

**GUJARAT INDUSTRIES POWER COMPANY LIMITED**  
**(Surat Lignite Power Plant)**

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

**TENDER DOCUMENTS FOR:**

**TENDER FOR AWARDING THE CONTRACT FOR SUPPLY OF  
REFRACTORY MATERIAL AND APPLICATION /REPAIR OF  
REFRACTORY WORK IN 4 x 125 MW CFBC BOILERS**

**TENDER NO.: SLPP/MECH/BLR/REF /17-18  
Year 2017-18”**

## TENDER NOTICE (NIT)

Name of work	Surat Lignite Power Plant - 4X125 MW, Unit # I to IV: Supply of refractory material and application/repair of Refractory work in 4 x 125 MW CFBC boilers during annual shutdown 2017-18
Place of work	Surat Lignite Power Plant, Village: Nani Naroli, Taluka: Mangrol, Dist.: Surat (Gujarat).
Quantity	The successful lowest bidder will be awarded this contract, involving total quantities of various items as mentioned against item descriptions in Price Schedule (Annexure-F1, F2, and F3).
Period of Contract	12 Months from the date of issue of work order.
EMD	Rs. 1,77,000 /-(Rupees One Lakh Seventy Seven thousand only) by Demand Draft payable at Bank of Baroda, Mosali, Dist-Surat or State Bank of India, Nani Naroli Branch Code-13423 or any other Bank, Surat. In case of Bank Guarantee, the BG shall be in favor of GIPCL from approved Banks mentioned in this tender.
Tender fee	Rs. 2000 / - (Rupees Two Thousand only)
Availability of online Tender document	On website: <a href="http://etender.gipcl.com">http://etender.gipcl.com</a> & <a href="https://gipcl.nprocure.com">https://gipcl.nprocure.com</a> (from 08.06.2017)
Downloading of online tender document from websites	06.06.2017 to 27.06.2017 16.30 HRS
Last date & Time of online submission of bid	27.06.2017, 17.00 HRS on website: <a href="https://gipcl.nprocure.com">https://gipcl.nprocure.com</a> only
Submission of EMD and other supporting documents for prequalification bid in physical form	EMD and other documents to be submitted in physical form within two working days after due date of closing of the tender during office hours at office of Surat Lignite Power Plant, Nani Naroli, Dist. Surat.

**NOTES:**

1. Amendment / corrigendum of the tender document, the 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 of bid submission.
2. GIPCL reserves the right to reject any or all the tenders or split the work among the bidders without assigning any reason thereof.
3. The bidders are required to quote the rate strictly as per the terms and conditions mentioned in the tender document. The conditional tender will not be entertained and shall be liable for outright rejection.
4. The bidders are required to submit their bids online through the website <https://qipcl.nprocure.com> only
5. The EMD & other documents to be submitted in physical form as mentioned above would be deposited at the following address:-

**ADDL. GENERAL MANAGER - SLPP  
GUJARAT INDUSTRIES POWER CO. LTD.,  
(Surat Lignite Power Plant)  
Village – Nani Naroli, Taluka – Mangrol  
District – Surat 394 110, Gujarat  
Phone: 02629-261063 (10 lines)  
Fax: (02629) 261073 / 261074**

# GUJARAT INDUSTRIES POWER COMPANY LIMITED SURAT LIGNITE POWER PLANT

## Sub:

Tender for: Supply of refractory material and application/ repair of Refractory work in 4 x 125 MW CFBC boilers during annual shutdown 2017-18 through gipcl.nprocure.com.

## **SECTION A**

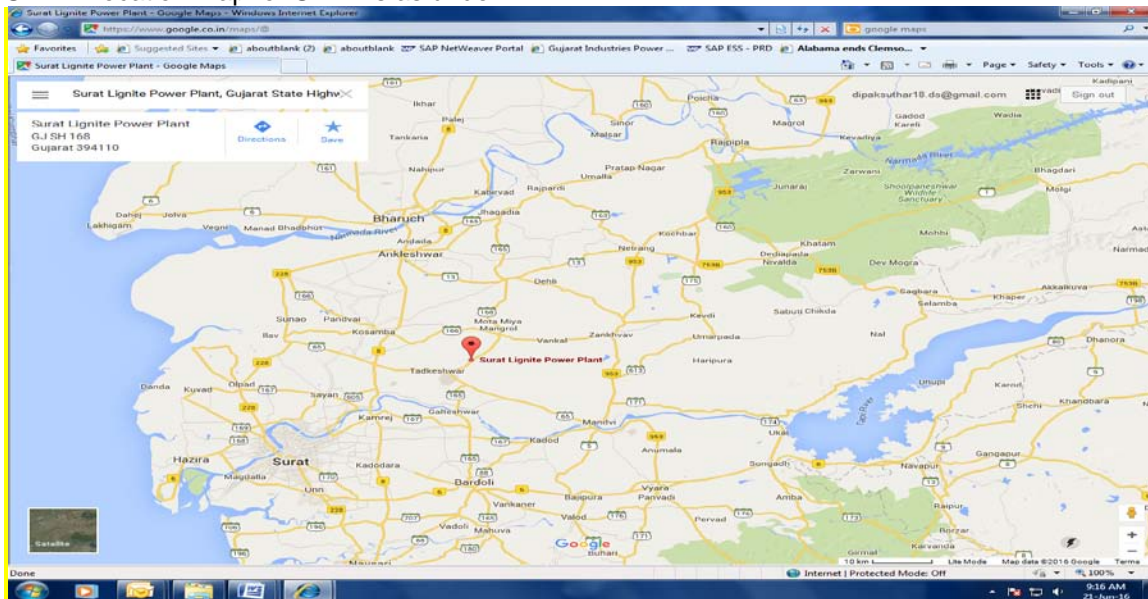
### **1. INSTRUCTIONS TO BIDDERS**

#### **PROJECT 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. 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. The company has also undertaken execution of 112.4 MW wind energy farm projects, out of which 87 MW capacity wind projects at different sites in Gujarat State have already been commissioned.

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



The Company is desirous of entering into Supply of refractory material and application/ repair of Refractory work of 4 x 125 MW CFBC Units Boiler & for a period of one years at SLPP and is therefore inviting tenders online from experienced contractors.

## **GENERAL INSTRUCTIONS**

The Bidders who are interested in participating in the tender must read and comply with the instructions and the terms and conditions contained in the tender documents.

The bids shall be filled in by the tendered clearly, neatly and accurately. Any alteration, erasures or over-writing would be liable to make the tender invalid unless the same is neatly carried out and attested over the full signature of tenderer. The decision of the Company to interpret the information and rates filled in by the tenderer shall be final and binding on the bidder.

The Bidders are requested to make themselves fully conversant with the General Conditions of Contract, Special Conditions of Contract, Technical Specifications, site conditions, safety and health aspects and norms to be observed, etc. while submitting their bids so that no ambiguity arises in these respects subsequent to submission of the Bids.

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 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.

Bidder has to submit all the information and details required in the 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.

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.

The tender documents shall not be transferable.

The Bidders are expected to examine all instructions, forms, terms and 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.

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

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

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.

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

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.

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.

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

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

## **2. DETAILED SCOPE OF WORK**

This tender is for four units (phase-1 for unit 1 & 2 and phase-2 for unit 3&4).GIPCL reserves the rights to allot all the four units' work to a single bidder or GIPCL may split the contract between two parties, phase-1 and phase-2 work separately as it may deem appropriate. In case of splitting of the contract between two parties, the L1 bidder in each Phase will be awarded the contracts.

Detail scope of work constitutes of following three parts.

- A) Supply of Refractory Material**
- B) Application / Repair of refractory during annual overhaul of boiler**
  - It has two parts viz
  - a. Mobilization of resources &
  - b. Application / Repair work of refractory/Dry out of Refractory
- C) Application/ Repair of refractory during FSD of Unit 1 to 4**

### **A) Supply of Refractory Material:-**

**Material supplied shall conform to GIPCL data sheet specification (as per Annexure). No technical deviation is allowed other than the data sheet requirement.**

GIPCL may depute third party inspection agency/their own inspection engineer at their works. Party has to establish the quality parameter at all stage.

Party has to furnish the manufacturing quality plan to GIPCL for review and approval along with the bid.

While dispatching the material party should furnish the material test certificate with dispatch documents.

GIPCL reserves to test the material by collecting the samples randomly at site. Samples shall be tested at reputed laboratory, in case if any deviation found, party has to replace the whole material with fresh material in line with data sheet requirements.

Contractor shall depute his authorized representative at our site for the stacking of supplied material. GIPCL will give space for stacking of material.

**For Unit -1,2,3&4 the estimated quantity of refractory (Castable) supply will be- approximately 306 MT However the quantity will vary as per the site condition. "The quantity estimated will be according to past experience (The qty will be indicated at the time of work order). But after stopping the unit, if additional quantity is required, the vendor must assure the materials will**

**be delivered within one week after placing the order". However payment shall be made as per the actual quantity supplied.**

**The payment will be done as per actual execution of quantity.** Plus 25% variation is allowed with same rate, terms and conditions.

Party to furnish shelf life of material in the bid.

Party to manufacture the material very close to shut down period in close co-ordination with GIPCL in order to avoid manufacturing expiry date, due to short postponement of annual shut down.

In case material expires due to any reasons party shall supply new material without affecting shut down work.

**Party has to supply the material as per the delivery schedule given by GIPCL. Approximate quantity to be supplied for unit-1,2, unit-3&4 shall be intimated in the work order, party to supply exact quantity on receipt of confirmation through mail by GIPCL prior to shut down.**

Party to match the manufacturing and delivery period to suit the shut down period up to the maximum extent to avoid deterioration of material due to long storage period. Party to closely co-ordinate with GIPCL on this matter. GIPCL will intimate for supply of material by mail/phone before starting of shutdown work. Party to indicate minimum advance notice required for supply of material to GIPCL site.

## **B) Application / Repair of refractory during annual overhaul of boiler.**

### **➤ Mobilization of resources :-**

To carry out the refractory application/repair work party has to mobilize resources as follows.

It includes mobilization of manpower along with necessary tools & tackles. Contractor has to mobilize sufficient quantity of scaffolding materials, breaking machine (either pneumatic or electrical), vibrator, shuttering or ramming material, gunning machine, measuring flasks, mixer machine, winch machine, water pump with pipe etc. for the refractory breaking & application work. It also includes mobilization of necessary pipes, hoses, connectors, consumables etc. required for the operation of pneumatic breaker machine, gunning machine, etc. Party has to mobilize sufficient tools & tackles with a back up arrangement for breakdown of any machine.

Contractor has to arrange burners, diesel tank, skilled manpower, technician for carrying out refractory dry out after completion of refractory application/ repair work. All the necessary recorder for noting down the dry out curve is in Contractor scope. Party has to mobilize all necessary hoses, safety equipments, thermocouples, etc. required for carrying out the refractory dry out at site.

**The mobilization will be separate for all boilers.**

### **➤ Application / Repair work of refractory in boiler :-**

Application / repair of refractory work to be carried out in following different areas of boilers.

- Combustor
- Cyclones
- Start up burners
- Seal pot & seal pot slant portion
- FBHE empty chamber & bundle chambers
- Cross over duct
- Ash coolers etc

Joint inspection of refractory lining in the above areas will be carried out for identification of damaged area. As per instruction of Engineer in charge (E-I-C) dismantling and application of refractory work will be carried out by the party in identified area. Detail scope of work for refractory application/ repair is as below.

Party to prepare bar chart for execution of work and submit to owner within one day of joint inspection. Mobilize scaffolding material required for refractory work and erect the scaffolding and platform inside cyclones from bottom to top and other refractory application areas.

Dimensional drawing of Cyclone & COD at SLPP is attached here with. Party shall bring sufficient scaffolding material for two cyclone and COD to ensure safety. Party shall also keep 25% additional scaffolding material to make approach in various location of boiler.

Removal of the damaged refractory by using pneumatic / electrical breakers or manual chipping depending upon the requirement either up to shell or pressure parts area and removal of old anchors by grinding.

Care should be taken to avoid any damage to tubes or shell while removing the refractory.

Thoroughly cleaning of the shell plate by grinding/chipping -carryout inspection with EIC.

Shifting of dismantled refractory scrap to ground floor & at temporary scrap yard area marked by EIC. From temporary scrap yard scrap is to be shifted to scrap yard as per instructions of EIC within 5 to 10 Km radius within three days after completion of works. 5% of the application amount will be hold unit vise till site is not cleared.

