

# **TENDER SPECIFICATION**

**No. BHE/PW/PUR/SAT-CRH/ OJ-154**

**FOR**

**SERVICES OF HLHR CRANE ON MONTHLY LEASING BASIS**

**FOR CONSTRUCTION WORKS**

**AT**

**SATPURA THERMAL POWER STATION**

**MADHYA PRADESH POWER GENERATION COMPANY LIMITED**

**DIST- BETUL**

**MADHYA PRADESH**

**PART: I**

**(TECHNICAL BID SPECIFICATION, NOTICE INVITING TENDER & GENERAL  
CONDITIONS OF CONTRACT)**



**BHARAT HEAVY ELECTRICALS LIMITED**

**(A Govt. of India Undertaking)**

**POWER SECTOR - WESTERN REGION**

**345-KINGSWAY, NAGPUR-440 001**

## **ATTACHMENTS**

**2X250 MW MPPGCL SATPURA UNITS - 10 & 11**

- 1. GENERAL ARRANGEMENT OF BOILER SECTION PLAN:  
DRAWING NO. :0-00 -022- 74711 / 05**
  
- 2. GENERAL ARRANGEMENT OF BOILER SECTION SIDE  
ELEVATION : DRAWING NO. :0-00 -022-74710 / 05**

<b>C o n t e n t s</b>			
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14	Drawing (Attached at the End of documents)		

**LEGEND:**

@: Issued as separate hard copy booklet 'Tender Specifications Part-II (Price Bid-OJ-138)' / Hosted in BHEL web page ([www.bhel.com](http://www.bhel.com)) as file titled "**PRICE BID-OJ-138**"

**Note:**

Rest of the tender documents are included in Tender Specifications Part-I / Hosted in BHEL web page ([www.bhel.com](http://www.bhel.com)) as file titled "**TECH BID-OJ-138**"

**BHARAT HEAVY ELECTRICALS LIMITED**

(A Govt. of India Undertaking)  
POWER SECTOR - WESTERN REGION  
345, KINGS WAY - NAGPUR 440 001

**TENDER SPECIFICATION No. BHE/PW/PUR/SAT-CRH/ OJ-.....**

**ISSUE DETAILS**

**NAME OF THE WORK: SERVICES OF HLHR CRANE ON MONTHLY LEASING BASIS FOR CONSTRUCTION WORKS AT MPPGCL SATPURA 2X250 MW THERMAL POWER STATION UNIT Nos 10 & 11, DISTT. BETUL, MADHYA PRADESH**

EARNEST MONEY DEPOSIT: Please see Special Conditions of Contract.

LAST DATE FOR TENDER SUBMISSION: Please obtain updated information from web page "<http://www.bhel.com>" → Tender Notifications → View Corrigendums.

THESE TENDER SPECIFICATION DOCUMENTS CONTAINING **PART-I** AND **PART-II** ARE ISSUED TO:

M/s. ....

.....

PLEASE NOTE:  
THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

For Bharat Heavy Electricals Limited

Dy. General Manager (Purchase)  
Place: Nagpur  
Date:

**NOTICE INVITING TENDER (Page 1 of 3)**

**PURCHASE TO INSERT**

## **PROJECT INFORMATION**

### **PROJECT INFORMATION**

#### **BACKGROUND**

BHEL's Client M/s Madhya Pradesh Power Generation Company Limited (MPPGCL) has pulverized Coal based Power Plant at Satpura Thermal Power Plant, Distt-Betul, Madhya Pradesh. The said client has undertaken the process of expanding the capacity of the power plant by setting up two power generation unit of 250 MW rating.

The Bidder shall acquaint himself by a visit to the site, if felt necessary, with the conditions prevailing at site before submission of the bid. The information given here in under is for general guidance and shall not be contractually binding on BHEL/ Owner. All relevant site data/information as may be necessary shall have to be obtained /collected by the Bidder.

#### **LOCATION AND APPROACH :**

- 1) Project: Thermal Power Station extention Units # 10 & 11 (250 MW each).
- 2) Project Location: Satpura, Dist: Betul, Madhya Pradesh, India.
- 3) Transport facilities:
  - A) Nearest Railway Station: Ghodadongri on Nagpur Itarsi route. Ghodadongri is 71 Kms from Itarsi on the Itarsi – Betul State Highway.
  - B) Road: Sarni/Satpura TPS is connected to Ghodadongri by 20 Km long all-weather district road.
  - C) Nearest Airport: Nagpur / 200 Kms, Bhopal / 200 Kms.

#### **CLIMATIC CONDITIONS:**

- 1) Maximum ambient Temperature: 50° Centigrade
- 2) Minimum ambient Temperature: 6.5° Centigrade
- 3) Seismic Zone : Part 3, Zone-III as per IS:1893/84
- 4) Relative Humidity: 60 %
- 5) Wind Speed: 10 kmph as per IS 875/87.

#### **GEOGRAPHICAL CONDITION:**

- 1) Plant Elevation above MSL: 439 m

## CHECK LIST

(VIDE PARA 1.3 OF SECTION-I OF GENERAL CONDITIONS OF CONTRACT)

1	NAME OF THE TENDERER WITH ADDRESS		
2	NATURE OF THE FIRM	LIMITED / PARTNERSHIP / PROPRIETARY	
3	EMD DETAILS (Rs. 2.0 LACS BY DD ONLY OR ONE TIME EMD)		
4	VALIDITY OF OFFER (REQUIRED 6 MONTHS FROM TENDER OPENING DATE)		
5	MOBILIZATION TIME (NOT EXCEEDING 45 DAYS FROM FAX LOI)		
6	WHETHER NO DEVIATION CERTIFICATE FURNISHED	YES	NO
7	TENDERER HAS VISITED THE PROJECT SITE AND ACQUAINTED WITH THE SITE CONDITIONS	YES	NO
8	DETAILS OF CONCURRENT JOBS ARE FURNISHED (AS PER RELEVANT APPENDIX)	YES	NO
9	HEAD QUARTER'S ORGANISATION IS FURNISHED	YES	NO
10	FINANCIAL STATUS OF THE COMPANY (ANNEXURE 'A' OF GCC) IS FURNISHED	YES	NO
11	PROFIT & LOSS ACCOUNT FOR PRECEDING THREE YEARS IS FURNISHED	YES	NO
12	COPY OF PAN CARD ACCOMPANIED BY 'IT RETURN' COPY IS FURNISHED	YES	NO
13	ANALYSIS OF UNIT RATES QUOTED (AS PER RELEVANT APPENDIX ) IS FURNISHED	YES	NO
14	POWER OF ATTORNEY ENCLOSED IN FAVOUR OF PERSON MAKING OFFER.	YES	NO
15	DETAILS OF SIMILAR WORK DONE IN LAST SEVEN YEARS (AS PER RELEVANT APPENDIX) AND SUPPORTING DOUCMENTS FURNISHED.	YES	NO
16	BIDDER HAS FMILIARIZED HIMSELF WITH ALL RELEVANT LOCAL LAWS & CONDITIONS.	YES	NO

17	WHETHER ALL THE PAGES OF THE TENDER DOCUMENTS ARE READ, UNDERSTOOD AND SIGNED	YES	NO
18	<p>WHETHER THE FOLLOWING DETAILS PERTAINING TO YOUR BANK ACCOUNT DULY ENDORSED BY THE BANK HAVE BEEN FURNISHED {TO ENABLE BHEL RELEASE PAYMENTS THROUGH ELECTRONIC FUND TRANSFER (EFT/RTGS) AS SPECIFIED IN SECTION 12 }</p> <ol style="list-style-type: none"> <li>1. Name of the Company</li> <li>2. Name of Bank</li> <li>3. Name of Bank Branch</li> <li>4. City/Place</li> <li>5. Account Number</li> <li>6. Account type</li> <li>7. IFSC code of the Bank Branch</li> <li>8. MICR Code of the Bank Branch</li> </ol> <p>NOTE: In case Bank endorsed certificate regarding above has already been submitted earlier, Kindly submit photocopy of the same</p>	YES	NO

NOTE : STRIKE OFF YES OR NO, AS APPLICABLE

## **DECLARATION BY BIDDER'S AUTHORIZED SIGNATORY**

### **TENDER SPECIFICATION No. BHE/PW/PUR/SAT-CRH/OJ-154**

I, \_\_\_\_\_, HEREBY CERTIFY THAT ALL THE INFORMATION AND DATA FURNISHED BY ME WITH REGARD TO THIS TENDER SPECIFICATION ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE. I HAVE GONE THROUGH THE SPECIFICATIONS, CONDITIONS AND STIPULATIONS IN DETAIL AND AGREE TO COMPLY WITH THE REQUIREMENTS AND INTENT OF THE SPECIFICATION. I FURTHER CERTIFY **THAT I AM DULY AUTHORISED REPRESENTATIVE OF THE UNDERMENTIONED BIDDER AND A VALID POWER OF ATTORNEY TO THIS EFFECT IS ALSO ENCLOSED.**

DATE:

SIGNATURE OF AUTHORIZED SIGNATORY WITH SEAL

## **CERTIFICATE OF NO-DEVIATION**

### **TENDER SPECIFICATION No. BHE/PW/PUR/SAT-CRH/OJ-154**

I/WE, M/s

.....

HEREBY CERTIFY THAT NOTWITHSTANDING ANY CONTRARY INDICATIONS/ CONDITIONS ELSEWHERE IN OUR OFFER DOCUMENTS, I/WE HAVE NEITHER SET ANY TERMS AND CONDITIONS NOR THERE IS ANY DEVIATION TAKEN FROM THE CONDITIONS OF BHEL'S TENDER SPECIFICATIONS, EITHER TECHNICAL OR COMMERCIAL, AND I/WE AGREE TO ALL THE TERMS AND CONDITIONS MENTIONED IN BHEL'S TENDER SPECIFICATION WITH ASSOCIATED AMENDMENTS AND CLARIFICATIONS.

Date:

Signature of the Bidder

**CERTIFICATE CONFIRMING  
KNOWLEDGE ABOUT SITE CONDITIONS**

**TENDER SPECIFICATION No. BHE/PW/PUR/SAT-CRH/OJ-154**

We, \_\_\_\_\_ M/s

.....  
hereby declare and confirm that we have visited the project site(s) for which we have submitted our offer and acquired full knowledge and information about the site conditions.

We further confirm that the above information is true and correct and we shall not be eligible for any additional payment of any nature due to lack of knowledge or non-familiarization of site conditions.

BIDDER'S NAME AND ADDRESS: .....

SIGNATURE & OFFICIAL SEAL OF BIDDER'S  
AUTHORISED SIGNATORY

PLACE:

DATE:

**SPECIAL CONDITIONS OF CONTRACT  
SECTION-A**

**1.0 BROAD SCOPE OF WORK.**

Services of HLHR Crane with operation & maintenance crew on lease basis at **2 X 250 MW MPPGCL SATPURA THERMAL POWER PLANT EXTN. UNITS Nos 10 & 11, Dist – Betul, Madhya Pradesh.**

The crane shall be engaged in the project for Erection & Commissioning work consisting of Boiler & Auxiliaries, Electrostatic Precipitator, Various Structures, Tanks, Vessels and other equipments of plants as per instructions of the BHEL Engineer-in-Charge.

The intent of this tender specification is to hire the service of HLHR crane on monthly lease basis to suit the specified requirements.

**CRANE NO. 1:** (Crane Identification Code: **Crane 1: HLHR**)

**1.1)**

**Heavy-Lift, High-Reach (HLHR) Crane (1 No.), required at 2 X 250 MW MPPGCL Satpura Thermal power plant extn. Units Nos 10 & 11, Dist – Betul, Madhya pradesh.**

**1.1.1) Technical Requirements & Duration of Deployment**

The offered crane shall meet the following requirements

<b>SN</b>	<b>Description of Parameter/Feature</b>	<b>Details/Requirement</b>
01	<b>Critical Lift Requirement-</b> Ceiling Girder	Weight: 69 MT
02	<b>Elevation after installation</b> Ceiling Girder	67 m ( <b>Top of Girder</b> )
03	<b>Dimensions of Consignment</b>  Ceiling Girder	Built-up I beam Length : 24.510 m Depth : 4.03 m Width of Flange: 0.950 m

SN	Description of Parameter/Feature	Details/Requirement
04	Overall dimension of crane with HLA, Counterweight, Guy Rope, Boom, Jib etc. vis-à-vis critical space restriction for crane movement.	<p>The Crane should accordingly be capable of lifting the above critical loads to their respective positions.</p> <p>The overall dimension of offered crane with all necessary assemblies shall be suitable for this.</p> <p>Bidder in his offer (Technical Bid) shall furnish complete dimensional details of crane assembly with sketch in this regard.</p>
05	Boom & Jib Lengths	<p><b>Boom</b> Length: To suit aforesaid lift requirements.</p> <p><b>Jib</b> Length: At least 18m.</p>
06	Crawler to Crawler outer dimension	Maximum 8.5 m
07	Heavy Lift Attachment (HLA)	Crane may have HLA for lifting higher loads and/or higher elevations. In addition, it shall be capable to lift loads without HLA as well.
08	Deployment tentatively by	<b>01-Mar-2010</b>
09	Duration of Hiring	<b>Regular Duration: 08 (Eight) months, Extendable</b> by another <b>2(Two) months</b> under the contractually agreed terms & conditions.

## 1.2 GENERAL REQUIREMENTS

1. The offered crane should have **boom travel limit alarm/stop** and **hoist travel alarm/ stop** safety features as minimum requirement. Other additional safety features, if any, should be made available to user without any additional cost.
2. Bidder shall submit along with technical bid a **copy of load chart** and technical details of crane offered as per Annexure I,
3. **Deployment of Cranes & Commencement of Services**  
The deployment schedule of the crane indicated earlier here is tentative. Not withstanding such indications, **you shall deploy and make the crane operational at site within forty five (45) days from the written intimation for deployment of crane.** A separate written notice asking to deploy the crane shall be issued by BHEL.
4. Bidder shall make available the complete set of Main Boom & Jib attachment with offset angle adjustment facility as specified for the crane in one go, that is at the time of mobilization. However the crane shall be initially and subsequently assembled as per the site requirement to be specified by BHEL site engineer. Bidder shall furnish the details of Main Boom & Jib configuration offered for respective crane in their technical bid.
5. **Offered Cranes shall have separate drums for main hook as well as auxiliary hook (jib hook) so that both these are operated independent of each other and should not require any changes from one to another.**

## 1.3 SPECIFIC REQUIREMENTS FOR HEAVY LIFT-HIGH REACH CRAWLER CRANE

1. **Bidder shall submit sketch/drawings/manual of the crane with boom length and working radius and other constructional dimensional details of crane for meeting the lift requirement as given in this tender specification and indicating clearance under the hook from the top elevation of top piece and other aspects (such as slinging/ hook block weight and clearance under the hook) shall be taken in to account to meet the above lift requirement.**
2. Bidders may offer alternative models for the lift requirements of the Heavy Lift – High Reach crawler crane. Bidder shall submit load capacity chart with and without HLA for all such options.
3. Bidder shall furnish the details like self-weights of Hook Block & Wire Rope (Kg per metre) and number of falls necessary for the specified load requirement. Such details regarding the crane must be substantiated by crane manufacturer's manual/data sheet.

4. The offered crane should have adequate **safety margin** taking into consideration the specific lift requirement, weight of lifting sling, hook, wire rope and other accessories.

#### **1.4 HEAVY LIFT ATTACHMENT (HLA)**

**Heavy Lift - High Reach (HLHR) Crawler Crane** will be accepted with or without HLA. However, the crane shall essentially meet the specified lift requirements with or without HLA. The crane shall be capable to lift loads in the regular operating range without HLA. Necessity of HLA shall be limited to enhancing the lift capacity (higher loads or higher reach or both) and not as a permanent feature.

#### **2.0 OPERATION, MAINTENANCE AND OPERATING CREW CHARGES**

- 2.1 The price quoted shall be inclusive of operation (**excluding fuel**) and preventive as well as breakdown maintenance of the crane. The bidder shall deploy Operator-cum-Mechanic, Helper and Maintenance Crew to ensure smooth operation and maintenance of the crane without affecting work. No extra payment shall be made towards engagement of crew in overtime working hours. The crane shall be available for service on all days of the month. Bidder shall carry out preventive maintenance beyond normal working hours or as per schedule agreed with BHEL engineer.
- 2.2 Bidder shall provide all lubricants, spare parts, filters and other necessary consumables (**except fuel**) that are necessary to fulfil the scope of services under this specification within the quoted rates. BHEL/erection contractors of BHEL will provide fuel commensurate with utilization time and agreed consumption rate.

#### **3.0 COMMENCEMENT OF CONTRACT, REGULAR CONTRACT PERIOD, TERMINATION & FORECLOSING**

**The contract period shall commence from the successful load testing of crane with mutually agreed boom length at project site location and its written acceptance by BHEL. The Contract Period (duration of hiring) will generally be as indicated under 'Regular Duration' in tabular form earlier here. Contract Period may be extended depending upon the requirement of BHEL as specified therein.**

If the performance/services of the contractor or the deployed crane is not to the satisfaction of BHEL, the contract is liable for termination without prior notice.

BHEL reserves the right of foreclosing the contract within the contract period with 30 days advance written notice without assigning reason and no payments will be made for the period after foreclosure.

#### 4.0 REGULAR WORKING HOURS

The services of crane with operating crew shall be made available for duration of **twelve (12) hours per day** including total one-hour break (30 minutes for lunch and 2 tea intervals of 15 minute each). The regular working hours will usually be from 08:30 a.m. to 8:30 p.m. However, this shall be adjusted to suit the working hours of the respective project sites from time to time.

#### 5.0 RATE SCHEDULE, QUOTED RATES/PRICE & CONTRACT VALUE.

5.01 Bidders shall quote their price in the Rate Schedule furnished in “Price Bid Specification” issued as Part-II of this tender specification.

5.02 **Total amount payable** towards **mobilization and de-mobilization** of HLHR crane shall be as in the table below.

<b>S N</b>	<b>Description of Crane</b>	<b>Total Amount for Mobilization and Demobilization</b>
1	HLHR Crane	<b>Rs. 25,50,000/=</b>

This amount is also indicated in the Rate Schedule for HLHR crane. Bidder shall neither quote any amount towards mobilization and de-mobilization separately nor make any alteration in this amount specified by BHEL. Offers with any deviation in this regard will be rejected.

5.03 Bidder shall quote only monthly hire charges rate and indicate the corresponding amount for the duration indicated in the Rate Schedule. Bidder shall also indicate the total amount as sum of total monthly hire charges and prescribed mobilization & de-mobilization charges. In case of any discrepancy between the rates and amounts, the monthly hire charges rate quoted by the bidder shall be considered as correct and the grand total amount for the crane shall be re-calculated for the purpose of offer evaluation.

