling. Clean/replace the lub oil filter and Oil top up if required. Ensure fixing of all safety guards. Remove tools/man waste materials from the equipments surrounding area. Take the trial and ensure satisfactory operation. Clean the area after completion of work	PM	48	No.	4122.88	197898.24
4	Decoupling and coupling of hydraulic or BFP or Booster pump or motor	Ensure PTW & Isolation, decouple for facilitate to carryout electrical and other job and Couple after alignment &completion of work. Box-up coupling gaurd. Clean the area after completion of work	BD	9	No.	1333.01	11997.09
5	Replacement of hydraulic coupling oil.	Ensure PTW & Isolation, Transport oil from store to site. Drain completely and rinse. Replace with new oil. Transport back the old oil to stores. Clean the area after completion of work	BD	3	No.	4211.44	12634.32

6	Cleaning / replacement of Suction strainer in water circuit.	Ensure PTW & Isolation, Dismantle the strainer. Replace the strainer element with spare cleaned strainer element. Inspect the removed strainer element for any damage / clogging. Store in its place after cleaning. Clean the area after completion of work	PM	36	No.	1349.16	48569.76
7	Maintenance of DE bearing/oil guard of BFP/BP.	Ensure PTW & Isolation, Dismantle the bearing housing. Clean the bearing, check the clearance of bearing and oil guard. If required replace the bearing/oil guard (front & rear). Attend oil leakage if any. Box up. Clean the area after completion of work	BD	14	No.	1898.51	26579.14
8	Maintenance of NDE bearing / oil guard of BFP/BP. (Including thrust bearing).	, -- do --	BD	16	No.	1898.51	30376.16
9	Replacement of BFP or Booster pump DE side mechanical seal and its parts	Ensure PTW & Isolation, Decouple the coupling remove the coupling flange. Remove bearing from bearing housing. Replace the damaged seal with repaired/new seal and assemble the pump. Clean the area after completion of work	BD	8	No.	3436.18	27489.44
10	Replacement of BFP or Booster pump NDE side mechanical seal	Ensure PTW & Isolation, Remove thrust and journal bearing from bearing housing. Remove the thrust collar. Replace the damaged seal with new repaired seal and assemble the pump. Check the thrust float & if required adjust/rectify it. Clean the area after completion of work	BD	8	No.	6329.69	50637.52
11	Overhauling of BFP or Booster pump Mechanical seal.	Clean the old mechanical seal dismantle the seal replace all damaged and worn out parts with new parts and preserve. Clean the area after completion of work	BD	16	No.	997.74	15963.84
12	Alignment of BFP to Motor OR Motor to HY. Coupling OR Motor to BP	Ensure PTW & Isolation, Decouple the equipment & carry out the alignment as per the instruction of Engineer to meet the required Drg. Values. Then couple it. Clean the area after completion of work	PM	36	No.	4206.04	151417.44
13	Cleaning/replacement of lub oil filter. -one no.	Ensure PTW & Isolation, Dismantle. Clean /replace the filter and box-up. Clean the area after completion of work	BD	30	No.	337.58	10127.40

14	PM of working oil/lub oil cooler-one no.	Ensure PTW & Isolate cooler from water and oil side. Drain oil in the empty barrel. Clean the water box, tubes, hydrotest tube side, plug leaking tubes if any and box-up. Check the oil level & top up after charging. Clean the area after completion of work	PM	9	No.	5407.44	48666.96
15	Attending of 1/2" or 1" oil or water pipe line fitting leakages.	Ensure PTW & Isolation, Dismantle the connection check for any abnormalities put the thread sealant and restore. Clean the area after completion of work	BD	10	No.	341.33	3413.30
16	Replacement of Booster pump parting plane & water jacket gasket.	Ensure PTW & Isolation, Remove the top casing, remove the old gasket and put new gasket and box up. Always put antiseize compounds on the bolts. check all the clearances & floats, align, couple and ensure healthy trial. Clean the area after completion of work	BD	2	No.	5231.58	10463.16
17	Replacement of thrust bearing end cover 'O' ring of BFP or Booster pump.	Ensure PTW & Isolation, Remove the end cover replace the 'O'ring and close the end cover. Clean the area after completion of work	BD	6	No.	202.63	1215.78
18	Booster pump suction flange or discharge flange leakage.	Ensure PTW & Isolation, Remove the flange bolts, replace old gasket by new gasket. Retight the flange by applying antiseize compound to all bolts. Clean the area after completion of work	BD	6	No.	4115.06	24690.36
19	BFP suction flange gasket replacement.	Ensure PTW & Isolation, Remove the flange bolts, replace old gasket by new gasket. Retight the flange by applying antiseize compound to all bolts. Clean the area after completion of work	BD	6	No.	2056.58	12339.48
20	Lub oil line 1/2" to 2”-line orifice gasket/flange gasket replacement.	Ensure PTW & Isolation, Open the flange and clean thoroughly. Replace old gasket by new gasket. Clean the area after completion of work	BD	6	No.	213.93	1283.58
21	Tightening of oil/water line flanges of 1/2" to 2" size for any leakages.	Ensure PTW & Isolation, Clean the flange bolts, check for any cracks/ looseness and tighten properly. Clean the area after completion of work	BD	12	No.	167.80	2013.60

22	Seal water cooler coil inspection/ tubes leakages.	Ensure PTW & Isolation, Isoalte the water side both circuits. Open the end cover. Thoroughly clean the coil and internal surface of the cooler body, inspect for any tube leakage and repair if any leakage is found. Restore the system. Clean the area after completion of work	PM	12	No.	2822.14	33865.68
23	Oil top up in hydraulic coupling	Check the oil level if below the normal level, top up the oil upto normal level in presence of Turbine operator. Clean the area after completion of work	BD	120	No.	524.10	62892.00
24	General cleaning of BFP, BP and hydraulic coupling area.-one.no.	Ensure PTW & Isolation, Clean the dust, water and oil accumulated on BFP, hydraulic coupling and booster pump. Also, tharoughly clean the BFP skid base frame and surrounding area. Proper precaution should be taken while cleaning running equipment.	PM	30	No.	1062.34	31870.20
25	Removal & Box-up of Coupling guard (One Number)	Ensure PTW & Isolation, Remove and box-up the coupling guard for the Instrumentation work. Clean the area after completion of work	BD	6	No.	510.99	3065.94
26	Overhauling of Hydraulic coupling.	Ensure PTW & Isolation, Open the the top cover of the hydraulic coupling housing. Remove the primary & secondary wheels. Remove the LO pump. Check the bearings, clearances & thrust floats. Drain the oil completely from housing as well as coolers, clean the inside & all the components thoroughly. If required replace the fusible plug & clean the LO filters. Service the scoop tube mechanism. Assemble all the components perfectly, align the HC with BFP & motor. Clean the area after completion of work. Take successful trial run.	BD	1	No.	31745.83	31745.83
27	Cleaning of Hydraulic coupling/COT/HPBP Tank / any other tank oil through Ferrocare machine.	Ensure PTW & Isolation, Shift the machine to the exact location. Connect the machine to the BFP HC / COT/ HPBP Tank / any other tank or Oil drum. Start & Stop the machine as per instruction of EIC. Run the machine till the required oil quality is achieved. Clean the area after completion of work. (1 No.= Oil cleaning of 1 Oil system or Minmum 5 Drums of Oil)	BD	3	No.	3569.84	10709.52

28	Replacement of fusible plug of hydraulic coupling of BFP.	Ensure PTW & Isolation, Remove the inspection cover & check the fusible plug (2nos.) for its failure. Rectify or replace it by new one & restore. Clean the area after completion of work	BD	3	No.	170.86	512.58
29	Servicing of BFP hydraulic coupling scoop mechanism.	Ensure PTW & Isolation, Decouple the mechanical linkage from actuator, operate it manually for freeness/full travel. If it stuckup then dismantle the cam post mechanism, clean it & apply lubrication as per the instruction of engineer in charge. Restore the system back. Clean the area after completion of work	BD	9	No.	3447.06	31023.54
30	Attending leakage from BFP retaining ring	Ensure PTW & Isolation, Decouple the pump, remove DE bearing housing. Replace the O-ring & gaskets of the retaining ring. Assembled in reverse order. Clean the area after completion of work	BD	4	No.	3473.25	13893.00
31	Overhauling of MIL/IL make valves 4" and below size-one No.	Ensure PTW & Isolation, Dismantle the valves, clean all the parts with cleaning agent, check all the parts of the valves if required rectify/replace it as per the instruction of engineer in charge. Box up the valves. take healthy trial. Clean the area after completion of work	BD	3	No.	5888.33	17664.99
32	Overhauling of MIL/IL make valves above 4" Size-one.no.	Ensure PTW & Isolation, Dismantle the valves, clean all the parts with cleaning agent, check all the parts of the valves if required rectify/replace it as per the instruction of engineer in charge. Box up the valves. take healthy trial. Clean the area after completion of work	BD	2	No.	5888.33	11776.66
							1088093.95

ANNEXURE B1							
TG LUB OIL SYSTEM							
Item No.	**Item of Work**	**Scope of work**	**Nature of Mntc.**	**Qty for 2yr**	**Unit**	**Estimated Unit cost (in Rs)**	**Total estimated cost (in Rs)**
1	Maintenance of jacking oil pump (plunger type pump submerged in oil tank.)	Ensure PTW & Isolation, Decouple, take out the pump and dismantle it. Check for any abnormalities / replace the pump. Restore. Align and couple the pump. Take trial run and check for adequate pressure. (Replae the bearing if required). Clean the area after completion of work	BD	1	No.	6824.18	6824.18
2	Maintenance of control oil main pump. (Axial piston pump submerged in oil tank)	, -- do --	BD	1	No.	6867.15	6867.15
3	Maintenance of control oil recirculating pump. (Gear pump submerged in oil tank.)	, -- do --	BD	1	No.	6867.15	6867.15
4	Maintenance of HPBypass control oil pump. (Gear pump submerged in oil tank)	, -- do --	BD	2	No.	6861.76	13723.52
5	Maintenance of clean oil transfer pump. (small gear pump installed on ground)	, -- do --	BD	1	No.	5055.34	5055.34
6	Maintenance of dirty oil transfer pump. (small gear pump installed on ground)	, -- do --	BD	1	No.	5055.34	5055.34
7	Maintenance of lub oil pump (AOP/EOP) (KSB make vertical centrifugal type pump)-one no.	, -- do --	BD	1	No.	6781.03	6781.03
8	PM of clean and dirty oil transfer pump.	Ensure PTW & Isolation, clean base, pump, check tightness of bolts & nuts, check for free rotation of pump, do necessary correction if required, do alignment & coupling, clean the suction filter. Clean the area after completion of work	PM	8	No.	1040.80	8326.40
9	Cleaning of turbine lub oil filter. -One no.	Ensure PTW & Isolation, Open the filters. Clean the elements with petrol and box-up. (10 litres of petrol required) Clean the area after completion of work	PM	65	No.	1290.97	83913.05
10	Cleaning of jacking oil filter.	, -- do --	BD	8	No.	744.55	5956.40

11	Replacement/Cleaning of control oil filters (One No.)	Ensure PTW & Isolation, Open the filter. Clean the element with petrol and box-up or Replace the damaged filter with new filter. Clean the area after completion of work	BD	6	No.	744.55	4467.30
12	Maintenance of control oil cooler. (One Number)	Ensure PTW & Isolation, thoroughly clean the coolers, pipes, bolts and nuts. Open water box, clean tube, shell, Detect for any leakage. Plug the leaking tube. Hydrotest and box-up. Clean the area after completion of work	BD	1	No.	3818.47	3818.47
13	Maintenance of turbine lub oil cooler-one no.	, -- do --	BD	1	No.	14263.79	14263.79
14	Maintenance of accumulator of control oil system - 1No. (35 Litre capacity).	Ensure PTW & Isolation, Dismantle the accumulator bladder. Repair/Replace the parts if any damage. Assemble back. Charge the Nitrogen to the required pressure. Clean the area after completion of work	BD	2	No.	2733.33	5466.66
15	Oil top up in control oil tank (Servo ACT AF-100 oil).	Check the contol oil level if below the normal top up the oil upto normal level in presence of Turbine Operator. Clean the area after completion of work	BD	15	No.	510.99	7664.85
16	Replacement of control oil 800 litres. (Servo ACT AF-100).	Ensure PTW & Isolation, Drain the old oil in empty barrel. Clean the tank. Fill the tank with new oil and restore. Clean the area after completion of work	BD	1	No.	4669.42	4669.42
17	Oil top up in MOT tank (Servo prime 46 T)	Check the luboil level if below the normal top up the oil upto normal level in presence of Turbine Operator. Clean the area after completion of work	BD	20	No.	887.45	17749.00
18	Oil top up in HP-Bypass control oil tank. (Servo Conval-46 oil)	Check the controloil level if below the normal top up the oil upto normal level in presence of Turbine Operator. Clean the area after completion of work	BD	15	No.	446.37	6695.55
19	Replacement of HP-Bypass control oil (Servo Conval-46) 150 litres.	Ensure PTW & Isolation, Drain the old oil in empty barrel. Clean the tank after opening the side cover. Replace the side cover gasket and fill the new oil and box-up. Clean the area after completion of work	BD	2	No.	2967.48	5934.96
20	Cleaning of MOT bucket strainer.	Ensure PTW & Isolation, Remove the top cover. Remove the strainer and clean with petrol and air and box- up. Clean the area after completion of work	BD	4	No.	758.41	3033.64

21	Maintenance of accumulator of HP Bypass control oil each no. (55 litre capacity)	Ensure PTW & Isolation, Dismantle the accumulator bladder. Repair/Replace the parts if any damage. Assemble back. Charge the Nitrogen to the required pressure. Clean the area after completion of work	BD	4	No.	2725.24	10900.96
22	PM of HP-Bypass system.	Ensure PTW & Isolation, thoroughly clean the outside surface of tank, accumulator, pipeline, valves, all fittings. Check for any leakages & arrest it by tightening if lekage donot stops note down the leakage to attend during shut down. Check for filter chocking and replace them. Check oil level, if require top up. Clean the oil tray. Check the accumulator pressure and charge the nitrogen gas if required. Clean the area after completion of work	PM	12	No.	2043.95	24527.40
23	PM of control oil system.	, -- do --	PM	6	No.	2027.79	12166.74
24	Maintenance of oil vapour exhaust fan.	Ensure PTW & Isolation, Open casing cover for any rubbing. Repair/replace the damage parts if any after inspection. Box up the cover after attending the problem. Clean the area after completion of work	BD	1	No.	2038.56	2038.56
25	PM of oil vapour exhaust fan.	Ensure PTW & Isolation, thoroughly clean the fan base, all blots& nuts, check for wear and tear, looseness& damages of bolts & nuts. If require replace/repair. Open the fan cover check for looseness of impeller correct if required. Check casing for any damage/wear etc. repair if required. Restore the system. Clean the area after completion of work	PM	36	No.	2042.59	73533.24
26	Clean suction filter of OVE fan	Ensure PTW & Isolation, Remove the suction filter of oil extraction fan and clean with petrol and box-up. Clean the area after completion of work	PM	4	No.	386.42	1545.68
27	Cleaning of MOT top cover and lub-oil coolers	Ensure PTW & Isolation, thoroughly clean the dust and oil from the top and side wall of the tank & surrounding pipe lines with cloth. Clean the oil cooler/accumulator body, oil pipes and flanges.	PM	24	No.	1400.31	33607.44

28	Attending leakge of oil from the fittings. (size upto 1") per joint	Ensure PTW & Isolation, Attend the leakge of oil from the fittings of control oil system/jacking oil system, if require replace the "o" ring/gasket etc. Clean the area after completion of work	BD	1	NO.	702.84	702.84
29	PM of Oil Centrifuge of MOT.	Ensure PTW & Isolation, thoroughly clean the centrifuge body, all bolts & nuts, bottom tray etc. Clean the suction strainer with petrol and box up Check the looseness of fasteners if require tighten/replace. Open the bowl cover and take out bowl plates. Thoroughly inspect & clean the bowl and check for any damages of bowl plate sealing etc if required replace the damage parts. Check the drive system if require replace the friction pad. Check the oil level & top up if required. Restore the system back. Clean the area after completion of work	PM	24	No.	3686.49	88475.76
30	Oil filling in worm gear box 5 litres. (servo mesh SP320)	Ensure PTW & Isolation, Drain the dirty oil from the housing, clean the housing and top up new oil. Clean the area after completion of work	BD	6	No.	351.43	2108.58
31	Maintenance of bowl spindle and gear box.	Ensure PTW & Isolation, Check the radial wobble. Worm wheel and worm height position. Buffers and ball bearing housing. Replace the damage part if any and box-up. Dismantle the gear box and replace the damaged parts and restore. Clean the area after completion of work	BD	1	No.	3044.37	3044.37
32	Maintenance of feed/booster gear pump.	Ensure PTW & Isolation, Decouple the pump. Dismantle and check for wear and tear of gears, replace if required. Check the condition of bearings, seals etc. replace if required. Reassemble and restore. Clean the area after completion of work	BD	1	No.	1547.75	1547.75
33	Cleaning of suction filter	Ensure PTW & Isolation, open the filter, clean and box-up Clean the area after completion of work	PM	6	No.	386.42	2318.52
34	Replacement of oil seal of feed pump/ booster pump.	Ensure PTW & Isolation, Decouple the pump. Remove old oil seal and replace by new seal. Check the alignement and box-up. Clean the area after completion of work	BD	1	No.	826.66	826.66

35	Cleaning of tray and drain oil collector	Ensure PTW & Isolation, Clean the tray, remove water/waste oil from collector. Fill that water/waste oil in drum and shift to maintenance bay. Clean the area after completion of work	BD	75	No.	367.59	27569.25
36	Cleaning of suction NRV	Ensure PTW & Isolation, Ensure the isolation of system. Open suction 2" NRV check for any blockage. Clean the glass replace the gasket if required. Clean the suction strainer and box-up. Clean the area after completion of work	BD	4	No.	721.67	2886.68
37	Bowl cleaning	Ensure PTW & Isolation, Dismantle the bowl, cleaned all bowl plates with petrol. Check all "O'rings if required replace it. Box- up, cleaning of oil centrifuge body, tray & oil collector and Take healthy trial. Clean the area after completion of work	BD	4	No.	2840.22	11360.88
38	Replacement of coupling pin of feed pump or booster pump of oil centrifuge	Ensure PTW & Isolation, Remove the sheared off pin from the coupling, inspect the couplings if damage then replace/repair it. Insert the new pin & restore. Align & couple the pump. Take healthy trial. Clean the area after completion of work	BD	1	No.	1032.74	1032.74
39	Replacement of the set of brake shoes of oil centrifuge	Ensure PTW & Isolation, Remove the damage brake shoes, clean the internals. If required remove the motor, check for any damage & repair it if required. Replace them by a new set of shoes. Ensure healthy trial. Clean the area after completion of work	BD	4	No.	713.61	2854.44
40	Cleaning of control oil/HPBP oil tank top cover and outer cover base.	Ensure PTW & Isolation, thoroughly clean the dust and oil from the top and side wall of the tank & surrounding pipe lines with cloth. Clean the oil cooler/accumulator body, oil pipes and flanges. Clean the area after completion of work	BD	8	No.	702.84	5622.72
41	Maintenance of accumulator of HP Bypass control oil each no. (10 litre capacity)	Ensure PTW & Isolation, Dismantle the accumulator bladder. Repair/Replace the parts if any damage. Assemble back. Charge the Nitrogen to the required pressure. Clean the area after completion of work	BD	2	No.	2768.31	5536.62

42	Inspection of AC/DC lube oil pump coupling-one no.	Ensure PTW & Isolation, Ensure PTW lift the motor with TG EOT crane, inspect the coupling and rectify or replace the coupling in case of any problem. After the work install the motor and normalise. Clean the area after completion of work	PM	6	No.	2709.08	16254.48
43	Inspection of AC/DC JOP coupling-one no.	Ensure PTW & Isolation, Take out the pump along with the motor to 10.5 mtr TG floor with the help of EOT crane. Inspect the coupling and rectify or replace the coupling if required reinstall the pump and normalise. Clean the area after completion of work	PM	4	No.	2709.08	10836.32
44	Checking the Nitrogen gas pressure in HPBP & CO system	Ensure PTW & Isolation, Check the Nitrogen gas pressure of all the accmulators of HPBP & CO system. Top up the gas if required & restore it. Clean the area after completion of work	BD	5	No.	2054.71	10273.55
45	Cleaning of MOT oil through Ferrocare machine.	Ensure PTW & Isolation, Shift the machine to the exact location. Connect the machine to the MOT. Start & Stop the machine as per instruction of EIC. Run the machine till the required oil quality is achieved. Clean the area after completion of work	BD	4	No.	4023.30	16093.20
46	Oil Transfer from MOT to Drain Oil & Clean oil tank and back to MOT	Ensure PTW & Isolation, Clean the Dirty oil tank & Clean oil tank completely from inside & outside. Check the Complete system. Check all valves freeness in system. Line flushing. Transfer the oil from MOT to dirty oil tank. Centrifuge Bowl & tray cleaning. Transfer oil from dirty to clean oil tank and clean oil tank to MOT. Attend Defect / leakage (if any). Transfer Pumps strainer cleaning (if required). Clean complete area after work completion. Remove cotton waste & waste oil and dispose at suitable location as guided by engineer in-charge. Clean the area after completion of work	BD	1	No.	13652.40	13652.40
							604450.98

ANNEXURE C1							
CEP & Its AUX							
Item No.	**Item of Work**	**Scope of work**	**Nature of Mntc.**	**Qty for 2yr**	**Unit**	**Estimated Unit cost (in Rs)**	**Total estimated cost (in Rs)**
1	Removal and insertion of CEP Make: BHEL Model: EN7H32.	Ensure PTW & Isolation, Shift material from store to site. Remove the piping connections. Decouple and remove the motor. Check the float of the pump and remove the pump. Clean the cannister thoroughly and inspect it. Clean the new pump body, bearings internal, Mech. seal internal if required and check the free float of pump and adjust as per requirement. Insert the pump into cannister and tighten the foundation bolts. Place the Motor and align with pump. Restore the system. Clean the area after completion of work. Take trial run for successful running.	BD	1	No.	25376.69	25376.69
2	Over hauling of mechanical Seal of CEP.	Dismantle the seal, inspect the internals, if required replace the internals. Assemble & test it. Preserve for future application. Clean the area after completion of work	BD	8	No.	4334.34	34674.72
3	Replacement of Suction/discharge flange gasket.	Ensure PTW & Isolation, Open the flange and replace the damage gasket by new gasket. Clean the area after completion of work	BD	2	No.	1419.15	2838.30
4	Oil top up in CEP bearing.	Ensure PTW & Isolation, Top up the oil to the required level in presence of Turbine Operator. Clean the area after completion of work	BD	12	No.	275.68	3308.16
5	Cleaning of suction strainer	Ensure PTW & Isolation, Dismantle the strainer. Clean the element and box-up. Clean the area after completion of work	PM	12	No.	2031.83	24381.96
6	PM of CEP	Ensure PTW & Isolation, Thoroughly clean equipment base, suction expansion bellow, discharge pipe etc. from oil and dirt. Check tightness of casing foundation, bearing housing and connected piping. Dismantle the strainer. Clean the element and box-up. Check coupling condition for any cracks on bolts, holes, hubs etc. check free rotation of pumps. Check alignment if required correct it. Check for any water/ oil leakages and arrest. Check oil quality if required replace or top up if level is low. Check mechanical seal for leakages, if any leakages are their, attend it by adjustment / replacement. Check for any general cracks, wear, damages rust on	PM	24	No.	3371.59	80918.16

		pumps body, bolts, nuts, coupling etc and attend. Clean the area after completion of work					
7	Maintenance of DE thrust bearing & mechanical seal of CEP.	Ensure PTW & Isolation, Decouple the pump, take out the motor from the position. Remove the pump coupling. Dismantle the bearing housing. Take out the bearing pads, clean thoroughly and inspect for any abnormalities and rectify/replace. Remove the mechanical seal. Repair/replace the damaged mechanical seal. Box up the mechanical seal & bearing. Top up oil to the level. Check the pump float. Place the motor align & couple with pump and restore the system. Clean the area after completion of work	BD	8	No.	12557.62	100460.96
8	Removal of CEP motor for electrical work	Ensure PTW & Isolation, to facilitate electrical maintenance work remove the fan cover, remove the motor from the position and shift it to TG maintenance bay & keep it safely. Reinstall the motor, align & couple the pump after completion of work. Ensure healthy trial run. Clean the area after completion of work	BD	1	No.	1411.08	1411.08
9	Removl of CEP motor top cover for I&C work & refixing of the same.	Ensure PTW & Isolation, Ensure the PTW remove the Motor Top Cover with help of EOT Crane and refix after completion of work. Clean the area after completion of work	BD	2	No.	545.98	1091.96
							274461.99

ANNEXURE D1							
Condenser/Deaerator/LP-HP heaters							
Item No.	**Item of Work**	**Scope of work**	**Nature of Mntc.**	**Qty for 2yr**	**Unit**	**Estimated Unit cost (in Rs)**	**Total estimated cost (in Rs)**
1	Cleaning of all the water boxes of condenser, (includes front top-2nos., front bottom-2nos. & rear-2nos.)	Ensure PTW & Isolation, Open the manhole of waterbox. Clean the internal surface of water box, tube plate and box-up. Replace the manhole cover gasket & the zinc electrodes. Clean the area after completion of work	PM	4	No.	6018.78	24075.12
2	Cleaning of hot well	Ensure PTW & Isolation, Open the both manhole door. Clean the hotwell, Collect scale/dirt sample for examination and box-up after inspection. Replace the manhole gasket. Clean the area after completion of work	PM	4	No.	4626.19	18504.76
3	Plugging of Tube leakage of condenser. - one no.	Ensure PTW & Isolation, Open the manhole door. Detect the leakages and plug the tubes. Replace the manhole gasket. Close manhole door. Clean the area after completion of work	BD	20	No.	1341.10	26822.00
4	Opening of manhole & Replacement of manhole door gasket of condenser/hotwell/OLT C Ball collector.	Ensure PTW & Isolation, Open manhole and inspect. Replace old gasket by new gasket and box-up. Clean the area after completion of work	BD	2	No.	2003.57	4007.14
5	Cleaning of Deaerator.	Ensure PTW & Isolation, Remove insulation. Open the manhole doors, thoroughly clean spray nozzles, trays & FST. Inspect whole structure with trays support for any abnormalities or damage, if found rectify. Replace the manhole gaskets and box-up. Apply insulation. Clean the area after completion of work	PM	4	No.	6979.26	27917.04
6	Inspection of HP/LP Flash Tank/Atmospheric Flash /CBD Tank	Ensure PTW & Isolation, Open manhole door and inspect HP/LP/Atmos. Flash/CBD tank and headers, repair if any abnormalities, clean thoroughly, replace manhole gasket & final box up. Clean the area after completion of work	PM	1	No.	4233.22	4233.22
7	Opening of manhole & replacement of flange gasket of deaerator.	Ensure PTW & Isolation, open the manhole and inspect. Replace the damaged gasket and box-up properly. Clean the area after completion of work	BD	2	No.	1005.83	2011.66
8	Attend flange leakageof LP heaters/HP heaters/Gland steam cooler/Drain cooler.	Ensure PTW & Isolation, Replace the damage gasket and tighten properly. Clean the area after completion of work	BD	1	No.	678.63	678.63

9	Condenser fill test.	Ensure PTW & Isolation, If required Dry all tubes after tube cleaning by external agency. Jack the condenser on jack bolt. Fill the condenser 100 mm above the tube nest. Depute the person for checking the leakage. Identify the leakage and record. Open the dummy flanges for draining the condenser. Release the jack bolt and close the dummy flanges of drain line replacing the gasket. Clean the area after completion of work	PM	4	No.	12379.68	49518.72
10	Condenser spring inspection	Ensure PTW & Isolation, thoroughly clean the condenser springs and fasteners with cleaning additives and apply anti corrosive spray. Check for freeness of the jack bolts. Clean the area after completion of work	PM	4	No.	2183.90	8735.60
11	Feed/condensate heaters waterbox partition plates checking & rectification	Ensure PTW & Isolation, Open the dummy flange by loosening the nuts & cut the heater diaphragm. Open the manhole flange by loosening the studs & nuts. Inspect & rectify inside for any erosion. Box up partition flange with new gasket. Weld the diaphragm. Carry out DP test. Box up the dummy flange. Clean the area after completion of work	BD	2	No.	45562.63	91125.26
							257629.15

ANNEXURE E1

AIR COMPRESSORS

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total estimated cost (in Rs)
1	PM of suction and delivery valves of HP cylinder (2 nos.) consist of six suction and six discharge valve I.e total 24 valves.	Ensure PTW & Isolation, Dismantle the valves along with plates, springs and packings. Inspect, repair and replace the damaged parts. Assemble and box-up. Thoroughly clean the compressor and intercooler as per the instruction of engineer incharge Clean the area after completion of work	PM	48	No.	6903.17	331352.16
2	PM of suction and delivery valves of LP cylinder (2nos.) Each cylinder consists of four suction and four discharge valve i.e total 16 valves.	Ensure PTW & Isolation, Dismantle the valves along with plates, springs and packings. Inspect, repair and replace the damaged parts. Assemble and box-up. Thoroughly clean the compressor and intercooler as per the instruction of engineer incharge Clean the area after completion of work	PM	48	No.	6903.17	331352.16
3	PM of HP Cylinders& Pistons. (Each compressor two nos. of HP cylinders)	Ensure PTW & Isolation, remove end cover, remove piston, check for cylinder ovality/cracks etc. Repair if required, Check the gland packings clean/ replace if required. Check the piston and wear ring if require replace it. Check the piston inner and outer end clearance. Reassemble & restore. Clean the area after completion of work	PM	16	No.	7010.85	112173.60
4	PM of LP Cylinders & Pistons. (Each Compressor two nos. of LP cylinders)	, ----do----	PM	16	No.	7010.85	112173.60
5	PM of crankshaft, crank case and connecting rods.	Ensure PTW & Isolation, Check the bearings of connecting rod and crank shaft for wear and tear. Check the bearings clearances. Check the crank case for any abnormalities and repair. If require replace the damage bearings and restore the system back. Clean the area after completion of work	PM	10	No.	8397.02	83970.20
6	Inspection of all bolts and nut of one air compressor.	Ensure PTW & Isolation, check for the looseness and cracking of all bolts and nuts, Rectify/replace/retighten the cylinder nuts, foundation bolts, crosshead bolts, cap nuts etc. Clean all bolts nuts thoroughly by applying lubricate with suitable grease. Clean the area after completion of work	PM	48	No.	729.77	35028.96
7	Cleaning of air suction filter of one air compressor (Two numbers)	Ensure PTW & Isolation, Dismantle, clean the filter. Replace if necessary. Box-up. Clean the area after completion of work	PM	96	No.	686.70	65923.20

8	Cleaning or replacement of lub oil filters of one air compressor (three numbers)	Ensure PTW & Isolation, Dismantle, clean the filter with petrol or replace if necessary. Box-up. Clean the area after completion of work	PM	48	No.	748.60	35932.80
9	PM of crosshead shoe and Piston rod nut	Ensure PTW & Isolation, check crosshead shoe for any damages, replace if required. Check the clearance of crosshead shoe as per the design value correct if required. Check pisotn rod lock nut for any looseness. Check gudgeon pins clearances & conditions. check all man hole gasket for any oil leakage replace if require. Check oil scrapper for oil leakages replace if require. Resotore the system back. Clean the area after completion of work	PM	48	No.	2717.18	130424.64
10	Replacement of oil scrapper ring	Ensure PTW & Isolation, Remove the side cover and open the oil scrapper assy. Check for wear and tear of oil scrapper if require replace and reassemble. Clean the area after completion of work	BD	4	No.	1365.31	5461.24
11	Replacement of damaged piston ring /wear ring of any one LP/HP cylinder.	Ensure PTW & Isolation, Remove the end cover, remove the piston and replace the damage piston and wear ring. Reassy. Clean the area after completion of work	BD	8	No.	5239.67	41917.36
12	Replacement of plummer block and bearing	Ensure PTW & Isolation, Decouple the coupling remove the damaged bearing and plummer block by new bearing/plummer block and couple the coupling after checking the alignment. Clean the area after completion of work	BD	2	No.	12646.66	25293.32
13	Replacement of Tyre Coupling.	Ensure PTW & Isolation, Decouple the coupling. Check the condition of tyre coupling if require replace it. Align and restore the system. Clean the area after completion of work	BD	2	No.	3111.06	6222.12
14	Replacement of HP Cylinder/Inner cover	Ensure PTW & Isolation, Remove the outer cover, remover water and air line connection, remove the piston, remove the damaged cylinder and replace by new cylinder/Inner cover and reassemble back. Clean the area after completion of work	BD	2	No.	10274.77	20549.54
15	Replacement of LP Cylinder/Inner cover.	, --do--	BD	2	No.	10274.77	20549.54
16	Replacement of HP/LP end cover.	Ensure PTW & Isolation, Remove water and air line connection, remove the outer cover, check the condition of gasket if require replace. Assemble new outer cover and box up . Clean the area after completion of work	BD	4	No.	2717.18	10868.72

17	Replacement of oil pump	Ensure PTW & Isolation, Remove the old oil pump and replace by new one. Clean the area after completion of work	BD	1	No.	1411.08	1411.08
18	Overhauling of Lub-oil pump.	Ensure PTW & Isolation, Dismantle the pump. Inspect gear and bearings condition, Repair/replace if required. Clean the area after completion of work	BD	1	No.	1472.98	1472.98
19	Replacement of lub oil pump oil seal.	Ensure PTW & Isolation, Open the end cover, remove the damage oil seal and fit new oil seal and box up. Clean the area after completion of work	BD	8	No.	740.52	5924.16
20	Attending Intercooler / after cooler tube leakage.	Ensure PTW & Isolation, Remove pipe connection. Open the jacket. Check for any tube leakage, plug the leaking tube and box-up. Clean the area after completion of work	BD	6	No.	6821.50	40929.00
21	Replacement of inter cooler/after cooler tube bundle assembly.	Ensure PTW & Isolation, take out the I/c tube bundle outside replace by new tube bundle assy. Check for any leakage by doing hydrotest before box-up. Restore the system. Clean the area after completion of work	BD	4	No.	6829.56	27318.24
22	Replacement of crank case top cover gasket.	Ensure PTW & Isolation, Remove the damaged gasket and replace with new and tighten properly all the bolts. Clean the area after completion of work	BD	4	No.	2757.55	11030.20
23	Replacement of oil pump gasket.	, -- do --	BD	4	No.	1384.15	5536.60
24	Replacement of air bottle gasket (of one flange)	Ensure PTW & Isolation, Remove the damaged gasket and replace with new and tighten properly all the bolts. Clean the area after completion of work	BD	12	No.	2709.08	32508.96
25	Replacement of one-way clutch assy.	Ensure PTW & Isolation, Remove the lub oil pump. Replace the damage one-way clutch assy by new and restore the system. Clean the area after completion of work	BD	12	No.	713.61	8563.32
26	Replacement of all flange gasket of each 3-way/ 4-way pneumatic valve of air drier.	Ensure PTW & Isolation, Open the flange remove the old gasket and close the flange. Clean the area after completion of work	BD	4	No.	2054.71	8218.84
27	Replacement of 3 way/4-way pneumatic valve of air drier (Any one number)	Ensure PTW & Isolation, Remove the old valve, erect new valve replace old gasket and box-up. Clean the area after completion of work	BD	2	No.	2725.24	5450.48
28	Servicing of 3 way/ 4way pneumatice valves of air drier	Ensure PTW & Isolation, Dismantle the valve, check for wear/damage parts replace if required assemble back and restore with new gasket. Clean the area after completion of work	PM	20	No.	4050.19	81003.80

29	oil top up in each compressor.	Ensure PTW & Isolation, check the oil level if below the normal level fill the oil till normal level reaches in presence of Turbine operator. Clean the area after completion of work	PM	60	No.	506.96	30417.60
30	Replacement of old oil of one compressor oil qty. 80 litres.	Ensure PTW & Isolation, Drain the old oil in empty barrel. Clean the crank case and refill with new oil. Clean the area after completion of work	BD	2	No.	4063.67	8127.34
31	Replacement of 1/2" and 1" damage isolating valve of air/water line.	Ensure PTW & Isolation, replace damage valve by new valve and restore. Clean the area after completion of work	BD	4	No.	686.70	2746.80
32	Attending of unloading air line leakage. (6mm and 10mm copper tube line with fittings of one compressor.	Ensure PTW & Isolation, check for any leakage and attend if required replace the fittings and copper tube. Clean the area after completion of work	BD	4	No.	1056.96	4227.84
33	Attending of 1/'2" air trap problem.	Ensure PTW & Isolation, remove trap dismantle the trap check for chocking and damage parts, repair and restore Clean the area after completion of work	BD	5	No.	686.70	3433.50
34	Air receiver/air dryer manhole gasket replacement.	Ensure PTW & Isolation, Open the manhole remove old gasket and replace by new gasket and close the manhole. Clean the area after completion of work	BD	2	No.	1013.89	2027.78
35	Inspection of Air Receiver. (One Number).	Ensure PTW & Isolation, Isolate air receiver, dismantle all pipings, open manhole and throughly clean inside, inspect inside surface for any cracks, dents, corrosion spots and attend, paint if required. Replace manhole gasket and fill water and carryout hydrotest upto 15 kg/cm2 for 30 minutes. Restore the system. Clean the area after completion of work	PM	4	No.	7325.89	29303.56
36	Inspection of LP discharge/ HP suction bottle.	Ensure PTW & Isolation, Dismantle the bottle, remove the deminister and clean it, clean the bottle if required paint with red oxide, replace the gasket and box-up. Clean the area after completion of work	PM	8	No.	4147.36	33178.88
37	Replacement of air drier alumina of air dryer (Two towers per air dryer).	Ensure PTW & Isolation, Open the manholes & drain the alumina. Clean the strainer, tower internal thoroughly. Close the manholes after replacing the gaskets. Charge the new silicagel & take the dryer in to service & ensure leakproof. Clean the area after completion of work	BD	2	No.	9993.63	19987.26
38	Cleaning of air drier after filter element.	Ensure PTW & Isolation, Dismantle, clean the filter. Replace if necessary. Box-up. Clean the area after completion of work	BD	4	No.	1021.96	4087.84

39	Inspection and greasing of compressor plumber block bearing.	Ensure PTW & Isolation, Open the top cover of the plumber block, inspect the bearing, replace or rectify the bearing for any abnormalities and grease the bearing. Check the pedestal fasteners tightness. Clean the area after completion of work	PM	24	No.	1376.08	33025.92
40	General cleaning of compressor	Ensure PTW & Isolation, thoroughly clean the compressor and intercooler as per the instruction of engineer incharge Clean the area after completion of work	PM	24	No.	1030.05	24721.20
41	Alignment of compressor	Ensure PTW & Isolation, Decople the compressor with motor for electrical work, align and couple after completion of Elect. Work. Clean the area after completion of work	BD	4	No.	2011.64	8046.56
42	Air compressor suction filter cover holding bolts replacements.	Ensure PTW & Isolation, Remove the shear off bolt by cutting, do drill (if required) & replace it by new one. Clean the area after completion of work	BD	8	No.	1083.88	8671.04
43	Venting of the oil line of the air compressor	Ensure PTW & Isolation, Open the union joints (if required open the crank case top cover). Crank the oil pump till all the air is released. Then restore the system with new gasket. Ensure healthy trial. Clean the area after completion of work	BD	4	No.	2011.64	8046.56
44	Air compressor oil cooler servicing	Ensure PTW & Isolation, Isolate the cooler. Drain oil & water. Collect the oil in the container. Clean the shell & tubes thoroughly. Hydro test the cooler & inspect for any leakage. If required plug the leaking tube & restore the cooler. Check the oil level & top up after charging. Clean the area after completion of work	BD	4	No.	3170.26	12681.04
45	Air compressor crank shaft replacement	Ensure PTW & Isolation, remove motor, decouple it, remove plummer block bearing & remove the flywheel. Remove all the bearings of crank shaft & big end bearings. Assemble in reverse order after noting down all the clearance readings. Align the compressor with motor. Couple it. Clean the area after completion of work	BD	1	No.	24649.08	24649.08
46	Air compressor fly wheel tightness checking	Ensure PTW & Isolation, Remove the safety guard, check the abnormalites, if any. Check the checknut and key of fly wheel. If required replace the checknut and key, by decoupling and removing the fly wheeel and plummer block. Restore the system. Clean the area after completion of work	PM	16	No.	1995.51	31928.16

47	Compressor cross head guide replacement	Ensure PTW & Isolation, Remove cylinder head & piston. Remove gudgeon pin, remove the cross-head guide. Assemble these in reverse order after noting down all the clearances. Clean the area after completion of work	BD	4	No.	8057.33	32229.32
48	Servicing of Air compressor discharge NRV	Ensure PTW & Isolation, remove both valve assemblies, dismantle the valves, Inspect & clean the parts. If required lap/replace the parts. Assemble the valves & box up the NRV. Clean the area after completion of work	PM	48	No.	2701.02	129648.96
							2049747.06

ANNEXURE F1

PLATE TYPE HEAT EXCHANGER

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total estimated cost (in Rs)
1	Cleaning of plate type heat exchanger. (TOTAL NUMBER OF PLATES IS 351.)	Ensure PTW & Isolation, Ensure isolation of primary and secondary water circuit. Thoroughly clean the equipment. Record initial distance of end plates at three location top, bottom and middle. Gradually loosen the tie bolts 10 Nos. sequentially and clean all plates thoroughly. Inspect for cracks/ damages of plates and gaskets, replace if required. Assemble all plates carefully and retighten the bolts sequentially till to achieve intial end plates reading. Lubricate the tie bolts with anticorrosive additives. Restore the system. Clean the area after completion of work	PM	12	No.	23819.50	285834.00
2	Manhole leakage arresting (one Number)	Ensure PTW & Isolation, Open the manhole, clean the water path replace the damaged gasket with new gasket and restore. Clean the area after completion of work	BD	4	No.	1357.25	5429.00
3	Back washing of PHE	Ensure PTW & Isolation, Open the discharge side ACW and CCW manhole and flush the PHE 3 to 4 times in presence of Turbine operator. Close the manhole after replacement of the gasket and box-up. Clean the area after completion of work	PM	36	No.	2682.19	96558.84
4	PHE online Acid Cleaning	Ensure PTW & Isolation, All necessary arrangement installation and removal for acid cleaning of PHE. Online cleaning as per E-IC and flushing of PHE after completion of online acid cleaning. Clean the area after completion of work	PM	1	No.	15934.30	15934.30

5	Servicing of butterfly valves from 300-450 NB	Ensure PTW & Isolation. Dismantle valve. Clean the internals. inspect and if required change the seal ring. Replace the gland packing/ O-ring. Assemble the valve and check for any leakage. position the valve after replacement of flange gasket and Greasing of Gear box. Ensure no leakages. Clean the area after completion of work.	BD	3	No	8450.86	25352.58
6	Greasing of Butterfly valve Gearbox	Ensure PTW & Isolation, Remove gear box cover. Remove old grease. Put new grease. Tighten the bolt. Clean the area after completion of work	PM	25	No	713.61	17840.25
7	Replacement of Butterfly valve from 300-450 NB	Ensure PTW & Isolation, Remove the valve. Clean the flange surface. Change the gasket with New gasket. Fix new valve. Tighten the bolt. Clean the area after completion of work	BD	3	No	5418.20	16254.60
							463203.57

ANNEXURE G1

PIPING

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total estimated cost (in Rs)
1	Welding of CS / SS piping upto 100 mm dia and max thickness 11mm.	Ensure PTW & Isolation, Removing of insulation. Cut the joint, fit -up properly and welding. Apply insulation. Clean the area after completion of work	BD	24	Per joint	2679.71	64313.04
2	-- do -- > 100mm & upto 200mm	, -- do --	BD	2	Per joint	4353.47	8706.94
3	-- do -- > 200 mm & upto 400mm.	, -- do --	BD	10	Per joint	5756.67	57566.70
4	Welding of ACW water line upto 100 mm.	Ensure PTW & Isolation, Cut the joint, proper edge preparation, fit-up making and welding. Clean the area after completion of work	BD	6	Per joint	1457.68	8746.08
5	-- do -- >100mm & upto 200mm.	, -- do --	BD	24	Per joint	2995.53	71892.72
6	-- do -- >200mm & upto 300mm.	, -- do --	BD	4	Per joint	3483.81	13935.24
7	Attending flange/threaded joint leakage in air/oil/water/steam line of 100 NB and below size.	Ensure PTW & Isolation, Check the flange/threaded connection for any leakage. Remove insulation. Replace the gasket/tighten it with teflon tape if required. Attend and restore back applying insulation. Clean the area after completion of work	BD	8	Per joint	783.86	6270.88

8	Attending leakages in SS pipe line upto 50 NB.	Ensure PTW & Isolation, Cut the pipe line at the leakage point. Insert spool piece if required. Fit up the joint and weld properly by argon purging. Clean the area after completion of work	BD	15	Per joint	1492.87	22393.05
9	Attending flange leakage of air/oil/water/steam line 100NB to 300NB.	Ensure PTW & Isolation, Remove insulation. Open the flange replace the old gasket by new gasket and close the flange. Restore with insulation. Clean the area after completion of work	BD	15	No.	1535.39	23030.85
10	Scaffolding upto 7 mtrs. Height for attending valve, pipeline leakges. (size max7mtrx2mtrwidth)	Ensure PTW & Isolation, Shift the scaffolding material at site make the scaffolding ensuring the safety aspect and remove after completion of job. Clean the area after completion of work	BD	12	No.	4130.37	49564.44
11	Scaffolding upto Height of 4 mts. & below (Size 4 x 2 mtr) for attending valve, pipeline leakges.	Ensure PTW & Isolation, Shift the scaffolding material at site make the scaffolding ensuring the safety aspect and remove after completion of job. Clean the area after completion of work	BD	10	No.	2478.21	24782.10
12	Fabrication of piping upto 2" per/Mtr. length	Ensure PTW & Isolation, collect the pipe, bend/cut and fit /weld into required shape Clean the area after completion of work	BD	24	mtr	1758.94	42214.56
13	Cut the pipe with hacksaw upto 2"	Ensure PTW & Isolation, Cut the pipe into two pieces or cut the pipe from valve /equipment. Clean the area after completion of work	BD	20	No.	1003.41	20068.20
14	Painting of pipe line up to 4" per/mtr length	Ensure PTW & Isolation, Clean the pipe thoroughly with wirebrush & remove all loose dust/dirt and apply paint Clean the area after completion of work	BD	30	mtr	510.30	15309.00
15	Painting of pipe line above 4"-10" per/mtr length	Ensure PTW & Isolation, Clean the pipe tharoughly with wire brush &remove all loose dust/dirt and apply paint Clean the area after completion of work	BD	30	mtr	1007.17	30215.10
16	Painting of Equipment surface per squire meter area	Ensure PTW & Isolation, Clean the surface tharoughly with wire brush &remove all loose dust/dirt and apply paint Clean the area after completion of work	BD	30	sq. mtr.	510.30	15309.00

17	Remove insulation & cladding sheet from pipe line /mtr. length and apply back upto 4"	Ensure PTW & Isolation, remove insulation as per the instruction of Enginner and apply after completion of work. Clean the area after completion of work	BD	2	mtr	496.86	993.72
18	Remove insulation & cladding sheet from pipe line /mtr. length and apply back above 4"upto 12"	Ensure PTW & Isolation, remove insulation as per the instruction of Enginner and apply after completion of work. Clean the area after completion of work	BD	10	mtr	989.68	9896.80
19	Inspection of steam/water/condensate/drai n line hangers (one no.)	Ensure PTW & Isolation, Inspect the hanger as per the instruction of engineer, clean and adjust the same if required. Replace the parts if required. Note down the spring values. Clean the area after completion of work	BD	1	No.	2026.44	2026.44
20	Attending of any pin hole leakage on pipe line & valve body.	Ensure PTW & Isolation, Remove the insulation & identify the leakage. Ensure isolation of the line. Attend the punctured area by welding or applying putty as directed by the engineer in charge. Restore the insulation & ensure no leakages after charging. Clean the area after completion of work	BD	5	No.	1815.03	9075.15
21	MS/HRH line strainer Inspection	Ensure PTW & Isolation, Removal of insulation, Cut the drain pipe, opening of bottom flange of MS/HRH strainer, Removal of MS/HRH strainer, Checking, Cleaning & DP Test of the strainer and its parts if required rectify, replace it, box-up of the strainer, apply insulation to the strainer. Clean the area after completion of work	BD	1	No.	22864.79	22864.79
							519174.80

