

TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17

**GUJARAT INDUSTRIES POWER COMPANY LIMITED**

TENDER FOR ANNUAL RATE CONTRACT OF COOLING WATER  
TREATMENT AT GIPCL VADODARA AND SURAT PLANTS

Bid No.: GIPCL/MATLS/CW/2016-17



**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.**

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**NOTICE INVITING TENDER (NIT)  
TENDER NO.: GIPCL/MATLS/CW/2016-17**

Name of work	ARC FOR COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS
Place of work	GUJARAT INDUSTRIES POWER CO. LTD., P.O. Petrochemical – 391346 Dist.: Vadodara, Gujarat – India  GUJARAT INDUSTRIES POWER CO. LTD., Surat Lignite Power Plant (SLPP) At & Post: Nani Naroli Taluka: Mangrol Dist: Surat pin: 394 110 (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	The Period of Contract shall be for <b>one year/12 months</b> from the Date of Award of Contract and can be extended for a further period of three months with same price, terms and conditions at sole discretion of GIPCL.
<b>EMD</b>	<b>Rs. 1.00 Lacs (Rs. One Lac.only) as per clause No.08.</b>
<b>Cost of tender document / tender fee</b>	<b>Rs. 5,000/- by Demand Draft in favor of GIPCL and payable at Vadodara.</b>
Pre Bid meeting	On <b>09.11.2016, 11:00</b> hrs. at office of GIPCL P.O. Petrochemical – 391346 Dist.: Vadodara, Gujarat – India.
Availability of online Tender document	Tender will be available on (n) Procure from <b>26.10.2016 to 17.11.2016</b>
Last date of online submission of offer	<b>17.11.2016 up to 17:30</b> hrs. on (n) Procure
Submission of EMD, Tender fee and other supporting documents for technical Bid in physical form	On or before <b>17.11.2016</b> during office hours at office of GIPCL, P.O. Petrochemical – 391346 Dist.: Vadodara, Gujarat – India

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**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 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 Bidders are required to submit their Bids online through the website [www.nprocure.com](http://www.nprocure.com).
5. The EMD, Tender fee & other supporting documents are to be submitted in physical form only at the following address:-

**Chief Manager (Materials & Contracts)  
Gujarat Industries Power Company Limited,  
P.O. Petrochemical – 391346  
Dist.: Vadodara.**

## **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 810 MW and 5 MW Solar Power Plant. 51 MW Wind Energy Farm Project is under installation and commissioning stage. GIPCL has issued Lol (Letter of Intent) for 26 MW and 71.40 MW Wind Energy Farm Projects. GIPCL has commissioned 1MWp Distributed Solar Power Projects at two locations in Gujarat viz. at Village: Amrol, Dist.: Anand and at Village: Vastan, Taluka Mangrol, Dist.: Surat.

GIPCL Vadodara Station is located at village Dhanora, Dist. Vadodara; Gujarat has two units St # 1 of 145 MW (32x3 + 49x1) & St # 2 of 165MW (111x1 + 54x1) capacity each. The plant is based on combined cycle technology using Natural Gas/R-LNG as a fuel. Both stations are operated either at part load or at base load depending on the Grid demand.

Surat Lignite Power Plant (SLPP) with four units of 125 MW capacity 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-Ahmadabad 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.

**The Company intends to award Annual Rate Contract for the work of Cooling Water Treatment at GIPCL-Vadodara and GIPCL-SLPP for a period of One Year and is therefore inviting open tenders online (n-procure portal ) from experienced & resourceful contractors.**

### **2. SCOPE OF WORK:**

- 2.1 Detail Scope of Work for ARC for Cooling Water Treatment at GIPCL-Vadodara and GIPCL-SLPP is mentioned in Section D.
- 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.

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**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 shall 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 should go through the specifications, scope of work etc. and get himself fully conversant with them. The Bid should include, cost of supply of chemicals, 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 the rates for both GIPCL-Vadodara and GIPCL-SLPP plants in (n) Procure only. Bids received for only one plant shall not be considered.
- 3.6 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.
- 3.7 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.
- 3.8 The tender documents shall not be transferable.
- 3.9 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 or during Pre-Bid meeting if required.
- 3.10 Conditional offers shall not be considered and liable to be rejected.
- 3.11 The Company reserves the right to extend the deadlines for submission of the Bids by giving amendments.
- 3.12 A Pre-Bid meeting will be organized by the Company as per details given in NIT (Notice Inviting Tender) at **GIPCL - Vadodara**. Bidders or his authorized representative with authorization letter shall attend the Pre-Bid meeting. Bidders may seek any clarifications from the Company on their written request regarding the tender document.
- 3.13 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.
- 3.14 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

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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.

- 3.15 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.
- 3.16 If the successful Bidder is a joint venture, formed of two or more companies, the Bidder along with the partners shall accept joint and several responsibilities and liabilities for all obligations under the Contract.
- 3.17 Timely and satisfactory completion of the work and strict adherence to the allotted time frames for jobs shall be the essence of the contract.
- 3.18 The Company reserves the right to qualify/disqualify any applicant without assigning any reason.
- 3.19 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**

The Bidder is advised to visit the GIPCL-Vadodara Plant and Surat Lignite Power Plant (SLPP) after downloading the tender copy from (n) Procure to study the actual working conditions, before submitting their offer. The Bidders shall examine the site of works and its surroundings and see for himself 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 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.

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.

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, temperature of fresh drained hot bed material, 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

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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 shall be adopted for qualifying the Bidders for further proceeding.

- 5.1** Bidder should have successful experience of cooling water treatments in more than 100 MW thermal power plants. I.e. supply of chemicals, operation, monitoring and trouble shooting of cooling water treatment.
- 5.2** Bidder should have R&D set up and/or technical collaboration with a reputed Institute laboratory / internationally renowned company/organization providing cooling water treatment package for trouble shooting of the problems associated with cooling water treatment. Requisite documents supporting the above shall be enclosed.
- 5.3** The Party should have minimum turnover of Rs. 1.0 Crore per annum from tender related works for last any two financial years out of last three financial years. Balance Sheet of the company along with profit and loss account to be submitted duly audited by chartered accountant with membership number. The Balance sheet must be in the name of the Company who is purchasing the tender document any type of MOU for this purpose shall not be entertained. Bidder should submit registration certificate of the company under Companies act 1956 or register partnership deed for partnership firm.
- 5.4** Party shall provide Comprehensive, state of the art on line monitoring system at a site with 24/7 access indicating following parameters:
1. Corrosion Rate
  2. Scale / Fouling Condition
  3. Important Circulating water parameters
  4. Dosing chemical details with consumption
  5. Monthly Report Display
  6. Tower efficiency / Approach
- 5.5** The Party shall provide list of customers with a list of past and present orders executed/being executed for similar systems with copies of performance certificate from user including system details therein.
- 5.6** The Party shall assure:



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- Improvement in Cooling Tower Efficiency / Performance.
- Improve vacuum at Condenser.
- Maintaining expected COC / Increase COC, while optimize the treatment cost & water consumption.
- The treatment of cooling water to control Scale, Corrosion and Fouling with suitable non-chromate based chemicals/ formulations which are non-hazardous & environmental friendly.

**5.7** Bidder should possess minimum **three years** of experience **out of last five years** (as per following Cl. No.5.8) in similar system and should enclose proof of the same. Bidder shall submit necessary evidence for the same like attested copies of work orders along with work completion certificates from clients. 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.

Note: For evaluation of the bid, the executed value mentioned in the work completion certificated will be considered.

**5.8** Bidder should produce evidence of having experience of successfully completed similar works as defined hereunder during last **Three years out of 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 certified 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 80% of the total estimated cost.**

**OR**

**b. Two similar completed work each costing not less than the amount equal to 50% of the total estimated cost.**

**OR**

**c. Three similar completed work each costing not less than the amount equal to 40% of the total estimated cost.**

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

**5.9** Contractor shall have to submit satisfactory work completion certificate from the client of above submitted orders. Experience as a sub-contractor will not be allowed and Price Bid of such Bidders will be rejected.

**5.10** Tender fee: The tender fee shall be accompanied in form of Demand Draft.

**5.11** EMD: The EMD shall be accompanied in the form of DD or Bank Guarantee given by Bank as described in subsequent clause no. 8.

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

**5.13** 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

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required attested documents found missing in the Technical Bid submitted by the Bidder, the tender inviting authority may inform to that Bidder only once 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.

- 5.14 The Bidder has to submit INCOME TAX Permanent Account Number (PAN), TIN/VAT no. of the firm. Copies of the same shall be submitted.
- 5.15 Bidder has to submit Service Tax registration number. Copy of the same shall be submitted.
- 5.16 In case Bidder is a joint venture company since last five years, the above requirements/credential of Joint Venture Company / Parent companies shall be considered.

**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 the Bidder. GIPCL reserves the right to accept/cancel/reject any/all Bids without assigning any reason thereof. The tenders of qualified Bidder/Bidders shall only be considered for further evaluation.**

**6. PRE-BID MEETING**

A pre Bid meeting will be arranged at **GIPCL-Vadodara** as per details given in the NIT (Notice Inviting Tender). All the Bidders are required to attend or send their authorized representative along with authorization letter for attending this meeting. It is desired to attend the Pre-Bid meeting as the work is directly related to the Plant operation and performance of Plant is depending on timely completion of awarded works.

**7. 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.

**8. EARNEST MONEY DEPOSIT (EMD) and TENDER FEE**

- 8.1 An EMD of **Rs. 1,00,000/-** and **Nonrefundable Tender fee Rs. 5,000/-** shall accompany with Bid. The EMD & Tender fee shall be in the form of a crossed bank Demand Draft in favor of Gujarat Industries Power Co. Ltd. **and payable at Vadodara.**

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- 8.2 The EMD, in alternative, may be submitted in the form of irrevocable Bank Guarantee in favor of Gujarat Industries Power Company Limited from any Nationalized Bank including Public Sector bank-IDBI Ltd or AXIS Bank, HDFC Bank, ICICI Bank or Kotak Mahindra bank, Yes Bank, Ratnakar Bank, IndusInd Bank, Karur Vysya Bank, DCB Bank, ING Vyasya Bank or The Kalapur Commercial Co-operative Bank Ltd, Rajkot Nagrik Sahakari Bank Ltd, The Ahmedabad Mercantile Co-operative bank Ltd, The Mehsana Urban Co-operative Bank Ltd, Nutan Nagrik Sahakari Bank Ltd as per Performa of BG enclosed under Section-F.
- 8.3 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.
- 8.4 The EMD of the successful bidder will be returned after payment of Security Deposit by successful bidder.
- 8.5 The earnest money deposit paid in the form of demand draft will be refunded to the unsuccessful BIDDER as soon as the tender is finalized.
- 8.6 Any bid not accompanied with EMD and Tender fee will be rejected. Tender fees and EMD should be submitted in physical form directly to GIPCL as per Clause 8.9.
- 8.7 No interest shall be payable on EMD.
- 8.8 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.

**8.9 SCHEDULE OF EMD & TENDER FEES**

EMD & Tender fee and other documents dully signed to be submitted in physical form <b>within three working days</b> after due date of closing of the tender	Address for Submission: <b>Chief Manager (Materials &amp; Contracts) Gujarat Industries Power Company Limited P.O. Petrochemical – 391346 Dist.: Vadodara, Gujarat - India</b>
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**9. SUBMISSION OF BIDS**

**A: MODE OF SUBMISSION**

The Bids shall be submitted in two parts along with EMD and Tender Fee within dates specified in NIT 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 within three working days after due date of closing of the tender.**

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

**The following Documents shall also be submitted along with EMD & Tender Fee in Physical Form to GIPCL-Vadodara.**

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 Technical as well as commercial, if any.
3. Qualification & experience of Supervisors/Engineers.

The following supporting documents shall also be submitted alongwith 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. If you don't have deviations then write "NIL" in the deviation sheet and then submit with sign & stamp.
2. Proof of experience meeting the minimum eligibility criteria.
3. Performance certificate issued by clients.
4. Previous work order copies.
5. Details of present work order (if any)
6. 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.
7. P.F Number and Allotment Letter.
8. PAN Number.
9. Service tax registration number/certificate copy.
10. Annexure-3 of Section E to be submitted with sign & Stamp.