5.04 Agreed monthly hire charges rates shall remain **firm** throughout the **Regular Duration** indicated against specified crane. Applicable monthly hire charges for **Extension Periods** as proposed in this Tender Specification shall be **90%** of the rates agreed for the regular contract/hiring period. No other revision of the rates shall be admitted during this period.

5.05 Road permits, Octroi, VAT, CST and Declaration Forms etc. required for deployment of the cranes at the destination sites shall be arranged by the bidder within the agreed price/ rates. BHEL will neither issue any Road Permit or VAT/CST declaration forms for this purpose nor pay any taxes in this regard.

## **5.06 TAXES, DUTIES, LEVIES**

Refer to Clause 2.8.4 of General Conditions of Contract. Notwithstanding anything contained therein, the following provisions shall be applicable for this contract.

The contractor shall pay all (save the specific exclusions as enumerated in this contract) taxes, fees, license charges, deposits, duties, tools, royalty, commissions or other charges which may be levied on the input goods & services consumed and output goods & services delivered in course of his operations in executing the contract. In case BHEL is forced to pay any of such taxes, BHEL shall have the right to recover the same from his bills or otherwise as deemed fit.

**However, provisions regarding Service Tax and Value Added Tax (VAT) on output services and goods shall be as per following clauses.**

### **Service Tax & Cess on Service Tax**

Service Tax and Cess on Service Tax as applicable on output Services are excluded from contractor's scope; therefore contractor's price/rates shall be **exclusive** of Service Tax and Cess on Output Services. In case, it becomes mandatory for the contractor under provisions of relevant act/law to collect the Service Tax & Cess from BHEL and deposit the same with the concerned tax authorities, such applicable amount will be paid by BHEL.

**Contractor shall submit to BHEL documentary evidence of Service Tax registration certificate specifying name of services covered under this contract. Contractor shall submit serially numbered Service Tax and Cess Invoice, signed by him or a person authorized by him in respect of taxable service provided, and shall contain the following, namely,**

- I. The name, address and the registration number of the contractor,**
- II. The name and address of the party receiving taxable service,**
- III. Description, classification and value of taxable service provided and,**
- IV. The service tax payable thereon.**

**All the four conditions shall be fulfilled in the invoice before release of service tax payment.**

Contractor shall obtain prior written consent from BHEL before billing the amount towards such taxes.

With introduction of Cenvat Credit Rules 2004, which came into force w.e.f. 10.09.2004, Excise Duty paid on Input Goods including Capital Goods and Service Tax paid on Input Services that are used for providing the output services can be taken credit of against the Service Tax payable on output services. However BHEL may opt for availing the abatement provision in which case cenvat credit may not be available on input duty.

### **VAT (Sales Tax /WCT)**

As regards Value Added Tax (VAT) on transfer of property in goods involved in Works Contract (previously known as Works Contract Tax) applicable as per local laws, the price quoted by the contractor shall be **exclusive** of the same. Where such taxes are required to be paid by the contractor, this will be reimbursed on production of proof of payment made to the authorities by the Contractor. In any case the Contractor shall register himself with the respective Sales Tax authorities of the state and submit proof of such registration to BHEL along with the first RA bill. The contractor has to take all necessary steps to **minimize tax on input goods** by purchasing the materials from any registered dealer of the concerned state only. In case contractor opts for composition, it will be with the prior express consent of BHEL. Deduction of tax at source shall be made as per the provisions of law unless otherwise found exempted. In case tax is deducted at

source as per the provisions of law, this is to be construed as an advance tax paid by the contractor and no reimbursement thereof will be made unless specifically agreed to.

**Modalities of Tax Incidence on BHEL**

Wherever the relevant tax laws permit more than one option or methodology for discharging the liability of tax/levy/duty, BHEL will have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the Contractor.

**New Taxes/Levies**

In case the Government imposes any new levy/tax on the output service/ goods/work after award of the contract, the same shall be reimbursed by BHEL at actual.

In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer, the Bidder/Contractor must convey its impact on his price duly substantiated by documentary evidence in support of the same **before opening of Price Bid**. Claim for any such impact after opening the Price Bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.

No reimbursement/recovery on account of increase/reduction in the rate of taxes, levies, duties etc. on input goods/services/work shall be made. Such impact shall be taken care of by the Price Variation/Adjustment Clause (PVC) if any. In case PVC is not applicable for the contract, Bidder has to make his own assessment of the impact of future variation if any, in rates of taxes/duties/ levies etc. in his price

5.07 The Contract Value for the purpose of offer evaluation, Work Order and Security Deposit shall be sum of the following elements:

- (i) Total amount payable towards mobilization and de-mobilization.
- (ii) Total hire charges of Crane for the Regular Duration of the crane as per Tender Specification.

**Contract Value for Offer Evaluation & Work Order (Award Value):**

- (iii) Total amount payable towards mobilization and de-mobilization (As fixed by BHEL, refer Clause 5.02).
- (iv) Total hire charge of Crane for the Regular Duration of the crane as per Tender Specification.

**Contract Value for Security Deposit (SD):**

At the beginning of contract, the Security Deposit shall be calculated according to the awarded Contract Value. Subsequently amount of SD shall be regulated based on the Contract Value that is arrived at after taking care of time extensions, short closure etc. Accordingly contractor shall pay additional amount of SD or BHEL will adjust/refund excess SD if any.

## 6.0 EARNEST MONEY DEPOSIT, SECURITY DEPOSIT & BANK GUARANTEE

### 06.1 Earnest Money Deposit:

- i) EMD for this tender is Rs. 2,00,000/- (Rupees Two lakhs only).
- ii) Bidders who have already deposited One Time EMD of Rs. 2.00 lakh are exempted from submission of EMD for this tender. However a copy of 'One Time EMD' certificate issued by BHEL/PSWR, Nagpur shall be enclosed along with the Offer.
- iii) EMD is to be paid in cash (as permissible under Income Tax Act), Pay order or Demand Draft in favour of Bharat Heavy Electricals Limited and payable at Nagpur.
- iv) No other form of EMD remittance shall be acceptable to BHEL.

#### 06.1.1 EMD by the bidder will be forfeited as per Tender Documents if

- i) After opening the tender, the bidder revokes his tender within the validity period or increases his earlier quoted rates.
- ii) The bidder does not commence the work within the period as per LOI/Contract. In case the LOI / contract is silent in this regard then within 15 days after award of contract.

#### 06.1.2 EMD shall not carry any interest.

#### 06.1.3 In the case of unsuccessful bidders, the Earnest Money will be refunded to them after acceptance of tender by successful bidder

### 06.2 Security Deposit

#### 06.2.1 Security Deposit shall be furnished by the successful bidder. The rate of Security Deposit will be as below:

SN	Contract Value	Security Deposit Amount
1	Up to Rs. 10 lakhs	10% of Contract Value
2	Above Rs. 10 lakhs upto Rs.50 lakhs	1 lakh + 7.5% of the Contract Value exceeding Rs. 10 lakhs.
3	Above Rs. 50 lakhs	Rs 4 lakhs + 5% of the Contract Value exceeding Rs. 50 lakhs.

The security Deposit should be furnished before start of the work by the contractor.

#### 06.2.2 Security Deposit may be furnished in any one of the following forms

- i. Cash (as permissible under the Income Tax Act)
- ii. Pay Order, Demand Draft in favour of BHEL.
- iii. Local cheques of scheduled banks, subject to realization.
- iv. Securities available from Post Offices such as National Savings Certificates, Kisan Vikas Patras etc. (Certificates should be held in the name of Contractor furnishing the security and duly pledged in favour of BHEL and discharged on the back).
- v. Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL.

- vi. Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The FDR should be in the name of the contractor, A/C BHEL, duly discharged on the back.
- vii. Security deposit can also be recovered at the rate of 10% from the running bills. However in such cases at least 50% of the Security Deposit should be remitted (either by cash/DD or **BG for maximum 50%** of total SD) before start of the work and the balance 50% may be recovered from the running bills.
- viii. EMD of the successful bidder shall be converted and adjusted against the cash Security Deposit excepting for such bidder who has remitted One Time EMD.
- ix. The Security Deposit shall not carry any interest.

**NOTE:** Acceptance of Security Deposit against Sl. No. (iv) and (vi) above will be subject to hypothecation or endorsement on the documents in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

**06.2.3 SECURITY DEPOSIT SHALL NOT BE REFUNDED TO THE CONTRACTOR EXCEPT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT**

**06.3 BANK GUARANTEE**

- i. It is the responsibility of the bidder to get the Bank Guarantees revalidated/extended for the required period as per the advice of BHEL Site Engineer / Construction Manager. BHEL shall not be held liable for issue of any reminders regarding expiry of the Bank Guarantees.
- ii. In case extension/further extensions of any Bank Guarantees are not required, the bidders shall ensure that the same is explicitly conveyed through the Construction Manager to BHEL PSWR/HQ, Nagpur
- iii. In case the Bank Guarantees are not extended before the expiry date, BHEL reserves the right to invoke the same by informing the concerned Bank in writing, without any advance notice/communication to the concerned bidder.
- iv. **Bidders to note that any corrections to Bank Guarantees shall be done by the issuing Bank, only through an amendment in an appropriate non judicial stamp paper.**
- v. Bidders to ensure that the Bank Guarantees submitted are exactly as per format given in the Tender documents.
- vi. The Original Bank Guarantee shall be sent directly by the Bank to BHEL under Registered Post (Acknowledgement Due). However, in exceptional cases, where guarantee is directly received by Vendor, the Vendor shall instruct the Bank to send an unstamped duplicate copy of the guarantee directly to BHEL under Registered Post (Acknowledgement Due).

06.3.1 Guidelines for acceptance of Bank Guarantees are as follows :

- Vendors are advised to obtain BG from any of the following BHEL consortium banks

State Bank of India  
ICICI Bank Ltd

The Hongkong and Shanghai banking Corporation Ltd.  
ABN Amro Bank N.V

Bank of Baroda	IDBI Ltd
Canara Bank	Punjab National Bank
Citi bank N.A	Standard Chartered Bank
Corporation Bank	State Bank of Travancore
Detshe Bank	State Bank of Hyderabad
HDFC Bank Ltd	Syndicate Bank

- The Bank Guarantees of all Public sector banks shall be accepted (Other than consortium banks also).
- The Bank Guarantees of Co-operative banks shall not be accepted.
- Bank Guarantees of other banks (banks other than consortium bank, public sector bank, & Co-operative banks) can be accepted subject to an overall exposure limit (at BHEL, PSWR, Nagpur) of RS. 10 crores for banks with net worth of more than Rs. 500 crores as on last balance sheet date and Rs 5 crores for banks with net worth between Rs. 350 to Rs 500 crores (A certificate and copy of latest Balance Sheet to be given at the time of submission of bank guarantees .

In case Bank Guarantees given by non consortium banks (Private sector or Public sector), the bank Guarantees shall be enforceable at Nagpur, Maharastra

## **6.0 PAYMENT TERMS**

### 6.1

The contractor shall submit his Running Account (RA) Bills towards mobilization, monthly charges, de-mobilization charges and Service Tax etc with all the details required by BHEL on or before the specified date every month. Payment of Monthly Hire Charges as certified by the BHEL Engineer-in-Charge will be made once in a calendar month at BHEL Site. Billing cycle may be as per mutually agreed cut-off dates.

### 6.2

Payment for RA Bills will normally be released in around 30 days of submission of the bill with measurement/log sheets. Contractor shall make his own arrangement for making payment of impending labour wages and other dues in the meanwhile.

### 6.3

Monthly hiring period shall be considered for payment purpose from the date of successful load testing of the crane and till the crane withdrawn for de-mobilization.

### 6.4

No advance payments shall be made by BHEL for this contract.

### 6.5

Payment towards mobilization and de-mobilisation of crane shall be made in the manner as specified below.

1. First 50% of the specified amount for mobilization and demobilization will be paid after deployment of the crane complete in all respects including all assemblies, sub-assemblies, accessories & components, assembly of crane as required by BHEL and BHEL's acceptance of load test of assembled crane at site.
2. Remaining 50% of the specified amount for mobilization and demobilization will be paid after removing the crane from the project site and clearing the site premises in all respect.

## **6.6 PRO RATA DAILY & HOURLY HIRE CHARGES**

In case services are availed for part of a calendar month, pro-rata payment of Hire Charges for the utilized number of days shall be made by BHEL. Pro-rata daily hire charges shall be calculated as follows.

6.6.1 Pro Rata Daily Hire Charges = Monthly Hire Charges divided by 30

6.6.2 Pro Rata Hourly Hire Charges = Monthly Hire Charges divided by 360

## **7.0 HOURLY OVERTIME CHARGES**

If the crane is required beyond the normal working hours as stipulated in this tender specification, overtime payment shall be made as following.

Hourly Overtime Charges = 15% of Pro Rata Hourly Hire Charges (as in 6.6.2)

## **8.0 SERVICES IN EXTENDED HOURS**

**Services of the cranes with crew may be needed by BHEL beyond the specified regular working hours. Prior consent from BHEL's Construction Manager shall be obtained by the contractor for rendering such services. Payment for the same shall be made along with the concerned month's Hire Charges bill on pro-rata basis as per clause 7.0 earlier here.**

## **9.0**

### **Safety, Occupational Health and Environmental Management**

BHEL PSWR has been certified for Environmental Management under ISO 14001:1996 standard and Occupational Health & Safety under OHSAS 18001 by DNV. In order to comply with the above standards, it shall be the endeavour of BHEL and all its subcontractors to meet and implement the requirements by following the guidelines issued under Environmental, Occupational Health and Safety Management (EHS) manual a copy of which will be available with the BHEL Site-in-charge.

Contractor shall also enter into a "Memorandum of Understanding" as given in clause 9.9 in case of award of contract.

### **9.0 Responsibility of the Contractor in Respect of Safety of Men, Equipment, Material and Environment.**

#### **9.1 The Contractor shall:**

##### **9.1.1**

Abide by the Safety Regulations applicable for the Site/Project and in particular as mentioned in the booklet "Safe Work Practices" issued by BHEL. Contractors are also to ensure that their employees and workmen use safety equipments as stipulated in the Factories Act (Latest Revision) during the execution of the work. Failure to use safety equipment as required by BHEL Engineer will be a sufficient reason for issuance of memo, which shall become part of Safety evaluation of the contractor at the end of the Project. Also all site work may be suspended if it is found that the workmen are employing unsafe working practice and all the costs/losses incurred due to suspension of work shall be borne by contractor. A comprehensive list of National Standards from which the contractor can draw references for complying with various requirements under this section is given under 9.10

##### **9.1.2**

Hold BHEL harmless and indemnified from and against all claims, cost and charges under Workmen's Compensation Act 1923 and 1933 and any amendment thereof and the contractor shall be solely responsible for the same.

#### 9.1.3

Abide by the Procedure governing entry/exit of the contractor's personnel within the Customer/Client premises. All the contractors employees shall be permitted to enter only on displaying of authorized Photo passes or any other documents as authorized by the Customer/Client.

#### 9.1.4

Be fully responsible for the identity, conduct and integrity of the personnel/workers engaged by them for carrying out the contract work and ensure that none of them are ever engaged in any anti national activity

#### 9.1.5

Prepare a signboard giving the following information and display it near work site:

- i) Name of Contractor
- ii) Name of Contractor Site-in-charge & Telephone number
- iii) Job Description in short
- iv) Date of start of job
- v) Date of expected completion
- vi) Name of BHEL Site-in-charge.

#### 9.1.6

Abide by the rules and regulations existing during the contract period as applicable for the contractors at the Project premises.

#### 9.1.7

Observe the timings of work as advised by BHEL Engineer-in-charge for carrying out the contract work.

### 9.2 **SPECIAL CONDITIONS**

#### 9.2.1 **Safety**

##### 9.2.1.1 **Safety Plan**

Before commencing the work, contractor shall submit a "safety plan" to the authorized BHEL official. The safety plan shall indicate in detail the measures that would be taken by the contractor to ensure safety to men, equipment, material and environment during execution of the work. The plan shall take care to satisfy all requirements specified hereunder.

The contractor shall submit "safety plan" before start of work. During negotiations, before placing of work order and during execution of the contract, BHEL shall have right to review and suggest modifications in the safety plan. Contractor shall abide by BHEL's decision in this respect.

##### 9.2.1.2

The contractor shall take all necessary safety precautions and arrange for appropriate appliances and/or as per direction of BHEL or it's authorized person to prevent loss of human lives, injuries to men engaged and damage to property and environment.

##### 9.2.1.3

The contractor shall provide to his work force and also ensure the use of Personnel Protection Equipment (PPE) as found necessary and/or as directed and advised by BHEL officials without which permission is liable to be denied.

- Safety helmets conforming to IS 2925/1984 (1990)

- Safety belts conforming to IS 3521/1989
- Safety shoes conforming to IS 1989 part-II /1986(1992)
- Eye and face protection devices conforming to IS 2573/1986(1991), IS 6994 (1973), part-I (1991), IS 8807/1978 (1991), IS 8519/1977(1991).
- Other job specific PPEs of standard ISI make as may be prescribed

#### 9.2.1.4

All tools, tackles, lifting appliances, material handling equipment, scaffolds, cradles, cages, safety nets, ladders, equipment, etc used by the contractor shall be of safe design and construction. These shall be tested and certificate of fitness obtained before putting them to use and from time to time as instructed by authorized BHEL official who shall have the right to ban the use of any item found to be unsafe.

#### 9.2.1.5

All electrical equipment, connections and wiring for construction power, its distribution and use shall conform to the requirements of Indian Electricity Act and Rules. Only electricians licensed by the appropriate statutory authority shall be employed by the contractor to carryout all types of electrical works. All electrical appliances including portable electric tools used by the contractor shall have safe plugging system to source of power and be appropriately earthed.

#### 9.2.1.6

The contractor shall not use any hand lamp energized by electric power with supply voltage of more than 24 volts. For work in confined spaces, lighting shall be arranged with power source of not more than 24 volts.

#### 9.2.1.7

The contractor shall adopt all fire safety measures as per relevant Indian Standards

#### 9.2.1.8

Where it becomes necessary to provide and/or store petroleum products, explosives, chemicals and liquid or gaseous fuel or any other substance that may cause fire or explosion, the contractor shall be responsible for carrying out such provisions and/or storage in accordance with the rules and regulations laid down by the relevant government acts, such as petroleum act, explosives act, petroleum and carbides of calcium manual of the chief controller of explosives, Government of India etc. The contractor in all such matters shall also take prior approval of the authorized BHEL official at the site.

#### 9.2.1.9

Proper means of access must be used e.g. ladders, scaffolds, platforms etc. No makeshift access such as oil drums or pallets shall be used. Design of these will be in accordance with relevant standards and certified by competent persons before use.