ANNEXURE H1

VALVES

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total estimated cost (in Rs)
1	Servicing of gate/globe valves of 150mm to 450 mm	Ensure PTW & Isolation, remove insulation if required. Dismantle, check seat/disc/stem and other internal parts. Repair the seat, disc/plug, bonnet seat by build up, grind and lap them. Check surface for blue match. Inspect thrust bearing, yoke bush of yoke, spindle and replace the damaged parts. Replace sealing ring, bonnet, gasket & gland packing etc. assemble. adjust gland hot tight the valve bonnet. ensure no leakage. Apply insulation back. Clean the area after completion of work	BD	6	No.	3549.76	21298.56
2	Servicing of gate/globe valves of 15mm to 125 mm	, -- do --	BD	25	No.	1988.33	49708.25
3	Servicing of non-return valve above 300NB upto 400NB	Ensure PTW & Isolation, Remove the insulation if necessary, open flange, check seat/disc/other internal parts. Repair the seat/disc by build up, grind and lap them. Check surface for blue match, replace gasket if necessary, box-up. Apply insulation back. Clean the area after completion of work	BD	1	No.	4614.21	4614.21
4	---DO-- NB upto 250	, --do---	BD	2	No.	2485.33	4970.66
5	Servicing of steam traps/ strainers	Ensure PTW & Isolation, Open, clean repair if required and box-up. Clean the area after completion of work	BD	4	NO.	689.38	2757.52
6	Servicing of Ball valves / globe valves of instrument air/water line NB 15 to 100 mm.	Ensure PTW & Isolation, seat/disc repalcement/ valve repalcement/socket tightening to attend leakage. Clean the area after completion of work	BD	5	NO.	713.61	3568.05
7	Replacement of gland packings in valves. Upto NB 25mm (Gate and Globe valve)	Ensure PTW & Isolation, Remove the gland follower. Remove the damage gland packing. Replace new. Box-up. Clean the area after completion of work	BD	1000	No.	504.52	504520.00
8	----do---- above 25mm upto 100NB	, --do---	BD	100	No.	719.00	71900.00
9	-- do -- NB 150 to 400 mm	, --do---	BD	50	No.	719.00	35950.00
10	Replacement of gate/glbe/NRV valves upto 50mm.	Ensure PTW & Isolation, Remove the damaged valve by cutting and insert the new valve. Weld the valve. Apply the insulation. Clean the area after completion of work	BD	15	No.	3146.54	47198.10

11	Replacement of gate / globe / NRV valves 65 to 150 mm.	, --do--	BD	5	No.	3434.26	17171.30
12	Replacement of gate / globe / NRV valves 200 to 450 mm.	, --do--	BD	1	No.	6948.45	6948.45
13	Replacement of flanged valve size 100mm and below	Ensure PTW & Isolation, Ensure the isolation of the system. Replace the defective valve with spare valve with new gasket and restore. Clean the area after completion of work	BD	6	No.	681.32	4087.92
14	Replacement of flanged valve size 150NB to 300NB.	Ensure PTW & Isolation, Ensure the isolation of the system. Replace the defective valve with spare valve with new gasket and restore. Clean the area after completion of work	BD	4	No.	1528.92	6115.68
15	Servicing of pneumatic / electrical control valves upto NB 100 mm.	Ensure PTW & Isolation, Ensure instrument air disconnection. Remove of actuator and insulation. Dismantle valve & check for abnormalities. Replace the seat, disc/plug, bonnet gasket by new spare if found damaged. Check surface for blue match. Inspect yoke bush, hand lever attachment, spindle and replace/repair the damaged parts. Restore back. Clean the area after completion of work.	BD	1	No.	2782.41	2782.41
16	-- do --- NB 150mm to 450mm	, --do---	BD	1	No.	4619.65	4619.65
17	Replacement of bonet /flange gaskets for valves upto NB 100mm (Gate/Globe/Pneumatic valve)	Ensure PTW & Isolation, Remove the damagegasket. Replace with new gasket. Tighten properly. Clean the area after completion of work.	BD	25	No.	681.32	17033.00
18	--do --' NB 150 to 300 mm	, --do---	BD	5	No.	1528.92	7644.60
19	Flange gasket replacement of gate/globe valve of 100 to 300NB in air/water line	Ensure PTW & Isolation, Clean the valve open the flanges replace old gasket by new gasket. Refit the flanges. Clean the area after completion of work.	BD	5	No.	1528.92	7644.60
20	Flange gasket replacement of gate/globe valve of below 100 NB air/water line.	Ensure PTW & Isolation, Clean the valve open the flanges replace old gasket by new gasket. Refit the flanges. Clean the area after completion of work.	BD	5	No.	1008.53	5042.65
21	Gland Tightening of valves (Globe/Gate/Pneumatic) of size 300to 450 NB.	Ensure PTW & Isolation, Clean the gland follower, spindle, gland bolts & nuts. Tighten the glands slowly to arrest small leakages. Clean the area after completion of work.	BD	10	No.	94.59	945.90

22	Gland Tightening of valves (Globe/Gate/Pneumatic) of size 200 to 250NB..	, --do---	BD	40	No.	178.39	7135.60
23	Gland Tightening of valves (Globe/Gate/Pneumatic) of size 65 to 150 NB..	, --do---	BD	80	No.	173.02	13841.60
24	Gland Tightening of valves (Globe/Gate/Pneumatic) of size upto 50 NB.	, --do---	BD	50	No.	173.02	8651.00
25	PM of LP-HEATER-1 and connected valves (no. of valves below 2"-15nos.above 2.5"-2nos) during plant in operation	Ensure PTW & Isolation, clean all the valves with cleaning agents, check for any leakage &attend by tighteningthe gland or bonnet bolts, apply anticorrosive spray to the valve stem and gland. Clean the associated pipe lines & heater shell externals. Free the valve if any in defect. Ensure more care & do not operate any valves. Clean the area after completion of work	PM	3	No.	1481.05	4443.15
26	PM of LP-HEATER-2 and connected valves (no. of valves below 2"-39nos., above 2"-5nos) during plant in operation	, ---do---	PM	3	No.	1481.05	4443.15
27	PM of LP-HEATER-3 and connected valves (no. of valves below 2"-33nos., above 2"-4nos&above 8"-2nos)	, ---do---	PM	3	No.	1481.05	4443.15
28	PM of HP HEATER-5 and connected valves (no. of valves below 2"-66nos., above 2"-4nos&above 8"-4nos) during plant in operation	, ---do---	PM	3	No.	2143.52	6430.56
29	PM of HP-HEATER-6 and connected valves (no. of valves below 2"-68nos., above 2"-4nos, &above8"-4) during plant in operation	, ---do---	PM	3	No.	2143.52	6430.56
30	PM of PRDS STN. and connected valves (no. of valves below 2"-83nos., above 2"-12nos&above 8"-6) during plant in operation	Ensure PTW & Isolation, clean all the valves with cleaning agents, check for any leakage &attend by tighteningthe gland or bonnet bolts, apply anticorrosive spray to the valve stem and gland. Clean the associated pipe lines externals. Ensure more care & do not operate any valves Clean the area after completion of work	PM	4	No.	2806.00	11224.00
31	PM of Feed control and connected valves no. of valves (below 2"-29 nos & above 8"-15) during plant in operation	, ---do---	PM	6	No.	1481.05	8886.30

32	PM of Deaerator and connected valves (no. of valves below 2"-121nos., above 2"-26nos & above 8"-15) during plant in operation	Ensure PTW & Isolation, clean all the valves with cleaning agents, check for any leakage & attend by tighteningthe gland or bonnet bolts, apply anticorrosive spray to the valve stem and gland. Free the valve if any in defect, Clean the associated pipe lines, deaeration tank & FST shell externals. Ensure more care & do not operate any valves. Clean the area after completion of work	PM	6	No.	2806.00	16836.00
33	HP flash tank Connected all valves inspection & cleaning	Ensure PTW & Isolation, clean all the valves with cleaning agents, check for any leakage & attend by tightening the gland or bonnet bolts, apply anticorrosive spray to the valve stem and gland. Free the valve if any in defect, Clean the associated pipe lines & shell externals. Ensure more care & do not operate any valves Clean the area after completion of work	PM	3	No.	1153.85	3461.55
34	LP flash tank Connected all valves inspection & cleaning	, ---do---	PM	3	No.	1153.85	3461.55
35	Air compressor ACW valves inspection & cleaning	Ensure PTW & Isolation, clean all the valves with cleaning agents, check for any leakage & attend by tightening the gland or bonnet bolts, apply anticorrosive spray to the valve stem and gland. Clean the associated pipe lines externals. Ensure more care & do not operate any valves Clean the area after completion of work	PM	3	No.	1153.85	3461.55
36	Air dryer valves inspection & cleaning	Ensure PTW & Isolation, clean all the valves with cleaning agents, check for any leakage &attend by tighteningthe gland or bonnet bolts, apply anticorrosive spray to the valve stem and gland. Clean the associated pipe lines & tower externals. Ensure more care & do not operate any valves Clean the area after completion of work	PM	3	No.	1153.85	3461.55
37	MS line all valves inspection & cleaning	Ensure PTW & Isolation, clean all the valves with cleaning agents, check for any leakage &attend by tightening the gland or bonnet bolts, apply anticorrosive spray to the valve stem and gland. Clean the associated pipe lines externals. Ensure more care & do not operate any valves Clean the area after completion of work	PM	4	No.	1153.85	4615.40
38	HRH & CRH line all valves inspection & cleaning	, ---do---	PM	4	No.	1153.85	4615.40

39	BFP discharge & suction line all valves inspection & cleaning	, ---do---	PM	4	No.	1153.85	4615.40
40	CEP discharge & suction line all valves inspection & cleaning	, ---do---	PM	4	No.	1153.85	4615.40
41	QC/SC NRV (All Extractions) inspection & Cleaning	, ---do---	PM	4	No.	1153.85	4615.40
42	Remove insulation & cladding sheet from valve upto 4"size and apply back	Ensure PTW & Isolation, remove insulation as per the instruction of Enginner and apply after completion of work. Clean the area after completion of work	BD	30	No.	167.64	5029.20
43	Remove insulation& cladding sheet from valve above 4"size and apply back	Ensure PTW & Isolation, remove insulation as per the instruction of Enginner and apply after completion of work. Clean the area after completion of work	BD	20	No.	167.64	3352.80
44	Servicing of safety relief valve upto 1"	Ensure PTW & Isolation, Remove the insulation, if any. Dismantle the valve, inspect for any damage & rctify by lapping or replacing the parts. Restore the insulation. Float the safety valve after charging. Clean the area after completion of work	BD	2	No.	697.46	1394.92
45	servicing of safety valve above 1" & upto 4" size	, -do-	BD	4	No.	1770.58	7082.32
46	servicing of safety valve above4" & upto 10" size	, -do-	BD	2	No.	5157.70	10315.40
47	Pressure setting of safety valve in air/water/steam line of any size	Ensure PTW & Isolation, Remove the hand lever & cover if required. Open the lock nut & adjust the nut to the required pressure as per the instruction of the engineer in charge. Restore it. Clean the area after completion of work	BD	4	No.	502.10	2008.40
48	NRV top bonnet tightening up to 20" size	Ensure PTW & Isolation, Remove the insulation, clean the bonnet nuts and surface and tight the nuts sequentially as per the instruction of engineer. Restore the insulation. Clean the area after completion of work	BD	4	No.	424.48	1697.92
49	Removal and refixing of pneumatic/electrical actuator upto 100NB size	Ensure PTW & Isolation, Remove the actuators in case of respective dept. are not able to remove the same and refix the same as per the instruction of engineer incharge. Clean the area after completion of work	BD	4	No.	675.94	2703.76
50	---do---- above 100NB upto 200NB	, ----do----	BD	2	No.	767.14	1534.28
51	---do---- above 200NB	, ----do----	BD	1	No.	767.14	767.14

52	operation of valves as per the instruction of operation dept.	Ensure PTW & Isolation, Open or close the valve as per the instruction of the operation engr/operator. Clean the area after completion of work	BD	600	No.	81.79	49074.00
53	Replacement of threaded valves upto 2" size.	Ensure PTW & Isolation, Replace the old valve by a new valve applying teflon tape on the threaded ends. Clean the area after completion of work	BD	10	No.	167.64	1676.40
54	Any valve freeness checking.	Ensure PTW & Isolation, Open/Close the valve as per the instruction of IEC. Lubricate the stem nut & spindle. Loose/tight the gland follower if required. Clean the area after completion of work	BD	100	No.	167.64	16764.00
55	Flap type NRV servicing (as in GSC fan, Oil vapour exhaust fan, etc.)	Ensure PTW & Isolation, Remove the NRV & clean the flange, disc & seat. Check for passing. If requred replace it. Restore with new gasket/O-rings Clean the area after completion of work	BD	8	No.	702.84	5622.72
56	Servicing of BD/BPE valve of HP-Bypass spray system.	Ensure PTW & Isolation, Ensure the isolation. Decouple the valve spndle. Dismantle the valve with care. Inspect the stem & seat. If required, weld the eroded area. If required replace or lapping to be done. Check the satisfactory contact & assemble it. Clean the area after completion of work. Take trial successfully.	BD	2	No.	10659.89	21319.78
57	Servicing HP-Bypass Main Valve	Ensure PTW & Isolation, Ensure the isolation. Decouple the valve spndle. Dismantle the valve with care. Inspect the stem & seat. If required replace or lapping to be done. Check the satisfactory contact & assemble it. Clean the area after completion of work. Take trial successfully.	BD	1	No.	10659.89	10659.89
58	Replacement of HP bypass spray valve.	Ensure PTW & Isolation, Remove the damaged valve by cutting and insert the new valve.Edge prepairation, welding and heattreatment (if required) the valve as per procedure instructed by EIC. Apply the insulation. Clean the area after completion of work.	BD	1	No.	8866.24	8866.24
							1106078.95

ANNEXURE I1

ONLINE TUBE CLEANING

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total estimated cost (in Rs)
1	Overhauling of centrifugal pump	Ensure PTW & Isolation, Decouple and take out the pump to maintenance area. Dismantle the pump completely, check for any wear/tear/damages of parts such as shaft, sleeve, bearings, impeller etc. repair/replace if required. Always use graphite compound for assembly. Assemble the pump, install, align and couple. Clean the area after completion of work. Take the trial run ensure smooth operation.	BD	2	No.	5504.34	11008.68
2	PM of OLTC pump	Ensure PTW & Isolation, thoroughly clean the pump, pump base bolts, coupling bolts etc check for any wear/tear/damages of above and repair/replace if required. Check for any oil and water leakage, arrest the same. Clean the bowlchamber, check for any abnormalities of ball bowl chamber and attend if required. Align the pump if required and restore the system. Clean the area after completion of work	PM	24	No.	2768.32	66439.68
3	Attending gland leakages of OLTC pump.	Ensure PTW & Isolation, Remove the gland follower and replace the old packing by new packing. Clean the area after completion of work	BD	2	No.	504.52	1009.04
4	Oil top in OLTC Pump	Ensure PTW & Isolation, Top up the oil in the pump to the required level. Clean the area after completion of work	PM	16	No.	169.25	2708.00
5	OLTC ball separator screen inspection. Each pass has one separator screen	Ensure PTW & Isolation, Open the man hole, inspect the screen for any chocking & abnormalities; rectify it. clean the screen & box up with new gasket. Clean the area after completion of work	PM	8	No.	4050.19	32401.52
6	Alignment of OLTC Pump	Ensure PTW & Isolation, Decouple the pump, check the alignment, if require correction, couple the pump, take trial. Clean the area after completion of work	BD	4	No.	2043.95	8175.80

7	Gland tightening of pump.	Adjust the gland by tightening to minimise leakage Clean the area after completion of work	BD	20	NO.	83.82	1676.40
							123419.12

ANNEXURE J1							
GSC FAN							
Item No.	**Item of Work**	**Scope of work**	**Nature of Mntc.**	**Qty for 2yr**	**Unit**	**Estimated Unit cost (in Rs)**	**Total estimated cost (in Rs)**
1	PM of GSC exhaust fan.	Ensure PTW & Isolation, thoroughly clean the fan, plummer blocks, base bolts, coupling bolts etc. Check for cracks/damages of base bolts, coupling bush and other all fastners, replace/repair if required. Check the bearing and plummer block condition, replace if required. Clean the bearings and lubricate with suitable grade of grease. If required remove the suction & discharge silencer, clean it properly. If required replace it & restore with new insulation. Open the fan end cover and check the lock nut of impeller for looseness, tighten if required. Check the impeller and casing for any cracks damages repair if required. Box-up align the fan with motor and restore. Clean the area after completion of work	PM	24	No	2717.18	65212.32
2	Maintenance of impeller	Ensure PTW & Isolation, Open the casing cover. Check for looseness of impeller, tighten/adjust the clearance with casing and restore. Clean the area after completion of work	BD	1	No.	2701.02	2701.02
3	Replacement of bearings/plummer block of GSC fan.	Ensure PTW & Isolation, Decouple and remove the couplings. Open the plummer block, replace the bearings/plummer block with new brg/plummer block. Grease the brgs. Align the machine and restore. Clean the area after completion of work	BD	1	No.	2760.25	2760.25

4	Alignment of GSC FAN to Motor.-One No.	Ensure PTW & Isolation, Decouple the equipment & carry out the alignment as per the instruction of Engineer to meet the required Drg. Values. Then couple it. Clean the area after completion of work. Take healthy trial of the fan.	PM	4	No.	1013.89	4055.56
5	Replacement of Bearing grease for any one bearing.	Ensure PTW & Isolation, Dismental the bearing Check the bearing and plummer block condition, replace if required. Clean the bearings and lubricate with suitable grade of grease. Clean the area after completion of work	BD	2	No.	593.08	1186.16
							75915.31

ANNEXURE K1

VACUUM PUMP

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total estimated cost (in Rs)
1	PM of vacuum pump	Ensure PTW & Isolation, thoroughly clean the pump base, bolts, coupling bolts, frame, body, cooler and connected fittings. Check for looseness/crackness of foundation bolts, base bolts, coupling bolts etc retight/replace if required. Check for any air/water leakage attend if required. Check the bearing grease refill if required. Check the alignment if required correct the same and restore the system. Clean the area after completion of work	PM	24	No.	3487.30	83695.20
2	Overhauling of Vacuum pump	Ensure PTW & Isolation, Decouple the pump/flanges. Remove the bearing housing take out the pump, inspect the rotor and casing for any abnromalities. Replace the gasket/'O' ring/valve plate/gland packing/worn out parts/etc. if required. Assemble, Clean the area after completion of work and take trial run.	BD	3	No.	16277.29	48831.87
3	Maintenanace of drive / non-drive end bearing	Ensure PTW & Isolation, Dismantle the bearing housing, clean the bearing, if require replace it. Assemble as per requirement. Re-grease and box-up. Clean the area after completion of work	BD	1	No	5129.31	5129.31

4	Replacement of stuffing box packing.	Ensure PTW & Isolation, remove gland follower, loosen the screws, push loosen the screws, push back the lantern ring. Remove old packing. Carefully clean the packing area. Check the lantern ring and shaft. Seen for wear & damage. It should be replaced if necessary. Insert new packing ring. Refit the lantern ring and remaining two packing rings. Push the gland ringsand follower alongwith shaft into the housing and fit as per the requirement. Clean the area after completion of work	BD	4	No.	2266.39	9065.56
5	Inter cooler Cleaning, Tube leakage identification and Hydrotest.	Ensure PTW & Isolation, remove cooler end cover, cleaning of tube bundle, hyrotest the tube bundle, identify the tube leakage, plug and restore. Clean the area after completion of work	BD	2	No.	4818.26	9636.52
6	Gland follower tightening.	Attend the gland leakage by tightening as per instruction of I/C. Clean the area after completion of work	BD	13	No.	81.79	1063.27
7	Replacement of tube bundle.	Ensure PTW & Isolation, Remove the end cover. Remove the old tube bundle and insert the new tube bundle. Replace all the gaskets. Clean the area after completion of work	BD	1	No.	2354.99	2354.99
8	Greasing of DE/NDE Bearing	Ensure PTW & Isolation, Check the bearing grease condition. If required remove and refill. Clean the area after completion of work	BD	8	No.	502.93	4023.44
9	Coupling Guard Opening	Ensure PTW & Isolation, open coupling guard, inspect and box-up. Clean the area after completion of work	BD	4	No.	165.60	662.40
							164462.56

ANNEXURE L1							
GENERATOR AND EXCITER							
Item No.	**Item of Work**	**Scope of work**	**Nature of Mntc.**	**Qty for 2yr**	**Unit**	**Estimated Unit cost (in Rs)**	**Total estimated cost (in Rs)**
1	Opening of exciter covers for cleaning.	Ensure PTW & Isolation, Remove the exciter hood. If required remove the air cooler, PMG and main exciter top half. Remove the diode wheel cover. Clean the base, check the gasket for any air leakage from the hood if require replaced and make proper sealing. Clean exciter cooler. After Cleaning of electrical equipment by electrical dept. box-up and check the PMG and main exciter air gap and restore the system to the normal. Clean the area after completion of work	PM	4	No.	13445.85	53783.40
2	Exciter cooler hydrotest (one no.)	Ensure PTW & Isolation, Remove the exciter hood. Ensure water isolation remove the cooler, make the arrangement of hyrotest at 8 kg/sqcm. Clean all tubes by petrol from outside. Check for any leakage replace all the gaskets and restore the system. Clean the area after completion of work	PM	4	No.	5538.43	22153.72
3	Generator cooler hydrotest (one no.)	Ensure PTW & Isolation, Put the dummy in the air path. Isolate the cooler from water side. Open the flange connection & remove cooler. Do necessary arrangement for the hydrotest. Do the hydrotest and check the location of leakage from gasket and tube. Open the water box, remove the old gasket and put the new gasket and box up. Do the hydrotest upto 8 kg/cm2. Paint cooler body from outside. Put the cooler back and normalise. Clean the area after completion of work	PM	10	No.	12586.37	125863.70
4	Hand barring of the turbine for One hour.	Ensure PTW & Isolation, Remove the hand barring top cover from brg. Pedestal-2, Put the lever and do the hand barring. If required replace old gasket of top cover for any leakage. Clean the area after completion of work	BD	10	No.	660.46	6604.60

5	General Cleaning of TG set, its stop & control valves with HP & LP bypass valves	Ensure PTW & Isolation, Remove the dust and oil with cloth from HP/IP turbine, LP turbine, Generator, Exciter, Brg. Pedestal 1,2,3,4 & 5, Clean all fasteners check for any cracks/looseness.Check turbine all keys/lubrite packers/LP turbine girder base washer. Thoroughly clean the actuators from dust, oil etc. Check for any oil leakages, check the coupling for any bolt looseness and attend, check all fastners for any looseness/cracks etc and attend. If require replace the filters. Clean the area after completion of work	PM	96	No.	2454.11	235594.56
6	Generator air cooler air filter cleaning.	Ensure PTW & Isolation, Remove the air filter and install the spare filter, clean the removed filter and keep it as spare. Clean the area after completion of work	PM	48	No.	972.26	46668.48
7	Exciter cooler make up air filter cleaning (four nos.)	Ensure PTW & Isolation, Remove the air filter, clean it by air and install back after cleaning. Clean the area after completion of work	PM	4	No.	568.83	2275.32
8	TG shaft lift setting.	Ensure PTW & Isolation, ensure isolation of complete TG system, after stopping barring gear. Set the dial gauges on the shaft of all bearings. Adjust the lift by setting jacking oil pressure. Finally cover the jacking oil valves and lock. Clean the area after completion of work	BD	3	No.	2657.97	7973.91
9	Inspection of generator during shutdown.	Ensure PTW & Isolation, Open the generator inspection door. Inspect the internals for any fastener’s looseness; tight it if required or for any foreign particles. Apply sealant (M-seal, etc.) if required. Check the functioning of LLD. Check the door sealing. if required replace it applying adhesives. Clean the dust & oil thoroughly. Close the door & apply aluminium foil strips on the door. Clean the area after completion of work	BD	4	No.	2832.91	11331.64

10	LP turbine diaphragm & gasket replacement. -one no.	Ensure PTW & Isolation, Remove the bolts & the diaphragm cage. Check for any leakages as per the instruction of in charge. Replace the diaphragm & gasket. Restore the cage in its position. Clean the area after completion of work	BD	5	No.	2674.10	13370.50
11	LP Turbine rotor inpection during annual shutdown. - per unit / LP Turbine Spare rotor-1 No. positioning & rotation on stand.	Ensure PTW & Isolation, ensure stopping of Barring gear, opening the Diaphragam of LP turbine outer casing, Check the rotor blades by moving the rotor and casing condition as per the instruction of engineer in charge with proper care, box up the Diaphragam with new gasket and lead sheet. Clean the area after completion of work. In case of spare rotor removal of cover, if required shifting / position on stand and as per EIC requirment rotation of rotor with due care to avoid any damage to rotor. After rototion proper covering of rotor as per the instruction of Engineer incharge.	PM	4	No.	3982.92	15931.68
12	Turbine/Generator/exciter bearings Jacking oil hose pipe inspection-one no.	Ensure PTW & Isolation, ensure stopping of Barring gear. Bearing pedestal opening and inspection/replacement of jacking oil hose pipe with proper care. Box up of pedestal, ensure all the relevent checks as per the instruction of Engineer incharge. Box up and normalise the system. Clean the area after completion of work	BD	8	No.	8223.43	65787.44
13	HP-IP front & rear bearing & LP-Rear bearing --400mm Dia (Bearing no.1to3) inspection-one no.	Ensure PTW & Isolation, ensure stopping of Barring gear, opening of pedestal cover and dismantling of bearing, remove top and bottom half of bearing from the position by supporting the shaft by shaft supporting device. inspection of bearing for any damage, carrying out of DP & UT test, Checking (toc/soc) oil clearances. inspection/replacement of jacking oil hose pipe with proper care. Assembly of bearings and pedestal. Check	BD	1	No.	26083.96	26083.96

		the blue contact of bearing, check the loading of bearing, ensure all the relevent checks as per the instruction of Engineer incharge. Box up and normalise the system. Clean the area after completion of work.					
14	Generator Front & Rear Bearing 360mm Dia (Bearing no.4&5) inspection-one no.	Ensure PTW & Isolation, ensure stopping of Barring gear, opening of pedestal cover and dismantling of bearing, remove top and bottom half of bearing from the position by supporting the shaft by shaft supporting device. inspection of bearing for any damage, carrying out of DP & UT test, Checking (toc/soc) oil clearances. inspection/replacement of jacking oil hose pipe with proper care. Assembly of bearings and pedestal. Check the blue contact of bearing, check the loading of bearing, ensure all the relevent checks as per the instruction of Engineer incharge. Box up and normalise the system. Clean the area after completion of work.	BD	1	No.	25631.80	25631.80
15	Exciter Bearing (bearing no.6) inspection-one no.	Ensure PTW & Isolation, ensure stopping of Barring gear, opening of pedestal cover and dismantling of bearing, remove top and bottom half of bearing from the position by supporting the shaft by shaft supporting device. inspection of bearing for any damage, carrying out of DP & UT test, Checking (toc/soc) oil clearances. inspection/replacement of jacking oil hose pipe with proper care. Assembly of bearings and pedestal. Check the blue contact of bearing, check the loading of bearing, ensure all the relevent checks as per the instruction of Engineer incharge. Box up and normalise the system. Clean the area after completion of work	BD	1	No.	22894.06	22894.06

16	Turbine/Generator/Exciter bearing Oil guard/oil catcher Clearance setting (Front & Rear)	Ensure PTW & Isolation, Check the clearance of oil guard/oil catcher. Remove the oil guard/catcher, cleaning and inspection of fins for any damage. If required refinning & resetting and box up. Clean the area after completion of work	BD	4	No.	11626.03	46504.12
17	Servicing of HP/IP stop/control valve	Ensure PTW & Isolation, Removal of Hydraulic actuator and extension piece. Dismentaling of valve, inspect the internals as per E-I/C for any abnormalities, if required repair or replace, seat lapping, check the blue contact and assemble. Mount and couple the actuator and take trial for valve stroke. Clean the area after completion of work	BD	2	No.	41385.20	82770.40
18	Turbine & Generator Bearing pedestal Top Cover removal for work i.e instrument checking, internal cleaning etc	Ensure PTW & Isolation, ensure stopping of Barring gear, Opening of bearing pedestal top cover. inspection & cleaning as per instruction of engineer in charge. Box up of pedestal, ensure all the relevent checks as per the instruction of Engineer incharge. Box up and normalise the system. Clean the area after completion of work	BD	2	No.	9796.43	19592.86
19	HP-IP front & rear bearing & LP-Rear bearing --400mm Dia (Bearing no.1to3) Replacement-one no.	Ensure PTW & Isolation, Removal of Bearing. Shifting of new bearing from warehouse to TG Floor. Checking of bearing dimentions as per instruction of Engineer incharge. Inspection of New bearing for any damage, carrying out of DP & UT test. blue matching of bearing torus with torus plate. positioning of bearing and checking of all the clearences. if required Scaping of bearing to make required clearences and seal bore reading. Check the blue contact of bearing, check the loading of bearing, ensure all the relevent checks as per the instruction of Engineer incharge. Assembly of bearings and pedestal. Box up and normalise the system. Clean the area after completion of work	BD	1	No.	34087.49	34087.49

20	Generator Front & Rear Bearing 360mm Dia (Bearing no.4&5) Replacement-one no.	Ensure PTW & Isolation, Removal of Bearing. Shifting of new bearing from warehouse to TG Floor. Checking of bearing dimentions as per instruction of Engineer incharge. Inspection of New bearing for any damage, carrying out of DP & UT test. blue matching of bearing with pedestal. positioning of bearing and checking of all the clearences. if required Scaping of bearing to make required clearences and seal bore reading. Check the blue contact of bearing, check the loading of bearing, ensure all the relevent checks as per the instruction of Engineer incharge. Assembly of bearings and pedestal. Box up and normalise the system. Clean the area after completion of work	BD	1	No.	33731.79	33731.79
							898635.43

ANNEXURE M1							
HYDRAULIC ACTUATORS							
Item No.	**Item of Work**	**Scope of work**	**Nature of Mntc.**	**Qty for 2yr**	**Unit**	**Estimated Unit cost (in Rs)**	**Total estimated cost (in Rs)**
1	Replacement of servo valve/pilot valve/puppet valve/blocking element/trip valve/solenoid valve/cartridge valve/relief valve/ complete actuator of HP- bypass/LP-Bypass/Turbine control oil system/HPSV/HPCV/IPSV/ IPCV valve actuators. (one no.)	Ensure PTW & Isolation, Replace the servo valve/pilot valve/puppet valve/blocking element/trip valve/solenoid valve/cartridge valve/relief valve/ complete actuator of HP- bypass/LP-Bypass/Turbine control oil system/HPSV/HPCV/IPSV/ IPCV valve actuators with new valve as per instruction of engineer in charge. Clean the area after completion of work	BD	1	No.	9299.63	9299.63
2	Replacment of filter element of HP/IP or LP-Bypass valve actuators. (one filter)	Ensure PTW & Isolation, Replace the filters element with new filter element. Clean the area after completion of work	BD	6	No.	861.05	5166.30
3	Attending oil leakage in the actuator body.	Ensure PTW & Isolation, Check the oil leakage if any from drain plug/ vent plug etc. attend the same by tightening. Clean the area after completion of work	BD	1	No.	183.80	183.80

4	O'ring replacement of HP/IP & LP bypass actuator supply & return oil line.	Ensure PTW & Isolation, ensure isolation of the leaking line, open the flange remove the damaged "O" ring and check for any abnormalities. Replace the old "O" ring with new O-ring and restore the system. Clean the area after completion of work	BD	1	No.	506.96	506.96
5	Overhauling of HP-Bypass BD/BPE valve actuator.	Ensure PTW & Isolation, Decouple the valve spindle. Dismantle the actuator with care. Inspect the piston seal & rod seal. If required replace the seals & assemble it. Take trial successfully. Clean the area after completion of work	BD	1	No.	3302.92	3302.92
6	Overhauling of HP-Bypass valve (main) actuator.	Ensure PTW & Isolation, Decouple the valve spindle. Dismantle the actuator with care. Inspect the piston seal & rod seal. If required replace the seals & assemble it. Take trial successfully. Clean the area after completion of work	BD	1	No.	3302.92	3302.92
7	Overhauling of LP-Bypass stop/control valve actuator	Ensure PTW & Isolation, Decouple the valve spindle. Dismantle the actuator with care. Inspect the piston seal & rod seal. If required replace the seals & assemble it. Take trial successfully. Clean the area after completion of work	BD	1	No.	3378.30	3378.30
							25140.83

ANNEXURE N1

ACW CCW AND SUMP PUMPS

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total estimated cost (in Rs)
1	PM of ACW Pump.	Ensure PTW & Isolation, Decouple the pump. Check the alignment, if required correct the same. Tighten / replace the gland to mimimise gland leakage. Tighten the pump assembly and foundation bolt. Check the condition of Bearing and seal. Grease the pump. Align and couple the pump. Clean the equipment. Clean the area after completion of work. Take successful trial run.	PM	36	No.	3420.03	123121.08
2	PM of CCW Pump.	, -do-	PM	24	No.	3420.03	82080.72
3	Gland tightening of pump.	Adjust the gland by tightening to minimise leakage Clean the area after completion of work	BD	105	No.	89.88	9437.40

4	Greasing in pump.	Ensure PTW & Isolation, Issue grease from warehouse and apply grease with grease gun in bearings. Clean the area after completion of work	BD	1	No.	257.50	257.50
5	Gland replacement of ACW/CCW pump.	Ensure PTW & Isolation, Remove the damage gland and replace with new. Adjust the gland to minimise leakages. Clean the area after completion of work. Take successful trial run.	BD	8	No.	1378.78	11030.24
6	Decoupling, Alignment and Coupling of pump.	Ensure PTW & Isolation, Remove coupling guard. Decouple the pump and motor. Check the alignment, if required. Correct the same. Couple and tighten the coupling bolt. Clean the area after completion of work. Take trial run for successful operation.	BD	4	No.	2095.48	8381.92
7	Overhauling of ACW pump.	Ensure PTW & Isolation, Shift material from stores. Decouple the pump. Dismantle the pump. Inspect all pump parts. Replace / Repair the damage parts if any. Assemble the pump. Fix the motor and coupling. Align and couple the pump. Clean the equipment. Clean the area after completion of work. Take successful trial run.	BD	2	No.	8905.61	17811.22
8	Overhauling of CCW pump.	, -do-	BD	2	No.	8905.61	17811.22
9	Suction strainer cleaning CCW pump.	Ensure PTW & Isolation, Remove filter element and clean with water / air. Refit the same. Check for any lekage. Clean the area after completion of work	BD	29	No.	2081.33	60358.57
10	Replacement of coupling Pump & Motor side.	Ensure PTW & Isolation, Issue materials from store. Remove coupling guard and coupling. Fix new coupling. Align and couple the same. Clean the area after completion of work	BD	1	No.	5307.87	5307.87
11	Servicing of NRV 400 NB.	Ensure PTW & Isolation, Open NRV. Check seat, disc and other internal parts. Repair the seat. Lap seat and check the surface for blue match. Assemble and Box up. Clean the area after completion of work	BD	1	No.	7496.88	7496.88

12	Replacement of NRV 400 NB.	Ensure PTW & Isolation, Remove the valve. Clean the flange surface. Cut and put new gasket. Fix new valve. Tighten the bolt. Clean the area after completion of work	BD	2	No.	3813.90	7627.80
13	Inspection of NRV 400 NB.	Ensure PTW & Isolation, Open NRV. Check seat, disc and other internal parts. Repair or replace if required. Assemble and Box up. Clean the area after completion of work.	BD	6	No.	4682.96	28097.76
							378820.18

ANNEXURE O1

TG MISC. JOB

Item No.	Item of Work	Scope of work	Nature of Mntc	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total estimated cost (in Rs)
1	cleaning of workshop equipments total 8 machines	Ensure Isolation, thoroughly clean the machines with cotton waste and cleaning additives. Clean the area after completion of work	PM	8	No.	3562.68	28501.44
2	Transportation of workshop machined scrap to ware house scrap yard. (one drum)	Collect the machined chips from the workshop and dispose at the ware house or required dumping area as per the instruction of engineer in charge. Clean the area after completion of work	BD	40	No.	662.47	26498.80
3	Maintenenace of workshop equipments as per the instruction of E/I (HMT 2 nos of Lathe, Shaper Machine or radial drilling machine) any one of the M/C as per the requirement per day basis	Ensure Isolation, Shift the tools and tackles, manpower to workshop, clean the machine and attend the problem as per the instructio of E/I(mwfitter +rigger+helper) Clean the area after completion of work	BD	2	Day	2111.22	4222.44
4	Arranging of workshop and TG tools, spares & consumables and cleaning (per day basis)	Clean the tools as per the instruction of the engineer in charge and arrange in its place and apply anti-corrosive additive. Clean the area after completion of work	BD	2	day	1432.62	2865.24
5	Cleaning of spillage oil per sq mtr area	Ensure PTW & Isolation, Clean the spillage oil from any surface with in TG building area with cotton wast or cloth and dispose it out. Clean the area after completion of work	BD	500	sq. mtr.	97.94	48970.00

6	Fabrication & erection of platform/structural/Supports/Handrailing/toe guard and other related work.	Ensure PTW & Isolation, Fabricate & erect the Platform/structural/Supports/Handrailing/toe guard and other related work as per the instruction of the engineer in charge and do (1 + 2) coat of painting. Clean the area after completion of work	BD	1000	KG	26.23	26230.00
7	Assisting supports to the external agency to facilitate maintenance work.	Ensure PTW & Isolation, Lift the special tools & tackles to the work place as directed by the engineer in charge to carry out the work by external agencies such as on-line leakage attending/rotating equipment inspection/etc. Clean the area after completion of work	BD	60	Hours	333.26	19995.60
8	Cleaning of scrap & debris incase the respective department not able to clean it.	Remove the debris/ scrap from the site & dump them at required place as instructed by the engineer in charge. Clean the area thoroughly. Arrange the required material properly. Clean the area after completion of work	BD	60	sq. mtr.	171.67	10300.20
9	For availing work shop machinist services after normal duty hour/on Sunday/holidays	Machining of various emergency jobs related to plant maintenance work after normal duty hours.	BD	800	Hours	217.46	173968.00
10	PM of Lathe machine	Ensure Isolation, Clean the equipment thoroughly. Clean/replace the filters. Check/replace the coolant & belts. Check coolant/oil level & top up coolant/oil to level. Check lubrication of all the moving parts & if required lubricate the parts. Ensure smooth running of the equipment. Clean the area after completion of work	PM	4	No.	1105.41	4421.64
11	PM of drill machine	, ----do----	PM	4	No.	1105.41	4421.64
12	PM of pedestal grinder	, ----do----	PM	2	No.	1105.41	2210.82
13	PM of shaping machine	, ----do----	PM	2	No.	1105.41	2210.82
14	PM of power saw	, ----do----	PM	2	No.	1105.41	2210.82
15	PM of hydraulic press	, ----do----	PM	2	No.	1105.41	2210.82

16	Deputation of two mashinist for workshop on daily basis	Deputation of two machinist (I.T. I with minimum 3-year experience) on daily basis for 24 months (man day-8 hrs/day) Both machinists should capable to carrying all type of machining jobs on Lathe machine/drilling machine/grinding machine/shaper machine etc.in the maintenance workshop. They should carryout all the machining job related to plant maintenance day to day basis. Both machinists should work in General shift everyday. Payment shall be made monthly basis.	BD	24	Month	46639.57	1119349.68
17	Deputation of One Crane operator on daily basis	Deputation of one crane operator (with minimum 5-year experience) on daily basis for 24 months (man day-8 hrs/day). crane operator should capable to operate all type of cranes and should have experience of lifting of critical equipment like turbine bearing, pumps, motors etc. Operator should carryout all the job related to crane operation day to day basis as per instruction of engineer in charge. Crane operator should work in General shift everyday. Payment shall be made monthly basis.	BD	24	Month	26552.25	637254.00
18	For availing Crane Operator services after normal duty hour/on Sunday/holidays	Operation of any crane for various emergency jobs related to plant maintenance after normal duty hours	BD	350	Hours	247.61	86663.50
							2202505.46

Note: The rates shall include all labour cost, equipments, supervision, consumables, tools, tackles, all taxes & duties (excluding GST).

PACKAGE - II :- Surat Lignite Power Plant - 4X125 MW, Surat Lignite Power Plant, Unit # III & IV: Annual Maintenance Contract for Turbine & Its Auxiliaries for two years 2025-27.

ANNEXURE A2

BOILER FEED PUMP & ITS AUXILIARIES

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total Estimated Cost (in Rs)
1	Removal and insertion of BFP cartridge. Model FK6D30 Make: BHEL.	Ensure PTW & Isolation, Shift fixture from stores to site. Decouple the pump. Dismantle all its accessories from water and oil system. Remove the old cartridge and insert new cartridge. Check the pump float, both the bearings, mechanical seals & if required replace or rectify them. Box-up all fittings. Alignment and couple. Take trial for smooth operation. Clean the area after completion of work	BD	1	No.	40153.47	40153.47
2	Over hauling of Booster Pump. MODEL FA1B56 MAKE BHEL.	Ensure PTW & Isolation, Before dismantling check the free float of pump. Dismantle the pump. Check the dimension of casing and impeller wear ring, if require replace it. Inspect the shaft/impeller/casing/bearings for any abnormalities and replace/rectify. If errosion is noticed in pump casing, it is to be rebuilt up by welding with appropriate electrode by heating. Then it is to be grinded to obtain smooth surface. Internal surface to be painted with ceramic coating after surface preparation. Flush the pump casing after dummying the discharge flange. Restore the pump, check all the clearances & floats, align, couple and ensure healthy trial. Clean the area after completion of work.	PM	2	No.	37047.99	74095.98

3	PM of BFP (including BP & Hydraulic coupling) MODEL: R16K.1 Make VOITH.	Ensure PTW & Isolation, Thoroughly clean equipment/base, from oil and dirt. Check tightness of all bolts of casing, foundation bearing housing and connected pipings. Check coupling condition for any cracks on bolts, holes etc. Check the quality of oil in lab. Dismantle the strainer. Replace the strainer element with spare cleaned strainer element if required. Inspect the removed strainer element for any damage/clogging.Store in its place after cleaning. Check bearings for oil leakage, arrest any oil leakage by replacing oil guards, etc./rectifying and oil line for any leakage of oil and rectify. Check seal cooling line for any choking/leakage attend if any. Check for any flange or gland leakage and attend it by replacing/tightening. Tighten all the fastners. Inspect the hydraulic coupling internals through inspection cover. Check the fusible plugs condition if required replace by new one. Lubricate all the required points of the hydraulic coupling. Clean/replace the lub oil filter and Oil top up if required. Ensure fixing of all safety guards. Remove tools/man waste materials from the equipments surrounding area. Take the trial and ensure satisfactory operation. Clean the area after completion of work	PM	32	No.	4122.88	131932.16
4	Decoupling and coupling of hydraulic or BFP or Booster pump or motor	Ensure PTW & Isolation, decouple for facilitate to carryout electrical and other job and Couple after alignment &completion of work. Box-up coupling gaurd. Clean the area after completion of work	BD	8	No.	1333.01	10664.08
5	Replacement of hydraulic coupling oil.	Ensure PTW & Isolation, Transport oil from store to site. Drain completely and rinse. Replace with new oil. Transport back the old oil to stores. Clean the area after completion of work	BD	2	No.	4211.44	8422.88

6	Cleaning / replacement of Suction strainer in water circuit.	Ensure PTW & Isolation, Dismantle the strainer. Replace the strainer element with spare cleaned strainer element. Inspect the removed strainer element for any damage/clogging.Store in its place after cleaning. Clean the area after completion of work	PM	16	No.	1349.16	21586.56
7	Maintenance of DE bearing/oil guard of BFP/BP.	Ensure PTW & Isolation, Dismantle the bearing housing. Clean the bearing, check the clearance of bearing and oil guard. If required replace the bearing/oil guard (front & rear). Attend oil leakage if any. Box up. Clean the area after completion of work	BD	12	No.	1898.51	22782.12
8	Maintenance of NDE bearing / oil guard of BFP/BP. (Including thrust bearing).	-- do --	BD	12	No.	1898.51	22782.12
9	Replacement of BFP or Booster pump DE side mechanical seal and its parts	Ensure PTW & Isolation, Decouple the coupling remove the coupling flange. Remove bearing from bearing housing. Replace the damaged seal with repaired/new seal and assemble the pump. Clean the area after completion of work	BD	4	No.	3436.18	13744.72
10	Replacement of BFP or Booster pump NDE side mechanical seal	Ensure PTW & Isolation, Remove thrust and journal bearing from bearing housing. Remove the thrust collar. Replace the damaged seal with new repaired seal and assemble the pump. Check the thrust float & if required adjust/rectify it. Clean the area after completion of work	BD	4	No.	6329.69	25318.76
11	Overhauling of BFP or Booster pump Mechanical seal.	Ensure PTW & Isolation, Clean the old mechanical seal dismantle the seal replace all damaged and worn out parts with new parts and preserve. Clean the area after completion of work	BD	8	No.	997.74	7981.92
12	Alignment of BFP to Motor OR Motor to HY. Coupling OR Motor to BP	Ensure PTW & Isolation, Decouple the equipment & carry out the alignment as per the instruction of Engineer to meet the required Drg. Values. Then couple it. Clean the area after completion of work	PM	24	No.	4206.04	100944.96
13	Cleaning/replacement of lub oil filter.-one no.	Ensure PTW & Isolation, Dismantle. Clean /replace the filter and box-up. Clean the area after completion of work	BD	12	No.	337.58	4050.96

14	PM of working oil/lub oil cooler-one no.	Ensure PTW & Isolation, Isolate cooler from water and oil side. Drain oil in the empty barrel. Clean the water box, tubes, hydrotest tube side, plug leaking tubes if any and box-up. Check the oil level & top up after charging. Clean the area after completion of work	PM	12	No.	5407.44	64889.28
15	Attending of 1/2" or 1" oil or water pipe line fitting leakages.	Ensure PTW & Isolation, Dismantle the connection check for any abnormalities put the thread sealant and restore. Clean the area after completion of work	BD	10	No.	341.33	3413.30
16	Replacement of Booster pump parting plane & water jacket gasket.	Ensure PTW & Isolation, Remove the top casing, remove the old gasket and put new gasket and box up. Always put antiseize compounds on the bolts. check all the clearances & floats, align, couple and ensure healthy trial. Clean the area after completion of work	BD	2	No.	5231.58	10463.16
17	Replacement of thrust bearing end cover 'O' ring of BFP or Booster pump.	Ensure PTW & Isolation, Remove the end cover replace the 'O'ring and close the end cover. Clean the area after completion of work	BD	4	No.	202.63	810.52
18	Booster pump suction flange or discharge flange leakage.	Ensure PTW & Isolation, Remove the flange bolts, replace old gasket by new gasket. Retight the flange by applying antiseize compound to all bolts. Clean the area after completion of work	BD	6	No.	4115.06	24690.36
19	BFP suction flange gasket replacement.	Ensure PTW & Isolation, Remove the flange bolts, replace old gasket by new gasket. Retight the flange by applying antiseize compound to all bolts. Clean the area after completion of work	BD	6	No.	2056.58	12339.48
20	Lub oil line 1/2" to 2”-line orifice gasket/flange gasket replacement.	Ensure PTW & Isolation, Open the flange and clean thoroughly. Replace old gasket by new gasket. Clean the area after completion of work	BD	10	No.	213.93	2139.30
21	Tightening of oil/water line flanges of 1/2" to 2" size for any leakages.	Ensure PTW & Isolation, Clean the flange bolts, check for any cracks/ looseness and tighten properly. Clean the area after completion of work	BD	12	No.	167.80	2013.60

22	Seal water cooler coil inspection/ tubes leakages.	Ensure PTW & Isolation, Isolate the water side both circuits. Open the end cover. Thoroughly clean the coil and internal surface of the cooler body, inspect for any tube leakage and repair if any leakage is found. Restore the system. Clean the area after completion of work	PM	6	No.	2822.14	16932.84
23	Oil top up in hydraulic coupling	Ensure PTW & Isolation, Check the oil level if below the normal level top up the oil upto normal level in presence of turbine Operator. Clean the area after completion of work	BD	120	No.	524.10	62892.00
24	General cleaning of BFP, BP and hydraulic coupling area.-one.no.	Ensure PTW & Isolation, Clean the dust, water and oil accumulated on BFP, hydraulic coupling and booster pump. Also, tharoughly clean the BFP skid base frame and surrounding area. Proper precaution should be taken while cleaning running equipment. Clean the area after completion of work	PM	24	No.	1062.34	25496.16
25	Removal & Box-up of Coupling guard (One Number)	Ensure PTW & Isolation, Remove and box-up the coupling guard for the Instrumentation work. Clean the area after completion of work	BD	6	No.	510.99	3065.94
26	Overhauling of Hydraulic coupling.	Ensure PTW & Isolation, Open the the top cover of the hydraulic coupling housing. Remove the primary & secondary wheels. Remove the LO pump. Check the bearings, clearances & thrust floats. Drain the oil completely from housing as well as coolers, clean the inside & all the components thoroughly. If required replace the fusible plug & clean the LO filters. Service the scoop tube mechanism. Assemble all the components perfectly, align the HC with BFP & motor. Take successful trial run. Clean the area after completion of work	BD	1	No.	31745.83	31745.83