**b) Price Bid:**

- 1) Price Bid shall be submitted only in soft form through **(n) Procure Only**.
- 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."
- 3) You shall submit the rates for Supply of Chemicals. These rates shall be inclusive of all man-power deputation charges, consumables, tools & tackles, rent of equipments, pumps and their maintenance charges, all man power, food & accommodation of workers, packing & forwarding, transportation of material up to site (FOR Site), storage and handling at site and also safety and statutory compliance, mobilization and de-mobilization etc.
- 4) We have provided Schedule of Quantities & Rates for GIPCL, Vadodara and GIPCL, SLPP in Section-E. Evaluation of bids shall be done considering combine/total landed cost of GIPCL, Vadodara and GIPCL, SLPP plants. Price bid submitted in hard copy shall not be considered for opening.

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- 5) The quantities shown in the price Bid are approximate for the contract period and may vary as per job requirement.
- 6) The Bidder shall fill the Bid documents with utmost care in consonance with the instructions contained in the Bid documents.

**10. 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 the documents shall also be typed or printed below the signature on each page.
- (ii) Bid by a joint venture/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 authorized partners or other authorized 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 i.e by the President/Managing Director/Secretary or other person or persons authorized 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 shall be disqualified.

**11. MODIFICATION AND WITHDRAWAL OF BIDS**

- a. The Bidder may modify or withdraw the 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.

**12. 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.

**13. 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 last date of submission of Bids.

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- 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.

**14. OPENING OF BIDS**

14.1 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 authorized officers of GIPCL.

**14.2 Preliminary Examination:**

14.2.1 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.

14.2.2 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.

**15. EVALUATION & COMPARISON OF BIDS**

- 15.1 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.
- 15.2 Bidder has to quote the rates for both GIPCL-Vadodara and GIPCL-SLPP plants in (n) Procure only. Bids submitted for only one plant shall not be considered.
- 15.3 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.
- 15.4 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.
- 15.5 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.

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- 15.6 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.
- 15.7 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.
- 15.8 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.

**16. RIGHT OF REJECTION OF TENDERS**

- 15.1 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.
- 15.2 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.
- 15.3 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.

**17. AWARD OF CONTRACT**

- 16.1 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.
- 16.2 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.

**18. CONTRACT PERIOD**

- 18.1 The contract will be for a period of **ONE YEAR** from the date of actual commencement of operation of the contract as stated in the Work Order ('Contract Period').
- 18.2 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.
- 18.3 The said Contract Period can be extended if mutually agreed upon by both the parties up to **SIX MONTHS** 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.

**19. 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 favor of Gujarat Industries Power Company Limited for guarantee amount at **10%** of the "Annual Contract Price" from any Nationalized Bank including Public Sector bank-IDBI Ltd or AXIS Bank, HDFC Bank, ICICI Bank or Kotak Mahindra bank, Yes Bank, Ratnakar Bank, IndusInd Bank, Karur Vysya Bank, DCB Bank, ING Vyasya Bank or The Kalupur Commercial Co-operative Bank Ltd, Rajkot Nagrik Sahakari Bank Ltd, The Ahmadabad Mercantile Co-operative bank Ltd, The Mehsana Urban Co-operative Bank Ltd, Nutan Nagrik Sahakari Bank Ltd 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 Lol or work order, whichever is earlier. The guarantee shall be valid up to retention period of three months from the contract completion date. The Guarantee amount shall be payable to the Company in Bidder's home currency without any condition whatsoever.

In addition to initial SD, GIPCL will retain 05% retention money from each RA bill as a cash security deposit.

The Performance Bank Guarantee (initial security deposit) & retention money (Cash 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.

**20. 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.

**21. CONTRACTOR'S OBLIGATIONS**

**A: DEPLOYMENT & RESPONSIBILITY OF MANPOWER**

- (i) The Contractor shall deploy suitably qualified and sufficient manpower for timely & satisfactorily execution of the works under the contract as mentioned in the Section Special Condition of Contract.
- (ii) The Contractor shall deploy sufficient skilled, Semi-skilled and Un-skilled manpower separately to properly complete the job in given/scheduled time.
- (iii) The Contractor shall depute its own workmen/labor with proper identification to enter the plant premises after ensuring that the jobs are scheduled.
- (iv) At the time of deploying manpower, the Contractor shall strictly comply all the applicable labor 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/labor 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



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shall compel GIPCL to initiate appropriate civil or criminal proceedings regarding the same.

- (v) The Contractor shall also comply with the safety requirements and provide his workmen/labor 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
- (vi) Contractor shall nominate /authorize senior experienced person 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. Contractor has to submit the authority letter and documentary proof for the same.
- (vii) The Contractor shall appoint a supervisor 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.
- (viii) During execution of the works, one or more jobs may be required to be done simultaneously and the Contractor shall mobilize additional resources accordingly.
- (ix) During emergency or similar situations the Contractor shall be required to mobilize resources as per need within the period of 04 hours as directed by GIPCL. If the contractor fails to mobilize sufficient manpower to complete the job in time, GIPCL will execute the job through other agency at the risk and cost of the contractor with 15% supervision charges& the same will be recovered from the Contractor's bill.
- (x) 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.
- (xi) During unit overhauling, the contractor has to enhance the site manpower as per the requirement 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 sufficient number of manpower and execute the work in all shifts with independent manpower. Contractor should not continue the same manpower for more than 12 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

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& working condition. All consumable items would be in the scope of the contractor.

**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.**

- (ii) For proper execution of the work as per the scope, the contractor is required to maintain sufficient quantity of tools & tackles with tractors & hydraulic trolleys in good working condition at site as per day to day work load and emergency situations to complete the work in stipulated time.
- (iii) 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 emergency arising during night hours the contractor should be in a position to mobilize the manpower immediately within minimum time.
- (iv) Arrangement for lighting at the work spot has to be made by the contractor. He 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
- (v) Pin sockets of IS standards should be used for all 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.

**22. 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 [bcshah@gipcl.com](mailto:bcshah@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.

**22. 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'.

**23. 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 or during Pre-Bid meeting.

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

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**24. PAYMENTS**

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

**25. 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 (n)-Procure.**

**26. QUANTITIES**

The quantities specified are estimated and for tendering purpose only. Payment will be made, based on Supply of chemicals & 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**

Sr. No	Description
01.	Tender documents are available only in electronic format which Bidders can download from the website <a href="https://www.nprocure.com">https://www.nprocure.com</a> and <a href="https://gipcl.nprocure.com">https://gipcl.nprocure.com</a>
02.	All bids (technical and price bid) should be submitted online through the website <a href="https://gipcl.nprocure.com">https://gipcl.nprocure.com</a> only. No physical submission of price bid will be entertained as it should be furnished on-line only.
03.	Bidders who wish to participate in online tenders will have to procure / should have legally valid Digital Certificate (Class III) as per Information Technology Act-2000, using which they can sign their electronic bids. Bidders can procure the same from any of the license certifying Authority of India or can contact (n)code solutions- a division of GNFC Limited, who are licensed Certifying Authority by Government of India
04.	All bids should be digitally signed. The bidders are required to contact at the below mentioned address for detailed training on on-line tendering and also for requirement.  (n) Code Solutions - A division of GNFC Ltd. 403, GNFC Infotower, S.G Road, Bodakdev, Ahmedabad – 380054 (Gujarat, India)  Toll Free: 1-800-419-4632/1-800-233-1010, Tel: 079-26857315/316/317 E-mail: <a href="mailto:nprocure@gnvfc.net">nprocure@gnvfc.net</a> , website: <a href="http://www.nprocure.com">www.nprocure.com</a>

## **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 favor of Gujarat Industries Power Company Limited for guarantee amount at **10%** of the "Annual Contract Price" from any Nationalized Bank including Public Sector bank-IDBI Ltd or AXIS Bank, HDFC Bank, ICICI Bank or Kotak Mahindra bank, Yes Bank, Ratnakar Bank, IndusInd Bank, Karur Vysya Bank, DCB Bank, ING Vyasya Bank or The Kalupur Commercial Co-operative Bank Ltd, Rajkot Nagrik Sahakari Bank Ltd, The Ahmadabad Mercantile Co-operative bank Ltd, The Mehsana Urban Co-operative Bank Ltd, Nutan Nagrik Sahakari Bank Ltd 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 guarantee shall be valid up to retention period of three months from the contract completion date. The Guarantee amount shall be payable to the Company in Bidder's home currency without any condition whatsoever.

In addition to initial SD, GIPCL will retain 05% retention money from each RA bill as a cash security deposit.

The Performance Bank Guarantee (initial security deposit) & retention money (Cash 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.

### **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 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 15% additional overhead charges of GIPCL.

### **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 15% 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.

**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

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get the work done by third party at the risk & cost of the CONTRACTOR with additional 15% 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 material evacuation, 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 as may be mutually agreed by the parties in consultation with the tribunal.
- b. In appointment of the Sole Arbitrator, if the dispute claim is up to a sum of Rs. 25/- Lac, a person having a position equivalent to a Retired District Judge shall be appointed; for the claim higher than Rs. 25/- Lac and up to Rs. 100/- Lac, the same shall be referred to a Retired High Court Judge and for a claim exceeding Rs. 100/- Lac, the same shall be referred to a Retired Supreme Court Judge.
- c. 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 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 for SLPP & from Vadodara Jurisdiction for Vadodara plant 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 or 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 & Vadodara Plant 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 & Vadodara Plant 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 & Vadodara Plant. The contractor shall



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- 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 Workmen's 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 Workmen's 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 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

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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.
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 & Vadodara Plant, 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, & Vadodara Plant 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

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operation. Brand name for safety shoe & safety helmet shall be suggested by safety representative of SLPP site & Vadodara Plant.

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 & Vadodara Plant.
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

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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 & Vadodara Plant.
18. Major AMC / ARC contractor (Where the man power strength is more than 50 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 & Vadodara Plant 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 incharge 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. Safety shoes to be issued to female employees also.
21. All the vehicles shall be fit as per RTO guidelines and valid fitness certificate is required as per RTO guidelines.
22. 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.
23. The Contractor shall comply all the new requirements related with safety as informed by the HOD / Safety department from time to time.
24. 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 below, penalty shall be levied on the contractor as per the table mentioned below:

<b>Category</b>	<b>Classification</b>	<b>Examples / Cases</b>	<b>Penalty</b>
A	PPEs Related	Working without helmet, shoes, safety belt, gloves etc.	Rs. 100 /- per instant.

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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.	<ul style="list-style-type: none"> <li>• Rs. 500 /- per instant.</li> <li>• After three incidence, Per incidence Rs. 2500/-</li> <li>• Continuous unsafe acts will disqualify the contractor from further participation in tender of GIPCL.</li> </ul>
		Unsafe working practices at height more than 3 meters	
		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..	
C	Unsafe Practices	Breach of safe practices by a particular person repeatedly for three times.	<p>Suspend the entry gate pass for one week.</p> <p><input type="checkbox"/> After two suspensions his gate pass will be cancelled.</p>

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 Location/Package wise full time independent experienced site-in-charge and independent site supervisors at site. 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 shall strictly follow the existing work permit system of the GIPCL and any future revisions.
- g. 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.

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- h. 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 15% overhead charges.
- i. Contractor shall mobilize the resources as per need within the period of four hours. If the contractor fails to mobilize sufficient 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 15% overhead charges.
- j. 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.
- k. 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.
- l. 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 as per clause no.12) and/or termination of contract.
- m. One or more jobs may be required to be done simultaneously and contractor shall mobilize additional resources accordingly.
- n. 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 sufficient manpower is deployed for the same.
- o. 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.
- p. The contractor has to submit daily reports showing work carried out with details of available manpower etc.
- q. 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.
- r. 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.
- s. 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



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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.

- t. 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.

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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 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. 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.
- d. Inspection of work will be done by Engineer in Charge or his authorized 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 an insurance coverage (Medical + Death Benefit) for sum of Rs. 01/-Lakh to all his workmen/labour deployed at GIPCL-SLPP & Vadodara for the accident taking place anywhere outside the Company premises or at any place when the workman is not in course of his employment.

**25. 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.

**26. 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.

**27. 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.

**28.** 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 detail scope of work and technical specifications for GIPCL-Vadodara & GIPCL-SLPP is mentioned in Annexure-I and Annexure-II.

### **1.1 FAILURE DURING EMERGENCY**

During any emergencies, contractor shall have to carry out the work 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 15% 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 labor at their own cost.
5. The contractor has to arrange JCB, cultivators, breaker machines & tractor with trolleys for lifting/shifting the materials of their own.
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...

### **1.2. 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

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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.

**1.3 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 shall be inclusive of Supply of Chemicals, cost of all labor, all man-power deputation charges, consumables, Rent of equipments, pumps and their maintenance charges, all man power, food & accommodation of workers, packing & forwarding, transportation of material up to site (FOR Site), storage and handling at site, safety and statutory compliance, mobilization and de-mobilization, supervision, cost of safety supervisor, shifting, transportation, loading, unloading, equipment, all tools & tackles, safety equipments & PPEs, Royalties, Rents, Stamp Duties, Central or State Government or Local body or Municipal Taxes or Duties, Turn over Tax, Work Contract Tax, , Octroi duty and / or any other duty / tax (excluding Service Tax), 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. No price escalation / idle charges shall be due to any reason whatsoever.