Contractor has to shift refractory material like bricks, Castables, gunning, insulating material etc from warehouse to site.

Ensure proper surface preparation and weld the anchors with suitable welding rod at suitable distance. Cross check/inspect jointly with EIC. (Recommended welding electrodes Advani / D & H/ Oerlinkon, ESAB, L&T).

Paint the anchors with black bituminous paints.

Contractor has to submit bar chart to GIPCL & adhere to it.

Party has to shift the balance Installation of retainer plates with supporting ribs wherever necessary.

Refractory application may be brick lining, casting or gunning method. Contractor has to carry out the work by this method as per instructions of E-I/C / Drawing).

**For application of refractory brick lining method**, first lining with shell plate is of calcium silicate block of max 70 mm thick, second lining will be of insulating bricks/ castable & outermost layer will be of high alumina brick/ fire clay brick in different area as directed by E-I-C/ Drawing).

**For application of refractory by casting** first lining with shell plate is of calcium silicate block , intermediate lining will be of insulating material by gunning or by hand tapping & final layer will be of dense castable (high alumina castable refractory) layer. For castable shuttering of suitable shape is to be prepared. Application of this refractory is to be carried out as per the recommendations of the refractory manufacturer.

Quality plan for application: Refractory castable application to be done as per the quality plan attached in the annexure-B1&B2. Quantity of water to be mixed, mixing time, pouring, vibrating, curing time to be monitored for each panel application.



Ensure proper water and refractory mixing ratio jointly with EIC (ratio as per the recommendations of the refractory manufacturer).

Removal of shuttering after ensuring the settling of refractory.

Casting has to be done in alternate panels of approximately 700mmx700mmsize.

The contractor has to prepare sample pieces of refractory casting for testing and ensuring the quality of casting and is to be handed over to GIPCL. After supply of material to site, party to carryout chemical analysis& all other test as per the data sheet in the GIPCL identified laboratory at Surat /Baroda/Ahmedabad for all material. Randomly at least one test to be carried out jointly. Cost of analysis shall be in party`s scope.

**For the application of refractory by gunning/ramming** first lining with shell plate is of either calcium silicate block or insulating gun mix , intermediate lining will be of gunning insulating material & final layer is of refractory by gunning method as per the recommendations of the refractory manufacturer. The thickness must be uniform across the applied area and continuous ramming is to be done to achieve uniform setting. Care must be taken while application to minimize refractory wastage.

Application of ceramic wool/ blanket/ ceramic paper of 50 mm to 03 mm thick in different areas as directed by E-I-C / Drawing.

Carryout the refractory dry out as per the heating curve given by the refractory supplier/OEM. Before starting of Dry-out, contractor has to establish no. of burner's and diesel requirement. Party has to furnish the quality parameter such as refractory strength; sintering quality appearance etc. will be achieved after dry out procedure. Party has to record dry out temperature and all parameter during dry out and furnish the report to EIC.

Party has to arrange sufficient number of skilled & unskilled manpower for executing the job on round the clock basis for dismantling, installation & removing debris of refractory

Contractor has to submit field quality plan which they are following during refractory application. Same shall be reviewed and approved by the GIPCL. As per the approved quality plan party has to execute the work and submit the report to GIPCL.

The scope of work also includes the erection of temporary supports and lifting arrangements for refractory application works as per the site requirements. No  
Separate payment will be done on this account.

For Unit -1,2,3 &4 the estimated quantity of refractory application/ repair by castable will be approximately 306 MT (AOH & FSD)

For Unit -1, 2, 3 & 4the estimated quantity of refractory application/ repair by brick lining (insulate and dense bricks) in cyclone - 90 MT (supply of bricks are in GIPCL scope).

Party has to make joint protocol with detail report and photo album .Detail report shall indicate the areas of refractory application/repair along with sketches & material specifications. Party has to submit this detail report along with the invoice. This is mandatory; it is to be attached along with invoice for processing.

**The payment will be done as per actual execution of quantity.** Plus 25% variation is allowed with same rate, terms and conditions.

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.

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 site requirement.

### ➤ **SCOPE OF CONTRACTOR :**

Storing of supplied material at GIPCL - Party has to depute their authorized representative for storing of supplied material. GIPCL will give space for storing of material. Party has to arrange stacking of material at warehouse. Party shall furnished day to day material conciliation report.

Mobilization of manpower and other resources as mentioned in detailed scope of work. Party shall also mobilized additional manpower with in short notice if required.

Scaffolding material required for both cyclones & other area

Winch machine for lifting material from ground floor to various floor. GIPCL will not provide any lift/crane/hoist for this purpose.

All required breaker Machines (Minimum 05 to 07nos.), Welding machine (Minimum 04 to 05 nos.), lighting arrangement.

Welding rod for anchor welding.

Qualified welders for welding

All required mixer machine/guniting machine/vibrator/Brick cutting machine etc.. for completing the work (Mixture machine minimum 05 NOS & Vibrator machine with niddle – Minimum 07 to 09 NOS)

All shuttering material for casting, empty barrel for water store, Ice for to maintain water temperature, weight measurement equipments.

All dry out equipments such as fuel tank, oil pump, piping/oil hoses, burners , blowers etc. any other items required for complete dry out. In case of sub-letting the dry out work to other party, bidder has to submit the dry out party details for scrutiny and approval to GIPCL

Any other material and machines required for complete refractory application and dry out of refractory.

Separate pump with flexible pipe required for water shifting from boiler zero meter to the work place.

### ➤ **GUARANTEE PERIOD FOR PART A AND B.**

Guarantee period shall **be two year** from the date of completion of work and handing over of the system after dry out. Any defect arising during guarantee period shall be attended by party with their own material, manpower, tools& tackles free of cost.

### ➤ **TIME SCHEDULE FOR PART B**

The basic considerations and the essence of the 'Contract' shall be the strict adherence to the time schedule for performing the specified 'Works'. Contractor has to complete the each activity as per time schedule given by the E-I-C.

- **Effective date of contract: 5 July 2017.**
- **Contract period: July 2017 to June 2018.**
- **Time schedule for completion of job is as below:**
  - *For Unit-1, 2, 3, & 4 – 18 to 21 days for each unit from the date of hand over of work front from GIPCL. AOH of Unit 2 is schedule from 05.07.2017 on wards for 25 days.*

*Party shall complete refractory related work on or before 17.07.2017, hence party shall be in position to mobilise sufficient resources and tools & tackles so that work can be completed in time bound period. Moreover following material will have to be supplied at site on or before 08.07.2017.*

*LC 90 – 12 MT*

*LC 60 – 25 MT*

*LC 45 – 10 MT*

*11LIZ – 08 MT*

*The quantity may vary while execution of work.*

The work of pre shutdown is excluded from this time schedule.

The contractor has to deploy separate groups for working parallel in different area of boilers.

The basic considerations and the essence of the 'Contract' shall be the strict adherence to the time schedule for performing the specified 'Works'. The entire works (except the pre shutdown activity) as specified in scope of work shall be completed as above.

The work shall be carried out continuously round the clock with **2x12 hours shift working**. Separate gangs shall be engaged in each shift without engaging the same manpower.

In case of delay in executing the contract by contractor, 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.

The said work shall be carried out in Unit 1,2,3&4 boiler during annual overhaul planned tentatively in the month of **July - 2017 to June - 2018**.

Unit Shutdown period may be postponed or cancelled due to various reasons and GIPCL shall not give any assurance for quantity of supply and application. Payment shall be made as per actual quantity of execution.

## ➤ **MOBILISATION PERIOD FOR PART B.**

GIPCL will give 7 days' advance notice for mobilization of resources to site. Contractor shall mobilize sufficient manpower and machine with necessary tools & tackles within the time to site.

## ➤ **FACILITIES TO BE PROVIDED BY GIPCL FOR PART A & B**

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.
- d. Site office shall be provided at site.
- e. Hydra and Tractor will be provided for lifting/shifting the heavy items subject to availability and chargeable basis only.
- f. Canteen facilities shall be provided on chargeable basis as per company policy.
- g. Space for storing of supplied material.
- h. Manpower for unloading of supply material at GIPCL ware house/site

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

The contractor to provide necessary facilities including accommodation of their labour at their cost.

- (i) Items/services to be provided by GIPCL free of cost.
- Anchors
  - Ceramic blankets/ wool / ceramic paper
  - Fire clay bricks/ Insulating bricks
  - SS Fiber
  - Calcium silicate blocks
  - Fuel for dry out

The Contractor has to collect above items from GIPCL stores/warehouse and shifting arrangement has to be made by Contractor at his own cost. Contractor shall give report/reconciliation of the issue of materials drawn.

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

### **C) Detail Scope of Work for Application / Repair of Refractory during Forced Outage of boiler**

This tender is for four units (phase-1 for unit 1 & 2 and phase-2 for unit 3&4).GIPCL reserves the rights to allot all the four units' work to a single bidder or GIPCL may split the contract between two parties, phase-1 and phase-2 work separately as it may deem appropriate. In case of splitting of the contract between two parties, the L1 bidder in each Phase will be awarded the contracts.

Application / Repair of refractory during short shutdown of boiler have following two parts viz.

Detail scope of work constitutes of following two parts.

#### **➤ Application / Repair of refractory during Forced Outages of boiler**

It has two parts viz

- a. Mobilization of resources &
- b. Application / Repair work of refractory

#### **➤ Mobilization of resources for Part C :-**

To carry out refractory application / repair work party has to mobilize resources as follows.

It includes mobilisation of manpower along with necessary tools and tackles. Contractor has to mobilize sufficient quantity of breaking machine (electrical), vibrator, shuttering and ramming material, measuring flasks and mixer machine etc. for the refractory breaking and application for breakdown of any machine.

Party has to mobilize sufficient tools & tackles with a back up arrangement for breakdown of any machine.

#### **➤ Application / Repair work of refractory in boiler for Part C:-**

Application / repair of refractory work to be carried out in following different areas of boilers.

- Combustor
- Cyclones
- Start up burners
- Seal pot & seal pot slant portion
- FBHE empty chamber & bundle chambers

- Cross over duct
- Ash coolers etc

Joint inspection of refractory lining in the above areas will be carried out for identification of damaged area. As per instruction of Engineer in charge (E-I-C) dismantling and application of refractory work will be carried out by the party in identified area. Detail scope of work for refractory application/ repair is as below.

Removal of the damaged refractory by using pneumatic / electrical breakers or manual chipping depending upon the requirement either up to shell or pressure parts area.

Shifting of dismantled refractory material to ground floor and at temporary scrap yard area marked by engineer in charge (E-I-C). From temporary scrap yard, old refractory material is to be shifted to scrape yard as per instructions of engineer in charge (E-I-C) within 5 to 10 km radius within two days after completion of works. 5% of the application amount will be hold unit vise till site is not cleared .

Contractor has to shift refractory material like castables, insulating material etc from warehouse to site.

For application of refractory by casting first lining with shell plate/ water wall is insulating material by gunning or by hand tapping and final layer will be of dense castables (high alumina castable refractory) layer. For castable shuttering of suitable shape is to be prepared. Application of this refractory is to be carried out as per the best practices.(Vibro casting method, hand ramming method, gunning method, Brick lining method)

Quantity of water to be mixed, mixing time, pouring, vibrating, curing time to be monitored for each panel application. Ensure proper water and refractory mixing ratio jointly with engineer in charge (E-I-C) (Ratio as per the refractory material data sheet). Removal of shuttering after ensuring the setting of refractory. Casting panel size has to be done as per engineer in charge (E-I-C).

Care must be taken while application to minimize refractory wastage.

Application of ceramic wool/ blanket of 50mm to 03mm thick in different areas as directed by engineer in charge (E-I-C).

After completion of complete work party hast to clear the area by removing all debris, scrap from the site. Party has to shift the balance material to ware house.

Party has to make joint protocol with detail report. Detail report shall indicate the areas of refractory application/repair along with material specification. Party has to submit this detail report along with the invoice. This is mandatory. It is to be attached with invoice for processing.

**The payment will be done as per actual execution of quantity.** Plus 25% variation is allowed with same rate, terms and conditions.

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.

## ➤ **SCOPE OF CONTRACTOR FOR PART C:**

Mobilization of manpower and other resources as mentioned in detailed scope of work.

All required breaker Machines, lighting arrangement.

All required mixer machine/guniting machine/vibrator/Brick cutting machine etc. for completing the work

All shuttering material for casting, empty barrel for water store, Ice for to maintain water temperature, weight measurement equipments.