#### 9.2.1.10

Temporary arrangements made at Site for lifting , platforms, approach access etc should be properly designed and approved before being put to use.

#### 9.2.1.11

All excavations and openings must be securely and adequately fenced/barricaded and warning signs erected when considered necessary as per relevant code of practice.

#### 9.2.1.12

No persons shall remove guardrails, covers or protective devices unless authorized by a responsible supervisor and alternative precautions have been taken

#### 9.2.1.13

Access ways, means of escape and fire exits shall be clearly marked, kept clear and unobstructed at all times

#### 9.2.1.14

Only authorized persons holding relevant license will drive and operate site plant and equipments e.g. cranes, dumpers, excavators, transport vehicles etc

#### 9.2.1.15

Only authorized personnel are allowed to repair, commission electrical equipments.

#### 9.2.1.16

Gas Cylinders shall be handled and stored as per Gas Cylinders Rules and relevant safe working practices

#### 9.2.1.17

All wastes generated at Site shall be segregated and collected in a designated place so as to prevent spillage/contamination/scattering at Site, until the waste is lifted for disposal to designated disposal area as advised by BHEL official.

#### 9.2.1.18

The contractor shall arrange at his cost (wherever not specified) appropriate illumination at all work spots for safe working when natural day light is not adequate for clear visibility.

#### 9.2.1.19

The contractor shall train adequate number of workers/supervisors for administering "FIRST AID". List of competent first aid administers should be prominently displayed.

#### 9.2.1.20

The contractor shall display at strategic places and in adequate numbers the following in fluorescent markings

- Emergency telephone numbers
- Exit, Walkways
- Safe working load charts for wire ropes, slings, D shackles etc
- Warning signs

#### 9.2.1.21

The contractor shall be held responsible for any violation of statutory regulations (local, state or central) and BHEL instructions that may endanger safety of men, equipment, material and environment in his scope of work or other contractors or agencies. Cost of damage, if any, to life and property arising out of such violation of statutory regulations and BHEL instructions shall be borne by the contractor.

#### 9.2.1.22

In case of a fatal or disabling injury/accident to any person at construction sites due to lapses by the contractor, the victim and/or his/her dependents shall be compensated by the contractor as per statutory requirements. However, if considered necessary, BHEL shall have the right to impose appropriate financial penalty on the contractor and recover the same from payments due to the contractor for suitably compensating the victim and/or his/her dependents. Before imposing any such penalty, appropriate enquiry shall be held by BHEL giving opportunity to the contractor to present his case.

#### 9.2.1.23

In case of any damage to property due to lapses by the contractor, BHEL shall have the right to recover cost of such damages from payments due to the contractor after holding an appropriate enquiry.

#### 9.2.1.24

In case of any delay in the completion of a job due to mishaps attributable to lapses by the contractor, BHEL shall have the right to recover cost of such delay from payments due to the contractor after notifying the contractor suitably and giving him opportunity to present his case.

#### 9.2.1.25

If the contractor fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given a reasonable opportunity to do so, and/or if the contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions regarding safety issued by the authorized BHEL official, BHEL shall have the right to take corrective steps at the risk and cost of the contractor after giving a notice of not less than seven days indicating the steps that would be taken by BHEL.

#### 9.2.1.26

### **Emergency Response**

BHEL will have an Emergency Response Plan for each Project Site in consultation with the Owner as the case may be, detailing the procedure for mobilization of personnel and equipment, and defining the responsibilities of the personnel indicated, in order to prepare for any emergency that may arise in order to ensure the priorities of

- Safeguard of life
- Protect assets under construction or neighbouring
- Protect environment
- Resumption of normal operations as soon as the emergency condition is called off

All Contractors shall also be part of the Emergency response Plan and the personnel so nominated shall be aware of their duties and responsibilities in an emergency response situation.

#### 9.2.1.27

At least 5% Contractors supervisors and workmen shall undergo training in administering 'First Aid'. The trained persons should represent for all categories of work and for all areas of work. Adequate number of trained persons should be available for each shift. These first aides shall be included in the emergency response team. Contractor employees and workmen are encouraged to participate in first aid training programmes whenever organized by BHEL.

## **9.2.2 OCCUPATIONAL HEALTH**

### 9.2.2.1

Specific occupational health hazards will be identified through the hazard evaluation processes in consultation with BHEL engineers and the necessary prevention/reduction/elimination methods implemented.

### 9.2.2.2

All personnel working in an activity with a potential risk to health shall be made aware of all those risks and the actions they must take to reduce/control/eliminate the risk

### 9.2.2.3

Safety coordinator shall conduct periodic checks to ensure that every group of workers engaged in similar activities are aware of potential risks to health and the actions required to be taken to mitigate the risk

#### 9.2.2.4

In order to protect personnel from associated health hazards, the following main areas will be focused

- Issue of approved Personnel Protective Equipment
- Verification that the PPE are adequate/maintained and worn by all staff involved in operations that are potentially hazardous to their health
- Ensure that the personnel deployed are physically fit for the operation/work concerned
- Provide hygienic and sanitary working conditions

#### 9.2.2.5

Contractor workers employees engaged in noise risk areas shall be issued with hearing protection aids and the use of the same will be enforced. Further, these workers will be educated on the hazards of noise

#### 9.2.2.6

Contractor workers engaged in dust environment shall be issued with necessary dust protection aids and the use of the same shall be enforced

#### 9.2.2.7

Workers engaged in exposure to bright light/rays as in welding or radiation shall be issued with eye protection devices and the use of the same shall be enforced

#### 9.2.2.8

Adequate arrangements shall be made to provide safe drinking water

#### 9.2.2.9

Health monitoring records on at least sample basis for contractor employees & workmen shall be maintained for persons engaged in specified categories of work. These shall include

- Noise induced hearing loss
- Lung Function test
- Ergonomic Test
- Eye Test for Welders, Grinders, Drivers etc

### **9.2.3.0 HYGIENE and HOUSEKEEPING**

#### 9.2.3.1

Good house keeping and proper hygiene is one of the key requirements of Occupational Health Safety and Environment management. Towards this the contractor shall encourage his workers and supervisors to maintain cleanliness in their area of work.

#### 9.2.3.2

The Contractor shall arrange to place waste bins/chutes at convenient locations for the collection of scrap and other wastes. The bins shall be clearly marked and segregated for metal, non-metal, hazardous and non hazardous wastes.

#### 9.2.3.3

BHEL may take up appropriate remedial measures at the cost of the contractors if the contractors fail in good house keeping and if there is an imminent risk of pollution

## **9.2.4 ENVIRONMENT MANAGEMENT**

### **9.2.4.1**

BHEL has a sound environmental management system, which is to be maintained and implemented by all the contractors. The system allows for project specific objectives to be set and developed sensitive to client requirements, applicable environmental legislation and BHEL's own objectives and policy. BHEL engineers will assess and monitor the environmental impact of their work and lay out objectives for their minimization. The contractors shall implement the objectives for continual improvement of environmental performance. BHEL shall regularly audit environmental impacts and their improvements.

### **9.2.4.2 WASTE MANAGEMENT**

#### **9.2.4.3.1**

The objective of waste management is to ensure the safe and responsible disposal of waste, ensuring that it is correctly disposed of and being able to audit the process to ensure compliance.

#### **9.2.4.3.2**

Chemical wastes if any shall be collected separately and disposed of to BHEL designated refuse yard as per BHEL advice.

#### **9.2.4.3.3**

No dangerous chemicals, noxious waste products or materials will be disposed off on or off site without approval obtained through BHEL.

#### **9.2.4.3.4**

All disposal of wastes generated during construction shall be in accordance with all relevant legislation.

#### **9.2.4.3.5**

Acid and alkali cleaning wastes shall be neutralized to acceptable norms before disposal to the designated area.

#### **9.2.4.3.6**

All necessary measures shall be taken to ensure safe collection and disposal of waste oils. In particular to ensure the prevention of their discharge into surface waters, ground waters, coastal waters or drainages

## **9.3 SUPERVISION**

### **9.3.1**

Contractor must provide at least one full time on site safety coordinator when the manpower engaged is in excess of 50 for the contract activities in the premises. If the manpower is less than 50, the on site safety coordination responsibilities shall be assumed by any one of the contractor's other supervisory staff; however in both the cases, the contractor must specify in writing the name of such persons to the BHEL Engineer in Charge.

### **9.3.2**

Contractor's safety coordinator or his supervisor responsible for safety as the case may be shall conduct at his work site, and document formal safety inspection and audits at least once in a week. Such documents are to be submitted to BHEL Engineer in Charge for his review and record.

Contractor, supervisor must attend all schedule safety meetings as would be intimated to him by the BHEL Engineer in Charge.

### 9.3.3

Before starting work under any contract, the contractor must ensure that a job specific safety procedures/field practices as required over and above the safety permit conditions are prepared and followed .He should also ensure that all supervisors and workers involved understand and follow this procedures /field practices.

### 9.3.4

Contractor must ensure that in his work site appropriate display boards are put displaying signs for site safety, potential hazards and precautions required.

## 9.4.0 **TRAINING & AWARENESS**

### 9.4.1

Contractor shall deploy experienced supervisors and other manpower who are well conversant with the safety and environment regulations of the Project. The electricians to be deployed on the job should have wireman license.

### 9.4.2

All Supervisors & Workmen of the Contractor shall undergo Fire safety training/ demonstration whenever arranged by BHEL with the help of either Customer's Fire and Safety department or outside faculty so as to acquire knowledge of fire prevention and also to be able to make use of appropriate fire extinguishers.

### 9.4.3

Contractor must familiarize himself from BHEL Engineer in Charge about all known potential fire, explosion or toxic release hazards related to the contract. He in turn will ensure that same information has been passed to the supervisors and workmen

### 9.4.4

Contractor must ensure that all his supervisors are properly trained and each employee has received and understood from his supervisor necessary training and briefing about the safety requirement. Necessary document as a means to verify that employees have understood the training is to be maintained.

### 9.4.5

The contractor supervisors shall also give a small safety briefing to all the workmen under his charge before undertaking any new work and specially understand the safety requirements that are mandatory

## 9.5.0 **REPORTING**

### 9.5.1

The contractor shall submit report of all accidents, fires and property damage, dangerous occurrences to the authorized BHEL official immediately after such occurrence but in any case not later than twelve hours of the occurrence. Such report shall be furnished in the manner prescribed by BHEL and also to meet statutory requirement.

### 9.5.2

Any injury sustained by any of the contractor's employees within the Project premises must be reported to BHEL supervisor and FIRST AID should be immediately administered. The Contractor shall be responsible for keeping and maintaining proper records of Accidents to his personnel.

### 9.5.3

Contractor must arrange to immediately investigate, properly document and report any injury, accident or near miss involving any of his employees and take appropriate follow up

action. He must furnish within 12 hours of the incident a written report to BHEL Engineer in charge and the Safety Section.

#### 9.5.4

According to the Factory Act and the Employees state Insurance Act & regulation, any person sustaining any injury within the project premises and absenting himself from work for more than 46 hours, his accident report has to be sent to the respective Government Authorities. Therefore contractor shall inform the owner's representative such matter immediately for their needful action.

#### 9.5.5

In addition, contractor shall submit periodic reports on safety to the authorised BHEL official from time to time as prescribed.

#### 9.5.6

Before commencing the work, the contractor shall appoint/nominate a responsible officer to supervise implementation of all safety measures and liaison with his counterpart of BHEL.

### 9.6 AUDIT REVIEW AND INSPECTION

#### 9.6.1

BHEL shall conduct audit on the contractor performance and compliance with the project specific requirements of the Environment and Occupational Health & Safety Management systems. The programme of audit shall cover all activities under the contract but will focus particularly on high-risk activities. The Construction Manager shall decide the schedule of audit. The audit findings shall be communicated to the contractors and necessary remedial action as advised by BHEL Engineers shall be under taken within the stipulated time.

#### 9.6.2

Inspections shall be carried out regularly by the contractors and by BHEL Engineers on activities, facilities, equipment, documentation, to cover the following aspects.

- Compliance with procedures and systems
- Availability, condition and use of PPE
- Condition of maintenance tools, equipments, facilities
- Availability of fire fighting equipments and its condition
- Use of fire fighting equipments and first aid kit
- Awareness of occupational health hazard
- Awareness of safe working practices
- Presence of quality supervision
- Housekeeping

The Safety coordinator shall visit and inspect work sites daily. All unsafe acts, unsafe conditions that have imminent potential for causing harm/injury/damage will be immediately corrected. He shall maintain a daily logbook giving details of unsafe acts or conditions observed and the corrective action taken and recommendations for preventing recurrence. Adequacy of corrective actions will be verified

The contractor shall take remedial measures as per the findings of each inspection Besides the above, the contractor shall be required to carry out the following inspections

Sl no	Equipment	Scope of inspection	Inspection by	Schedule
1	Hand tools	To identify unsafe/defective tool	User	Daily
2	Power tools	To identify unsafe/defective	User	Daily

		tool		
3	Fire Extinguishers	To check pressure and any defect	User / Safety Coordinator	Daily Every month
4	Lifting equipment/tackles	To check for defects and efficacy of brakes	User Third party	Daily Every Year
5	PPE	To check for defects	User	Daily

#### 9.7 **NON COMPLIANCE:-**

##### 9.7.1

NONCONFORMITY OF SAFETY RULES AND SAFETY APPLIANCES WILL BE VIEWED SERIOUSLY AND THE BHEL HAS RIGHT TO IMPOSE FINES ON THE CONTRACTOR AS UNDER **for every instance of violation noticed:**

Sl. No	Instance of Violation	Fine (in Rs)
01	Not Wearing Safety Helmet	50/-
02.	Not wearing Safety Belt	100/-
03.	Grinding Without Goggles	50/-
04.	Not using 24 V Supply For Internal Work	500/-
05.	Electrical Plugs Not used for hand Machine	100/-
06.	Not Slinging property	200/-
07.	Using Damaged Slings	200/-
08.	Lifting Cylinders Without Cage	500/-
09.	Not Using Proper Welding Cable With Lot of Joints And Not Insulated Property.	200/-
10.	Not Removing Small Scrap From Platforms	200/-
11.	Gas Cutting Without Taking Proper Precaution or Not Using Sheet Below Gas Cutting	200/-
12.	Not Maintaining Electric Winches Which are Operated Dangerously	500/-
13.	Improper Earthing Of Electrical T&P	500/-
	Major Accident or Accidents causing partial loss of earning to the victim	50,000/- per victim
14	Fatal Accident or Accidents causing permanent loss of earning to the victim	1,00,000/- per victim

Any other non-conformity noticed not listed above will also be fined as deemed fit by BHEL. The decision of BHEL engineer is final on the above. The amount will be deducted from running bills of the contractor. The amount collected above will be utilised for giving award to the employees who could avoid accident by following safety rules. Also the amount will be spent for purchasing the safety appliances and supporting the safety activity at site.

#### 9.8

**CITATION:-**If safety record of the contractor in execution of the awarded job is to the satisfaction of safety department of BHEL, issue of an appropriate certificate to recognize the safety performance of the contractor may be considered by BHEL after completion of the job

#### 9.9 **Memorandum of Understanding**

After Award Of Work, Contractors Are Required To Enter Into A Memorandum Of Understanding As Given Below:

**Memorandum of Understanding**

**BHEL, PSWR is committed to Health, Safety and Environment Policy (EHS Policy) as given in the booklet titled “ Safe Working Practices” issued to all contractors.**

M/s \_\_\_\_\_ do hereby also commit to the same EHS Policy while executing the Contract Number \_\_\_\_\_

**M/s \_\_\_\_\_ shall ensure that safe work practices not limited to the above booklet are followed by all construction workers and supervisors. Spirit and content therein shall be reached to all workers and supervisors for compliance.**

BHEL will be carrying out EHS audits twice a year and M/s \_\_\_\_\_ shall ensure to close any non-conformity observed/reported within fifteen days.

Signed by authorized representative of M/s-----

Name :

Place & Date:

**9.10**

Comprehensive list of National Standards for reference and use wherever applicable in the execution of Civil, Erection and Commissioning Contracts.