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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 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.

We have provided Schedule of Quantities & Rates for GIPCL, Vadodara and GIPCL, SLPP in Section-E. Evaluation of bids shall be done considering combine/total landed cost of GIPCL, Vadodara and GIPCL, SLPP plants. Price bid submitted in hard copy shall not be considered for opening.

The quantities shown in the SOR are approximate for the contract period and may vary as per job requirement.

**3. CONTRACT PERIOD**

Contract period will **One Year** from the date of commencement (mobilization period will be 15 days from the date of issue of LOI or Work Order whichever earlier).

**4. TERMS OF PAYMENT**

**A. Conditions of Payment:**

The contractor shall supply the chemicals to GIPCL-Vadodara and GIPCL-SLPP plants as per the requirements and based on that the MRR (Materials Receipt Report) will be prepared and inspection of the chemicals will be carried out by C&L Department. Contractor shall raise the location wise separate running invoices in duplicate in respect of the work performed or completed during the month along with the documents as hereinafter provided. On receipt of MRR inspected by C&L Department, 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 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 shall be submitted as per clause no.: 1 of Section-C. Security deposit will be returned to the Contractor without any interest after retention period of three months from actual contract completion date as certified by Engineer-in-charge as per clause no.: 1 of Section-C.
- (iii) Service tax shall be paid along with bills after fulfillment of following terms.

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- (a) Submission of copy of registration certificate issued by Service Tax Authority (to be furnished only once).
- (b) Citing the service Tax Registration no. And the date of issue of registration certificate on invoices.
- (c) Claim of Service Tax amount with percentage (%) separately shown on the invoices.
- (d) The contractor shall be required to submit the proof of payment of service tax 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) 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.
- (vi) The Contractor shall submit his Final Bill within a period of three 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 three months.
- (vii) 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 valid for a period of **one year** of the Contract Period and shall remain unaltered during the Contract Period.

**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... 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 provide required separate & independent site supervisor 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.
- b) Contractor shall provide accommodation for the persons deployed by him for the work at his own cost.
- c) Contractor shall mobilize the resources at site within 04 hours from the time the intimation given by GIPCL.
- d) The resources required for execution of above jobs will vary from time to time, hence contractor shall mobilize the resources accordingly.

**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 detail technical specification in Section-D. Estimated 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. GENERAL CONDITIONS OF CONTRACT**

General Conditions of Contract (Section-C) and detail specification prepared by the company will be applicable for this contract. The same is enclosed herewith. Bidders are advised to go through the same.

Where any portion of the general conditions of contract is repugnant to or at variance with any provisions of the special conditions 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.

**ANNEXURE- I**

**Scope and Technical Specifications for Cooling Water Treatment at - Vadodara**

**1. General Description:**

**Preamble :-**

Gujarat Industries Power Company Limited (GIPCL), is a premier power Generating Company, adopting Conventional method using Natural Gas & Lignite as a fuel and Non Conventional method – Solar & Wind. GIPCL Vadodara unit is located at village Dhanora has two units : Station I - 145 MW (32×3+49×1) & Station II - 165 MW (111×1+54×1) capacity each. The plant is based on combined cycle technology, using Natural Gas as a fuel. Both Stations are operated either at part load or at base load depending on Gujarat Electricity board demand.

GIPCL Vadodara is drawing approx. 3000 M<sup>3</sup> water from own French well and 1000 m<sup>3</sup> water from GSFC source on daily basis (considering 60% & 10% PLF respectively in Station – I & II). Out of which 80% water is used for make up in Cooling Water System and balance 20% is used in service water, fire water, DM Plant and potable water use.

Raw water drawn from sources stored in Reservoir in the plant, get filtered through Pressure Sand Filters (PSF) and fed into the cooling water fore bay at respective Stations. Approx 4,000 M<sup>3</sup> of water stored in the both CW circuit (hold up capacity). It is continuously circulated through the ADM Brass SB 111C based condenser, Auxiliary Cooling Systems/ pumps through Induced draft Counter Flow cooling tower to achieve the necessary condensation in steam/water circuit. Currently the system is being operated ~ 5.0 COC during continuous operations.

The scope of this contract is for management of treatment of cooling water for Steam Turbine Condenser & Auxiliary Cooling water system. The main objective of this treatment program is :

- To improve Cooling Tower Efficiency / Performance
- To improve vacuum at Condenser
- Maintaining expected COC / Increase COC, while optimize the treatment cost & water consumption.

The aim of this contract is to carry out treatment of cooling water to control scale; corrosion and fouling with suitable non-chromate based chemicals/ formulations and its executions as per system requirements. The chemicals & its concentrations that are non-hazardous & environmental friendly shall be used to achieve the objective. Since the cooling tower blow down water is directly disposed off from the site without any further treatment, Vendor shall ensure that in the treatment program the concentrations of the chemicals does not exceed the consent conditions of the GPCB in the final blow down under any circumstances. ( GPCB consent parameters attached as Annexure-1 )

Note: Although installed capacity of Vadodara plant is 310 MW ( 145 MW + 165 MW ), at present the plant is operating at 60% PLF of Station I & 10% PLF of Station II .

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**Details of System:**

**Station – 1 (145 MW) & Station – 2 ( 165 MW)**

**Technical specification of Cooling Towers (both) : ( at 100 % Load )**

- |     |  |   |  |
|-----|--|---|--|
| 01. | Number of Cooling Towers                                     | : | One each per Station ( Total Two )     |
| 02. | Number of cells per tower                                    | : | Six                                    |
| 03. | Type of Cooling Tower  | : | Induced Draft (Counter Flow)           |
| 04. | Total Circulation rate                                       | : | 15000 cu.m / hr. (Approx.)             |
|     | a) Flow across each condenser                                | : | 13000 cu.m / hr. (Approx.)             |
|     | b) Flow across heat exchanger of Auxiliary system            | : | 2000 cu.m / hr. (Approx.)              |
| 05. | Basin Volume   | : | 2700 / 2300 Cu.m (Approx.) each        |
| 06. | Evaporation loss   | : | 165 m <sup>3</sup> /hr. (Approx.)      |
| 07. | Blow down water for calculation of dosing chemical quantity. | : | 50 m <sup>3</sup> /hr.                 |
| 08. | Side stream filter available                                 | : | Not Available.                         |
| 09. | Operating COC  | : | 5.0                                    |
| 10. | ACW pumps (3.0 ) flow  | : | 1050 m3/hr (St I) / 1200 m3/hr (St II) |
| 11. | CW pumps (3.0) flow  | : | 6700 m3/hr (St I) / 7000 m3/hr (St II) |

**Technical specification of Surface Condenser**

- |     |                              |   |                                 |
|-----|------------------------------|---|---------------------------------|
| 01. | Nos. of Surface Condensers   | : | 2                               |
| 02. | Nos. of water side passes    | : | 2                               |
| 03. | Quantity of cooling water    | : | 13000 cu.m (Approx.)/ condenser |
| 04. | Cooling water I/L &O/L temp. | : | :32.0 & 41.0°C (nominal)        |
| 05. | Tube material:               |   |                                 |

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- a) In Condensing Zone : ADM Brass ,SB111 C / SB Cr 11  
 b) In Air Cooling Zone : ADM Brass , SB111 C / SB Cr G
06. Tube sheets, Channels & Water Boxes : CS IS 2062 / CS SA 516 GR 60.
07. Piping & Valves : CS

**The typical analysis of make-up water is as below:-**

Sr. No.	Parameter	Unit	Range
01.	pH		7.9 – 8.1
02.	Conductivity	Micro-Siemens	450 - 600
03.	Total Dissolved Solid	ppm	270 - 350
04.	Turbidity	NTU	< 2.0
05.	Total Harness as CaCO <sub>3</sub>	ppm	120 - 180
06.	Calcium Harness as CaCO <sub>3</sub>	ppm	50 - 75
07.	M-alkalinity as CaCO <sub>3</sub>	ppm	150 - 220
08.	Chloride as CaCO <sub>3</sub>	ppm	40 - 70
09.	Silica as SiO <sub>2</sub>	ppm	15 - 25
10.	Iron as Fe	ppm	0.2 max
11	Sulphate	ppm	15 - 30

**Plant Operation Philosophy :**

Station I	3 GT + 1 STG	2 ACW + 2 CW Pumps Operation	Irrespective of Load
	2 GT + 1 STG	2 ACW + 2 CW Pumps Operation	Irrespective of Load
	1 GT + 1 STG	2 ACW + 1 CW pump Operation	Irrespective of Load
Station II	1 GT + 1 STG	1 ACW + 2 CW pump Operation	Irrespective of Load

**Present Cooling water treatment Program (Circulating water Parameters):**

Cooling water treatment program includes use of antiscalants, corrosion inhibitor for both Mild steel and Copper, oxidizing Biocide (Hypochlorite), dispersants and bio-dispersants. Sulphuric acid dosing is done for maintaining the required pH of the circulating water. **Side Stream Filtration is not available in both CW systems.**

**Technical Requirements for Proposed Cooling water treatment Program**

**A. General requirements of Cooling water treatment Package:**

- a. Vendor shall provide treatment program consisting :
- Chemicals that are Biodegradable, non-toxic, non-hazardous and non-chromate based.
  - Orthophosphate & Zinc as Corrosion inhibitor.
  - Organophosphate & Polymeric dispersant for deposit control
  - Bio Dispersant
  - Oxidizing and Non Oxidizing Biocide
  - Azole base

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A toxicological test report & MSDS should be submitted along with the offer for all the chemicals supplied. The cooling water treatment shall comprise of zinc as the cathodic inhibitor and stabilized ortho-phosphate as the anodic inhibitors combined as a single formulation. Individual chemicals as cathodic and anodic inhibitors in basic chemicals forms are not acceptable. The products offered should be field tested and proven.

b. Vendor should offer the Cooling water treatment program /scheme which is well proven in other industries with similar kind of circulation rate, technically proven & suitable to our plant in terms of metallurgy, environment , safety norms and consent conditions ( Annexure I ) etc. GIPCL is free to accept / reject the part of schemes or full scheme.

c. The chemical should not have any deleterious effect on any component of the Cooling water system including Condenser, Heat Exchangers and the packing material of cooling tower.

d. A dedicated scale inhibitor cum dispersant program shall be included in the program for dispersion of iron, general scale, and sludge to take care of chances of scaling / deposition inside Heat Exchangers, Condenser and Tower Fill Packs. Treatment should ensure no scaling in above mentioned areas of interest. There should not be reduction in heat transfer capacity of heat exchanger, due to fouling or formation of deposits so as to achieve Vacuum at Condenser at desired level. And also treatment should ensure no pitting across condenser and heat exchangers with corrosion in admissible control.

e. Effective control of biological growth shall be provided by using suitable biocide, bio dispersant together with chlorine di-oxide. For chlorine di oxide dosing vendor shall provide a chlorine di oxide generator for in-situ generation.

- Dosing of 0.1 ppm Chlorine dioxide as ClO<sub>2</sub> (based on hold up volume) on daily basis would require. Sodium Chlorite (ClO<sub>2</sub> precursor) having 25% active concentration will be required.
- Vendor shall submit the Test (Analysis) Certificate of 25 % Active Content of ClO<sub>2</sub> Precursor along with each lot of ClO<sub>2</sub> Precursor chemical. Vendor has to provide necessary reagents & monitoring instrument (On returnable basis) for monitoring of residual ClO<sub>2</sub> in the Cooling water.

f. In GIPCL Vadodara Chlorine dosing is not carried out.

**g. It is required to have continuous dosing of chemicals (excluding Sulfuric Acid supplied by GIPCL) by metering pumps only. The dosing equipment required for implementing the treatment program shall be brought, installed, commissioned and maintained by the contractor adopting site safety standards. They should be of proven design and fit for the purpose. Electrical power supply will be given by GIPCL at free of cost. Sulfuric Acid shall be dosed by Gravity.**

h. Dosing equipment brought to site by the vendor shall be operated and maintained by vendor staff at site. Successful vendor shall provide Calibration report of dosing equipments.

i. Chemicals shall be supplied in New HDPE containers to site. The containers must be properly sealed and also shall be labeled properly with name, brand name, batch no, expiry date etc.