27	Cleaning of Hydraulic coupling/COT/HPBP Tank / any other tank oil through Ferrocare machine.	Ensure PTW & Isolation, Shift the machine to the exact location. Connect the machine to the BFP HC / COT/ HPBP Tank / any other tank or Oil drum. Start & Stop the machine as per instruction of EIC. Run the machine till the required oil quality is achieved. Clean the area after completion of work. (1 No.= Oil cleaning of 1 Oil system or Minmum 5 Drums of Oil)	BD	2	No.	3569.84	7139.68
28	Replacement of fusible plug of hydraulic coupling. of BFP.	Ensure PTW & Isolation, Remove the inspection cover & check the fusible plug (2nos.) for its failure. Rectify or replace it by new one & restore. Clean the area after completion of work	BD	8	No.	170.86	1366.88
29	Servicing of BFP hydraulic coupling scoop mechanism.	Ensure PTW & Isolation, Decouple the mechanical linkage from actuator, operate it manually for freeness/full travel. If it stuckup then dismantle the cam post mechanism, clean it & apply lubrication as per the instruction of engineer in charge. Restore the system back. Clean the area after completion of work	BD	2	No.	3447.06	6894.12
30	Attending leakage from BFP retaining ring	Ensure PTW & Isolation, Decouple the pump, remove DE bearing housing. Replace the O-ring & gaskets of the retaining ring. Assembled in reverse order. Clean the area after completion of work	BD	4	No.	3473.25	13893.00
31	Overhauling of MIL/IL make valves 4" and below size-one No.	Ensure PTW & Isolation, Dismantle the valves, clean all the parts with cleaning agent, check all the parts of the valves if required rectify/replace it as per the instruction of engineer in charge. Box up the valves. take healthy trial. Clean the area after completion of work	BD	2	No.	5888.33	11776.66
32	Overhauling of MIL/IL make valves above 4" Size-one.no.	Ensure PTW & Isolation, Dismantle the valves, clean all the parts with cleaning agent, check all the parts of the valves if required rectify/replace it as per the instruction of engineer in charge. Box up the valves. take healthy trial. Clean the area after completion of work	BD	1	No.	5888.33	5888.33
							792311.13

ANNEXURE B2							
TG Lub Oil System							
Item No.	**Item of Work**	**Scope of work**	**Nature of Mntc.**	**Qty for 2yr**	**Unit**	**Estimated Unit cost (in Rs)**	**Total Estimated Cost (in Rs)**
1	Maintenance of jacking oil pump (plunger type pump submerged in oil tank.)	Ensure PTW & Isolation, Decouple, take out the pump and dismantle it. Check for any abnormalities / replace the pump. Restore. Align and couple the pump. Take trial run and check for adequate pressure. (Replae the bearing if required). Clean the area after completion of work	BD	1	No.	6824.18	6824.18
2	Maintenance of control oil main pump. (Axial piston pump submerged in oil tank)	-- do --	BD	1	No.	6867.15	6867.15
3	Maintenance of control oil recirculating pump. (Gear pump submerged in oil tank.)	-- do --	BD	1	No.	6867.15	6867.15
4	Maintenance of HPBypass control oil pump. (Gear pump submerged in oil tank)	-- do --	BD	1	No.	6861.76	6861.76
5	Maintenance of clean oil transfer pump. (small gear pump installed on ground)	-- do --	BD	1	No.	5055.34	5055.34
6	Maintenance of dirty oil transfer pump. (small gear pump installed on ground)	-- do --	BD	1	No.	5055.34	5055.34
7	Maintenance of lub oil pump (AOP/EOP) (KSB make vertical centrifugal type pump)-one no.	-- do --	BD	1	No.	6781.03	6781.03
8	PM of clean and dirty oil transfer pump.	Ensure PTW & Isolation, clean base, pump, check tightness of bolts & nuts, check for free rotation of pump, do necessary correction if required, do alignment & coupling, clean the suction filter. Clean the area after completion of work	PM	4	No.	1040.80	4163.20
9	Cleaning / replacement of turbine Lub oil filter. -One no.	Ensure PTW & Isolation, Open the filters. Clean the elements with petrol and box-up. (10 litres of petrol required) Clean the area after completion of work	BD	30	No.	1290.97	38729.10
10	Cleaning of jacking oil filter.	-- do --	BD	10	No.	744.55	7445.50
11	Replacement/Cleaning of control oil filters (One No.)	Ensure PTW & Isolation, Open the filter. Clean the element with petrol and box-up or Replace the damaged filter with new filter. Clean the area after completion of work	BD	6	No.	744.55	4467.30

12	Maintenance of control oil cooler. (One Number)	Ensure PTW & Isolation, thoroughly clean the coolers, pipes, bolts and nuts. Open water box, clean tube, shell, Detect for any leakage. Plug the leaking tube. Hydrotest and box-up. Clean the area after completion of work	BD	1	No.	3818.47	3818.47
13	Maintenance of turbine lub oil cooler-one no.	-- do --	BD	1	No.	14263.79	14263.79
14	Maintenance of accumulator of control oil system - 1No. (35 Litre capacity).	Ensure PTW & Isolation, Dismantle the accumulator bladder. Repair/Replace the parts if any damage. Assemble back. Charge the Nitrogen to the required pressure. Clean the area after completion of work	BD	4	No.	2733.33	10933.32
15	Oil top up in control oil tank (Servo ACT AF-100 oil).	Ensure PTW & Isolation, Check the contol oil level if below the normal top up the oil upto normal level in presence of turbine Operator. Clean the area after completion of work	BD	15	No.	510.99	7664.85
16	Replacement of control oil 800 litres. (Servo ACT AF-100).	Ensure PTW & Isolation, Drain the old oil in empty barrel. Clean the tank. Fill the tank with new oil and restore. Clean the area after completion of work	BD	1	No.	4669.42	4669.42
17	Oil top up in MOT tank (Servo prime 46 T)	Ensure PTW & Isolation, Check the lube oil level if below the normal top up the oil upto normal level in presence of turbine Operator. Clean the area after completion of work	BD	20	No.	887.45	17749.00
18	Oil top up in HP-Bypass control oil tank. (Servo Conval-46 oil)	Ensure PTW & Isolation, Check the control oil level if below the normal top up the oil upto normal level in presence of turbine Operator. Clean the area after completion of work	BD	15	No.	446.37	6695.55
19	Replacement of HP-Bypass control oil (Servo Conval-46) 150 litres.	Ensure PTW & Isolation, Drain the old oil in empty barrel. Clean the tank after opening the side cover. Replace the side cover gasket and fill the new oil and box-up. Clean the area after completion of work	BD	2	No.	2967.48	5934.96
20	Cleaning of MOT bucket strainer.	Ensure PTW & Isolation, Remove the top cover. Remove the strainer and clean with petrol and air and box- up. Clean the area after completion of work	BD	4	No.	758.41	3033.64

21	Maintenance of accumulator of HP Bypass control oil each no. (55 litre capacity)	Ensure PTW & Isolation, Dismantle the accumulator bladder. Repair/Replace the parts if any damage. Assemble back. Charge the Nitrogen to the required pressure. Clean the area after completion of work	BD	4	No.	2725.24	10900.96
22	PM of HP-Bypass system.	Ensure PTW & Isolation, thoroughly clean the outside surface of tank, accumulator, pipeline, valves, all fittings. Check for any leakages & arrest it by tightening if lekage donot stops note down the leakage to attend during shut down. Check for filter chocking and replace them. Check oil level, if require top up. Clean the oil tray. Check the accumulator pressure and charge the nitrogen gas if required. Clean the area after completion of work	PM	8	No.	2043.95	16351.60
23	PM of control oil system.	-- do --	PM	4	No.	2027.79	8111.16
24	Maintenance of oil vapour exhaust fan.	Ensure PTW & Isolation, Open casing cover for any rubbing. Repair/replace the damage parts if any after inspection. Box up the cover after attending the problem. Clean the area after completion of work	BD	2	No.	2038.56	4077.12
25	PM of oil vapour exhaust fan.	Ensure PTW & Isolation, thoroughly clean the fan base, all blots& nuts, check for wear and tear, looseness& damages of bolts & nuts. If require replace/repair. Open the fan cover check for looseness of impeller correct if required. Checkcasing for any damage/wear etc. repair if required. Restore the system. Clean the area after completion of work	PM	24	No.	2042.59	49022.16
26	Clean suction filter of OVE fan	Ensure PTW & Isolation, Remove the suction filter of oil extraction fan and clean with petrol and box-up. Clean the area after completion of work	PM	2	No.	386.42	772.84
27	Cleaning of MOT top cover and lub-oil coolers	Ensure PTW & Isolation, thoroughly clean the dust and oil from the top and side wall of the tank & surrounding pipe lines with cloth. Clean the oil cooler/accumulator body, oil pipes and flanges. Clean the area after completion of work	PM	24	No.	1400.31	33607.44

28	Attending leakge of oil from the fittings. (size upto 1") per joint	Ensure PTW & Isolation, Attend the leakge of oil from the fittings of control oil system/jacking oil system, if require replace the "o" ring/gasket etc. Clean the area after completion of work	BD	5	NO.	702.84	3514.20
29	PM of Oil Centrifuge of MOT.	Ensure PTW & Isolation, thoroughly clean the centrifuge body, all bolts & nuts, bottom tray etc. Clean the suction strainer with petrol and box up Check the looseness of fasteners if require tighten/replace. Open the bowl cover and take out bowl plates. Thoroughly inspect & clean the bowl and check for any damages of bowl plate sealing etc if required replace the damage parts. Check the drive system if require replace the friction pad. Check the oil level & top up if required. Restore the system back. Clean the area after completion of work	PM	30	No.	3686.49	110594.70
30	Oil filling in worm gear box 5 litres. (servo mesh SP220)	Ensure PTW & Isolation, Drain the dirty oil from the housing, clean the housing and top up new oil. Clean the area after completion of work	BD	2	No.	351.43	702.86
31	Maintenance of bowl spindle and gear box.	Ensure PTW & Isolation, Check the radial wobble. Worm wheel and worm height position. Buffers and ball bearing housing. Replace the damage part if any and box-up. Dismantle the gear box and replace the damaged parts and restore. Clean the area after completion of work	BD	2	No.	3044.37	6088.74
32	Maintenance of feed/booster gear pump.	Ensure PTW & Isolation, Decouple the pump. Dismantle and check for wear and tear of gears, replace if required. Check the condition of bearings, seals etc. replace if required. Reassemble and restore. Clean the area after completion of work	BD	2	No.	1547.75	3095.50
33	Cleaning of suction filter	Ensure PTW & Isolation, open the filter, clean and box-up Clean the area after completion of work	PM	8	No.	386.42	3091.36

34	Replacement of oil seal of feed pump/ booster pump.	Ensure PTW & Isolation, Decouple the pump. Remove old oil seal and replace by new seal. Check the alignement and box-up. Clean the area after completion of work	BD	2	No.	826.66	1653.32
35	Cleaning of tray and drain oil collector	Ensure PTW & Isolation, Clean the tray, remove water/waste oil from collector. Fill that water/waste oil in drum and shift to maintenance bay. Clean the area after completion of work	BD	48	No.	367.59	17644.32
36	Cleaning of suction NRV	Ensure PTW & Isolation, Ensure the isolation of system. Open suction 2" NRV check for any blockage. Clean the glass replace the gasket if required. Clean the suction strainer and box-up. Clean the area after completion of work	BD	4	No.	721.67	2886.68
37	Bowl cleaning	Ensure PTW & Isolation, Dismantle the bowl, cleaned all bowl plates with petrol. Check all "O'rings if required replace it. Box- up, cleaning of oil centrifuge body, tray & oil collector and Take healthy trial. Clean the area after completion of work	BD	10	No.	2840.22	28402.20
38	Replacement of coupling pin of feed pump or booster pump of oil centrifuge	Ensure PTW & Isolation, Remove the sheared off pin from the coupling, inspect the couplings if damage then replace/repair it. Insert the new pin & restore. Align & couple the pump. Take healthy trial. Clean the area after completion of work	BD	1	No.	1032.74	1032.74
39	Replacement of the set of brake shoes of oil centrifuge	Ensure PTW & Isolation, Remove the damage brake shoes, clean the internals. If required remove the motor, check for any damage & repair it if required. Replace them by a new set of shoes. Ensure healthy trial. Clean the area after completion of work	BD	2	No.	713.61	1427.22
40	Cleaning of control oil/HPBP oil tank top cover and outer cover base.	Ensure PTW & Isolation, thoroughly clean the dust and oil from the top and side wall of the tank & surrounding pipe lines with cloth. Clean the oil cooler / accumulator body, oil pipes and flanges. Clean the area after completion of work	BD	4	No.	702.84	2811.36

41	Maintenance of accumulator of HP Bypass control oil each no. (10 litre capacity)	Ensure PTW & Isolation, Dismantle the accumulator bladder. Repair/Replace the parts if any damage. Assemble back. Charge the Nitrogen to the required pressure. Clean the area after completion of work	BD	2	No.	2768.31	5536.62
42	Inspection of AC/DC lube oil pump coupling-one no.	Ensure PTW & Isolation, Lift the motor with TG EOT crane, inspect the coupling and rectify or replace the coupling in case of any problem. After the work instal the motor and normalise. Clean the area after completion of work	PM	6	No.	2709.08	16254.48
43	Inspection of AC/DC JOP coupling-one no.	Ensure PTW & Isolation, Take out the pump along with the motor to 10.5 mtr TG floor with the help of EOT crane. Inspect the coupling and rectify or replace the coupling if required reinstal the pump and normalise. Clean the area after completion of work	PM	4	No.	2709.08	10836.32
44	Checking the Nitrogen gas pressure in HPBP & CO system	Ensure PTW & Isolation, Check the Nitrogen gas pressure of all the accmulators of HPBP & CO system. Top up the gas if required & restore it. Clean the area after completion of work	BD	4	No.	2054.71	8218.84
45	Inspection of oil centrifuge belt	Ensure PTW & Isolation, Check the tightness of oil centrifuge belt. If find loose or damage, replace with new one. Take trial run Clean the area after completion of work	BD	8	No.	2725.24	21801.92
46	Inspection of CO pump / HPBP Control oil pump coupling-one no.	Ensure PTW & Isolation, Take out the Pump & Motor. Inspect the coupling and rectify or replace the coupling if required reinstall the pump and normalize. Clean the area after completion of work	BD	4	No.	2709.08	10836.32
47	Cleaning of MOT oil through Ferrocare machine.	Ensure PTW & Isolation, Shift the machine to the exact location. Connect the machine to the MOT. Start & Stop the machine as per instruction of EIC. Run the machine till the required oil quality is achieved. Clean the area after completion of work	BD	4	No.	4023.30	16093.20

48	Oil Transfer from MOT to Drain Oil & Clean oil tank and back to MOT	Ensure PTW & Isolation, Clean the Dirty oil tank & Clean oil tank completely from inside & outside. Check the Complete system. Check all valves freeness in system. Line flushing. Transfer the oil from MOT to dirty oil tank. Centrifuge Bowl & tray cleaning. Transfer oil from dirty to clean oil tank and clean oil tank to MOT. Attend Defect / leakage (if any). Transfer Pumps strainer cleaning (if required). Clean complete area after work completion. Remove cotton waste & waste oil and dispose at suitable location as guided by engineer in-charge. Clean the area after completion of work	BD	1	No.	13652.40	13652.40
							582898.63

ANNEXURE C2							
CEP & Its AUX							
Item No.	**Item of Work**	**Scope of work**	**Nature of Mntc.**	**Qty for 2yr**	**Unit**	**Estimated Unit cost (in Rs)**	**Total Estimated Cost (in Rs)**
1	Removal and insertion of CEP Make: BHEL Model: EN7H32.	Ensure PTW & Isolation, Shift material from store to site. Remove the piping connections. Decouple and remove the motor. Check the float of the pump and remove the pump. Clean the cannister thoroughly and inspect it. Clean the new pump body, bearings internal, Mech. seal internal if required and check the free float of pump and adjust as per requirement. Insert the pump into cannister and tighten the foundation bolts. Place the Motor and align with pump. Restore the system. Take trial run for successful running. Clean the area after completion of work	BD	1	No.	25376.69	25376.69
2	Over hauling of mechanical Seal of CEP.	Ensure PTW & Isolation, Dismantle the seal, inspect the internals, if required replace the internals. Assemble & test it. Preserve for future application. Clean the area after completion of work	BD	8	No.	4334.34	34674.72
3	Replacement of Suction/discharge flange gasket.	Ensure PTW & Isolation, Open the flange and replace the damage gasket by new gasket. Clean the area after completion of work	BD	2	No.	1419.15	2838.30

4	Oil top up in CEP bearing.	Ensure PTW & Isolation, Top up the oil to the required level in presence of turbine Operator. Clean the area after completion of work	BD	12	No.	275.68	3308.16
5	Cleaning of suction strainer	Ensure PTW & Isolation, Dismantle the strainer. Clean the element and box-up. Clean the area after completion of work	PM	12	No.	2031.83	24381.96
6	PM of CEP	Ensure PTW & Isolation, Thoroughly clean equipment base, suction expansion bellow, discharge pipe etc. from oil and dirt. Check tightness of casing foundation, bearing housing and connected piping. Dismantle the strainer. Clean the element and box-up. Check coupling condition for any cracks on bolts, holes, hubs etc. check free rotation of pumps. Check alignment if required correct it. Check for any water/ oil leakages and arrest. Check oil quality if required replace or top up if level is low. Check mechanical seal for leakages, if any leakages is their attend it by adjustment/replacement. Check for any general cracks, wear, damages rust on pumps body, bolts, nuts, coupling etc and attend. Clean the area after completion of work	PM	24	No.	3371.59	80918.16
7	Maintenance of DE thrust bearing & mechanical seal of CEP.	Ensure PTW & Isolation, Decouple the pump, take out the motor from the position. Remove the pump coupling. Dismantle the bearing housing. Take out the bearing pads, clean thoroughly and inspect for any abnormalities and rectify/replace. Remove the mechanical seal. Repair/replace the damaged mechanical seal. Box up the mechanical seal & bearing. Top up oil to the level. Check the pump float. Place the motor align & couple with pump and restore the system. Clean the area after completion of work	BD	8	No.	12557.62	100460.96

8	Removal of CEP motor for electrical work	Ensure PTW & Isolation, to facilitate electrical maintenance work remove the fan cover, remove the motor from the position and shift it to TG maintenance bay & keep it safely. Reinstall the motor, align & couple the pump after completion of work. Ensure healthy trial run. Clean the area after completion of work	BD	1	No.	1411.08	1411.08
9	Removl of CEP motor top cover for I&C work & refixing of the same.	Ensure PTW & Isolation, remove the Motor Top Cover with help of EOT Crane and refix after completion of work Clean the area after completion of work	BD	2	No.	545.98	1091.96
							274461.99

ANNEXURE D2

CONDENSER/ DEAERATOR/LP HP HEATERS

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total Estimated Cost (in Rs)
1	Cleaning of all the water boxes of condenser, (includes front top-2nos., front bottom-2nos. & rear-2nos.)	Ensure PTW & Isolation, Open the manhole of waterbox. Clean the internal surface of water box, tube plate and box-up. If required replace the manhole cover gasket & the zinc electrodes. Clean the area after completion of work	PM	4	No.	6018.78	24075.12
2	Cleaning of hot well	Ensure PTW & Isolation, Open the both manhole door. Clean the hotwell and box-up. Replace the manhole gasket. Clean the area after completion of work	PM	4	No.	4626.19	18504.76
3	Plugging of Tube leakage of condenser. -one no.	Ensure PTW & Isolation, Open the manhole door. Detect the leakages and plug the tubes. Close manhole door. Replace the manhole gasket. Clean the area after completion of work	BD	12	No.	1341.10	16093.20
4	Opening of manhole & Replacement of manhole door gasket of condenser/hotwell/OLTC Ball collector.	Ensure PTW & Isolation, Open manhole and inspect. Replace old gasket by new gasket and box-up. Clean the area after completion of work	BD	4	No.	2003.57	8014.28

5	Cleaning of Deaerator.	Ensure PTW & Isolation, Remove insulation. Open the manhole doors, thoroughly clean spray nozzles, trays & FST. Inspect whole structure with trays support for any abnormalities or damage, if found rectify. Replace the manhole gaskets and box-up. Apply insulation. Clean the area after completion of work	PM	4	No.	6979.26	27917.04
6	Inspection of HP/LP Flash Tank/Atmospheric Flash /CBD Tank	Ensure PTW & Isolation, Open manhole door and inspect HP/LP/Atmos. Flash/CBD tank and headers, repair if any abnormalities, clean thoroughly and final box up. Clean the area after completion of work	PM	1	No.	4233.22	4233.22
7	Opening of manhole & replacement of flange gasket of deaerator.	Ensure PTW & Isolation, open the manhole and inspect. Replace the damaged gasket and box-up properly. Clean the area after completion of work	BD	2	No.	1005.83	2011.66
8	Plugging of Tube leakage of LP heaters/HP heaters/Gland steam cooler/ Drain cooler. -each tube	Ensure PTW & Isolation, Open the water box. Detect the leaking tube. Plug the tube and restore. Clean the area after completion of work	BD	2	No.	1349.16	2698.32
9	Attend flange leakageof LP heaters/HP heaters/Gland steam cooler/Drain cooler.	Ensure PTW & Isolation, Replace the damage gasket and tighten properly. Clean the area after completion of work	BD	1	No.	678.63	678.63
10	Condenser fill test.	Ensure PTW & Isolation, If required Dry all tubes after tube cleaning by external agency. Jack the condenser on jack bolt. Fill the condenser 100 mm above the tube nest. Depute the person for checking the leakage. Identify the leakage and record. Open the dummy flanges for draining the condenser. Release the jack bolt and close the dummy flanges of drain line replacing the gasket. Clean the area after completion of work	PM	4	No.	12379.68	49518.72
11	Condenser spring inspection	Ensure PTW & Isolation, thoroughly clean the condenser springs and fasteners with cleaning additives and apply anti corrosive spray. Check for freeness of the jack bolts Clean the area after completion of work	PM	4	No.	2183.90	8735.60

12	Feed/condensate heaters waterbox partition plates checking & rectification	Ensure PTW & Isolation, Open the dummy flange by loosening the nuts & cut the heater diaphragm. Open the manhole flange by loosening the studs & nuts. Inspect & rectify inside for any erosion. Box up partition flange with new gasket. Weld the diaphragm. Carry out DP test. Box up the dummy flange. Clean the area after completion of work	BD	1	No.	45562.63	45562.63
							208043.18

ANNEXURE E2

SCREW AIR COMPRESSORS

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of Dry Screw Air Compressor (4000 Hrs)	Ensure PTW & Isolation, replace all oil & air filters with all o rings, servicing of intercooler and aftercooler drain and drain check valves, check oil level and if found less, top up. Attend any leakages of air/water/oil line. Thrououtly clean compressor, dryer and associated pipes. Inspection of all bolts and nut of one air compressor. Clean the area after completion of work	PM	3	No.	2070.86	6212.58
2	PM of Dry Screw Air Compressor (8000 Hrs)	Ensure PTW & Isolation, removal of all pipe lines. Replace all oil & air filters with all o rings, servicing of inlet valve, inspect all bearings washers, diaphragm and etc. If found any damage part rectify or replace as per E-I/C, replace all o rings of check valve, servicing of intercooler and aftercooler drain and drain check valves, check oil level and if found less, top up. Attend any leakages of air/water/oil line. Inspection of all bolts and nut of one air compressor. Thrououtly clean compressor, dryer and associated pipes. Clean the area after completion of work	PM	3	No.	6337.33	19011.99

3	PM of Dry Screw Air Compressor (12000 Hrs)	Ensure PTW & Isolation, removal of all pipe lines. Replace all oil & air filters with all o rings, servicing of intercooler and aftercooler drain and drain check valves, check oil level and if found less, top up. Attend any leakages of air/water/oil line. Inspection of all bolts and nut of one air compressor. Thrououtly clean compressor, dryer and associated pipes. Clean the area after completion of work	PM	1	No.	2070.86	2070.86
4	PM of Dry Screw Air Compressor (16000 Hrs)	Ensure PTW & Isolation, removal of all pipe lines. Replace all oil & air filters with all o rings, overhauling of inlet valve, inspect all bearings washers, diaphragm. Inspect HP & LP balance piston diaphragm. If found any damage part rectify or replace as per E-I/C, replace drive coupling rubber set, clean or replace mufflers, Servicing of check valve. Replace all o rings of check valve, servicing of intercooler and aftercooler drain and drain check valves, check oil level and if found less, top up. Inspection of all bolts and nut of one air compressor. Attend any leakages of air/water/oil line. Thrououtly clean compressor, dryer and associated pipes. Clean the area after completion of work	PM	3	No.	6337.33	19011.99
5	Servicing of Intercooler/Aftercooler-1 no	Ensure PTW & Isolation, open all flanges, take tube bundle outside, thoroughly clean the tube bundle and cooler, if any tube leakage do hydrotest as per E-I/C. Replace all orings/gaskets/seals of cooler and box up. Take trail run. Clean the area after completion of work	PM	4	No.	2674.10	10696.40
6	Servicing of Oil cooler-1 no	Ensure PTW & Isolation, drain complete oil from compressor, take out side cooler, backwashing, if require dismental all plates and clean. Replace o rings and box up. Take trail run. Clean the area after completion of work	PM	1	No.	1005.83	1005.83

7	Cleaning or Replace any air or oil filter (one no.)	Ensure PTW & Isolation, Dismantle, clean the filter. Replace if necessary. Box-up. Clean the area after completion of work	BD	24	No.	498.88	11973.12
8	Cleaning or Replace any muffler-1 no	Ensure PTW & Isolation, Dismantle, clean the muffler. Replace if necessary. Box-up. Clean the area after completion of work	BD	8	No.	335.28	2682.24
9	oil top up in each compressor.	Ensure PTW & Isolation, check the oil level I fbelow the normal level fill the oil till normal level reaches in presence of turbine Operator. Clean the area after completion of work	BD	18	No.	335.28	6035.04
10	Replacement of air compressor oil 85 Ltrs	Ensure PTW & Isolation, Open the plug and drain the oil and collect it in a drum, shift drum to scrap yard, fill new oil and close plug. Clean the area after completion of work	BD	3	No.	1013.89	3041.67
11	Overhauling of Screw Compressor	Ensure PTW & Isolation, Complete Dismantaling of screw compressor as per instruction of EIC. Inspection of all spares of compressor and replace if any in damaged conditions and complete box-up of compressor. Clean the area after completion of work	BD	3	No.	21821.06	65463.18
12	Servicing of NRV or Check valve up to 4" - 1 no.	Ensure PTW & Isolation, Dismentaling of valve, inspect all internals for any abnormalities, if found rectify, replace with new ones as per EIC and box up. Clean the area after completion of work	BD	6	No.	737.83	4426.98
13	PM of Air Dryer	Ensure PTW & Isolation, removal of all pipe lines, dismental and inspect dryer parts rotor, demister, strainer, inner disc, shaft etc, replace demister and gasket. Inspect regenreation cooler, replace all orings and box up cooler and dryer. Service drain valve, check valve and throttle valve. Box up. and take trial run with all pipe lines. Clean the area after completion of work	PM	6	No.	5183.15	31098.90
14	Replacement of Gear box of Air Dryer	Ensure PTW & Isolation, Dismantal the air dryers and remove the rotor and Gear box, repair / replace the gear box. Check all internals, if required replace the internals and also check for any abnormalities and normalize. Clean the area after completion of work	BD	1	No.	5183.15	5183.15

15	Inspection & Replacement of Water separator	Ensure PTW & Isolation, Dismantle, Check the WSD for damage. Replace if necessary. Box-up. Clean the area after completion of work	BD	6	No.	498.88	2993.28
16	Chock removal of Dryer Drains	Ensure PTW & Isolation, Dismantle both the Drain pipes. Clean the drain pipe. Ensure clear path and box up. Take trail run. Clean the area after completion of work	BD	12	No.	335.28	4023.36
17	Servicing of Gear box of Air Dryer	Ensure PTW & Isolation, Dismantle the Gearbox. Check all the intrenals, repair / replace the damaged parts. Box up Clean the area after completion of work	BD	1	No.	3151.42	3151.42
18	Inspection & servicing of suction valve	Ensure PTW & Isolation, removal of all pipe lines & Filters. Removal Suction valve. Inspection of all the internals and repair & replacement of damaged parts. Box up. and take trial run with all pipe lines. Clean the area after completion of work	BD	1	No.	3092.23	3092.23
							201174.22

ANNEXURE F2							
PLATE TYPE HEAT EXCHANGER							
Item No.	**Item of Work**	**Scope of work**	**Nature of Mntc.**	**Qty for 2yr**	**Unit**	**Estimated Unit cost (in Rs)**	**Total Estimated Cost (in Rs)**
1	Cleaning of plate type heat exchanger. (TOTAL NUMBER OF PLATES IS 351.)	Ensure PTW & Isolation, Ensure isolation of primary and secondary water circuit. Thoroughly clean the equipment. Record initial distance of end plates at three location top, bottom and middle. Gradually loosen the tie bolts 10 Nos. sequentially and clean all plates thoroughly. Inspect for cracks/ damages of plates and gaskets, replace if required. Assemble all plates carefully and retighten the bolts sequentially till to achieve intial end plates reading. Lubricate the tie bolts with anticorrosive additives. Restore the system. Clean the area after completion of work	PM	12	No.	23819.50	285834.00

2	Manhole leakage arresting (1 Number)	Ensure PTW & Isolation, Open the manhole, clean the water path replace the damaged gasket with new gasket and restore. Clean the area after completion of work	BD	2	No.	1357.25	2714.50
3	Back washing of PHE	Ensure PTW & Isolation, Open the discharge side ACW and CCW manhole and flush the PHE. Close the manhole if required replace the gasket and box-up. Clean the area after completion of work	PM	36	No.	2682.19	96558.84
4	PHE online Acid Cleaning	Ensure PTW & Isolation, All necessary arrangement installation and removal for acid cleaning of PHE. Online cleaning as per E-IC and flushing of PHE after completion of online acid cleaning. Clean the area after completion of work	PM	1	No.	15934.30	15934.30
5	Servicing of butterfly valves from 300-600 NB	Ensure PTW & Isolation, Dismantle valve. Clean the internals. inspect and if required change the seal ring. Replace the gland packing/ O-ring. Assemble the valve and check for any leakage. position the valve after replacement of flange gasket and Greasing of Gear box. Ensure no leakages. Clean the area after completion of work	BD	20	No	8450.86	169017.20
6	Greasing of Butterfly valve Gearbox	Ensure PTW & Isolation, Remove gear box cover. Remove old grease. Put new grease. Tighten the bolt. Clean the area after completion of work	PM	24	No	713.61	17126.64
7	Replacement of Butterfly valve from 300-600 NB	Ensure PTW & Isolation, Remove the valve. Clean the flange surface. Cut and put new gasket. Fix new valve. Tighten the bolt. Clean the area after completion of work	BD	2	No	5418.20	10836.40
							598021.88

ANNEXURE G2

PIPING

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total Estimated Cost (in Rs)
1	Welding of CS / SS piping upto 100 mm dia and max thickness 11mm.	Ensure PTW & Isolation, Removing of insulation. Cut the joint, fit -up properly and welding. Apply insulation. Clean the area after completion of work	BD	35	Per joint	2679.71	93789.85
2	-- do -- > 100mm & upto 200mm	-- do --	BD	10	Per joint	4353.47	43534.70
3	-- do -- > 200 mm & upto 400mm.	-- do --	BD	4	Per joint	5756.67	23026.68
4	Welding of ACW water line upto 100 mm.	Ensure PTW & Isolation, Cut the joint, proper edge preparation, fit-up making and welding. Clean the area after completion of work	BD	10	Per joint	1457.68	14576.80
5	-- do -- >100mm & upto 200mm.	-- do --	BD	10	Per joint	2995.53	29955.30
6	-- do -- >200mm & upto 300mm.	-- do --	BD	4	Per joint	3483.81	13935.24
7	Attending flange/threaded joint leakage in air/oil/water/steam line of 100 NB and below size.	Ensure PTW & Isolation, Check the flange/threaded connection for any leakage. Remove insulation. Replace the gasket/tighten it with teflon tape if required. Attend and restore back applying insulation. Clean the area after completion of work	BD	25	Per joint	783.86	19596.50
8	Attending leakages in SS pipe line upto 50 NB.	Ensure PTW & Isolation, Cut the pipe line at the leakage point. Insert spool piece if required. Fit up the joint and weld properly by argon purging. Clean the area after completion of work	BD	10	Per joint	1492.87	14928.70
9	Attending flange leakage of air/oil/water/steam line 100NB to 300NB.	Ensure PTW & Isolation, Remove insulation. Open the flange replace the old gasket by new gasket and close the flange. Restore with insulation. Clean the area after completion of work	BD	15	No.	1535.39	23030.85
10	Scaffolding upto 7 mtrs. Height for attending valve, pipeline leakges. (size max7mtrx2mtrwidth)	Ensure PTW & Isolation, Shift the scaffolding material at site make the scaffolding ensuring the safety aspect and remove after completion of job. Clean the area after completion of work	BD	15	No.	4130.37	61955.55

11	Scaffolding upto Height of 4 mts. & below (Size 4 x 2 mtr) for attending valve, pipeline leakges.	Ensure PTW & Isolation, Shift the scaffolding material at site make the scaffolding ensuring the safety aspect and remove after completion of job. Clean the area after completion of work	BD	10	No.	2478.21	24782.10
12	Fabrication of piping upto 2" per/Mtr. length	Ensure PTW & Isolation, collect the pipe, bend/cut and fit /weld into required shape Clean the area after completion of work	BD	30	mtr	1758.94	52768.20
13	Cut the pipe with hax-saw upto 2"	Ensure PTW & Isolation, Cut the pipe into two pieces or cut the pipe from valve /equipment. Clean the area after completion of work	BD	15	No.	1003.41	15051.15
14	Painting of pipe line up to 4" per/mtr length	Ensure PTW & Isolation, Clean the pipe tharoughly with wire brush & remove all loose dust/dirt and apply paint. Clean the area after completion of work	BD	40	mtr	510.30	20412.00
15	Painting of pipe line above 4"- 10" per/mtr length	Ensure PTW & Isolation, Clean the pipe tharoughly with wire brush &remove all loose dust/dirt and apply paint. Clean the area after completion of work	BD	20	mtr	1007.17	20143.40
16	Painting of Equipment surface per squire meter area	Ensure PTW & Isolation, Clean the surface tharoughly with wire brush &remove all loose dust/dirt and apply paint. Clean the area after completion of work	BD	40	sq. mtr.	510.30	20412.00
17	Remove insulation& cladding sheet from pipe line /mtr. length and apply back upto 4"	Ensure PTW & Isolation, remove insulation as per the instruction of Enginner and apply after completion of work. Clean the area after completion of work	BD	50	mtr	496.86	24843.00
18	Remove insulation& cladding sheet from pipe line /mtr. length and apply back above4"upto 12"	Ensure PTW & Isolation, remove insulation as per the instruction of Enginner and apply after completion of work Clean the area after completion of work	BD	50	mtr	989.68	49484.00
19	Inspection of steam/water/condensate/drain line hangers (one no.)	Ensure PTW & Isolation, Inspect the hanger as per the instruction of engineer, clean and adjust the same if required. Replace the parts if required. Note down the spring values. Clean the area after completion of work	BD	1	No.	2026.44	2026.44

20	Attending of any pin hole leakage on pipe line & valve body.	Ensure PTW & Isolation, Remove the insulation & identify the leakage. Ensure isolation of the line. Attend the punctured area by welding or applying putty as directed by the engineer in charge. Restore the insulation & ensure no leakages after charging. Clean the area after completion of work	BD	10	No.	1815.03	18150.30
21	MS/HRH line strainer Inspection	Ensure PTW & Isolation, Removal of insulation, Cut the drain pipe, opening of bottom flange of MS/HRH strainer, Removal of MS/HRH strainer, Checking, Cleaning & DP Test of the strainer and its parts if required rectify, replace it, box-up of the strainer, apply insulation to the strainer. Clean the area after completion of work	BD	1	No.	22864.79	22864.79
							609267.55

ANNEXURE H2

VALVES

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total Estimated Cost (in Rs)
1	Servicing of gate/globe valves of 150mm to 450 mm	Ensure PTW & Isolation, remove insulation if required. Dismantle check seat/disc/stem/ and other internal parts. Repair the seat, disc/plug, bonnet seat by build up, grind and lap them. Check surface for blue match. Inspect thrust bearing, yoke bush of yoke, spindle and replace the damaged parts. Replace sealing ring, bonnet, gasket & gland packing etc. assemble. adjust gland hot tight the valve bonnet. ensure no leakage. Apply insulation back. Clean the area after completion of work	BD	6	No.	3549.76	21298.56
2	Servicing of gate/globe valves of 15mm to 125 mm	, -----do-----	BD	30	No.	1988.33	59649.90

3	Servicing of non-return valve above 300NB upto 400NB	Ensure PTW & Isolation, Remove the insulation if necessary, open flange, check seat/disc/other internal parts. Repair the seat/disc by build up, grind and lap them. Check surface for blue match, replace gasket if necessary, box-up. Apply insulation back. Clean the area after completion of work	BD	1	No.	4614.21	4614.21
4	---DO-- NB upto 250	--do---	BD	2	No.	2485.33	4970.66
5	Servicing of steam traps/ strainers	Ensure PTW & Isolation, Open, clean repair if required and box-up. Clean the area after completion of work	BD	4	NO.	689.38	2757.52
6	Servicing of Ball valves/globe valves of instrument air/water line NB 15 to 100 mm.	Ensure PTW & Isolation, seat/disc repalcement/ valve repalcement/socket tightening to attend leakage. Clean the area after completion of work	BD	20	NO.	713.61	14272.20
7	Replacement of gland packings in valves. Upto NB 25mm (Gate and Globe valve)	Ensure PTW & Isolation, Remove the gland follower. Remove the damage gland packing. Replace new. Box-up. Clean the area after completion of work	BD	850	No.	504.52	428842.00
8	----do---- above 25mm upto 100NB	--do---	BD	250	No.	719.00	179750.00
9	-- do -- NB 125 to 400 mm	--do---	BD	50	No.	719.00	35950.00
10	Replacement of gate/glbe/NRV valves upto 50mm.	Ensure PTW & Isolation, Remove the damaged valve by cutting and insert the new valve. Weld the valve. Apply the insulation. Clean the area after completion of work	BD	15	No.	3146.54	47198.10
11	Replacement of gate/globe/NRV valves 65 to 150 mm.	--do--	BD	6	No.	3434.26	20605.56
12	Replacement of gate/globe/NRV valves 200 to 450 mm.	--do--	BD	1	No.	6948.45	6948.45
13	Replacement of flanged valve size 100mm and below	Ensure PTW & Isolation, Replace the defective valve with spare valve and restore. Clean the area after completion of work	BD	6	No.	681.32	4087.92
14	Replacement of flanged valve size 150NB to 300NB.	Ensure PTW & Isolation, Replace the defective valve with spare valve and restore. Clean the area after completion of work	BD	10	No.	1528.92	15289.20

15	Servicing of pnuematic/electrical control valves upto NB 100 mm.	Ensure PTW & Isolation, Ensure instrument air disconnection. Remove of actuator & insulation. Dismantle valve & check for abnormalities. Replace the seat, disc/plug, bonnet gasket by new spare if found damaged. Check surface for blue match. Inspect yoke bush, hand lever attachment, spindle and replace/repair the damaged parts. Restore back. Clean the area after completion of work	BD	5	No.	2782.41	13912.05
16	-- do --- NB 150mm to 450mm	--do---	BD	5	No.	4619.65	23098.25
17	Replacement of bonet /flange gaskets for valves upto NB 100mm (Gate/Globe/Pneumatic valve)	Ensure PTW & Isolation, Remove the damage gasket. Replace new. Tighten properly. Clean the area after completion of work	BD	20	No.	681.32	13626.40
18	--do --' NB 150 to 300 mm	--do---	BD	10	No.	1528.92	15289.20
19	Flange gasket replacement of gate/globe valve of 100 to 300NB in air/water line	Ensure PTW & Isolation, Clean the valve open the flanges replace old gasket by new gasket. Refit the flanges. Clean the area after completion of work	BD	10	No.	1528.92	15289.20
20	Flange gasket replacement of gate/globe valve of below 100 NB air/water line.	Ensure PTW & Isolation, Clean the valve open the flanges replace old gasket by new gasket. Refit the flanges. Clean the area after completion of work	BD	10	No.	1008.53	10085.30
21	Gland Tightening of valves (Globe/Gate/Pneumatic) of size 300to 450 NB.	Ensure PTW & Isolation, Clean the gland follower, spindle, gland bolts & nuts. Tighten the glands slowly to arrest small leakages. Clean the area after completion of work	BD	10	No.	94.59	945.90
22	Gland Tightening of valves (Globe/Gate/Pneumatic) of size 200 to 250NB..	Ensure PTW & Isolation, Clean the gland follower, spindle, gland bolts& nuts. Tighten the glands slowly to arrest small leakages. Clean the area after completion of work	BD	40	No.	178.39	7135.60
23	Gland Tightening of valves (Globe/Gate/Pneumatic) of size 65 to 150 NB..	Ensure PTW & Isolation, Clean the gland follower, spindle, gland bolts& nuts. Tighten the glands slowly to arrest small leakages. Clean the area after completion of work	BD	50	No.	173.02	8651.00

24	Gland Tightening of valves (Globe/Gate/Pneumatic) of size upto 50 NB.	Ensure PTW & Isolation, Clean the gland follower, spindle, gland bolts& nuts. Tighten the glands slowly to arrest small leakages. Clean the area after completion of work	BD	200	No.	173.02	34604.00
25	PM of LP-HEATER-1 and connected valves (no. of valves below 2"-15nos.above 2.5" - 2nos) during plant in operation	Ensure PTW & Isolation, clean all the valves with cleaning agents, check for any leakage &attend by tighteningthe gland or bonnet bolts, apply anticorrosive spray to the valve stem and gland. Clean the associated pipe lines & heater shell externals. Free the valve if any in defect. Ensure more care & do not operate any valves Clean the area after completion of work	PM	4	No.	1481.05	5924.20
26	PM of LP-HEATER-2 and connected valves (no. of valves below 2"-39nos., above 2"-5nos) during plant in operation	---do---	PM	4	No.	1481.05	5924.20
27	PM of LP-HEATER-3 and connected valves (no. of valves below 2"-33nos., above 2"-4nos&above 8"-2nos)	---do---	PM	4	No.	1481.05	5924.20
28	PM of HP HEATER-5 and connected valves (no. of valves below 2"-66nos., above 2"-4nos&above 8"-4nos) during plant in operation	---do---	PM	4	No.	2143.52	8574.08
29	PM ofHP-HEATER-6 and connected valves (no. of valves below 2"-68nos., above 2"-4nos, & above 8"-4) during plant in operation	---do---	PM	4	No.	2143.52	8574.08
30	PM of PRDS STN. and connected valves (no. of valves below 2"-83nos., above 2"-12nos&above 8"-6) during plant in operation	Ensure PTW & Isolation, clean all the valves with cleaning agents, check for any leakage &attend by tighteningthe gland or bonnet bolts, apply anticorrosive spray to the valve stem and gland. Clean the associated pipe lines & heater shell externals. Free the valve if any in defect. Ensure more care & do not operate any valves Clean the area after completion of work	PM	4	No.	2806.00	11224.00
31	PM of Feed control and connected valves no. of valves (below 2"-29 nos & above 8"-15) during plant in operation	---do---	PM	6	No.	1481.05	8886.30

32	PM of Deaerator and connected valves (no. of valves below 2"-121nos., above 2"-26nos & above 8"-15) during plant in operation	Ensure PTW & Isolation, clean all the valves with cleaning agents, check for any leakage & attend by tighteningthe gland or bonnet bolts, apply anticorrosive spray to the valve stem and gland. Free the valve if any in defect, Clean the associated pipe lines, deaeration tank & FST shell externals. Ensure more care & do not operate any valves. Clean the area after completion of work	PM	6	No.	2806.00	16836.00
33	HP flash tank Connected all valves inspection & cleaning	Ensure PTW & Isolation, clean all the valves with cleaning agents, check for any leakage &attend by tighteningthe gland or bonnet bolts, apply anticorrosive spray to the valve stem and gland. Clean the associated pipe lines & shell externals. Ensure more care &do not operate any valves Clean the area after completion of work	PM	4	No.	1153.85	4615.40
34	LP flash tank Connected all valves inspection & cleaning	---do---	PM	4	No.	1153.85	4615.40
35	Air compressor ACW valves inspection & cleaning	Ensure PTW & Isolation, clean all the valves with cleaning agents, check for any leakage &attend by tighteningthe gland or bonnet bolts, apply anticorrosive spray to the valve stem and gland. Clean the associated pipe lines externals. Ensure more care &do not operate any valves. Clean the area after completion of work	PM	4	No.	1153.85	4615.40
36	Air dryer valves inspection & cleaning	Ensure PTW & Isolation, clean all the valves with cleaning agents, check for any leakage &attend by tighteningthe gland or bonnet bolts, apply anticorrosive spray to the valve stem and gland. Clean the associated pipe lines & tower externals. Ensure more care &do not operate any valves. Clean the area after completion of work	PM	4	No.	1153.85	4615.40

37	MS line all valves inspection & cleaning	Ensure PTW & Isolation, clean all the valves with cleaning agents, check for any leakage &attend by tighteningthe gland or bonnet bolts, apply anticorrosive spray to the valve stem and gland. Clean the associated pipe lines externals. Ensure more care &do not operate any valves. Clean the area after completion of work	PM	4	No.	1153.85	4615.40
38	HRH & CRH line all valves inspection & cleaning	---do---	PM	4	No.	1153.85	4615.40
39	QC/SC (All Extractions) NRV inspection & Cleaning	---do---	PM	4	No.	1153.85	4615.40
40	BFP discharge & suction line all valves inspection & cleaning	---do---	PM	4	No.	1153.85	4615.40
41	CEP discharge & suction line all valves inspection & cleaning	---do---	PM	4	No.	1153.85	4615.40
42	Remove insulation& cladding sheet from valve upto 4"size and apply back	Ensure PTW & Isolation, remove insulation as per the instruction of Enginner and apply after completion of work Clean the area after completion of work	BD	30	No.	167.64	5029.20
43	Remove insulation& cladding sheet from valve above 4"size and apply back	Ensure PTW & Isolation, remove insulation as per the instruction of Enginner and apply after completion of work Clean the area after completion of work	BD	20	No.	167.64	3352.80
44	Servicing of safety relief valve upto 1"	Ensure PTW & Isolation, Remove the insulation, if any. Dismantle the valve, inspect for any damage & rctify by lapping or replacing the parts. Restore the insulation. Float the safety valve after charging. Clean the area after completion of work	BD	2	No.	697.46	1394.92
45	servicing of safety valve above 1" & upto 4" size	-do-	BD	6	No.	1770.58	10623.48
46	servicing of safety valve above4" & upto 10" size	-do-	BD	4	No.	5157.70	20630.80
47	Pressure setting of safety valve in air/water/steam line of any size	Ensure PTW & Isolation, Remove the hand lever & cover if required. Open the lock nut & adjust the nut to the required pressure as per the instruction of the engineer in charge. Restore it. Clean the area after completion of work	BD	8	No.	502.10	4016.80