IS No	YEAR	Amd upto	DESCRIPTION
IS 10204	1982		PORTABLE FIRE EXTINGUISHERS MECHANICAL FOAM TYPE
IS 10245	1994		SPECIFICATION FOR BREATHING APPARATUS
IS 10291	1982		SAFETY CODE FOR DRESS DRIVERS IN CIVIL ENGINEERING WORKS
IS 10658	1983		HIGHER CAPACITY DRY POWDER FIRE EXTINGUISHERS (TROLLEY MOUNTED)
IS 10662	1992		COLOUR TELEVISION
IS 10667	1983		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR PROTECTION OF FOOT AND LEG
IS 11037	1984		ELECTRONIC FAN REGULATORS
IS 11057	1984		INDUSTRIAL SAFETY NETS
IS 11451	1998		RECOMMENDATION FOR SAFETY AND HEALTH REQUIREMENT RELATING TO OCCUPATION EXPOSURE TO ASBESTOS
IS 1169	1967		PEDESTAL FANS
IS 1179	1967		SPECIFICATION FOR EQUIPMENT FOR EYE AND FACE PROTECTION DURING WELDING
IS 11833	1986		DRY POWDER FIRE EXTINGUISHERS FOR METAL FIRES
IS 11972	1987		CODE OF PRACTICE FOR SAFETY PRECAUTION TO BE TAKEN WHEN ENTERING A SEWAGE SYSTEM
IS 1287	1986		ELECTRIC TOASTER
IS 13063	1991		STRUCTURAL SAFETY OF BUILDINGS ON SHALLOW FOUNDATIONS ON ROCKS

IS No	YEAR	Amd upto	DESCRIPTION
IS 13385	1992		SPECIFICATIONS FOR FIRE EXTINGUISHERS 50 LITRE WHEEL MOUNTED WATER TYPE (GAS CARTRIDGES)
IS 13386	1992		SPECIFICATIONS FOR FIRE EXTINGUISHERS 50 LITRE MECHANICAL FOAM TYPE
IS 13415	1992		CODE OF SAFETY FOR PROTECTIVE BARRIERS IN AND AROUND BUILDINGS
IS 13416	1992		RECOMMENDATIONS FOR PREVENTIVE MEASURES AGAINST HAZARDS AT WORKING PLACE PART 1 TO PART 5
IS 13430	1992		CODE OF PRACTICE FOR SAFETY DURING ADDITIONAL CONSTRUCTION AND ALTERATION TO EXISTING BUILDINGS
IS 13849	1993		PORTABLE FIRE EXTINGUISHERS DRY POWDER TYPE ( CONSTANT PRESSURE)
IS 1446	1985		CLASSIFICATION OF DANGEROUS GOODS (FIRST REVISION)
IS 1476	1979		REFRIGERATORS
IS 1641	1988		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS (GENERAL): GENERAL PRINCIPLES OF FIRE GRADING AND CLASSIFICATION
IS 1642	1989		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS-DETAILS OF CONSTRUCTION
IS 1643	1988		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS (GENERAL): EXPOSURE HAZARD
IS 1646	1997		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS (GENERAL): ELECTRICAL INSTALLATIONS
IS 1904	1986		CODE OF PRACTICE FOR DESIGN AND CONSTRUCTION OF FOUNDATIONS IN SOIL
IS 1905	1987		STRUCTURAL SAFETY OF BUILDINGS MASONARY WALLS
IS 2082	1985		ELECTRICAL GEYSERS
IS 2171	1985		PORTABLE FIRE EXTINGUISHERS DRY POWDER TYPE (CARTRIDGE)
IS 2309	1989		PRACTICE FOR THE PROTECTION OF BUILDINGS AND ALLIED BUILDINGS AGAINST LIGHTENING
IS 2312	1967		EXHAUST FANS
IS 2361	1994		SPECIFICATION FOR BUILDING GRIPS - FIRST REVISION
IS 2418	1977		TUBULAR FLUORSCENT LAMPS IS 2418 (FT-1)
IS 2750	1964		STEEL SCAFFOLDINGS
IS 2762	1964		SAFE WORKING LOADS IN KGS FOR WIRE ROPE SLINGS
IS 2878	1986		FIRE EXTINGUISHERS CARBON DIOXIDE TYPE (PORTABLE AND TROLLEY MOUNTED)
IS 2925	1984		SPECIFICATION FOR INDUSTRIAL SAFETY HELMETS
IS 3016	1982		CODE OF PRACTICE FOR FIRE PRECAUTIONS IN WELDING AND CUTTING OPERATIONS- FIRST REVISION
IS 3315	1974		DESERT COOLERS
IS 3521	1989		INDUSTRIAL SAFETY BELTS AND HARNESS
IS 368	1983		IMMERSION WATER HEATERS
IS 3696	1991		SAFETY CODE OF SCAFFOLDS AND LADDERS PART 1 TO 2
IS 3737	1996		LEATHER SAFETY BOOTS FOR WORKERS IN HEAVY METAL INDUSTRIES
IS 374	1979		CEILING FANS INCLUDING REGULATORS
IS 3764	1992		EXCAVATION WORK - CODE OF SAFETY
IS 3786	1983		METHOD FOR COMPUTATION OF FREQUENCY AND SEVERITY RATES FOR INDUSTRIAL INJURIES AND CLASSIFICATION OF

IS No	YEAR	Amd upto	DESCRIPTION
			INDUSTRIAL ACCIDENTS
IS 3935	1966		CODE OF PRACTICE FOR COMPOSITE CONSTRUCTION
IS 4014	1967		CODE OF PRACTICE FOR STEEL TUBULAR SCAFFOLDING
IS 4081	1986		SAFETY CODE FOR BLASTING AND RELATED DRILLING OPERATIONS
IS 4082	1977	1996	STACKING AND STORAGE OF CONSTRUCTION MATERIALS AND COMPONENTS AT SITE
IS 4130	1991		DEMOLITION OF BUILDINGS - CODE OF SAFETY PART 1 TO 2
IS 4138	1977		SAFETY CODE FOR WORKING IN COMPRESSED AIR (FIRST REVISION)
IS 4155	1966		GLOSSARY OF TERMS RELATING TO CHEMICAL AND RADIATION HAZARDS AND HAZARDOUS CHEMICALS
IS 4209	1967		CODE OF SAFETY FOR CHEMICAL LABORATORY
IS 4250	1980		FOOD MIXERS
IS 4262	1967		CODE OF SAFETY FOR SULFURIC ACID
IS 4756	1978		SAFETY CODE FOR TUNNELING WORK
IS 4912	1978		SAFETY REQUIREMENTS FOR FLOOR AND WALL OPENINGS, RAILINGS AND TOE BOARDS
IS 5121	1969		SAFETY CODE FOR PILING AND OTHER DEEP FOUNDATIONS
IS 5182	1969	1982	METHODS FOR MEASUREMENT OF AIR POLLUTION
IS 5184	1969		CODE OF SAFETY FOR HYDROFLUORIC ACID
IS 5216	1982	2000	RECOMMENDATIONS ON SAFETY PROCEDURES AND PRACTICE IN ELECTRICAL WORK PART I AND II
IS 555	1979		TABLE FANS
IS 5557	1995		INDUSTRIAL AND SAFETY LINED RUBBER BOOTS ( SECOND REVISION)
IS 5916	1970		SAFETY CODE FOR CONSTRUCTION INVOLVING USE OF HOR BITUMINOUS MATERIALS
IS 5983	1980		SPECIFICATION FOR EYE PROTECTORS - FIRST REVISION
IS 6234	1986		PORTABLE FIRE EXTINGUISHERS WATER TYPE ( STORED PRESSURE)
IS 692	1994		CRITERIA FOR SAFETY AND DESIGN OF STRUCTURES SUBJECTED TO UNDERGROUND BLASTS
IS 6994	1973		SPECIFICATION FOR SAFETY GLOVES
IS 7155	1986		CODE OF RECOMMENDED PRACTICE FOR CONVEYOR SAFETY (PART 1 TO 8)
IS 7205	1974		SAFETY CODE FOR ERECTION OF STRUCTURAL STEEL WORK
IS 7293	1974		SAFETY CODE FOR WORKING WITH CONSTRUCTION MACHINERY
IS 7323	1994		GUIDELINES FOR OPERATIONS OF RESERVOIRS
IS 7812	1975		CODE OF SAFETY FOR MERCURY
IS 7969	1975		SAFETY CODE FOR HANDLING AND STORAGE OF BUILDING MATERIALS
IS 8089	1976		CODE OF SAFE PRACTICE FOR LAYOUT OF OUTSIDE FACILITIES IN AN INDUSTRIAL PLANT
IS 8091	1976		CODE OF PRACTICE FOR INDUSTRIAL PLANT LAYOUT
IS 8095	1976		ACCIDENTS PREVENTION TAGS
IS 818	1968	1997	CODE OF PRACTICE FOR SAFETY AND HEALTH REQUIREMENTS IN ELECTRIC AND GAS WELDING, AND

IS No	YEAR	Amd upto	DESCRIPTION
			CUTTING OPERATIONS
IS 8448	1989		AUTOMATIC LINE VOLTAGE CORRECTOR (STABILISER)
IS 8519	1977		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR BODY PROTECTION
IS 8520	1977		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR EYE, FACE AND EAR PROTECTION
IS 875	1987		STRUCTURAL SAFETY OF BUILDING: LOADING STANDARD PART 1 TO 5
IS 8807	1978		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR PROTECTION OF ARMS AND HANDS
IS 8978	1985		INSTANTANEOUS WATER HEATERS
IS 8989	1978		SAFETY CODE FOR ERECTION OF CONCRETE FRAMED STRUCTURES
IS 940	1989		PORTABLE FIRE EXTINGUISHERS WATER TYPE ( GAS CARTRIDGE)
IS 9457	1980		SAFETY COLOURS AND SIGNS
IS 9679	1980		CODE OF SAFETY FOR WORK ENVIRONMENTAL MONITORING
IS 9706	1997		CODE OF PRACTICE FOR THE CONSTRUCTION OF AERIAL RPEWAYS FOR THE TRANSPORTATION OF MATERIAL
IS 9759	1981		GUIDELINES FOR DEWATERING DURING CONSTRUCTION
IS 9815	1989		SERVO MOTOR OPERATED LINE VOLTAGE CORRECTOR (SERVO STABILISER)
IS 9944	1992		RECOMMENDATIONS ON SAFE WORKING LOAD FOR NATURAL AND MAN-MADE FIBRE ROPE SLINGS
IS 996	1979		SINGLE PHASE ELECTRIC MOTORS
ISO 3873	1977		SAFETY HELMET

**10 BREAK IN SERVICES DUE TO BREAKDOWN, ABSENCE OF OPERATING CREW ETC. : DISALLOWANCE OF RENTAL/ OFFSETTING OF LOST HOURS**

10.1

The contractor shall ensure 100% availability of the services of crane. If however there is any breakdown of the crane, the services shall be restored at the earliest so as not to affect the work at project site. **Disallowance in monthly rental charges** shall be made towards non-availability of services of crane for any reasons whatsoever as under:

**10.1.1 Individual Incidences of Breakdown**

- a) **Up to 4 (four) hours in a single incidence:** Single pro-rata basis.
- b) **Single Incidence stretching more than four hours:** Single pro-rata basis up to 4 hours, followed by double pro-rata basis for duration exceeding four hours.

**10.1.2 Cumulative Breakdown Duration in a Month**

- a) **Up to 36 Hours in a Complete Calendar Month:** Single Pro-Rate basis.\*

- b) **Exceeding 36 Hours in a Complete Calendar Month:** Single Pro-Rata basis up to 36 hours, followed by double pro-rata basis for duration exceeding 36 hours. \*

**\* In both the cases (10.1.2.a and 10.1.2.b) as above, the conditions regarding disallowance due to individual incidence of breakdown (10.1.1.a and 10.1.1.b) shall essentially be applicable irrespective of the Cumulative Duration in the month.**

10.1.3 For billing period less than one calendar month, the limit of 36 hours shall be pro-rated as 10% of the Hire Period in number of hours (e.g. Hire Period in hours = utilized number of days in the calendar month x 12 hours per day).

## 10.2

BHEL may also choose to utilize the services of the crane in extended hours or on holidays to offset the lost hours due to breakdown in lieu of disallowance as stipulated above. Construction Manager BHEL shall permit offsetting of lost hours only after the incidence of such breakdown and usually within the remaining period of the concerned calendar month of breakdown. Carrying forward to subsequent months shall be at the sole discretion of BHEL construction manager.

Offsetting shall be done with express prior permission of BHEL Construction Manager by availing the services in extended hours or on holiday's maximum up to the same number of hours lost due to breakdown irrespective of the total duration or single instance duration mentioned in earlier paragraphs. Depending on the actual project requirement, BHEL may opt to offset the lost hours due to breakdown either partly or fully. In the event of partial offsetting, disallowance as in relevant clause shall be applicable for the remaining lost hours.

## 10.3

In case there is a major breakdown of the crane, the contractor shall repair it or substitute with similar or higher capacity crane with BHEL's prior consent (regarding acceptability of the substitute) within 15 days. Failure to do so, shall entitle BHEL to arrange alternative at the risk and cost of contractor. Disallowance of rental charges shall be applicable in accordance with relevant clause.

## **11 MOBILISATION PERIOD**

Crane with crew complete in all respect shall reach project site & made available for BHEL's work after load test **within 45 (Forty five) days** from BHEL's written deployment notice for respective crane.

## **12 SCOPE FOR MOBILISATION & DEMOBILISATION**

Contractor shall arrange suitable capacity assist cranes and Tools & Tackles at the respective project site for unloading of crane sub-assemblies, components, assembly, dismantling/loading of the crane during mobilization & de-mobilization of crane. Contractor shall also arrange to and fro transportation, skilled manpower and consumables at his own cost.

**13**            **DAILY LOG BOOK**

The contractor shall maintain a logbook in duplicate giving full operation details, preventive maintenance and Breakdown records and obtain counter signature of BHEL Engineer in Charge on a daily basis. Original log sheets shall be submitted to BHEL at regular intervals as directed by BHEL and before submission of monthly bills.

**14**            **REPAIR & MAINTENANCE COST**

The cost of repairs arising during the operation should be borne by the contractor. Necessary manpower, fuel, lubricants, tools & tackles, assist cranes and spare parts shall be made available by the contractor as a normal scope to attend the breakdowns.

**15**            **RELIEVERS FOR OPERATING CREW**

In case any member of the operating crew proceeds on leave/ is absent, the contractor shall arrange alternative beforehand for continuation of work to meet BHEL's time-bound erection programme.

**16**            **BOOM EXTENSION & REDUCTION**

First assembly of the entire crane including required boom length, as decided by Construction Manager BHEL and dismantling for demobilization are in regular scope of these services.

For any in-between requirement of boom extension or reduction of the cranes at site, the manpower, tools and tackles required shall be provided by BHEL's erection agency free of charges. However the Contractor shall extend supervisory services of the operating crew for all such instances as necessary for BHEL. This duration shall be treated as services utilized and considered for payment of hire charges.

**17**            **INSURANCE COVER FOR MEN & MATERIALS**

The Contractor shall arrange necessary CPM Insurance cover with appropriate Third Party Liability cover for the cranes and WC/Personal Accident Policy as applicable for the O&M crew. If any accident/injury/loss occurs due to the operation of the crane, to any other persons/ public and the properties of BHEL/client/other agencies/third party, the contractor shall have to pay necessary compensation and other expense, so decided by the appropriate authorities.

BHEL/Client has obtained comprehensive Marine cum Erection All Risks Insurance Policy for the plant under installation and other assets of BHEL. Accidental loss/damage to these materials will be covered under this policy. Contractor shall arrange for necessary insurance cover for the assets owned by him.

## **18 ACCOMODATION & LOCAL CONVEYANCE**

Contractor has to make their own arrangement for accommodation, local transport and other amenities for their crew at project site.

## **19 FITNESS OF CRANE AS HEAVY LIFTING EQUIPMENT**

Contractor shall arrange and submit fitness certificate of the assembled crane at site from the statutory authority as applicable.

## **20 LOAD TESTING AT SITE**

BHEL will provide suitable load for carrying out the load test on assembled crane, however contractor shall arrange to & fro transportation of such test load within plant premises and return the same after completion of load test at their own cost. Depending upon the availability of load, the load test shall be conducted at the appropriate radius as applicable for a particular boom length as per crane load capacity chart.

## **23.0 GATE PASS FOR MEN & MATERIALS**

Contractor shall arrange the entry/out gate pass for their crew and materials for which necessary documents will be forwarded by BHEL to the client. Contractor shall maintain duly endorsed records of all incoming equipments to facilitate grant of outward gate pass.

## **24.0 LIQUIDATED DAMAGES**

The bidder is to clearly understand that timely deployment of the services complete with equipment and crew is very vital to this contract. Therefore deployment of crane with all necessary attachments, components and O&M crew specified in the work order shall be made within the time limit prescribed in the contract. In case of delay in deployment beyond the period specified in the order, BHEL will have no obligation to accept the crane and reserves the right to levy liquidated damages @ 0.5% (half percent) of the Order Value for each week of delay or part thereof, subject to a maximum of 5% of the Order Value.

In exceptional cases where the reasons for delay in deployment of crane at the project site are beyond the control of the contractor (e.g., Natural Calamities, Riot, Strike and Force Mejeure conditions) extension of delivery date may be granted by BHEL on merit. Documentary evidences supporting the reasons of such delay are to be produced by the contractor.

## **25.0 FUEL, LUBE AND HYDRAULIC OIL ETC.**

Fuel oil (HSD) for normal operation of the crane shall be provided by BHEL/ BHEL's erection contractor after the services of the crane is accepted by BHEL after first load test till the services are being utilized by BHEL. Consumption of fuel shall be as indicated by the bidder in this offer (Technical Bid). Excess consumption, if any, due to inefficient engine performance,

leakage, theft and other reasons attributable to the bidder/crane shall be on the bidders account.

The bidder at his own cost shall arrange and meet the HSD required during breakdown maintenance.

Hydraulic oil, Engine Oil, Grease and all other lubricants and associated consumables e.g. filter elements etc have to be arranged by the contractor/bidder at his own cost. In case such or any consumables are arranged by BHEL, recovery at actual procurement cost plus overhead charges (currently @30%) shall be recovered by BHEL.

## **26.0 HOLIDAYS AND OTHER BENEFITS:**

Three national holidays shall be treated as holidays for the operation of this contract. In case services are availed on these days, the same will be treated as overtime.

Being an important power project construction work, erection activities are likely to be carried out on Sundays and other holidays as well. No extra payments are envisaged other than the rentals for such holidays as specified elsewhere herein. The rates quoted by bidders shall be inclusive of such considerations.

## **27.0 GENERAL**

27.1 In case of any contradiction between “General Condition of Contract” & “Special Conditions of Contract” of this Tender Specification, the provisions of Special Condition of Contract shall prevail.

27.2 In case of contradictions between Quoted Unit Rate and Total Amount, the quoted Unit Rate shall be taken as correct and total amount recalculated for the intended order quantity.

27.3 In case of contradictions between Rates in Figures and Rates Words, the lesser of the two shall be considered as correct.

**27.4 Bidders are free to offer alternative models/make of crane for a specific requirement. However only one Price Bid/Rate shall be submitted for a specific category of crane in the specific price bid format of BHEL.**

**27.5 In case BHEL finds that any bidder has furnished incorrect information, the offer is liable for rejection.**

## **28.0 SUSPENSION OF BUSINESS DEALING WITH CONTRACTORS (w.e.f 18.05.09)**

A bidder may be put on HOLD for a period of 6 months, for future tenders for specific works on the basis of one or more of the following reasons:

- I. Bidder does not honour his own offer or any of its conditions within the validity period.
- II. Bidder fails to respond against three consecutive enquires of BHEL.
- III. After placement of order, Bidder fails to execute a contract.
- IV. Bidder fails to settle sundry debt account, for which he is legitimately liable, within one year of its occurrence.
- V. Bidder's performance rating falls below 60% in specific category.
- VI. Bidder works are under strike/ lockout for a long period.

A Bidder may be de-listed from the list of registered Bidders of the region for a period of 1 year on the basis of one or more of the following reasons:-

- VII. Bidder tampers with tendering procedure affecting ordering process or commits any misconduct which is contrary to business ethics.
- VIII. Bidder has substituted, damaged, failed to return, short returned or unauthorizedly disposed off materials/ documents/ drawings/ tools etc of BHEL.
- IX. Bidder no longer has the technical staff, equipment, financial resources etc. required to execute the orders/ contracts.

A Bidder can be banned from doing any business with all Units of BHEL for a period of 3 years on the basis of one or more of the following reasons:

- X. Bidder is found to be responsible for submitting fake/ false/ forged documents, certificates, or information prejudicial to BHEL's interest.
- XI. In spite of warnings, the Bidder persistently violates or circumvents the provisions of labour laws/ regulations/ rules and other statutory requirements.
- XII. Bidder is found to be involved in cartel formation.
- XIII. The Bidder has indulged in malpractices or misconduct such as bribery, corruption and fraud, pilferage etc which are contrary to business ethics.
- XIV. The Bidder is found guilty by any court of law for criminal activity/ offences involving moral turpitude in relation to business dealings.
- XV. The Bidder is declared bankrupt, insolvent, has wound up or been dissolved; i.e ceases to exist for all practical purposes.
- XVI. Bidder is found to have obtained Official Company information/ documentation by questionable means.
- XVII. Communication is received from the administrative Ministry of BHEL to ban the Bidder from business dealings.