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Each batch of chemicals should have test certificate that all chemicals are bio-degradable (preferably within 24hrs), environment friendly and do not fall under banned category. Vendor shall be take back the empty containers of chemicals.

j. Vendor shall provide the quality control check procedure for the each chemical supplied. Each dispatch of the chemical shall have quality check details from the manufacturer's lab. If required, these chemical upon receipt will be first analyzed in GIPCL lab before accepting the consignment and will be accepted/rejected based on analysis results. In case active ingredient found lower with respect to minimum of the value specified by party, deduction from the delivered cost on prorata basis, shall be done for said total chemical supplied in that lot. In addition to above, cost of testing if done from lab other than GIPCL's own laboratory, shall be borne by vendor for such case. Opinion of GIPCL officer regarding acceptance / rejection of chemicals will be considered final.

k. Vendor shall send labor along with consignment for unloading of chemical carboys and drums. The labor shall be equipped with required PPE's (safety shoes, safety helmets, chemical resistance gloves, chemical resistance dress, splash proof goggles etc. as per GIPCL site safety standards. Any violation observed & reported in plant area by concerned officer shall attract penalty, as mentioned in penalty clause section.

l. Vendor should maintain required barrel pumps, transfer pumps at site for handling of chemicals.

m. Total quantity of chemicals should be sufficient for minimum 2 months stock or reasonably adequate quantities of each chemical at site.

n. Vendor is advised to visit plant site and submit proposal only after extensive survey, ascertaining quality of make-up, circulating water, blow down, equipment metallurgy etc. Vendor is free to quote chemicals based on formulations for water quality data to meet the guarantee. Vendor is required to refer instructions points and have to either provide acceptance of each or give comments before Pre Bid meeting.

o. Vendor shall take into account the seasonal variations in the input water quality for the treatment purpose.

Vendor shall depute one trained, experienced & competent Site In charge / chemist as mentioned in Service section, at our site throughout the contract period for managing day to day affairs

p. Site in charge in presence of GIPCL official shall carry out any require analysis to monitor the necessary treatment parameters. Lab facilities shall be provided to the vendor for the above analysis at free of cost for the purpose.

q. Corrosion coupon will be assessed ( Quarterly, Half Yearly, Yearly ) jointly by GIPCL and vendor.

r. The vendor shall submit detail operating procedure, manual of monitors & contingency procedure ( in emergency scenario considering high cu corrosion rate, Condenser DP, vacuum, salinity ,turbidity ,pH excursion ,non availability of chlorination, condenser leakage etc.)

s. Microbiological analysis of circulating water will be carried out monthly by vendor .

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t. Successful Vendor shall provide analytical method of analysis along with active content, details of instruments/reagents required for analysis of various chemicals, active content in bulk chemicals and their value before start of the treatment.

u. The total quantity of blow down from all cooling towers needs to be maintained below the present level

**B. Performance / Guarantee Parameters:**

**1. Plant operating/Chemistry limiting parameters:**

These operating parameters need to be maintained on continuous basis. Optimum Blow down rate (M<sup>3</sup>/h) will be based on these limiting parameters.

- a) pH of water will essentially tend to neutral condition of the Ryzner stability index (non-scaling, non-corrosive). Broadly, it should be in the range of 7.8-8.4 (Bidder to suggest the operating pH range within above range based on the chemicals/formulations to be used).
- b) Suspended solids: Total suspended solids within the CW system should not increase beyond 50 mg/l & ideally it should be maintained below 25 mg/l. The dosing regime will be designed to take care of CW makeup water input turbidity of 5NTU & overall CW suspended solids not exceeding 50 mg/l.

**2. Chemistry based Performance parameters:**

These are identified as the ones that need to be controlled & maintained within the limits to ensure long term integrity of the plant.

- a) **Scale control** - It is evaluated based on the Ryzner index values & other observations described below.
  - The Ryzner Index value should be neutral in all circumstances..
  - Test heat exchanger that will be inspected at regular interval should be free from scale deposition.
  - It is not envisaged to go for condenser or any other cooling surface cleaning with treatment regime in place. However, if opportunity arises, water jet cleaning of the condenser may be carried-out by the owner. The treatment program should ensure no scaling. However, if some scale exist that should be loose, non-adherent type that can be easily removed by water jetting.
  - Components of the deposit collected & analyzed should demonstrate the satisfactory performance of hardness control.
  - Similarly, it is not envisaged to carryout cooling tower fill cleaning. Visual inspection of the fills & or weight gain measurements may be carried out from time to time. These results should not indicate any abnormal level of deposition. However vendor can reasonably suggest for online cleaning of cooling tower fill provided that he should be able to demonstrate the performance improvement after cleaning.
  - Deposit monitor: Visual inspections, weight of deposit measured should reveal no deposition. Calculation of heat transfer co-efficient should reveal consistent values.

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- b) **Silt deposit control** - Presence of silt in fills, cooling tower basin, condenser water box & condenser tubes will be monitored.
- c) **Bio-fouling control** - Performance is measured based on the results indicated by the bio-fouling monitor & lab results for biological activity.
- Differential pressure increase across the bio-fouling monitor should be less than 01 inch water column assuming that flow setting through the monitor at rate of 2gpm results in 03 inch water column DP initially. Besides this, visual/inspections provision in the monitor should also show a clean/ un-fouled tube.
  - Visual inspection of the cooling tower structure, fills, columns, culvert, surfaces should not reveal any biological growth.
  - Total bacterial or viable count (TBC) should be less than 105 counts/ml. Station chemist will decide the interval & locations of the sample to be collected.
  - Total Sulphate reducing bacteria count should be less than 100 counts/100ml. Station chemist will decide the sampling intervals & locations of the sample to be collected.
  - Cooling tower/condenser/heat exchange surfaces/inspections as mentioned previously should not reveal any bio fouling.
  - Free residual chlorine of 1.0 ppm is to be achieved in cooling water through chlorine dosing and oxidizing biocide.
- d) **Corrosion** - Performance of treatment program in terms of corrosion control will be evaluated based on the following measurements
- **Copper corrosion** –
    - Rate should be less than 0.20 mpy as measured using standard CU-Ni coupons (90-10). ASTM standards will be followed for measurements/ preparation techniques & installation of the coupon.
    - Water-soluble Cu levels in cooling water will be measured at regular interval.
    - The traces of copper in condenser deposit analysis (if any) shall be within the justifiable limits of copper corrosion rate.
  - **Iron / Mild Steel corrosion** –
    - Rate should be less than 04 mpy as measured using standard Mild Steel coupons. ASTM standards will be followed for measurements/ preparation techniques & installation of the coupon.
    - The traces of iron in Heat exchanger deposit analysis (if any) shall be within the justifiable limits of iron corrosion rate.
  - **Microbiological Induced Corrosion** -
    - Micro biological induced corrosion rate (MIC) should be in control. Heat exchanger surface inspection & spool piece or any dismantled equipment/pipe work inspection should reveal no evidence of MIC.

**3. Plant Technical Performance parameters**

These parameters essentially guaranty following parameters.

- **Cycle Of Concentration (COC):** You shall maintain agreed COC in circulating water throughout the contractual period. ( desire COC = around 5.0 to 6.0 )
- **Vacuum at Condenser :** You shall maintain vacuum at mutually agreed level.



**C. Alternative chemicals for water Treatment:**

The contractor may sometimes find it necessary to change one or two chemicals during the treatment based on his experience regarding efficacy of the chemicals in use. Since the contractor shall be in better position to know regarding nature of make-up, circulating water and effectiveness of the treatment, after carrying out the treatment for some time, allowing use of alternative chemicals is considered in the interest of achieving better results.

For this purpose vendor shall specify all such alternative chemicals along with their unit rates in the quotation itself. Main chemical shall be taken for the purpose of bid evaluation and calculating guaranteed cost. Any chemical not in the bidding list, if needed can be agreed after mutual discussion and prior approval of unit in charge. Based on the suitability, the proposal will be evaluated & accepted/rejected by the owner. However, the overall guaranteed cost shall remain the same.

**D. Change in Dosing**

The normal blow down rate shall be based on the set COC targets. It is not envisaged to increase the blow down rate with the optimum chemical being dosed.

Change in chemical concentration/formulation, if any required, shall first have to undergo technical approval.(Old chemical dosing shall be continue till getting approval). The techno-commercial reasons to change the concentration or chemicals/formulations, without affecting the integrity & performance of the system, that will be intimated with supporting document for concurrence & justify that new chemical/formulation will be of equivalent cost. Any higher cost implications for such change of chemicals will be to the account of vendor. Any reduction in cost for buying such new chemicals/formulations shall be passed on to the owner.

If vendor fails to meet the performance parameter and recommend for increased blow down rate, equivalent additional chemical quantities to keep the optimum concentration shall be dosed. Vendor shall dose the same at his cost.

**E. Monitoring:**

Vendor will set up monitoring equipment & stations for on line monitoring of dosed chemicals & their performance at his cost. Vendor should clearly mention details of the monitoring instruments which will be supplied free of cost with the package for use at site on returnable basis. The monitoring systems installed by the bidder will be of standard, proven design. While ascertaining the performance, results of monitors will be taken into considerations. Following monitors shall be installed –

- a) Bio fouling monitor
- b) Deposit monitor (Replacement of installed tube at quarterly frequency with fresh one, analysis deposit sample in your lab & submit report.
- c) Coupon Rake : Two nos. of coupon rakes are available with GIPCL. Coupons will be fixed at the starting of the treatment and replaced for analysis at monthly, quarterly, half

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yearly and annual frequency respectively. Vendor shall provide ASTM a 53 grade -MS & Cu Ni – 2 each.

d) Test heat exchanger (Model condenser) – This shall be installed by vendor and will be opened periodically for inspection of internal condition w.r.t. scale, corrosion, fouling etc.)

e) Analysis kits with reagents for special analysis (e.g. TBC, SRB etc.)

f) Comprehensive, state of the art on line monitoring system at a site with 24/7 access to Head C&L Department, indicating following parameters will be preferred.

1. Corrosion Rate
2. Scale / Fouling Condition
3. Important Circulating water parameters
4. Dosing chemical details with consumption
5. Monthly Report Display
6. Tower efficiency / Approach

After completion of contract period rest of chemicals will be return to the vendor. Or otherwise supplier will provide the free service up to consumption of all chemicals.

The above mentioned monitoring equipment are identified as the minimum requirement for smooth operation of the system however other monitoring techniques, if required, will be identified and installed on mutual agreement.

The instruments shall be calibrated at certain frequency as per manufacturer recommendations and result should be submitted.

**F. Services:**

- The Vendor shall depute one trained, experienced & competent chemist at a site throughout the contract period for managing day to day affairs. The Chemist posted shall report to HOD – C&L & shall follow the instructions / guideline of HOD- C&L time to time

Few of the regular works are as below but not limited to these only –

- a) Vendor will depute site in charge / Chemist preferably B.Sc. – Chemistry / Diploma – Chemical and having minimum five (05) years experience in the Cooling Water Treatment as site in charge. The chemist must have adequate knowledge & experience in the field. The analysis of Raw material done by your chemist in the presence of our officers will be considered final for material rejection / acceptance. The site in charge will work on all working days during G shift i.e. 9:00 to 17:30 hrs.
- b) Site in charge shall set all required dosing functions / parameters of metering pumps, so that during 17:30 hrs to next day's 09:00 hrs and on holidays the dosing of chemicals in CT will not get affected.
- c) Lunch / Breakfast / Tea- Coffee etc. availed by deputed staff of Vendor will be on chargeable basis as per GIPCL's policy. Township facility not available at Vadodara.

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- d) Issue of dosing chemicals from stores and keep at designated dosing location, maintain the operating levels in dosing tanks. Unloading of chemicals- vendors scope
- e) Calculate, dose & monitor those chemicals being dosed continuously to deliver the performance parameters listed in sections below while maintaining the operating parameters.
- f) Take daily field round, collect the technical data associated with CW treatment regime
- g) Take daily reading from DCS ( if available ).
- h) Daily round of monitoring skids & take readings.
- i) Daily analysis of makeup & cooling water will be carried out by GIPCL .
- j) Keep informed Head of C&L department regarding activities of treatment and monitoring observations.
- k) At regular interval, readings of CW system & condenser shall be collected by vendor and submitted with comments/suggestions & action taken. Detail format & data collection interval shall be mutually agreed with Head of C&L department
- l) Submission of Monthly Reports on water quality, monthly consumption of chemicals, observations & recommendations to head C&L department
- m) Availability of technical expert who has to come at site periodically and as & when required on call basis & anyother relevant work assigned.