48	NRV top bonnet tightening up to 20" size	Ensure PTW & Isolation, Remove the insulation, clean the bonnet nuts and surface and tight the nuts sequentially as per the instruction of engineer. Restore the insulation. Clean the area after completion of work	BD	4	No.	424.48	1697.92
49	Removal of pneumatic / electrical actuator in case of respective dept. are not able to remove the same and refix the same upto 100NB size	Ensure PTW & Isolation, Remove the actuators as per the instruction of engineer incharge. Clean the area after completion of work	BD	4	No.	675.94	2703.76
50	---do---- above 100NB upto 200NB	----do----	BD	2	No.	767.14	1534.28
51	---do---- above 200NB	----do----	BD	1	No.	767.14	767.14
52	operation of valves as per the instruction of operation dept.	Open or close the valve as per the instruction of the operation engr/operator. Clean the area after completion of work	BD	600	No.	81.79	49074.00
53	Replacement of threaded valves upto 2" size.	Ensure PTW & Isolation, Replace the old valve by a new valve applying teflon tape on the threaded ends. Clean the area after completion of work	BD	10	No.	167.64	1676.40
54	Any valve freeness checking.	Ensure PTW & Isolation, Open/Close the valve as per the instruction of IEC. Lubricate the stem nut & spindle. Loose/tight the gland follower if required. Clean the area after completion of work	BD	100	No.	167.64	16764.00
55	Flap type NRV servicing (as in GSC fan, Oil vapour exhaust fan, etc.)	Ensure PTW & Isolation, Remove the NRV & clean the flange, disc & seat. Check for passing. If requred replace it. Restore with new gasket/O-rings Clean the area after completion of work	BD	8	No.	702.84	5622.72
56	Servicing of BD/BPE valve of HP-Bypass spray system.	Ensure PTW & Isolation, Decouple the valve spndle. Dismantle the valve with care. Inspect the stem & seat. if required weld the eroded area. If required replace or lapping of stem & seat to be done. Check the satisfactory contact & assemble it. Take trial successfully. Clean the area after completion of work	BD	4	No.	10659.89	42639.56

57	Servicing HP-Bypass Main Valve	Ensure PTW & Isolation, Decouple the valve spndle. Dismantle the valve with care. Inspect the stem & seat. if required weld the eroded area. If required replace or lapping of stem & seat to be done. Check the satisfactory contact & assemble it. Take trial successfully. Clean the area after completion of work	BD	1	No.	10659.89	10659.89
58	Replacement of HP bypass spray valve.	Ensure PTW & Isolation, Remove the damaged valve by cutting and insert the new valve. Edge prepairation, welding and heattreatment (if required) the valve as per procedure instructed by EIC. Apply the insulation. Clean the area after completion of work.	BD	1	No.	8866.24	8866.24
							1289330.75

ANNEXURE I2

ONLINE TUBE CLEANING

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total Estimated Cost (in Rs)
1	Overhauling of centrifugal pump	Ensure PTW & Isolation, Decouple and take out the pump to maintenance area. Dismantle the pump completely, check for any wear/tear/damages of parts such as shaft, sleeve, bearings, impeller etc. repair/replace if required. Always use graphite compound for assembly. Assemble the pump, install align and couple. Take the trial run ensure smooth operation. Clean the area after completion of work	BD	2	No.	5504.34	11008.68
2	PM of OLTC pump	Ensure PTW & Isolation, thoroughly clean the pump, pump base bolts, coupling bolts etc check for any wear/tear/damages of above and repair/replace if required. Check for any oil and water leakage, arrest the same. Clean the bowlchamber, check for any abnormalities of ball bowl chamber and attend if required. Align the pump if required and restore the system. Clean the area after completion of work	PM	24	No.	2768.32	66439.68

3	Attending gland leakages of OLTC pump.	Ensure PTW & Isolation, Remove the gland follower and replace the old packing by new packing. Clean the area after completion of work	BD	8	No.	504.52	4036.16
4	Oil top in OLTC Pump	Ensure PTW & Isolation, Top up the oil in the pump to the required level in presence of turbine Operator. Clean the area after completion of work	PM	16	No.	504.29	8068.64
5	OLTC ball separator screen inspection. Each pass has one separator screen	Ensure PTW & Isolation, Open the man hole, inspect the screen for any chocking & abnormalities; rectify it, clean the screen & box up with new gasket. Clean the area after completion of work	PM	8	No.	4050.19	32401.52
6	Charging of OLTC Pass with Sponze balls	Ensure PTW & Isolation, Squeeze the balls & reliev air from it, open ball collector cover and charge all balls (400 nos balls). Close ball collector Clean the area after completion of work	PM	12	No.	379.68	4556.16
7	Inspection of Flapper	Ensure PTW & Isolation, Open the top cover of collector, check operation of flapper, if found any abnormalities, service, check spring for any damage and replace and box up. Clean the area after completion of work	BD	8	No.	1000.99	8007.92
8	Alignment of OLTC Pump	Ensure PTW & Isolation, Decouple the pump, check the alignment, if require correction, couple the pump, take trial. Clean the area after completion of work	BD	4	No.	2043.95	8175.80
9	Gland tightening of pump.	Ensure PTW & Isolation, Adjust the gland by tightening to minimise leakage Clean the area after completion of work	BD	20	No.	83.82	1676.40
							144370.96

ANNEXURE J2							
GSC FAN							
Item No.	**Item of Work**	**Scope of work**	**Nature of Mntc.**	**Qty for 2yr**	**Unit**	**Estimated Unit cost (in Rs)**	**Total Estimated Cost (in Rs)**
1	PM of GSC exhaust fan.	Ensure PTW & Isolation, thoroughly clean the fan, Check for cracks/damages of base bolts. Check the impeller and casing for any cracks, damages, looseness and repair if required. Clean the area after completion of work	PM	24	No	2019.72	48473.28
2	Maintenance of impeller	Ensure PTW & Isolation, Open the casing cover. Check for looseness of impeller, tighten/adjust the clearance with casing, repair / replace if required and restore. Clean the area after completion of work	BD	4	No.	2701.02	10804.08
							59277.36

ANNEXURE K2							
VACUUM PUMP							
Item No.	**Item of Work**	**Scope of work**	**Nature of Mntc.**	**Qty for 2yr**	**Unit**	**Estimated Unit cost (in Rs)**	**Total Estimated Cost (in Rs)**
1	PM of vacuum pump	Ensure PTW & Isolation, thoroughly clean the pump base, bolts, coupling bolts, frame, body, cooler and connected fittings. Check for looseness/crackness of foundation bolts, base bolts, coupling bolts etc retight/replace if required. Clean/replace suction strainer in sealing line, check for any air/water leakage attend if required. Check the bearing grease refill if required. Check the alignment if required correct the same and restore the system. Clean the area after completion of work	PM	24	No.	3487.30	83695.20

2	PM of Recirculation Pump	Ensure PTW & Isolation, thoroughly clean the pump base, bolts, coupling bolts, frame, body, cooler and connected fittings. Check for looseness/crackness of foundation bolts, base bolts, coupling bolts etc retight/replace if required. Check for any Oil/water leakage attend if required. Check the bearing grease refill if required. Check the alignment if required correct the same and restore the system. Clean the area after completion of work	PM	24	No.	2719.86	65276.64
3	Maintenanace of drive end bearing	Ensure PTW & Isolation, Decouple the pump, shift the motor from base, dismental all pipe lines, remove side covers, do arrangment to remove bearing from shaft, inspect bearing, If require, replace bearing and box up restore the system. Clean the area after completion of work	BD	1	No	5129.31	5129.31
4	Maintenanace of non-drive end bearing	Ensure PTW & Isolation, Dismental all pipe lines, remove side covers, inspect bearing, do arrangment to remove bearing from shaft, If require, replace bearing and box up restore the system. Clean the area after completion of work	BD	1	No	5129.31	5129.31
5	Replacement of Gland packing.	Ensure PTW & Isolation, remove gland follower, loosen the screws, push loosen the screws, push back the lantern ring. Remove old packing. Carefully clean the packing area. Check the lantern ring and shaft. Seen for wear & damage. It should be replaced if necessary. Insert new packing ring. Refit the lantern ring and remaining two packing rings. Push the gland rings and follower alongwith shaft into the housing and fit as per the requirement. Clean the area after completion of work	BD	8	No.	2266.39	18131.12

6	Overhauling of Vacuum Pump.	Ensure PTW & Isolation, Decouple the pump/flanges. Remove the bearing housing take out the pump, inspect the rotor and casing for any abnromalities. Replace the gasket/'O' ring/valve plate/gland packing/worn out parts/etc. if requires. Assemble and take trial run. Clean the area after completion of work	BD	2	No.	16277.29	32554.58
7	Inter cooler Cleaning, Tube leakage identification and Hydrotest.	Ensure PTW & Isolation, remove cooler end cover, cleaning of tube bundle, hyrotest the tube bundle, identify the tube leakage, plug and restore. Clean the area after completion of work	BD	8	No.	4818.26	38546.08
8	Gland follower tightening.	Ensure PTW & Isolation, Attend the gland leakage by tightening as per instruction of I/C. Clean the area after completion of work	BD	16	No.	81.79	1308.64
9	Replacement of tube bundle.	Ensure PTW & Isolation, Remove the end cover. Remove the old tube bundle and insert the new tube bundle. Replace all the gaskets wherever it is required. Clean the area after completion of work	BD	1	No.	2354.99	2354.99
10	Cleaning of CCW Strainer of Vacuum Pump	Ensure PTW & Isolation, Open Flange, remove strainer element, clean or replace as per instruction of EIC. Box up and restore Clean the area after completion of work	PM	8	No.	756.38	6051.04
11	Alingment of Vacuum Pump/RC Pump-1no.	Ensure PTW & Isolation, Decouple the pump, check the alignment, if require correction, couple the pump, take trial. Clean the area after completion of work	BD	4	No.	1005.83	4023.32
12	Greasing of DE/NDE Bearing	Ensure PTW & Isolation, Check the bearing grease condition. If required remove and refill Clean the area after completion of work	BD	8	No.	502.93	4023.44
13	Coupling Guard Opening	Ensure PTW & Isolation, open coupling guard, inspect and box-up Clean the area after completion of work	BD	4	No.	165.60	662.40
							266886.07

ANNEXURE L2

GENERATOR AND EXCITER

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total Estimated Cost (in Rs)
1	Opening of exciter covers for cleaning.	Ensure PTW & Isolation, Remove the exciter hood. If required remove the air cooler, PMG and main exciter top half. Remove the diode wheel cover. Clean the base, check the gasket for any air leakage from the hood if require replaced and make proper sealing. Clean exciter cooler. After Cleaning of electrical equipment by electrical dept. box-up and check the PMG and main exciter air gap and restore the system to the normal. Clean the area after completion of work	PM	4	No.	13445.85	53783.40
2	Exciter cooler hydrotest (one no.)	Ensure PTW & Isolation, Remove the exciter hood. Ensure water isolation remove the cooler, make the arrangement of hyrotest at 8 kg/cm2.Clean all tubes by petrol from outside. Check for any leakage replace all the gaskets and restore the system. Clean the area after completion of work	PM	4	No.	5538.43	22153.72
3	Generator cooler hydrotest (one no.)	Ensure PTW & Isolation, Put the dummy in the air path. Isolate the cooler from water side. Open the flange connection & remove cooler. Do necessary arrangement for the hydrotest. Do the hydrotest and check the location of leakage from gasket and tube. Open the water box, remove the old gasket and put the new gasket and box up. Do the hydrotest upto 8 kg/cm2. Paint cooler body from outside. Put the cooler back and normalise. Clean the area after completion of work	PM	10	No.	12586.37	125863.70
4	Hand barring of the turbine for One hour.	Ensure PTW & Isolation, Remove the hand barring top cover from brg. Pedestal-2, Put the lever and do the hand barring. If required replace old gasket of top cover for any leakage. Clean the area after completion of work	BD	10	No.	660.46	6604.60

5	General Cleaning of TG set, its stop & control valves with HP & LP bypass valves	Ensure PTW & Isolation, Remove the dust and oil with cloth from HP/IP turbine, LP turbine, Generator, Exciter, Brg. Pedestal 1,2,3,4,5 & 6, Clean all fasteners check for any cracks/looseness.Check turbine all keys/lubrite packers/LP turbine girder base washer. Thoroughly clean the actuators from dust, oil etc. Check for any oil leakages, check the coupling for any bolt looseness and attend, check all fastners for any looseness/cracks etc and attend. If require replace the filters. Clean the area after completion of work	PM	120	No.	2454.11	294493.20
6	Generator air cooler air filter cleaning.	Ensure PTW & Isolation, Remove the air filter and install the spare filter, clean the removed filter and keep it as spare. Clean the area after completion of work	PM	72	No.	972.26	70002.72
7	Exciter cooler make up air filter cleaning (four nos.)	Ensure PTW & Isolation, Remove the air filter, clean it by air and install back after cleaning. Clean the area after completion of work	PM	6	No.	568.83	3412.98
8	TG shaft lift setting.	Ensure PTW & Isolation, ensure isolation of complete TG system, after stopping barring gear. Set the dial gauges on the shaft of all bearings. Adjust the lift by setting jacking oil pressure. Finally cover the jacking oil valves and lock. Clean the area after completion of work	BD	3	No.	2657.97	7973.91
9	Inspection of generator during shutdown.	Ensure PTW & Isolation, Open the generator inspection door. Inspect the internals for any fastener’s looseness; tight it if required or for any foreign particles. Apply sealant (M-seal, etc.) if required. Check the functioning of LLD. Check the door sealing. if required replace it applying adhesives. Clean the dust & oil thoroughly. Close the door & apply aluminium foil strips on the door. Clean the area after completion of work	BD	4	No.	2832.91	11331.64

10	LP turbine diaphragm & gasket replacement. -one no.	Ensure PTW & Isolation, Remove the bolts & the diaphragm cage. Check for any leakages as per the instruction of in charge. Replace the diaphragm & gasket. Restore the cage in its position. Clean the area after completion of work	BD	5	No.	2674.10	13370.50
11	LP Turbine rotor inpection during annual shutdown. - per unit / LP Turbine Spare rotor-1 No. positioning & rotation on stand.	Ensure PTW & Isolation, ensure stopping of Barring gear, opening the Diaphragam of LP turbine outer casing, Check the rotor blades by moving the rotor and casing condition as per the instruction of engineer in charge with proper care, box up the Diaphragam with new gasket and lead sheet. Clean the area after completion of work. In case of spare rotor removal of cover, if required shifting / position on stand and as per EIC requirment rotation of rotor with due care to avoid any damage to rotor. After rototion proper covering of rotor as per the instruction of Engineer incharge.	PM	4	No.	3982.92	15931.68
12	Turbine/Generator/exciter bearings Jacking oil hose pipe inspection-one no.	Ensure PTW & Isolation, ensure stopping of Barring gear, bearing pedestal opening and inspection/replacement of jacking oil hose pipe with proper care. Box up of pedestal, ensure all the relevent checks as per the instruction of Engineer incharge. Box up and normalise the system. Clean the area after completion of work	BD	8	No.	8223.43	65787.44
13	HP-IP front & rear bearing & LP-Rear bearing -- 400mm Dia (Bearing no.1to3) inspection-one no.	Ensure PTW & Isolation, ensure stopping of Barring gear, opening of pedestal cover and dismantling of bearing, remove top and bottom half of bearing from the position by supporting the shaft by shaft supporting device. inspection of bearing for any damage, carrying out of DP & UT test, Checking (toc/soc) oil clearances. Inspection / replacement of jacking oil hose pipe with proper care. Assembly of bearings and pedestal. If required bearing to be replaced with new bearing. Check the blue contact of	BD	1	No.	26083.96	26083.96

		bearing, check the loading of bearing, ensure all the relevent checks as per the instruction of Engineer incharge. Box up and normalise the system. Clean the area after completion of work					
14	Generator Front & Rear Bearing 360mm Dia (Bearing no.4&5) inspection-one no.	Ensure PTW & Isolation, ensure stopping of Barring gear & PTW, opening of pedestal cover and dismantling of bearing, remove top and bottom half of bearing from the position by supporting the shaft by shaft supporting device. inspection of bearing for any damage, carrying out of DP & UT test, Checking (toc/soc) oil clearances. Inspection / replacement of jacking oil hose pipe with proper care. Assembly of bearings and pedestal. If required bearing to be replaced with new bearing. Check the blue contact of bearing, check the loading of bearing, ensure all the relevent checks as per the instruction of Engineer incharge. Box up and normalise the system. Clean the area after completion of work	BD	1	No.	25631.80	25631.80
15	Exciter Bearing (bearing no.6) inspection-one no.	Ensure PTW & Isolation, ensure stopping of Barring gear, opening of pedestal cover and dismantling of bearing, remove top and bottom half of bearing from the position by supporting the shaft by shaft supporting device. inspection of bearing for any damage, carrying out of DP & UT test, Checking (toc/soc) oil clearances. Inspection / replacement of jacking oil hose pipe with proper care. Assembly of bearings and pedestal. If required bearing to be replaced with new bearing. Check the blue contact of bearing, check the loading of bearing, ensure all the relevent checks as per the instruction of Engineer incharge. Box up and normalise the system. Clean the area after completion of work	BD	1	No.	22894.06	22894.06

16	Turbine/Generator/Exciter bearing Oil guard/oil catcher Clearance setting (Front & Rear)	Ensure PTW & Isolation, Check the clearance of oil guard/oil catcher. Remove the oil guard/catcher, cleaning and inspection of fins for any damage. If required refinning & resetting and box up. Clean the area after completion of work	BD	3	No.	11626.03	34878.09
17	Servicing of HP/IP stop/control valve	Ensure PTW & Isolation, Removal of Hydraulic actuator and extension piece. Dismentaling of valve, inspect the internals as per E-I/C for any abnormalities, if required repair or replace, seat lapping, check the blue contact and assemble. Mount and couple the actuator and take trial for valve stroke. Clean the area after completion of work	BD	4	No.	41385.20	165540.80
18	Turbine & Generator Bearing pedestal Top Cover removal for work i.e instrument checking, internal cleaning etc	Ensure PTW & Isolation, ensure stopping of Barring gear, Opening of bearing pedestal top cover. inspection & cleaning as per instruction of engineer in charge. Box up of pedestal, ensure all the relevent checks as per the instruction of Engineer incharge. Box up and normalise the system. Clean the area after completion of work	BD	2	No.	9796.43	19592.86
19	HP-IP front & rear bearing & LP-Rear bearing -- 400mm Dia (Bearing no.1to3) Replacement-One No.	Ensure PTW & Isolation, Removal of Bearing. Shifting of new bearing from warehouse to TG Floor. Checking of bearing dimentions as per instruction of Engineer incharge. Inspection of New bearing for any damage, carrying out of DP & UT test. blue matching of bearing torus with torus plate. positioning of bearing and checking of all the clearences. if required Scaping of bearing to make required clearences and seal bore reading. Check the blue contact of bearing, check the loading of bearing, ensure all the relevent checks as per the instruction of Engineer incharge. Assembly of bearings and pedestal. Box up and normalise the system. Clean the area after completion of work	BD	1	No.	34087.49	34087.49

20	Generator Front & Rear Bearing 360mm Dia (Bearing no.4&5) Replacement- One No.	Ensure PTW & Isolation, Removal of Bearing. Shifting of new bearing from warehouse to TG Floor. Checking of bearing dimentions as per instruction of Engineer incharge. Inspection of New bearing for any damage, carrying out of DP & UT test. blue matching of bearing with pedestal. positioning of bearing and checking of all the clearences. if required Scaping of bearing to make required clearences and seal bore reading. Check the blue contact of bearing, check the loading of bearing, ensure all the relevent checks as per the instruction of Engineer incharge. Assembly of bearings and pedestal. Box up and normalise the system. Clean the area after completion of work	BD	1	No.	33731.79	33731.79
							1053150.34

ANNEXURE M2

HYDRAULIC ACTUATORS

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total Estimated Cost (in Rs)
1	Replacement of servo valve/pilot valve/puppet valve/blocking element/trip valve/solenoid valve/cartridge valve/relief valve of HP- bypass/LP-Bypass/Turbine control oil system/HPSV/HPCV/IPSV/ IPCV valve actuators. (one no.)	Ensure PTW & Isolation, replace the servo valve/pilot valve/puppet valve/blocking element/trip valve/solenoid valve/cartridge valve/relief valve of HP- bypass/LP-Bypass/Turbine control oil system/HPSV/HPCV/IPSV/ IPCV valve actuators with new valve as per instruction of engineer in charge. Clean the area after completion of work	BD	1	No.	9299.63	9299.63
2	Replacment of filter element of HP/IP or LP-Bypass valve actuators. (one filter)	Ensure PTW & Isolation, replace the filters element with new filter element. Clean the area after completion of work	BD	8	No.	861.05	6888.40
3	Attending oil leakage in the actuator body.	Ensure PTW & Isolation, Check the oil leakage if any from drain plug/ vent plug etc. attend the same by tightening. Clean the area after completion of work	BD	1	No.	183.80	183.80

4	O'ring replacement of HP/IP & LP bypass actuator supply & return oil line.	Ensure PTW & Isolation, ensure isolation of the leaking line, open the flange remove the damaged "O" ring and check for any abnormalities. Replace the old "O" ring with new O-ring and restore the system. Clean the area after completion of work	BD	1	No.	506.96	506.96
5	Overhauling of HP-Bypass BD/BPE valve actuator.	Ensure PTW & Isolation, Decouple the valve spindle. Dismantle the actuator with care. Inspect the piston seal & rod seal. If required replace the seals & assemble it. Take trial successfully. Clean the area after completion of work	BD	1	No.	3302.92	3302.92
6	Overhauling of HP-Bypass valve (main) actuator.	Ensure PTW & Isolation, Decouple the valve spindle. Dismantle the actuator with care. Inspect the piston seal & rod seal. If required replace the seals & assemble it. Take trial successfully. Clean the area after completion of work	BD	1	No.	3302.92	3302.92
7	Overhauling of LP-Bypass stop/control valve actuator	Ensure PTW & Isolation, Decouple the valve spindle. Dismantle the actuator with care. Inspect the piston seal & rod seal. If required replace the seals & assemble it. Take trial successfully. Clean the area after completion of work	BD	1	No.	3378.30	3378.30
							26862.93

ANNEXURE N2

ACW AND CCW PUMPS

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of ACW Pump.	Ensure PTW & Isolation, Decouple the pump. Check the alignment, if required correct the same. Tighten / replace the gland to mimimise gland leakage. Tighten the pump assembly and foundation bolt. Check the condition of Bearing and seal. Grease the pump. Align and couple the pump. Clean the equipment. Take successful trial run. Clean the area after completion of work	PM	36	No.	3420.03	123121.08
2	PM of CCW Pump.	-do-	PM	24	No.	3420.03	82080.72

3	Gland tightening of pump.	Ensure PTW & Isolation, Adjust the gland by tightening to minimise leakage Clean the area after completion of work	BD	105	No.	89.88	9437.40
4	Greasing in pump.	Ensure PTW & Isolation, Issue grease from warehouse and apply grease with grease gun in bearings. Clean the area after completion of work	BD	12	No.	257.50	3090.00
5	Gland replacement of ACW/CCW pump.	Ensure PTW & Isolation, Remove the damage gland and replace with new. Adjust the gland to minimise leakages. Take successful trial run. Clean the area after completion of work	BD	6	No.	1378.78	8272.68
6	Decoupling, Alignment and Coupling of pumps.	Ensure PTW & Isolation, Remove coupling guard. Decouple the pump and motor. Check the alignment, if required. Correct the same. Couple and tighten the coupling bolt. Take trial run for successful operation. Clean the area after completion of work	BD	8	No.	2095.48	16763.84
7	Overhauling of ACW pump.	Ensure PTW & Isolation, Shift material from stores. Decouple the pump. Dismantle the pump. Inspect all pump parts. Replace / Repair the damage parts if any. Assemble the pump. Fix the motor and coupling. Align and couple the pump. Clean the equipment. Take successful trial run. Clean the area after completion of work	BD	3	No.	8905.61	26716.83
8	Overhauling of CCW pump.	-do-	BD	3	No.	8905.61	26716.83
9	Suction strainer cleaning CCW pump.	Ensure PTW & Isolation, Remove filter element and clean with water / air. Refit the same. Check for any lekage. Clean the area after completion of work	BD	8	No.	2081.33	16650.64
10	Replacement of coupling Pump & Motor side.	Ensure PTW & Isolation, Issue materials from store. Remove coupling guard and coupling. Fix new coupling. Align and couple the same. Clean the area after completion of work	BD	1	No.	5307.87	5307.87

11	Servicing of NRV 350 NB.	Ensure PTW & Isolation, Open NRV. Check seat, disc and other internal parts. Repair the seat. Lap seat and check the surface for blue match. Assemble and Box up. Clean the area after completion of work	BD	2	No.	7496.88	14993.76
12	Replaceement of mechanical seal of ACW pump	Ensure PTW & Isolation, Issue mechanical seal from store. Dismentle mechanical seal. Erect new mech seal & take trial run. Clean the area after completion of work	BD	2	No.	2171.21	4342.42
13	Servcing of mechanical seal of ACW pump	Ensure PTW & Isolation, Issue necessary spares from store. Dismentle mech seal. Inspect intenal & replace if requied. Assemble mech. Seal & take trial run. Clean the area after completion of work	BD	2	No.	2070.86	4141.72
14	Replacement of NRV 350 NB.	Ensure PTW & Isolation, Remove the valve. Clean the flange surface. Cut and put new gasket. Fix new valve. Tighten the bolt. Clean the area after completion of work	BD	2	No.	3813.90	7627.80
							349263.59

ANNEXURE O2

TG MISC. JOB

Item No.	Item of Work	Scope of work	Nature of Mntc.	Qty for 2yr	Unit	Estimated Unit cost (in Rs)	Total Estimated Cost (in Rs)
1	Cleaning of spillage oil per sq mtr area	Ensure PTW & Isolation, Clean the spillage oil from any surface with in TG building area with cotton wast or cloth and dispose i out. Clean the area after completion of work	BD	450	sq. mtr.	97.94	44073.00
2	Fabrication & erection of platform/structural supports.	Ensure PTW & Isolation, Fabricate & erect the platform/structural support as per the instruction of the engineer in charge and do (1 + 2) coat of painting. Clean the area after completion of work	BD	600	KG	26.23	15738.00

3	Assisting supports to the external agency to facilitate maintenance work.	Ensure PTW & Isolation, Lift the special tools & tackles to the work place as directed by the engineer in charge to carry out the work by external agencies such as on-line leakage attending/rotating equipment inspection/etc. Clean the area after completion of work	BD	75	Hours	333.26	24994.50
4	Cleaning of scrap & debris incase the respective department not able to clean it.	Ensure PTW & Isolation, Remove the debris/ scrap from the site & dump them at required place as instructed by the engineer in charge. Clean the area thoroughly. Arrange the required material properly. Clean the area after completion of work	BD	75	sq. mtr.	171.67	12875.25
							97680.75

Note: The rates shall include all labour cost, equipments, supervision, consumables, tools, tackles, all taxes & duties (excluding GST).

PACKAGE - III :- Surat Lignite Power Plant - 4X125 MW, Surat Lignite Power Plant, Unit # I & II: Annual Maintenance Contract for Balance of Plant Equipments for two years 2025-27.

Part :A1

VERTICAL TURBINE PUMP

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of Bodhan River water pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the pump and motor. Check the alignment, if required correct the same. Tighten / replace the gland to mimimise gland leakage. Tighten the pump assembly and foundation bolt. Check oil condition / level, if required replace / top up.	PM	3	No	2673.79	8021.37
2	PM of CW pump	- do -	PM	30	No	2673.79	80213.70
3	PM of Raw water pump	- do -	PM	18	No	2673.79	48128.22
4	Bearing or ratchet replacement / servicing of TBH in River water pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple pump and motor. Remove motor. Drain oil. Dismantle thrust bearing housing. Check worn out parts, if required replaces the same. Assemble the thrust bearing housing. Fill the oil. Fix the motor. Align and couple the pump. Clean the equipment. Take the trial. All generate scrape to be discard at designated place.	BD	1	No	10402.45	10402.45
5	Bearing or ratchet replacement / servicing of TBH in CW pump	-do -	BD	1	No	10402.45	10402.45
6	Bearing or ratchet replacement / servicing of TBH in Raw Water Pump	-do -	BD	1	No	10402.45	10402.45
7	Overhauling of River water pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Remove the motor. Dismantle the pump. Inspect all pump parts. Replace / Repair the damage parts if any. Assemble the pump. Clean and paint the pump. Fix the motor and	BD	1	No	76453.03	76453.03

		coupling. Checking the blue contact between motor and motor stool if required. Align and couple the pump. Clean the equipment.					
8	Overhauling of CW pump	- do -	BD	1	No	73510.49	73510.49
9	Overhauling of Raw Water Pump	- do -	BD	2	No	40988.62	81977.24
10	Cleaning of Coarse screen in CW Pump & Raw water pump.	Ensure permit to work & safe work place. Isolate the screen by putting stop log. Lift the screen. Clean the screen by air / water. Check screen bolt if required replace the same. Put the screen. Lift the stop log.	BD	20	No	989.55	19791.00
11	Lifting and lowering of stop log & gates for Raw water & CW pump.	Ensure permit to work & safe work place. Lift the stop log with electric hoist and lowered the same as an when required.	BD	3	No	989.55	2968.65
12	Replacement of U Bolt in stop log & screen.	Ensure permit to work & safe work place. Shift bolt from stores, Cut the old bolt. Fix new one	BD	2	No	1525.57	3051.14
13	Attending leakage of 900NB River water pipe line	Ensure permit to work & safe work place. Excavation, leakage identification & required power supply will be given by GIPCL at site. Shift tools-tackles, welding m/c, dewatering pump, cutting set & required manpower to site. Leakage attending with patch work or socket welding.	BD	8	No	12653.84	101230.72
						PART TOTAL	**526552.91**

Part :B1

MISC. HORIZONTAL CENTRIFUGAL PUMP

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of Boiler Fill pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the pump and motor. Check the alignment, if required corrects the same. Tighten / replace the gland to mimimise gland leakage. Tighten the pump assembly and foundation bolt. Check the condition of Bearing, oil seal and oil cup. Repaired / replace of oil cup if required. Check oil condition / level, if required replace / top up. Check spider if required replace the same. Align and couple the pump. Clean the equipment. Take successful trial run.	PM	8	No	2673.79	21390.32
2	PM of ECW Pump.	- do -	PM	12	No	2673.79	32085.48
3	PM of Service water pump.	- do -	PM	18	No	2673.79	48128.22
4	PM of Hot well make up pump.	- do -	PM	16	No	2673.79	42780.64
5	PM of Service water booster pump.	- do -	PM	1	No	2673.79	2673.79
6	PM of Plant potable water pump.	- do -	PM	8	No	2673.79	21390.32
7	PM of Colony potable water pump.	- do -	PM	8	No	2673.79	21390.32
8	PM of Chilled Water Booster pump.	- do -	PM	2	No	2673.79	5347.58
9	PM Boiler ACW Booster pump.	- do -	PM	24	No	2673.79	64170.96
10	PM of Solar water pump	- do -	PM	8	No	2673.79	21390.32
11	External Cleaning of Hot well make up pump.	Clean the pump & base frame completely.	PM	8	No	662.39	5299.12
12	External Cleaning of Boiler fill pump.	- do -	PM	4	No	662.39	2649.56

13	Oil seals replacement of pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove coupling guard. Decouple the pump and motor. Remove coupling, bearing cover and oil seal. Fix new oil seal and box up. Couple and align pump. Take trial run for successful operation.	BD	6	No	2777.68	16666.08
14	Overhauling of Boiler fill pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Decouple the pump. Drain oil. Dismantle the pump. Inspect all pump parts. Replace / Repair the damage parts, if any. Assemble the pump. Fill the oil. Fix the coupling. Align and couple the pump. Clean the equipment. Take successful trial run. All generate scrape to be discard at designated place.	BD	1	No	10242.04	10242.04
15	Overhauling of ECW Pump	- do -	BD	1	No	6058.56	6058.56
16	Overhauling of Service water pump	- do -	BD	2	No	6058.56	12117.12
17	Overhauling of Hot well make up pump.	- do -	BD	2	No	6058.56	12117.12
18	Overhauling of Service water booster pump	- do -	BD	1	No	6058.56	6058.56
19	Overhauling of Plant potable water pump.	- do -	BD	2	No	6058.56	12117.12
20	Overhauling of colony potable water pump	- do -	BD	2	No	6058.56	12117.12
21	Overhauling of chilled water booster pump	- do -	BD	1	No	6058.56	6058.56
22	Overhauling of Boile ACW Pump	- do -	BD	2	No	10146.22	20292.44
23	Overhauling of Solar pump	- do -	BD	2	No	10146.22	20292.44

24	Replacement / Repair of gland follower & its bolt at site.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Dismantle gland follower. Remove damaged part. Repair / replace the same. Assemble and Box up.	BD	6	No	678.54	4071.24
						PART TOTAL	**426905.03**

Part :C1

DM WATER PLANT

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of Clarified water pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the pump and motor. Check the alignment, if required corrects the same. Tighten / replace the gland to mimimise gland leakage. Tighten the pump assembly and foundation bolt. Check the condition of Bearing, oil seal and oil cup. Repairs / replace of oil cup if required. Check oil condition / level, if required replace / top up. Check spider if required replace the same. Align and couple the pump. Clean the equipment. Take successful trial run.	PM	18	No	2673.79	48128.22
2	PM of Degassed water pump	- do -	PM	12	No	2673.79	32085.48
3	PM of DM water transfer pump	- do -	PM	18	No	2673.79	48128.22
4	PM of Filter backwash pump of SSF system	- do -	PM	12	No	2673.79	32085.48
5	PM of Backwash waste Transfer pump of SSF system	- do -	PM	8	No	2673.79	21390.32
6	PM of regeneration pump.	- do -	PM	8	No	2673.79	21390.32

7	PM of DM Plant & CW Forebay Acid unloading pump	- do - & check the condition of mechanical seal if required adjust the same.	PM	12	No	2673.79	32085.48
8	PM of Alkali unloading pump	- do -	PM	8	No	2673.79	21390.32
9	PM of HP Dosing pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Check alignment of pump, correct if required. Check the coupling, bearing, gland condition. Replace if required. Lubricate the bearings/gear box. Clean the suction strainer. Box-up. Assist trial run. Adjust pressure if required.	PM	24	No	1340.93	32182.32
10	PM of Hydrazine dosing pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove pulley guard and belt. Check pump and motor pulley alignment, if required align the same. Tighten the pump assembly and foundation bolt. Check plunger seal / O-ring if required replace. Service valve assembly. Fix the belt. Put the pulley guard. Grease the plunger. Oil top up /change if required. Clean the suction strainer. Take successful trial run.	PM	12	No	1340.93	16091.16
11	PM of Marpholine dosing pump.	- do -	PM	12	No	1340.93	16091.16
12	PM of M B blower	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove pulley guard and belt. Check blower and motor pulley alignment, if required align the same. Tighten the blower assembly and foundation bolt. Fix the belt. Put the pulley guard. Grease the bearing. Oil top up / change if required. Clean suction filter. Take successful trial run.	PM	12	No	2673.79	32085.48
13	PM of Twin lobe air blower for SSF system	- do -	PM	8	No	2673.79	21390.32
14	PM of PSF blower	- do -	PM	8	No	1340.93	10727.44

15	PM of Degassed blower	- do -	PM	16	No	2673.79	42780.64
16	PM of agitator.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the agitator and motor. Check the alignment, if required correct the same. Couple and tighten the coupling bolt. Take trial run for successful operation.	PM	18	No	1340.93	24136.74
17	Oil seals replacement of pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove coupling guard. Decouple the pump and motor. Remove coupling, bearing cover and oil seal. Fix new oil sel and box up. Couple and align pump. Take trial run for successful operation.	BD	6	No	1540.64	9243.84
18	Mechanical seal replacement of in Acid / Alkali unloading pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove coupling guard. Decouple the pump and motor. Remove pump from assembly. Remove mechanical seal. Fix new mech. seal and box up. Couple and align pump. Take trial run for successful operation.	BD	2	No	1540.64	3081.28
19	Suction strainer cleaning of Blower / Pump.	Ensure permit to work & safe work place. Remove filter element and clean with water / air. Refit the same.	BD	6	No	1124.66	6747.96
20	Replacements of relief valve of HP Dosing pump.	Ensure permit to work & safe work place. Remove the valve. Replaced with new one.	BD	2	No	1340.93	2681.86
21	Plunger seal / O ring replacement of dosing pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove the damage gland completely and replace with new. Adjust the gland to minimize leakages. Take successful trial run.	BD	2	No	1013.77	2027.54

22	Servicing of valve assembly of dosing pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Dismantle valve assembly Remove all parts. Service all parts. Assemble the same. Take trial run.	BD	2	No	1340.93	2681.86
23	Overhauling of Clarified water pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Decouple the pump. Dismantle the pump. Inspect all pump parts. Replace / repair the damage parts if any. Assemble the pump. Fix the coupling and motor. Align and couple the pump. Clean the equipment. Take successful trial run.	BD	2	No	10322.78	20645.56
24	Overhauling of Degassed water pump	- do -	BD	1	No	6946.09	6946.09
25	Overhauling of DM water transfer pump	- do -	BD	1	No	5347.59	5347.59
26	Overhauling of regeneration pump.	- do -	BD	1	No	5339.51	5339.51
27	Overhauling of DM Plant & CW Forebay Acid unloading pump	- do -	BD	4	No	5347.59	21390.36
28	Overhauling of Alkali unloading pump	- do -	BD	2	No	5539.22	11078.44
29	Overhauling of MB blower.	- do -	BD	1	No	5347.59	5347.59
30	Overhauling of PSF blower	- do -	BD	1	No	5339.51	5339.51
31	Overhauling of Degassed blower	- do -	BD	1	No	5339.51	5339.51
32	Overhauling of HP Dosing pump	- do -	BD	2	No	5347.59	10695.18
33	Overhauling of Hydrazine dosing pump.	- do -	BD	1	No	5347.59	5347.59

34	Overhauling Marpholine dosing pump.	- do -	BD	1	No	5347.59	5347.59
35	Servicing of SAC vessel	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Open the vessel. Dismantle the internals. Cleaning of complete internals / strainers. Repair/replace internals if required. Refitting of internals. Box up.	BD	1	No	8053.67	8053.67
36	Servicing of SBA Vessel.	- do -	BD	1	No	8053.67	8053.67
37	Servicing of MB Vessel.	- do -	BD	1	No	8053.67	8053.67
38	Servicing of PSF / SSF vessel	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Opening the vessel. Top up the material upto required level. Box up.	BD	1	No	8053.67	8053.67
39	Inspection of degasser tower.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Open the tank top cover. Check the condition of pall ring if required top up. Box up.	BD	1	No	4030.87	4030.87
40	Servicing/replacement of ejector.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Dismantle the ejector. Check internal. Rectify / service the same. Box up.	BD	2	No	4030.87	8061.74
41	Decoupling, Coupling and Alignment of agitator.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the agitator and motor. Check the alignment, if required corrects the same. Couple and tighten the coupling bolt. Take trial run for successful operation.	BD	2	No	2673.79	5347.58
42	Replacement of Filter in Degasser, MB & PSF Air Blower.	Thoroughly clean the equipment & surrounding. Issue materials from store. Remove filter. Fix new Filter.	BD	2	No	1013.77	2027.54
43	Replacement of Silica Gel.	Ensure permit to work & safe work place. Dismantle Silica Gel container. Replace the silica gel. Put the silica gel.	BD	2	No	2035.62	4071.24

44	Back washing of PSF, SAC, SBA, MB	Ensure permit to work & safe work place. Open the top manhole cover. Charge with water. Box up.	BD	4	No	1357.08	5428.32
45	Inspection of Degasser / CST Tank.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Open manhole door. Check the internal. Replace gasket and box up.	BD	6	No	1005.70	6034.20
46	Opening and box up of top cover of AMT / other tank.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Open top door. Replace rubber gasket and box up.	BD	2	No	1005.70	2011.40
47	Level gauge servicing or replacement	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue materials from store. Remove level gauge. Servicing/cleaning or fix new level gauge.	BD	4	No	1013.77	4055.08
48	Replacement of Air scoring tube of AMT	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue new air scoring tube from store. Drain the tank. Remove air scoring tube & fit new air scoring tube	BD	1	No	1013.77	1013.77
PART TOTAL							**661094.38**

Part :D1							
RAW WATER CLARIFICATION PLANT							
Item No.	**Item of Work**	**Scope of Work**	**Nature of Mntc.**	**Qty.**	**UOM**	**Estimated Unit Cost (in Rs)**	**Total Estimated Cost (in Rs)**
1	PM of Raw Water Chlorination booster pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the pump and motor. Check the alignment, if required corrects the same. Tighten / replace the gland to mimimise gland leakage. Tighten the pump assembly and foundation bolt. Check the condition of Bearing, oil seal. Grease the bearing. Check spider if required replace the same. Align and couple the pump. Clean the equipment. Take successful trial run.	PM	4	No	2673.79	10695.16

2	PM of Caustic recirculation pump.	- do -	PM	4	No	2673.79	10695.16
3	PM of Sludge disposal pump (50 dia clarifier).	- do -	PM	12	No	2673.79	32085.48
4	PM of Alum dosing pump (50 dia clarifier).	- do -	PM	8	No	2673.79	21390.32
5	PM of Gear box in 50 dia clarifier (inner & outer drive)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the gearbox and motor. Check the alignment, if required corrects the same. Tighten the gearbox assembly and foundation bolt. Check the condition of Bearing, oil seal and view glass. Check oil condition / level, if required replace / top up. Check sprocket & chain if required replace the same. Align and couple the gearbox. Clean the equipment. Take successful trial run.	PM	8	No	2681.87	21454.96
6	PM of Flash mixer Gear box (50 dia clarifier).	- do -	PM	6	No	2673.79	16042.74
7	PM of Chlorination blower.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove pulley guard and belt. Check fan and motor pulley alignment, if required align the same. Tighten the fan assembly and foundation bolt. Fix the belt. Put the pulley guard. Grease the bearing. Oil top up/change if required. Take successful trial run.	PM	4	No	2673.79	10695.16
8	Servicing of CW, Raw water and portable water chlorination system.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Check entire system for chlorine leakage with ammonia solution. If leakage found attend the same and do pressure testing with nitrogen. Clean the gas filter. Check / service the vacuum regulator / ejector.	BD	6	No	2673.79	16042.74

9	Suction strainer cleaning of pump.	Ensure permit to work & safe work place. Remove filter element and clean with water / air. Refit the same.	BD	3	No	1005.70	3017.10
10	Bearing replacement in blower.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue bearing from store. Remove pulley guard and belt. Remove fan pulley. Remove the bearing from plumber block. Fix new bearing. Fix the pulley. Align the pulley and shaft. Put belt and pulley guard. Take successful trial run.	BD	1	No	2873.50	2873.50
11	Servicing of valve assembly of Alum dosing pump.	Thoroughly clean the equipment & surrounding. Ensure permit to work & safe work place. Dismantle valve assembly Remove all parts. Service all parts. Assemble the same.	BD	2	No	1340.93	2681.86
12	Overhauling of Raw water chlorination booster pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Decouple the pump. Dismantle the pump. Inspect all pump parts. Replace/repair the damage parts, if any. Assemble the pump. Fix the coupling and motor. Align and couple the pump. Clean the equipment. Take successful trial run.	BD	1	No	5339.51	5339.51
13	Overhauling of Caustic recirculation pump	- do -	BD	1	No	5339.51	5339.51
14	Overhauling of Chlorination blower.	- do -	BD	1	No	5339.51	5339.51
15	Overhauling of Sludge disposal pump (50 dia clarifier).	- do -	BD	2	No	5539.22	11078.44
16	Overhauling of Alum dosing pump (50 dia clarifier)	- do -	BD	1	No	5339.51	5339.51

17	Overhauling of gear box in 50 dia clarifier (inner & outer drive)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Decouple the gearbox. Dismantle the gearbox. Inspect all gearbox parts. Replace/repair the damage parts, if any. Assemble the gearbox. Fix the sprocket and motor. Align and couple the gearbox. Clean the equipment. Take successful trial run.	BD	1	No	5816.97	5816.97
18	Overhauling of gear box in flash mixer (50 dia clarifier)	- do -	BD	1	No	5816.97	5816.97
19	Servicing of drive chain mechanism of 50 dia clarifier (inner & outer drive)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Check the alignment of drive / driven sprocket. Check the chain. Align and tighten the chain and sprocket assembly and foundation bolt. Lubricate properly. Clean the equipment. Take successful trial run.	BD	2	No	8005.23	16010.46
20	Overhauling of Clarifier inner drive gear and liner assembly.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift the material from stores. Lift the outer bridge of clarifier. Decouple the chain drive. Dismantle the traction wheel. Inspect all liner and gear parts. Replace / Repair the damage parts if any. Assemble the inner drive. Fix the inner drive and coupling. Align and couple the gearbox. Clean the equipment. Take successful trial run.	BD	1	No	8253.38	8253.38
21	Plumber block / Bearing replacement in clarifier.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove coupling guard. Remove plumber block & bearing. Fix new bearing and box up. Couple and align. Take successful trial run.	BD	2	No	2410.81	4821.62

22	Replacement of Traction Wheel of 50 dia clarifier (outer drive)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift wheel from store. Lift the bridge & lock. Remove chain, sprocket, Bearing & wheel from shaft. Replace with new one and box up. Clean the equipment. Take successful trial run.	BD	2	No	5587.66	11175.32
23	Replacement of chain / sprocket in 50 dia clarifier (inner & outer drive)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove chain guard. Remove chain and sprocket. Check chain / sprocket. Dismantle sprocket. Replace with new one and box up. Clean the equipment. Take successful trial run.	BD	1	No	2673.79	2673.79
24	Replacement of pinion shaft / pinion in 50 dia clarifier (inner drive)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove chain and sprocket. Check pinion / shaft. Dismantle shaft / pinion. Replace with new one and box up. Fill oil. Clean the equipment. Take successful trial run.	BD	1	No	5730.85	5730.85
25	Servicing of ejector.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Dismantle the ejector and do the servicing. Box up	BD	2	No	2011.40	4022.80
26	Servicing of vacuum Regulator.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Dismantle the regulator and do the servicing. Box up	BD	10	No	1508.55	15085.50
27	Replacement of ejector.	Ensure permit to work & safe work place. Remove the ejector. Fix new one & Box up	BD	2	No	1005.70	2011.40
28	Replacement of vacuum Regulator.	Ensure permit to work & safe work place. Remove the vacuum regulator. Fix new one & Box up	BD	4	No	1005.70	4022.80
29	Replacements of relief valve of Dosing pump.	Ensure permit to work & safe work place. Remove the valve. Replaced with new one.	BD	1	No	1013.77	1013.77

30	Bearing replacement of 50 Dia Flash Mixture agitator shaft.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple gearbox and agitator. Remove agitator shaft from assembly. Remove bearing. Fix new bearing and box up. Couple and align pump. Take trial run for successful operation.	BD	1	No	3113.58	3113.58
31	Cutting of 3 mm Lead gasket from Lead sheet up to 50 mm Flange.	Cut the gasket with punch and grind ID & OD of the gasket.	BD	20	No	163.58	3271.60
32	Replacement of copper tube between Chlorine tonner & header. (CWPH & RWPH)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue copper tube from store. Remove copper tube & fit new copper tube.	BD	2	No	1007.31	2014.62
33	Greasing in Tonner roller.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue grease from ware house Clean and apply grease and make roller free.	BD	20	No	331.20	6624.00
PART TOTAL							**281590.09**

Part :E1

FIRE FIGHTING SYSTEM

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of Hydrant pump (Motor Driven).	Ensure permit to work & safe work place.Thoroughly clean the equipment & surrounding. Decouple the pump and motor. Check the alignment, if required correct the same. Tighten / replace the gland to mimimise gland leakage. Tighten the pump assembly and foundation bolt. Check the condition of Bearing, oil seal. Grease the bearing. Check spider if required replace the same. Align and couple the pump. Clean the equipment. Take successful trial run.	PM	12	No	2769.61	33235.32

2	PM of Hydrant pump (Engine Driven).	- do -	PM	4	No	2673.79	10695.16
3	PM of Spray pump.	- do -	PM	6	No	2769.61	16617.66
4	PM of jockey pump.	- do -	PM	8	No	2673.79	21390.32
5	PM of Fire Water booster pump (Motor Driven).	- do -	PM	6	No	2673.79	16042.74
6	PM of Fire Water booster pump (Engine Driven).	- do -	PM	4	No	2673.79	10695.16
7	PM of Diesel Engine (Hydrant pump).	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the engine and generator. Check the alignment, if required corrects the same. Tighten the assembly and foundation bolt. Check oil / coolant condition / level. Clean air filter. Check belt tightness / alignment if required tighten / align. Align and couple the engine. Clean the equipment. Take successful trial run.	PM	4	No	2673.79	10695.16
8	PM of Diesel Engine (fire water booster pump).	- do -	PM	4	No	2673.79	10695.16
9	Replacement of belt in Diesel Engine.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue belt from warehouse. Remove pulley guard. Remove old belt. Fix new belt. Check the alignment of pulley, if required correct the same. Put the pulley guard.	BD	1	No	1005.70	1005.70
10	Overhauling of Hydrant / Spray pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Decouple the pump. Dismantle the pump. Inspect all pump parts. Replace/Repair the damage parts if any. Assemble the pump. Fix the motor and coupling. Align and couple the pump. Clean the equipment. Take successful trial run.	BD	2	No	13714.54	27429.08
11	Overhauling of jockey pump.	- do -	BD	1	No	5339.51	5339.51