Any other material and machines required for complete refractory application.

Minimum Man power 09 to be mobilised including site incharge, mason, carpenter, helper, electrician, etc. (if manpower less than 09 persons, penalty charges of Rs. 1500 per day per person will be deducted from the current bill

02 no. Mixture machine, 02 no. Vibrator machine, 02 no. Breaker machine, to be kept at site in healthy condition up to completion of contract.

Bidder shall depute one expert qualified and experienced site in charge to co-ordinate the work and qualified supervisory engineers for site work.

## ➤ **GUARANTEE PERIOD FOR PART C:-**

Guarantee period shall **be three month** from the date of completion of work and handing over of the system after dry out. Any defect arising during guarantee period shall be attended by party with their own material, manpower, tools& tackles free of cost.

## ➤ **TIME SCHEDULE FOR PART C:-**

The basic considerations and the essence of the 'Contract' shall be the strict adherence to the time schedule for performing the specified 'Works'. Contractor has to complete the each activity as per time schedule given by the E-I-C.

- **Effective date of contract: One year from the date of award of contract.**

The work of pre shutdown is excluded from this time schedule

The contractor has to deploy separate groups for working parallel in different area of boilers

The basic considerations and the essence of the 'Contract' shall be the strict adherence to the time schedule for performing the specified 'Works'. The entire works (except the pre shutdown activity) as specified in scope of work shall be completed as above.

The work shall be carried out continuously round the clock with **2x12 hours shift working**. Separate gangs shall be engaged in each shift without engaging the same manpower.

In case of delay in executing the contract by contractor, GIPCL reserves the right to engage another contractor and complete the balance job at the risk and cost of the contractor.

## ➤ **MOBILISATION PERIOD FOR PART C:-**

GIPCL will give 16 hours advance notice for mobilization of resources to site. Contractor shall mobilize sufficient manpower and machine with necessary tools & tackles within the time to site.

Breaker man mobilisation time – within 16 hrs. from the intimation time

➤ **TIME SCHEDULE FOR COMPETION OF JOB FOR PART C:-**

**For Unit-1, 2, 3 and 4:** 48 hrs for up to 2 MT for each unit from the date of handover the work front from GIPCL. The date of shutdown is excluded from this 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'. The entire works (except the pre shutdown activity) as specified in scope of work shall be completed as above.

The work shall be carried out continuously round the clock with 2x12 hours shift working. Separate gangs shall be engaged in each shift without engaging the same manpower. In case of delay in executing the contract by contractor, 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.

➤ **FACILITIES TO BE PROVIDED BY GIPCL FOR PART C:-**

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

Electricity & water at nearest available one point. Further distribution to be done by contractor at their cost.

Quarter(s) for supervisor/ engineers on chargeable basis in GIPCL's township at discretion of GIPCL if available.

Workshop facility as available at site only.

Site office shall be provided at site.

Hydra and Tractor will be provided for lifting/shifting the heavy items subject to availability and chargeable basis only.

Canteen facilities shall be provided on chargeable basis as per company policy.

Space for storing of material.

Anchor welding and scaffolding erection.

Refractory material for Application

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

The contractor shall provide necessary facilities including accommodation of their labour at their cost.

- (ii) Items/services to be provided by GIPCL free of cost.
  - Anchors
  - Ceramic blankets/ wool / ceramic paper
  - Fire clay bricks/ Insulating bricks
  - SS Fiber
  - Calcium silicate blocks
  - Refractory Materials

The Contractor has to collect above items from GIPCL stores/warehouse and shifting arrangement has to be made by Contractor at his own cost. Contractor shall give report/reconciliation of the issue of materials drawn.

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

#### **4. PLANT VISIT**

The Bidder is advised to visit the Surat Lignite Power Plant (SLPP) after downloading the tender copy from website: <http://etender.gipcl.com/> 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 required for the satisfactory completion of work, the quantity of various items of the work, the availability of local labour, availability and rates of material, local working conditions, uncertainties of weather, obstructions and hindrances that may arise, etc which may affect the work or cost thereof, before submission of his Bid. Ignorance of site conditions shall not be accepted by the GIPCL as basis for any claim for compensation. The submission of a Bid by the BIDDER will be construed as evidence that such an examination was made. Any later claims / disputes in regard to rates quoted shall not be entertained or considered by the GIPCL.

The rates quoted by Bidder shall be based on his own knowledge and judgment of the conditions and hazards involved and shall not be based on any representations of the Engineer.



## 5. ELIGIBILITY CRITERIA

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

1. **Bidder should possess minimum three years of experience during last five year in Supply and application of Refractory material on the basis of AOH/ARC/Project contract of 110 MW and above capacity CFBC for lignite or coal fired units. Proof to be attached.**
2. Bidder should produce evidence of having experience of successfully completed identical works as defined hereunder during last **five years** ending last day of the month previous to the one in which tender is invited, satisfactory progress of ongoing works etc. along with certified copies of documentary evidence preferably photo copies of work experience from the clients.

The experience should be either of the following:

Bidder should have executed minimum (for Supply and application both)

- A. **One** similar completed work each costing not less than the amount equal to **70 Lakh**  
OR
- B. **Two** similar completed work each costing not less than the amount equal to **52 Lakh**  
OR
- C. **Three** similar completed work each costing not less than the amount equal to **44 Lakh**

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

3. Contractor has to submit satisfactory work completion certificate from the client. Experience as a sub contractor will not be allowed and Price Bid of such Bidders will be rejected.
4. Bidder should have annual turnover of i.e. **400 Lakh** for last three financial years i.e. 2013-14, 2014-15 & 2015-16.)
5. The net worth of the bidder as on 31.03.2016 should be positive as evidenced from audited accounts.
6. Bidder shall furnish annual audited financial statement duly certified by Chartered Accountant for the last three years to demonstrate the financial healthiness of the company. The balance Sheet must be in the name of the company. Any type of MOU for this purpose will not be entertained.
7. In case of those Bidders, who are having only manufacturing back ground or application back ground of refractory at least for last three years, they should have joint venture arrangement with applicator in case of manufacturer visa versa. Joint venture arrangement shall be furnished on stamp paper of Rs. 100
8. Sub letting of work is subject to approval of GIPCL. In case of subletting the contract, contractor should furnish minimum four resourceful vendor list for approval
9. Bidder should give guarantee for their material quality and application quality jointly in line with tender document conditions.
10. Bidder should be capable to supply refractory as per the technical data sheet Annexure. Submit the Annexure- duly filled with signature and sign with supporting documents, indicating manufacturer name and address.
11. Bidder shall enclose P. F. code allotment letter along with labour licenses and W.C. Policy copies of previous orders.
12. The bidder has to submit PAN Card copy of the firm/Company.

13. Bidder has to submit copy of service tax registration number.—Copy of same should be submitted.
14. Bidder has to submit VAT registration number / CST TIN
15. After opening of technical Bid, if any required attested documents found missing in the Technical Bid submitted by the Bidder, the tender inviting authority may inform to that Bidder 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.
16. Tender fee: The tender fee shall be accompanied in form of Demand Draft.
17. EMD: To pay EMD in the form of DD or Bank Guarantee given by Bank as described in subsequent clause no. 7.
18. 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.

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

## **6. LANGUAGE OF BID**

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

## **7. EARNEST MONEY DEPOSIT**

### **EARNEST MONEY DEPOSIT (EMD) and TENDER FEE**

An EMD of Rs. 177000/- (Rupees One Lac Seventy Seven Thousand only) and Non refundable Tender fee Rs. 2,000/- (Rupees Two Thousand only) shall accompany with Bid. The EMD & Tender fee shall be in the form of a crossed bank Demand Draft in favour of Gujarat Industries Power Co. Ltd. as per following details:

<b>Bank</b>	<b>Payable at :</b>
1. Bank of Baroda	Mosali, Dist: Surat
2. State Bank of India	Nani Naroli, Branch Code: 13423
3. Any Nationalized banks	Surat

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 Kalupur 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 with this e-tender under Section-F.

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

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

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.

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 6.9.

No interest shall be payable on EMD.

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.

## SCHEDULE OF EMD & TENDER FEES

EMD & Tender fee and other documents to be submitted in physical form <b>within three working days</b> after due date of closing of the tender	Address for Submission:  <b>AGM - SLPP GUJARAT INDUSTRIES POWER CO. LTD., (Surat Lignite Power Plant) Village – Nani Naroli, Taluka – Mangrol District – Surat 394 110, Gujarat Phone : 02629-261063 (10 lines) Fax : (02629) 261073 / 261074</b>
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## 8. SUBMISSION OF BID

### A: MODE OF SUBMISSION

(i) The bids shall be submitted online at the GIPCL e-portal within the dates specified in the NIT along with the details of tender fees, Bid in two parts as under:

- (a) Pre Qualification bid and Techno-commercial bid without price
- (b) Price bid

**Note: Tender fee and EMD to be submitted in physical form within three working days after due date of closing of the tender.**

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

#### (a) Pre Qualification bid without price

The following documents shall also be submitted dully signed and stamp

- I. Proof of experience meeting the minimum eligibility criteria as per Annexure I. (Supporting documents to be must attached)
- II. Performance certificate issued by clients
- III. Previous work order copies.
- IV. Present ongoing work details.

#### (b) Techno-commercial bid without price

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

The following documents shall also be submitted dully signed and stamp:

- I. Qualification and experience of site in charge, site Engineers and supervisors.
- II. Schedule of deviation (Annexure- J) Technical as well as commercial, if any.
- III. Material Specification –Data sheet Annexure- A1, It should be filled against all parameters-Mandatory
- IV. Field quality plan -To be followed at site-mandatory annexure-B1 &B2- Witness and submit for acceptance.
- V. Tender Fee and EMD as per clause

- VI. P.F Number and Allotment Letter
- VII. Labour Licence and W.C. policy copies of previous order.
- VIII. PAN Number.
- IX. Annexure-I duly filled in.
- X. Service tax registration number/certificate copy.
- XI. VAT / CST registration

**(b) Price Bid**

Price bid shall be submitted only in soft form through GIPCL e- portal.  
The bidder shall submit the following annexure duly filled

- F1 : Price Schedule for supply of refractory Material
- F2 : Price schedule for application/ repair work
- F3 : - Price schedule for application / repair during FSD

1. Price Bid shall be submitted only in soft form through <https://gipcl.nprocure.com>  
**Note: Estimated rates includes cost of all manpower, equipments, vehicles, consumables, tools & tackles, transportation, Safety and statutory compliance, mobilization, Contingency expenditure and supervision charges etc.....**
2. All taxes as applicable shall be paid extra at actual as per prevailing rates as declared by Central Government on submission of documentary evidence.
3. Bidder shall have to quote the rates in the form of %age. i.e. "At Estimated Value. \_\_\_Y\_\_\_%age below the estimated value OR \_\_\_X\_\_\_%age above the estimated value."
4. The quantities shown in the price Bid are approximate for the contract period and may vary as per job requirement.
5. The Bidder shall fill the Bid documents with utmost care in consonance with the instructions contained in the Bid documents.

**9. POINTS TO BE CONSIDERED DURING QUOTING ONLINE PRICE BID**

The schedule of rates shall be read in conjunction with Instructions to Bidders, General conditions of contract, Special conditions of contract and Technical specifications.

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.

The method of measurement of completed work for payment shall be in accordance with actual measurement.

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

**METHOD OF TENDERING/SIGNATURE OF BIDS**

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.

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 authorised partners or other authorised representative(s). A certified copy of the power of attorney authorizing such partner or representative shall also be submitted.

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 authorised to Bid on behalf of such Corporation/Company. A certified copy of the board resolution/power of attorney authorizing such partner or representative shall also be submitted.

The Bidder's name stated on the proposal shall be the exact legal name of the firm. Erasures or other changes in the Bid Documents shall be initialed by the person signing the Bid.

Bids not conforming to the above requirements of signing shall be disqualified.

## **10. SCHEDULE OF DEVIATIONS**

Whenever bidder deviates from the specifications the same shall be listed out in the "Schedule of Deviation" attached as **ANNEXURE-J** to these specifications. Only those deviations, which are listed in this Annexure, shall be considered. Deviations indicated elsewhere will be rejected.

## **11. MODIFICATION & WITHDRAWAL OF BID**

The Bidder may modify or withdraw the bid prior to the deadline prescribed for submission of bids.

No Bid shall be modified subsequent to the deadline for submission of Bids.