**G. Instructions to the Vendors**

Sr. No.	Pre-Bid requirements	Accepted/Not Accepted	Remarks
1.	One representative team of the Vendor shall essentially visit the site before submission of technical offer for data collection (other than provided in scope of work), for seeing current status of cooling tower, monitoring & dosing arrangement and for pre Bid discussion & clarification on Scope of work.		
2.	Vendor team shall collect required water samples for analysis in their laboratory to develop formulation of treatment regime		
3.	Vendor team is expected to put up a written request for the list of data other than mentioned in this document which is required by them for making and submission of bid		
4.	The scope of work shall essentially be discussed during pre Bid visit to have clarity and complete understanding		
5.	Vendor to quote for ClO2 system (on lease) with its details and required chemical for ClO2 generation.		
6.	Vendor shall indicate the maximum consumption of each regular chemical to be supplied by him on the basis of 60% PLF of St # 1 & 10 % PLF of St # 2 .Maximum payable / guaranteed contract amount shall be calculated for yearly actual consumption.		

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7.	Vendor shall also mention maximum consumption of sulphuric acid supplied by GIPCL.(not exceeding 50 Tons/Tower/month)		
8.	Vendor should specify the time period for stabilization (in case ) before start of normal treatment programme. Maximum stabilization period shall be 30 days from startup of cooling water treatment.		
9.	<p>Vendor shall clearly indicate the constituents and active components of the chemicals/formulation used for the treatment.</p> <p>For all the chemicals that are going to be a part of the CW treatment for protection against scale, corrosion, bio fouling and silt deposition the bidder is required to furnish the following information related to them:</p> <ul style="list-style-type: none"> <li>➤ The ppm level of dosing recommended for each chemical and the reason for the same</li> <li>➤ frequency of monitoring the residual level of the added chemicals in CW water</li> <li>➤ the method to analyze the residual levels of the treatment chemicals in the system</li> <li>➤ Analysis method for the active ingredient present in to individual product</li> <li>➤ Lab results on inhibition effect of the formulation will also provided by the supplier/contractor</li> </ul>		

➤ **Active content required in product supplied by Vendor**

Sr. No	Item Particular	% Active Content
1	Ortho Phosphate	50%
2	Organo Phosphonate	50%
3	Zinc	7%
4	<b>Ploymeric</b> Dispersant	25%
5	Biodispersant	50%
6	CIO2 precursor	25%
7	Hypo	7.0 % to 9.0 %
9	Non Oxidizing Biocide	50%

➤ **Polymeric Dispersant.**

- **Polymeric Dispersant should be Low Molecular based preferably Ter / Co Polymer of Acrylic & Sulphonic Acid.**
- **Polymeric Dispersant should give Minimum Calcium Phosphate Inhibition of 95 % at pH of 8.0**

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- **Following levels of Parameters / Inhibitors/Chemicals in circulating water are to be maintained / Guaranteed**

Sr. No.	Parameters	Control limit
01.	pH	7.8 to 8.4
02.	Residual Zinc as Zn	Min. 1.0 ppm
03.	Residual Orthophosphate as PO4 (Inorganic)	Min.4.5 to 5 ppm
04.	Residual Organophosphate as PO4 (Organic)	Min. 2 to 2.5 ppm
05.	Residual Total Phosphate as PO4	Min. 7.0 ppm
06.	Residual Chlorine	0.5 ppm
07.	Iron Corrosion	Max. 4.0 mpy
08.	Copper Corrosion	Max. 0.20 mpy
09.	Suspended Solids	Max. 50 ppm
10.	Ryzner Index Value	Neutral
11.	Cycle Of Concentration ( CoC )	5.0 to 6.0
12.	Total Bacterial Count (TBC)	Max. 105 Counts/ml
13	Sulphate Reducing Bacteria (SRB)	Max. 100 Counts/ 100 ml
14	Azole	Min. 1.0 ppm

**Penalty Clause**

Penalty shall be applicable in the following cases:-

01. If the guaranteed parameters like corrosion rate, scaling, microbiological growth (TVC + SRB), Condenser Vacuum, pitting corrosions, Tower fill pack condition, COC and effect of polymeric dispersant are not achieved as per satisfaction of concerned officer, then 10% of the cost of chemicals for the particular period shall be deducted.
02. Fore-bay strainer cleaning frequency shall be limited to 24/year (Each station), if it exceeds Rs.1, 000/- per strainer cleaning shall be back charged.
03. Landed cost of the chemical shall be considered for calculating the deductions.
04. In the absence of skilled manpower penalty of Rs.1000/- and Rs.500/- for unskilled manpower per day shall be recovered from vendors bills.

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05. If any deputed contract person found not equipped with required PPE ( as per safety norms of GIPCL ), then Rs. 500/ - will be charged on each instance as penalty to Vendor. And on repeated violation of safety norms, ( more than three times ) particular deputed person of vendor will be asked to be relieved from GIPCL plant.
- 06 Corrosion coupon shall be provided in advance, if vendor fail to fulfill the requirement then 10% cost of the chemicals for the particular period shall be deducted.
- 07 Both condenser's efficiency must be more than 95% as per design parameter , if condenser is work less than 95% efficiency, then 10% cost of the chemicals for the particular period shall be deducted.
- 08 If any force shutdown occurs in plant due to incompetence of cooling water treatment, then 20% cost of the chemicals for total contract period shall be deducted.
- 09 All chemical should be dozed through dozing pump if chemicals will be dozed without dozing pump, cost of chemical for particular days will be deducted from the Bill
- 10 Additional chemical required more than prescribed to maintained the system healthiness , should be provided ( after consulting Head C&L )by the vendor at free of cost.
- 11 If online Monitoring System is not working more than 10 days the cost of chemical for particular days will be deducted from the Bill.
- 12 If supplier fail to analyze the cooling water sample once in month in the supplier's laboratory, Rs.5000 shall be deducted for each phase of water sample from the bill.

**Mobilisation**

Vendor should mobilize chemical in such a way that at least two month stock is available at plant, so that treatment can go smoothly uninterrupted for 60 days.

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**TECHNICAL BID**

Quantity of Chemicals to be mentioned on the basis of 60% PLF of St # 1 & 10 % PLF of St # 2 however Order and the procurement shall be on the basis of actual operational requirement.

<b>Sr. No</b>	<b>Item Particular</b>	<b>Manufacture Cat Ref No</b>	<b>Pack Size</b>	<b>Unit of Measurement</b>	<b>Estimated Qty. mentioned for PLF</b>
1	Corrosion Inhibitor ( Zinc & Phosphahate base )				
2	Dispersant				
3	Antiscalant				
4	CU Inhibitor				
5	Biodispersant				
6	Clo2 precursor				
7	Hypo				
8	HCL				
9	Biocide 1				
10	Biocide 2				

**ANNEXURE- 1**

➤ **GPCB Consent conditions for Treated Effluent**

<b>Parameters</b>	<b>Unit</b>	<b>Limit</b>
		<b><u>(Max.)</u></b>
p H	-	<b>6.5 - 8.5</b>
Temperature	0 C	<b>40.00</b>
Colour ( Pt -Co scale )	units	<b>100.00</b>
T.S.S.	mg / lt	<b>100.00</b>
Oil & Grease	mg / lt	<b>10.00</b>
Phenolic Compounds	mg / lt	<b>1.00</b>
Cyanide	mg / lt	<b>0.20</b>
Fluoride	mg / lt	<b>1.50</b>
Sulphide	mg / lt	<b>2.00</b>
Ammonical Nitrogen	mg / lt	<b>50.00</b>
Arsenic	mg / lt	<b>0.20</b>
Total Chromium	mg / lt	<b>2.00</b>
Hexavalent Chromium	mg / lt	<b>0.10</b>
Copper	mg / lt	<b>3.00</b>
Lead	mg / lt	<b>0.10</b>
Mercury	mg / lt	<b>0.01</b>
Nickel	mg / lt	<b>3.00</b>
Zinc	mg / lt	<b>5.00</b>
B.O.D. ( 3 Days - 27 deg. )	mg / lt	<b>100.00</b>
C.O.D	mg / lt	<b>250.00</b>
Chloride	mg / lt	<b>600.00</b>
Sulphate	mg / lt	<b>1000.00</b>
T.D.S.	mg / lt	<b>5000.00</b>
Insecticides	mg / lt	<b>Absent</b>
Bio - Assay Test	-	<b>min - 90% survival - 96 hrs</b>



**Annexure II**

**Scope and Technical Specifications For Cooling Water Treatment at - SLPP**

**Preamble :-**

Gujarat Industries Power Company Limited (GIPCL), is a premier power Generating Company, adopting Conventional method using Natural Gas & Lignite as a fuel and Non Conventional method – Solar & Wind. GIPCL - SLPP unit is located at village Nani Naroli, Mangrol, Dist. Surat has two units : Phase I - 250 MW (125×2) & Phase II - 250 MW (125×2) capacity each. The plant is based on CFBC technology, using Lignite as a fuel.

The scope of Cooling Water (CW) Treatment Program is for management of treatment of cooling water. The main objective of this treatment program is:

- To improve Cooling Tower Efficiency / Performance
- To improve vacuum at Condenser
- Maintaining expected COC / Increase COC, while optimize the treatment cost & water consumption.

The aim of this contract is to carry out treatment of cooling water to control scale; corrosion and fouling with suitable non-chromate based chemicals/ formulations and its executions as per system requirements. The chemicals & its concentrations that are non-hazardous & environmental friendly shall be used to achieve the objective. Since the cooling tower blow down water is directly disposed off from the site without any further treatment, it shall be ensured that in the treatment program the concentrations of the chemicals does not exceed the consent conditions of the GPCB in the final blow down under any circumstances. (GPCB consent parameters attached as Annexure-2 )

The total quantity of cooling water required for the condensers and heat exchangers of auxiliary cooling water system of 2 x 125 MW units phase-I is 38000 cu.m/hr and 2X125 MW units Phase-II is approximately 38000 cu.m/hr.

**Phase-I (Unit 1 & 2)**

**Technical specification of Cooling Tower:**

- |     |                           |                               |  |                            |
|-----|---------------------------|-------------------------------|--|----------------------------|
| 01. | Number of Cooling Towers  | :                             | Two with common fore-bay open channel. |                            |
| 02. | Number of cells per tower | :                             | Nine                                   |                            |
| 03. | Type of Cooling Tower     | :                             | Induced Draft                          |                            |
| 04. | Total Circulation rate    | :                             | 38000 cu.m / hr. (Approx.)             |                            |
|     | a)                        | Flow across each condenser    | :                                      | 14800 cu.m / hr. (Approx.) |
|     | b)                        | Flow across heat exchanger of | :                                      | 2070 cu.m / hr. (Approx.)  |

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	Auxiliary system	
c)	Margin flow 19000– (14800+2070)	:2130 Cu.m/ hr. (Approx.)
05.	System holding capacity	: 26800 Cu.m (Approx.)
06.	Evaporation loss	: 720 m <sup>3</sup> /hr. (Approx.)
07.	Blow down water for calculation of dosing chemical quantity.	: 144 m <sup>3</sup> /hr.
08.	Side stream filter available	: 3% of circulation rate.
09.	Operating COC	: 6.0

**Technical specification of Surface Condenser**

01.	Nos. of Surface Condensers	: 2
02.	Nos. of water side passes	: 2
03.	Quantity of cooling water	: 14800 cu.m (Approx.)/ condenser.
04.	Cooling water I/L &O/L temp.	: 31.0 & 41.0°C (nominal)
05.	Tube material :	
	a) In Condensing Zone	: Cu-Ni 90/10,SB111 C70600
	b) In Air Cooling Zone	: SS SA 249 TP 304.
06.	Tube sheets, Channels & Water Boxes	: CS SA 516 GR 70.
07.	Piping & Valves	: CS
08.	Velocity of Cooling Water	: 1.94 m/sec. (Approx.)

**Technical specification of Package Air conditioning cooling water system**

<b>1) <u>Phase – I Cooling Tower</u></b>	<b>:</b>	<b>Four (04)</b>
Hold up capacity	:	3.5 M3
Metallurgy of Condenser	:	Copper
Nos. of Condensers	:	12 nos.