## **INSTRUCTION FOR FILLING UP APPENDICES**

**Please note the following while filling up the Appendices.**

- 1. Blank Formats for technical and other essential details of offered Crane/s are furnished in these Appendices. Bidder must fill up all the details and submit as part of Technical cum Commercial Bid. These details shall not be furnished with Price Bid.**
- 2. In case the Bidder offers alternative models for a particular requirement, they shall use copy of the relevant Appendix for furnishing these details for each alternative/option.**
- 3. Options must be clearly assigned identification numbers and indicated in the relevant space in the Appendix.**
- 4. Bidders shall furnish appropriate supporting documents duly furnishing cross-reference in the Appendices.**
- 5. In case of insufficient space in the Appendix, bidder shall use additional sheets in order to furnish complete information.**

**TECHNICAL DETAILS OF OFFERED HLHR CRANE REQUIRED FOR  
2x250 MW SATPURA TPS, MADHYA PRADESH**

**Crane Identification Code : Crane 1: HLHR**

Option No. .... of ..... (please indicate in 'X of Y' format)

SN	DESCRIPTION	AS BEING OFFERED BY BIDDER	SUPPORTING DOCUMENT REFERENCE
1	NAME OF CRANE MANUFACTURER		
2	CRANE MODEL NO.		
3	MFG SL. NO. OF CRANE		
4	MAXIMUM RATED CAPACITY IN METRIC TONNES		
	WORKING RADIUS FOR MAX RATING		
5	FURNISH TECHNICAL/ TYPE OF BOOM CONFIGURATION & LOAD CHART SPECIFIC TO BOOM, WHICH SHALL BE PROVIDED. SPECIFY , WHETHER OFFERED CRANE IS WITH OR WITHOUT HEAVY LIFT ATTACHMENT WHAT IS THE MAXIMUM CAPACITY OF CRANE WITHOUT HLA		
6	TYPE OF MAIN & JIB BOOM OFFERED		
7	LENGTH OF BASIC BOOM		
8	TOTAL LENGTH OF MAIN BOOM		
9	LENGTHS OF MAIN BOOM INSERTS		
10	LENGTH OF BASIC JIB		
11	TOTAL LENGTH OF JIB		
12	LENGTHS OF JIB INSERTS		
13	LIFTING CAPACITY OF MAIN HOOK BLOCK IN MT		
14	LIFTING CAPACITY OF JIB (AUXILIARY) HOOK BLOCK IN MT		
15	WIDTH OF EACH CRAWLER ASSEMBLY		

TECHNICAL DETAILS OF OFFERED **HLHR** CRANE REQUIRED FOR  
**2x250 MW SATPURA TPS, MADHYA PRADESH**

**Crane Identification Code : Crane 1: HLHR**

Option No. .... of ..... (please indicate in 'X of Y' format)

SN	DESCRIPTION	AS BEING OFFERED BY BIDDER	SUPPORTING DOCUMENT REFERENCE
16	COPY OF LATEST TEST CERTIFICATE		
17	CRANE LOAD CAPACITY CHART ENCLOSED		
18	CRANE PRODUCT CATALOGUE ENCLOSED		
19	DETAILS OF SAFETY FEATURES IN THE OFFERD CRANE		
20	CERTIFICATION OF "SAFE CONSTRUCTION EQUIPMENT" OF THE OFFERED CRANE FROM ANY REGULATORY AUTHORITY		
21	DIMENSION OF CRANE IN OPERABLE CONDITION (WITH SKETCH/DRAWING/PHOTOGRAPH)		
22	PRESENT LOCATION OF ENGAGEMENT OF THE OFFERED CRANE <b>WITH CONTACT TELEPHONE NUMBERS</b> AND ADDRESS		
23	SCHEDULE FOR DEPLOYMENT AT BHEL PROJECT SITE AS PER TENDER SPECIFICATION		
24	DEPLOYMENT HISTORY OF OFFERED CRANE IN LAST FIVE YEARS (INDICATING NAMES OF THE CUSTOMERS IN NEXT COLUMN, AND ENCLOSE COPY OF ORDERS AND COMPLETION CERTIFICATE AS REF DOCUMENTS	04-05	A)
		05-06	B)
		06-07	C)
		07-08	D)
		08-09	E)

SIGNATURE OF BIDDER WITH SEAL

## **SECTION-1**

### **1 GENERAL INSTRUCTIONS TO TENDERER**

#### **1.1 DESPATCH INSTRUCTIONS**

- 1.1.1 This tender specification as a whole, duly furnishing all the details required and other documents as required in the following pages shall be duly signed and sent in a sealed cover duly superscribing the name of work as given in the tender notice.
- 1.1.2 The tender shall be addressed to Officer inviting tender as indicated in the tender notice.
- 1.1.3 Tenders submitted by post shall be sent as "**REGISTERED POST ACKNOWLEDGEMENT DUE**" and shall be posted with due allowance for any postal delay. The Tender received after due date and time for opening are liable to be rejected. Telegraphic offers and offers received by telex may not be considered.
- 1.1.4 Tenders shall be opened by authorised Officer of BHEL at his office at the time and date as specified in the tender notice in the presence of such of those tenderers or their authorised representatives who may be present.
- 1.1.5 The tenderers shall closely persue all the clauses, specifications and drawing indicated in the tender documents before quoting. Should the tenderers have any doubt about the meaning of any portion of the tender specification or find discrepancies or omission in the drawings or the tender documents issued are incomplete or shall require clarification on any of technical aspect, scope of work etc., he shall at once, contact the authority inviting the tender for clarification before the submission of the tender.
- 1.1.6 **Before tendering, the tenderers are advised to inspect the site of work and environments and be well acquainted with actual working and other prevalent conditions, facilities available, position of material and labour. No claim will be entertained later on the ground of lack of knowledge.**
- 1.1.7 Tenderer must fill up all the schedules and furnish all the required information as per the instructions given in various section of the tender specification. Each and every page of the tender specification must be signed and submitted alongwith the offer by the tenderer in token of complete acceptance thereof. The information furnished shall be complete by itself.
- 1.1.8 The tenderer shall quote the rates in English language and international numerals. These rates shall be entered in figures as well as in words. In case of difference in rates between words and figures, the least of the two be treated as valid rate. For the purpose of the tenders, the metric system of units shall be used.

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**(FOR WORK IN CONSTRUCTION MANAGEMENT OF BHARAT HEAVY ELECTRICALS LIMITED)**

1.1.9 All entries in the tender shall be typed or be written in ink. Erasers and overwriting are not permitted and may such tenders liable to summary rejection. All certifications and insertions shall be duly attested by the tenderer.

**1.2 QUALIFICATION OF TENDERERS**

Only tenderers who have previous experience in the work of this nature and description detailed in this tender specification are expected to quote for this work duly detailing their experience alongwith offer. Offers from tenderers who do not have proven and established experience in the field are not likely to be considered.

**1.3 DATA TO BE ENCLOSED**

Full information shall be given by the tenderer in respect of the following. Non-submission of this information may lead to rejection of the offer.

**1.3.1 FINANCIAL STATUS**

A Certificate from Scheduled Bank to prove his financial capacity to undertake the work duly indicating financial limits the tenderer enjoys/Solvency Certificate from the concerned Government authority. Information required in Annexure "A" shall be furnished by the tenderer alongwith the offer.

**1.3.2 INCOME TAX CERTIFICATE**

A Certificate of Income-tax clearance from the appropriate authority in the forms prescribed therefore duly indicating annual turnover and the Sales Tax clearance certificate from the appropriate authorities as prescribed by the concerned State Governments, if any. These certificates shall be valid for one year from the date of issue or for the period prescribed therein for all tenders submitted during the period.

**1.3.3 PREVIOUS EXPERIENCE**

A statement giving particulars duly supported by documentary evidence of the various services rendered for each similar works by the tenderer indicating particulars and value of each work, the site location and the duration and date of completion and also a list of site location and particulars and value of various services that are under progress. Information required in Annexure "B" shall be furnished by the tenderers alongwith the offer.

**1.3.4 ORGANIZATION CHART**

The organization pattern what are totally available with him and will be employed by the tenderer for this work duly indicating the number of Supervisors, the number of Skilled and Unskilled persons etc.

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1.3.5 An attested copy of the Power of Attorney, in case the tender is signed by an individual other than the sole proprietor shall also be attached.

1.3.6 **IN CASE OF INDIVIDUAL:**

His full name, address and place & nature of business.

1.3.7 **IN CASE OF PARTNERSHIP FIRM**

The names of all the partners and their addresses, A copy of the partnership deed/instrument of partnership duly certified by the Notary Public shall be enclosed.

1.3.8 **IN CASE OF COMPANIES:**

Date and place of registration including date of commencement certificate in case of Public Companies (certified copies of Memorandum and articles of Association are also to be furnished).

1.3.9 **Nature of business carried on by the Company and the provisions of the Memorandum relating thereof.**

1.3.10 Names and particulars including address of the Directors and their previous experience.

1.3.11 A list of Tools & Tackles that the tenderer is having and those that will be used on this job.

1.3.12 [In addition to the above the particulars required in various annexures.](#)

1.4 **EARNEST MONEY DEPOSIT**

1.4.1 **Every tender must be accompanied by the prescribed amount of Earnest Money Deposit (EMD) in the manner described in Special Conditions of Contract.**

1.5 **AUTHORISATION AND ATTESTATION**

1.5.1 **Tenders shall be signed by a person duly authorised/empowered to do so. Certified copies of such authority and relevant documents shall be submitted alongwith tenders.**

1.6 **VALIDITY OF OFFER**

**The rates in the Tender shall be kept open for acceptance for a minimum period of SIX MONTHS from the date of opening of tenders. In case BHEL (Bharat Heavy Electricals Ltd) calls for negotiations, such negotiations shall not amount to cancellation or withdrawal of the original offer which shall be binding on the tenderers.**

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**1.7 EXECUTION OF CONTRACT**

The successful tenderer's responsibility under this contract commences from the date of issue of the Letter of Intent by Bharat Heavy Electricals Limited. The successful tenderer shall be required to execute an agreement in the prescribed form Annexure-E with BHEL, within a reasonable time after the acceptance of the tender and in any case before submitting the first bill for payment. The expenses for completion and stamping and registration of agreement with prescribed authority, if necessary, shall be borne by the Contractor.

**1.8 SECURITY DEPOSIT**

**1.8.1** Upon acceptance of tender, the successful tenderer shall deposit the required amount of Security Deposit (SD) in the manner specified in the Special Conditions of Contract.

**1.8.2** If the value of the work done at any time exceeds the accepted agreement value, the Security Deposit shall be correspondingly enhanced and the extra Security Deposit shall be immediately deposited by the Contractor or recovered from payments due to him.

**1.8.3** Failure to deposit the Security Deposit within the stipulated time may lead to forfeit of Earnest Money and cancellation of the award of work.

**1.8.4** BHEL reserves the right to forfeit Security Deposit in addition to other claims and penalties in the event of the contractor's failure to fulfill any of the contractual obligations or in the event of termination of contract as per terms and conditions of contract. BHEL reserves the right to set off these Security Deposit against any claims of any other contracts with BHEL.

**1.8.5 RETURN OF SECURITY DEPOSIT**

If the contractor fully performs and completes the work in all respect to the entire satisfaction of BHEL, Security Deposit will be released to the contractor after deducting all costs of expenses of other amounts that are to be paid to BHEL under this or other contracts entered into with the contractor on completion/submission of the following:-

- a) Release of payment against final bill by BHEL.
- b) Clearance Certificate from PF Commissioner, Labour Department, and Railway Authorities etc. wherever applicable.
- c) Dismantling of site office, stores, labour colony or any other temporary structures, removal of debris and handing over possession of BHEL/Customer's land without any encumbrance.
- d) Performance Bank Guarantee in the prescribed proforma

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**1.8.9 No interest shall be payable by BHEL on Earnest Money, Security Deposit/or any money due to the contractor by BHEL.**

**1.9 REJECTION OF TENDER AND OTHER CONDITIONS**

**1.9.1 The acceptance of tender will rest with BHEL which does not bind itself to accept the lowest tender or any tender and reserves to itself full rights for the following without assigning any reasons whatsoever:-**

**1.9.1.1 To reject any or all of the tenders.**

**1.9.1.2 To split up the work amongst two or more tenderers.**

**1.9.1.3 To award the work in part**

**1.9.1.4 Either of the contingencies stated in (1.9.1.2) and (1.9.1.3) above to modify the time for completion suitably.**

**1.9.2 Conditional and Unwitnessed tenders, tenders containing absurd unworkable rates and tenders which are incomplete and otherwise defective and tenders not in accordance with the tender conditions, specifications etc. are liable to be rejected.**

**1.9.3 If a tenderer expired after the submission of his tender or after the acceptance of his tender, BHEL may at their discretion, cancel such tender. If a partner of a firm expires after the submission of tender or after the acceptance of the tender, BHEL may then cancel such tender at their discretion, unless the firm retains its character.**

**1.9.4 BHEL will not be bound by any Power of Attorney granted by changes in the composition of the firm made subsequent to the execution of the contract. They may, however, recognise such power of Attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the contractor concerned.**

**1.9.5 If the tenderer deliberately gives wrong information in his tender, BHEL reserves the right to reject such tender at any stage or to cancel the contract if awarded and forfeit the Earnest Money/Security Deposit/any other money due.**

**1.9.6 Canvassing in any form in connection with the tenders submitted by the Contractors is liable to rejection.**

**1.9.7 Should a tenderer or contractor or in the case of a firm or company of contractor/one or more of its partners/shareholders/Directors have a relation or relatives employed in BHEL, the authority inviting tender shall be informed of the fact alongwith the offer. Failing to do so, BHEL may, at its sole discretion, reject the tender or cancel the contract and forfeit the Earnest Money/Security Deposit.**

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- 1.9.8**     **The successful tenderer should not sub-contract the part of complete work detailed in the tender specification undertaken by him without written permission of BHEL. The tenderer is solely responsible to BHEL for the work awarded to him.**

**SECTION-2**

- 2.1 DEFINITION: The following terms shall have the meaning hereby assigned to them except where the context otherwise required.**
- 2.1.1 BHEL shall mean Bharat Heavy Electricals Limited, a company registered under Indian Companies Act, 1956 with its registered office at BHEL HOUSE, SIRI FORT, NEW DELHI, or its authorised officers or its Resident Engineers or other employees authorised to deal with any matters with which these persons are concerned on its behalf.**
- 2.1.2 “GENERAL MANAGER” shall mean the Officer in Administrative charge of contracting unit of BHEL.**
- 2.1.3 “ENGINEER” or “ENGINEER IN CHARGE” shall mean ENGINEER deputed by BHEL. The term includes DGM, PROJECT MANAGER, CONSTRUCTION MANAGER, RESIDENT MANAGER, SITE ENGINEER, RESIDENT ENGINEER and ASSISTANT SITE ENGINEER of BHEL at site as well as the Officers in charge at Head Office.**
- 2.1.4 “SITE” shall mean the places or place at which the plants/equipments are to be erected and services are to be performed as per the specification of this contract.**
- 2.1.5 “CLIENT OF BHEL” or “CUSTOMER” shall mean the project authorities with whom BHEL has entered into a contract for provision of services.**
- 2.1.6 “CONTRACTOR” shall mean the individual firm or company who enters into the contract with BHEL and shall include their executors, administrators and successors and permitted assigns.**
- 2.1.7 “CONTRACT” or “CONTRACT DOCUMENT” shall mean and include the agreement of work order, the acceptance, appendices or rates, schedules, quantities if any, general conditions of contract, special conditions of contract, instructions to the tenderer, drawings, technical specifications, the specifications if any the tender documents and the Letter of Indent/Accepting letter issued by BHEL. Any conditions or terms stipulated by the contractor in the tender documents or subsequent letters shall not form part of the contract unless, specifically accepted in writing by BHEL in the Letter of Indent and incorporated in the agreement.**
- 2.1.8 “GENERAL AND SPECIAL CONDITIONS OF CONTRACT” shall mean the instructions to Tenderer and General and special conditions of contract pertaining to the work for which above tenders have been called for.**
- 2.1.9 “TENDER SPECIFICATION” shall mean “Specific conditions, technical specifications, appendices, site information and drawing pertaining to the work in which the tenderers are required to submit their offer. Individual specification number will be assigned to each tender specification.**

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- 2.1.10 **“TENDER DOCUMENTS” shall mean the General and special conditions of contract (2.1.8) and tender specification (2.1.9).**
- 2.1.11 **“LETTER OF INTENT” shall mean the intimation by a letter to the tenderer that the tender has been accepted in accordance with provisions contained in the letter. The responsibility of the contractor commences from the date of issue of this letter and all terms and conditions of the contract are applicable from this date.**
- 2.1.12 **“COMPLETION TIME” shall mean the period by date specified in the acceptance of tender for handing over the erected equipment/plant which are found acceptable by the Engineer being of required standard and conforming to the specifications of the contract.**
- 2.1.13 **“PLANT” shall mean and connote the entire assembly of the plant and equipments covered by the contract.**
- 2.1.14 **“EQUIPMENT” shall mean equipment, machineries, materials, structural, electricals and other components of the plant covered by the contract.**
- 2.1.15 **“TESTS” shall mean and include such test or tests to be carried out on the part of the contractor as are prescribed in the contract or considered necessary by BHEL, in order to ascertain the quality, workmanship, performance and efficiency of the contractor or part there of.**
- 2.1.16 **“APPROVED”, “DIRECTED” or “INSTRUCTED” shall mean approved, directed or instructed by BHEL.**
- 2.1.17 **“WORK OR CONTRACT” shall mean and include supply of all categories of labours, specified consumables, tools and tackles required for complete and satisfactory site, transportation, handling, stacking, storing, erecting, testing and commissioning of the equipments to the entire satisfaction of BHEL.**
- 2.1.18 **“SINGULAR AND PLURALS ETC” words carrying singular number shall also include plural and vice versa, where the context so required, Words, imparting the masculine Gender shall be taken to include the feminine Gender and words imparting persons shall include any company or associations or body of individuals, wherever incorporated or not.**
- 2.1.19 **“HEADING” – The heading in these general conditions are solely for the purpose of facilitating reference and shall not be deemed to be part thereof or be taken as instructions thereof or of the contract.**
- 2.1.20 **“MONTH” shall mean calendar month.**
- 2.1.21 **“COMMISSIONING” shall mean the synchronisation of the Plant after all initial adjustments, trials, cleaning, re-assembly required at site if any, have been completed and plant is ready for commercial use.**

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**2.1.22 "WRITING" shall include any manuscript type written or printed statement under the signature of BHEL.**