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**

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.

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 & VALIDITY OF BID**

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.

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**

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.

### **Preliminary Examination:**

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.

#### **Arithmetical errors will be rectified on the following basis:**

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

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**

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.

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.

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.

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.

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.

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.

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**

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.

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.

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**

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.

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**

The contract will be for a period of 1 years from the date of actual commencement of operation of the contract as stated in the Work Order ('**Contract Period**').

The said Contract Period can be extended if mutually agreed upon by both the parties up to one year and in such a case a fresh contract shall be executed on the same or revised terms.

GIPCL reserves the right to extend the Contract Period for upto 3 months on the same terms and conditions without entering into any new contract.

## **19. QUANTITIES**

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

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

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

## **20. CONTRACTOR'S OBLIGATIONS**

### **A: DEPLOYMENT & RESPONSIBILITY OF MANPOWER**

The Contractor shall deploy suitably qualified and sufficient manpower for timely & satisfactory execution of the works under the contract.

The Contractor shall deploy sufficient skilled, Semi-skilled and Un-skilled manpower like technician, helper, rigger, welders, cutter, electrician, Carpenter, Mason store keeper etc. for properly complete the job in given/scheduled time.

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

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

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

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

Contractor shall nominate /authorise 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 at SLPP site. Contractor has to submit the authority letter and documentary proof for the same.

The Contractor shall appoint a supervisor who shall co-ordinate with GIPCL's Engineer In - Charge for daily maintenance job. They have to maintain daily job register 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.

During execution of the works, one or more jobs may be required to be done simultaneously and the Contractor shall mobilise additional resources accordingly.

During emergency or similar situations the Contractor shall be required to mobilise resources as per need within the period of 24 hours as directed by GIPCL. If the contractor fails to mobilise 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.

During working in high risk area like hot lines of steam/ water/ oil / height 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.



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 refractory work increases substantially). For this, enhanced work shall be completed by deploying additional manpower with separate supervisor. Payment will be made on job rate basis only. The work during the overhauling period is to be carried out round the clock. Contractor should mobilise sufficient number of manpower and execute the work in two shifts with independent manpower. Contractor should not continue the same manpower more than 12 hours.

## **B: TOOLS & TACKLES**

All tools and tackles to execute the contract are in the scope of the contractor. The contractor should ensure that tools are in healthy condition. All consumable items i.e. cloth, cotton waste, kerosene oil, gases (Oxygen, D/A, Argon), welding machine, scaffolding materials, lifting tools, winch machine, grinding machine, mixture machine, vibrator machine, brick cutting machine, ply wood, ply wood and wood cutting machine welding electrode, bituminous paint, wire brushes, Water pump with flexible pipes, etc. would be in the scope of the contractor.

Note: the welding electrode should be approved make i.e. Advani, Oerlikon, ESAB, D&H, L&T.

Provision of scaffolding material for maintenance work will be in the scope of the contractor. The scaffolding shall be with pipe and clamps, metallic jallies.

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

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, 240 Volt and sufficient quantity of halogen lamp.

Electrician/supervisor should ensure that the cable connection is not in loose condition, which may cause any damage or failure to the machine/manpower. Pin sockets of IS standards should be used for all connections.

The Contractor must ensure that all the generated scrap, cotton waste, waste oil, tools and tackles are removed from the site immediately and he must ensure cleaning of the site. Further, these items should be disposed off to the scrap yard or any other designated place as instructed by Engineer In Charge. In case of heavy weight items, if required transportation may be arranged by the GIPCL at the discretion of the engineer in charge on chargeable basis. If the scrap removal is not done within the stipulated time given by GIPCL Engineer, the scrap will be removed by GIPCL at the Contractor's cost with penalty and it will be deducted in the bill.

Insulation scrape materials like refractory Castable, bricks, anchor etc. should be collected in separately with proper care and then disposed at a suitable location as per the instruction of engineer in charge.

It is the responsibility of site incharge to segregate and remove the scrap from site. Work will be certified by E-I/C only after removal of scrap to the scrap yard.

If any equipment or part are found damaged due to negligence / fault of contractor, the cost of such damages shall be recovered from the contractor bill.

Contractor shall nominate / authorize a person in writing as Site in charge to coordinate with GIPCL engineer and should bear overall responsibility of contract. Such person shall function from site office of contractor at SLPP. Adequate Supervisory staff for execution of said work should be deployed round the clock.

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.

Inspection of work will be done by engineer in charge or his authorized representative, if the work is not found satisfactory, engineers in charge reserves the right to take suitable action.

The contractor has to do quality job. GIPCL shall not compromise in quality. Incase of poor quality of work the contractor may be asked to rework the job.

## **21. TERMS OF PAYMENT**

### **Conditions of Payment:**

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

#### **A) FOR SUPPLY OF REFRACTORY MATERIAL**

- 80 % payment within 21 days from the date of receipt of material & invoice along with test certificate of material on pro rata basis.
- Balance 20% will be released within 30 days after completion of application work in each unit. Payment shall be made unit wise.

#### **B) FOR APPLICATION/REPAIR OF REFRACTORY**

The contractor shall raise the invoice in duplicate after completion of job and the payment of the same shall be made within 21 days thereafter as per the following terms of payment

- (i) 100% payment against the work executed duly certified by GIPCL E-I-C and on submission of joint protocol with drawing / photo album in soft & hard copy indicating the details of repaired portion on drawing and with quantity of applied material and material reconciliation report. Payment shall be made unit wise.

Service tax shall be paid along with bills after fulfilment of following terms.

- (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 its registration certificate is cancelled or discontinued for whatsoever reason.

- (i) 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.
- (ii) 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.

At the time of return of the Security Deposit, the Contractor shall submit an indemnity bond acknowledging the receipt of all the due amounts and indemnifying GIPCL from and against all claims in that regard.

**A. Validity and Uniformity of Rates**

The rates shall be valid for a period of **one years** or the Contract Period and shall remain unaltered during the entire Contract Period.

Item rates quoted, shall include cost of all consumables,( except free issue materials by GIPCL) labour, supervision, tools & tackles, transport and any such other costs excluding statutory taxes as are not specifically mentioned herein, but may be incurred by the contractor for the satisfactory and timely completion of the work.

**B. Deductions from Contract Price**

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

## **SECTION-B**

### **INSTRUCTIONS TO BIDDERS FOR ONLINE TENDERING**

Bidders who wish to participate in this tender will have to procure or should have legally valid Digital Certificate (Class III) as per Information Technology Act-2000, using which they can sign their electronic bids. Bidders can procure the same from any of the license certifying Authority of India or can contact (n)code solutions-a division of GNFC Limited, who are licensed Certifying Authority by Government of India at address mentioned below Bidder may go through the e-tendering instruction for online Bid participation through n-procure platform for further details and guidance for participation in the tendering process through e-tendering. In case of any queries related to e-tendering system, Bidder may write/contact at following details:

**(n) Code Solutions – A division of GNFC Ltd.**

**301, GNFC Info tower, Bodakdev,**

**Ahmedabad – 380 054 (India)**

**Tel: +91 79 26857316 / 17 / 18**

**Fax:+91 79 26857321**

**E-mail: nprocure@gnvfc.net**

**www.nprocure.com**

**Toll Free: 1800-233-1010(Ext. 501,512,517)**

Bidder may visit <https://www.nprocure.com/html/faq.asp> for information regarding e-tendering registration process

## SECTION-C

# GENERAL CONDITIONS OF CONTRACT

### **1. CONTRACT SECURITY DEPOSIT/ PERFORMANCE BANK GUARANTEE**

As a Contract Security, the successful Bidder, to whom the work is awarded, shall be required to furnish a Performance Bank Guarantee (PBG)/Contract security deposit in favour of Gujarat Industries Power Company Limited for guarantee amount at ten percent **(10%)** of the "Annual Contract Price" 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 **Annexure - H**, 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 guarantee Period (Guarantee Period 02 years + Retention Period 03 Months). The Guarantee amount shall be payable to the Company in Bidder's home currency without any condition whatsoever.

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**

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

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.

### **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 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**

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.

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.

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 any dispute with regard to the interpretation of any of the provisions of this document or to the due performance in accordance with the contract terms, the decision of AGM (SLPP), GIPCL will be final and binding.

## **9. EMPLOYEE'S COMPENSATION INSURANCE**

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

Contractor shall also obtain additional off-duty coverage insurance policy for all his workers as per clause no. 23 herein under.

## **10. STATUTORY REQUIREMENTS**

The contractor shall be solely responsible for any accident caused to his workers and should adhere to all rules / regulations as per labour laws of Government and other statutory laws as applicable.

The contractor should register himself under the Contract Labour 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 Labour 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.

Contractor shall have to insure his workmen /supervisors etc. under Group Insurance scheme.

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 Labour Laws Act in respect of employees engaged by him for the work and shall have to maintain necessary records. In case any amount becomes due to be payable by him to his employees or to the Government under the above rules, regulation, Acts, GIPCL reserves the right to recover the same from the running bill of the contract.

Documentary evidence of deposit of PF paid shall have to be produced by the contractor along with the next bill.

Records as per the provisions of various statutory Acts will have to be maintained by the contractor and submitted as and when required.

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.

## **11. COMPLIANCE OF LABOUR LAWS**

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.

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, Employee 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.

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

- 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.
- The contractor shall have a valid license obtained from Licensing Authority under the Contract Labor (Regulation & Abolition) Act-1970 at the time of execution of the contract covering all his employees working at SLPP site and furnish the same failing which GIPCL may terminate the contract at its sole discretion.
- The Contractor shall at the time of execution of the contract have a EPF Code Number obtained from the Authorities concerned under the Employees Provident & Miscellaneous Provisions Act, 1972 and remit contributions in respect of the employees employed by him at SLPP Site to the P.F office concerned every month failing which GIPCL will recover from the outstanding payment to the contractor from GIPCL.PF code of Gujarat region should be taken.
- 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.
- 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.
- The Contractor shall not pay less than the Minimum Wages notified by the Government from time to time to his employees of corresponding categories.
- 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.
- The contractor shall take Employee Compensation Insurance Policy for all his employees working at SLPP. The contractor shall indemnify the company against any liability due to any work injury or accident to any of its employees.
- 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 Employee Compensation Act, 1923.
- 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.

- The Contractor shall not engage / employ persons below the age of 18 years. Employment of women shall be strictly according to applicable laws.
- 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 Employee 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.
- 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 challan along with ECR copy on monthly basis to HR&A dept. for verification and record.
- 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.
- The contractor shall conduct pre-induction and periodic medical checkup of his workmen as per applicable laws.

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.

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.

Contractor shall have to insure his workmen /supervisors etc. under Group Insurance scheme.

The Contractor shall be responsible for compliance of all statutory rules, regulation, act enforced from time framed by the government such as Factory Act, Employee Compensation Act, payment of 'Wages Act', Minimum Wages Act', Provident Fund Act, All Labor Laws Act in respect of employees engaged by him for the work and shall have to maintain necessary records. In case any amount becomes due to be payable by him to his employees or to the Government under the above rules, regulation, Acts, GIPCL reserves the right to recover the same from the running bill of the contract.

Documentary evidence of deposit of PF paid shall have to be produced by the contractor along with the next bill.

Records as per the provisions of various statutory Acts will have to be maintained by the contractor and submitted as and when required.

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.



## **12. LEGAL ASPECTS**

Contractor shall maintain all register required under the Labour Laws & any other applicable laws and make the payment as per the Minimum Wages Act to the workers employed by him.

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.

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.

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.

Contractor shall abide by all the statutory rules and regulations like P.F, Labour Laws etc.

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.

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.

Contractor shall indemnify GIPCL from any liabilities arising out of the employment of the manpower.

## **13. 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.

## **14. 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.

## **15. LIGHTING**

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

Electrician/supervisor should ensure that the cable connection is not in loose condition, which may cause any damage or failure to the machine/manpower. 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.