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**Technical specification of Plate Heat Exchanger**

01.	Inlet cooling water temperature	:	36°C (nominal)
02.	Outlet cooling water temperature	:	45°C (nominal)
03.	Plate material	:	SS 316

**Phase-II (Unit 3 & 4)**

**Technical specification of Cooling Tower:**

01.	Number of Cooling Towers	:	Two with common fore-bay open channel.
02.	Number of cells per tower	:	seven
03.	Type of Cooling Tower	:	Induced Draft
04.	Total Circulation rate	:	38000 cu.m / hr. (Approx.)
	a) Flow across each condenser	:	16000 cu.m / hr. (Approx.)
	b) Flow across heat exchanger of Auxiliary system	:	2070 cu.m / hr. (Approx.)
	c) Margin flow 19000– (15000+2070)	:	1930 Cu.m/ hr. (Approx.)
05.	System holding capacity	:	18000 Cu.m (Approx.)
06.	Evaporation loss	:	720 m <sup>3</sup> /hr. (Approx.)
07.	Blow down water for calculation of dosing chemical quantity.	:	144 m <sup>3</sup> /hr.
08.	Side stream filter available	:	3% of circulation rate.
09.	Operating CoC	:	6.0

**Technical specification of Surface Condenser**

01.	Nos. of Surface Condensers	:	2
02.	Nos. of water side passes	:	2
03.	Quantity of cooling water Condenser.	:	16000 cu.m (Approx.)
04.	Cooling water I/L &O/L temp.	:	31.0 & 41.0°C (nominal)

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05. Tube material:  
 a) In Condensing Zone : SS 304  
 b) In Air Cooling Zone : SS SA 249 TP 304.
06. Tube sheets, Channels & Water Boxes : CS SA 516 GR 70.
07. Piping & Valves : CS
08. Velocity of Cooling Water : 1.94 m/sec. (Approx.)

**Technical specification of Package Air conditioning cooling water system**

- 1) Phase – II Cooling Tower : Three (03)**
- Hold up capacity : 3.0 M3  
 Metallurgy of Condenser : Copper  
 Nos. of Condensers : 3 nos

**Technical specification of Plate Heat Exchanger**

01. Inlet cooling water temperature : 36°C (nominal)  
 02. Outlet cooling water temperature : 45°C (nominal)  
 03. Plate material : SS 316

GIPCL is drawing the Raw water from bed of Tapi river through pipeline and is stored in RCC reservoir inside the plant. After chlorination and clarification, Clarified water is used for Cooling Water make-up. The analysis of make-up water is as below:-

Sr. No.	Parameter	Unit	Range
01.	pH		7.5 to 8.5
02.	Conductivity	Micro-Siemens	300 to 450
03.	Total dissolved solid	ppm	200 to 300
04.	Turbidity	NTU	<25 NTU
05.	Total Hardness as CaCO <sub>3</sub>	ppm	120 to 160
06.	Calcium Hardness as CaCO <sub>3</sub>	ppm	60 to 90
07.	M-alkalinity as CaCO <sub>3</sub>	ppm	125 to 175
08.	Chloride as CaCO <sub>3</sub>	ppm	20 to 50
09.	Silica as SiO <sub>2</sub>	ppm	20 to 30
10.	Iron as Fe	ppm	0.2 max.

**Note : Side Stream Filtration is available in both CW systems**

**Technical Requirements for Proposed Cooling water treatment Program**

**A. General requirements of Cooling water treatment Package:**

- a. Vendor shall provide treatment program consisting :
- Chemicals that are Biodegradable, non-toxic, non-hazardous and non-chromate based.
  - Orthophosphate & Zinc as Corrosion inhibitor.
  - Organophosphate & Polymeric dispersant for deposit control
  - Bio Dispersant
  - Oxidizing and Non Oxidizing Biocide
  - Azole base

A toxicological test report & MSDS should be submitted along with the offer for all the chemicals supplied. The cooling water treatment shall comprise of zinc as the cathodic inhibitor and stabilized ortho-phosphate as the anodic inhibitors combined as a single formulation. Individual chemicals as cathodic and anodic inhibitors in basic chemicals forms are not acceptable. The products offered should be field tested and proven.

b. Vendor should offer the Cooling water treatment program /scheme which is well proven in other industries with similar kind of circulation rate, technically proven & suitable to our plant in terms of metallurgy, environment , safety norms and consent conditions ( Annexure I )etc. GIPCL is free to accept / reject the part of schemes or full scheme.

c. The chemical should not have any deleterious effect on any component of the Cooling water system including Condenser, Heat Exchangers and the packing material of cooling tower.

d. A dedicated scale inhibitor cum dispersant program shall be included in the program for dispersion of iron, general scale, and sludge to take care of chances of scaling / deposition inside Heat Exchangers, Condenser and Tower Fill Packs. Treatment should ensure no scaling in above mentioned areas of interest. There should not be reduction in heat transfer capacity of heat exchanger, due to fouling or formation of deposits so as to achieve Vacuum at Condenser at desired level. And also treatment should ensure no pitting across condenser and heat exchangers with corrosion in admissible control.

e. Effective control of biological growth shall be provided by using suitable biocide, bio dispersant together.

f. Chlorine supplied by SLPP is to be dosed to maintain Free residual chlorine.

g. It is required to have continuous dosing of chemicals (excluding Sulfuric Acid supplied by GIPCL) by metering pumps only. The dosing equipment required for implementing the treatment program shall be brought, installed, commissioned and maintained by the contractor adopting site safety standards. They should be of proven design and fit for the purpose. Electrical power supply will be given by GIPCL at free of cost. Sulphuric Acid dosing shall be carried out by gravity.

h. Dosing equipment brought to site by the vendor shall be operated and maintained by vendor staff at site. Successful vendor shall provide Calibration report of dosing equipments.

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i. Chemicals shall be supplied in New HDPE containers to site. The containers must be properly sealed and also shall be labeled properly with name, brand name, batch no, expiry date etc.

Each batch of chemicals should have test certificate that all chemicals are bio-degradable (preferably within 24hrs), environment friendly and do not fall under banned category. Vendor shall be taking back the empty containers of chemicals.

j. Vendor shall provide the quality control check procedure for each chemical supplied. Each dispatch of the chemical shall have quality check details from the manufacturer's lab. If required, these chemical upon receipt will be first analyzed in GIPCL lab before accepting the consignment and will be accepted/rejected based on analysis results. In case active ingredient found lower with respect to minimum of the value specified by party, deduction from the delivered cost on prorata basis, shall be done for said total chemical supplied in that lot. In addition to above, cost of testing if done from lab other than GIPCL's own laboratory, shall be borne by vendor for such case. Opinion of GIPCL officer regarding acceptance / rejection of chemicals will be considered final.

k. Vendor shall send labor along with consignment for unloading of chemical carboys and drums. The labor shall be equipped with required PPE's (safety shoes, safety helmets, chemical resistance gloves, chemical resistance dress, splash proof goggles etc. as per GIPCL site safety standards. Any violation observed & reported in plant area by concerned officer shall attract penalty, as mentioned in penalty clause section.

l. Vendor should maintain required barrel pumps, transfer pumps at site for handling of chemicals.

m. Total quantity of chemicals should be sufficient for minimum 2 months stock or reasonably adequate quantities of each chemical at site.

n. Vendor is advised to visit plant site and submit proposal only after extensive survey, ascertaining quality of make-up, circulating water, blow down, equipment metallurgy etc. Vendor is free to quote chemicals based on formulations for water quality data to meet the guarantee. Vendor is required to refer instructions points and have to either to provide acceptance of each or give comments before Pre Bid meeting.

o. Vendor shall take into account the seasonal variations in the input water quality for the treatment purpose.

Vendor shall depute one trained, experienced & competent Site In charge / chemist as mentioned in Service section, at our site throughout the contract period for managing day to day affairs

p. Site in charge in presence of GIPCL official shall carry out any require analysis to monitor the necessary treatment parameters. Lab facilities shall be provided to the vendor for the above analysis.

q. Corrosion coupon will be assessed ( Quarterly, Half Yearly, Yearly ) jointly by GIPCL and vendor.

r. The vendor shall submit detail operating procedure, manual of monitors & contingency procedure ( in emergency scenario considering high cu corrosion rate, Condenser DP,

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vacuum, salinity ,turbidity ,pH excursion ,non availability of chlorination, condenser leakage etc.)

s. Microbiological analysis of circulating water will be carried out monthly by vendor.

t. Successful Vendor shall provide analytical method of analysis along with active content, details of instruments/reagents required for analysis of various chemicals, active content in bulk chemicals and their value before start of the treatment.

**B. Performance / Guarantee Parameters:**

**1. Plant operating/Chemistry limiting parameters:**

These operating parameters need to be maintained on continuous basis. Optimum Blow down rate (M3/hr) will be based on these limiting parameters.

- a) pH of water will essentially tend to neutral condition of the Ryzner stability index (non-scaling, non-corrosive). Broadly, it should be in the range of 7.5-8.5 (Vendor to suggest the operating pH range within above range based on the chemicals/formulations to be used).
- b) Suspended solids: Total suspended solids within the CW system should not increase beyond 50 mg/l & ideally it should be maintained below 25 mg/l. The dosing regime will be designed to take care of CW makeup water input turbidity of 5NTU & overall CW suspended solids not exceeding 50 mg/l.

**2 Chemistry based Performance parameters:**

These are identified as the ones that need to be controlled & maintained within the limits to ensure long term integrity of the plant.

- a) **Scale control** - It is evaluated based on the Ryzner index values & other observations described below.
  - The Ryzner Index value should be neutral in all circumstances.
  - Test heat exchanger that will be inspected at regular interval should be free from scale deposition.
  - It is not envisaged to go for condenser or any other cooling surface cleaning with treatment regime in place. However, if opportunity arises, water jet cleaning of the condenser may be carried-out by the owner. The treatment program should ensure no scaling. However, if some scale exist that should be loose, non-adherent type that can be easily removed by water jetting.
  - Components of the deposit collected & analyzed should demonstrate the satisfactory performance of hardness control.
  - Similarly, it is not envisaged to carryout cooling tower fill cleaning. Visual inspection of the fills & or weight gain measurements may be carried out from time to time. These results should not indicate any abnormal level of deposition. However vendor can reasonably suggest for online cleaning of cooling tower fill provided that he should be able to demonstrate the performance improvement after cleaning.

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- Deposit monitor: Visual inspections, weight of deposit measured should reveal no deposition. Calculation of heat transfer co-efficient should reveal consistent values
- b) **Silt deposit control** - Presence of silt in fills, cooling tower basin, condenser water box & condenser tubes will be monitored
- c) **Bio-fouling control** - Performance is measured based on the results indicated by the bio-fouling monitor & lab results for biological activity.
  - Differential pressure increase across the bio-fouling monitor should be less than 01 inch water column assuming that flow setting through the monitor at rate of 2gpm results in 03 inch water column DP initially. Besides this, visual/inspections provision in the monitor should also show a clean/ un-fouled tube.
  - Visual inspection of the cooling tower structure, fills, columns, culvert, surfaces should not reveal any biological growth.
  - Total bacterial or viable count (TBC) should be less than 105 counts/ml. Station chemist will decide the interval & locations of the sample to be collected.
  - Total Sulphate reducing bacteria count should be less than 100 counts/100ml. Station chemist will decide the sampling intervals & locations of the sample to be collected.
  - Cooling tower/condenser/heat exchange surfaces/inspections as mentioned previously should not reveal any bio fouling.
  - Free residual chlorine of 1.0 ppm is to be achieved in cooling water through chlorine dosing and oxidizing biocide.
- d) **Corrosion** - Performance of treatment program in terms of corrosion control will be evaluated based on the following measurements
  - **Copper corrosion** –
    - Rate should be less than 0.10 mpy as measured using standard CU-Ni coupons (90-10). ASTM standards will be followed for measurements/ preparation techniques & installation of the coupon.
    - Water-soluble Cu levels in cooling water will be measured at regular interval.
    - The traces of copper in condenser deposit analysis (if any) shall be within the justifiable limits of copper corrosion rate
  - **Iron / Mild Steel corrosion** –
    - Rate should be less than or = 02 mpy for Carbon Steel & less than or = 0.05 mpy for S.S. as measured using standard coupons. ASTM standards will be followed for measurements/ preparation techniques & installation of the coupon.
    - The traces of iron in Heat exchanger deposit analysis (if any) shall be within the justifiable limits of iron corrosion rate
  - **Microbiological Induced Corrosion** -
    - Micro biological induced corrosion rate (MIC) should be in control. Heat exchanger surface inspection & spool piece or any dismantled equipment/pipe work inspection should reveal no evidence of MIC.



**3. Plant Technical Performance parameters**

These parameters essentially guaranty following parameters

- **Cycle Of Concentration (COC):** You shall maintain agreed COC in circulating water throughout the contractual period. ( desire COC = 6.0 )
- **Vacuum at Condenser :** You shall maintain vacuum at mutually agreed level.

**C. Alternative chemicals for water Treatment:**

The contractor may sometimes find it necessary to change one or two chemicals during the treatment based on his experience regarding efficacy of the chemicals in use. Since the contractor shall be in better position to know regarding nature of make-up, circulating water and effectiveness of the treatment, after carrying out the treatment for some time, allowing use of alternative chemicals is considered in the interest of achieving better results.