12	Overhauling of Fire water booster pump.	- do -	BD	1	No	6050.48	6050.48
13	Providing assistant for Diesel Engine servicing.	Ensure permit to work & safe work place. Providing manpower for assisting supplier representative to carry out servicing of diesel engine. Thoroughly clean equipment / base from oil and dirt. Check the tightness of all bolts of casing, foundation, etc. Boxup equipment. Assist trial run.	BD	2	No	2673.79	5347.58
14	Replacement of Deluge valve.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove the valve. Clean the flange surface. Cut and put new gasket. Fix new valve. Tighten the bolt.	BD	2	No	2019.47	4038.94
15	PM of Deluge Station valves and cleaning(total 28station)	Ensure permit to work & safe work place. Thoroughly clean the deluge valve station all valves (around 4 Nos.) check for any leakage of water from gland and tighten the gland/replace the gland packing. **Clean the Y-** Strainer .Check for any damage and inform to EIC and apply graphite spray on the spindle. Remove all the waste material from site.	PM	112	No	2673.79	299464.48
PART TOTAL							**478742.45**

Part :F1

INDUCED DRAFT COOLING TOWER

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of cooling tower fan & cell	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the fan and motor. check and correct the blue contact of motor and gearbox base if req. Check the alignment / blade angle if required correct the same. Tighten the fan assembly and foundation bolt. Check the condition of Bearing, oil seal, fan blade, grommet and oil indicator. replace if required. Check oil	PM	144	No	2788.45	401536.80

		condition / level, if required replace / top up. Clean cell, blades and nozzles. Clean the equipment. Take successful trial run.					
2	Oil top up in Gear Box.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Bring oil from store. Top up new oil upto required level.	BD	50	No	331.20	16560.00
3	Oil replacement in gear reducer.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Bring oil from store. Drain old oil and replace with new oil upto required level.	BD	4	No	1013.77	4055.08
4	Hose replacement in gear reducer.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Bring hose from store. Drain oil and replace hose with new. Fill the oil upto required level.	BD	4	No	1005.70	4022.80
5	Oil Seal replacement in gear reducer.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue oil seal from ware- house. Decouple shaft. Remove coupling and gear box cover. Replace oil seal. Assemble the same. Align and couple the gear box with motor. Clean the equipment. Take successful trial run.	BD	4	No	3384.77	13539.08
6	PVC Fills replacement in cooling tower. (per block) size.1.2mx1.2 mx0.6m	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue material from store. Replace damaged fins block by new one.	BD	100	no	1007.72	100772.00
7	Replacement of gear reducer in Cooling Tower.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue gear reducer from warehouse. Transport gear reducer upto cooling tower cell. Dismantle the fan assembly, shaft and coupling. Remove damaged gear reducer. Replace with new one. Check and correct the blue contact between gear box base and base	BD	2	No	17319.47	34638.94

		frame if req. Refix the blade and adjust blade angle & replace the hood. Align and couple the gear reducer. Fill new oil. Take successful trial run. Transfer damaged gear box to ware house/workshop.					
8	Replacement of Fan assembly in Cooling Tower.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue fan assy from warehouse. Transport upto cooling tower cell. Dismantle damaged fan assy. Replace with new one. Check and correct the blue contact between gear box and base frame. Adjust blade angle & replace the hood. Align and couple the gear reducer. Take successful trial run. Transfer damaged fan assembly to ware house.	BD	2	No	16911.98	33823.96
9	Replacement of drive shaft in Cooling Tower.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue drive shaft from warehouse. Transport upto cooling tower cell. Dismantle drive shaft. Replace with new one. Align and couple the gear reducer. Take successful trial run. Transfer damaged drive shaft to ware house.	BD	4	No	6761.46	27045.84
10	Gearbox new base frame installation or replacement of base frame.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue base frame from warehouse. Transport upto cooling tower cell. Decouple the gear box, dismantle fan assy, remove gear box installed the new base frame or replacement of existing damaged base frame as per instruction of EIC. check and correct the blue contact between gear box and base frame. Couple and alignment of gearbox. Assembly of fan blades. Adjust blade angle. Take successful trial run. Transfer damaged base frame to ware house.	BD	4	No	21887.26	87549.04

11	Replacement of coupling in Cooling Tower.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue materials from store. Remove coupling guard and coupling. Fix new coupling by heating. Align and couple the same.	BD	2	No	3384.77	6769.54
12	Blade angle adjustment of cooling tower fan	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove hub cover. Check blade angle. Adjust blade angle if required. Fix hub cover. Take successful trial run.	BD	18	No	3336.19	60051.42
13	Nozzle/diffuser ring replacement in nos.(one no.)	Issue material from store. Replace damaged nozzle with new one.	BD	150	No	327.16	49074.00
14	Pipe coupling & branch arm replacement in nos.	Ensure permit to work & safe work place. Issue material from store. Replace damaged with new one.	BD	25	No	343.31	8582.75
15	Replacement of Drift Eliminator block (Each block contains 5 to 10 drift eliminators)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue material from store. Drilling of hole for locating rod. Remove damage drift eliminators. Assemble the block with new drift eliminator.	BD	120	No	1516.62	181994.40
16	Opening and fitting of Fan Door.	Ensure permit to work & safe work place. Open the door and refit the same after work.	BD	10	No	327.16	3271.60
17	Hydro jet cleaning of Cooling tower (9Nos. Cell)	Shift canvas hose pipe to site. Necessary arrange before starting work. Clean the entire cooling tower fills by hydro jetting from bottom side.	BD	4	No	13261.34	53045.36
PART TOTAL							**1086332.61**

Part :G1

DIESEL ENGINE

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of Diesel Engine.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the engine and generator. Check the alignment, if required corrects the same. Tighten the assembly and foundation bolt. Check oil / coolant condition / level. Clean air filter. Check belt tightness / alignment if required tighten / align. Align and couple the engine. Clean the equipment. Clean the oil spillage if any. Check the diesel tanks for any leakage and clean the diesel tank. Take successful trial run of engine.	PM	12	No	2673.79	32085.48
2	Diesel top up in Diesel engine / Drum	Ensure permit to work & safe work place. Bring diesel from store and topped upto required level as per EIC.	BD	12	No	1013.77	12165.24
3	Engine oil top up in Diesel engine.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Bring oil from store and topped upto required level.	BD	2	No	1005.70	2011.40
4	Coolant top up in Diesel engine.	Ensure permit to work & safe work place. Bring DM water from DM water plant and topped upto required level	BD	2	No	1005.70	2011.40
5	Air filter cleaning / replacement of diesel engine set.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove filter and clean with air and Boxup.	BD	1	No	670.47	670.47
6	Lub oil filter changing of diesel engine set.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove old filter. Clean the filter box. Put new filter and Boxup.	BD	1	No	343.31	343.31
7	Fuel oil filter changing of Diesel engine	Remove old filter. Clean the filter box. Put new filter and box up.	BD	1	No	343.31	343.31

	set.						
8	Belt tension adjustment of diesel engine	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove belt guard. Adjust belt tension by adjusting screw and Boxup.	BD	1	No	754.27	754.27
9	Belt replacement in diesel engine	Issue belt from warehouse. Remove belt guard. Remove old belt. Check the coupling alignment, if required corrects the same. Put new belt and adjust belt tension.	BD	1	No	1257.12	1257.12
10	Replacement of flexible hose in DG set.	Ensure permit to work & safe work place. Shift hose from stores, Remove damage hose. Fix new hose	BD	1	No	758.31	758.31
11	Complete Engine oil replacement in diesel engine .	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Bring oil from store. Drain old oil and replace with new oil upto required level.	BD	1	No	2669.76	2669.76
12	Radiator water replacement in diesel engine	Bring DM water from DM plant. Drain old water and replace with fresh DM water upto required level.	BD	1	No	1005.70	1005.70
13	Providing assistant for Diesel Engine servicing.	Ensure permit to work & safe work place. Providing manpower for assisting supplier representative to carry out servicing of diesel engine. Change the oil/fuel/air filter. Change oil. Change coolant. Thoroughly clean equipment / base from oil and dirt. Check the tightness of all bolts of casing, foundation, etc. Boxup equipment. Assist trial run.	BD	4	No	2673.79	10695.16
14	External Cleaning of DG set.	Ensure permit to work & safe work place. Clean the Diesel engine & base frame completely.	BD	2	No	335.23	670.46
PART TOTAL							**67441.39**

Part :H1

SUMP AND SUBMERSIBLE PUMP

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of Transformer yard Sump Pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the pump and motor. Check the alignment. Tighten the pump assembly and foundation bolt. Align and couple the pump. Clean the equipment. Grease the bearing. Take successful trial run.	PM	8	No	2673.79	21390.32
2	PM of Switch yard Sump Pump.	- do -	PM	8	No	2673.79	21390.32
3	PM of DG house Sump Pump (outside).	- do -	PM	4	No	2673.79	10695.16
4	PM of DG house Sump Pump.	- do -	PM	4	No	2673.79	10695.16
5	PM of FO unloading Pump house Sump Pump.	- do -	PM	4	No	2673.79	10695.16
6	PM of FO Transfer Pump house Sump Pump.	- do -	PM	4	No	2673.79	10695.16
7	PM of TG Building sump pump	- do -	PM	32	N0	2673.79	85561.28
8	PM of cable galley sump pump	- do -	PM	16	No	2673.79	42780.64
9	PM of 1.5/5 HP Submersible pump in ESP MCC room U - I&II.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decuple the pipe from pump. Remove submersible pump from pit. Check and clean the suction strainer. Check oil, if required top up. Tighten the pump assembly. Clean the equipment. Take successful trial run.	PM	6	No	2673.79	16042.74
10	PM of 1.5HP Submersible pump in AC MCC room.	- do -	PM	4	No	2673.79	10695.16

11	PM of 20HP Submersible pump in FO Pump unloading system & MCC room.	- do -	PM	12	No	2673.79	32085.48
12	PM of 1.5HP Submersible pump in Clarifier pump house.	- do -	PM	4	No	2673.79	10695.16
13	PM of 1.5/5 Submersible pump in condenser pit	- do -	PM	8	No	2673.79	21390.32
14	PM of 1.5/5HP/7.5HP Submersible pump at Workshop MCC room, 5MW solar plant & industrial canteen	- do -	PM	4	No	2673.79	10695.16
15	Overhauling of Sump Pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Decouple the pump. Dismantle the pump. Inspect all pump parts. Replace / repair the damage parts if any. Assemble the pump. Fix the motor and coupling. Align and couple pump. Clean the equipment. Take successful trial run.	BD	6	No	10170.45	61022.70
16	Overhauling of Submersible Pump (40/20 HP)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Dismantle the pump. Inspect all pump parts. Replace / repair the damage parts if any. Assemble the pump. Clean the equipment. Take successful trial run.	BD	1	No	5339.51	5339.51

17	Overhauling of Submersible Pump (1.5/5 HP)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Dismantle the pump. Inspect all pump parts. Replace / repair the damage parts if any. Assemble the pump. Clean the equipment. Take successful trial run.	BD	1	No	5339.51	5339.51
18	Shifting of Submersible Pump in plant premises. (40 & 20 HP)	Lift the pump from stores/ ware house or site. Shift the pump as direction of EPIC.	BD	6	No	1332.86	7997.16
19	Shifting of Submersible Pump in plant premises. (5 & 1.5 HP)	Lift the pump from stores/ ware house or site. Shift the pump as direction of EIC.	BD	20	No	1332.86	26657.20
20	Replacement of suction strainer in submersible pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift strainer from stores, Remove damage strainer. Fix new one.	BD	5	No	1336.90	6684.50
21	Repl. of canvas hose in sub. pump	Shift hose from stores, Remove damage hose. Fix new hose	BD	6	No	1428.67	8572.02
22	Suction strainer cleaning of Sump Pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove motor of sump pump. Lift the pump. Remove strainer and clean with water / air. Refit the same.	BD	10	No	1013.77	10137.70
23	Suction strainer cleaning of submersible pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Lift the submersible pump. Remove strainer and clean with water / air. Refit the same.	BD	10	No	1013.77	10137.70
24	Oil replacement / top up in Submersible pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Bring oil from store. Drain old oil and replace with new oil upto required level.	BD	6	No	167.62	1005.72
PART TOTAL							**458400.94**

Part :I1

LP PIPING

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	Erection & Welding of MS / SS pipe up to 6mm thk up to 50NB (in mtr)	Ensure permit to work & safe work place. Thoroughly clean the piping system & surrounding. Issue pipe from store. Erect the pipe. Cut the joint. Grind the face. Fit up the joint properly. Weld the joint. Make support.	BD	100	M	550.89	55089.00
2	- do - 80 to 150 NB	- do -	BD	100	M	550.89	55089.00
3	- do - 200 to 300 NB	- do -	BD	50	M	630.34	31517.00
4	Threading, fitting, Erection & Welding of GI pipe up to 50 NB (per meter)	Cut the joint. Thread & Fit up the joint properly. If required weld the joint. Make support.	BD	100	M	508.90	50890.00
5	Welding of MS / SS joint up to 6mm	Cut the joint. Grind the face. Fit up the joint properly. Weld the joint.	BD	300	No	642.40	192720.00
6	Erection & welding of MS / SS flange upto 80NB..	Cut the joint. Grind the face. Fit up the flange properly. Weld the joint.	BD	25	No	642.40	16060.00
7	- do - 100 to 250 NB	- do -	BD	25	No	1176.88	29422.00
8	Erection & welding of MS / SS flange from 300NB to 600NB	- do -	BD	1	No	1214.56	1214.56
9	Fabrication & Welding of mitre from parant MS pipe up to 11mm thk up to 300NB (in No)	Cut the pipe. Fabricate miter. Grind the face. Fit up the joint properly. Weld the joint. Make support.	BD	1	No	2231.02	2231.02
10	Fabrication & Welding of reducer from parent MS pipe up to 11mm thk up to 300NB (in No)	Cut the pipe. Fabricate mitre. Grind the face. Fit up the joint properly. Weld the joint. Make support.	BD	1	No	2182.57	2182.57
11	Erection of UPVC pipe up to 50NB	Cut the UPVC pipe as per requirement. Fit elbow, tee, flanges etc fitting & clamps as per requirement by gluing. charged the system. Attend leakage if any.	BD	100	M	169.63	16963.00

12	Erection of UPVC pipe up to 80NB	Cut the UPVC pipe as per requirement. Fit elbow, tee, flanges etc fitting & clamps as per requirement by gluing. Charged the system. Attend leakage if any.	BD	100	M	169.63	16963.00
13	Erection of UPVC pipe up to 150NB	Cut the UPVC pipe as per requirement. Fit elbow, tee, flanges etc fitting & clamps as per requirement by gluing. Charged the system. Attend leakage if any.	BD	200	M	339.27	67854.00
14	Erection/ replacement of UPVC valve up to 50NB	Dismantled the pipe from system. cut pipe as per requirement. Fit the valve by gluing. Take trial	BD	25	No	678.54	16963.50
15	Erection/ replacement of UPVC valve up to 100NB	Dismantled the pipe from system. cut pipe as per requirement. Fit the valve by gluing. Take trial	BD	5	No	678.54	3392.70
16	Fabrication of Flange from MS plate up to 25 mm thk up to 300NB (in No)	Issue plate from store. Cut the plate. Fabricate flange. Grind the face. Drill hole.	BD	20	No	1109.59	22191.80
17	Attending leakage of underground pipe up to 100NB	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Excavation, leakage identification & required power supply will be given by GIPCL at site. Shift tools-tackles, welding m/c, dewatering pump, cutting set & required manpower to site. Leakage attending with patch work or socket welding.	BD	6	No	4193.97	25163.82
18	Attending leakage of underground pipe up to 250NB	- do -	BD	2	No	6924.56	13849.12
19	Attending leakage of underground pipe up to 450NB	- do -	BD	2	No	6962.24	13924.48
20	Attending leakage in PVC/HDPE pipe fitting.	Ensure permit to work & safe work place. Check the joint for any leakages. Remove fitting join with PVC cement. Ensure no leakage.	BD	12	No	670.47	8045.64
21	Attending union leakage in pipe line.	Check the union connection for any leakage. Attend and restore.	BD	5	No	1005.70	5028.50

22	Attending flange leakage in pipe line upto 80 NB	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Check the flange joint for any leakages. Loosen the flange. Replace the gasket. Tighten the flange.	BD	20	No	1005.70	20114.00
23	- do - 100 to 200 NB	- do -	BD	10	No	1005.70	10057.00
24	- do - 250 to 450 NB	- do -	BD	2	No	1005.70	2011.40
25	Attending flange leakage in CW pipe line (1200 Dia.)	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Check the flange joint for any leakages. Loose the flange. Replace the gasket. Tighten the flange.	BD	1	No	1221.83	1221.83
26	Wraping and coating in pipe line per Sq. mt.	Clean pipe. Apply primer. Apply pipe coat by heating.	BD	20	Sq. M	263.43	5268.60
27	Dewatering of Valve Pit/drain chambers/Sump pit of Pumps/CW Forebay.	Providing assistance for operation of pump for dewatering per hour	BD	360	Hrs.	83.81	30171.60
28	Pin hole leakage attending of above ground pipe up to 100NB size.	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Make necessary arrangement. Attending on line pin hole leakage by 25NB/50NB socket welding	BD	20	No	1583.91	31678.20
29	Pin hole leakage attending of above ground pipe up to 300NB size.	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Make necessary arrangement. Attending on line pin hole leakage by 25NB/50NB socket welding	BD	5	No	1621.59	8107.95
30	Pin hole leakage attending of above ground/under ground pipe up to 350NB to 750 NB size.	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Make necessary arrangement. Attending on line pin hole leakage by 25NB/50NB socket welding and patch-up work by MS plate.	BD	2	No	5282.66	10565.32
31	Pipe line chocking clearing up 200NB size.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Identify chocking area. Cut the pipe spool & clean the piping system. Weld spool piece(meter). Charge the	BD	10	No	2011.40	20114.00

		system.					
32	Cutting & shifting of scrape/discard piping system up to 100NB size. (Meter)	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Shifting of cutting set to location. Cut unused/scrape piping system. Shift scrape pipe as per EIC instruction.	BD	125	M	427.01	53376.25
33	Cutting & shifting of scrape/discard piping system from 125NB to 250NB size. (Meter)	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Shifting of cutting set to location. Cut unused/scrape piping system. Shift scrape pipe as per EIC instruction.	BD	125	M	427.01	53376.25
PART TOTAL							**892817.11**

Part :J1

LP VALVES

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	Servicing of air release valve at plant max upto size6 inch	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Open flanges. Check seat, ball and other internal parts. Repair the seat. Check the surface for blue match. Replace gasket. Box up.	PM	30	No	2673.79	80213.70
2	Servicing of air release valve in river water pipe line size upto 8 inch	- do -	PM	10	No	2673.79	26737.90
3	Greasing of Butterfly valve Gearbox in CW, RAW & CT	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Remove gear box cover. Remove old grease. Put new grease. Tighten the bolt.	PM	50	No	1009.74	50487.00
4	Gland tightening in valves	Adjust the gland by tightening to stop leakages.	BD	50	No	81.79	4089.50
5	Greasing of Gate & Globe & diaphragm valves.	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Thoroughly clean the valves body and gland with rust remover/cleaner. Issue grease from store. Apply on valve spindle	BD	150	No	163.58	24537.00

6	Replacement of gland packing in valves up to 300NB size.	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Remove the gland follower. Remove the damage gland packing. Replace new. Box up.	BD	6	No	1009.74	6058.44
7	Servicing of Gate / Globe Valve at site up to 150 NB.	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Dismantle valve. Check seat, disc and other internal parts. Repair the seat. Lap seat and check the surface for blue match. Replace gland packing. Assemble and Box up.	BD	15	No	2765.57	41483.55
8	- do - 200 to 450 NB	- do -	BD	10	No	2814.02	28140.20
9	Servicing of NRV at site up to 150 NB.	Open NRV. Check seat, disc and other internal parts. Repair the seat. Lap seat and check the surface for blue match. Assemble and Box up.	BD	8	No	2669.76	21358.08
10	- do - 200 to 450 NB	- do -	BD	4	No	2756.53	11026.12
11	Servicing of Diaphragm Valve up to 80 NB	Dismantle the valve. Inspect the damaged parts. Repair / replace the damaged parts. Box-up and ensure proper functioning of the valve.	BD	12	No	2003.33	24039.96
12	- do - upto 250 NB	- do -	BD	2	No	2003.33	4006.66
13	Servicing of Float Valve..	Remove float valve from pipe. Dismantle and service the same.	BD	2	No	2003.33	4006.66
14	Servicing of safety shower system	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Gland tightening & all leakage attesting of safety shower system. Replaced isolation valve if req. Replaced any spares if req. Ensure smooth functioning of safety shower.	BD	12	No	1432.71	17192.52
15	Servicing of butterfly valves up to 350 NB	Dismantle valve. Repair the seat disc, plug by buildup. Grind and lap the seat. Check surface for blue match. Replace bonnet gasket and gland packing. Assemble the valve. Adjust the gland. Hot tight the valve bonnet. Ensure no leakages.	BD	2	No	2669.76	5339.52
16	- do - 400 to 750 NB	- do -	BD	2	No	2669.76	5339.52
17	- do - 1200 NB	- do -	BD	2	No	2673.79	5347.58

18	Replacement of gate, globe valve, NRV and upto 150 NB.	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Remove the valve. Clean the flange surface. Cut and put new gasket. Fix new valve. Tighten the bolt.	BD	15	No	2099.14	31487.10
19	- do - 200 to 450 NB	- do -	BD	4	No	2147.59	8590.36
20	Replacement of threaded gate, globe valve, NRV and Float valve upto 50 NB.	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Remove the valve. Clean the thread. Fix new valve.	BD	30	No	1756.24	52687.20
21	Attending Butterfly valves passing in position to prevent passing 1200 NB	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Open manhole cover. Check valve seal if required replace seal. Check seal gap if required adjust. Ensure no leakages.	BD	2	No	2551.89	5103.78
22	Servicing of Gear Box of butterfly valves up to 750 NB	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Dismantle gear box. Remove old grease and clean internals. Check the worn-out parts. Replace / Repair the parts. Assemble the gear box. Fill new grease. Box up and fit on the valve.	BD	2	No	2555.93	5111.86
23	- do - 1200 NB	- do -	BD	2	No	2555.93	5111.86
24	Replacement of Butterfly valve up to 200 NB	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Remove the valve. Clean the flange surface. Cut and put new gasket. Fix new valve. Tighten the bolt.	BD	5	No	2022.49	10112.45
25	- do - 250 to 450 NB	- do -	BD	1	No	2022.49	2022.49
26	- do - 600 to 750 NB	- do -	BD	1	No	2688.92	2688.92
27	- do 1200NB	- do -	BD	1	No	2865.42	2865.42
28	Replacement of Diaphragm valve up to 80 NB	- do -	BD	10	No	1336.90	13369.00
29	- do - upto 250 NB	- do -	BD	2	No	1336.90	2673.80

30	Replacement of Diaphragm up to 80 NB	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Dismantle the valve. Remove damaged diaphragm. Replace with new one. Box-up and ensure no leakage in valve.	BD	30	No	1670.11	50103.30
31	- do - upto 250 NB	- do -	BD	2	No	1670.11	3340.22
32	Replacement / Repair of gland follower & its bolt at site.	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Dismantle gland follower. Remove damaged part. Repair / replace the same. Assemble and Box up.	BD	4	No	773.44	3093.76
33	Fabrication / Replacement of valves handle.	Remove the valve handle from position. Fabricate / repair handle if required. Replace with new one.	BD	4	No	815.16	3260.64
34	Freeness checking of various type & size of valves	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Check the valve for jamming. Made free if required. Lubricate the spindle of valve. Assist trial run of valve by opening and closing of valve.	BD	50	No	251.42	12571.00
35	Replacement of Rubber expansion joint in CW line of 1200 NB	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Loosen the bolt and tie rod. Remove RE joint. Fix new RE joint. Tighten the bolt.	BD	1	No	2865.42	2865.42
PART TOTAL							**576462.49**

Part :K1

EOT CRANES, ELECT. & MECH. HOIST

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of TG Building Cranes (175/30 T)	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Greasing of wire rope. Oil top up in gear box and thruster. Greasing of LT & CT wheels & bearings. Alignment of LT & CT wheels. Inspection & adjustment of break & break shoe. Inspection of all fasteners & tighten, if required. Cleaning of crane. Trail for successful operation	PM	4	No	2681.87	10727.48

2	PM of TG Building Cranes 40/10 T)	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Greasing of wire rope. Oil top up in gear box and thruster. Greasing of LT & CT wheels & bearings. Alignment of LT & CT wheels. Inspection & adjustment of break & break shoe. Inspection of all fasteners & tighten, if required. Cleaning of crane. Trail for successful operation	PM	4	No	2681.87	10727.48
3	PM of CW pump house Cranes (25/10 T)	-do-	PM	6	No	2673.79	16042.74
4	PM of Ware house Cranes (10 T)	-do-	PM	6	No	2673.79	16042.74
5	PM of Work shop Cranes (10 T)	-do-	PM	6	No	2673.79	16042.74
6	PM of Electric Hoist. (CW Forebay)	-do-	PM	6	No	2673.79	16042.74
7	PM of Electric Hoist. (River Water pump house)	-do-	PM	4	No	2673.79	10695.16
8	PM of Electric Hoist. (Raw water pump house)	-do-	PM	4	No	2673.79	10695.16
9	PM of Electric Hoist. (Raw water forebay)	-do-	PM	8	No	2673.79	21390.32
10	PM of Electric Hoist. (Compressor house)	-do-	PM	16	No	2673.79	42780.64
11	PM of Electric Hoist. (Air washer fan)	-do-	PM	4	No	2673.79	10695.16
12	Adjustment / Replacement of thruster / brake shoe in EOT crane	Adjust / Remove thruster and break shoe and fixing of new after alignment. Take trail run.	BD	2	No	2019.47	4038.94
13	Decoupling, Alignment and Coupling of Gear Box.	Remove coupling guard. Decouple the gear box and motor. Check the alignment, if required corrects the same. Couple and tighten the coupling bolt. Take trial run for successful operation.	BD	2	No	2019.47	4038.94

14	Overhauling of gearbox.	Decouple the Gear box and motor. Open the gear box. Replace damaged parts if any. Assemble the gear box. Place in position. Align the same. Clean the equipment. Take successful trail run.	BD	1	No	6761.46	6761.46
15	Replacement of Wire rope guide..	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Remove wire rope. Insert new guide rope. Insert wire. Tighten the bolt. Take successful trail.	BD	1	No	2681.87	2681.87
16	Alignment of Rail.	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Check Level and straightness of rail. If required correct the same. Check tightness of all bolts.	BD	1	No	5331.44	5331.44
17	Lubrication of wire rope.	Remove / clean old lubricant from wire rope. Issue lubricant from warehouse. Apply new lubricant.	BD	2	No	1336.90	2673.80
18	Cleaning of crane & Rail.	Clean crane & Rail beam completely	BD	2	No	1005.70	2011.40
19	Providing assistant for repairing of EOT crane to external agency	Providing necessary manpower ie one mechanical fitter, two helper & one rigger/welder if required for assisting supplier representative to carry out servicing of EOT crane. Thoroughly clean equipment. Check the tightness of all bolts. Boxup equipment. Assist trial run.	BD	4	No	2873.50	11494.00
20	Servicing of Manual Hoist/Chain Pulley Box & Travelling Trolley.	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Check spring mechanism and ratchet and powl is operating properly. Check / rectify chain wear. Check brake disc wear. Check / rectify hook opening. Lubricate load chain and load chain wheel.	PM	20	No	2669.76	53395.20
PART TOTAL							**274309.41**

Part :L1

GENERAL MECHANICAL WORK

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	Gland tightening of Pump.	Adjust the gland by tightening to minimize leakages.	BD	50	No	335.23	16761.50
2	Oil top up in pump, Blower & Gear Box.	Bring oil from store. Drain old oil and replace with new oil upto required level.	BD	120	No	335.23	40227.60
3	Gland replacement of pump.	Remove the damage gland completely and replace with new. Adjust the gland to minimize leakages. Take successful trial run.	BD	10	No	339.27	3392.70
4	Oil replacement in pump, Gear Box, Blower.	Bring oil from store. Drain old oil and replace with new oil upto required level.	BD	10	No	1009.74	10097.40
5	Decoupling, Alignment and Coupling of pump/ Blower/ Gear Box with motor.	Remove coupling guard. Decouple the pump /gear box /motor. Check and correct the blue contact between motor and base frame or gearbox and base frame if required. Check the alignment and correct the same. Couple and tighten the coupling bolt. Take trial run for successful operation.	BD	15	No	2688.92	40333.80
6	Replacement of Oil Cup / Oil level indicator.	Issue materials from store. Drain oil from brg. housing. Remove oil cup / level indicator. Fix new one. Fill the oil. Check for any leakages.	BD	4	No	1009.74	4038.96
7	Replacement of belt in blower/ dosing pump/ DG set.	Issue belt from warehouse. Remove pulley guard. Remove old belt. Fix new belt. Check the alignment of pulley, if required corrects the same. Put the pulley guard.	BD	2	No	1009.74	2019.48
8	Greasing in pump, Blower, Clarifier drive and Plummer block.	Issue grease from ware-house and apply grease with grease gun in bearings	BD	4	No	327.16	1308.64
9	Love joy coupling spider / pin bush replacement	Remove coupling guard. Remove damage spider / pin bush. Fix new one. Align and couple the equipment.	BD	4	No	777.47	3109.88
10	Replacement of coupling Pump/ Gear Box.	Issue materials from store. Remove coupling guard and coupling. Fix new coupling by heating. Align and couple the same.	BD	4	No	2692.96	10771.84

11	Fabrication & Erection of structrual job. (in MT)	Shift the material from steel yard. Fabricate as per drawing or as per instruction given by EIC.	BD	2	MT	24801.91	49603.82
12	Opening and closing of Man hole cover of tank.	Thoroughly clean the system & surrounding. Ensure permit to work & safe work place. Open man hole door. Replace gasket and box up.	BD	5	No	2665.72	13328.60
13	Servicing of Level indicator.	Open pulley housing. Service the level indicator and insure freeness.	BD	5	No	1336.90	6684.50
14	Replacement of flexible hose in FO unloading pump.	Shift hose from stores, Remove damage hose. Fix new hose	BD	2	No	1007.72	2015.44
15	Painting of Pipe, Structure and equipment per Sq. Mt.	Thoroughly clean the system & surrounding. Ensure permit to work & safe work place. Shift the material from store. Paint Two coat paint as per EIC.	BD	200	Sq. M	167.62	33524.00
16	Suction strainer cleaning of Pump.	Remove filter element and clean with water / air. Refit the same.	BD	5	No	666.43	3332.15
17	Vibration measurement Assistance.	Supply manpower for assisting vibration measurement to GIPCL EIC for all category rotating equipment. Semiskilled labor shall be required.	BD	4	No	654.32	2617.28
18	Balancing of Pump/ Impeller/ Fan.	Ensure permit to work & safe work place. Thoroughly clean the system & surrounding. Providing manpower for assisting balancing of fan, Pump & motor. This includes welding of trial / final weight. Correctness of alignment. Inspection of bearings Tightness of foundation bolt etc.	BD	2	No	2072.28	4144.56
20	Erection of scaffolding for Miscellaneous work.3MX3M X6M HEIGHT	Ensure permit to work & safe work place. Erect the scaffolding as per instruction of E-I-C. Make proper approach and platform as per instruction of EIC.	BD	45	No	3958.21	178119.45
21	Erection of scaffolding for Miscellaneous work.6MX6M X6M HEIGHT	Ensure permit to work & safe work place. Erect the scaffolding as per instruction of E-I-C. Make proper approach and platform as per instruction of EIC.	BD	10	No	3958.21	39582.10

21	Lub oil sample collection.	Open the plug of the lub oil tank/bearing/HC etc. Collect the sample. Submit it to C&L laboratory. Box up.	BD	4	No	245.37	981.48
22	Cleaning of pumps.	Clean the pump & base frame completely.	BD	4	No	249.41	997.64
PART TOTAL							**466992.82**

Part :M1

LIGNITE RUN OFF WATER CLARIFICATION PLANT

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of Lignite Runoff Pond water pump	Thoroughly clean the system & surrounding. Ensure permit to work & safe work place. Decouple the pump and motor. Check the alignment, if required corrects the same. Tighten / replace the gland to mimimise gland leakage. Tighten the pump assembly and foundation bolt. Check oil condition / level, if required replace / top up. Replacement of coupling bolt and / or bush if required. Align and couple the pump. Clean the equipment. Take successful trial run.	PM	12	No	2669.76	32037.12
2	PM of Sludge disposal pump (25 dia clarifier).	- do -	PM	8	No	2669.76	21358.08
3	PM of Alum dosing pump (25 dia clarifier).	Thoroughly clean the system & surrounding. Ensure permit to work & safe work place. Remove pulley guard and belt. Check pump and motor pulley alignment, if required align the same. Tighten the pump assembly and foundation bolt. Check plunger seal / O-ring if required replace. Service valve assembly. Fix the belt. Put the pulley guard. Grease the plunger. Oil top up /change if required. Clean the suction strainer. Take successful trial run.	PM	12	No	2669.76	32037.12

4	PM of Gear box in 25 dia clarifier (inner & outer drive)	Thoroughly clean the system & surrounding. Ensure permit to work & safe work place. Decouple the gearbox and motor. Check the alignment, if required corrects the same. Tighten the gearbox assembly and foundation bolt. Check the condition of Bearing, oil seal and view glass. Check oil condition / level, if required replace / top up. Check sprocket & chain if required replace the same. Align and couple the gearbox. Clean the equipment. Take successful trial run.	PM	6	No	2669.76	16018.56
5	PM of Flash mixer Gear box (25 dia clarifier).	- do -	PM	2	No	2669.76	5339.52
6	Bearing replacement / servicing of TBH in Lignite runoff pond water pump	Thoroughly clean the system & surrounding. Ensure permit to work & safe work place. Decouple pump and motor. Remove motor. Drain oil. Dismantle thrust bearing housing. Check worn out parts, if required replaces the same. Assemble the thrust bearing housing. Fill the oil. Fix the motor. Align and couple the pump. Clean the equipment. Take successful trial run.	BD	1	No	2701.03	2701.03
7	Suction strainer cleaning of dosing Pump.	Remove filter element and clean with water / air. Refit the same.	BD	4	No	502.85	2011.40
8	Plunger seal / O ring replacement of dosing pump.	Remove the damage gland completely and replace with new. Adjust the gland to minimize leakages. Take successful trial run.	BD	1	No	1336.90	1336.90
9	Servicing of valve assembly of Alum dosing pump.	Dismantle valve assembly Remove all parts. Service all parts. Assemble the same.	BD	1	No	1336.90	1336.90
10	Overhauling of Lignite runoff pond water pump	Thoroughly clean the system & surrounding. Ensure permit to work & safe work place. Shift material from stores. Remove the motor. Dismantle the pump. Inspect	BD	1	No	13280.81	13280.81

		all pump parts. Replace / Repair the damage parts if any. Assemble the pump. Clean and paint the pump. Fix the motor and coupling. Align and couple the pump. Clean the equipment. Take successful trial					
11	Overhauling of Sludge disposal pump (25 dia clarifier).	- do -	BD	1	No	5358.68	5358.68
12	Overhauling of gear box in 25 dia clarifier (inner / outer drive)	Thoroughly clean the system & surrounding. Ensure permit to work & safe work place. Shift material from stores. Decouple the gearbox. Dismantle the gearbox. Inspect all gearbox parts. Replace/repair the damage parts, if any. Assemble the gearbox. Fix the sprocket and motor. Align and couple the gearbox. Clean the equipment. Take successful trial run.	BD	1	No	5366.75	5366.75
13	Overhauling of gear box in flash mixer (25 dia clarifier)	- do -	BD	1	No	6788.69	6788.69
14	Servicing of drive chain mechanism of 25 dia clarifier (inner & outer drive)	Thoroughly clean the system & surrounding. Ensure permit to work & safe work place. Check the alignment of drive / driven sprocket. Check the chain. Align and tighten the chain and sprocket assembly and foundation bolt. Lubricate properly. Clean the equipment. Take successful trial run.	BD	1	No	8005.23	8005.23
15	Overhauling of Clarifier inner drive gear and liner assembly.	Thoroughly clean the system & surrounding. Ensure permit to work & safe work place. Shift the material from stores. Lift the outer bridge of clarifier. Decouple the chain drive. Dismantle the traction wheel. Inspect all liner and gear parts. Replace / Repair the damage parts if any. Assemble the inner drive. Fix the inner drive and coupling. Align and couple the gearbox. Clean the equipment. Take successful trial run.	BD	1	No	8204.94	8204.94

16	Plumber block / Bearing replacement in clarifier.	Thoroughly clean the system & surrounding. Ensure permit to work & safe work place. Remove coupling guard. Remove plumber block & bearing. Fix new bearing and box up. Couple and align. Take successful trial run.	BD	2	No	1716.33	3432.66
17	Replacement of Traction Wheel of 25 dia clarifier (outer drive)	Thoroughly clean the system & surrounding. Ensure permit to work & safe work place. Shift wheel from store. Lift the bridge & lock. Remove chain, sprocket, Bearing & wheel from shaft. Replace with new one and box up. Clean the equipment. Take successful trial run.	BD	1	No	5531.14	5531.14
18	Replacement of chain / sprocket in 25 dia clarifier (inner & outer drive)	Thoroughly clean the system & surrounding. Ensure permit to work & safe work place. Remove chain guard. Remove chain and sprocket. Check chain / sprocket. Dismantle sprocket. Replace with new one and box up. Clean the equipment. Take successful trial run.	BD	1	No	2673.79	2673.79
19	Replacement of pinion shaft / pinion in 25 dia clarifier (inner drive)	Thoroughly clean the system & surrounding. Ensure permit to work & safe work place. Remove chain and sprocket. Check pinion / shaft. Dismantle shaft / pinion. Replace with new one and box up. Fill oil. Clean the equipment. Take successful trial run.	BD	1	No	5539.22	5539.22
20	Bearing replacement of 25 Dia Flash Mixture agitator shaft.	Thoroughly clean the system & surrounding. Ensure permit to work & safe work place. Decouple gearbox and agitator. Remove agitator shaft from assembly. Remove bearing. Fix new bearing and box up. Couple and align pump. Take trial run for successful operation.	BD	1	No	2921.94	2921.94
PART TOTAL							**181280.48**

Note: The rates shall include all labour cost, equipments, supervision, consumables, tools, tackles, all taxes & duties (excluding GST).

PACKAGE - IV :- Surat Lignite Power Plant - 4X125 MW, Surat Lignite Power Plant, Unit # III & IV: Annual Maintenance Contract for Balance of Plant Equipments for two years 2025-27.

Part :A2

VERTICAL TURBINE PUMP

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of River water pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the pump and motor. Check the alignment, if required corrects the same. Tighten / replace the gland to mimimise gland leakage. Tighten the pump assembly and foundation bolt. Check oil condition / level, if required replace / top up.	PM	24	No	2673.79	64170.96
2	PM of CW pump	- do -	PM	18	No	2673.79	48128.22
3	Bearing or ratchet replacement / servicing of TBH in River water pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple pump and motor. Remove motor. Drain oil. Dismantle thrust bearing housing. Check worn out parts, if required replaces the same. Assemble the thrust bearing housing. Fill the oil. Fix the motor. Align and couple the pump. Clean the equipment. Take a trial.	BD	1	No	7025.76	7025.76
4	Bearing or ratchet replacement / servicing of TBH in CW pump	-do -	BD	1	No	7025.76	7025.76
5	Overhauling of River water pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Remove the motor. Dismantle the pump. Inspect all pump parts. Replace / Repair the damage parts if any. Assemble the pump. Clean and paint the pump. Fix the motor and coupling. checking the blue contact between motor and motor stool if required. Align and	BD	1	No	96382.55	96382.55

		couple the pump. Clean the equipment.					
6	Overhauling of CW pump	- do -	BD	1	No	89880.29	89880.29
7	Replacement of Motor coupling of cooling water pump .	Ensure permit to work & safe work place. Shifting of the motor to work place .dismantling the motor coupling. Assembled the new coupling as per EIC instruction. Check and correct the blue contact between motor and motor stool surface. Fix the motor, align and couple the pump. Clean the equipment.	BD	1	No	10718.15	10718.15
8	Replacement of motor of CW Pump /River water pump.	Ensure permit to work & safe work place. Shifting of the motor .check and correct the blue contact between motor and motor stool surface. Fix the motor ,align and couple the pump. Clean the equipment.	BD	1	No	10653.56	10653.56
9	Cleaning of Coarse screen in CW Pumps & forebay	Ensure permit to work & safe work place. Isolate the screen by putting stop log. Lift the screen. Clean the screen by air / water. Check screen bolt if required replace the same. Put the screen. Lift the stop log.	BD	50	No	989.55	49477.50
10	Lifting and lowering of stop log & gates for CW pump.	Ensure permit to work & safe work place. Lift the stop log with electric hoist and lowered the same as an when required.	BD	3	No	989.55	2968.65
Part Total							**386431.40**

Part :B2

MISC. HORIZONTAL CENTRIFUGAL PUMP

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of Boiler Fill pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the pump and motor. Check the alignment, if required corrects the same. Tighten / replace the gland to mimimise gland leakage. Tighten the pump assembly and foundation bolt. Check the condition of Bearing, oil seal and oil cup. Repair / replace of oil cup if required. Check oil condition / level, if required replace / top up. Check spider if required replace the same. Align and couple the pump. Clean the equipment. Take successful trial run.	PM	8	No	2692.96	21543.68
2	PM of CW Make up Pump	__ do __	PM	12	No	2692.96	32315.52
3	PM of ECW Pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Check alignment of pump, correct if required. Check the coupling, bearing, gland condition. Replace if required. Lubricate the bearings. Clean the suction strainer. Box-up. Assist trial run.	PM	12	No	2673.79	32085.48
4	PM of Hot well make up pump.	- do -	PM	16	No	2673.79	42780.64
5	PM of Colony potable water pump.	- do -	PM	8	No	2673.79	21390.32
6	PM Boiler ACW Booster pump.	- do -	PM	16	No	2865.42	45846.72
7	External Cleaning of Hot well make up pump.	Clean the pump & base frame completely.	PM	4	No	662.39	2649.56
8	External Cleaning of Boiler fill pump.	- do -	PM	2	No	662.39	1324.78

9	Oil seals replacement of pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove coupling guard. Decouple the pump and motor. Remove coupling, bearing cover and oil seal. Fix new oil seal and box up. Couple and align pump. Take trial run for successful operation.	BD	2	No	2673.79	5347.58
10	Overhauling of Boiler fill pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Decouple the pump. Drain oil. Dismantle the pump. Inspect all pump parts. Replace / Repair the damage parts, if any. Assemble the pump. Fill the oil. Fix the coupling. Align and couple the pump. Clean the equipment. Take successful trial run.	BD	1	No	10242.04	10242.04
11	Overhauling of CW make up pump	- do -	BD	2	No	10290.48	20580.96
12	Overhauling of ECW Pump	- do -	BD	1	No	10146.22	10146.22
13	Overhauling of Hot well make up pump.	- do -	BD	2	No	10146.22	20292.44
14	Overhauling of colony potable water pump	- do -	BD	2	No	10138.15	20276.30
15	overhauling of Boiler ACW Booster pump..	- do -	BD	2	No	10242.04	20484.08
16	Replacement of mechanical seal in Boiler ACW Booster pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Decouple the pump. Dismantle the pump. Dismantle the existing mechanical seal and Inspect all pump parts. Replace / Repair the damage parts, if any. Assemble the pump and new mechanical seal..Fill the oil/grease. Fix the coupling. Align and couple the pump. Clean the equipment. Take	BD	1	No	6769.53	6769.53

		successful trial run.					
17	Replacement / Repair of gland follower & its bolt at site.	Ensure permit to work & safe work place. Dismantle gland follower. Remove damaged part. Repair / replace the same. Assemble and Box up.	BD	2	No	674.50	1349.00
PART TOTAL							**315424.85**

Part :C2

DM WATER PLANT

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of Clarified water pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Check the alignment, if required corrects the same. Tighten / replace the gland to mimimise gland leakage. Tighten the pump assembly and foundation bolt. Check the condition of Bearing, oil seal and oil cup. Repair / replace of oil cup if required. Check oil condition / level, if required replace / top up. Check spider if required replace the same. Align and couple the pump. Clean the equipment. Take successful trial run.	PM	12	No	2673.79	32085.48
2	PM of Degassed water pump	- do -	PM	12	No	2673.79	32085.48
3	PM of DM water transfer pump	- do -	PM	16	No	2673.79	42780.64
4	PM of Filter backwash pump of SSF system	- do -	PM	12	No	2673.79	32085.48
5	PM of Backwash waste Transfer pump of SSF system	- do -	PM	8	No	2673.79	21390.32
6	PM of DM Water regeneration pump.	- do -	PM	12	No	2673.79	32085.48
7	PM of N-pit pump.	- do -	PM	8	No	2673.79	21390.32
8	PM of Acid unloading pump at DM Plant	- do - & check the condition of mechanical seal if required adjust/replace the same.	PM	4	No	2673.79	10695.16

9	PM of Acid unloading pump at CW forebay	- do -	PM	8	No	2673.79	21390.32
10	PM of Alkali unloading pump	- do -	PM	8	No	2673.79	21390.32
11	PM of HP Dosing pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Check alignment of pump, correct if required. Check the coupling, bearing, gland condition. Replace if required. Lubricate the bearings/gear box. Clean the suction strainer. Box-up. Assist trial run. Adjust pressure if required.	PM	24	No	2673.79	64170.96
12	PM of Hydrazine dosing pump.	do	PM	12	No	2673.79	32085.48
13	PM of Marpholine dosing pump.	- do -	PM	12	No	2673.79	32085.48
14	PM of M B blower	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Check blower and motor pulley alignment, if required align the same. Tighten the blower assembly and foundation bolt. check the belt. Put the pulley guard. Grease the bearing. Oil top up / change if required. Clean suction filter. Take successful trial run.	PM	8	No	2669.76	21358.08
15	PM of Twin lobe air blower for SSF	- do -	PM	8	No	2669.76	21358.08
16	PM of PSF blower	- do -	PM	8	No	2669.76	21358.08
17	PM of Degassed blower	- do -	PM	8	No	2669.76	21358.08
18	PM of agitator.	Ensure permit to work & safe work place & thoroughly clean the equipment & surrounding. Decouple the agitator and motor. Check the alignment, if required corrects the same. Couple and tighten the coupling bolt. Take trial run for successful operation.	PM	24	No	1336.90	32085.60

19	Servicing of Safety shower	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Gland tightening & all leakage attesting of safety shower system. Replaced isolation valve if req. Replaced any spares if req. Ensure smooth functioning of safety shower.	PM	10	No	1356.06	13560.60
20	Oil seals replacement of pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Ensure permit to work & safe work place. Decouple the pump and motor. Remove coupling, bearing cover and oil seal. Fix new oil sel and box up. Couple and align pump.	BD	2	No	2741.40	5482.80
21	Mechanical seal replacement of in Acid / Alkali unloading pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the pump and motor. Remove pump from assembly. Remove mechanical seal. Fix new mech. seal and box up. Couple and align pump. Take trial run.	BD	2	No	2692.96	5385.92
22	Suction strainer cleaning of Blower / Pump.	Ensure permit to work & safe work place. Remove filter element and clean with water / air. Refit the same.	BD	4	No	1009.74	4038.96
23	Replacements of relief valve of HP Dosing pump.	Remove the valve. Replaced with new one.	BD	1	No	1336.90	1336.90
24	Plunger seal / O ring replacement of dosing pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Ensure permit to work & safe work place. Remove the damage gland completely and replace with new. Adjust the gland to minimize leakages. Take successful trial run.	BD	2	No	1013.77	2027.54
25	Servicing of valve assembly of dosing pump.	Ensure permit to work & safe work place. Dismantle valve assembly Remove all parts. Service all parts. Assemble the same. Take trial run.	BD	2	No	1340.93	2681.86