## **16. 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.

## **17. 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.

## **18. GENERAL SAFETY CLAUSES :**

1. The Contractor shall observe and comply, with regard to his workmen working at the SLPP site, the safety norms as per the safety operating standards.
2. The Contractor shall ensure that his workmen are informed and trained regarding the safety standards to be adopted while operating within the SLPP Plant & Mines premises and the Contractor shall brief them regarding the same and use of the Personal Protective Equipment ('PPE').
3. The Contractor shall issue safety shoes and safety helmet of IS standard to all his workmen immediately on execution of the work and the contractor shall ensure that his workmen wears the protective equipments at all times during the work operation. Brand name for safety shoe & safety helmet shall be suggested by safety representative of SLPP site.
4. Other safety gears like ear plug, dust mask, hand gloves, safety goggles, gum boots, full body safety uniform and belts, safety net etc. shall be issued and used as per the job requirements. Safety helmet shall be of YELLOW COLOUR ONLY. Contractor will procure safety shoes & safety helmet from a reputed company with at least 12 months' guarantee and shall produce the guarantee certificate and IS standard certificate to the safety department. Contractor should purchase safety shoes of reputed brands. Safety shoes will be issued every year. IS certificate and guarantee certificate must be obtained from the vendor and submitted to the Safety department. Safety shoes should be heat, water, oil and chemical resistant, having an anti-slippery sole of 15298- 2002 make.
5. It is the duty of contractor to ensure that his workmen are wearing required PPEs as per work requirement. Contractor should ensure that their workers are wearing Safety helmet, safety shoes, dust mask, goggles, ear plug etc. at all times when they are at work throughout the

- contract period. The contractor has to maintain the PPE issue register with signature of workmen.
6. Contractor will reissue these PPEs in case of damage or misplacement of the same. Replacement shall be made immediately.
  7. The contractor shall be responsible for providing first aid or emergency medical help and treatment to his workmen in the event of any accident or injury.
  8. If it is observed that contractor is not issuing required PPEs timely and that of required quality, GIPCL will issue the required PPEs to contract workers and back charge the same with 25% overhead charges of GIPCL.
  9. All lifting tools and tackles shall be duly certified by competent person in conformity with the statutory requirements and certificate in form no. 10 as per rule 60 of Gujarat Factories Rules, 1963 and section 29 of the Factories Act, 1948 shall be submitted every year before using such tools and tackles. In case of purchase of new lifting tools and tackles, form no. 10 as per the said rules shall be submitted before they are taken into use. All lifting tools and tackles shall be of reputed make having International manufacturing standard and shall be maintained in proper and workable condition.
  10. The Contractor shall nominate one Safety Officer with required qualification for supervising the daily job/ shutdown jobs for observing and maintaining the safety aspects at site. He is solely responsible for any safety measures during maintenance work. He has to ensure that all the workmen working at site are equipped with essential PPE's and proper safety arrangement is made at the SLPP site.
  11. After mobilization of any tools & tackles to site, which includes chain pulley blocks, D-shackles, wire ropes, winch machines, Mobile crane, Hydra etc. shall be offered for inspection with all above statutory test certificate before using at site for any work. They should use all tools and tackles only after certification by GIPCL representative/safety officer.
  12. When working at height, working on ceiling or roof covered with fragile materials, full body harness safety belt, ladders and crawling boards shall be used to prevent accident. Further, during working on height, contractor should arrange proper scaffolding of still pipes, safety net, full body safety belt, fall arrestor system etc. Advice and instructions of engineer in charge/ safety in charge shall be strictly complied with in this regard. All necessary safety precautions shall be taken by the contractor to prevent accident and personnel injuries while working on height.
  13. Flash back arrestors made of reputed manufacturer shall be provided on cutting torch, on DA cylinders and on O2 cylinder. Cylinder caps also required for handling the cylinders at the work at height area. Gas cylinders shall be transferred through gas cylinder trolley only with cylinder cap and stored up right (vertical) position only. All gas cylinders shall be hydro tested / certified as per gas cylinder rules 2004. Gas cylinders shall be stored, handled as per gas cylinder rules 2004.
  14. All vehicles shall be operated by licensed drivers only. All vehicles' PUC to be tested as per Government approved RTO guidelines. All Vehicles must be parked in Parking space designated by GIPCL. If any vehicle is found inside the plant premises other than the parking area such vehicles shall be handed over to Security dept. and their entry shall be cancelled for movement inside the plant premises with immediate effect.
  15. All electrical equipment shall be in good condition and free from any defect. Electrical tools & equipments i.e. welding machine, grinding and drill machine etc. may be checked by the electrical engineer of the contractors regularly, every six month at least and report to be submitted to concerned HOD and safety depts.
  16. During hot work, contractor will use fire curtains like asbestos sheets or fire blankets to prevent falling and spreading of sparks and hot material on and around the work area. Contractor will procure and use such items. ELCB / RCCB shall be provided with rating of 9-30 milli ampere on welding machine and all portable power tools.
  17. The contractor shall fill – up Incident notification form (S-I), Incident Investigation form (S-II) and near miss report within time limit as specified in forms, if any accident, Incident, near miss occurred while working at SLPP site.
  18. Major AMC / ARC contractor (Where the man power strength is more than 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 coordination with safety officer of SLPP and attend all safety related meeting such as safety committee, on job safety training etc. Where the contractual man power is less than 50, the site 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:

Category	Classification	Examples / Cases	Penalty
A	PPEs Related	Working without helmet, shoes, safety belt, gloves etc.	Rs. 100 /- per instant.
B	WI Related	<p>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.</p> <p>Unsafe working practices at height more than 3 meters</p> <p>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..</p>	<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-SLPP.</li> </ul>
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>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.**

## **19. 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.

## **20. GENERAL TERMS AND CONDITIONS:**

1. 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.
2. 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.
3. If the work is not found satisfactory, Engineer-in-charge reserves the right to take suitable action.
4. Contractor shall depute Location/Package wise full time independent experienced site-in-charge, 03 ENGI (02 day + 01 night), 03 Foreman (02 day + 01 Night), 01 Store keeper, 02 QC Engi (01 day + 01 Night). 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.
5. 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.
6. Contractor shall strictly follow the existing work permit system of the GIPCL and any future revisions.
7. 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.
8. 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.
9. The scope against each activity mention in Part A, B, & C also cover receipt / transfer spare material from ware house, renewal of PTW on daily basis against work , removal of any scrap generated out of work executed as per instruction and procedure suggested by engineer incharge.

10. 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.
11. 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.
12. One or more jobs may be required to be done simultaneously and contractor shall mobilize additional resources accordingly.
13. 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.
14. 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.
15. The contractor has to submit daily reports showing work carried out with details of available manpower, resources etc.
16. The Bidder shall provide details of registration along with copy of the registration certificate issued by the District Industries Centre/Department of Industries, etc of the respective State Government. It is to be noted that large scale industries and trading firms have been excluded from the purview of the Act.
17. 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.

## **21. 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.

## **22. CONTRACTOR TO REMOVE ALL OFFENSIVE MATTER IMMEDIATELY AND CLEAN-UP.**

All loose materials, wastage, packing materials, cut pieces or other matter of an offensive nature shall not be deposited on the surface, but shall at once be carted away by the CONTRACTOR to some pit or place provided by him away from the site of work and approved by local authorities.

As a part of the work included in this contract, the CONTRACTOR shall completely remove and satisfactorily dispose of all temporary works to the extent directed. He shall tear down and dispose of all temporary works, shall remove or grade, to the extent directed, all plant and equipment, shall satisfactorily dispose off all rubbish resulting from the operations under this contract and shall do all work necessary to restore the territory embraced within the site of his operations to at least as good order and conditions as at the beginning of the work under this contract.

## **23. 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 site for the accident taking place anywhere outside the Company premises or at any place when the workman is not in course of his employment.

## **24. WORK MEASUREMENT/CERTIFICATION**

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.

Contractor should maintain one computer with printer for keeping daily records and maintain the data.

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.

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.

## **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. 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.

## **27. PENALTY AND RECOVERY**

- In the event of undue delay in performance or the performance is unsatisfactory causing damage to the plant and property of GIPCL, then in such a case, GIPCL (Engineer-In-Charge) shall be entitled to levy a penalty on the Contractor at the rate of 1.5 times of the item rate upto a maximum of 10% of the total contract value. The said penalty amount may be recovered either from the monthly bills or the SD.
- However, the total amount of penalty recoverable from the Contractor shall be restricted to 10% of the contract value.
- In addition to and without prejudice to the above, GIPCL shall also have the right to get the affected work completed by a third party or agency at the risk and cost of the Contractor alongwith 15% supervision charges and the Contractor shall be liable for payment of any differential amount in the contract price.
- Any damage caused to the equipment or machinery on account of the negligence on the part of the Contractor or due to any other reasons attributable to the Contractor, shall be recovered by the Owner/GIPCL from the Contractor.
- The ascertainment of the cause of the damage shall be done by the AGM (SLPP) and his decision in this regard shall be final & binding to the contractor.
- The decision of the Engineer-In-Charge as regard the amount of damages to be recovered from the Contractor shall be final.
- The aforesaid amounts of penalty and damages shall be recoverable from the monthly bills of the Contractor or the SD. If the amount of damages recoverable from the Contractor exceeds the bills and SD amount, then the Contractor shall become liable to pay the same to GIPCL and GIPCL shall be entitled to initiate appropriate proceedings against the Contractor for the same.

## **28. TERMINATION**

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

- Contractor is adjudged as insolvent.
- Contractor has abandoned the contract i.e. the Contractor fails to perform the obligations under the contract for a period of One month.
- Contractor fails to proceed with the work with due diligence as per requirements of the contract.
- Any of the licenses, permissions or registrations of the Contractor as required under the applicable laws are discontinued/ cancelled or not renewed in time.
- Contractor has neglected or failed persistently to observe or perform his obligations under the contract or performs unsatisfactorily
- The Contractor is found to have acted in breach or violation of any of the safety norms persistently, applicable labour and other laws in relation to the contract and his obligations therein. The Contractor commits a breach of the contractual terms and conditions.



GIPCL shall give the Contractor a 15 days' notice period to rectify the breach, failing which the contract shall stand terminated on the last date of the notice period without requiring any further notice from GIPCL in that behalf.

Upon such termination

, the outstanding dues of the Contractor shall be settled subject to the amounts recoverable by GIPCL under the contract from the Contractor.

The SD shall be retained till completion of the defect liability period.

## **29. 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.

## **30. 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.

**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.**





## ANNEXURE – F1

### Price Schedule for SUPPLY(to be read along with table on page no. 47)

<b>PART A</b>				
	Description of Material (A)	Unit Rate in Rs . excluding Tax	Total quantity in MT	Total rate in Rs.
1	LC-45 castable	17000	38MT	646000.00
2	Insulyte 11 Liz	17000	47MT	799000.00
3	LC 90	33000	66MT	2178000.00
4	LC 60	19000	155MT	2945000.00
5	Total (Sr No 1 to 4 of Part A)			6568000.00
6	SOR service charge / profit ( To be quote by bidder on ) [+X % above Total Sr. No. 5 ]	<b>(NEED TO BE QUOTED ONLINE ONLY)</b>		
Or		OR		
6	SOR service charge / profit ( To be quote by bidder on ) [Y % below Total Sr. No. 5 ]	<b>(NEED TO BE QUOTED ONLINE ONLY)</b>		
Or		OR		
6	SOR service charge / profit ( To be quote by bidder on ) [Equal to Total Sr. No. 5 ]	<b>(NEED TO BE QUOTED ONLINE ONLY)</b>		
or				
7	Net Cost Part A: Sr. No. 5 +/- Sr. No. 6 [+X % or -Y% or 0%-Equal]			
8	Central Excise Duty (12.50%) on Sr. No. 7	<b>(NEED TO BE QUOTED ONLINE ONLY)</b>		
9	Total of Sr No. 7 + Sr No. 8			
10	CST/VAT/OTHER on Sr. No. 9	<b>(NEED TO BE QUOTED ONLINE ONLY)</b>		
11	Total Sr. No. 9 + Sr. No. 10			
12	Freight Charge on per MT <b>(NEED TO BE QUOTED ONLINE ONLY)</b>	2900 (FOR ESTIMATION ONLY)	306MT	887400.00
13	Total Sr. No. 11 + Sr. No. 12			

**Note:**

- Material should be supplied as per the specification attached in Annexure A
- TEST certificates required for each batch item.
- Prices shall be firm and valid for one year. Supply price should be FOR at site inclusive of freight and insurance. Excise Invoice should be submitted for payment.
- Taxes and duties if any shall be indicated separately as above.
- Plus 25% variation is allowed with same rate, terms and conditions.
- Bid validity shall be kept for 180 days from the date of offer.

COMPANY SEAL

SIGNATURE .....

NAME .....

DESIGNATION .....

COMPANY .....

DATE .....