For this purpose vendor shall specify all such alternative chemicals along with their unit rates in the quotation itself. Main chemical shall be taken for the purpose of bid evaluation and calculating guaranteed cost. Any chemical not in the bidding list, if needed can be agreed after mutual discussion and prior approval of unit in charge. Based on the suitability, the proposal will be evaluated & accepted/rejected by the owner. However, the overall guaranteed cost shall remain the same.

**D. Change in Dosing**

The normal blow down rate shall be based on the set COC targets. It is not envisaged to increase the blow down rate with the optimum chemical being dosed. Change in chemical concentration/formulation, if any required, shall first have to undergo technical approval.(Old chemical dosing shall be continue till getting approval). The techno-commercial reasons to change the concentration or chemicals/formulations, without affecting the integrity & performance of the system, that will be intimated with supporting document for concurrence & justify that new chemical/formulation will be of equivalent cost. Any higher cost implications for such change of chemicals will be to the account of vendor. Any reduction in cost for buying such new chemicals/formulations shall be passed on to the owner.

If vendor fails to meet the performance parameter and recommend for increased blow down rate, equivalent additional chemical quantities to keep the optimum concentration shall be dosed. Vendor shall dose the same at his cost.

**E. Monitoring:**

Vendor will set up monitoring equipment & stations for on line monitoring of dosed chemicals & their performance at his cost. Vendor should clearly mention details of the monitoring instruments which will be supplied free of cost with the package for use at site on returnable basis. The monitoring systems installed by the bidder will be of standard,

**TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17**

proven design. While ascertaining the performance, results of monitors will be taken into considerations. Following monitors shall be installed –

- a) Bio fouling monitor
- b) Deposit monitor (Replacement of installed tube at quarterly frequency with fresh one, analysis deposit sample in your lab & submit report.
- c) Coupon Rake & Coupons : Coupons will be fixed at the starting of the treatment and replaced for analysis at monthly, quarterly, half yearly and annual frequency respectively. Vendor shall provide ASTM A 53 grade - CS,SS & Cu Ni – 4 each along with rakes.
- d) Test heat exchanger (Model condenser) – This shall be installed by vendor and will be opened periodically for inspection of internal condition w.r.t. scale, corrosion, fouling etc.)
- e) Analysis kits with reagents for special analysis (e.g. TBC, SRB etc.)
- f) Comprehensive, state of the art on line monitoring system at a site with 24/7 access to Head C&L Department, indicating following parameters will be preferred.

1. Corrosion Rate
2. Scale / Fouling Condition
3. Important Circulating water parameters
4. Dosing chemical details with consumption
5. Monthly Report Display
6. Tower efficiency / Approach

g) Vendor will be responsible for operation of S.S.F, chlorination, as well as chlorine tonner loading and unloading and acid unloading.

h) Pretreatment plant chemical preparation under Vendor's scope. And Vendor shall assure Clarifier outlet water Turbidity < 2.0 NTU, by Polyelectrolyte ( supply by Vendor ) & Poly Aluminum Chloride( 3.0 ppm ) ( supply by GIPCL ) treatment.

After completion of contract period rest of chemicals will be return to the vendor \_Or otherwise supplier will provide the free service up to consumption of all chemicals

The above mentioned monitoring equipment are identified as the minimum requirement for smooth operation of the system however other monitoring techniques, if required, will be identified and installed on mutual agreement.

The instruments shall be calibrated at certain frequency as per manufacturer recommendations and result should be submitted.

**F. Services:**

You have to provide following manpower for dozing and monitoring purpose.

**Site In charge :- One (1)**

You should depute site In charge who would be permanent employee of the company and qualified with B.Sc/M.Sc degree in chemistry and having minimum five (05) years experience in the Cooling Water Treatment as site in charge. The analysis of Raw

**TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17**

material done by your site engineer in presence of our officers will be considered final for material rejection / acceptance. He will work during 08:30 to 17:30 hrs

**Chemist – 4 Nos.**

All the chemist shall possess minimum qualification of B.Sc. with chemistry. They will work in shifts.(round the clock)

**Unskilled labour – 08 Nos.**

- The Site Engineer and Chemist posted shall report to HOD – C&L & shall follow the instructions / guideline of HOD- C&L time to time. Site in charge/ Chemist shall set all required dosing functions / parameters of metering pumps, so that uninterrupted dosing of chemicals in CT will not get affected
- The Site Engineer and Chemist posted at GIPCL site should stay in our GIPCL colony on chargeable basis. We shall not allow up & down from near-by cities (Surat / Ankleshwar etc).
- Lunch / Breakfast / Tea- Coffee etc. availed by all deputed staff of Vendor will be on chargeable basis as per GIPCL's policy.
- Issue of dosing chemicals from stores and keep at designated dosing location, maintain the operating levels in dosing tanks. Unloading chemicals- vendors scope
- Calculate, dose & monitor those chemicals being dosed continuously to deliver the performance parameters listed in sections below while maintaining the operating parameters.
- Take daily field round, collect the technical data associated with CW treatment regime
- Take daily reading from DCS. (if available)
- Daily round of monitoring skids & take readings.
- Daily analysis of makeup & cooling water by vendor chemist
- Keep informed Head of C&L department regarding activities of treatment and monitoring observations.
- At regular interval, readings of CW system & condenser shall be collected by vendor and submitted with comments/suggestions & action taken. Detail format & data collection interval shall be mutually agreed with Head of C&L department
- Submission of monthly report on water quality, monthly consumption of chemicals, observations & recommendations to head C&L department
- Availability of technical expert who has to come at site periodically and as & when required on call basis
- Any other relevant work assigned

**TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17**

**G. Instructions to the Vendors**

Sr. No.	Pre-Bid requirements	Accepted/Not Accepted	Remarks
1.	One representative team of the Vendor shall essentially visit the site before submission of technical offer for data collection (other than provided in scope of work), for seeing current status of cooling tower, monitoring & dosing arrangement and for pre bid discussion & clarification on Scope of work.		
2.	Vendor team shall collect required water samples for analysis in their laboratory to develop formulation of treatment regime		
3.	Vendor team is expected to put up a written request for the list of data other than mentioned in this document which is required by them for making and submission of bid		
4.	The scope of work shall essentially be discussed during pre Bid visit to have clarity and complete understanding		
5.	Vendor shall indicate the maximum consumption of each regular chemical to be supplied by him on the basis of 82% PLF of Phase 1 & 80 % PLF of Phase 2. Maximum payable / guaranteed contract amount shall be calculated for yearly actual consumption.		
6.	Vendor shall also mention maximum consumption of sulphuric acid (not exceeding 50 Tons/Tower/month )& Chlorine gas (not exceeding 4.5Tons/Tower/month ) supplied by GIPCL.		
7.	Vendor should specify the time period for stabilization (in case ) before start of normal treatment programme. Maximum stabilization period shall be 30 days from startup of cooling water treatment.		
8.	Vendor shall clearly indicate the constituents and active components of the chemicals/formulation used for the treatment. For all the chemicals that are going to be a part of the CW treatment for protection against scale, corrosion, bio fouling and silt deposition the bidder is required to furnish the following		

**TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17**

	<p>information related to them:</p> <ul style="list-style-type: none"> <li>➤ The ppm level of dosing recommended for each chemical and the reason for the same</li> <li>➤ frequency of monitoring the residual level of the added chemicals in CW water</li> <li>➤ the method to analyze the residual levels of the treatment chemicals in the system</li> <li>➤ Analysis method for the active ingredient present in to individual product</li> <li>➤ Lab results on inhibition effect of the formulation will also provided by the supplier/contractor</li> </ul>		
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➤ **Active content required in product supplied by Vendor**

Sr. No	Item Particular	% Active Content
1	Ortho Phosphate	50%
2	Organo Phosphonate	50%
3	Zinc	7%
4	<b>Ploymeric</b> Dispersant	25%
5	Biodispersant	50%
6	Non Oxidizing Biocide	50%

➤ **Polymeric Dispersant.**

- **Polymeric Dispersant should be Low Molecular based preferably Ter / Co Polymer of Acrylic & Sulphonic Acid.**
- **Polymeric Dispersant should give Minimum Calcium Phosphate Inhibition of 95 % at pH of 8.0**

**H. Following levels of Parameters / Inhibitors/Chemicals in circulating water are to be maintained / Guaranteed**

Sr. No.	Parameters	Control limit
01.	pH	7.5 to 8.5
02.	Residual Zinc as Zn	Min. 1.0 ppm
03.	Residual Orthophosphate as PO <sub>4</sub> (Inorganic)	Min.4.5 to 5 ppm
04.	Residual Organophosphate as PO <sub>4</sub> (Organic)	Min. 2 to 2.5 ppm
05.	Residual Total Phosphate as PO <sub>4</sub>	Min. 7.0 ppm
06.	Residual Chlorine	Min. 0.50 ppm
07.	Iron Corrosion	Max. 2.0 mpy
08.	Copper Corrosion	Max. 0.10 mpy
09	S.S. Corrosion	Max. 0.05 mpy

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10.	Suspended Solids	Max. 50 ppm
11.	Ryzner Index Value	Neutral
12.	Cycle Of Concentration ( COC )	6.0
13.	Total Bacterial Count (TBC)	Max. 105 Counts/ml
14	Sulphate Reducing Bacteria (SRB)	Max. 100 Counts/ 100 ml
15.	Turbidity of input water	Max. 2.0 NTU
16	Azole ( in Phase I )	Min 1.0 ppm

**I. Pre Treatment Programme:**

The Pre treatment program is based on PAC and cationic poly electrolyte. Vendor shall assure clarifier outlet water Turbidity < 2.0 NTU

- Polyelectrolyte Quantity and dosing rate for pretreatment plant is pre decided and party has to performed the jar test in GIPCL laboratory, as per given specification.
- Poly Aluminum Chloride (PAC) concentration: 3 PPM
- Quality parameter require: < 2 NTU
- Certificate: Potable water grade certificate from authorized organization.
- PAC will be supplied by GIPCL

**J. GIPCL will supply :**

Sulfuric Acid : 100 tons / month ( max )

Chlorine : 9.0 tons / month ( max )

PAC : As per requirement

**Penalty Clause**

Penalty shall be applicable in the following cases:-

01. If the guaranteed parameters like corrosion rate, scaling, microbiological growth (TVC + SRB), Condenser Vacuum, pitting corrosions, Tower fill pack condition, COC and effect of polymeric dispersant are not achieved to the satisfaction of concerned officer then 10% of the cost of chemicals for the particular period shall be deducted.
02. Fore-bay strainer cleaning frequency shall be limited to 24/year (Each station), if it exceeds Rs.1, 000/- per strainer cleaning shall be back charged.
03. Landed cost of the chemical shall be considered for calculating the deductions.
04. In the absence of skilled manpower penalty of Rs.1000/- and Rs.500/- for unskilled manpower per day shall be recovered from vendors bills.

**TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17**

05. If any deputed contract person found not equipped with required PPE ( as per safety norms of GIPCL ), then Rs. 500/ - will be charged on each instance as penalty to Vendor. And on repeated violation of safety norms, ( more than three times ) particular deputed person of vendor will be asked to be relieved from GIPCL plant.
- 06 Corrosion coupon shall be provided in advance, if vendor fail to fulfill the requirement then 10% cost of the chemicals for the particular period shall be deducted.
- 07 Condenser's efficiency must be more than 95% as per design parameter , if condenser is work less than 95% efficiency, then 10% cost of the chemicals for the particular period shall be deducted.
- 08 If any force shutdown occurs in plant due to incompetence of cooling water treatment, then 20% cost of the chemicals for total contract period shall be deducted.
- 09 Polyelectrolyte dosing shall not be increase as per recommended by party. If polyelectrolyte quantity is increase then cost shall be bear by vendor.
- 10 All chemical should be dozed through dozing pump if chemicals will be dozed without dozing pump, cost of chemical for particular days will be deducted from the Bill
- 11 Additional chemical required more than prescribed to maintained the system healthiness , should be provided ( after consulting Head C&L )by the vendor at free of cost.
- 12 If online Monitoring System is not working more than 10 days the cost of chemical for particular days will be deducted from the Bill.
- 13 If supplier fail to analyze the cooling water sample once in month in the supplier's laboratory, Rs.5000 shall be deducted for each phase of water sample from the bill.

**Mobilisation**

Vendor should mobilize chemical in such a way that at least two month stock is available at plant, so that treatment can go smoothly uninterrupted for 60 days.

**TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17**

**TECHNICAL BID**

Quantity of Chemicals to be mentioned is on the basis of 82% PLF of Phase # 1 & 80 % PLF of Phase # 2 however Order and the procurement shall be on the basis of actual operational requirement.