26	Overhauling of Clarified water pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Ensure permit to work & safe work place. Shift material from stores. Decouple the pump. Dismantle the pump. Inspect all pump parts. Replace / repair the damage parts if any. Assemble the pump. Fix the coupling and motor. Align and couple the pump. Clean the equipment. Take successful trial run.	BD	2	No	10157.31	20314.62
27	Overhauling of Filter backwash pump of SSF system	- do -	BD	1	No	6780.62	6780.62
28	overhauling of Backwash waste Transfer pump of SSF system	- do -	BD	1	NO	6829.07	6829.07
29	Overhauling of Degassed water pump	- do -	BD	1	No	6780.62	6780.62
30	Overhauling of DM water transfer pump	- do -	BD	1	No	6780.62	6780.62
31	Overhauling of regeneration pump.	- do -	BD	1	No	6780.62	6780.62
32	Overhauling of Acid unloading pump at DM Plant	- do -	BD	2	No	6780.62	13561.24
33	Overhauling of Alkali unloading pump	- do -	BD	1	No	6780.62	6780.62
34	Overhauling of MB blower.	- do -	BD	1	No	6780.62	6780.62
35	Overhauling of PSF blower	- do -	BD	1	No	6780.62	6780.62
36	Overhauling of Degassed blower	- do -	BD	1	No	6780.62	6780.62
37	Overhauling of HP Dosing pump	- do -	BD	1	No	6780.62	6780.62
38	Overhauling of Hydrazine dosing pump.	- do -	BD	1	No	6780.62	6780.62
39	Overhauling Marpholine dosing pump.	- do -	BD	1	No	6780.62	6780.62

40	Overhauling of Acid unloading pump at CW forebay	- do -	BD	1	No	6807.75	6807.75
41	Servicing of SAC vessel	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Open the vessel. Dismantle the internals. Cleaning of complete internals / strainers. Repair/replace internals if required. Refitting of internals. Box up.	BD	1	No	8045.60	8045.60
42	Servicing of SBA Vessel.	- do -	BD	1	No	8045.60	8045.60
43	Servicing of MB Vessel.	- do -	BD	1	No	8045.60	8045.60
44	Servicing of PSF / ACF / SSF vessel	- do -	BD	1	No	8045.60	8045.60
45	Inspection of degasser tower.	Ensure permit to work & safe work place. Open the tank top cover. Check the condition of pall ring if required top up. Box up.	BD	1	No	4022.80	4022.80
46	Servicing/replacement of ejector.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Dismantle the ejector. Check internal. Rectify / service the same. Box up.	BD	1	No	4026.83	4026.83
47	Decoupling, Coupling and Alignment of agitator.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the agitator and motor. Check the alignment, if required corrects the same. Couple and tighten the coupling bolt. Take trial run for successful operation.	BD	2	No	2718.20	5436.40
48	Replacement of Filter in Degasser, MB & PSF Air Blower.	Issue materials from store. Remove filter. Fix new Filter.	BD	2	No	1005.70	2011.40
49	Replacement of Silica Gel.	Dismantle Silica Gel container. Replace the silica gel. Put the silica gel.	BD	6	No	2031.58	12189.48
50	Back washing of PSF, SAC, SBA, MB	Open the top manhole cover. Charge with water. Box up.	BD	2	No	1361.12	2722.24

51	Inspection of Degasser / CST Tank.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Open manhole door. Check the internal. Replace gasket and box up.	BD	2	No	2015.44	4030.88
52	Opening and box up of top cover of AMT / other tank.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Open top door. Replace rubber gasket and box up.	BD	6	No	2011.40	12068.40
53	Level gauge servicing or replacement	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue materials from store. Remove level gauge. Servicing/cleaning or fix new level gauge.	BD	4	No	1009.74	4038.96
54	Overhauling of N-pit pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. . Shift material from stores. Decouple the pump. shifting the pump at workshop. Dismantle the pump. Inspect all pump parts. Replace / repair the damage parts if any. Assemble the pump. Fix the motor and coupling. Align and couple the pump. Clean the equipment. Take successful trial run.	BD	4	No	10243.11	40972.44
55	Suction strainer cleaning of N pit pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Dewater Neutralizing pit. Remove filter element and clean with water / air. Refit the same.	BD	1	No	1070.62	1070.62
PART TOTAL							**794625.77**

Part :D2

RAW WATER CLARIFICATION PLANT

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of CW Chlorination booster pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Check the alignment, if required corrects the same. Tighten / replace the gland to mimimise gland leakage. Tighten the pump assembly and foundation bolt. Check the condition of Bearing, oil seal and oil cup. Repair / replace of oil cup if required. Check oil condition / level, if required replace / top up. Check spider if required replace the same. Align and couple the pump. Clean the equipment. Take successful trial run.	PM	4	No	2015.44	8061.76
2	PM of Caustic recirculation pump.	- do -	PM	12	No	2015.44	24185.28
3	PM of Chlorination blower.	- do -	PM	6	No	2015.44	12092.64
4	PM of Alum dosing pump (32/12.5 dia clarifier)	- do -	PM	16	No	2015.44	32247.04
5	PM of Poly dosing pump (32/12.5 dia clarifier & centrifuge).	- do -	PM	24	NO	2015.44	48370.56
6	PM of Gear box in 32 dia clarifier (inner & outer drive)	Thoroughly clean the equipment & surrounding. Ensure permit to work & safe work place. Decouple the gearbox and motor. Check the alignment, if required corrects the same. Tighten the gearbox assembly and foundation bolt. Check the condition of Bearing, oil seal and view glass. Check oil condition / level, if required replace / top up. Check sprocket &	PM	8	No	2015.44	16123.52

		chain if required replace the same. Align and couple the gearbox. Clean the equipment. Take successful trial run.					
7	PM of 12.5dia clarifier	- do -	PM	6	No	2015.44	12092.64
8	PM of Flash mixer Gear box (32 dia clarifier).	- do -	PM	6	No	2015.44	12092.64
9	PM of centrifuge feed pump	- do -	PM	18	No	2015.44	36277.92
10	PM of centrifuge for PTP & ETP	- do -	PM	12	No	2015.44	24185.28
11	PM of Air blower for PT plant	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Check blower and motor pulley alignment, if required align the same. Tighten the blower assembly and foundation bolt. check the belt. Put the pulley guard. Grease the bearing. Oil top up / change if required. Clean suction filter. Take successful trial run.	PM	6	No	2015.44	12092.64
12	Servicing of CW chlorination system.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Check entire system for chlorine leakage with ammonia solution. If leakage found attended the same and do pressure testing with nitrogen. Clean the gas filter. Check / service the vacuum regulator / ejector.	BD	6	No	2015.44	12092.64
13	Suction strainer cleaning of pump.	Remove filter element and clean with water / air. Refit the same.	BD	6	No	1009.74	6058.44
14	Servicing of valve assembly of Alum dosing pump.	Dismantle valve assembly Remove all parts. Service all parts. Assemble the same.	BD	2	No	1009.74	2019.48
15	Overhauling of CW chlorination booster pump	- do -	BD	1	No	4026.83	4026.83
16	Overhauling of Caustic recirculation pump	- do -	BD	1	No	4026.83	4026.83

17	Overhauling of Chlorination blower.	- do -	BD	1	No	4026.83	4026.83
18	Overhauling of Alum dosing pump (32 dia & 12.5 dia clarifier)	- do -	BD	1	No	4026.83	4026.83
19	Overhauling of gear box in 32 dia clarifier (inner & outer drive)	Thoroughly clean the equipment & surrounding. Shift material from stores. Decouple the gearbox. Dismantle the gearbox. Inspect all gearbox parts. Replace/repair the damage parts, if any. Assemble the gearbox. Fix the sprocket and motor. Align and couple the gearbox. Clean the equipment. Take successful trial run.	BD	1	No	4268.26	4268.26
20	Overhauling of gear box in flash mixer (32 dia clarifier)	- do -	BD	1	No	4268.26	4268.26
21	Servicing of drive chain mechanism of 32 dia clarifier (inner & outer drive)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Check the alignment of drive / driven sprocket. Check the chain. Align and tighten the chain and sprocket assembly and foundation bolt. Lubricate properly. Clean the equipment. Take successful trial run.	BD	2	No	2019.47	4038.94
22	Overhauling of Clarifier inner drive gear and liner assembly.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift the material from stores. Lift the outer bridge of clarifier. Decouple the chain drive. Dismantle the traction wheel. Inspect all liner and gear parts. Replace / Repair the damage parts if any. Assemble the inner drive. Fix the inner drive and coupling. Align and couple the gearbox. Clean the equipment. Take successful trial run.	BD	1	No	7196.90	7196.90

23	Plumber block / Bearing replacement in clarifier.	Thoroughly clean the equipment & surrounding. Ensure permit to work & safe work place. Remove coupling guard. Remove plumber block & bearing. Fix new bearing and box up. Couple and align. Take successful trial run.	BD	2	No	2256.86	4513.72
24	Replacement of Traction Wheel of 32/12.5 dia clarifier (outer drive)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift wheel from store. Lift the bridge & lock. Remove chain, sprocket, Bearing & wheel from shaft. Replace with new one and box up. Clean the equipment. Take successful trial run.	BD	2	No	4316.70	8633.40
25	Replacement of chain / sprocket in 32/12.5 dia clarifier (inner & outer drive)	Thoroughly clean the equipment & surrounding. Ensure permit to work & safe work place. Remove chain guard. Remove chain and sprocket. Check chain / sprocket. Dismantle sprocket. Replace with new one and box up. Clean the equipment. Take successful trial run.	BD	2	No	2019.47	4038.94
26	Replacement of pinion shaft / pinion in 32/12.5 dia clarifier (inner drive)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove chain and sprocket. Check pinion / shaft. Dismantle shaft / pinion. Replace with new one and box up. Fill oil. Clean the equipment. Take successful trial run.	BD	2	No	4268.26	8536.52
27	Replacements of relief valve of Dosing pump.	Remove the valve. Replaced with new one.	BD	2	No	1013.77	2027.54
28	Bearing replacement of 32 Dia Flash Mixture agitator shaft.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple gearbox and agitator. Remove agitator shaft from assembly. Remove bearing. Fix new bearing and box up. Couple and align pump. Take trial run.	BD	1	No	2057.15	2057.15

29	Replacement of copper tube between Chlorine tonner & header.	Ensure permit to work & safe work place. Issue copper tube from store. Remove copper tube & fit new copper tube.	BD	2	No	1005.70	2011.40
30	Greasing in Tonner roller.	Issue grease from ware house Clean and apply grease and make roller free.	BD	20	No	81.79	1635.80
PART TOTAL							**327326.63**

Part :E2

FIRE FIGHTING SYSTEM

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of Hydrant pump (Motor Driven).	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the pump and motor. Check the alignment, if required corrects the same. Tighten / replace the gland to mimimise gland leakage. Tighten the pump assembly and foundation bolt. Check the condition of Bearing, oil seal. Grease the bearing. Check spider if required replace the same. Align and couple the pump. Clean the equipment. Take successful trial run.	PM	12	No	2115.29	25383.48
2	PM of Hydrant pump (Engine Driven).	- do -	PM	6	No	2019.47	12116.82
3	PM of jockey pump.	- do -	PM	12	No	2057.15	24685.80
4	PM of Diesel Engine (Hydrant pump).	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the engine and generator. Check the alignment, if required corrects the same. Tighten the assembly and foundation bolt. Check oil / coolant condition / level. Clean air filter. Check belt tightness / alignment if	PM	6	No	2019.47	12116.82

		required tighten / align. Align and couple the engine. Clean the equipment. Take successful trial run.					
5	Replacement of belt in Diesel Engine.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Ensure permit to work & safe work place. Issue belt from warehouse. Remove pulley guard. Remove old belt. Fix new belt. Check the alignment of pulley, if required corrects the same. Put the pulley guard.	BD	1	No	1009.74	1009.74
6	Overhauling of Hydrant pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Decouple the pump. Dismantle the pump. Inspect all pump parts. Replace/Repair the damage parts if any. Assemble the pump. Fix the motor and coupling. Align and couple the pump. Clean the equipment. Take successful trial run.	BD	2	No	10423.98	20847.96
7	Overhauling of jockey pump.	- do -	BD	1	No	5111.86	5111.86
8	Providing assistant for Diesel Engine servicing.	Providing manpower for assisting supplier representative to carry out servicing of diesel engine. Thoroughly clean equipment / base from oil and dirt. Check the tightness of all bolts of casing, foundation, etc. Boxup equipment. Assist trial run.	BD	2	No	2003.33	4006.66
9	Replacement of Deluge valve.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove the valve. Clean the flange surface. Cut and put new gasket. Fix new valve. Tighten the bolt.	BD	2	No	2067.92	4135.84

10	PM of Deluge Station valves and cleaning (total 28station)	Ensure permit to work & safe work place. Thoroughly clean the deluge valve station all valves (around 4 Nos.) check for any leakage of water from gland and tighten the gland/replace the gland packing. **Clean the Y-**Strainer. Check for any damage and inform to EIC and apply graphite spray on the spindle. Remove all the waste material from site.	PM	112	No	2019.47	226180.64
PART TOTAL							**335595.62**

Part :F2

INDUCED DRAFT COOLING TOWER

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of cooling tower fan & cell	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the fan and motor. Check and correct the blue contact of motor and gearbox base if req. Check the alignment / blade angle if required correct the same. Tighten the fan assembly and foundation bolt. Check the condition of Bearing, oil seal, fan blades and oil indicator. Replace if required. Check oil condition / level, if required replace / top up. Clean cell, blades and nozzles. Clean the equipment. Take successful trial run.	PM	112	No	2,692.96	3,01,611.52
2	Oil top up in Gear Box.	Bring oil from store. Top up new oil upto required level.	BD	120	No	331.20	39,744.00
3	Oil replacement in gear reducer .	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Bring oil from store. Drain old oil and replace with new oil upto required level.	BD	4	No	1,009.74	4,038.96

4	Oil Seal replacement in gear reducer.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue oil seal from ware-house. Decouple shaft. Remove coupling and gear box cover. Replace oil seal. Assemble the same. Align and couple the gear box with motor. Clean the equipment. Take successful trial run.	BD	6	No	2,758.52	16,551.12
5	PVC Fills replacement in cooling tower.(per block)size.1.2mx 1.2mx0.6m	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue material from store. Replace damaged fins block by new one.	BD	50	No	1,007.72	50,386.00
6	Replacement of gear reducer in Cooling Tower.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue gear reducer from warehouse. Transport gear reducer upto cooling tower cell. Dismantle the fan assembly, shaft and coupling. Remove damaged gear reducer. Replace with new one. Check and correct the blue contact between gear box base and base frame if req. Refix the blade and adjust blade angle & replace the hood. Align and couple the gear reducer. Fill new oil. Take successful trial run. Transfer damaged gear box to ware house/workshop.	BD	4	No	17,262.41	69,049.64
7	Replacement of Fan assembly in Cooling Tower.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue fan assembly from warehouse. Transport upto cooling tower cell. Dismantle damaged fan assy. Replace with new one. Adjust blade angle & replace the hood. Align and couple the gear reducer. Take successful trial run. Transfer damaged fan assembly to ware house.	BD	6	No	16,955.37	1,01,732.22

8	Replacement of Fan blade set in Cooling Tower.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue fan blade set from warehouse. Transport upto cooling tower cell. Dismantle existing blades. Replace with new one. Adjust blade angle. check the alignment if req. Take successful trial run. Transfer damaged blades to ware house.	BD	4	No	7,594.46	30,377.84
9	Replacement of drive shaft in Cooling Tower.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue drive shaft from warehouse. Transport upto cooling tower cell. Dismantle drive shaft. Replace with new one. Align and couple the gear reducer. Take successful trial run. Transfer damaged drive shaft to ware house.	BD	4	No	5,347.59	21,390.36
10	Gearbox new base frame installation or replacement of base frame.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue base frame from warehouse. Transport upto cooling tower cell. Decouple the gear box, dismantle fan assembly; remove gear box installed the new base frame or replacement of existing damaged base frame as per instruction of EIC. Check and correct the blue contact between gear box and base frame. Couple and alignment of gearbox. Assembly of fan blades. Adjust blade angle. Take successful trial run. Transfer damaged base frame to ware house.	BD	1	No	21,887.26	21,887.26
11	Replacement of coupling in Cooling Tower.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue materials from store. Remove coupling guard and coupling. Fix new coupling by heating. Align and couple the same. Align the shaft with motor and	BD	2	No	3,384.77	6,769.54

		gear box. Take trial run.					
12	Blade angle adjustment of cooling tower fan	Ensure permit to work & safe work place. Remove hub cover. Check blade angle. Adjust blade angle if required. Fix hub cover. Take successful trial run.	BD	14	No	1,332.86	18,660.04
13	Nozzle/diffuser ring replacement in nos. (one no.)	Ensure permit to work & safe work place. Issue material from store. Replace damaged nozzle with new one.	BD	200	No	167.62	33,524.00
14	Pipe coupling & branch arm replacement in nos.	Issue material from store. Replace damaged with new one.	BD	10	No	339.27	3,392.70
15	Overhauling of Cooling Tower Gear Box.	Thoroughly clean the equipment & surrounding. Ensure permit to work & safe work place. Shift material to workshop. Drain oil. Dismantle the gear box. Inspect all gear parts. Replace / Repair the damage parts, if any. Assemble the gear box. Fill the oil. Clean the equipment.	BD	1	No	8,967.58	8,967.58
16	Replacement of Drift Eliminator block (Each block contains 15 to 20 drift eliminators)	Thoroughly clean the equipment & surrounding. Ensure permit to work & safe work place. Issue material from store. Drilling of hole for locating rod. Remove damage drift eliminators. Assemble the block with new drift eliminator.	BD	100	No	758.31	75,831.00
17	Hydro jet cleaning of Cooling tower (7Nos. Cell)	Shift canvas hose pipe to site. Necessary arrange before starting work. Clean the entire cooling tower fills by hydro jetting from bottom side.	BD	4	NO	12,432.50	49,730.00
18	Nozzles & its headers de-chocking of cooling tower cell.	Dismantle all cooling tower nozzles & adaptors. (Approx.525 nozzles per cell). De-chocked & cleaned all nozzles & headers. Fit back all nozzles & adaptors. Replaced nozzles & adaptor if required.	BD	14	No	10,068.72	1,40,962.08
PART TOTAL							**994605.86**

Part :G2

DIESEL ENGINE

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of Diesel Engine.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the engine and generator. Check the alignment, if required corrects the same. Tighten the assembly and foundation bolt. Check oil / coolant condition / level. Clean air filter. Check belt tightness / alignment if required tighten / align. Align and couple the engine. Clean the equipment. Clean the oil spillage if any. Check the diesel tanks for any leakage and clean the diesel tank. Take successful trial run of engine.	PM	12	No	2673.79	32085.48
2	Diesel top up in Diesel engine / Drum	Bring diesel from store and topped upto required level as per EIC.	BD	12	No	1013.77	12165.24
3	Engine oil top up in Diesel engine.	Bring oil from store and topped upto required level.	BD	1	No	1013.77	1013.77
4	Coolant top up in Diesel engine.	Bring DM water from DM water plant and topped upto required level	BD	1	No	506.89	506.89
5	Air filter cleaning / replacement of diesel engine set.	Remove filter and clean with air and Boxup.	BD	1	No	339.27	339.27
6	Lub oil filter changing of diesel engine set.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove old filter. Clean the filter box. Put new filter and Boxup.	BD	1	No	343.31	343.31
7	Fuel oil filter changing of Diesel engine set.	Remove old filter. Clean the filter box. Put new filter and box up.	BD	1	No	343.31	343.31
8	Greasing of plumber block.	Issue grease from ware-house and apply grease with grease gun in bearings.	BD	1	No	335.23	335.23

9	Belt tension adjustment of diesel engine	Remove belt guard. Adjust belt tension by adjusting screw and Boxup.	BD	1	No	502.85	502.85
10	Belt replacement in diesel engine	Issue belt from warehouse. Remove belt guard. Remove old belt. Check the coupling alignment, if required corrects the same. Put new belt and adjust belt tension.	BD	1	No	1005.70	1005.70
11	Replacement of flixible hose in DG set.	Shift hose from stores, Remove damage hose. Fix new hose	BD	1	No	1009.74	1009.74
12	Complete Engine oil replacement in diesel engine (210 Ltr.)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Bring oil from store. Drain old oil and replace with new oil upto required level.	BD	1	No	2019.47	2019.47
13	Radiator water replacement in diesel engine	Bring DM water from DM plant. Drain old water and replace with fresh DM water upto required level.	BD	1	No	1009.74	1009.74
14	Providing assistant for Diesel Engine servicing.	Ensure permit to work & safe work place. Providing manpower for assisting supplier representative to carry out servicing of diesel engine. Change the oil/fuel/air filter. Change oil. Change coolant. Thoroughly clean equipment / base from oil and dirt. Check the tightness of all bolts of casing, foundation, etc. Boxup equipment. Assist trial run.	BD	4	No	2673.79	10695.16
15	External Cleaning of DG set.	Clean the Diesel engine & base frame completely.	BD	2	No	171.65	343.30
PART TOTAL							**63718.46**

Part :H2

SUMP AND SUBMERSIBLE PUMP

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of Transformer yard Sump Pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the pump and motor. Check the alignment. Tighten the pump assembly and foundation bolt. Align and couple the pump. Clean the equipment. Grease the bearing. Take successful trial run.	PM	8	No	2711.47	21691.76
2	PM of Switch yard Sump Pump.	- do -	PM	8	No	2673.79	21390.32
3	PM of CW Pump house cable house Sump Pump	- do -	PM	4	No	2673.79	10695.16
4	PM of Fire water pump cable house Sump Pump	- do -	PM	4	No	2673.79	10695.16
5	PM of sump pump cable trench opp. To CWPH	- do -	PM	4	No	2673.79	10695.16
6	PM of sump pump cable trench opp. U#4 GT	- do -	PM	4	No	2673.79	10695.16
7	PM of sump pump cable trench opp. U#3 GT	- do -	PM	4	No	2673.79	10695.16
8	PM of ESP cable vault Sump Pump (U3 & 4, 2nos.)	- do -	PM	8	No	2673.79	21390.32
9	PM of sump pump of boiler area (Phase#1, Total 2nos.)	- do -	PM	8	No	2673.79	21390.32
10	PM of sump pump of boiler area (Phase# 2, Total 2nos.)	- do -	PM	8	No	2673.79	21390.32
11	PM of boiler Blow down sump pump (U1, 2nos.)	- do -	PM	8	No	2673.79	21390.32
12	PM of boiler Blow down sump pump (U2, 2nos.)	- do -	PM	8	No	2673.79	21390.32
13	PM of boiler Blow down sump pump (U3, 2nos.)	- do -	PM	8	No	2673.79	21390.32

14	PM of boiler Blow down sump pump (U4, 2nos.)	- do -	PM	8	No	2673.79	21390.32
15	PM of TG Building sump pump	- do -	PM	32	No	2673.79	85561.28
16	PM of cable gallery sump pump	- do -	PM	16	No	2673.79	42780.64
17	PM of screw pump for dirty oil tank (U1, 2nos.)	- do -	PM	8	No	1340.93	10727.44
18	PM of screw pump for dirty oil tank (U2, 2nos.)	- do -	PM	8	No	1340.93	10727.44
19	PM of screw pump for dirty oil tank (U3, 2nos.)	- do -	PM	8	No	1340.93	10727.44
20	PM of screw pump for dirty oil tank (U4, 2nos.)	- do -	PM	8	No	1340.93	10727.44
21	PM of screw pump for FO unloading pump house outside (1nos.)	- do -	PM	4	No	1340.93	5363.72
22	PM of screw pump for FO unloading pump house in side (1nos.)	- do -	PM	4	No	1340.93	5363.72
23	PM of screw pump for FO transfer pump house outside (1nos.)	- do -	PM	4	No	1340.93	5363.72
24	PM of screw pump for FO transfer pump house in side (2nos.)	- do -	PM	8	No	1340.93	10727.44
25	PM of screw pump Near GT#4	- do -	PM	4	NO	1340.93	5363.72
26	PM of screw pump outside of Phase#1 Air compressor house	- do -	PM	8	NO	1340.93	10727.44
27	PM of screw pump outside of Phase#2 Air compressor house	- do -	PM	4	NO	1340.93	5363.72
28	PM of submersible pump for CEP pit	- do -	PM	8	No	2673.79	21390.32
29	PM of submersible pump for condenser pit	- do -	PM	16	No	2673.79	42780.64
30	PM of Submersible pump for cable trench near U4 UAT	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decuple the pipe from pump. Remove submersible pump from pit. Check and clean the	PM	4	No	2673.79	10695.16

		suction strainer. Check oil, if required top up. Tighten the pump assembly. Clean the equipment. Take successful trial run.					
31	PM of Submersible pump for Air compressor house	- do -	PM	4	NO	2673.79	10695.16
32	Overhauling of Sump Pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Decouple the pump. Dismantle the pump. Inspect all pump parts. Replace / repair the damage parts if any. Assemble the pump. Fix the motor and coupling. Align and couple pumps. Clean the equipment. Take successful trial run.	BD	2	No	8118.59	16237.18
33	Overhauling of Submersible Pump (20/10 H.P.)	Shift material from stores. Dismantle the pump. Inspect all pump parts. Replace / repair the damage parts if any. Assemble the pump. Clean the equipment. Take successful trial run.	BD	1	No	5347.59	5347.59
34	Overhauling of Submersible Pump (1.5/1.5 HP)	Shift material from stores. Dismantle the pump. Inspect all pump parts. Replace / repair the damage parts if any. Assemble the pump. Clean the equipment. Take successful trial run.	BD	2	No	5347.59	10695.18
35	Shifting of Submersible Pump in plant premises. (20 & 10 HP)	Lift the pump from stores/ ware house or site. Shift the pump as direction of EIC.	BD	10	No	1332.86	13328.60
36	Shifting of Submersible Pump in plant premises. (5 & 1.5 HP)	Lift the pump from stores/ ware house or site. Shift the pump as direction of EIC.	BD	20	No	1332.86	26657.20
37	Replacement of suction strainer in submersible pump	Shift strainer from stores, Remove damage strainer. Fix new one	BD	4	No	1336.90	5347.60
38	Replacement of canvas hose in submersible pump	Shift hose from stores, Remove damage hose. Fix new hose	BD	6	No	1356.06	8136.36
39	Suction strainer cleaning of Sump Pump.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove motor. Lift the pump. Remove filter	BD	6	No	1028.90	6173.40

		element and clean with water / air. Refit the same.					
40	Oil replacement / top up in Submersible pump	Bring oil from store. Drain old oil and replace with new oil upto required level.	BD	2	No	171.65	343.30
PART TOTAL							**643642.97**

Part :I2

LP PIPING

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	Erection & Welding of MS / SS pipe up to 6mm thk up to 50NB (in mtr)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Issue pipe from store. Erect the pipe. Cut the joint. Grind the face. Fit up the joint properly. Weld the joint. Make support.	BD	100	M	570.81	57081.00
2	- do - 80 to 150 NB	- do -	BD	100	M	542.17	54217.00
3	- do - 200 to 300 NB	- do -	BD	50	M	642.40	32120.00
4	Threading, fitting, Erection & Welding of GI pipe up to 50 NB (per meter)	Cut the joint. Thread & Fit up the joint properly. If required weld the joint. Make support.	BD	80	M	513.75	41100.00
5	Welding of MS / SS joint up to 6mm.	Cut the joint. Grind the face. Fit up the joint properly. Weld the joint.	BD	150	No	642.40	96360.00
6	Erection & welding of MS / SS flange upto 80NB..	Cut the joint. Grind the face. Fit up the flange properly. Weld the joint.	BD	20	No	642.40	12848.00
7	- do - 100 to 250 NB	- do -	BD	10	No	1187.64	11876.40
8	- do - 350 to 600 NB	- do -	BD	2	No	1428.30	2856.60
9	Fabrication & Welding of mitre from parent MS pipe up to 11mm thk up to 300NB (in No)	Cut the pipe. Fabricate mitre. Grind the face. Fit up the joint properly. Weld the joint. Make support.	BD	1	No	2201.41	2201.41
10	Fabrication & Welding of reducer from parant MS pipe up to 11mm thk up to 300NB (in No)	Cut the pipe. Fabricate mitre. Grind the face. Fit up the joint properly. Weld the joint. Make support.	BD	1	No	2163.73	2163.73

11	Fabrication of Flange from MS plate up to 25 mm thk up to 300NB (in No)	Issue plate from store. Cut the plate. Fabricate flange. Grind the face. Drill hole.	BD	20	No	1604.36	32087.20
12	Erection of UPVC pipe up to 50NB	Cut the UPVC pipe as per requirement. Fit elbow, tee, flanges etc fitting & clamps as per requirement by gluing. Charged the system. Attend leakage if any.	BD	100	M	173.67	17367.00
13	Erection of UPVC pipe up to 80NB	Cut the UPVC pipe as per requirement. Fit elbow, tee, flanges etc fitting & clamps as per requirement by gluing. Charged the system. Attend leakage if any.	BD	100	M	173.67	17367.00
14	Erection of UPVC pipe up to 150NB	Cut the UPVC pipe as per requirement. Fit elbow, tee, flanges etc fitting & clamps as per requirement by gluing. Charged the system. Attend leakage if any.	BD	100	M	343.31	34331.00
15	Erection/ replacement of UPVC valve up to 50NB	Dismantle the pipe from system. cut pipe as per requirement. Fit the valve by gluing. Take trial	BD	20	No	682.58	13651.60
16	Erection/ replacement of UPVC valve up to 100NB	Dismantle the pipe from system. cut pipe as per requirement. Fit the valve by gluing. Take trial	BD	10	No	682.58	6825.80
17	Attending leakage in PVC pipe fitting.	Check the joint for any leakages. Remove fitting join with PVC cement. Ensure no leakage.	BD	30	No	674.50	20235.00
18	Attending union leakage in pipe line.	Check the union connection for any leakage. Attend and restore.	BD	6	No	674.50	4047.00
19	Attending flange leakage in pipe line upto 80 NB	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Check the flange joint for any leakages. Loosen the flange. Replace the gasket. Tighten the flange.	BD	50	No	1009.74	50487.00
20	- do - 100 to 200 NB	- do -	BD	25	No	1009.74	25243.50
21	- do - 250 to 450 NB	- do -	BD	6	No	1009.74	6058.44
22	Attending flange leakage in CW pipe line (up to 2400 Dia.)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Check the flange joint for	BD	1	No	2111.25	2111.25

		any leakages. Loose the flange. Replace the gasket. Tighten the flange.					
23	Wrapping and coating in pipe line per Sq. mt.	Clean pipe. Apply primer. Apply pipe coat by heating.	BD	6	Sq.M	167.62	1005.72
24	Dewatering of Valve Pit/drain chambers	Shift the submersible pump from store or any other area in plant. Dewater the pit. Bring it back to store.	BD	10	No	1508.55	15085.50
25	Pin hole leakage attending of above ground pipe up to 100NB size.	Ensure permit to work & safe work place. Thoroughly clean the equipment/system & surrounding. Make necessary arrangement. Attending on line pin hole leakage by 25NB/50NB socket welding	BD	25	No	1550.27	38756.75
26	Pin hole leakage attending of above ground pipe up to 300NB size.	Make necessary arrangement. Attending on line pin hole leakage by 25NB/50NB socket welding	BD	8	No	1550.27	12402.16
27	Cutting & shifting of scrape/discard piping system up to 100NB size.(Meter)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shifting of cutting set to location. Cut unused/scrape piping system. Shift scrape pipe as per EIC instruction.	BD	100	M	261.41	26141.00
28	Dismantling of old piping system up to 250NB size.(Meter)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shifting of cutting set to location. Cut unused/scrape piping system. Shift scrape pipe as per EIC instruction.	BD	100	M	261.41	26141.00
PART TOTAL							**662168.06**

Part :J2

LP VALVES

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	Servicing of air release valve CWPH (3nos.)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Open flanges. Check seat, ball and other internal parts. Repair the seat. Check the surface for blue match. Replace gasket. Box up.	PM	6	No	2673.79	16042.74
2	Servicing of air release valve at condensors outlet U3 & 4	- do -	PM	16	No	2741.40	43862.40
3	Greasing of Butterfly valve Gearbox in CW & CT	Remove gear box cover. Remove old grease. Put new grease. Tighten the bolt.	PM	50	No	1005.70	50285.00
4	Gland tightening in valves	Adjust the gland by tightening to stop leakages.	BD	50	No	81.79	4089.50
5	Greasing of Gate & Globe & diaphragm valves.	Thoroughly clean the valves body and gland with rust remover/cleaner .Issue grease from store. Apply on valve spindle	BD	120	No	167.62	20114.40
6	Replacement of gland packing in valves up to 300NB size.	Remove the gland follower. Remove the damage gland packing. Replace new. Box up.	BD	12	No	1009.74	12116.88
7	Servicing of Gate / Globe Valve at site up to 150 NB.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Dismantle valve. Check seat, disc and other internal parts. Repair the seat. Lap seat and check the surface for blue match. Replace gland packing. Assemble and Box up.	BD	10	No	2673.79	26737.90
8	- do - 200 to 450 NB	- do -	BD	6	No	2692.96	16157.76
9	Servicing of NRV at site up to 150 NB.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Open NRV. Check seat, disc and other internal parts. Repair the seat. Lap seat and check the	BD	10	No	2741.40	27414.00

		surface for blue match. Assemble and Box up.					
10	- do - 200 to 450 NB	- do -	BD	4	No	2692.96	10771.84
11	Servicing of Diaphragm Valve up to 80 NB	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Dismantle the valve. Inspect the damaged parts. Repair / replace the damaged parts. Box-up and ensure proper functioning of the valve.	BD	20	No	2007.36	40147.20
12	- do - upto 250 NB	- do -	BD	4	No	2053.66	8214.64
13	Servicing of Float Valve..	Remove float valve from pipe. Dismantle and service the same.	BD	4	No	2007.36	8029.44
14	Servicing of Level gauge.	Thoroughly clean the equipment & surrounding. Ensure permit to work & safe work place. Service the level indicator and insure visibility.	BD	8	No	2669.76	21358.08
15	Servicing of butterfly valves up to 350 NB	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Dismantle valve. Repair the seat disc, plug by build up. Grind and lap the seat. Check surface for blue match. Replace bonnet gasket and gland packing. Assemble the valve. Adjust the gland. Hot tight the valve bonnet. Ensure no leakages.	BD	6	No	2913.87	17483.22
16	- do - 400 to 750 NB	- do -	BD	2	No	2913.87	5827.74
17	- do - 1200 NB	- do -	BD	2	No	2913.87	5827.74
18	Replacement of gate, globe valve, NRV and upto 150 NB.	Remove the valve. Clean the flange surface. Cut and put new gasket. Fix new valve. Tighten the bolt.	BD	12	No	2026.53	24318.36
19	- do - 200 to 450 NB	- do -	BD	6	No	2247.44	13484.64
20	Replacement of thraded gate, globe valve, NRV and Float valve upto 50 NB.	Remove the valve. Clean the thread. Fix new valve .	BD	18	No	1436.48	25856.64

21	Attending Butterfly valves passing in position to prevent passing 1200 NB	Open manhole cover. Check valve seal if required replace seal. Check seal gap if required adjust. Ensure no leakages.	BD	4	No	2796.01	11184.04
22	Servicing of Gear Box of butterfly valves up to 750 NB	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Dismantle gear box. Remove old grease and clean internals. Check the worn-out parts. Replace / Repair the parts. Assemble the gear box. Fill new grease. Box up and fit on the valve.	BD	4	No	2555.93	10223.72
23	- do - 1200 NB	- do -	BD	2	No	2564.01	5128.02
24	Replacement of Butterfly valve up to 200 NB	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove the valve. Clean the flange surface. Cut and put new gasket. Fix new valve. Tighten the bolt.	BD	8	No	2026.53	16212.24
25	- do - 250 to 450 NB	- do -	BD	4	No	2026.53	8106.12
26	- do - 600 to 750 NB	- do -	BD	2	No	2913.87	5827.74
27	- do 1200NB	- do -	BD	2	No	2989.23	5978.46
28	Replacement of Diaphragm valve up to 80 NB	- do -	BD	10	No	1336.90	13369.00
29	- do - upto 250 NB	- do -	BD	5	No	1356.06	6780.30
30	Replacement of Diaphragm up to 80 NB	Dismantle the valve. Remove damaged diaphragm. Replace with new one. Box-up and ensure no lekage in valve.	BD	20	No	1670.11	33402.20
31	- do - upto 250 NB	- do -	BD	6	No	1694.33	10165.98
32	Replacement / Repair of gland follower & its bolt at site.	Dismantle gland follower. Remove damaged part. Repair / replace the same. Assemble and Box up.	BD	4	No	777.47	3109.88
33	Fabrication / Replacement of valves handle.	Remove the valve handle from position. Fabricate / repair handle if required. Replace with new one.	BD	4	No	1044.14	4176.56
34	Freeness checking of various type & size of valves	Check the valve for jamming. Made free if required. Lubricate the spindle of valve. Assist trial run of valve by	BD	30	No	251.42	7542.60

		opening and closing of valve.					
35	Replacement of Rubber expansion joint in CW line of 1200 NB	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Loosen the bolt and tie rod. Remove RE joint. Fix new RE joint. Tighten the bolt.	BD	1	No	3008.07	3008.07
PART TOTAL							**542355.05**

Part :K2

EOT CRANES, ELECT. & MECH. HOIST

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	PM of CW pump house Cranes	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Greasing of wire rope. Oil top up in gear box and thruster. Greasing of LT & CT wheels & bearings. Alignment of LT & CT wheels. Inspection & adjustment of break & break shoe. Inspection of all fasteners & tighten, if required. Cleaning of crane. Trail for successful operation	PM	6	No	2673.79	16042.74
2	PM of semi gantry crane of CW Forebay	-do-	PM	6	No	2673.79	16042.74
3	PM of Electric Hoist. (River Water pump house)	-do-	PM	4	No	2673.79	10695.16
4	PM of Electric Hoist. (Compressor house)	-do-	PM	6	No	2673.79	16042.74
5	PM of Electric Hoist. (Air washer fan)	-do-	PM	8	No	2673.79	21390.32
6	PM of AC Plant Electric Hoist	-do-	PM	6	No	2673.79	16042.74
7	PM of DG House single girder under slung Cranes	-do-	PM	6	No	2673.79	16042.74
8	PM of Electric hoist of fire water pump house	-do-	PM	4	No	2673.79	10695.16

9	Adjustment / Replacement of thruster / brake shoe in EOT crane	Adjust / Remove thruster and break shoe and fixing of new after alignment. Take trail run.	BD	2	No	2019.47	4038.94
10	Decoupling, Alignment and Coupling of Gear Box.	Remove coupling guard. Decouple the gear box and motor. Checks the alignment, if required correct the same. Couple and tighten the coupling bolt. Take trial run for successful operation.	BD	2	No	2067.92	4135.84
11	Overhauling of gearbox.	Decouple the Gear box and motor. Open the gear box. Replace damaged parts if any. Assemble the gear box. Place in position. Align the same. Clean the equipment. Take successful trail run.	BD	2	No	6769.53	13539.06
12	Replacement of Wire rope guide..	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove wire rope. Insert new guide rope. Insert wire. Tighten the bolt. Take successful trail.	BD	1	No	2741.40	2741.40
13	Alignment of Rail.	Check Level and straightness of rail. If required correct the same. Check tightness of all bolts.	BD	1	No	2669.76	2669.76
14	Lubrication of wire rope.	Remove / clean old lubricant from wire rope. Issue lubricant from warehouse. Apply new lubricant.	BD	2	No	1340.93	2681.86
15	Cleaning of crane & Rail.	Clean crane & Rail beam completely	BD	2	No	997.63	1995.26
16	Providing assistant for repairing of EOT crane to external agency	Providing necessary manpower ie one mechanical fitter, two helper & one rigger/welder if required for assisting supplier representative to carry out servicing of EOT crane. Thoroughly clean equipment. Check the tightness of all bolts. Boxup equipment. Assist trial run.	BD	4	No	2911.18	11644.72

17	Servicing of Manual Hoist/Chain Pulley Box & Travelling Trolley.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Check spring mechanism and ratchet and pawl is operating properly. Check / rectify chain wear. Check brake disc wear. Check / rectify hook opening. Lubricate load chain and load chain wheel.	PM	20	No	2673.79	53475.80
PART TOTAL							**219916.98**

Part :L2

GENERAL MECHANICAL WORK

Item No.	Item of Work	Scope of Work	Nature of Mntc.	Qty.	UOM	Estimated Unit Cost (in Rs)	Total Estimated Cost (in Rs)
1	Gland tightening of Pump.	Adjust the gland by tightening to minimize leakages.	BD	50	No	81.79	4089.50
2	Oil top up in pump, Blower & Gear Box.	Bring oil from store. Drain old oil and replace with new oil upto required level.	BD	50	No	331.20	16560.00
3	Gland replacement of pump.	Remove the damage gland completely and replace with new. Adjust the gland to minimize leakages. Take successful trial run.	BD	10	No	674.50	6745.00
4	Oil replacement in pump, Gear Box, Blower.	Bring oil from store. Drain old oil and replace with new oil upto required level.	BD	10	No	1032.94	10329.40
5	Decoupling, Alignment and Coupling of pump/ Blower/ Gear Box with motor.	Remove coupling guard. Decouple the pump /gear box /motor. Check and correct the blue contact between motor and base frame or gearbox and base frame if required. Check the alignment and correct the same. Couple and tighten the coupling bolt. Take trial run for successful operation.	BD	20	No	2717.18	54343.60
6	Replacement of Oil Cup / Oil level indicator.	Issue materials from store. Drain oil from brg. housing. Remove oil cup / level indicator. Fix new one. Fill the oil. Check for any leakages.	BD	6	No	1009.74	6058.44

7	Replacement of belt in blower/ dosing pump/ DG set.	Issue belt from warehouse. Remove pulley guard. Remove old belt. Fix new belt. Check the alignment of pulley, if required corrects the same. Put the pulley guard.	BD	4	No	1009.74	4038.96
8	Greasing in pump, Blower, Clarifier drive and Plummer block.	Issue grease from ware-house and apply grease with grease gun in bearings	BD	12	No	327.16	3925.92
9	Love joy coupling spider / pin bush replacement	Remove coupling guard. Remove damage spider / pin bush. Fix new one. Align and couple the equipment.	BD	6	No	1295.57	7773.42
10	Replacement of coupling of Pump/ Gear Box.	Issue materials from store. Remove coupling guard and coupling. Fix new coupling by heating. Align and couple the same.	BD	4	No	2955.59	11822.36
11	Fabrication & Erection of structural job. (in MT)	Shift the material from steel yard. Fabricate as per drawing or as per instruction given by EIC.	BD	5	MT	25824.66	129123.30
12	Opening and closing of Man hole cover of tank.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Open man hole door. Replace gasket and box up.	BD	10	No	2665.72	26657.20
13	Servicing of Level indicator.	Open pully housing. Service the level indicator and insure freeness.	BD	8	No	1336.90	10695.20
14	Painting of Pipe, Structure and equipment per Sq. Mt.	Shift the material from store. Paint Two coat paint as per EIC.	BD	100	No	175.69	17569.00
15	Suction strainer cleaning of Pump.	Remove filter element and clean with water / air. Refit the same.	BD	18	No	666.43	11995.74
16	Vibration measurement Assistance.	Supply manpower for assisting vibration measurement to GIPCL EIC for all categories rotating equipment. Semiskilled labor shall be required.	BD	12	No	654.32	7851.84
17	Balancing of Pump/ Impeller/ Fan.	Providing manpower for assisting balancing of fan, Pump & motor. This includes welding of trial / final weight. Correctness of alignment. Inspection of bearings Tightness of foundation bolt etc.	BD	4	No	2305.30	9221.20

18	Erection of scaffolding for Miscellaneous work.3MX3M X6M HEIGHT	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Erect the scaffolding as per instruction of E-I-C. Make proper approach and platform as per instruction of EIC.	BD	30	No	3958.21	118746.30
19	Erection of scaffolding for Miscellaneous work.6MX6M X6M HEIGHT	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Erect the scaffolding as per instruction of E-I-C. Make proper approach and platform as per instruction of EIC.	BD	10	No	3958.21	39582.10
20	Lub oil sample collection.	Open the plug of the lub oil tank/bearing/HC etc. Collect the sample. Submit it to C&L laboratory. Box up.	BD	4	No	245.37	981.48
21	Cleaning of pumps.	Clean the pump & base frame completely.	BD	4	No	249.41	997.64
PART TOTAL							**499107.60**

Part :M2							
LIGNITE RUN OFF WATER CLARIFICATION PLANT, PT PLANT & ETP							
Item No.	**Item of Work**	**Scope of Work**	**Nature of Mntc.**	**Qty.**	**UOM**	**Estimated Unit Cost (in Rs)**	**Total Estimated Cost (in Rs)**
1	PM of Lignite Runoff Pond water pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple the pump and motor. Check the alignment, if required correct the same. Tighten / replace the gland to mimimise gland leakage. Tighten the pump assembly and foundation bolt. Check oil condition / level, if required replace / top up. Replacement of coupling bolt and / or bush if required. Align and couple the pump. Clean the equipment. Take successful trial run.	PM	12	No	2673.79	32085.48

2	PM of Lignite Run off pond clarifier 30 Dia at Ash water recovery system.	Decouple the gearbox and motor. Check the alignment, if required corrects the same. Tighten the gearbox assembly and foundation bolt. Check the condition of Bearing, oil seal and view glass. Check oil condition / level, if required replace / top up. Check sprocket & chain if required replace the same. Align and couple the gearbox. Clean the equipment. Take successful trial run.	PM	6	NO	2722.24	16333.44
3	PM of Flocculator for lamella clarifier	- do -	PM	4	NO	2770.69	11082.76
4	PM of flash mixer for lamella clarifier	- do -	PM	4	NO	2819.13	11276.52
5	PM of Thickener feed pump.	- do -	PM	8	No	2867.58	22940.64
6	PM of Centrifuge feed pumps	- do -	PM	8	NO	2916.02	23328.16
7	PM of vertical turbine pump for ETP/ guard pond	- do -	PM	12	No	2964.47	35573.64
8	PM of Alum dosing pump for ETP	- do -	PM	12	No	3012.92	36155.04
9	PM of vertical Sump pump for lamella clarifier	- do -	PM	8	No	3061.36	24490.88
10	PM of vertical sump pump for clear water pit of API near FOTPH.	- do -	PM	8	No	3109.81	24878.48
11	PM of Thickener for ETP	- do -	PM	4	No	3158.25	12633.00
12	PM of Thickener for PT	- do -	PM	8	No	3206.70	25653.60
13	PM of Centrifuge (PT & ETP)	- do -	PM	12	No	3255.15	39061.80
14	PM of Blow down pump at Ash water recovery clarifier system	- do -	PM	6	No	3303.59	19821.54
15	PM of clear water pump at Ash water recovery clarifier system	- do -	PM	6	No	3352.04	20112.24
16	Brg replacement / service of TBH of LROP water pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Decouple pump and motor. Remove motor. Drain oil. Dismantle thrust bearing housing. Check worn out parts, if required	BD	1	No	3110.35	3110.35

		replaces the same. Assemble the thrust bearing housing. Fill the oil. Fix the motor. Align and couple the pump. Clean the equipment. Take trial					
17	Suction strainer cleaning of dosing Pump.	Remove filter element and clean with water / air. Refit the same.	BD	4	No	506.89	2027.56
18	Plunger seal / O ring replacement of dosing pump.	Remove the damage gland completely and replace with new. Adjust the gland to minimize leakages. Take successful trial run.	BD	1	No	1340.93	1340.93
19	Servicing of valve assembly of Alum dosing pump.	Dismantle valve assembly Remove all parts. Service all parts. Assemble the same.	BD	1	No	1340.93	1340.93
20	Overhauling of Lignite runoff pond water pump	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Remove the motor. Dismantle the pump. Inspect all pump parts. Replace / Repair the damage parts if any. Assemble the pump. Clean and paint the pump. Fix the motor and coupling. Align and couple the pump. Clean the equipment. Take successful trial	BD	1	No	13187.69	13187.69
21	Overhauling of phase # 2 lignite run of pond clarifier (inner / outer drive)	Shift material from stores. Decouple the gearbox. Dismantle the gearbox. Inspect all gearbox parts. Replace/repair the damage parts, if any. Assemble the gearbox. Fix the sprocket and motor. Align and couple the gearbox. Clean the equipment. Take successful trial run.	BD	1	No	6175.48	6175.48
22	Overhauling of Thickener/ centrifuge feed pump	- do -	BD	4	No	5539.22	22156.88

23	Overhauling of vertical Turbine pump of ETP.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift material from stores. Remove the motor. Dismantle the pump. Inspect all pump parts. Replace / Repair the damage parts if any. Assemble the pump. Clean and paint the pump. Fix the motor and coupling. Align and couple the pump. Clean the equipment. Take successful trial	BD	2	No	5663.02	11326.04
24	Servicing of drive chain mechanism of clarifier at ash water recovery (inner & outer drive)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Check the alignment of drive / driven sprocket. Check the chain. Align and tighten the chain and sprocket assembly and foundation bolt. Lubricate properly. Clean the equipment. Take successful trial run.	BD	2	No	8005.23	16010.46
25	Plumber block / Bearing replacement in AWR clarifier.	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove coupling guard. Remove plumber block & bearing. Fix new bearing and box up. Couple and align. Take successful trial run.	BD	2	No	1956.41	3912.82
26	Replacement of Traction Wheel of clarifier (outer drive)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Shift wheel from store. Lift the bridge & lock. Remove chain, sprocket, Bearing & wheel from shaft. Replace with new one and box up. Clean the equipment. Take successful trial run.	BD	2	No	5730.85	11461.70

27	Replacement of chain / sprocket in clarifier (inner & outer drive)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove chain guard. Remove chain and sprocket. Check chain / sprocket. Dismantle sprocket. Replace with new one and box up. Clean the equipment. Take successful trial run.	BD	2	No	3365.49	6730.98
28	Replacement of pinion shaft / pinion in clarifier (inner drive)	Ensure permit to work & safe work place. Thoroughly clean the equipment & surrounding. Remove chain and sprocket. Check pinion / shaft. Dismantle shaft / pinion. Replace with new one and box up. Fill oil. Clean the equipment. Take successful trial run.	BD	1	No	6127.03	6127.03
						PART TOTAL	**460336.07**

Note: The rates shall include all labour cost, equipments, supervision, consumables, tools, tackles, all taxes & duties (excluding GST).