## ANNEXURE – F2

**Price Schedule (to be read along with table on page no. 47)**

### Application/Repair of Refractory

#### **PART B**

S.N	Description	Unit Rate in Rs . excluding Tax	Total quantity	Total rate in Rs.
1	Lump sum price for mobilization of resources.	270000	04 Nos.	1080000.00
2	Price for Refractory removal and application works as per MT rate basis. (Casting)	13500	274 MT	3699000.00
3	Price for Cyclone/COD Brick removal and application works as per MT rate basis.	10000	90 MT	900000.00
4	Application of hysil block per square meter	0	450 Sq.Meter	0.0
5	Application of ceramic wool per square meter	0	200 Sq.Meter	0.0
6	Lump sum price for Refractory dry out	350000	04 Nos.	1400000.00
7	Total (Sr No 1 to 6 of Part B)			7079000.00
8	SOR service charge / profit ( To be quote by bidder on ) [+X % above Total Sr. No. 7 ]	<b>(NEED TO BE QUOTED ONLINE ONLY)</b>		
Or		<b>OR</b>		
8	SOR service charge / profit ( To be quote by bidder on ) [Y % below Total Sr. No. 7 ]	<b>(NEED TO BE QUOTED ONLINE ONLY)</b>		
Or		<b>OR</b>		
8	SOR service charge / profit ( To be quote by bidder on ) [Equal to Total Sr. No. 7 ]	<b>(NEED TO BE QUOTED ONLINE ONLY)</b>		
9	Net Cost Part B: Sr. No. 7 +/- Sr. No. 8 [+X % or -Y% or 0%-Equal]			
10	Service tax @ 15% on Sr. No. 9	<b>(NEED TO BE QUOTED ONLINE ONLY)</b>		
11	Final Cost for Part B (Sr. No. 9 + 10)			

- Price & rates quoted above shall include cost of all consumables (except free issue materials by GIPCL) labor, supervision, tools and tackles, transport etc. and such other cost are not specifically mentioned herein but will be incurred by the contractor for the satisfactory and timely completion of the work.
- For Sr. No. 1 & 6 the payment shall be made on lump sum basis.
- For Sr. No. 2, 3, 4, 5 payment shall be made as per actual execution of work.
- Plus 25% variation is allowed with same rate, terms and conditions.
- Contractor has to arrange lodging & boarding facilities to their supervisors, technician & labors on their own. GIPCL will not provide above facility.

COMPANY SEAL

SIGNATURE .....  
NAME .....  
DESIGNATION .....  
COMPANY .....  
DATE .....

**ANNEXURE-F3**

**PRICE SCHEDULE(to be read along with table on page no. 47)  
Application/Repair of Refractory (FSD)(PART C)**

Sr.No	Description	Unit Rate in Rs . excluding Tax	Total quantity	Total rate in Rs.
1	Lump sum Charge for dismantling of damage refractory, removing & application of refractory work up to 2 MT (With Mobilization of Man Power and all required tools)	72105.00	12 Nos.	865260.00
2	Unit Rate If quantity Exceed than 2.00 MT.	15675.00	08 MT	125400.00
3	Total (Sr No 1 to 2 of Part C)			990660.00
4	SOR service charge / profit ( To be quote by bidder on ) [+X % above Total Sr. No. 7 ]	<b>(NEED TO BE QUOTED ONLINE ONLY)</b>		
Or		<b>OR</b>		
4	SOR service charge / profit ( To be quote by bidder on ) [Y % below Total Sr. No. 7 ]	<b>(NEED TO BE QUOTED ONLINE ONLY)</b>		
Or		<b>OR</b>		
4	SOR service charge / profit ( To be quote by bidder on ) [Equal to Total Sr. No. 7 ]	<b>(NEED TO BE QUOTED ONLINE ONLY)</b>		
5	Net Cost Part B: Sr. No. 3+/- Sr. No. 4 [+X % or -Y% or 0%-Equal]			
6	Service tax @ 15% on Sr. No. 5	<b>(NEED TO BE QUOTED ONLINE ONLY)</b>		
7	Final Cost for Part B (Sr. No. 5 + 6)			

**In** **words**

- .....
- Price & rates quoted above shall include cost of all consumables (except free issue materials by GIPCL) labour, supervision, tools and tackles, transport etc. and such other cost are not specifically mentioned herein but will be incurred by the contractor for the satisfactory and timely completion of the work.
  - Payment shall be made as per actual execution of work.
  - Plus 25% variation is allowed with same rate, terms and conditions.
  - Contractor has to arrange lodging & boarding facilities to their supervisors, technician & labors on their own. GIPCL will not provide above facility.

COMPANY SEAL

SIGNATURE .....

NAME .....

DESIGNATION .....

COMPANY .....

DATE .....

Quoting formula in Price Bid

PART DESCRIPTION	NET ESTIMATION	QUOTED IN % (+/-)	QUOTE D IN AMOUNT	PRICE BEFORE TAXES AND DUTIES	CENTRAL EXCISE DUTY (%)	TOTAL PRICE AFTER CED	CST / VAT/Service tax /OTHER TAXES ON (%)	TOTAL PRICE AFTER CST/VAT/ SERVICE tax /OTHER TAXES	FRIGHT CHARGES per MT	TOTAL PRICE AFTER ALL TAXES, DUTIES AND FRIGHT CHARGES
	A	B	C	A +/- B% OF A) = D	E	D + (E% of D) = F	G	F + (G% of F) = H	I	J = H + (306XI )
PART A	6568000	To be quoted by Vendor in %	calculated	calculated	To be quoted by Vendor	calculated	To be quoted by Vendor in % CST /VAT whatsoever applicable to vendor	calculated	To be quoted by Vendor in Amount	calculated
PART B	7079000	To be quoted by Vendor %	calculated	calculated	To be quote =0	calculated	To be quoted by Vendor in %-prevailing service tax	calculated	To be quote =0	calculated
PART C	990660	To be quoted by Vendor %	calculated	calculated	To be quote =0	calculated	To be quoted by Vendor in %-prevailing service tax	calculated	To be quote =0	calculated
			To be quote by vendor							
			Calculated / pre define values							
			To Be quote zero by vendor compulsory							

**ANNEXURE – F**

**BID FORM**

BID NO.:

From :

To :

M/S GUJARAT INDUSTRIES POWER COMPANY LIMITED  
At & Post – Nani Naroli  
Taluka – Mangrol  
Dist. Surat – 394110

1. I / We, the undersigned, have carefully examined and understood the Bidding Documents. I/We hereby agree for the annual maintenance contract described in the specifications (or such portion thereof as Gujarat Industries Power Company Limited may accept) in conformity with the Specifications and Bidding documents.
  - (a) The total price for the rate contract of equipments specified for annual maintenance contract being ..... (in figures)  
..... (in words)  
.....
  - (b) The equipment will maintained in accordance with the instruction of supplier.
2. In the event our proposal is accepted, we agree to furnish a performance Guarantee in the manner acceptable to Gujarat Industries Power Company Limited, and for the sum equal to 10% of Annual Contract Price (excluding service tax) within 21 days of the 'Letter of Intent / Letter of Award'.



**ANNEXURE –G**  
**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  
At & Post – Nani Naroli  
Taluka: Mangrol

**Dist.Surat-394 110**

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

(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 .....

**Annexure H**

**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 .....

Last date for lodgement of claim : .....

To

M/s.GUJARAT INDUSTRIES POWER COMPANY LTD.  
At & Post Nani Naroli  
Taluka Mangrol  
Dist.Surat  
Gujarat-394 110

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/warantee period of ..... Months under the said LOI/Order equivalent to.....\*.....(percent) of the said value of the order to the purchaser

Contd....2

(2)

(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 upto (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. 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.

Contd....3

(3)

Notwithstanding anything contained herein above our liability under this Guarantee is restricted to Rs..... and it shall remain in force upto 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 :

## ANNEXUORE- I

### Eligibility criteria for Refractory Material Supply and application.

Sr. No.	Eligibility Criteria [inline with clause-5]	Year	Rs. Lacs	In	Details	Supporting Documents attached.
1	Bidder should possess minimum three years of experience during last five years in Supply and application of Refractory material on the basis of AOH/ARC/Project contract of 110 MW and above capacity CFBC for lignite or coal fired units. Proof to be attached.	2011-12				
		2012-13				
		2013-14				
		2014-15				
		2015-16				
2	Bidder should have annual turnover of i.e. <b>400 Lakh</b> for last three financial years i.e. 2013-14, 2014-15 & 2015-16.	2013-14				
		2014-15				
		2015-16				
3	The net worth of the bidder as on 31.03.2016 should be positive as evidenced from audited accounts					
4	Bidder shall furnish annual audited financial statement duly certified by Chartered Accountant for the last three years to demonstrate the financial healthiness of the company. The balance Sheet must be in the name of the company. Any type of MOU for this purpose will not be entertained.	2013-14				
		2014-15				
		2015-16				
5	In case of those Bidders, who are having only manufacturing back ground or application back ground of refractory at least for last three years, they should have joint venture arrangement with applicator in case of manufacturer visa versa. Joint venture arrangement shall be furnished on stamp paper of Rs. 100					
6	Sub letting of work is subject to approval of GIPCL. In case of subletting the contract, contractor should furnish minimum four resourceful vendor list for approval					
7	Bidder should give guarantee for their material quality and application quality jointly in line with tender document conditions.					
8	Bidder should produce evidence of having experience of successfully completed identical works as defined hereunder during last <b>five years</b> ending last day of the month previous to the one in which tender is invited, satisfactory progress of ongoing works etc. along with certified copies of documentary evidence preferably photo copies of work experience from the clients. The experience should be either of the following: Bidder should have executed minimum (for Supply and application both) <b>A. One</b> similar completed work each costing not less than the amount equal to <b>70 Lakh</b> OR <b>B. Two</b> similar completed work each costing not less than the amount equal to <b>52 Lakh</b> OR <b>C. Three</b> similar completed work each costing not less than the amount equal to <b>44 Lakh</b> Bidder should specifically mention fulfilling of above criteria in his offer along with details of work orders & work completion certificates issued by clients	2016				
		2015				
		2014				
		2013				
		2012				

9	Contractor has to submit satisfactory work completion certificate from the client. Experience as a sub contractor will not be allowed and Price Bid of such Bidders will be rejected.				
10	Bidder should be capable to supply refractory as per the technical data sheet annexure-. Submit the annexure-duly filled with signature and sign with supporting documents, indicating manufacturer name and address.				
11	Bidders should possess valid PF number.				
12	Bidder shall enclose P. F. code allotment letter along with labour licenses and W.C. Policy copies of previous orders.				
13	The bidder has to submit PAN Card copy of the firm/Company.				
14	Bidder has to submit copy of service tax registration number.-Copy of same should be submitted.				
15	Bidder has to submit VAT registration number / CST TIN				
16	After opening of technical Bid, if any required attested documents found missing in the Technical Bid submitted by the Bidder, the tender inviting authority may inform to that Bidder 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.				
17	Tender fee: The tender fee shall be accompanied in form of Demand Draft				
18	EMD: To pay EMD in the form of DD or Bank Guarantee given by Bank as described in subsequent clause no. 7.				
19	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.				

**ANNEXURE –J**

**SCHEDULE OF DEVIATION FROM GENERAL AND TECHNICAL SPECIFICATIONS**

All the deviations from the general and technical specifications shall be filled by BIDDER clause by clause in this schedule.

Sr. No	SECTION	CLAUSE NO	AS PER TENDER DOCUMENT	DEVIATION

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

COMPANY SEAL

SIGNATURE .....