**2.2 LAW GOVERNING THE CONTRACT AND COURT JURISDICTION**

**The contract shall be governed by the Law for the time being in force in the Republic of India. The Civil Court at NAGPUR having ordinary original civil jurisdiction shall alone have exclusive jurisdiction in regard to all claims in respect of this contract.**

**2.3 ISSUE OF NOTICE**

**The Contractor shall furnish to BHEL Engineer the name, designation and address of his authorised agent and all complaints, notices, communication and reference shall be deemed to have been duly given to the contractor if delivered to the contractor or his authorised agent or left at or posted to the address either of the contractor or his representative and shall be deemed to have been so given in the case of posting on the day on which they would have reached such address in the ordinary course of the post or on which they were so delivered of or left.**

**2.4 USE OF LAND**

**No land belonging to BHEL or their customer under temporary possession of BHEL shall be occupied by the contractor without written permission of BHEL.**

**2.5 COMMENCEMENT OF WORK**

**2.5.1 The contractor shall commence the work within the time indicated in the Letter of Indent from BHEL and shall proceed with the same with due expedition without delay.**

**2.5.2 If the successful tenderer fails to start the work within stipulated time, BHEL, at its sole discretion will have the right to cancel the contract. The Earnest Money and/or Security Deposit with BHEL will stand forfeited without any further reference to him without prejudice to any and all of BHEL's other rights and remedies in this regard.**

**2.5.3 All the work shall be carried out under the direction and to the satisfaction of BHEL.**

**2.5.4 The transported equipment, erected/constructed plan of work performed under the contract as the case may be shall be taken over when it has been completed in all respects and/or satisfactorily put into operation site.**

**2.6 MODE OF PAYMENT AND MEASUREMENT OF THE WORK COMPLETED:**

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- 2.6.1 All payments due to the contractor shall be paid by “Account Payee Cheques”**
- 2.6.2 For progress running bill payments: - The Contractor shall present detailed measurement sheets in triplicate, duly indicating all relevant details based on technical documents and connected drawings for work done during the month/period under various categories in line with terms of payment as per Letter of Indent. The basis of arriving at the quantities, weights shall be relevant documents and drawings released by BHEL. The measurement sheets shall be prepared jointly with BHEL Engineers and signed by both the parties.**
- 2.6.3 These measurement sheets will be checked by BHEL Engineers and quantities and percentage eligible for payment under various groups shall be decided by BHEL Engineer. The abstract of quantities and percentage so arrived at based on the terms of payment shall be entered in Measurement Book and signed by both the parties.**
- 2.6.4 Based on the above quantity, contractor shall prepare the bills in prescribed proforma and work out the financial value. These will be entered in Measurement Book and signed by both the parties and paid for duly effecting recoveries due.**
- 2.6.5 All recoveries due from the contractor for the month/period shall be effected in full from the corresponding running bills unless specific approval from the competent authorities is obtained otherwise.**
- 2.6.6 Measurement shall be restricted to that for which it is required to ascertain the financial liability of BHEL under this contract.**
- 2.6.7 The measurement shall be taken jointly by person duly authorised on the part of BHEL and by the Contractor.**
- 2.6.8 The Contractor shall bear the expenditure involved if any, in making the measurement. The contractor shall, without extra charges, provide all the assistance with appliances and other things necessary for measurement.**
- 2.6.9 If at any time due to any reason whatsoever, it becomes necessary to re-measure the work done in full or in part, the expenses towards such reimbursements shall be borne by the contractor.**
- 2.6.10 Passing of measurement as per bills does not amount to acceptance of the completion of the work mentioned. Any left out work has to be completed, if pointed out at a later date by BHEL.**
- 2.6.11 Final measurement bill shall be prepared in the final bill proforma prescribed for the purpose based on the certificate issued by BHEL Engineer that entire works as stipulated in tender specification has been completed in all respects to the entire satisfaction of BHEL. Contractor shall give unqualified “No Dues” and “No Demand” Certificate. All the tools and tackles loaned to him should be returned in satisfactory condition to BHEL. Quantities/weight**

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erected shall be prepared and paid within a reasonable time after completion of work. After payment of final bill only guarantee obligation percentage shall remain unpaid which shall be released in accordance with clause 2.13 The final bill quantities and financial value shall also be entered in Measurement Book and signed by both the parties to the contract.

**2.7 RIGHTS OF BHEL**

**BHEL reserves the following rights in respect of this contract without entitling the contractor for any compensation.**

- 2.7.1 To get work done through other agency at the risk and cost of the contractor in the event of contractor's poor progress, other or inability to progress the work for completion as stipulated in the contract, poor quality of the work, persistent disregard to instruction of BHEL, assignment, transfer, subletting of the contract without permission of BHEL, non-fulfillment of any contractual obligation etc. and to claim/recover compensation for such losses from the contractor including BHEL's supervision charges and overheads from Security Deposit and other dues.**
- 2.7.2 To withdraw any portion of work and/or to restrict after quantum of work as indicated in the contract during the progress of erection and get it done through other agency and/or by departmental labour to suit BHEL's commitment of its customer or in case BHEL decided to advance the date of completion due to other emergency reasons BHEL's obligation to its customer.**
- 2.7.3 To terminate the contract after due notice and forfeit security deposit and recover the loss sustained in getting the balance work done through other agencies in addition to liquidated damages in the event of:-**
  - 2.7.3.1 Contractor's continued poor progress**
  - 2.7.3.2 Withdrawal from or abandonment of the work before completion of the work**
  - 2.7.3.3 Corrupt act of contractor**
  - 2.7.3.4 Insolvency of the contractor**
  - 2.7.3.5 Persistent disregard to the instructions of BHEL**
  - 2.7.3.6 Assignment, transfer, sub-letting of contract without BHEL's written permission**
  - 2.7.3.7 Non fulfillment of any contractual obligations**
- 2.7.4 To recover any money due from contractor from any money due to the contractor under this contract or any contract or from the security deposit.**

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- 2.7.5** To claim compensation for losses sustained including BHEL's supervision charges and overheads for completion on termination of contract and to impose penalty for delay in completion of the work at the rate of ½% of the contract value per week of delay or part thereof subject to ceiling of 10% of contract value.
- 2.7.6** To terminate the contract or to restrict the quantum of work and pay for the portion of work executed in case BHEL's contract with their customer are terminated for any reason.
- 2.7.7** To effect recovery from any amounts due to the contractor under this or any other contract or in any other form the money BHEL is forced to pay to anybody due to contractor's failure to fulfill any of his obligations.
- 2.7.8** To restrict or increase the quantity and nature of work to suit site requirement since the tender specification is based on preliminary documents and quantities furnished therein are indicative and approximate and the rates quoted shall not be subject to revision.
- 2.7.9** To deploy BHEL's Fitters, Welders, Operators and Technicians in case of emergency/poor progress/efficiency in skill on the part of employees of contractor and recover the expenditure on account of the same from contractor's bills.
- 2.7.10** While every endeavour will be made by BHEL, they can not guarantee uninterrupted work due to conditions beyond their control, contractor will not be entitled for any compensation/extra payment on this account.
- 2.7.11** In the event of any dispute of any nature, the decision of BHEL shall be final and binding on the contractor.
- 2.8** RESPONSIBILITIES OF THE CONTRACTOR IN RESPECT OF LOCAL LAWS, EMPLOYMENT OF WORKERS ETC.
- The following are the responsibilities of the contract in respect of observation of local laws, employment of personnel, payment of taxes etc.
- 2.8.1** As far as possible, Unskilled Workers shall be engaged from the local areas in which the work is being executed.
- 2.8.2** The contractor at all times during the continuance of this contract shall, in all his dealings with local labour for the time being employed on or in connection with the work, have due regard to all local festivals and religious and other customs.
- 2.8.3** The contractor shall comply with all State and Central Laws, Statutory Rules, Regulations etc. such as:-
- 2.8.4** Payment of Wages Act, Minimum Wages Act, Workmen Compensation Act, Employer's Liability Act, Industrial Dispute Act, Employers Provident Fund

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Scheme, Employees State Insurance Scheme, Contract Labour (Regulation and Abolition) Act, 1970 and other acts, rules and regulations for labour as may be enacted by the Government during the tenure of the contractor shall give to the local governing body, police and other relevant authorities all such notices as may be required by the Law.

- 2.8.4 The contractor shall pay all taxes, license charges, deposits, duties, taxes, royalties, commission or other charges which may be levied on account of his operations in executing the contract. In case BHEL is forced to pay any of such taxes, BHEL shall have the right to recover the same from his bills or otherwise as deemed fit.
- 2.8.5 While BHEL would pay the inspection fees of Boiler Inspectorate, all other arrangements for site visits periodically by Boiler Inspector to site, Inspection certificate etc. will have to be made by contractor. However, BHEL will not make any payment to Boiler Inspector in connection with contractor's Welders qualification/prequalification tests. Etc.
- 2.8.6 Contractor shall be responsible for provision of health and sanitary arrangements (more particularly described in Contract Labour Regulation & Abolition Act), Safety precautions etc. as may be required for safe and satisfactory execution of contract.
- 2.8.7 The contractor shall be responsible for proper accommodation including adequate medical facilities for personnel employed by him.
- 2.8.8 The contractor shall be responsible for the proper behaviour and observance of all regulations by the staff employed by him.
- 2.8.9 The contractor shall ensure that no damage is caused to any person/property of other parties working at site. If any such damage is caused, it is responsibility of the contractor to make good the losses or compensate for the same.
- 2.8.10 All the properties/equipments/components of BHEL/their Client loaned with or without deposit to the contractor in connection with the contract shall remain properties of BHEL/their Client.
- The contractor shall use each property for the purpose of execution of this contract. All such properties/equipments/components shall be deemed to be in good condition when received by the contractor unless he notifies within 48 hours to the contrary. The contractor shall return them in good condition as and when required.
- 2.8.11 It is not obligatory on the part of BHEL to supply any tools or tackles or other materials other than those specifically agreed to do so by BHEL. However, depending upon availability/possibility/BHEL's/ Customer's handling equipment and other plants may be made available to the contractor on payment of the hire charges free of charges as fixed, subject to the conditions laid down by BHEL/Customer from time to time unless paid in advance, such

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hire charges if applicable shall be recovered from contractor's bills/Security Deposit in one installment.

- 2.8.12 The contractor shall fully indemnify BHEL against all claims of whatsoever nature arising during the course of erection/construction/performing work under the contract.
- 2.8.13 In case the contractor is required to undertake any work outside the scope of this contract, the rates payable shall be those mutually agreed upon.
- 2.8.14 Any delay in completion of works/or non achievement of periodical targets due to the reasons attributable to the contractor, the same will have to be compensated by the contractor either by increasing manpower and resources or by working extra hours and/or by working more than shift. All these are to be carried out by the contractor at no extra cost.
- 2.8.15 The contractor shall arrange, coordinate his work in such a manner as to cause no hindrance to other agencies working in the same premises.
- 2.8.16 All safety rules and codes applied by the Client/BHEL at site shall be observed by the contractor without exception. The contractor shall be responsible for the safety of the equipment/material and works to be performed by him and shall maintain all light, fencing guards, slings etc. or other protection necessary for the purpose. Contractor shall also take such additional precautions as may be indicated from time to time by the Engineer with a view to prevent pilferage, accidents, fire hazards and due precautions shall be taken against fire hazards and atmospheric conditions. Suitable number of Clerical staff, watch and ward, store keepers to take care of equipment/materials and construction tools and tackles shall be posted at site by the contractor till the completion of work under this contract.
- The contractor shall arrange for such safety devices as are necessary for such type of work and carry out the requisite site tests of handling equipment, lifting tools, tackles etc. as per prescribed standards and practices.
- 2.8.17 The contractor will be directly responsible for payment of wages to his workmen. A pay roll sheet giving all the payments given to the workers and duly signed by the contractor's representative should be furnished to BHEL site for record purpose, if so called for.
- 2.8.18 In case of any class of work for which there is no such specification as laid down in the contract, such work shall be carried out in accordance with the instructions and requirements of the Engineer.
- 2.8.19 No levy or payment or charge made or imposed shall be impeached by reason of any Clerical error or by reason of any mistake in the amount levied or demanded or charged by BHEL/their Client. In case of nonreturning, loss, damage, repair etc. the cost thereof as may be fixed by the Site Engineer will be recovered from the contractor.

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- 2.8.20 Also, no idle labour charges will be admissible in the event of any stoppage caused in the work resulting contractor's labour being rendered idle due to any cause at any time.
- 2.8.21 The contractor shall take all responsible care to protect the materials and work till such time the plant/equipment has been taken over by BHEL/their Client.
- 2.8.22 The contractor shall not stop the work or abandon the site for whatsoever reason of dispute, excepting force majeure conditions. All such problems/disputes shall be separately discussed and settled without affecting the progress of work. Such stoppage or abandonment shall be treated as breach of contract and deal with accordingly.

**2.9 CONSEQUENCES OF CANCELLATION**

Whenever BHEL exercises its authority to terminate the contract/withdraws a portion of work under 2.7, they may complete the work by any means at the contractor's risk and cost, provided that the event of the cost of completion(as certified by the Site Engineer which is final and conclusive) be less than contract cost, the advantage shall accrue to BHEL and that if the cost of completion exceeds the money due to contractor under the contract, the contractor shall either pay the excess amount ordered by BHEL or same shall be recovered from the contractor by any other means. This will be in addition to the forfeiture of security deposit and recovery of liquidated damages as per relevant clauses.

- 2.9.1 In case BHEL completes the work under the provision of this condition, the cost of such completion to be taken into account in determining the excess cost to be charged to the contractor under this condition shall consist of materials purchased and/or labour provided by BHEL within addition of such percentage to COVER SUPERVISION and establishment charges as may be decided by BHEL.

**2.10 INSURANCE**

- 2.10.1 BHEL/their customer shall arrange for insuring the materials/properties of BHEL/Customer covering the risk during transit, storage, erection and commissioning.
- 2.10.2 It is the sole responsibility of contractor to insure his workmen against accidents and injury while at work as required by relevant rules and to pay compensation to workmen as per Workmen's Compensation Act. Contractor shall insure his staff against accidents. The work will be carried out in a protected area and all the rules and regulations of the client/BHEL in the area of project which are in force from time to time will have to be followed by the contractor.
- 2.10.3 If due to negligence and for non observation/observance of safety and other precautions, any accident/injury occurs to any other persons/public, the

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contractor shall have to pay necessary compensation and other expenses, if so decided by the appropriate authorities.

**2.10.4** If due to the contractor's carelessness, negligence or non-observance of safety precaution, damage to BHEL's/Customer's property and personnel occurs and if BHEL is unable to recover in full cost from the insurance company, the same will be recovered from contractor.

**2.10.5** It shall be the responsibility of contractor to provide security arrangement for the equipment/materials belonging to BHEL and handed over to contractor for erection/transportation till same are taken over by BHEL.

**2.11** STRIKES & LOCKOUT

**2.11.1** The contractor will be fully responsible for all the dispute and other issues connected with his labour. In the event of the contractor's labour resorting to strike or the Contractor resorting to lockout and if the strike or lockout declared is not settled within a period of one month, BHEL shall have the right to get the erection work executed employing its own labour or through any other agencies or both and the cost so incurred by BHEL shall be deducted from the contractor's bills.

**2.11.2** For all purposes whatsoever, the employees of the contractor shall not be deemed to be in the employment of BHEL.

**2.12** FORCE MAJEURE

**2.12.1** The following shall amount to force majeure:-

Acts of God, act of any Government, War, Sabotage, Riots, Civil commotion, Police action, Revolution, Flood, Fire, Cyclones, Earth quake and Epidemic and other similar causes over which the contractor has to control.

**2.12.2** If the contractor suffers delay in the due execution of the contractual obligation due to delays caused by force majeure as defined above, the agreed time of completion of the job covered by this contract or the obligations of the contractor shall be extended by a period of time equal to period of delay, provided that on the occurrence of any such contingency, the contractor immediately should report to BHEL and the contractor shall not be eligible for any compensation.

**2.13** GUARANTEE

Even though the work will be carried out under the supervision of BHEL Engineers, the contractor will be responsible for the quality of the workmanship and shall guarantee the work done for a period of twelve months from the date of completion of work as certified by the Engineer for good workmanship and shall rectify free of cost all such defects due to faulty erection detected during the guarantee period starting from the date of the completion of rectification. In the event of the contractor failing to repair the defective

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works within the time specified by the Engineer, BHEL may proceed to undertake the repairs of such defective works at the contractor's risk and cost without prejudice to any other rights and recover the same from security deposit/other dues or by other legal means.

**2.14 ARBITRATION**

All disputes between the parties to the contract, arising out of or in relation to the contract other than those for which the decision of the Engineer or of any other person is by the contract expressed to be final and conclusive shall, after written notice by either party to the contract to other party be referred to sole arbitration of General Manager or his nominee. The arbitration shall be conducted in accordance with the provisions of the Indian Arbitration Act 1940.

The parties to the contract understand and agree that it will be no objection that the General Manager or the person nominated as Arbitrator, had earlier in his official capacity to deal directly or indirectly with the matter to which the contract relates or that in the course of his official duties had expressed views on all or any of the matters in dispute or difference. The award of the Arbitrator shall be final and binding on the parties to this contract.

In the event of the Arbitrator dying, neglecting or refusing to act, resigning or being unable to act for any reason or his award being set aside by the Court for any reason. It shall be lawful for the General Manager or his successor as the case may be, either to act himself as the Arbitrator or to appoint another Arbitrator in the place of the outgoing Arbitrator in the manner aforesaid. The Arbitrator may from time to time, with the consent of both the parties to the contract, enlarge the time for making the award.