Sr. No.	Item	Total Amount (in Rs)
1	Package-1 (Phase-I Turbine & Aux)	**1,02,31,739.34**
2	Package-2 (Phase-II Turbine & Aux)	**65,53,001.33**
3	Package-3 (Phase-I Balance of Plant)	**63,78,922.11**
4	Package-4 (Phase-II Balance of Plant)	**62,45,255.32**
5	Estimated manpower Cost for Unforseen / Contigency Work (Annexure-F)	**3,16,800.00**
6	Total estimated Value for Two years without GST (Sr. No. 1+ Sr. No. 2+ Sr. No. 3+ Sr. No. 4+ Sr. No. 5)	**2,97,25,718.10**
7	GST @ 18% on Sr. No. 6	**53,50,629.26**
8	Total estimated Value for Two years with GST (Sr. No. 6 + Sr. No. 7)	**3,50,76,347.36**

(Rs Three Crore Fifty Lac Seventy-Six Thousand Three Hundred Forty-Seven and Thirty-Six Paisa only.)

PRICE BID FORMAT

Sr. No.	Description	Estimated SoR Value with 18% GST (In Rs.)	% Service charge (To be quoted by bidder)	Total Quoted Amount with Service charge (In Rs.)
(A)	(B)	(C)	(D)	(E) = (C) + ((C)x(D%))
	AMC for TG & BOP Equipment for two years 2025-27	**3,50,76,347.36**	Above / Equal / Below	

Note: - (**1) Prices shall be quoted through online (n)-Procure only. Hard copy of price bid shall not be considered / accepted.**

(2) Evaluation of tender will be done on gross total quoted amount with GST as per above column no. (E)

NAME OF TENDERER : _____
SEAL & SIGNATURE OF TENDERER : _____
NAME OF AUTHORISED PERSON : _____
ADDRESS : _____
PHONE NO. _____ FAX No. _____
MOBILE NO. _____ Email ID. _____

SECTION-F
LIST OF ANNEXURES & FORMS

1.0 ANNEXURE-A

CHECKLIST FOR PASSING THE BILLS

For the month of:

1)	Work Order / P.O. No. & Contract value	:	
2)	Nature of work	:	
3)	Duration of Work Order	:	From to
4)	Maxi. No. of manpower per day deployed in the month.	:	M F Total
5)	Details of Labour License	:	Valid up to for Persons.
6)	Details of E.C Policy	:	Valid up to for Persons.
7)	Documents attached for verification for the previous month.	:	Wage & Attendance Sheets. Yes/No
			P.F Challan Yes/No
8)	Documents attached for verification (in case of Final Bill)	:	Bonus Payment Register Yes/No
		:	Leave wage register Yes/No
9)	Security Deposit / Retention Money lying with Co.	:	Yes / No if yes, Rs.

Date :

Signature of Contractor
with official stamp

2.0 ANNEXURE-B

PROFORMA FOR CONTRACT SECURITY-CUM-PERFORMANCE GUARANTEE BY SELLER / CONTRACTOR

(To be executed on non-judicial stamped paper of approximate value)

B. G. No.----------Date: ……

1. WHEREAS Gujarat Industries Power Company Limited having its office at PO: Ranoli, Dist. Vadodara – 391 350, Gujarat State, India (hereinafter referred to as "The Company/Owner" which expressions shall unless repugnant to the subject or context includes its legal representatives, successors and assigns) has entered into a contract with M/s. …….. ……(hereinafter referred to as "Contractor(s)/ Seller(s)" which expression shall unless repugnant to the subject or context includes their legal representatives, successors and assigns) for ……on the terms and conditions as set out inter alia, in the Company's contract No./ work order No.……..date ……and various documents forming part thereof hereinafter referred to as the "said contract" which expression include all amendments, modifications and/ or variations thereto and where as the Contractor(s)/ Seller(s) has agreed for due execution of the entire contract and guarantees its performance including any parts executed through any other agencies/ subcontractors

   AND WHEREAS one of the conditions of the "said contract" is that "contractor(s)/seller(s) shall furnish to the owner a Bank Guarantee from a bank for….% (…….percent) of the total value of the "said contract" against due and faithful performance of the "said contract" including performance guarantee obligations of the contractor(s)/seller(s) for execution/ supplies made under the "said contract."
2. We ……Bank having its branch office at ……..……..do hereby agree and undertake to pay the amount due and payable under this guarantee without any demur merely on a demand from the Company stating that in the opinion of the Company, which is final & binding, the amount claimed is due by reason of default made by the Contractor(s)/ Seller(s) in performing any of the terms & conditions of the said Contract including defect liability obligations, in fulfilling the performance guarantee obligation or loss or damage caused to or would be caused to or suffered by the Company by reason of any breach by the said Contractor (s)/ Seller(s) of any of the terms & conditions of the contract. Any such demand made on the Bank by the owner 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 Rs.----------(Rs ……only)
3. We undertake to pay to the Company any money so demanded not withstanding any dispute or disputes raised by the contractor(s)/ Seller(s) in any suit or proceeding pending before any office, court or tribunal relating thereto our liability under this present guarantee being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under. Our liability to pay is not dependent or conditional on the owner proceeding against the Contractor(s)/ Seller(s).

4. The guarantee herein contained shall not be determined or affected or suspended by the liquidation or winding up, dissolution or change of constitution or insolvency of the said Contractor(s)/ Seller(s) but shall in all respect and for all purposes be binding and operative until payment of all money due or liabilities under the said contract(s)/ Order(s) are fulfilled.
5. This guarantee will remain valid up _____ days or _____ whichever is earlier. The Bank undertakes not to revoke this guarantee during its currency without previous consent of the OWNER/PURCHASER and further agrees that if this guarantee is extended for a period as mutually agreed between contractor & owner/purchaser, the guarantee shall be valid for a period so extended provided that a written request for such extension is received before the expiry of validity of guarantee.
6. We ……Bank further agree with the Company that the company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract(s)/ Order(s) or to extend the time of performance by the said Contractor(s) Seller(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Company against the said Contractor(s)/ Seller(s) and to forbear or enforce any of the terms and conditions relating to the said Contract(s)/ Order(s) and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor (s) / Seller(s) or for any forbearance, act or omission on the part of the Company or any indulgence by the Company to the said Contractor(s)/ Seller(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have affect of so relieving us.
7. Notwithstanding anything contained herein before, our liability shall not exceed Rs…….(Rupees……only) and shall remain in force till..……..Unless a demand or claim under this Guarantee is made on us within three months from the date of expiry we shall be discharged from all the liabilities under this guarantee.

Date _____

……. Bank
Corporate Seal of the Bank

By its constitutional Attorney
Signature of duly Authorized person
On behalf of the Bank
With Seal & Signature code

3.0 ANNEXURE-C

PROFORMA FOR BANK GUARANTEE FOR EARNEST MONEY DEPOSIT

(To be executed on non-judicial stamped paper of approximate value)

B. G. No.----------Date: ……

1. WHEREAS M/s.Gujarat Industries Power Company Limited having its Corporate Office at PO: Ranoli, Dist. Vadodara – 391 350, Gujarat State, India (hereinafter called "The Company Owner" which expression shall unless repugnant to the subject or context includes its legal representatives, successors and assigns) has issued tender paper vide its Tender No……for ---------- ---------- (hereinafter called "the said tender")to M/s……(hereinafter called the said Tenderer(s)" which expression shall unless repugnant to the subject or context includes their legal representatives, successors and assigns and as per terms and conditions of the said tender, the tenderer shall submit a Bank guarantee for Rs.……. (Rupees……..only) towards earnest money in lieu of cash.
2. We ……..Bank having its branch office at …… do hereby undertake to pay the amount due and payable under this guarantee without any demur, merely on a demand from the Company stating that in the opinion of the company which is final and binding, the amount claimed is due because of any withdrawal of the tender or any material alteration to the tender after the opening of the tender by way of any loss or damage caused to or would be caused or suffered by the Company by reason of any breach by the said tenderer(s) of any of the terms and conditions contained in the said tender or failure to accept the letter of Intent Agreement or that the amount covered under this Guarantee is forfeited. Any such demand made on the Bank by the owner shall be conclusive as regards the amount due and payable by the Bank under this guarantee, However, our liability under this guarantee shall be restricted to an amount not exceeding Rs……..(Rupees……..only).
3. We undertake to pay to the Company any money so demanded not withstanding any dispute or disputes raised by the tenderer (s) in any suit or proceeding pending before any office, court or tribunal relating thereto our liability under this present guarantee being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under. Our liability to pay is not dependent or conditional on the owner proceeding against the tenderer.
4. The guarantee herein contained shall not be determined or affected or suspended by the liquidation or winding up, dissolution or change of constitution or insolvency of the said tenderer(s) but shall in all respect and for all purposes be binding and operative until payment of all money due or liabilities under the said contract(s)/ Order(s) are fulfilled.
5. We ……..Bank Ltd. further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the finalization of the said tender and that it shall continue to be enforceable till the said tender is finally decided and order placed on the successful tenderer(s) and or till all the dues of the company under or by virtue of the said tender have been fully paid and its claims satisfied or discharged or till a duly authorized officer of the company certifies that the terms and conditions of the said tender have been fully and properly carried out by the said tenderer (s) and accordingly discharges the guarantee.

6. That the Owner Company will have full liberty without reference to us and without affecting this guarantee to postpone for any time or from time to time the exercise of any of the power of the owner under the tender.
7. Notwithstanding anything contained herein before, our liability shall not exceed Rs……. (Rupees……only) and shall remain in force till…….. (Date to be filled up shall be 180 days from the date of submission of Bid).

Date _____ ……. …….Bank
Corporate Seal of the Bank

By its constitutional Attorney
Signature of duly Authorized person
On behalf of the Bank
With Seal & Signature code

4.0 ANNEXURE-D

PERFORMA CERTIFICATE
(No claim, No arbitration)

To,
Chief General Manager (RE & SLPP)
Gujarat Industries Power Company Limited,
Surat Lignite Power Plant,
Village: Nani Naroli, Ta. Mangrol,
Dist. Surat – 394110 (Gujarat).

Dear Sir,

Subject:_____

Ref: Work Order No.:_____Dated_____

We hereby confirm with free consent as under:-

1. The measurements certified in final bill is full and final. We accept all the certified measurements and no claim related to the measurement is left.
2. The payment certified in that or above referred LoI / contract is full and final. We accept this, and no claim related to payment is left.
3. The rates of the LoI / contract and its amendments are firm till completion of contract and extension period. We shall not claim any escalation against these rates.
4. Along with the contract referred, the ARBITRATION CLAUSE also perishes i.e. we will not resort to arbitration.
5. No extra items are left to be settled.
6. We do not have any claims against any item related to the LoI than those items certified in the bills.
7. We are accepting the recoveries or hold amount from our bills, if any, made by GIPCL against non compliance or as decided by GIPCL within terms & conditions of contract.
8. We have paid royalties, taxes for all the materials procured by us, for carrying out the works for above LoI and we indemnify GIPCL from any liability arising thereof.
9. In case of any disputes arising in future related to payment of royalties, all liabilities of settlement of dispute and its payment if any, will be borne by us.
10. We have paid wages to all the workmen who were deployed by us for carrying out above referred work as per prevailing Minimum wages act. We have also fulfilled all requirements of the P.F. Act. We have maintained all records necessary as per the statutory requirements. We hereby indemnify GIPCL from any disputes arising in future related to payment of labours, Provident Fund, etc.. and confirm that all liabilities of settlements of disputes and their payment is our responsibility.

The above confirmation will come into effect as soon as payment from final bill after due recoveries will be received by us.

For, M/S._____

Signature, Stamp and date.

5. Form-A

List of qualifying staff to be submitted with physical documents

Sr. No.	**Name of Supervisor**	Qualification	Experience

Contractor / Authorized Representative’s
Signature, Company’s / Organization’s Seal & Date

Note: Form-A of Bid without price shall be submitted with Part-I

6. Form-B

List of Tools & Tackles to be submitted with physical documents

Sr. No.	**Description**	Nos.	Status

Contractor / Authorized Representative’s
Signature, Company’s / Organization’s Seal & Date

Note: Form-B of Bid without price shall be submitted with Part-I

ANNEXURE - F

Schedule of Prices For Manpower for the jobs not covered in the contract
(All the Prices/Cost are in Rs.)

		For Normal Working Days			For Overtimes hours		
Sr. No.	Category	Qty for Two years (Man day)	Man Day rate Rs / Day	Total Estimated Cost in Rs	Qty For Two years (Hours)	Man hour rate Rs / hours	Total Estimated Cost in Rs
1	Mill Wright fitter	16	1500	24000	32	375	12000
2	Mechanical fitter	16	1200	19200	32	300	9600
3	Piping fitter	16	1000	16000	32	250	8000
4	Structural fitter	16	1000	16000	32	250	8000
5	IBR welder	16	1500	24000	32	375	12000
6	Argon, Arc welder	16	1200	19200	32	300	9600
7	Grinder	16	1000	16000	32	250	8000
8	Rigger	16	1000	16000	32	250	8000
9	Gas cutter	16	1000	16000	32	250	8000
10	Helper	16	800	12800	32	200	6400
11	Insulation fitter	16	1000	16000	32	250	8000
12	Painter	16	1000	16000	32	250	8000
				211200.00			**105600.00**

Total Estimated Cost of manpower for Unforeseen/Contigency Jobs for Two years	**316800.00**

NOTE:

1. **The rates includes cost of all manpower, equipments, vehicles, consumables, tools & tackles, transportation, Safety and statutory compliance, mobilization, Contingency expenditure and supervision charges etc…**
2. **The quantities specified are estimated and for tendering purpose only. Payment will be made, based on actual work done as certified by Engineer-in-charge of GIPCL.Quantities of individual items may be revised during the course of contract period based on site requirement.**

COMPANY SEAL

SIGNATURE ……..…

NAME ……..……..

DESIGNATION ……..…

COMPANY ……..…..

ANNEXURE – G1

LIST OF MAINTENANCE TOOLS AND TACKLES (TENTATIVE) FOR TURBINE & ITS AUXILIARIES

Sr. No.	*Description*	*Quantity*
1	320/400AMP.WELDING RECTIFIER/ GENERATORS	2 no
2	Potable Welding machine (Weight:2Kg)	1 nos
3	Welding Electrode holder	4 no
4	CUTTING TORCH WITH HOSE PIPE AND REGULATOR & GAS CYLINDER	2set
5	Flash back arrester for cutting set	4 no
6	Steel tape-2 mtrs	2no
7	Steel tape-5 mtrs	2no
8	Mesuring tape-10 mtrs	2no
9	D/E SPANNER COMPLETE SET	4 set
10	RING SPANNER COMPLETE SET	4 set
11	BOX SPANNER COMPLETE SET	1 set
12	Screw Spanner Complete Set	2 set
13	HAMMERING SPANNER SIZE:21 MM	2
14	HAMMERING SPANNER SIZE:36 MM	2
15	HAMMERING SPANNER SIZE:40 MM	2
16	HAMMERING SPANNER SIZE:46 MM	2
17	HAMMERING SPANNER SIZE:50 MM	2
18	HAMMERING SPANNER SIZE:55 MM	2
19	HAMMERING SPANNER SIZE:60 MM	2
20	HAMMERING SPANNER SIZE:70 MM	2
21	HAMMERING SPANNER SIZE:75 MM	2
22	HAMMERING SPANNER SIZE:85 MM	1
23	HAMMERING SPANNER SIZE:95 MM	1
24	HAMMERING SPANNER SIZE:100 MM	1
25	HAMMERING SPANNER SIZE:105 MM	1
26	HAMMERING SPANNER SIZE:115 MM	1
27	HAMMERING SPANNER SIZE:120 MM	1
28	HAMMERING SPANNER SIZE:130 MM	1
29	HAMMERING SPANNER SIZE:145 MM	1
30	TORQUE WRENCH SET 0.3 Kg.Mts. to 275 Kg.M	2 nos
31	Multiplir for Torque wrech	2 set
32	SLING WITH HOOK CHUCK 5T	2
33	PULLEYS, SINGLE WAY	2
34	ALLEN KEYS COMPLETE SET	4
35	PLUMBS	4
36	PIPE WRENCH-1"	2
37	PIPE WRENCH-2"	2

38	PIPE WRENCH-4"	2
39	PULLER-8"	2
40	PULLER-10"	2
41	INSIDE CALIPERS SIZE.-4"	2
42	INSIDE CALIPERS SIZE.-6"	2
43	INSIDE CALIPERS SIZE.-8"	2
44	INSIDE MICROMETER SIZE UPTO 500MM	2 SET
45	OUTSIDE MICROMETER SIZE:0-50MM	2 SET
46	OUTSIDE MICROMETER SIZE UPTO 500MM	2 SET
47	VERNIER CALIPERS Size: 0-150mm	2 no
48	VERNIER CALIPERS Size: 0-300mm	2 no
49	PERPENDICULAR-100MM	2
50	PERPENDICULAR-150MM	2
51	Eye bolts size:M6	4
52	Eye bolts size:M8	4
53	Eye bolts size:M10	4
54	Eye bolts size:M12	4
55	Eye bolts size:M14	4
56	Eye bolts size:M16	4
57	Eye bolts size:M20	4
58	Eye bolts size:M24	4
59	D SHACKLE –1 MT	8 NOS. each
60	D SHACKLE –2 MT	8 NOS. each
61	D SHACKLE –3 MT	4 nos
62	D SHACKLE – 5 MT	4 nos
63	D SHACKLE – 10 MT	4 nos
64	D SHACKLE –20MT	4 nos
65	D SHACKLE – 25MT	4 nos
66	D SHACKLE –30MT	4 nos
67	D SHACKLE –40MT	4 nos
68	WIRE ROPE SLING SIZE-6mm	4 nos
69	WIRE ROPE SLING SIZE-8mm	4 nos
70	WIRE ROPE SLING SIZE-10mm	2 nos
71	WIRE ROPE SLING SIZE-12mm	2 nos
72	WIRE ROPE SLING SIZE-14mm	2 nos
73	WIRE ROPE SLING SIZE-16mm	2 nos
74	PULLEY Size-4"	2 nos
75	PULLEY Size-6"	2 nos
76	WOODEN SLEEPER	20
77	MECHANICAL JACK 50MT	2
78	MECHANICAL JACK 100MT	2
79	HYDRAULIC JACK 50 MT(HOLLOW TYPE)	4 nos
80	HYDRAULIC JACK 100 MT(HOLLOW TYPE)	4 nos
81	BENCH VICE Size-4"	2

82	BENCH VICE Size-6"	2
83	GRINDING MACHINES WITH FLEXIBLE SHAFT (FF2)	2
84	ANGLE GRINDING MACHINE Size:4" AG7	6
85	STRAIGHT GRINDING MACHINE GQ4	2
86	SPIRIT LEVEL	2
87	MASTER LEVEL	2
88	MECHANICAL SCREW DRIVER SIZE:4"	2
89	MECHANICAL SCREW DRIVER SIZE:6"	2
90	MECHANICAL SCREW DRIVER SIZE:8"	2
91	MECHANICAL SCREW DRIVER SIZE:12"	2
92	DIAL GUAGE WITH MAGNETIC STAND (Size 0-100)	30 nos
93	FEELER GUAGE (Size: 0.05-1.00mm)	2nos.
94	FEELER GUAGE (Size: 0.3-0.8mm)	2nos.
95	Wooden HAMMER –4 LBS,	4
96	Wooden HAMMER –10 LBS,	2
97	Wooden HAMMER –20 LBS,	2
98	Plastic HAMMER –4 LBS,	2
99	Plastic HAMMER –10 LBS,	2
100	MANILA ROPE OF (Size: 1/4" to 2")	2 set each
101	CHAIN PULLEY BLOCK-1 MT	2
102	CHAIN PULLEY BLOCK-2 MT	2
103	CHAIN PULLEY BLOCK-3 MT	2
104	CHAIN PULLEY BLOCK-5 MT	1
105	ELECTRODES DRYING OVEN	2
106	HACK SAW	4 set
107	WIRE CUTTER	4
108	SHIM CUTTER	4
109	HAND LAMP	10nos
110	ARGON WELDING SET WITH CYLINDERS	2 set
111	WELDING Lead OF 400 METER LENGTH EACH	2nos. each
112	Number punch	2sets
113	Hole Puch	2 Sets
114	Letter punch	2sets
115	Copper rod	4nos.
116	Chiesel	4nos.
117	Pedestal grinding machine 100mm size	2 nos
118	Taper reamer-12mm	2
119	Taper reamer-16mm	2
120	Tap set up to 32mm sizes	2sets each
121	Pipe die with wrench upto 1"	2sets
122	Slip Guage size upto 100mm	1 Set
123	Tommy bar	2
124	Bevel Protector	2 nos.

125	Depth Gauge	2
126	Telescopic Gauge (Size:1.4-6")	2
127	Hydraulic Bolt tensioner for Stud M20	2
128	Circlip plier set	2 set
129	Plier	2 set
130	File (Rough & Smooth) sets	2 sets
131	Niddle/round file set	2 set
132	Surface plate Size: 900mmX900mm	2 nos
133	Surface plate Size: 500mmX500mm	2 nos
134	Pipe bending machine Size upto 4"	1 nos

ANNEXURE- G2

LIST OF MAINTENANCE TOOLS AND TACKLES (TENTATIVE) For BALANCE OF PLANT

Sr. No.	*Description*	Quantity (No.)
1	320/400AMP.WELDING RECTIFIER/ GENERATORS	2
2	CUTTING TORCH WITH HOSE PIPE AND REGULATOR & GAS CYLINDER	2set
3	STEEL TAPE-2 MTR TO 5 MTR	4
4	D/E SPANNER COMPLETE SET	2
5	RING SPANNER COMPLETE SET	2
6	BOX SPANNER COMPLETE SET	1
7	SLING WITH HOOK CHUCK 5T	2
8	PULLEYS, SINGLE WAY	2
9	ALLEN KEYS COMPLETE SET	2
10	PLUMBS	2
11	PIPE WRENCH/DIFFERENT SIZES	4
12	PULLER/BEARING PULLER	2
13	INSIDE/OUTSIDE CALIPERS OF DIFFERENT SIZE.	2
14	INSIDE OUTSIDE MICROMETER OF DIFFERENT RANGE UPTO 200 MM SIZE	2set
15	VERNIER CALIPERS UPTO OF DIFFERENT RANGE UPTO 200MM LENGTH	2set
16	TRISQUARE	4
17	D SHACKLE –1 MT, 2 MT, 3 MT, 5 MT, 10 MT,	2 NOS. each
18	WIRE ROPE SLING OF DIFFERENT SIZES (each should be in pair)	2 nos each
19	PULLEY	4
20	MECHANICAL JACK 25 MT,50MT	2nos. each
21	GRINDING MACHINES WITH FLEXIBLE SHAFT	2
22	ANGLE GRINDING MACHINE AG7	2
23	STRAIGHT GRINDING MACHINE GQ4	2
24	SPIRIT LEVEL	4
25	MASTER LEVEL	4
26	MECHANICAL SCREW DRIVER OF VARIOUS SIZE	4set
27	DIAL GUAGE WITH MAGNETIC STAND	4
28	FEELER GUAGE of different size	2set each.
29	GREASE GUN –CAP. 1 LTR	4
30	HAMMER –4 LBS, 10 LBS, 20LBS	2 nos. each
31	MANILA ROPE OF DIFFERENT SIZES	2 set
32	CHAIN PULLEY BLOCK-1 MT, 2 MT, 5 MT	1nos. each
33	ELECTRODES DRYING OVEN	1
34	HACK SAW	4 set
35	WIRE CUTTER	4
36	SHIM CUTTER	2
37	HAND LAMP	5nos.
38	STEP DOWN TRANSFORMER (24VOLT)	2 set
39	WELDING LEAD OF 100 METER LENGTH EACH	2nos. each
40	CHIESEL OF DIFFERENT SIZES	4sets
41	COPPER ROD	4nos.

ANNEXURE-J

SCHEDULE OF DEVIATION FROM GENERAL SPECIFICATION.

All deviation from the General condition and Technical specification shall be filled by the BIDDER clause in this schedule.

SECTION	CLAUSE NO.	AS PER TENDER DOCUMENT	DEVIATION

The BIDDER here by certifies that the above mentioned points are the only deviations from the Owner's General condition of this enquiry. The Bidder further confirms that in the events any other data and information presented in the Bidder's proposal and accompanying documents are at variance with the specific requirements laid out in the Owner's General specifications, then the latter shall govern and will be binding on the BIDDER for the quoted price.

COMPANY SEAL

SIGNATURE ……

NAME ……

DESIGNATION ……

COMPANY …….

DATE ……..

ANNEXURE- I
Details of Equipments

ANNEXURE - I1

Details of equipments Unit 1 & 2:Turbine & Its Auxiliaries

SL	Equipment	Make	Model/Type	Capacity	Qty.
1	Turbine	BHEL	K30-16, N30X3.2	125MW	2
2	Boiler Feed Pump	WIER	FK 6D 30	1860mlc, 235m3/hr	6
3	Booster pump	BHEL	FA 1B 56	102mlc, 235m3/hr	6
4	Hydraulic coupling	VOITH	R 15 k2	1673kw, 4800rpm	6
5	Condensate Extaction Pump	BHEL	EN 7H 32	186mlc, 382m3/hr	4
6	TG oil centrifuge	Alfa laval	MAB 205S	6500lpm	2
7	TG main oil pump (AC)	KSB	ETA65-250VL/1	6bar, 80m3/hr	4
8	TG emergency oil pump(DC)	KSB	ETA65-250VL/1	3bar, 80m3/hr	2
9	TG jack oil pump (AC)	IMO	A 12DKH137	150bar, 5.1m3/hr	2
10	TG jack oil pump (DC)	IMO	A 12DKH137	150bar, 5.1m3/hr	2
11	TG lube oil filter	Boll & Kirch	2-68-2	1400lpm, 37micron	4
12	Oil vapour exhaust fan	Radiant	R-100-AW5	0.18m3/hr, 0.75Kw	6
13	TG jack oil filter	EPE	400D90G25F DIN25	85lpm, 25micron	4
14	HP bypass system	YUKEN		234ton/hr steam bypass	2
15	Control oil accumulator	HYDAC	SB330-32A1/116N-270	32ltrs, 160bar	8
16	Control oil pump	Rexroth	Axial piston pump	40lpm, 160bar	4
17	Control oil recirculation pump	Rexroth	Gear pump	23lpm, 5bar	2
18	ACW pump	WPIL	250 DS 401	36mwc, 950m3/hr	6
19	CCW pump	Matter & Platt	12/14 ALE MK-1	15mwc, 1150m3/hr	6
20	Air Compressor	KPCL	T-BTD-R2M	8.8kg/cm2, 49.05m3/min	4
21	Air drier	MVS	HOC	8.4kg/cm2, 2700m3/hr	2
22	Plate heat exchanger	Alfa laval	Plate type	950m3/hr in ACW side & 1150m3/hr in CCW side	6
23	LP heater	BHEL	U-tube	326.583ton/hr of condensate	6
24	HP heater	BHEL	U-tube	401.7ton/hr	4
25	Gland steam condenser	BHEL	Straight tube	326.583ton/hr of condensate	2
26	Drain cooler	BHEL	Straight tube	326.583ton/hr of condensate	2
27	Condenser	BHEL	SCD2-7262	274.27ton/hr of steam at 0.108ata pressure	2
28	Deaerator	BHEL	Spary cum tray type	303.2ton/hr of Cond.	2
29	On line tube cleaning system	GEA		7400m3/hr	4
30	Vacuum pump	SIEMENS	ELMO-F	0.97ksc (vacuum)	4
31	Lathe machine	HMT	L50 & NH26	centre ht. 500mm & 260mm	1 each

32	Radial drill machine	Batliboi	BR615	60mm in steel	1
33	Pillar drill machine	SAMPAT	BDM/BT	20mm in steel	1
34	Column drill machine	EIFCO	BC 540	50mm in steel	1
35	Power saw	JASWANT		300mm steel	1
36	Shaping machine	SAGAR	SM-815	32inch	1
37	Hydraulic press	ENERPAC		50ton	1
38	Pedestal grinder	ELMACO	PG123	1400rpm	2

ANNEXURE-I2

	Details of equipments Unit 3 & 4: Turbine & Its Auxiliaries				
SL	**Equipment**	**Make**	**Model/Type**	**Capacity**	**Qty.**
1	Turbine	BHEL	K30-16, N30X3.2	125MW	2
2	Boiler Feed Pump	WIER	FK 6D 30	1840 mlc, 490 m^3/hr	4
3	Booster pump	BHEL	FA 1B 56	490 m^3/hr, 100 mlc	4
4	Hydraulic coupling	VOITH	R16 K.1	428 lpm	4
5	Condensate Extaction Pump	BHEL	EN 7H 32	175mlc, 390m3/hr	4
6	TG oil centrifuge	Alfa laval	MMB 305	2400LPH	2
7	TG main oil pump (AC)	KSB	ETA65-250VL	6bar, 80m3/hr	4
8	TG emergency oil pump(DC)	KSB	ETA65-160VL	3bar, 80m3/hr	2
9	TG jack oil pump (AC)	TUSHACO	T 3SA 38/36	150bar, 5.1m3/hr	2
10	TG jack oil pump (DC)	TUSHACO	T 3SA 38/36	150bar, 5.1m3/hr	2
11	TG lube oil filter	PALL INDIA			4
12	Oil vapour exhaust fan	Radiant	R-100-AW5	0.18m3/hr, 0.75Kw	6
13	TG jack oil filter	EPE	400D90G25F DIN25	85lpm, 25micron	4
14	HP bypass system	YUKEN		234ton/hr steam bypass	2
15	Control oil accumulator	HYDAC	SB330-32A1/116N-270	32ltrs, 160bar	8
16	Control oil pump	Rexroth	Axial piston pump	40lpm, 160bar	4
17	Control oil recirculation pump	Rexroth	Gear pump	23lpm, 5bar	2
18	ACW pump	Becon weir	250 DS 401	36mwc, 950m3/hr	6
19	CCW pump	Becon weir	12/14 ALE MK-1	15mwc, 1150m3/hr	6
20	Air Compressor	Atlas copco	ZR 400	8.0 kg/cm2, 58.6m3/min	3
21	Air drier	Atlas copco	MD 1000	8.0kg/cm2	3
22	Plate heat exchanger	IDMC	Plate type	950m3/hr in ACW side & 1150m3/hr in CCW side	6
23	LP heater	BHEL	U-tube	326.583ton/hr of condensate	6
24	HP heater	BHEL	U-tube	401.7ton/hr	4
25	Gland steam condenser	BHEL	Straight tube	326.583ton/hr of condensate	2
26	Drain cooler	BHEL	Straight tube	326.583ton/hr of condensate	2
27	Condenser	BHEL	SCD2-7262	274.27ton/hr of steam at 0.108ata pressure	2
28	Deaerator	BHEL	Spary cum tray type	303.2ton/hr of Cond.	2
29	On line tube cleaning system	Multitext		7400m3/hr	4

ANNEXURE-I3

Details of equipments Unit 1 & 2: Balance of Plant

Sr. No.	Equipment	Make	Qty.	Model	Capacity
I	**VERTICAL TURBINE PUMP**				
1	River Water Pump	KIRLOSKAR	3	BHR-7-22.5 DEG, 2 STAGE	810 M^3/Hr
2	CW Pump	WPIL LTD	5	TM-54TC-II, SINGLE	9500 M^3/Hr
3	Raw Water Pump	WPIL LTD	3	L-14 M, SINGLE	1236 M^3/Hr
4	Lignite run off pond pump	WPIL LTD	2	L-10 M/2 STAGE	450 M^3/Hr
II	**HORIZONTAL CENTRIFUGAL PUMP**				
1	Boiler ACW Booster Pump	MATHER+PLATT	4	PN-ISO 34 200 x 150-315	315 M^3/Hr
2	Hot Well make-up Pump	MATHER+PLATT	4	PN-ISO 17L 100 x 65-315	50 M^3/Hr
3	Service water pump	MATHER+PLATT	3	PN-ISO 26 150 x 125 - 400	150 M^3/Hr
4	Boiler fill pump	KIRLOSKAR	2	KPD 65/32	100 M^3/Hr
5	ECW Pump	KSB	3	RKP-E	65 M^3/Hr
6	Service water booster pump	KIRLOSKAR	2	KPD 40/16	20 M^3/Hr
7	Plant Potable water pump	KIRLOSKAR	2	KPD 30/20	10 M^3/Hr
8	Colony Potable water pump	KIRLOSKAR	2	KPD 50/26	50 M^3/Hr
9	Chilled water booster pump	KIRLOSKAR	2	KDS-1.5222	4 Lt./Sec.
	DM & CLARIFICATION PLANT				
III	**HORIZONTAL CENTRIFUGAL PUMP**				
1	Clarified water pump	SU PUMP	3	CPP-1-C 100x80-400	40 M^3/Hr
2	DM water transfer pump	SU PUMP	3	CPP-1-C-80x50-250	22 M^3/Hr
3	DM water regeneration pump	SU PUMP	2	CPP-OC-40x25-180	10 M^3/Hr
4	Filter backwash pump	SU PUMP	2	CPP-1 150X100-250	204 M^3/Hr
5	Degassed water transfer pump	SU PUMP	3	CPP-1C-100x80-400	30 M^3/Hr
6	Acid unloading pump for DMP	SU PUMP	2	CPP-1C-80x50-250	15 M^3/Hr
7	Alkali unloading pump	SU PUMP	2	CPP-1C-80x50-250	15 M^3/Hr
8	CW Chlorination booster Pump	KIRLOSKAR	2	DB 65/32	45 M^3/Hr
9	Raw Water Chlorination Pump	KIRLOSKAR	2	DB 32/20	7 M^3/Hr
10	Caustic recirculation pump	MATHER+PLATT	1	50 x 32-125 ET-ISO-1	20 M^3/Hr
11	CW Acid unloading pump	SU PUMP	2	CPP-1C-50x25-250	5 M^3/Hr
IV	**PLUNGER TYPE METERING PUMP**				
1	HP Dosing Pump	VK PUMP	4	PR-35	57Lt/Hr.
2	Hydrazine Dosing Pump	INDION	2	MK6 TWIN HEAD	25 Lt./Hr
3	Marpholine Dosing Pump	INDION	2	MK6 TWIN HEAD	25 Lt./Hr
4	Sodium Sulphide Dosing Pump	INDION	2	MK6 SINGLE HEAD	5 Lt./Hr

5	Alum Dosing Pump (50 Dia Clarifier)	VK PUMP	2	PR-20	750 Lt./Hr
6	Alum Dosing Pump (25 Dia Clarifier)	INDION	2	MK6 single HEAD	25 Lt./Hr
V	**BLOWER**				
1	Degassed Blower (Centrifugal)	DUTTA AIR	4	DTS/102/1B	23.5 M^3/Min
2	Mixed Bed Blower (Rotary)	EVERST	2	53 (TWIN LOBE TYPE)	2.3 M^3/Min
3	Pressure Sand Filter Blower (Rotary)	EVERST	2	55 (TWIN LOBE TYPE)	5.3 M^3/Min
4	Chlorination blower (Centrifugal)	CAPITAL	1		1000 M^3/Hr
5	Twin Lobe Air blower for SSF System	EVERST	2	M5175	367 M^3/Hr
VI	**CLARIFIER & GEAR BOX**				
1	50 DIA Clarifier inner drive assembly	ELECON	1	5 NU	
2	50 DIA Clarifier outer drive assembly	ELECON	1	5 NU	
3	Flash Mixer agitator (50 Dia Clarifier)	GREAVES	1	V 800 HDS	
4	25 DIA Clarifier inner drive assembly	ELECON	1	4 NU	
5	25 DIA Clarifier outer drive assembly	ELECON	1	4 NU	
6	Flash Mixer agitator (25 Dia Clarifier)	GREAVES	1	U-500 2W	
VII	**AGITATOR**				
1	Caustic Dosing Tank Agitator for SBA	ION EXCHANGE	1	AG 1	
2	Caustic Dosing Tank Agitator for MB	ION EXCHANGE	1	AG 2	
3	Sodium Sulphide Preparation Tank	ION EXCHANGE	2	AG 3 A / B	
4	Caustic Preparation Tank Agitator	ION EXCHANGE	1	AG 5	
5	Marpholine Soln Preparation Tank	ION EXCHANGE	2	AG 7 A / B	
6	Alum Soln Preparation Tank	ION EXCHANGE	2	AG 101 A / B	
7	Flash Mixture (50 dia clarifier)	ION EXCHANGE	1	FM 1	
VIII	**FIRE FIGHTING SYSTEM**				
1	Hydrant Pump Motor driven	MATHER+PLATT	2	ET-ISO NO-32, 200X150-500	273 M^3/Hr
2	Hydrant pump Engine driven	MATHER+PLATT	1	ET-ISO NO-32, 200X150-500	273 M^3/Hr
3	Spray Pump	MATHER+PLATT	1	ET-ISO NO-32, 200X150-500	273 M^3/Hr
4	Jockey Pump	MATHER+PLATT	2	ET-ISO NO-04, 50X32-250	25 M^3/Hr
5	Fire water booster pump Motor driven	MATHER+PLATT	1	ET-ISO NO-27, 150x125-500	171 M^3/Hr
6	Fire water booster pump engine driven	MATHER+PLATT	1	ET-ISO NO-26, 150x125-450	171 M^3/Hr

IX	**COOLING TOWER**				
1	Gear box & Fan assembly	PAHARPUR	18	36 M Series, 78-4399-1	
X	**DIESEL ENGINE**				
1	Diesel engine for DG set	CUMMINES	2	KTA 2300 G	750 KVA
2	Diesel engine for hydrant pump	KIRLOSKAR	1	6 SL-9088 T	154 HP
3	Diesel engine for fire water booster pump	CUMMINES	1	NT-495-F	140 BHP
XI	**SUMP & SUBMERSIBLE PUMP**				
1	Sludge disposal pump (50 Dia Clarifier)	SU PUMP	2	CPV-1-150x100-315	162 M^3/Hr
2	Sludge disposal pump (25 Dia Clarifier)	SU PUMP	1	CPV-1-100x80-315	70 M^3/Hr
3	Backwash Waster transfer pump	SU PUMP	2	CPV-1-150X100-400	50 M^3/Hr
4	Transformer Yard Sump pump U-I & II	SU PUMP	2	CPV-1-100x80-250	100 M^3/Hr
5	Switchyard Sump pump	SU PUMP	2	CPV-1-100x80-250	100 M^3/Hr
6	Out side DG House Sump pump	SU PUMP	1	CPV-1-100x80-250	100 M^3/Hr
7	DG House Sump pump	SU PUMP	1	CPV-032-40x25-130	10 M^3/Hr
8	Fuel oil transfer pump house Sump pump	SU PUMP	1	CPV-032-40x25-130	10 M^3/Hr
9	Fuel Oil unloading pump house Sump pump	SU PUMP	1	CPV-032-40x25-130	10 M^3/Hr
10	Submersible Pump 1.5HP	SU PUMP/Pullen	4	SUD-A-15	1.5 HP
11	Submersible Pump for ESP C/R 5HP & 1MW Solar plant	SU PUMP/Pullen	2	SUD-A-50	5 HP
12	Submersible Pump for Condenser pit	SU PUMP	2	SUD-C-200	20 HP
13	Submersible Pump for FOUPH	SU PUMP	1		20 HP
14	Submersible Pump for FOPH	SU PUMP	1		20 HP
15	Submersible Pump for Zero discharge system.	SU PUMP/Goodwin P	2		20 HP
16	Submersible Pump for CT	SU PUMP	1	SUD-C-400	40 HP
17	Submersible Pump for Industrial Canteen waste water sump pit	SU pump	1		7.5 HP / 10HP
XII	**EOT CRANE**				
1	TG Building	FAFECO	1		175/30 Tons
2	TG Building	FAFECO	1		40/10 Tons
3	CW Pump House	BATLIBOI	1		25/10 Tons
4	Warehouse	BATLIBOI	1		10 Tons
5	Workshop	BATLIBOI	1		10 Tons
XIII	**ELECTRIC HOIST**				
1	CW Forebay (Semi gantry)	BATLIBOI	1		5 Tons
2	River water pump house	HERCULES	1		5 Tons

3	Raw Water Pump House	EDDY CRANES	1		6 Tons
4	Raw Water Forebay	EDDY CRANES	3		5 Tons
5	Compressor House	EDDY CRANES	4		6 Tons
6	Air Washer fan U I & II	EDDY CRANES	2		6 Tons
XIV	**MANUAL HOIST (TRAVELLING)**				
1	DG House	BATLIBOI	1		2 Tons
2	Clarified Water Pump House	BATLIBOI	1		2 Tons
3	FO Unloading Pump House	BATLIBOI	1		1 Tons
4	FO Transfer Pump House	BATLIBOI	1		3 Tons
XV	**CHAIN PULLEY BLOCK**				
1	Mannual Hoist	INDEF	7		1 Tons
2	Mannual Hoist	INDEF	12		2 Tons
3	Mannual Hoist	INDEF	1		3 Tons
XVI	**MISCELLANEOUS**	**AT COLONY**			
1	POTABLE WATER PUMP TOWNSHIP	KSB	2		
2	CW Chlorination System	Chloro Tech	2		40Kg/Hr
3	Raw water chlorination System	Chloro Tech	2		10Kg/Hr
4	DM Plant Chorination System	Chloro Tech	2		5Kg/Hr

ANNEXURE-I4

Details of equipments Unit 3 & 4: Balance of Plant

Sr. No.	Equipment	Make	Qty.	Model	Capacity
I	**Vertical Turbine Pump**				
1	River Water Pump	M/s.Jyoti Limited	4	750 T	1042 M^3/Hr
2	CW Pump	BHEL-Hydrabad	3	CW1Q	19000 M^3/Hr
3	Lignite run off pond Pump	M/s.WPIL Limited	2	L10M	450 M^3/Hr
II	**PT Plant**				
1	32 dia Clarifier	M/s.Vinayak	1	CLF	874 M^3/Hr
2	32 dia Clarifier Outer Drive Gear Box	M/s.Crompton Greaves	1	U 400 L	NA
3	32 dia Clarifier Outer Drive Gear Box	M/s.Crompton Greaves	1	A-200 25 : 01 LA11	NA
4	32 dia Clarifier Inner Drive Gear Box(Flocculator)	M/s.Crompton Greaves	2	A-337 25 : 01 LD24	NA
5	32 dia Clarifier Inner Drive Gear Box(Flocculator)	M/s.Crompton Greaves	1	A-200 25 : 01 LA11	NA
6	32 dia Clarifier Inner Drive Gear Box(Flocculator)	M/s.Crompton Greaves	1	A-200 20 : 01 RA11	NA

7	12.5 dia Clarifier (HRSCC)	M/s.Vinayak	1	HRSCC	135 M^3/Hr
8	12.5 dia Clarifier for Scapper Drive Gear Box (HRSCC)	M/s.Crompton Greaves	1	A 287 60 : 01	NA
9	12.5 dia Clarifier for Scapper Drive Gear Box (HRSCC)	M/s.Crompton Greaves	1	V 600 40 : 01	NA
10	12.5 dia Clarifier for Impeller Drive Gear Box (HRSCC)	M/s.Crompton Greaves	1	A 287 10 : 01	NA
11	Thickener Mechanism	M/s.Vinayak	1		40 M^3/Hr
12	Gear Box for Thickener	M/s.Crompton Greaves	1	A-337 70 : 01	NA
13	Thickener Mechanism	M/s. EIMKO KCP			40 M^3/Hr
14	Gear Box for Thickener	M/s.Crompton Greaves	1	`150 : 1	NA
15	Sludge disposal Pump(PT Plant)	M/s.Su-Motors Pvt.Limited	3	CPV0 100 X 80 - 250	40 M^3/Hr
16	Alum Dosing Pump for DM HRSCC	M/s.Milton Roy	2	B-105-1	100 LPH
17	Alum Dosing Pump for for CLF	M/s.Milton Roy	2	B-145-2	500 LPH
18	Poly Dosing Pump for DM HRSCC	M/s.Milton Roy	2	B-105-1	100 LPH
19	Poly Dosing Pump for CLF	M/s.Milton Roy	2	B-145-2	500 LPH
20	Poly Dosing Pump for Centrifuge	M/s.Milton Roy	2	B-105-2	200 LPH
21	Centirfuge Feed Pump	M/s.Tushaco	3	TIS 200.1 VT	10 M^3/Hr
22	Centirfuge Feed Pump	M/s.Tushaco	1	TIS 380.1 VT	18 M^3/Hr
23	Centrifuge for PT Plant	M/s.Alfa Laval	2	ALDEC 30	10 M^3/Hr
24	Centrifuge for ETP	M/s.Alfa Laval	1	ALDEC-45	15 M^3/Hr
25	Air Blower for Thickened Sludge sump	M/s.Everest Blower	2	710 ES	970 M^3/Hr
26	Agitator for Alum solution tank	M/s.Vinayak	2	A162	96 RPM
27	Gear Box for Alum solution tank	M/s.Crompton Greaves	2	A162 15 : 1	NA
28	Agitator for Polymer Dosing Tank	M/s.Vinayak	2	A200	96 RPM
29	Gear Box for Polymer Dosing Tank	M/s.Crompton Greaves	2	A200 15 : 1	NA
30	Agitator for Flash mixer	M/s.Vinayak	1	A287	NA
31	Gear Box for Flash mixer	M/s.Crompton Greaves	1	A287 15 : 1	NA
35	Agitator for Polymer Dosing Centrifuge	M/s.Vinayak	2	A162	96 RPM
33	Gear Box for Polymer Dosing Centrifuge	M/s.Crompton Greaves	2	A162 15 : 1	NA

III	**DM Plant**				
1	Clarified Water Transfer Pump	M/s.Su-Motors Pvt.Limited	2	CPP1 100 X 80 - 400	40 M^3/Hr
2	D.G.Water Transfer Pump	M/s.Su-Motors Pvt.Limited	2	CPP1 100 X 80 - 400	35 M^3/Hr
3	DM Water Regeneration Pump	M/s.Su-Motors Pvt.Limited	2	CPP1 100 X 80 - 315	20 M^3/Hr
4	Neutralization Pit Pump	M/s.Su-Motors Pvt.Limited	2	CPV1 100 X 80 - 400	95 M^3/Hr
5	Acid Unloading Pump for DMP	M/s.Raje-Dia Pump Pvt.Limited	2	RD-40N-200	15 M^3/Hr
6	Caustic Unloading Pump	M/s.Raje-Dia Pump Pvt.Limited	2	RD-40N-200	15 M^3/Hr
7	Pressure Sand Filter Blower	M/s.Everest Blower	2	M5125	3.42 M^3/min
8	Mix.Bed Air Blower	M/s.Everest Blower	2	47	1.54 M^3/min
9	Degassed Air Blower	M/s.CB Doctor	2	HPSC-120-SWSI	12.6 M^3/min
10	Agitator for SBA	M/s.Fiber & Fiber Products	1	Top Entry	1000 RPM
11	Agitator for MB	M/s.Fiber & Fiber Products	1	Top Entry	1000 RPM
12	Chlorination system for DM plant		2		1kg/hr.
IV	**CW Chlorination Plant**				
1	Chlorination Booster Pump	M/s.Beacon Weir Limited	2	BCP 65/320	49 M^3/Hr
2	Chlorination Blower	M/s.Nadi	2	P50-156	1500 CMH
3	Caustic circulation Pump	M/s.Raje-Dia Pump Pvt.Limited	2	PPE40N-160HCM	25 M^3/Hr
4	CW Chorination system	M/s. TEC Feb chem	2		75Kg/Hr.
V	**CW-Treatment Plant**				
1	Acid Unloading Pump for CW	M/s.Su-Motors Pvt.Limited	2	CPPO 40 X 25 - 130	10 M^3/Hr
2	Chemical Dosing Pump	M/s.Milton Roy	5	V-13	12 LPH
3	Acid Dosing Pump	M/s.Milton Roy	2	D-93	35 LPH
4	Back Wash Disposal Vertical Pump	M/s.Su-Motors Pvt.Limited	2	CPV1 100 X 80 - 250	75 M^3/Hr
5	Back Wash Booster Pump	M/s.Mather & Platt Limited	2	8/8 ALE	377 M^3/Hr
6	Air Blower	M/s.Everest Blower	2	M5175	378 M^3/Hr
VI	**Effluent Treatment Plant**				
1	Lamella/Tube settler with mechanism for ETP	M/s.MM Aqua	1	NA	15 M^3/Hr
1.1	Gear Box for Flash mixer	M/s.Premium Energy Transmission Ltd.	1	A 162	15 : 01 LA11