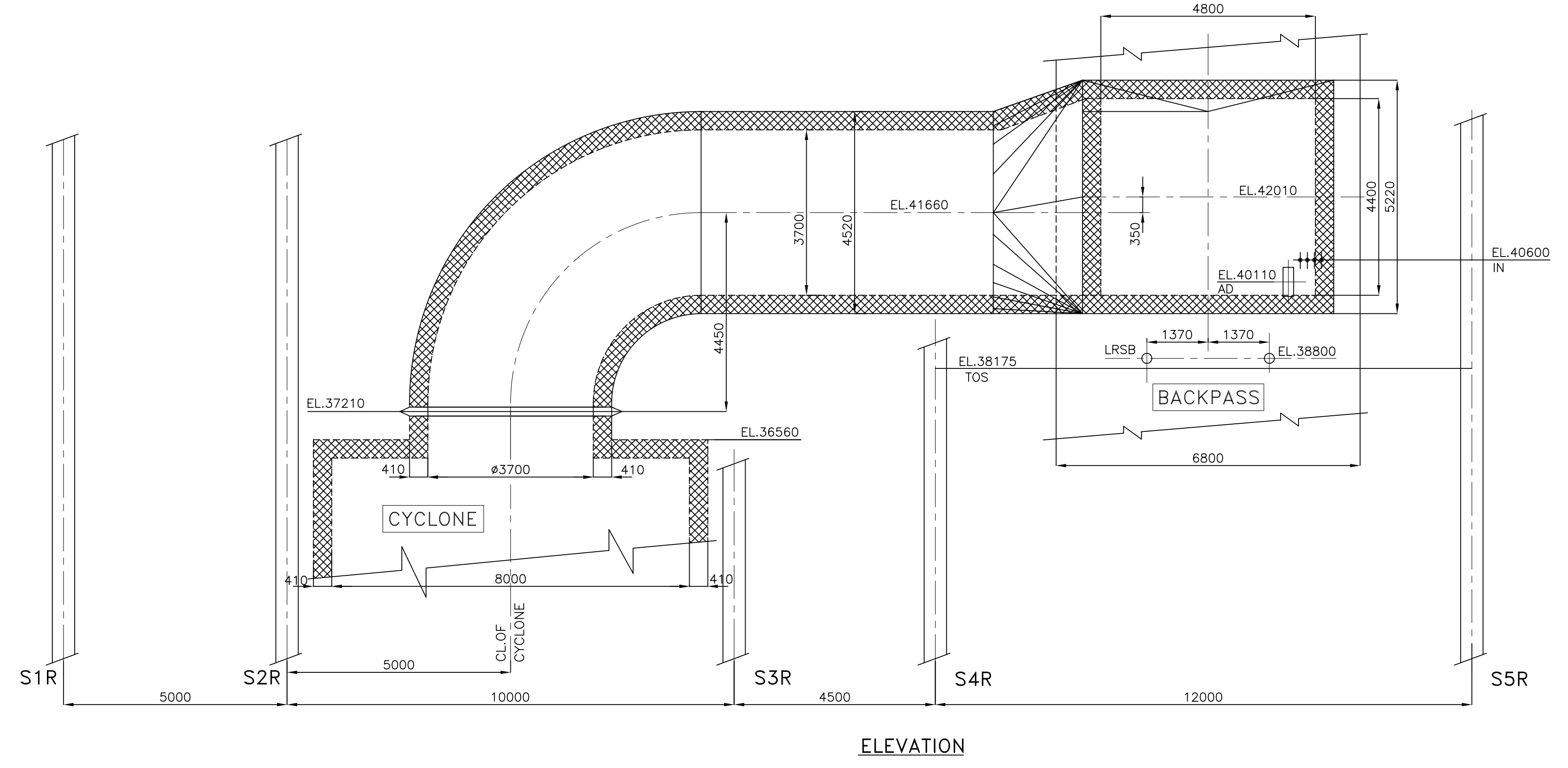
NAME .....

DESIGNATION .....

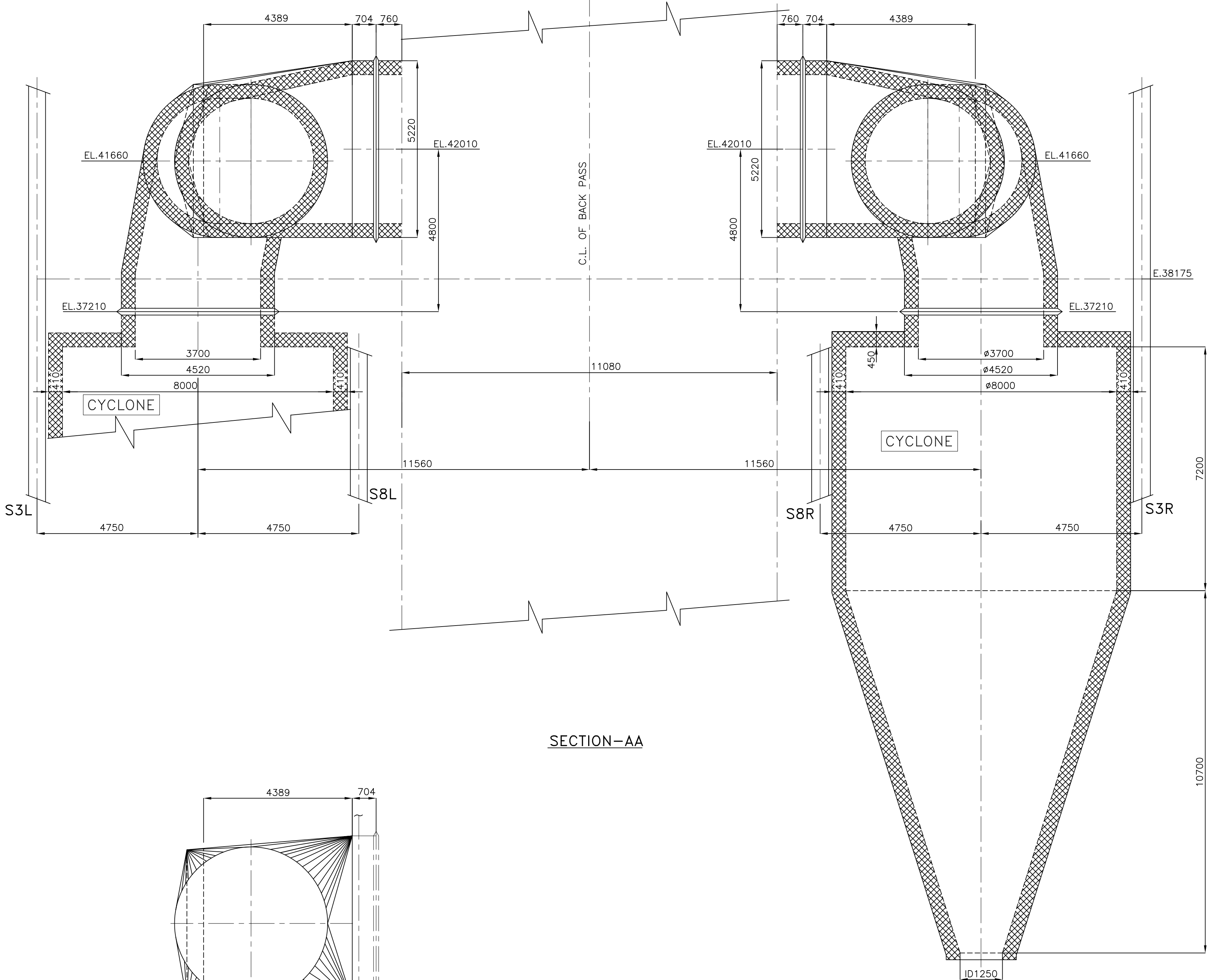
COMPANY .....

DATE .....