- 2.15 Work under the contract shall be continued during the arbitration proceedings. The venue of the arbitration shall be the place from which the contract is issued or such other place as the Arbitrator at his discretion may determine.**

**2.16 PRICE VARIATION CLAUSE**

The quoted rate shall be firm throughout the period as specified in time schedule plus grace period. The grace period would be one month for every six months of contract period or part thereof. In case the work cannot be completed within the above period plus grace period for no fault of contractor, the following shall become applicable to cover all expenditure for completing the contracted work. No other compensation shall be payable:-

$$P_1 = P_0 (0.10 + 0.90 L_1 / L_0)$$

Where

$$P_1 = \text{Revised contract rate/Contract price}$$

$$P_0 = \text{Accepted contract rate/contract price}$$

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**L<sub>0</sub> = All India Average Consumer Price Index for Industrial Workers as published in RBI Bulletin for the month when the contract period comes to a close.**

**L<sub>1</sub> = All India average Consumer Price Index for Industrial Workers as published in RBI Bulletin for the month for which bill has been raised.**

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ANNEXURE "A"

**FINANCIAL VIABILITY**

- |           |  |            |
|-----------|--|------------|
| <b>1</b>  | <b>Owner's capital in the business (in case of Partnership, Please mention percentage, shares and amounts)</b>   | <b>Rs.</b> |
| <b>2</b>  | <b>Quantum of Business done during last three financial years</b>  | <b>Rs.</b> |
|           |  | 1)         |
|           |  | 2)         |
|           |  | 3)         |
| <b>3.</b> | <b>Value of fixed assets of the business in last three years</b>   | 1)         |
|           |  | 2)         |
|           |  | 3)         |
| <b>4.</b> | <b>Guarantee Limits(if any) enjoyed by the firm</b>  |            |
| <b>5.</b> | <b>Over draft limits (if any) enjoyed by the firm</b>  |            |
| <b>6.</b> | <b>Please state whether audited Profit and Loss Account and Balance Sheet for last three years are enclosed.</b> |            |

**NOTE:** All the above documents should be duly certified by Auditors/Bank as may be applicable.

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ANNEXURE”B”

**ANALYSIS OF SIMILAR JOBS EXECUTED/IN PROGRESS**

<b>Sl. No.</b>	<b>Details of job executed/in progress with location of projects</b>	<b>Total value of the contract</b>	<b>No. of Skilled/Unskilled workers deployed at site for this job</b>	<b>No. of staff deployed at site for execution of job</b>	<b>Remarks</b>

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ANNEXURE "C"

**PROFORMA FOR BANK GUARANTEE FOR EARNEST MONEY DEPOSIT**  
***(IF APPLICABLE)***

(To be issued in appropriate valid non-judicial stamp paper)

This deed of guarantee made this \_\_\_\_\_ day of 200 \_\_\_\_\_ by \_\_\_\_\_ Bank Limited in favour of Bharat Heavy Electricals Limited, having its registered office at BHEL House, Asian Games Village, Siri Fort, New Delhi – 110 049 (hereinafter called the "Company"), thru BHEL, Power Sector-Western Region, Nagpur – 440 001 (Maharashtra).

WHEREAS M/s \_\_\_\_\_ (hereinafter called the tenderer) have submitted a tender \_\_\_\_\_ in response to tender specification no. \_\_\_\_\_ (hereinafter called the said "tender document") of M/s BHEL, PSWR, Nagpur – 440 001.

AND WHEREAS the said tender documents provide that the tenderer shall pay a sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) towards Earnest Money Deposit to be made in the form and manner there specified.

AND WHEREAS the tenderer \_\_\_\_\_ has approached in consideration of the arrangement arrived at between the said tenderer and the said Bank and the said Bank has agreed to give such guarantee as hereinafter mentioned to the aforesaid company.

Now, therefore, this presents and we \_\_\_\_\_ Bank Limited by the hand of Shri \_\_\_\_\_, its lawfully and duly constituted attorney, do hereby undertake to pay the aforesaid company a sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) by virtue of the Guarantee against any loss or damage caused to or suffered by the said company by reason of breach by the aforesaid tenderer of the terms, conditions, stipulations, Undertaking or any one of them contained in the said tender documents and for the payment of any money or moneys payable by the said tenderer to the said company under the terms and conditions of the tender documents (the decision regarding the breach, loss, damage or payment due being solely is the discretion of the said company). We further undertake to pay the aforesaid amount in a lumpsum on demand irrespective of the fact whether the said tenderer admits or denies such claims or questions its correctness in any Court, Tribunal or Arbitration proceedings or before any authority.

The aforesaid guarantee will remain in force and we shall be liable under the same irrespective of any concession for the time being granted by the said company to the tenderer in or for fulfilling conditions of the tender documents and the guarantee will remain in full force irrespective of any change of terms, conditions or stipulations or any variation in the terms of the said tender documents irrespective of whether notice of such change and variation is given to us or not and claim to receive such notice of any change and/or variation of the terms and/or conditions of the said tender document is hereby specifically waived by us. Further, we shall not be released from the guarantee by any for bearance of exercise of non exercise of any of the power of rights under the

**GENERAL CONDITIONS OF CONTRACT (Rev 01, 18/07/2008)**  
**(FOR WORK IN CONSTRUCTION MANAGEMENT OF BHARAT HEAVY ELECTRICALS LIMITED)**

said company against the tenderer irrespective of whether notice of such for bearances, enforcement or non-enforcement of any powers or rights modifications or changes of such for bearances enforcement or non-enforcement of any powers or right, modifications or changes made in the said tender documents or concessions shown of the tenderer by the company is given to us or not. The guarantee herein contained shall be determined or affected by the liquidation or winding up or insolvency or change in the constitution of the tender but shall in all respects and for all purposes be binding and operative until all payments of all moneys due or that may hereafter become due to the said company in respect of any liability or obligations of the tender under the said tender documents.

We, the said Bank further agree that the guarantee hereinafter contained shall remain in full force and effect during the period that would be taken for the finalisation of the tender and execution of agreement there of and that it shall continue to be enforceable till the required security deposit is deposited by the successful tenderer, as stipulated in the said tender documents or till the company certifies that the terms and conditions of the said tender documents have been fully and properly carried out by the said tenderer, and accordingly discharged the guarantee subject however to that the company shall have no rights under this guarantee after the expiry of 180 days from the date of its execution.

Any claim of dispute arising under the terms of these documents shall only be enforced or settled in Courts at NAGPUR only.

And lastly the \_\_\_\_\_ Bank undertakes not to revoke this guarantee under the Bank's memorandum and articles of association and the undersigned has full power to do so on its behalf under the power of attorney dated \_\_\_\_\_ granted to him by the proper authorities of the Bank.

DATED \_\_\_\_\_

THE \_\_\_\_\_

(Signature of the person duly authorised to sign on behalf of Bank by its constituted attorney  
(Signature of the person duly authorised to sign on behalf of Bank)

Note: 1) To be countersigned by the SBI or RBI if it is executed by other Scheduled Bank

2) No deviation from the above can be accepted.

**NOT APPLICABLE**

**GENERAL CONDITIONS OF CONTRACT (Rev 01, 18/07/2008)**  
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ANNEXURE "D"

**PROFORMA FOR SECURITY DEPOSIT BG**

**THIS DEED OF GUARANTEE made this day of \_\_\_\_\_**

By M/s \_\_\_\_\_  
(Hereinafter called the Bank) in favour of M/s Bharat Heavy Electricals Limited, having its registered office at BHEL House, Asian Games Village, Siri Fort, New Delhi – 110 049 (hereinafter called the "Principal"), through BHEL, Power Sector-Western Region, Nagpur – 440 001 (Maharashtra).

WHEREAS M/s \_\_\_\_\_  
(Hereinafter called the contractor) proposes to enter into a contract arising out of Letter of Intent No. \_\_\_\_\_ dated \_\_\_\_\_ addressed by principal to the contractor for \_\_\_\_\_ (hereinafter called the said agreement).

AND WHEREAS the said agreement provides that the contractor shall pay a sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) towards 50% of full Security Deposit to be made in the form and manner therein specified.

AND WHEREAS the Contractor have approached the Bank and on their request and in consideration of the agreement arrived at between the said Contractor and the Bank, the Bank has agreed to give such guarantee as hereinafter mentioned to the Principal.

NOW, therefore these presents witnesses that we the Bank by the hand of Mr. \_\_\_\_\_, its lawfully duly constituted attorney to hereby undertake to pay to the Principal a sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) without demur on demand being made by the Principal and keep to the Principal indemnified to the extent of Rs. \_\_\_\_\_ by virtue of this guarantee against any loss or damage caused to or by the aforesaid Contractor of any of the terms and conditions, stipulation or undertaking of any one of them contained in the said Agreement and tender documents attached thereto, and for the payment of any money or money payable by the said contractor to the Principal under the terms and conditions of the said Agreement (the decision regarding the breach, loss, damage or payment due being solely in the discretion of the Principal).

We further undertake to pay without demur the aforesaid amount in a lump sum on demand or such part there of as the Principal may demand from time to time irrespective of the fact whether the said contractor admits or denies such claim or questions its correctness in any Court, Tribunal or Arbitration proceedings or before any authority. The aforesaid guarantee will remain in force and we shall be liable under the same irrespective of any concession or time being granted by the Principal to the contractor in or for fulfilling the said agreement between contractor and the Principal and the guarantee will remain in full force irrespective of any change of terms, conditions or stipulations or any variation in the terms of the said Agreement irrespective of whether notice of such change or variation is given to us or not.

**GENERAL CONDITIONS OF CONTRACT (Rev 01, 18/07/2008)**  
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The Guarantee herein contained shall not be determined or affected by the liquidation or winding up or insolvency of or change in the constitution of the Contractor but shall in all respects and for all purposes binding and operative until all payments of all money due or that may hereafter become due to the principal in respect of any liabilities or obligations of the contractor under the said agreement.

We, the Bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all dues of the principal under or by virtue of the said agreement have been fully paid its Agreement have been fully and properly carried out by the said contractor and accordingly discharges the guarantee, subject however that the principal shall have no rights under the guarantee after the expiry of six months from the date of completion of the contract unless this guarantee is extended by mutual agreement.

Any claim or dispute or disputes arising under the terms of this document shall be enforced or settled in the Courts at Nagpur only.

And lastly the bank undertakes not to revoke this guarantee during its currency except with the previous consent of the principal in writing.

The Guarantor hereby declares that it has powers to execute this guarantee and the executant has full powers to do so on behalf of the Guarantor

**DATED:**

**(Name of the Bank)**

**SEAL**

**DESIGNATION OF THE AUTHORISED  
PERSON SIGNING THE GUARANTEE**

**GENERAL CONDITIONS OF CONTRACT (Rev 01, 18/07/2008)**  
**(FOR WORK IN CONSTRUCTION MANAGEMENT OF BHARAT HEAVY ELECTRICALS LIMITED)**

ANNEXURE "E"

**PROFORMA FOR ADVANCE PAYMENT (If Applicable)**

THIS DEED OF GUARANTEE made this day of \_\_\_\_\_ by M/s \_\_\_\_\_ (hereinafter called the Bank) in favour of M/s Bharat Heavy Electricals Limited, having its registered office at BHEL House, Asian Games Village, Siri Fort, New Delhi – 110 049 (hereinafter called the "Principal"), thru BHEL, Power Sector-Western Region, Nagpur – 440 001 (Maharashtra).

WHEREAS M/s \_\_\_\_\_ (hereinafter called the contractor) proposes to enter into a contract arising out of Letter of Award reference no. \_\_\_\_\_ dated \_\_\_\_\_ addressed by Principal to the Contractor for \_\_\_\_\_ (hereinafter called the said agreement).

AND WHEREAS the said Agreement provides that the Principal shall pay a sum of up to Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) being the 5% value of the Contract amount of Rs. \_\_\_\_\_ towards interest bearing advance to be made in the form and manner therein specified.

AND WHEREAS the Contractor have approached the Bank requesting to issue a Bank Guarantee for Rs. \_\_\_\_\_ and based on their request and in consideration of the agreement arrived at between the said Contractor and the Bank, the Bank has agreed to give such bank guarantee as hereinafter mentioned to the Principal.

NOW, therefore, these presents witnesses that we the Bank by the hand of Mr. \_\_\_\_\_, its lawfully duly constituted attorney do hereby undertake to pay to the principal a sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) without demur on demand being made by the principal and keep to the Principal indemnified to the extent of Rs. \_\_\_\_\_ by virtue of this guarantee against any loss or damage caused to or by the aforesaid Contractor of any of the terms or conditions, stipulation or undertaking of any one of them contained in the said agreement and tender documents attached thereto, and for the payment of any money or moneys payable by the said Contractor to the Principal under the terms and conditions of the said agreement (the decision regarding the breach, loss, damage or payment due being solely in the discretion of the principal).

We further undertake to pay without demur the aforesaid amount in a lump sum on demand or such part thereof as the principal may demand from time to time irrespective of the fact whether the said contractor admits or denies such claim or questions its correctness in any Court, Tribunal or Arbitration proceedings or before any authority. The aforesaid guarantee will remain in force and we shall be liable under the same irrespective of any concession or time being granted by the Principal to the Contractor in or for fulfilling the said agreement between contractor and the principal and the guarantee will remain in full force irrespective of any change of terms, conditions or stipulations or any variation in the terms of the said agreement irrespective of whether notice of such change or variation is given to us or not.

The Guarantee herein contained shall not be determined or affected by the liquidation or winding up or insolvency or change in the constitution of the contractor, but shall in

**GENERAL CONDITIONS OF CONTRACT (Rev 01, 18/07/2008)**

**(FOR WORK IN CONSTRUCTION MANAGEMENT OF BHARAT HEAVY ELECTRICALS LIMITED)**

**all respects and for all purposes binding and operative until all payments of all money due or that may hereafter become due to the principal in respect of any liabilities or obligations of the contractor under the said agreement.**

**We, the Bank further agree that the guarantee herein contained shall remain in full force till the advance and interests thereof are recovered in full.**

**Any claim or dispute or disputes arising under the terms of this document shall be enforced or settled in the Courts at Nagpur only.**

**And lastly the Bank undertakes not to revoke this guarantee during its currency except with the previous consent of the principal in writing.**

**The Guarantor hereby declares that it has powers to execute this guarantee and the executant has full powers to do so on behalf of the Guarantor.**

**DATED**

**(Name of the Bank & Place)**

**SEAL**

**DESIGNATION OF THE AUTHORISED  
PERSON SIGNING THE GUARANTEE**

**GENERAL CONDITIONS OF CONTRACT (Rev 01, 18/07/2008)**  
**(FOR WORK IN CONSTRUCTION MANAGEMENT OF BHARAT HEAVY ELECTRICALS LIMITED)**

ANNEXURE "F"

**BANK GUARANTEE PROFORMA FOR RELEASE OF LAST 5% PAYMENT**

THIS DEED OF GUARANTEE made this day of \_\_\_\_\_ by M/s \_\_\_\_\_ (hereinafter called the Bank) in favour of M/s BHARAT HEAVY ELECTRICALS LIMITED, having its registered office at BHEL House, Asian Games Village, Siri Fort, New Delhi – 110 049 (hereinafter called the "Principal"), thru BHEL, Power Sector-Western Region, Nagpur –440-001(Maharashtra), WHEREAS M/s \_\_\_\_\_ (hereinafter called the contractor) proposes to enter into a contract arising out of Letter of Award reference no. \_\_\_\_\_ dated \_\_\_\_\_ addressed by the Principal to the contractor for (hereinafter called the said agreement).

AND WHEREAS the said agreement provides that the contractor shall pay a sum of Rs. \_\_\_\_\_ (Rupees) \_\_\_\_\_ only) towards 5 percent of contract value towards guarantee period of twelve months in the form and manner therein specified.

AND WHEREAS the contractor have approached the Bank and their request and in consideration of the agreement arrived at between the said contractor and the Bank, the Bank has agreed to give such guarantee as hereinafter mentioned the Principal.

NOW therefore, these presents witness that we the Bank by the hand of Mr. \_\_\_\_\_ the offices are authority by the bank of 'Guarantees' issue in behalf of the Bank do hereby undertakes to pay to the principal a sum of Rs \_\_\_\_\_ (Rupees \_\_\_\_\_ only) by virtue of this guarantee against any loss or damage caused to or by the aforesaid Contractor of any of the terms of conditions, stipulations or undertakings of any case of them contained in the same agreement and documents attached thereto and for the payment of any money or moneys payable by the said contractor to the Principal under the terms and conditions of the said agreement. (the decision regarding the breach, loss, damage or payment due being solely in the discretion of the Principal).

We further undertake to pay without demur the aforesaid amount in a lumpsum on demand or such part hereof as the Principal may demand from time to time irrespective of the fact whether the said Contractor admits or denies such claim or question its correctness in any Court, Tribunal or arbitration proceedings or before any authority. The aforesaid guarantee will remain in force and we shall be liable under the same irrespective of any concession or time being granted by the Principal to the Contractor in or for fulfilling the said Agreement between Contractor and the Principal and the guarantee will remain in full force irrespective of any change of terms, conditions or stipulations or any variation in the terms of the said Agreement irrespective of whether notice of such change or variation is given to us or not and claim to receive such notice of any change/and/or variation of the terms and/or conditions of the said agreement is hereby specifically waived by us.

**GENERAL CONDITIONS OF CONTRACT (Rev 01, 18/07/2008)**  
**(FOR WORK IN CONSTRUCTION MANAGEMENT OF BHARAT HEAVY ELECTRICALS LIMITED)**

Further we shall not be released from the guarantee by any forbearance or the exercise or non-exercise of any of the powers or rights under the said agreement by the Principal against the Contractor irrespective of whether notice of such forbearance enforcement or non-enforcement of any powers or rights, modifications or changes made in the agreement or concessions shown to Contractor by the Principal is given to us or not.

The Guarantee herein contained shall not be determined or affected by the liquidation or winding up or insolvency of or change in the constitution of the Contractor but shall in all respects and for all purposes binding and operative until all payments of all moneys due or that may hereinafter become due to the Principal in respect of any liabilities or obligations of the contractor under the said agreement.

The Bank guarantee shall be valid till i.e. 12 months after completion of works as per relevant clause of Tender Specification No. \_\_\_\_\_

Any claim or dispute or disputes arising under the terms of this document shall be enforced or settled in the Courts at NAGPUR only.

And lastly the undertaken not to revoke this guarantee during its currency except with the previous consent of the Principal in writing.

The Guarantor hereby declares that it has powers to execute this guarantee and the executant has full powers to do so on behalf of the Guarantor.