1.2	Gear Box for Flocculator	M/s.Premium Energy Transmission Ltd.	1	A 287	60 : 01 LA11
2	CPI Seprator including media and oil mixer	M/s.Paramount Limited	1	NA	5 M^3/Hr
3	Vertical Centrifugal Pump for U3 & 4 Boiler Floor Wash Area	M/s.Su-Motors Pvt.Limited	4	CPV0 50 X 40 - 315	15 M^3/Hr
4	Vertical Centrifugal Pump for Lemella Clarifier.	M/s.Su-Motors Pvt.Limited	2	CPV0 80 X 50 - 250	15 M^3/Hr
5	Vertical Centrifugal Pump for Boiler Blowdown Unit# 3 & 4.	M/s.Su-Motors Pvt.Limited	8	CPV0 50 X 40 - 315	15 M^3/Hr
6	Vertical Centrifugal Pump Effluent Disposal Area. (ETP Pump)	M/s.Su-Motors Pvt.Limited	2	CPV2 200 X 150 - 400	300 M^3/Hr
7	Vertical Centrifugal Pumps for Clear Water Pit	M/s.Su-Motors Pvt.Limited	2	CPV0 50 X 40 - 315	5 M^3/Hr
8	Horizontal Screw Pumps for Dirty Oil Tank	M/s.Tushaco	8	TIS-100.1	5 M^3/Hr
9	Horizontal Screw Pumps for Fuel Oil	M/s.Tushaco	2	TIS-100.1	5 M^3/Hr
10	Horizontal Screw Pumps for Fuel oil Unloading Pump House.	M/s.Tushaco	2	TIS-100.1	5 M^3/Hr
11	Horizontal Screw Pumps for Fuel oil Unloading yard	M/s.Tushaco	1	TIS-100.1	5 M^3/Hr
12	Horizontal Screw Pumps for Burnt Oil Pit	M/s.Tushaco	6	TIS-100.1	5 M^3/Hr
13	Alum Dosing Pump	M/s.Milton Roy	2	M-12	30 LPH
14	Agitator for lime Dosing tank	M/s.Remi	1	NA	915 RPM
15	Agitator for Alum Dosing tank	M/s.Remi	1	NA	915 RPM
VII	**LP Dosing System**				
1	Hydrazine Dosing Pump	M/s.Metachem	4	MC-2R	30 LPH
2	Agitator for Hydrazine Dosing Tank	M/s.Remi	2	NA	NA
3	Marpholine Dosing Pump	M/s.Metachem	4	MC-2R	30 LPH
4	Agitator for Marpholine Dosing Tank	M/s.Remi	2	NA	NA
5	Agitator for NaOH Dosing Tank	M/s.Remi	2	NA	NA
VIII	**HP Dosing System**				
1	Phosphate Dosing Pump	M/s.Metachem	4	MC-3R	60 LPH
2	Agitator for Phosphate Preparation Tank	M/s.Remi	2	NA	NA

3	Agitator for Phosphate Dosing Tank	M/s.Remi	2	NA	NA
IX	**Horizontal Centrifugal Pump**				
1	DM Water Transfer Pump	M/s.Beacon Weir Limited	2	BWB 80/100	45 M^3/Hr
2	CW Make-up Pump	M/s.Beacon Weir Limited	2	SDA 250/250	800 M^3/Hr
3	Boiler Fill Pump	M/s.Beacon Weir Limited	2	DRA H 125/150	100 M^3/Hr
4	Hot well make up Pump	M/s.Beacon Weir Limited	4	DQB 80/100	40 M^3/Hr
5	ACW Pump	M/s.Beacon Weir Limited	6	SDA 250/300	900 M^3/Hr
6	CCW Pump	M/s.Beacon Weir Limited	6	SDA 300/400	950 M^3/Hr
7	Boiler ACW booster Pump	M/s.Beacon Weir Limited	4	SDB 250/250	750 M^3/Hr
8	Service Water Booster Pump	M/s.Mather & Platt Limited	2	50/80 BSN	40 M^3/Hr
9	Colony Potable Water Pump	M/s.Kirloskar	2	CPMH 40/32	26 M^3/Hr
	Colony Potable pump	M/s. Mather & Patt	2		120 M^3/Hr, 75 Meter Head
10	Emergency Cooling Water Pump	M/s.SAM Turbo Industry Limited	3	WP+C 65/260	80 M^3/Hr
X	**Sump Pump Package**				
X.I	**Sump Pumps**				
1	Sump Pump for TG Building (A-Row)	M/s.Su-Motors Pvt.Limited	4	CPV1 150 X 100 - 250	100 M^3/Hr
2	Sump Pump for TG Building (B-Row)	M/s.Su-Motors Pvt.Limited	4	CPV1 150 X 100 - 250	100 M^3/Hr
3	Sump Pump for Transformer yard	M/s.Su-Motors Pvt.Limited	2	CPV1 150 X 100 - 250	100 M^3/Hr
4	Sump Pump for Cable trench (Outside TG buildings)	M/s.Su-Motors Pvt.Limited	1	CPV1 150 X 100 - 250	100 M^3/Hr
5	Sump Pump for Cable Galleries Zero Metre	M/s.Su-Motors Pvt.Limited	4	CPV1 150 X 100 - 250	100 M^3/Hr
6	Sump Pump for DG House Cable Vault	M/s.Su-Motors Pvt.Limited	1	CPV1 100 X 80 - 250	25 M^3/Hr
7	Sump Pump for Compressor House Cable Vault	M/s.Su-Motors Pvt.Limited	1	CPV0 100 X 80 - 250	25 M^3/Hr
8	Sump Pump for Clarifier Water Pump House Cable Vault	M/s.Su-Motors Pvt.Limited	1	CPV0 100 X 80 - 250	25 M^3/Hr
9	Sump Pump for ESP Cable Vault	M/s.Su-Motors Pvt.Limited	2	CPV1 100 X 80 - 250	25 M^3/Hr

10	Sump Pump for Transformer yard Cable Vault	M/s.Su-Motors Pvt.Limited	2	CPV1 100 X 80 - 250	25 M^3/Hr
11	Sump Pump for Lime stone plant cable Vault	M/s.Su-Motors Pvt.Limited	1	CPV1 100 X 80 - 250	25 M^3/Hr
12	Sump Pump for CW P/H cable Vault	M/s.Su-Motors Pvt.Limited	1	CPV1 100 X 80 - 250	25 M^3/Hr
13	Sump Pump for Station service switchgear Room	M/s.Su-Motors Pvt.Limited	1	CPV1 100 X 80 - 250	25 M^3/Hr
14	Sump Pump for DM plant cable Vault	M/s.Su-Motors Pvt.Limited	1	CPV1 100 X 80 - 250	25 M^3/Hr
15	Sump Pump for Switch Yard	M/s.Su-Motors Pvt.Limited	2	CPV1 100 X 80 - 250	25 M^3/Hr
X.II	**Submersible Pumps**				
1	Submersible Pump for CEP Pit	M/s.Su-Motors Pvt.Limited	4	SUD-4CP-104	100 M^3/Hr
2	Submersible Pump for Condenser Pit	M/s.Su-Motors Pvt.Limited	4	SUD-4CP-104	100 M^3/Hr
3	Submersible Pump 5 HP	M/s.Su-Motors Pvt.Limited	8	SUD-4CP-54	25 M^3/Hr
4	Submersible Pump 15 HP	M/s.Su-Motors Pvt.Limited	6	SUD-4CP-154	50 M^3/Hr
5	Submersible Pump 25 HP	M/s.Su-Motors Pvt.Limited	1	SUD-4CP-254	150 M^3/Hr
XI	**Fire Fighting System**				
1	Hydrant Pump Motor driven	M/s.Kirlosker	2	UP 150/56	273 M^3/Hr
2	Hydrant pump Engine driven	M/s.Kirlosker	1	UP 150/56	273 M^3/Hr
3	Jockey Pump	M/s.Kirlosker	2	CPHM 32/26	20 M^3/Hr
4	Diesel Engine For Fire Hydrant System	M/s.Koel	1	6SL9088T-F6.2002	154 HP
XII	**Cooling Tower**				
1	Fan	M/s.Spancrete	14	AXIAL FLOW/10000ENF4	NA
2	Gear Box	M/s.Elecon	14	KBVCT-280	GEAR RATIO 16:1
3	Drive Shaft	M/s.Spancrete	14	SINGLE SPAN	NA
XIII	**EOT Crane**				
1	DG EOT Crane CW Pump House	M/s.Anupam Industries Limited	1	Double Girder EOT Crane	30 TON
2	DG EOT Crane River Water Pump House	M/s.Electromech	1	Double Girder EOT Crane	15 TON
3	SG EOT Crane Cooling Water Pump House Screens & Gates	M/s.Reva Industries Limited	1	Semi-Gantry EOT Crane	10 TON

4	SG EOT Crane DG Building	M/s.Reva Industries Limited	1	Under Slung EOT Crane	7.5 TON
5	SG EOT Crane Compressor House	M/s.Tuobro Furguson(India)P. Limited	1	Under Slung EOT Crane	5 TON
6	SG EOT Crane Fire Water & Clarified Water Pump House	M/s.Tuobro Furguson(India)P. Limited	1	Under Slung EOT Crane	5 TON
XIV	**Electrical Hoist**				
1	AC Plant Room Electric Hoist	M/s.Reva Industries Limited	1	Electrical Hoist/RH2	3 TON
2	Air washer Room Electric Hoist	M/s.Reva Industries Limited	4	Electrical Hoist/RH3	5 TON
3	Butterfly valve handling Electric Hoist	M/s.Reva Industries Limited	2	Electrical Hoist/RH3	5 TON
4	Station service switch gear Room Electric Hoist	M/s.Reva Industries Limited	1	Electrical Hoist/RH3	5 TON
XV	***Lignite Run off pond clarification system***				
1	32 dia Clarifier	M/s.Dorr-Oliver Ltd	1		Apprx. 850 M^3/Hr
2	Outer Drive Gear Box_32 dia Clarifier	M/s.Elecon	1	5 NU, 70:01	NA
3	Inner Drive Gear Box_32 dia Clarifier	M/s.Elecon	1	5 NU, 70:01	NA
4	Alum Dosing Pump	M/s.Metachem Corporation	2	MC-2	200 LPH
5	Agitator for Alum solution tank	NA	2	NA	NA
6	Gear Box for Agitator_Alum solution tank	M/s.Elecon	2	5 NU, 25:01	NA
7	Agitator for Flash mixer	NA	1	NA	NA
8	Gear Box for Agitator_Flash mixer	M/s.Elecon	1	4NU.CV, 7.5:01	NA
9	Clarified Water Pump	M/s.WPIL Limited	3	CT14TC	275 M^3/Hr
10	Sludge Pump	M/s.THRE EL Engineering Pvt. Ltd	2	CPV1-100 X 80-315	100 M^3/Hr
11	Manual Hoist	M/s.Reva Industries Ltd	1	NA	5 Ton
XVI	**Travelling Trolley**				
1	RE Joints	M/s.Hercules Hoists Limited	1	Indef-P	5 TON
2	Vacuum Pump Handling	M/s.Hercules Hoists Limited	4	Indef-P	3 TON
3	Unitery Air Filteration Unit	M/s.Hercules Hoists Limited	2	Indef-P	3 TON
4	ACW Booster Pumps in Bunker bay	M/s.Hercules Hoists Limited	2	Indef-P	3 TON
5	Chemical House PT Plant	M/s.Indef	1	Indef-P	3 TON

6	IDCT Cooling tower	M/s.Indef	20	NA	3 TON
7	Heavy Valves at Deaerator floor & APRDS Stations	M/s.Hercules Hoists Limited	8	Indef-P	2 TON
8	Basket Handling of 600 NB CCW Duplex Strainer	M/s.Hercules Hoists Limited	2	Indef-P	2 TON
9	CEP Strainers	M/s.Hercules Hoists Limited	2	Indef-P	2 TON
10	BFP Strainers	M/s.Hercules Hoists Limited	4	Indef-P	2 TON
11	Fire Water Booster Pump House	M/s.Hercules Hoists Limited	1	Indef-P	2 TON
12	Elevator Machine Room	M/s.Hercules Hoists Limited	3	Indef-P	2 TON
13	Feed control station in bunker bay	M/s.Hercules Hoists Limited	6	Indef-P	2 TON
14	Boiler Feed Discharge Valves near HP Heaters	M/s.Hercules Hoists Limited	4	Indef-P	2 TON
15	Boiler Feed Discharge Valves near BFP	M/s.Hercules Hoists Limited	6	Indef-P	2 TON
16	DM Supply Feed Pumps	M/s.Hercules Hoists Limited	1	Indef-P	2 TON
17	ACW/DMCW Pumps	M/s.Hercules Hoists Limited	8	Indef-P	2 TON
18	Effluent Disposal Pump House	M/s.Indef	1	NA	2 TON
19	Chlorine Cylinder	M/s.Indef	1	Indef-P	2 TON
20	Condenser HOT well MU & Boiler fill Pump	M/s.Hercules Hoists Limited	4	Indef-P	1 TON
21	Air Washer Room (Pumps)	M/s.Hercules Hoists Limited	2	Indef-P	1 TON
22	Sump Pumps in TG Building Area	M/s.Hercules Hoists Limited	4	Indef-P	1 TON
23	Sump Pumps in Transformer Yard	M/s.Hercules Hoists Limited	2	Indef-P	1 TON
24	Sump Pumps in Cable Tranch (Out side Buildings)	M/s.Hercules Hoists Limited	1	Indef-P	1 TON
25	Sump Pumps in Cable Galleries	M/s.Hercules Hoists Limited	2	Indef-P	1 TON
26	Service Water Booster Pumps	M/s.Hercules Hoists Limited	1	Indef-P	1 TON
27	Chilled Water Pumps for AC System	M/s.Hercules Hoists Limited	1	Indef-P	1 TON
28	Condensate Transfer Pumps	M/s.Hercules Hoists Limited	1	Indef-P	1 TON
29	Sump Pumps in CEP	M/s.Hercules Hoists Limited	2	Indef-P	1 TON
30	Sump Pump in condenser pit	M/s.Hercules Hoists Limited	2	Indef-P	1 TON

31	Handling Butterfly Valves (Weighing between 100KG to 800 KG -in ACW & CCW System	M/s.Hercules Hoists Limited	6	Indef-P	1 TON
32	Handling balance heavy actuator in various areas	M/s.Hercules Hoists Limited	6	Indef-P	1 TON
33	Boiler Floor wash area	M/s.Indef	2	NA	1 TON
34	Boiler blowdown Unit	M/s.Indef	4	NA	1 TON
35	Vertical Centrifugal Pump for lemella Clarifier.	M/s.Indef	1	NA	1 TON
36	Vertical Centrifugal Pumps for clear Water pit FO Pump House	M/s.Indef	1	NA	1 TON
XVI	**Chain Pulley Block**				
1	RE Joints	M/s.Hercules Hoists Limited	1	Indef-P	5 TON
2	Vacuum Pump Handling	M/s.Hercules Hoists Limited	4	Indef-P	3 TON
3	Unitery Air Filteration Unit	M/s.Hercules Hoists Limited	2	Indef-P	3 TON
4	ACW Booster Pumps in Bunker bay	M/s.Hercules Hoists Limited	2	Indef-P	3 TON
5	Chemical House PT Plant	M/s.Indef	1	Indef-P	3 TON
6	IDCT Cooling tower	M/s.Indef	8	NA	3 TON
7	Heavy Valves at Deaerator floor & APRDS Stations	M/s.Hercules Hoists Limited	8	Indef-P	2 TON
8	Basket Handling of 600 NB CCW Duplex Strainer	M/s.Hercules Hoists Limited	2	Indef-P	2 TON
9	CEP Strainers	M/s.Hercules Hoists Limited	2	Indef-P	2 TON
10	BFP Strainers	M/s.Hercules Hoists Limited	4	Indef-P	2 TON
11	Fire Water Booster Pump House	M/s.Hercules Hoists Limited	1	Indef-P	2 TON
12	Elevator Machine Room	M/s.Hercules Hoists Limited	3	Indef-P	2 TON
13	Feed control station in bunker bay	M/s.Hercules Hoists Limited	6	Indef-P	2 TON
14	Boiler Feed Discharge Valves near HP Heaters	M/s.Hercules Hoists Limited	4	Indef-P	2 TON
15	Boiler Feed Discharge Valves near BFP	M/s.Hercules Hoists Limited	6	Indef-P	2 TON
16	DM Supply Feed Pumps	M/s.Hercules Hoists Limited	1	Indef-P	2 TON
17	ACW/DMCW Pumps	M/s.Hercules Hoists Limited	8	Indef-P	2 TON
18	CRH NRVs	M/s.Hercules Hoists Limited	4	Indef-P	2 TON

19	Effluent Disposal Pump House	M/s.Indef	1	NA	2 TON
20	Chlorine Cylinder	M/s.Indef	1	Indef-P	2 TON
21	Condenser HOT well MU & Boiler fill Pump	M/s.Hercules Hoists Limited	4	Indef-P	1 TON
22	Air Washer Room (Pumps)	M/s.Hercules Hoists Limited	2	Indef-P	1 TON
23	Sump Pumps in TG Building Area	M/s.Hercules Hoists Limited	4	Indef-P	1 TON
24	Sump Pumps in Transformer Yard	M/s.Hercules Hoists Limited	2	Indef-P	1 TON
25	Sump Pumps in Cable Tranch (Out side Buildings)	M/s.Hercules Hoists Limited	1	Indef-P	1 TON
26	Sump Pumps in Cable Galleries	M/s.Hercules Hoists Limited	2	Indef-P	1 TON
27	Service Water Booster Pumps	M/s.Hercules Hoists Limited	1	Indef-P	1 TON
28	Chilled Water Pumps for AC System	M/s.Hercules Hoists Limited	1	Indef-P	1 TON
29	Condensate Transfer Pumps	M/s.Hercules Hoists Limited	1	Indef-P	1 TON
30	Sump Pumps in CEP	M/s.Hercules Hoists Limited	2	Indef-P	1 TON
31	Sump Pump in condenser pit	M/s.Hercules Hoists Limited	2	Indef-P	1 TON
32	Handling Butterfly Valves (Weighing between 100KG to 800 KG -in ACW & CCW System	M/s.Hercules Hoists Limited	6	Indef-P	1 TON
33	Handling balance heavy actuator in various areas	M/s.Hercules Hoists Limited	6	Indef-P	1 TON
34	Boiler Floor wash area	M/s.Indef	2	NA	1 TON
35	Boiler blowdown Unit	M/s.Indef	4	NA	1 TON
36	Vertical Centrifugal Pump for lemella Clarifier.	M/s.Indef	1	NA	1 TON
37	Vertical Centrifugal Pumps for clear Water pit FO Pump House	M/s.Indef	1	NA	1 TON

ANNEXURE-IK
DEFECT LIABILITY AND COMPLETION PERIOD

Part A

Sr. No.	Name of the activity	Nature of Maint.	Unit	Completion Period	Defect Liability period.
1	Dismantlig, removal and insertion of BFP cartridge.	BD	No.	46 hours	1 month
2	Over hauling of Booster Pump. MODEL FA1B56 MAKE BHEL.	BD	No.	48 hours	1 month
3	PM of BFP (including BP & Hydraulic coupling)	PM	No.	8hours	1 week
4	Decoupling and coupling of hydraulic or BFP or Booster pump or motor	BD	No.	6 hours	Nil
5	Replacement of hydraulic coupling oil.	BD	No.	6 hours	Nil
6	Cleaning / replacement of Suction strainer in water circuit.	BD	No.	4 hours	Nil
7	Maintenance of DE bearing and oil guard of BFP/BP.	BD	No.	5 hours	1 week
8	Maintenance of NDE bearing and oil guard of BFP/BP.(Including thrust bearing).	BD	No.	5 hours	1 week
9	Replacement of BFP or Booster pump DE side mechanical seal	BD	No.	8 hours	1week
10	Replacement of BFP or Booster pump NDE side mechanical seal	BD	No.	12 hours	1 week
11	Cleaning/replacement of lub oil filters.	BD	No.	1 hour	Nil
12	PM of working oil/lub oil cooler	PM	No.	8 hours	1 week
13	Attending of 1/2" or 1" oil or water pipe line fitting leakages.	BD	No.	1 hour	2 days
14	Replacement of Booster pump parting plane gasket.	BD	No.	8 hours	1 week
15	Replacement of thrust bearing end cover 'O' ring of BFP or Booster pump.	BD	No.	1 hour	1 week
16	Booster pump suction flange or discharge flange leakage.	BD	No.	12 hours	1week
17	BFP suction flange gasket replacement.	BD	No.	6 hours	1week
18	Lub oil line I/2" to 2" line orifice gasket/flange gasket replacement.	BD	No.	1 hour	1 week
19	Tightening of oil/water line flanges of 1/2" to 2" size for any leakages.	BD	No.	1 hour	1 week
20	Seal water cooler tubes leakages.	BD	No.	8 hours	1 week
21	Oil top up in hydraulic coupling	PM	No.	1hour	Nil
22	General cleaning of BFP,BP and hydraulic coupling area.	PM	No.	4 hours	Nil
23	Removal & Box-up of Coupling guard (One Number)	BD	No.	3 hours	Nil
24	Replacement of fusible plug of hydraulic coupling.of BFP.	BD	No.	1hr	1month
25	Servicing of BFP hydraulic coupling scoop mechanism.	BD	No.	1hr	1month
26	Attending leakage from BFP retaining ring	BD	No.	7hrs	2months
27	Overhauling of Hydraulic coupling.	BD	No.	72hrs	4months
28	Overhauling Of MIL make valves Up to 4" & below size	BD	No.	24hours	3months
29	Overhauling Of MIL make valves above 4" size	BD	No.	24hours	3months

PART B

1	Maintenance of jacking oil pump(plunger type pump submerged in oil tank.)	BD	No.	24 hours	1month
2	Maintenance of control oil main pump.(Axial piston pump submerged in oil	BD	No.	24 hours	1month
3	Maintenance of control oil recirculating pump.(Gear pump submerged in oil	BD	No.	12 hours	1month
4	Maintenance of HPBypass control oil pump.(Gear pump submerged in oil tank)	BD	No.	16 hours	1month
5	Maintenance of clean oil transfer pump.(small gear pump installed on ground)	BD	No.	12 hours	1month
6	Maintenance of dirty oil transfer pump.(small gear pump installed on ground)	BD	No.	12 hours	1 month
7	Maintenance of lub oil pump (AOP/EOP) (KSB make vertical centrifugal type pump)	BD	No.	24 hours	1 month
8	PM of clean and dirty oil transfer pump.	PM	No.	4 hours	1 week
9	Cleaning of turbine lub oil filter.	BD	No.	3 hours	Nil
10	Cleaning of jacking oil filter.	BD	No.	1 hour	Nil
11	Replacement of control oil filters (Total three nos.)	BD	No.	2 hours	Nil
12	Maintenance of control oil cooler. (One Number)	BD	No.	8 hours	1 week
13	Maintenance of turbine luboil cooler,	BD	No.	24 hours	1 month
14	Maintenance of accumulator of control oil system - 1No. (35 Litre capacity).	BD	No.	6 hours	1 week
15	Oil top up in control oil tank (Servo ACT AF-100 oil).	BD	No.	1 hour	Nil
16	Replacement of control oil 800 litres. (Servo ACT AF-100).	BD	No.	6 hours	Nil
17	Oil top up in MOT tank(Servo prime 46 T)	BD	No.	1 hour	Nil
18	Cleaning of Main oil tank.(14000 litre capacity)	BD	No.	24 hours	Nil
19	Oil top up in HP-Bypass control oil tank.(Servo Conval-46 oil)	BD	No.	1 hour	Nil
20	Cleaning of MOT strainer.	BD	No.	4 hours	Nil
21	Maintenance of accumulator of HP Bypass control oil each no.	BD	No.	6 hours	1 week
22	PM of HP-Bypass system.	PM	No.	4 hours	1 week
23	Maintenance of oil vapour exhaust fan.	BD	No.	4 hours	1 week
24	PM of oil vapour exhaust fan.	PM	No.	4 hours	1 week

Sr. No.	Name of the activity	Nature of Maint.	Unit	Completion Period	Defect Liability period.
25	Cleaning of suction filter of oil vapour extraction fan.	PM	No.	3 hours	Nil
26	Cleaning of MOT top cover	PM	No.	2 hours	Nil
	Centrifuge :				
27	PM of centrifuge.	PM	No.	6 hours	1 week
28	Oil filling in worm gear box 5 litres. (servo mesh SP220)	BD	No.	1 hour	Nil
29	Maintenance of bowl spindle and gear box.	BD	No.	12 hours	1 week
30	PM of brake.	PM	No.	2 hours	1 week
31	Maintenance of feed/booster gear pump.	BD	No.	4 hours	1 week
32	Cleaning of polishing filter	BD	No.	1 hour	Nil
33	Replacement of oil seal of feed pump/ booster pump.	BD	No.	2 hours	1 week
34	Cleaning of tray amd drain oil collector	PM	No.	2 hours	Nil
35	Inspection of AC/DC lube oil pump coupling	PM	No.	8hrs	1month
36	Inspection of AC/DC JOP coupling	PM	No.	8hrs	1month
37	Checking the Nitrogen gas pressure in HPBP & CO system	BD	No.	1hr	1month
38	Replacement of coupling pin of feed pump or booster pump of oil centrifuge	BD	No.	1hr	1month
39	Replacement of the set of brake shoes of oil centrifuge	BD	No.	1hr	1month
PART C					
1	Over hauling of CEP Make: BHEL Model:EN7H32.	BD	No.	48 hours	1 month
2	Cleaning of suction strainer	BD	No.	4 hours	Nil
3	PM of CEP	PM	No.	6 hours	1week
4	Maintenance of DE thrust bearing of CEP.	BD	No.	12 hours	1 week
5	Maintenance of Mechanical Seal.	BD	No.	12 hours	1 week
6	Replacement of Suction/discharge flange gasket.	BD	No.	4 hours	1 week
7	Oil top up in CEP bearing.	BD	No.	1 hour	Nil
8	Removal of CEP motor for electrical work	BD	No.	4hrs	Nil
9	Removl of CEP motor top cover for I&C work & refixing of the same .	BD	No.	2hrs	Nil
PART-D					
1	Cleaning of water box (per box) of condenser.	BD	No.	8 hours	Nil
2	Cleaning of hot well	BD	No.	8 hours	Nil
3	Plugging of Tube leakage of condenser.	BD	No.	2 days	1month
4	Replacement of manhole door gasket of condenser/hotwell.	BD	No.	3 hour	1 week
5	Cleaning of spray nozzle of Deaerator.	PM	No.	12 hours	Nil
6	Attending manhole flange leakage of deaerator.	BD	No.	3 hours	1month
7	Plugging of Tube leakage of LP heaters/HP heaters/Gland steam cooler/ Drain cooler.	BD	No.	2 days	1month
8	Attend flange leakageof LP heaters/HP heaters/Gland steam cooler/Drain	BD	No.	2 days	1month
9	Condenser fill test.	PM	No.	16 hours	Nil
10	Condenser spring inspection	PM	No.	4hrs	1month
11	Heater partition plane rectification	BD	No.	72hrs	4months
PART-E					
1	PM of suction and delivery valves of HP cylinder consist of six suction and six discharge valve I.e total 24 valves.	PM	No.	8 hours	1 week
2	PM of suction and delivery valves of LP cylinder (2nos.) Each cylinder consists of four suction and four discharge valve I.e total 16 valves.	PM	No.	8 hours	1 week
3	PM of HP Cylinders& Pistons.(Each compressor two nos. of HP cylinders)	PM	No.	8 hours	1 month
4	PM of LP Cylinders & Pistons. (Each Compressor two nos. of LP cylinders)	PM	No.	8 hours	1 month
5	PM of crankshaft, crank case and connecting rods.	PM	No.	8 hours	2 month
6	Inspection of all bolts and nut of one air compressor.	PM	No.	2 hours	1month
7	Cleaning of air suction filter of one air compressor (Two numbers)	PM	No.	1 hour	Nil
8	Cleaning or replacement of lub oil filters of one air compressor(two numbers)	PM	No.	1 hour	Nil
9	PM of crosshead shoe	PM	No.	6 hours	1 month
10	Replacement of oil scrapper ring	BD	No.	4 hours	1 week
11	Replacement of damaged piston ring /wear ring of one cylinder.	BD	No.	12hours	1 month
12	Replacement of plumber block and bearing	BD	No.	8 hours	1 month
13	Replacement of Tyre	BD	No.	12 hours	1 month
14	Replacement of HP Cylinder/Inner cover	BD	No.	24 hours	1month
15	Replacement of LP Cylinder/Inner cover.	BD	No.	24hours	1month
16	Replacement of HP/LP end cover.	BD	No.	5 hours	1month
17	Air compressor fly wheel tightness checking	BD	No.	48hrs	2months
18	Compressor cross head guide replacement	BD	No.	48hrs	2months

Sr. No.	Name of the activity	Nature of Maint.	Unit	Completion Period	Defect Liability period.
17	Replacement of oil pump	BD	No.	2hours	1month
18	Overhauling of Lub-oil pump.	BD	No.	4 hours	1month
19	Replacement of lub oil pump oil seal.	BD	No.	1 hour	1 week
20	Intercooler and after cooler tube leakage checking	BD	No.	8 hours	1 week
21	Replacement of inter cooler/after cooler tube bundle assembly.	BD	No.	10 hours	1 week
22	Replacement of crank case top cover gasket	BD	No.	4 hours	1 week
23	Replacement of oil pump gasket	BD	No.	2 hours	1 week
24	Replacement of air bottle gasket (of one flange)	BD	No.	3 hours	1 moth
25	Replacement of one-way clutch assy.	BD	No.	2 hours	1 week
26	Replacement of all flange gasket of each 3-way/ 4-way pneumatic valve of air	BD	No.	4 hours	1 month
27	Replacement of 3 way/4-way pneumatic valve of air drier (Any one number)	BD	No.	6 hours	1 month
28	Servicing of 3 way/ 4way pneumatice valves of air drier	BD	No.	6 hours	1 month
29	oil top up in each compressor.	PM	No.	1 hour	Nil
30	Replacement of old oil of one compressor oil qty. 80 litres.	BD	No.	4 hours	Nil
31	Replacement of 1/2" and 1" damage isolating valve of air/water line.	BD	No.	1 hour	1 week
32	Attending of unloading air line leakage.(6mm and 10mm copper tube line with fittings of one compressor.	BD	No.	1 hour	1 week
33	Attending of 1/"2" air trap problem.	BD	No.	1 hour	1 week
34	Air receiver manhole gasket replacement.	BD	No.	4 hours	1week
35	Each tower manhole gasket replacement of air drier.	BD	No.	6 hours	1week
36	Inspection & Hydrotesting of Air Receiver.(One Number).	PM	No.	24 hours	1month
37	Inspection of LP discharge/ HP suction bottle.	PM	No.	12 hours	1 month
38	Inspection and greasing of compressor plumber block bearing.	PM	No.	2hrs	1month
39	General cleaning of compressor	PM	No.	1hr	Nil
40	Alighnment of compressor	BD	No.	8hrs	Nil
41	Air compressor suction filter cover holding bolts replacements.	BD	No.	1hr	1month
42	Venting of the oil line of the air compressor	BD	No.	1hr	1week
43	Air compressor oil cooler servicing	BD	No.	4hrs	1month
PART-F					
1	Cleaning of plate type heat exchanger.	BD	No.	3 days	1 month
2	Manhole leakage arresting (1 Number)	BD	No.	4 hours	1 month
3	Back washing of PHE	PM	No.	6hours	1 month

PART-G

1	Welding of CS piping 100 mm dia and max thickness 11mm.	BD	No.	2 hrs	1 week
2	– do -- > 100mm & upto 200mm	BD	No.	3 hrs	1 week
3	– do -- > 200 mm & upto 400mm.	BD	No.	3 hrs	1 week
4	Welding of ACW water line upto 100 mm.	BD	No.	2 hrs	1 week
5	– do -- >100mm & upto 200mm.	BD	No.	3 hrs	1 week
6	– do -- >200mm & upto 300mm.	BD	No.	3 hrs	1 week
7	– do -->300mm & upto 600 mm.	BD	No.	4 hrs	1 week
8	– do -->600mm & upto 1200 mm.	BD	No.	8 hrs	1 week
9	Attending leakage in air/oil/water line of 100 NB and below size.	BD	No.	1hr	1 week
10	Attending leakages in SS pipe line upto 50 NB.	BD	No.	2 hrs	1 week
11	Attending flange leakage of air/oil/ACW water line 100NB to 250NB.	BD	No.	3 hr	1 week
12	Attending flange leakage of air/oil/ACW water line 300NB to 600NB.	BD	No.	4 hrs	1 week
13	Fabrication of piping upto 2" per/Mtr. length	BD	mtr	4 hrs	Nil
14	Cut the pipe with hax-saw upto 2"	BD	No.	1hr	Nil
15	Painting of pipe line up to 4" per/mtr length	BD	mtr	2hrs	1month
16	Painting of pipe line up to 4"- 10" per/mtr length	BD	mtr	2hrs	1month
17	Painting of Equipment surface per squire meter area	BD	sq.	3hrs	1month
18	Remove insulation& cladding sheet from pipe line /mtr. length and apply back upto 4"	BD	mtr	2hrs	Nil
19	Remove insulation& cladding sheet from pipe line /mtr. length and apply back above4"	BD	mtr	2hrs	Nil
20	Inspection of steam/water/condensate/drain line hangers(one no.)	BD	No.	1hr	1month

Sr. No.	Name of the activity	Nature of Maint.	Unit	Completion Period	Defect Liability period.
PART-H					
1	Servicing of gate/globe valves of nb 300mm to 450 mm.	BD	No.	6 hours	1 month
2	-- do -- NB 60 to 250	BD	No.	6 hours	1 month
3	-- do -- Nb 50mm and below.	BD	No.	5 hours	1 month
4	Servicing of non return valve NB 300 to 400	BD	No.	8 hours	1 month
5	---DO-- NB below 250	BD	No.	6 hours	1 month
6	---DO-- CRH/Extraction NRV SIZE 450 TO 600 MM.	BD	No.	10 hours	1 month
7	Servicing of steam traps/ strainers	BD	No.	2 hours	1 month
8	Servicing of Ball valves/globe valves of instrument air line NB 15 to 50 mm.	BD	No.	2 hours	1 month
9	Replacement of gland packings in valves. Upto NB 100mm (Gate and Globe valve)	BD	No.	1 hour	1 month
10	-- do -- NB 150/400 mm	BD	No.	1 hour	1 month
11	Servicing of pnuematic control valves upto NB 100 mm.	BD	No.	6 hours	1 month
12	-- do --- NB 150mm to 450mm	BD	No.	8 hours	1 month
13	Replacement of bonet /flange gaskets for valves upto NB 100mm (Gate/Globe/Pneumatic valve)	BD	No.	4 hours	1 month
14	--do --' NB 150 to 300 mm	BD	No.	4 hours	1 month
15	--do --' NB 350 to 600 mm	BD	No.	6 hours	1 month
16	Flange gasket replacement of gate/globe valve of 350 to 600 mm in air/water	BD	No.	4 hours	1 month
17	Flange gasket replacement of gate/globe valve of 100 to 300NB in air/water	BD	No.	3 hours	1 month
18	Flange gasket replacement of gate/globe valve of below 100 NB air/water line.	BD	No.	2 hours	1 month
19	Gland Tightening of valves(Globe/Gate/Pneumatic) of size 250to 450 NB.	BD	No.	1/2 hour	1 week
20	Gland Tightening of valves(Globe/Gate/Pneumatic) of size 150 to 250NB..	BD	No.	1/2 hour	1 week
21	Gland Tightening of valves(Globe/Gate/Pneumatic) of size 50 to 150 NB..	BD	No.	1/2 hour	1 week
22	Gland Tightening of valves(Globe/Gate/Pneumatic) of size below 50 NB .	BD	No.	1/2 hour	1 week
23	Remove insulation& cladding sheet from valve upto 4"size and apply back	BD	No.	2hrs	Nil
24	Remove insulation& cladding sheet from valve above 4"size and apply back	BD	No.	2hrs	Nil
25	Servicing of safety relief valve upto 1"	BD	No.	8 hrs	1month
26	servicing of safety valve above 1" & upto 4" size	BD	No.	12hrs	1month
27	servicing of safety valve above4" & upto 10" size	BD	No.	16hrs	1month
28	NRV top bonnet tightening up to 20" size	BD	No.	4hrs	1month
29	Removal of pneumatic/electrical actuator in case of respective dept. are not able to remove the same and refix the same upto 100NB size	BD	No.	3hrs	Nil
30	---do--- above 100NB upto 200NB	BD	No.	8hrs	Nil
31	---do--- above 200NB	BD	No.	8hrs	Nil
32	Replacement of threaded valves upto 2" size.	BD	No.	1hr	1month
33	Flap type NRV servicing (as in GSC fan, Oil vapour exhaust fan, etc.)	BD	No.	1hr	1month
34	Servicing of BD/BPE valve of HP-Bypass spray system.	BD	No.	48hrs	1month
35	Servicing of HP-Bypass/LP byoass main valve.	BD	No.	48hrs	1month
PART-I					
1	Overhauling of centrifugal pump	BD	No.	6 hours	1 month
2	PM of OLTC pump	PM	No.	4 hours	1 month
3	Attending gland leakages of OLTC pump.	BD	No.	1/2 hour	1 day
4	Oil top in OLTC Pump	BD	No.	1/2 hour	Nil
5	OLTC ball separator screen inspection	PM	No.	6hrs	1month
PART-J					
1	PM of GSC exhaust fan.	PM	No.	5 hours	1 month
2	Maintenance of impeller	BD	No.	8 hours	1 month
3	Replacement of bearings/plumber block of GSC fan.	BD	No.	6 hours	1 month
PART-K					
1	PM of vacuum pump	PM	No.	5 hours	1week
2	Maintenanace of drive / non-drive end bearing	BD	No.	6 hours	1week
3	Replacement of stuffing box packing.	BD	No.	2 hours	1week

Sr. No.	Name of the activity	Nature of Maint.	Unit	Completion Period	Defect Liability period.
PART- L					
1	Opening of exciter covers for cleaning.	PM	No.	1 day	1 month
2	Generator cooler hydrotest.	BD	No.	8 hours	1week
3	Hand barring of the turbine for One hour.	BD	No.	1 hour	Nil
4	General Cleaning of TG set.	PM	No.	6 hours	Nil
5	Cleaning of suction air filter of gernerator air cooler	PM	No.	2 hours	Nil
6	Cleaning of suction air filter of exciter air cooler.	PM	No.	3 hours	Nil
7	LP turbine diaphragm & gasket replacement.(One No.)	BD	No.	3hrs	1 week
8	Inspection of generator internals	PM	No.	4hrs	1month
9	HP-IP Front & rear bearing & LP-Rear bearing 400mm Dia Inspection work.	BD	No.	2 days	1 Year
10	Gen. Front & rear bearing 360mm Dia Inspection work.	BD	No.	2 days	1 Year
11	Exciter bearing Inspection work.	BD	No.	2 days	1 Year
PART- M					
1	PM of HP/IP and LP-Bypass Valves actuators.	PM	No.	4hrs	1 week
2	Replacement of servo valve/pilot valve/puppet valve/blocking element/trip valve/solenoid valve/cartridge valve/relief valve of HP- bypass/LP-Bypass/Turbine control oil system/HPSV/HPCV/IPSV/ IPCV valve actuators.(one no.)	BD	No.	4hrs	1 week
3	Replacment of filter element of HP/IP or LP-Bypass valve actuators.(one filter)	BD	No.	2hrs	1 week
4	Attending oil leakage in the actuator body.	BD	No.	2hrs	1 week
5	O'ring replacement of HP/IP & LP bypass actuator supply & return oil line .	BD	No.	2hrs	1 week
6	Overhauling of HP-Bypass BD/BPE valve actuator.	BD	No.	24hrs	1month
7	Overhauling of HP-Bypass valve (main) actuator.	BD	No.	24hrs	1month
8	Overhauling of LP-Bypass stop/control valve actuator	BD	No.	24hrs	1month
PART- O					
1	cleaning of workshop equipments total 8 machines	BD	No.	8hrs	Nil
2	Arranging of workshop and TG tools and cleaning	BD	No.	8hrs	Nil
3	Cleaning of spillage oil per sq mtr area	BD	sq.	1hr	Nil
4	Fabrication & erection of platform/structural supports.	BD	MT	1 day	1 week
5	Attending of any pin hole leakage on pipe line & valve body.	BD	No.	1hr	1month
6	PM of Lathe machine	PM	No.	7hrs	1months
7	PM of drill machine	PM	No.	7hrs	1months
8	PM of pedestal grinder	PM	No.	7hrs	1months
9	PM of shaping machine	PM	No.	7hrs	1months
10	PM of power saw	PM	No.	7hrs	1months
11	PM of hydraulic press	PM	No.	7hrs	1months

ANNEXURE- M

(To be submitted on Company's Letter Head)

Declaration Cum Undertaking for Safety Laws and Regulations Compliance

I _____ on behalf of ……Name of Party/Company……..hereby confirm, agree and undertake that all the Statutory and Safety Laws and Regulations of the applicable Authority/ies shall be strictly followed for all types of works at the site during the period of the Contract, if awarded to me.

Further, I ……..Name of Party/Company…… also hereby confirm, declare and undertake that there has not been any major Safety Violation and any single Fatal Accident during the execution of the contract/contracts awarded to me during the period of preceding Three years.

Signed and Stamped by the
Authorized Signatory
Of the Bidder

ANNEXURE- N

(To be submitted on Company's Letter Head)

Declaration for Contractual Disputes/ Litigations

I _____ on behalf of ……Name of Party/Company……..hereby confirm that I/We have not been engaged in any Industrial Dispute(S) or have invoked legal recourse e.g. Arbitration and/or litigation against any Govt, of Gujarat Undertakings / Depts. / Authorities and Govt. of Gujarat supported companies / undertakings / organizations for the last Five (05) years. There are no ongoing/pending legal matter(s) with any of the Govt. of Gujarat Undertakings / GoG supported Companies, including GIPCL.

I/We also confirm that M/s …….. ……. Have not been Blacklisted/ deregistered / listed under stop Deal by any Govt, of Gujarat Undertakings / Depts. / Authorities and Govt. of Gujarat supported companies / undertakings / organizations , including GIPCL for the last Five (05) years.

The above is true, as on date, to the best of my knowledge. Any breach/ false statement in this regard shall amont to disqualification of the Bid being submitted herein.

Signed and Stamped by the
Authorized Signatory
Of the Bidder

ANNEXURE-H
PARTICULARS OF THE BIDDER

Sr. No.	Particulars	Please provide information here.
1	Name of BIDDER	
2	a. Registered Office Address: b. Address for Correspondence: c. E-mail ID:	
3	Contact Details: Contact Person Name Telephone No. : Mobile No.:	
4	Year of establishment PAN No. GST No	

COMPANY SEAL

SIGNATURE……

NAME ……

DESIGNATION ……

COMPANY …….

DATE ……..

GUJARAT INDUSTRIES POWER COMPANY LIMITED
Surat Lignite Power Plant

We are in receipt of following statutory documents pertaining to M/s..... for BRC / BMC of .....for the Bill no.....dtd..... for the period of ..... to ..... on dtd.....

	Attached	Verified
1. Certificate of compliance by BIDDER		
2. Attendance Register		
3. Wages Register		
4. Bank statement for payment of wages		
5. EPF Challan		
6. ECR and		
7. TRRN Confirmation details by EPFO/Bank		

Above submitted documents were verified by HR&A and this is to certify that M/s.....has been comply with the provisions of The Employees’ Provident Funds and Miscellaneous Provisions Act 1952, Minimum Wages Act 1948 and Payment of Wages Act 1936 for the month of .....

Dy. Manager (HR&A) Additional General Manager (HR&A)

Date:

Place:

• **This certificate has been issued for internal usage of GIPCL SLPP and sole purposes of this certificate has to processing RA bill and verifies the statutory compliance by BIDDER.**

GUJARAT INDUSTRIES POWER COMPANY LIMITED
Surat Lignite Power Plant

Date:

Sub: Submission of statutory compliance documents.

Name of Department: .....

Name of BIDDER: .....

Contract Period: From ..... to.....

Nature of Work: .....

Bill no.: ..... Dated: ..... Period: From..... to.....

Dear Sir,

We are herewith submitting following monthly statutory documents received from BIDDER pertaining to BRC/BMC of..... For the month of.....

	Attached	Verified
1. Certificate of Compliance by BIDDER		
2. Attendance Register		
3. Wages Register		
4. Bank Statement for deposition of Wages		
5. EPF Challan		
6. ECR		
7. TRRN Confirmation by EPFO /Bank		

This submission is for your verification and record please.

Checked by:

HoD

Signature:

Date:

To,
AGM (HR&A)

CERTIFICATE OF COMPLIANCE BY BIDDER

Certified that M/s.....has been awarded BRC / BMC for ..... for the period of.....to ..... at Gujarat Industries Power Company Limited – Surat Lignite Power Plant, Nani Naroli. I undertake to be bound by all the provisions of the Contract Labour (Regulation & Abolition) Act 1970 and the Contract Labour (Regulation & Abolition) Rules 1972, The Employees’ Provident Funds and Miscellaneous Provisions Act 1952, Minimum Wages Act 1948, Payment of Wages Act 1936 and Payment of Bonus Act 1965 and all other applicable labour laws in so far as the provisions are applicable to me in respect of the employment of contract labour by me for the month of .....

For M/s. .....

Authorized Signature with Stamp

Place: Nani Naroli

Date:

Through: HoD

To,

AGM (HR&A)

ETHICS PACT
GUJARAT INDUSTRIES POWER COMPANY LIMITED

Reference PO Number Date:

Integrity Pact No. : Contract Period

To create an environment where Business Confidence is built through best business practices and is fostered in an atmosphere of trust and respect between providers of goods and services and their users for the benefit of stakeholder, society and the nation.

GIPCL'S COMMITMENT	PARTY'S COMMITMENT
To maintain the highest ethical standards in business and professions	Not to bring pressure / recommendation from outside GIPCL to influence its decision.
To ensure maximum transparency to the Satisfaction of all stakeholders.	Not to use intimidation, threat, inducement or pressure of any kind on GIPCL or any of its employees.
To fulfill the terms of agreement / contract and to consider objectively the viewpoints of	To be prompt and reasonable in fulfilling the contract, agreement and legal obligations.
To ensure regular and timely release of payments	To provide goods and / or services timely as per agreed.
To ensure that no improper demand is made by employees or by anyone on our behalf.	To maintain the general discipline in our dealings and transactions.
To give maximum possible assistance to all the Vendors / Suppliers / Service Provider and others to enable them to complete the works in time.	To be truthful and honest in furnishing information.
To provide all necessary information to suppliers /contractors relating to contract / job to facilitate them to complete the contract / job successfully in time.	Not to divulge to others any information, business details about GIPCL made available during the course of business relationship without the written consent of GIPCL.
To ensure that no hurdles are caused to vendors / suppliers / contractors in execution of	Not to enter into cartel / understanding whether formal or informal so as to influence the price.

Seal & signature Seal & Signature

(GIPCL's Authorized Signatory) **(Party's Authorized Signatory)**

Name: **Name:**

Designation: **Designation**