<b>Sr. No</b>	<b>Item Particular</b>	<b>Manufacture Cat Ref No</b>	<b>Pack Size</b>	<b>Unit of Measurement</b>	<b>Estimated Qty. for mentioned PLF</b>
1	Corrosion Inhibitor ( Zinc & Phosphahate base )				
2	Dispersant				
3	Antiscalant				
4	Azole				
5	Biodispersant				
6	Non Oxi. Biocide				
7	Poly Electrolyte				



**ANNEXURE-2**

➤ **GPCB Consent conditions for Treated Effluent**

<b>Parameters</b>	<b>Unit</b>	<b>Limit</b>
		<b>(Max.)</b>
<b>p H</b>	-	<b>6.5 - 8.5</b>
<b>Temperature</b>	0 C	<b>40.00</b>
<b>T.S.S.</b>	mg / lt	<b>100.00</b>
<b>Oil &amp; Grease</b>	mg / lt	<b>10.00</b>
<b>Phenolic Compounds</b>	mg / lt	<b>1.00</b>
<b>Sulphide</b>	mg / lt	<b>2.00</b>
<b>Ammonical Nitrogen</b>	mg / lt	<b>50.00</b>
<b>Total Chromium</b>	mg / lt	<b>2.00</b>
<b>Hexavalent Chromium</b>	mg / lt	<b>0.10</b>
<b>Total Copper</b>	mg / lt	<b>1.00</b>
<b>Total Iron</b>	mg / lt	<b>1.00</b>
<b>Zinc</b>	mg / lt	<b>1.00</b>
<b>B.O.D. ( 3 Days - 27 deg. )</b>	mg / lt	<b>30.00</b>
<b>C.O.D</b>	mg / lt	<b>100.00</b>
<b>Chloride</b>	mg / lt	<b>600.00</b>
<b>Sulphate</b>	mg / lt	<b>1000.00</b>
<b>T.D.S.</b>	mg / lt	<b>2100.00</b>

**SECTION-E**  
**SCHEDULE OF QUANTITIES**

**ANNEXURE- 1**

**SCHEDULE OF RATES (SOR) FOR GIPCL-VADODARA**

Quantity & Rates of Chemicals mentioned by considering 60% PLF of St # 1 & 10 % PLF of St # 2. Man power deputation charges, Packing & Forwarding charges of chemicals and equipment rent has been clubbed with cost of chemicals.

Sr. No	Item Particular	Estimated Qty.	Unit of Measurement	SOR (Rs)	Estimated Price Rs.
1	Corrosion Inhibitor ( Zinc & Phosphahate base )	5000	Kg	138	690000
2	Dispersant	7500	Kg	81	607500
3	Antiscalant	2000	Kg	147	294000
4	CU Inhibitor	1000	Kg	175	175000
5	Biodispersant	500	Kg	119	59500
6	Clo2 precursor	4000	Kg	119	476000
7	Hypo	9800	Lts	11	107800
8	HCL	4000	Lts	6	24000
9	Biocide 1	2000	Kg	166	332000
10	Biocide 2	2000	Kg	128	256000
TOTAL CHEMICAL COST Rs.					30,21,800/-

- Taxes extra as applicable
- Quantity mentioned against each chemicals may vary in range of  $\pm 10\%$

**My rates are as under.**

**At estimated value**

**OR \_\_\_\_\_ %age above the estimated value**

**OR \_\_\_\_\_ %age below the estimated value.**

**TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17**

**ANNEXURE- 2**

**SCHEDULE OF RATES (SOR) FOR GIPCL-SLPP**

Quantity & Rates of Chemicals mentioned by considering 82% PLF of Phase # 1 & 80 % PLF of Phase # 2. Man power deputation charges, Packing & Forwarding charges of chemicals and equipment rent has been clubbed with cost of chemicals.

<b>Sr. No</b>	<b>Item Particular</b>	<b>Estimated Qty.</b>	<b>Unit of Measurement</b>	<b>SOR (Rs)</b>	<b>Estimated Price Rs.</b>
1	Corrosion Inhibitor ( Zinc & Phosphatate base )	16500	Kg	131	2161500
2	Dispersant	15000	Kg	78	1170000
3	Antiscalant	8300	Kg	151	1253300
4	Azole	2200	Kg	79	173800
5	Biodispersant	1100	Kg	104	114400
6	Non Oxi. Biocide	1800	Kg	182	327600
7	Poly Electrolyte	2200	kg	100	220000
TOTAL CHEMICAL COST Rs.					<b>54,20,600/-</b>
Rent of pumps/ equipments, Man power deputation charges ( Annual ) included in SOR					

- Taxes extra as applicable.
- Quantity mentioned against each chemicals may vary in range of  $\pm 10\%$

**My rates are as under.**

**At estimated value**

**OR \_\_\_\_\_ %age above the estimated value**

**OR \_\_\_\_\_ %age below the estimated value**

**TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17**

**ANNEXURE- 3 (To be submitted along with technical bid dully filled, signed and stamped)**

**Bidders are required to furnish the details in the following table.**

<b>Sr. No</b>	<b>Description</b>	<b>Details required in percentage (%)</b>
<b>01</b>	<b>Applicable Excise duty</b>	
<b>02</b>	<b>Applicable Sales Tax</b>	
<b>03</b>	<b>Any other applicable taxes &amp; duties</b>	

## 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 Labor 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

**TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17**

**2.0 ANNEXURE-B**

**PROFORMA OF BANK GUARANTEE FOR ORDER PERFORMANCE**

**(To be Stamped in accordance with Stamp Act)**

Ref: ..... Bank Guarantee No.....

Date .....

Bank Guarantee Cover period from ..... to .....

To  
M/s. Gujarat Industries Power Company Limited  
P.O. Petrochemical  
Dist. Vadodara — 391346

Dear Sir,

In consideration of the Gujarat Industries Power Company Limited (hereinafter referred to as the Purchaser which expression shall unless repugnant to the context/or meaning thereof include its successors, administrators, and assigns) having awarded to M/s.....having its Registered Office/Principal Office at ..... (address) ..... (hereinafter referred to as the "CONTRACTOR" which expression shall unless repugnant to the context or meaning thereof include its successors, administrators, executors and assigns) a Order by issue of Purchaser's Letter of Intent No.....dated.....and same having been unequivocally accepted by the CONTRACTOR dated .....valued at .....for (scope of order) .....and the contractor having agreed to provide a Order Performance Guarantee for the faithful performance of the entire order including for the quality of the materials and/or workmanship, successful commissioning and satisfactory performance of the equipments/system and satisfactory services rendered during the guarantee/warranty period of ..... Months under the said LOI/Order equivalent to.....\*..... (Percent) of the said value of the order to the purchaser (Name & address of Bank) ..... having its Head Office at ..... (hereinafter referred to as the "Bank" which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, executors, assigns) do hereby irrevocably guarantee and undertake to pay the Purchaser, on written demand any and all moneys payable by the CONTRACTOR to the extent of (in figures) ..... (in words) ..... as aforesaid at any time up to (days/months/year) \*\*..... without any demur, reservations, contest, recourse or protest and/or without any reference to the CONTRACTOR. Any such demand made by the Purchaser on the bank shall be conclusive and binding notwithstanding any difference between the Purchaser and CONTRACTOR of any dispute pending before any Court, Tribunal, Arbitrator or any other Authority.

....2

(2)

**TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17**

It shall be conclusive and enough for enforcement of the BANK GUARANTEE on the bank if GUJARAT INDUSTRIES POWER COMPANY LIMITED invokes the BANK GUARANTEE stating only that the default has been committed by the contractor, thus far and no further. The bank undertakes not to revoke this guarantee during its currency without previous written consent of the purchaser and continue to be enforceable till the Purchaser discharges this guarantee.

The Purchaser shall have the fullest liberty without affecting in any way the liability of the Bank under this guarantee from time to time to extend the time for performance of the Order by the CONTRACTOR. The Purchaser shall have the fullest liberty, without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the CONTRACTOR, and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any covenants, contained or implied in the Order between the Purchaser and the CONTRACTOR or any other course of or remedy or security available to the Purchaser. The Bank shall not be released of its obligations under these presents by any exercise by the Purchaser of its liberty with reference to the matter aforesaid or any of them or by reason or any other acts of omission or commission on the part of the Purchaser or any other indulgence shown by the Purchaser or by any other matter or thing whatsoever which under law would, but for this provision, have the effect of relieving the Bank. The Bank also agrees that the Purchaser at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the CONTRACTOR and notwithstanding any security or other guarantee that the Purchaser may have in relation to the CONTRACTOR's liabilities.

Notwithstanding anything contained herein above our liability under this Guarantee is restricted to Rs..... and it shall remain in force up to the including .....unless a written demand to enforce any claim under this Guarantee is lodged with us before expiry date, the Bank will be discharged from its liabilities under this Guarantee. This Guarantee shall be extended from time to time for such period or period as may be desired by the ..... on whose behalf this guarantee has been given.

Dates this.....day of .....20.....  
at .....

.....  
Signature

Banker's rubber stamp:

Name

Designation with  
Bank stamp:

Attorney as per power of  
Attorney No.

Dated:

**TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17**

**3.0 ANNEXURE-C**

**PROFORMA FOR BANK GUARANTEE FOR EMD**

**(To be stamped in accordance with Stamp Act)**

Ref .....

Bank Guarantee No.....

Date .....

Guarantee cover period: From .....To .....

To  
M/s. Gujarat Industries Power Company Limited  
P.O. Petrochemical  
Dist.Vadodara — 391346

Dear Sirs,

In accordance with your "Invitation for Bids" under your Specification No.....Dated.....  
M/s..... having its  
Registered/Head office at.....  
(Herein after called the Bidder) wish to participate in the said Bid for .....

As an irrevocable bank Guarantee against Bid guarantee for an amount of Rs..... valid for one (1) year from ..... is required to be submitted by the Bidder as a condition precedent for participation in the said Bid, which amount is liable to be forfeited on the happening of any contingencies mentioned in the Bid Documents.

We, the ..... Bank at ....., having our Head Office at (local address) ..... Guarantee and undertake to pay immediately on written demand by Gujarat Industries Power Company Limited (hereinafter called the "Purchaser")  
(In figures) ..... (In words) ..... without any reservation, protest, demur and recourse. Any such demand made by said "Purchaser" shall be conclusive and binding on us irrespective of any dispute or difference raised by the Bidder. It shall be conclusive and enough for enforcement of Bank Guarantee on the Bank if Purchaser invokes the Bank Guarantee stating only that the default has been committed by the Bidder, thus far and no further.

Contd....2



**TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17**

(2)

This Guarantee shall be irrevocable and shall remain valid up to ..... if any further extension of this guarantee is required, the same shall be extended to such required period on receiving instructions from ..... on whose behalf the guarantee is issued.

In witness there of Bank, through its authorized Officer, has set its hand and stamp on this ..... day of .....20 ..... at .....

.....  
(Signature)

.....  
(Name)

Designation with Bank

Stamp:

Attorney as per Power of  
Attorney No.

Dated .....

**TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17**

**4.0 ANNEXURE-D**

PERFORMA CERTIFICATE  
(No claim, No arbitration)

To,

M/s. Gujarat Industries Power Company Limited  
P.O. Petrochemical  
Dist.Vadodara — 391346

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 Lol / contract is full and final. We accept this, and no claim related to payment is left.
3. The rates of the Lol / 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 Lol 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 Lol 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.

**TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17**

**5. Form-A**

**List of qualifying staff to be submitted with physical documents**

<b>Sr. No.</b>	<b>Name of Supervisor</b>	<b>Qualification</b>	<b>Experience</b>

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**

<b>Sr. No.</b>	<b>Description</b>	<b>Nos.</b>	<b>Status</b>

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

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

**TENDER FOR ARC OF COOLING WATER TREATMENT AT GIPCL VADODARA AND SURAT PLANTS (2016-17)". BID NO.: GIPCL/MATLS/CW/2016-17**

**7. ANNEXURE-E**

**(Performa for daily work done report/measurement sheet)**

**Name of Work:**

**Name of Agency:**

**Work Order No.:**

**DAILY WORK DONE REPORT FOR DATE:** \_\_\_\_\_

**Name of Supervisor of Contractor:** \_\_\_\_\_

**Sign of Engineer-in-charge (to be taken at 08:30 AM to 08:45 AM):** \_\_\_\_\_


\_\_\_\_\_  
Sign of Contractor's  
site-in-charge

Total nos. of trips certified by me

\_\_\_\_\_  
(Shift-in-charge, Main Control Room)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