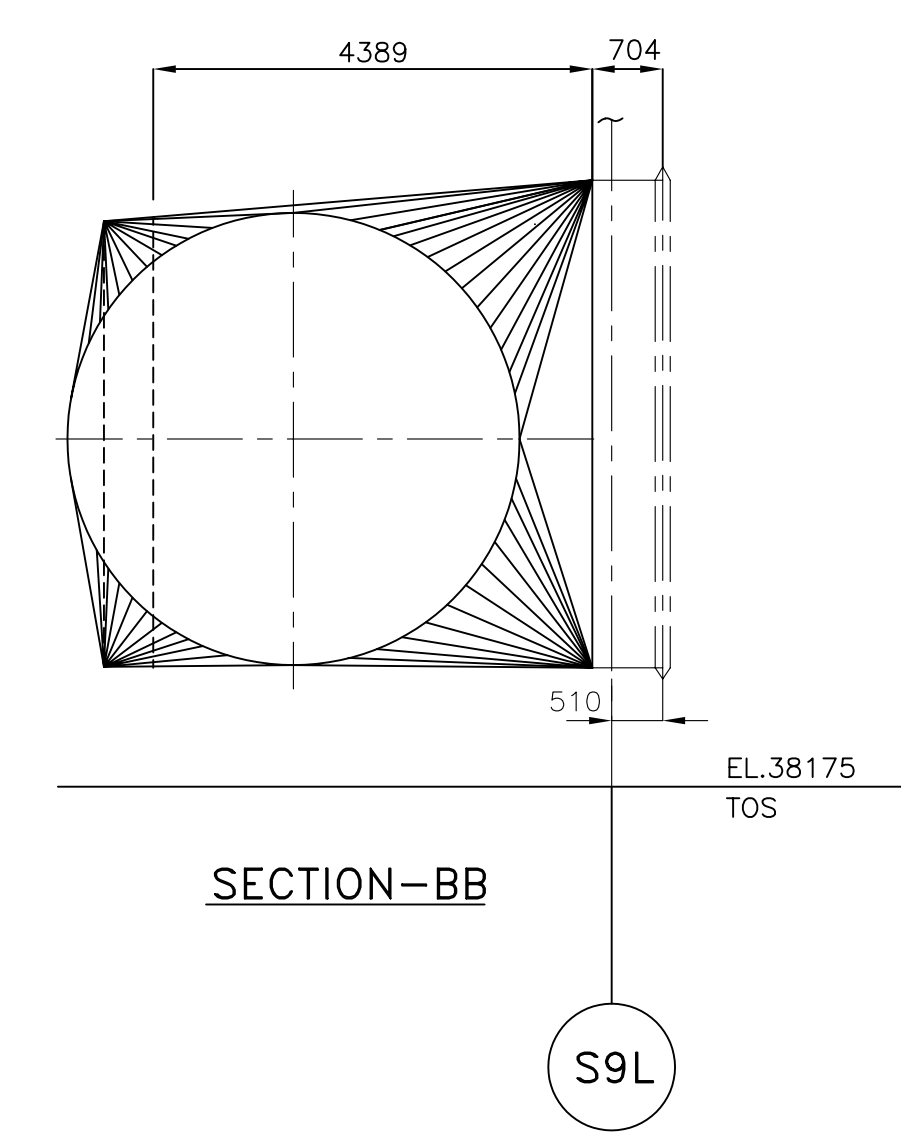




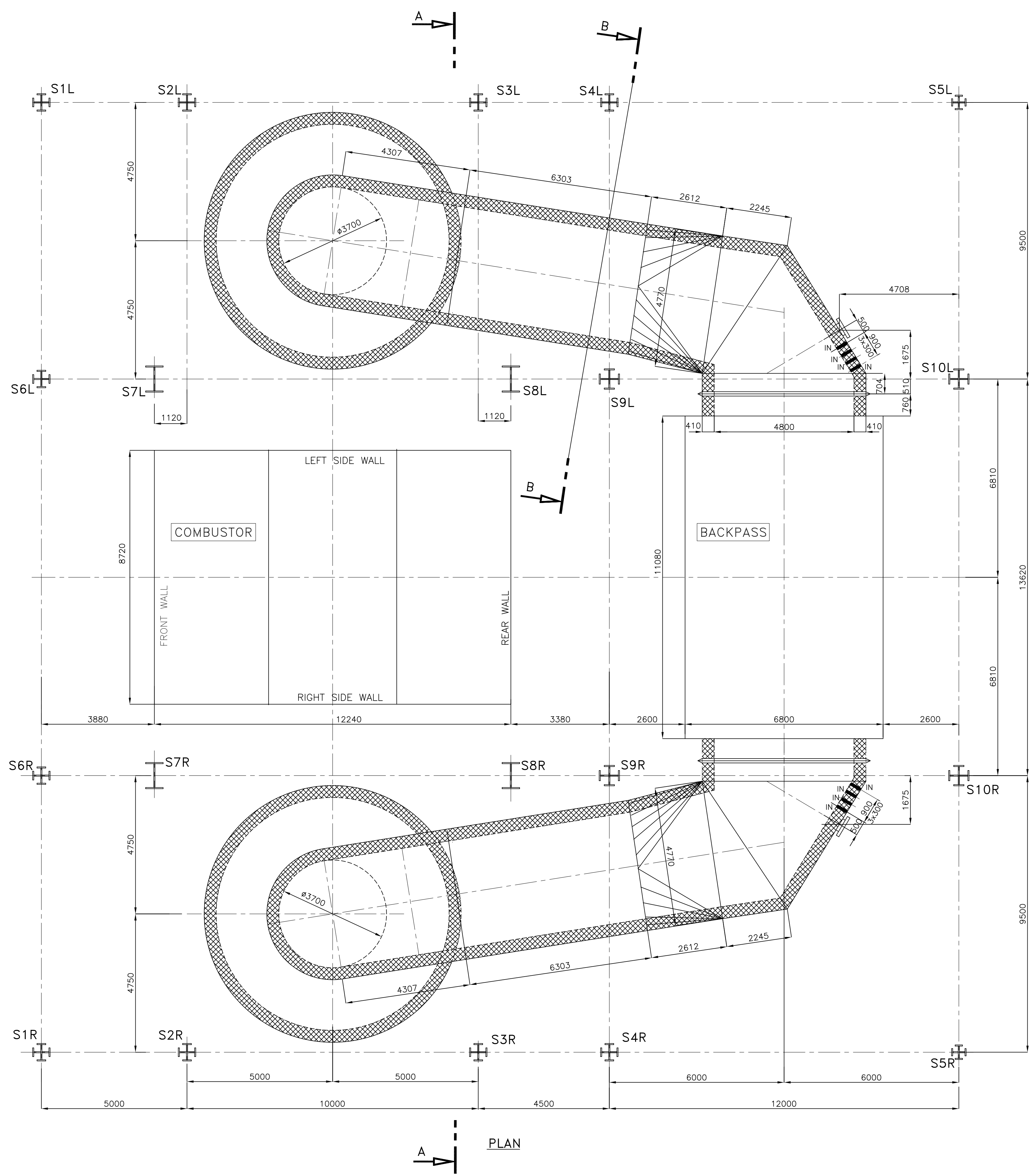
ELEVATION



SECTION-AA



SECTION-BB



PLAN

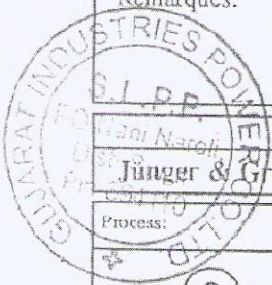
NOTES

• FOR NOTES, LEGEND & REFERENCE DRAWINGS REFER GENERAL ARRANGEMENT OF BOILER - ELEVATION DRAWING No. 0-00-511-92760

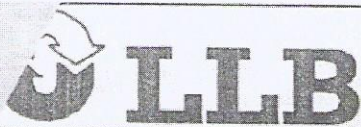
REV		DATE	ALTD	CUSTOMER	
CHD				GUJARAT INDUSTRIES POWER COMPANY LIMITED	
APPD				CONSULTANT	
ZONE				TCE CONSULTING ENGINEERS LIMITED, BANGALORE	
PROJECT				SURAT LIGNITE POWER PLANT - PHASE-II	
				2x125 MW CFBC BOILER - EXPANSION PROJECT (UNIT 3 & 4)	
				405 1/r; 131 Kg/Cm <sup>2</sup> (g); 540°C/540°C	
DRAWN				BHARAT HEAVY ELECTRICALS LTD.,	
CHECKED				BOILER PLANT UNIT, TIRUCHIRAPALLI-620 014.	
APPROVED				TITLE	
DATE				LAYOUT OF FLUE GAS DUCTING	
				( CYCLONE TO BACKPASS )	
ALL DIMENSIONS ARE IN MILLIMETRES				DRG No.	
SCALE 1:75				0-00-515-92768	
				REV. 00	


**LLB**
**Feuerfest-Materialspezifikation**  
**Refractory Material Specification**  
**Spécification du Matériau Réfractaire**
**Job Spec. No.:**  
**SP 4.101 L**

<b>Material:</b> Material: Matériau:	Feuerleichtbeton insulating refractory castable béton réfractaire isolant	<i>Insulyte</i>		
<b>JG-Material-Nr.:</b> JG Material No.:	27 08 02	<b>Lurgi-Material-Nr.:</b> Lurgi Material No.:	4.101 L	
<b>JG No. de matériau:</b>		<b>Lurgi No. de matériau:</b>		
<b>Max. Anwendungstemperatur:</b> Max. service temperature: Température maximum de service:	bei nicht korrosiver und neutraler Ofenatmosphäre in uncorrosive and neutral atmosphere si l'atmosphère du four est neutre et non corrosive		1300	°C
<b>Rohstoffbasis:</b> Raw material base: Base de matières premières:	Schamotte, Perlite fireclay, perlite chamotte, perlite			
<b>Körnung:</b> Grain size: Granulométrie:			0-1,25	mm
<b>Chemische Analyse:</b> Chemical analysis: Composition chimique:	PRE R 24	Al <sub>2</sub> O <sub>3</sub> Fe <sub>2</sub> O <sub>3</sub> CaO	42,0 0,8 8,0	%
<b>Rohdichte:</b> Bulk density: Densité apparente:	PRE R 9	110 °C	0,95	g/cm <sup>3</sup>
<b>Kaltdruckfestigkeit:</b> Cold crushing strength: Résistance à l'écrasement à froid:	PRE R 9	110 °C 800 °C	2,0 1,2	N/mm <sup>2</sup>
<b>Wärmeleitfähigkeit:</b> Thermal conductivity: Conductibilité thermique:	ASTM C-417	500 °C 800 °C °C °C °C	0,25 0,27	W/mK
<b>Lineare Längenänderung (irreversibel):</b> Linear change of length (irreversible): Modification de la longueur linéaire (irrévers.):		800 °C 1250 °C	-0,3 -1,1	%
<b>Lineare Längenänderung (reversibel):</b> Linear change of length (reversible): Modification de la longueur linéaire (réversible):		800 °C 1250 °C	-0,3 -1,1	%
<b>Bindungsart:</b> Type of setting: Type de prise:	hydraulisch hydraulic hydraulique	<b>Materialbedarf:</b> Required material: Besoin en matériaux:	0,85	l/m <sup>3</sup>
<b>Verarbeitung:</b> Application: Mise en oeuvre:	Gießen casting couler	<b>Wasserszusatz:</b> Addition of water: Addition d'eau:	60,0 l/100 kg	
<b>Bemerkungen:</b> Remarks: Remarques:	CO-Beständigkeit (ASTM C-288) Klasse A/B CO-resistance (ASTM C-288) class A/B résistance au CO (ASTM C-288) classe A/B			



J+G Job No.		Size	Serial-No.	Rev.	Type
Jünger & Gräter	Date: 03.12.96	Name: Bruder	9 6 3 1 4 0 3 0	4	19 0 6
Process:	ZW	Job:	GIPCL		
Job No.		Rev.			
D 19109 00 4 F 00534		0	Sheet 19		
Project/Job No.		Serial No.			



Feuerfest-Materialspezifikation  
Refractory Material Specification  
Spécification du Matériau Réfractaire

Job Spec. No.:  
SP 3/201 L

Material: Feuerbeton, dicht  
Material: compact refractory castable  
Matériau: béton réfractaire compact

JG-Material-Nr.: 22 03 01  
JG Material No.:  
JG No. de matériau:

LC-45

Lurgi-Material-Nr.: 3.201 L  
Lurgi Material No.:  
Lurgi No. de matériau:

Max. Anwendungstemperatur: Max. service temperature: Température maximum de service:	bei nicht korrosiver und neutraler Ofenatmosphäre in uncorrosive and neutral atmosphere si l'atmosphère du four est neutre et non corrosive	1550	°C
Rohstoffbasis: Raw material base: Base de matières premières:	Schamotte fireclay charlotte		
Körnung: Grain size: Granulométrie:		0-10	mm
Chemische Analyse: Chemical analysis: Composition chimique:	PRE/R 24	Al <sub>2</sub> O <sub>3</sub> Fe <sub>2</sub> O <sub>3</sub> CaO	46,0 1,0 3,0 %
Rohdichte: Bulk density: Densité apparente:	PRE/R 9	110 °C	2,28 g/cm <sup>3</sup>
Kaltdruckfestigkeit: Cold crushing strength: Résistance à l'écrasement à froid:	PRE/R 27	110 °C 1200 °C	110 90 N/mm <sup>2</sup>
Wärmeleitfähigkeit: Thermal conductivity: Conductibilité thermique:	ASTM C 417	500 °C 1000 °C	1,10 1,15 W/mK
Lineare Längenänderung (irreversibel): Linear change of length (irreversible): Modification de la longueur linéaire (irrévers.):	LR 101	1500 °C	-0,4 %
Lineare Längenänderung (reversibel): Linear change of length (reversible): Modification de la longueur linéaire (réversible):		°C	%

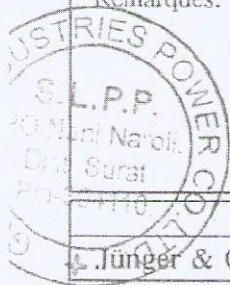
Bindungsart: Type of setting: Type de prise:	hydraulisch hydraulic hydraulique	Materialbedarf: Required material: Besoin en matériaux:		t/m <sup>3</sup>
Verarbeitung: Application: Mise en oeuvre:	minimale Vibration/Stochern minimal vibration/rodding vibration minimum/piquer	Wasserzusatz: Addition of water: Addition d'eau:	5.5-7.0 l/100 kg	

Bemerkungen:  
Remarks:  
Remarques:

CO-Beständigkeit gemäß ASTM C 288: B  
CO-resistance acc. to ASTM C 288: B  
résistance au CO suivant ASTM C 288: B

Kaltdruckfestigkeit: kleinster erlaubter Einzelwert nach dem Brennen bei 800 °C: 90 N/mm<sup>2</sup>  
Cold crushing strength: smallest permissible individual value after firing at 800 °C: 90 N/mm<sup>2</sup>  
Résistance à l'écrasement à froid: plus petite valeur admissible après cuisson à 800 °C: 90 N/mm<sup>2</sup>

Abriebfestigkeit/abrasion resistance/résistance à l'abrasion 800 °C: ≤ 10 cm<sup>3</sup> (vibriert/vibrated/vibré)



Jungfer & Gräter	Date: 19.12.96	Name: Bruder	J+G Job No.	Size	Serial-No.	Rev.	Type
			9 6 3 1 4 0 3 0	4	15	0	6

Process:	ZW	Job:	GIPCL				
			Job No.	Rev.			
			D 19109 00 4 F 00534	0			Sheet 15
			Project/Job No.	Serial No.			

*Handwritten signatures and initials*

# LC 90 , LC 60 DATA SHEET

Brand Name	LC 90	LC 60	Teting Standard
Base Raw Material	Brown Fused Alumina and High Purity Cement OR WFA	Calcined Clay / Bauxite and high purity Cement	NA
Application Temperature	1700C	1600C	As Per Bidder Standard Practice
Max Grain Size	5-6mm	5-6mm	IS : 1528 (Part 14)
Water Required (%)	4-5%	5.0 - 6.5	NA
Installation Method	Vibration Casting	Vibration Casting	NA
Chemical Properties (%)	Spec Value	Spec Value	
Al <sub>2</sub> O <sub>3</sub>	90 min	60 min	IS : 12107 (Part 3) or XRF
Fe <sub>2</sub> O <sub>3</sub>	1 Max	1.2 max	IS : 12107 (Part 6) or XRF
CaO	1.5 Max	1.5 max	ASTM C 573 or XRF
SiO <sub>2</sub> / Sic	Remaining	Remaining	
Physical Properties			
BD (gm/cc)	2.95 - 3.1 Min	2.6 Min	IS : 10570
CCS (Kg/cm <sup>2</sup> )			
At 110°C/24hrs	950 Min	750 min	IS : 10570
At 800°C/3hrs	1000Min	850 min	
At 1100°C/3hrs	1100 - 1275	900 min	
At 1350°C/3hrs	NA	NA	
At 1500°C/3hrs	NA	NA	
Thermal Properties			
PLC (%)			
At 800°C/3hrs	As per Bidder Specification	As per Bidder Specification	ASTM C113, 1993 OR IS : 10570
At 1100°C/3hrs	As per Bidder Specification	As per Bidder Specification	
At 1500°C/3hrs	As per Bidder Specification	As per Bidder Specification	
Thermal Conductivity			
W/mk			
At 400°C HF	2.2 Max	0.95	BIS 9490
At 600°C HF	2.30Max	1.12	
At 800°C HF	2.35 Max	1.20	
Abrasion Loss (cc)	3.74 max After heating 1200C/3 hrs	6.0 max after heating 1200 C/3hrs	ASTM C - 704
Shelf Life	6 Month	6 Month	NA
Packing	50 Kg or 25 Kg	50 Kg or 25 Kg	NA

*ate* *Y* 17-04-2017

*Reddy* 17.04.17