(Name of the Bank & Place)

DATED:

SEAL

**DESIGNATION OF THE AUTHORISED  
PERSON SIGNING THE GUARANTEE**

**GENERAL CONDITIONS OF CONTRACT (Rev 01, 18/07/2008)**  
**(FOR WORK IN CONSTRUCTION MANAGEMENT OF BHARAT HEAVY ELECTRICALS LIMITED)**

**BHARAT HEAVY ELECTRICALS LIMITED**

*(A Government of India Undertaking)*

**Power Sector – Western Region**

**345, Kingsway**

**Nagpur – 440 001**

**CONTRACT AGREEMENT**

**AGREEMENT NO.** \_\_\_\_\_ **DATED** \_\_\_\_\_

<b>NAME OF WORK</b>	
<b>NAME OF THE CONTRACTOR WITH FULL ADDRESS</b>	
<b>AMOUNT OF TENDER ACCEPTED</b>	
<b>LETTER OF INDENT NO.</b>	
<b>TIME ALLOTTED FOR COMPLETING THE WORK (DATE OF COMPLETION)</b>	

\_\_\_\_\_  
**CONTRACTOR**

\_\_\_\_\_  
**(OFFICER AUTHORISED TO SIGN AGREEMENT)**

**GENERAL CONDITIONS OF CONTRACT (Rev 01, 18/07/2008)**  
**(FOR WORK IN CONSTRUCTION MANAGEMENT OF BHARAT HEAVY ELECTRICALS LIMITED)**

**CONTRACT AGREEMENT**

**This Agreement made this day, the \_\_\_\_\_ between BHEL having its Registered Office at BHEL HOUSE, SIRI FORT, NEW DELHI (hereinafter called the FIRST PARTY) thru BHEL, POWER SECTOR-WESTERN REGION, SHREEMOHINI, 345, KINGSWAY, NAGPUR – 440001, of one part and \_\_\_\_\_ (hereinafter called the “CONTRACTOR” of the SECOND PARTY).**

- 02 WHEREAS the first party is desirous of executing the work of \_\_\_\_\_  
\_\_\_\_\_ more particularly described in the appendices including drawings and specifications attached herewith.
- 03 WHEREAS in pursuance of the said contractor’s tender having been accepted the first party has decided to give the above said work to the Contractor.
- 04 WHEREAS the said Contractor has agreed to do the herein contained in these presents, instructions to tenderer, general conditions and special conditions (hereinafter referred as the said contract schedule) at approved rates (hereinafter referred to as the said contract rates).
- 05 AND WHEREAS the said contractor has furnished the Bank Guarantee of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) towards initial 50% Security Deposit for the complete work and has further agreed for balance amount of Rs. \_\_\_\_\_ Security Deposit being recovered at 10% value of each running bill till the full security deposit is made up for the satisfactory completion and performance of the work and whereas the validity of the said Bank Guarantee has to be executed by the contractor, if so required for the extended period of contract period and in the event of his failure to do so, the contractor shall pay or accept the recovery of this amount of Rs. \_\_\_\_\_ from the bills forthwith in one installment and it has further been agreed that the failure to extend the validity of Bank Guarantee or failure to pay the aforesaid amount in the manner specified above shall constitute the breach of the contract and first party reserves the right to take any legal action deemed fit for recovery of the said sum of Rs. \_\_\_\_\_. This amount of Rs. \_\_\_\_\_ will be refunded (and Bank Guarantee will be returned) to the contractor on satisfactory completion of the work as specified in the contract documents.
- 06 Now these presents witness that in consideration of the said contract schedule and said contract rates, as also of agreement of good and faithful service to be rendered and performed by the contractor in the execution of the said work subject to the stipulation hereinafter expressed.
- 07 That the said contractor will perform the aforesaid work subject to the conditions contained in these presents, instructions to the Tenderers, General and Special Conditions of Contract and the Contract documents attached herewith including the said schedule, Specifications, Appendices, Letter of Indent, drawings attached and also such other drawings and instructions as may from time to time be given by the first party.

**GENERAL CONDITIONS OF CONTRACT (Rev 01, 18/07/2008)**  
**(FOR WORK IN CONSTRUCTION MANAGEMENT OF BHARAT HEAVY ELECTRICALS LIMITED)**

- 08 And that the said contractor shall be deemed to have carefully examined the specifications and Conditions of Contract, Appendices, Schedules, Letter of Award, Drawings etc. as aforesaid and also to have satisfied himself as to the nature and character of work to be executed.
- 09 That the said contractor shall carryout and complete the execution of the said work to the entire satisfaction of the Engineer-In-charge within the agreed time schedule.
- 10 That the first party after proper scrutiny of the bills submitted by the said contractor will pay to him during progress of the said work at said contract rates and agreed terms of payment, a sum as determined by the first party in respect of the work executed by the contractor.
- 11 That the contract shall come into force with retrospective effect from the date on which Telex/Fax Letter of Indent was issued to the contractor.
- 12 That whenever under this contract or otherwise any sum of money shall be recoverable from or payable by the contractor, the sum may be deducted in the manner as set out in the conditions of the contract aforesaid.
- 13 That all charges on account of Octroi, terminal and sales tax or other duties on material obtained for the work shall be borne by the said contractor.
- 14 This is agreed between the parties that the non-exercise of any of the powers conferred on the authorities of the first party will not in any manner constitute waiver of the conditions hereto contained in these presents and the liability of the said contractor either of past or future compensation shall remain unaffected.
- 15 That the expression BHEL means the Bharat Heavy Electricals Limited, BHEL House, Siri Fort, New Delhi, Through BHEL, Power Sector-Western Region, "Shreemohini Complex", 345, Kingsway, Nagpur – 440 001.

The documents hereto attached viz:-

- 1 \_\_\_\_\_  
2 \_\_\_\_\_  
3 \_\_\_\_\_ etc.

shall also form part of this agreement.

In WITNESS hereto the parties have respectively set their signature in presence of:

WITNESS (with full address)

1.  
2.

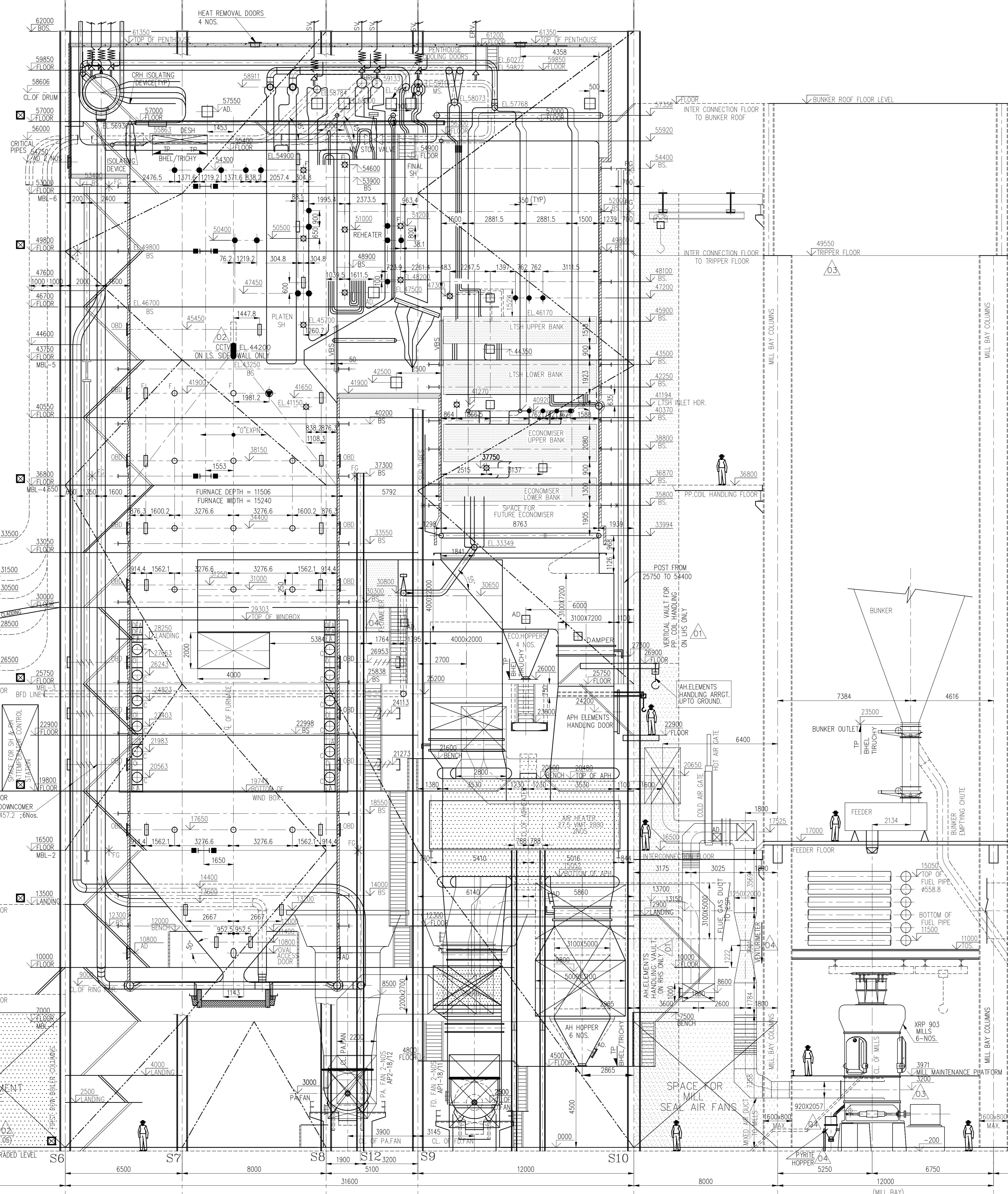
Signature of the Contractor  
(To be signed by a person holding valid Power of Attorney of the Company)

WITNESS (with full address)

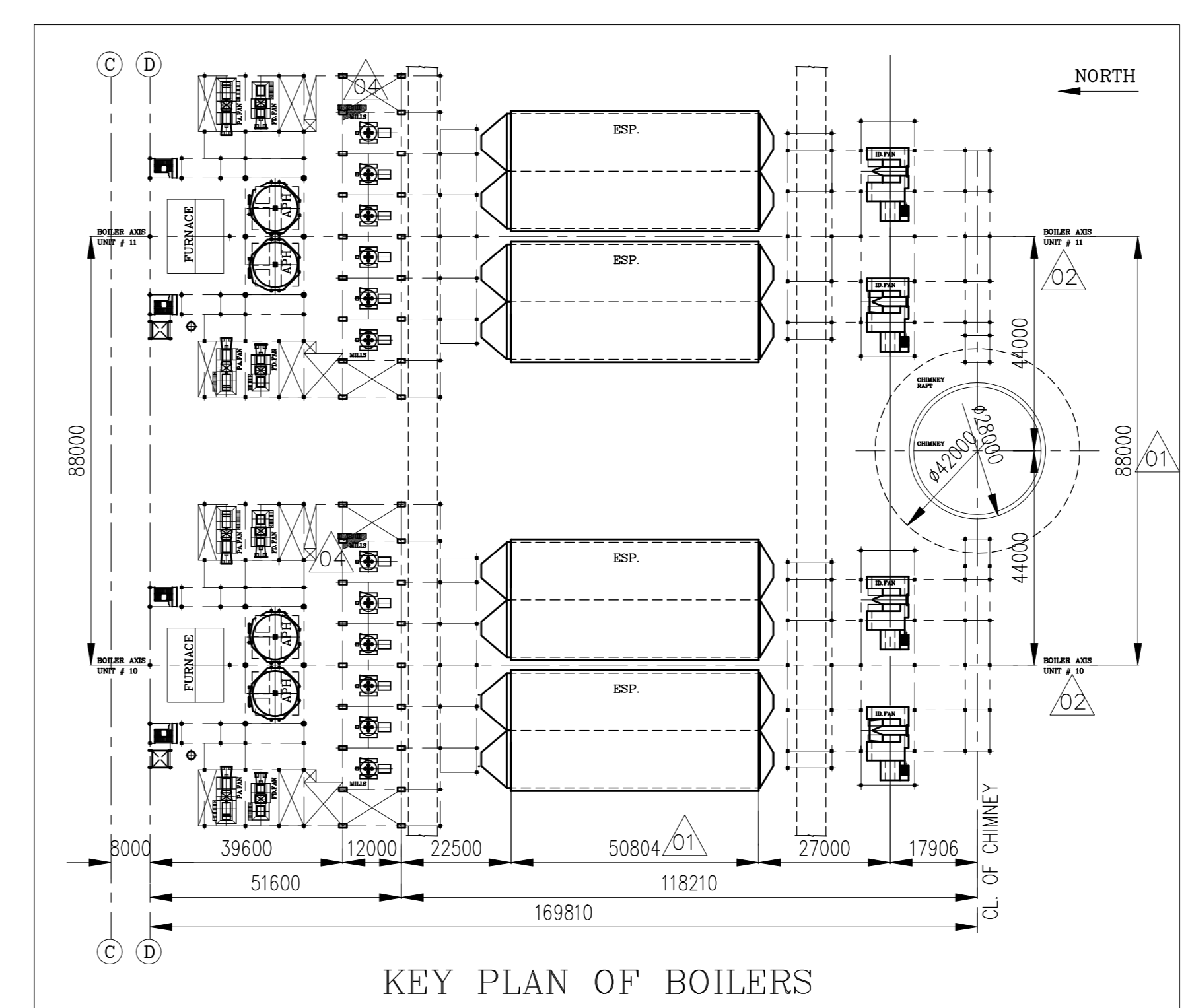
1.  
2.

For and on behalf of  
BHARAT HEAVY ELECTRICALS LTD

DATE\_\_\_\_\_



SIDE ELEVATION



KEY PLAN OF BOILERS

**BOILER PARAMETERS**

- STEAM FLOW AT SUPER HEATER OUTLET : 810 T/HR
- STEAM PRESSURE AT SUPERHEATER OUTLET : 155 KG/CM<sup>2</sup> (G)
- STEAM TEMPERATURE AT SUPERHEATER OUTLET : 540° C
- STEAM FLOW AT REHEATER OUTLET : 693.5 T/HR
- STEAM PRESSURE AT REHEATER INLET : 39.54 KG/CM<sup>2</sup> (G)
- STEAM PRESSURE AT REHEATER OUTLET : 37.47 KG/CM<sup>2</sup> (G)
- STEAM TEMPERATURE AT REHEATER INLET : 344.8° C
- STEAM TEMPERATURE AT REHEATER OUTLET : 540° C
- FEED WATER TEMPERATURE ENTERING ECONOMISER: 247.0° C

**DESCRIPTION OF THE UNIT**  
 TWO NUMBERS OF 250 MW BOILERS, NATURAL CIRCULATION, TWO PASS, SINGLE DRUM, DIRECT, PULVERISED COAL FIRED, BALANCED DRAFT FURNACE, SINGLE REHEAT, RADIANT DRY BOTTOM, SUITABLE FOR OUTDOOR INSTALLATION & SIX NUMBERS OF BOWL MILLS ARRANGED AT THE REAR OF THE BOILER.

- NOTES: -**
- ALL DUCT SIZES ARE INSIDE DIMENSIONS ONLY UNLESS OTHERWISE SPECIFIED
  - ALL ELEVATIONS ARE REFERRED TO POWER HOUSE FINISHED GROUND FLOOR ELEVATION ± 0.0M. WHICH CORRESPONDS TO 449.25.  $\Delta_3$
  - BOILER AREA PAVEMENT LEVEL/ FINISH GRADED LEVEL IS 200MM. BELOW 0.0M.  $\Delta_3$  ie RL.449.05M  $\Delta_3$

**REFERENCE DRAWINGS: -**

S.NO.	DESCRIPTION	DRAWING NO.
1	GEN ARRANGEMENT OF BOILER SEC. SIDE ELEVATION	0-00-022-74710
2	GEN ARRANGEMENT OF BOILER SEC. PLAN	0-00-022-74711
3	TP DETAILS OF FW, MS, HRH & CRH PIPING	0-00-020-74712
4	LOCATION OF FURNACE OPENINGS AND BUCKSTAYS	0-00-020-74713
5	LAYOUT OF COLD AIR DUCTING-ELEVATION	0-00-020-74714
6	LAYOUT OF COLD AIR DUCTING-PLAN	0-00-020-74715
7	LAYOUT OF HOT AIR DUCTING-ELEVATION	0-00-020-74716
8	LAYOUT OF HOT AIR DUCTING-PLAN	0-00-020-74717
9	LAYOUT OF ID SYSTEM-ELEVATION	0-00-020-74718
10	LAYOUT OF ID SYSTEM-PLAN	0-00-020-74719
11	KEY PLAN OF BOILERS	0-00-020-74914
12	BOILER EQUIPMENT DESIGNATION	3-00-020-70127
13	LAYOUT OF FLUE GAS DUCTING	1-00-020-71176
14	FLOOR PLAN @ EL.7000	1-00-021-71177
	TO	TO
	FLOOR PLAN @ EL. 59550	1-00-021-71192

**LEGEND: -**

SYMBOL	ABBREVIATION	DESCRIPTION
TP	TP	TERMINAL POINT UNDER BOILER SCOPE OF SUPPLY
AD	AD	ACCESS DOOR
OAD	OAD	OBSERVATION DOOR
F	F	FUTURE OBSERVATION DOOR
LRSB	LRSB	LONG RETRACTABLE SOOT BLOWER
F	F	FUTURE LONG RETRACTABLE SOOT BLOWER
IN	IN	INSTRUMENT INSERT
BS	BS	BUCKSTAY
FG	FG	FURNACE GUIDE
WB	WB	FURNACE GUIDE ON FRONT/REAR WALLS
F	F	WALL BLOWER
F	F	FUTURE WALL BLOWER
MBL	MBL	MAIN BRACE LEVEL
WP	WP	WORK POINT
TP	TP	TEMPERATURE PROBE
TL	TL	LIFT LANDING FLOOR
ASDC	ASDC	ACOUSTIC STEAM LEAK DETECTION CHANNEL

REV. DATE ALTERED T.Selvaraju  
 05 14-11-2009 CHD. & APPD. G.Veeramani  
 1. NOTE NO.3 UPDATED.  
 2. LOCATION OF REVISED AREAS ARE MARKED AS  $\Delta_3$   
 THE ABOVE REVISIONS ARE AS PER DESEIN'S LETTER NO. D-3039/CC-20/SKJ/472, DT 29/10/09

REV.	DATE	ALTERED	Damodar Soren	REV.	DATE	ALTERED	T.Selvaraju
0.3	15-06-2009	CHD. & APPD.	G.Veeramani	04	19-08-2009	CHD. & APPD.	G.Veeramani

- CLEL OF MILL AIR INLET UPDATED AS 3200.
- FLOOR AT EL.25500 IN TG BAY SHOWN AS DEARATOR FLOOR.
- FLOOR AT EL.19800 IN TG BAY REVISED AS EL.19000.
- INTERCONNECTION FLOOR TO TRIPPER FLOOR SHOWN AS EL.49550.
- CONSULTANT NAME INCLUDED IN THE TITLE BLOCK.
- FLOW METER & VENTURI METER SIZE MARKED IN HOT SEC AIR DUCT TO WINDBOX & HOT AIR DUCT TO MILLS.

FOLLOWING ARE AS PER PEM DRG. NO. PE-DC-311-100-M001 - MAIN PLANT EQUIPMENT LAYOUT.

- NOTE NO.3 REVISED AS 'BOILER AREA FINISHED GRADED LEVEL'.
- POWER HOUSE FINISHED GROUND FLOOR EL. SHOWN AS 0000 (RL 449.25).
- BOILER AREA FINISHED GRADED LEVEL SHOWN AS -200 (RL 449.05)
- NOTE 3 UPDATED.
- LENGTH OF ESP IN KEY PLAN UPDATED.
- VERTICAL FREE VAULT & SPACE FOR PP COIL HANDLING SHOWN AS ON LHS ONLY.
- VERTICAL FREE VAULT FOR APH ELEMENTS HANDLING SHOWN AS ON RHS ONLY.

CUSTOMER NO.1206 & 1207

CUSTOMER  
**MADHYA PRADESH POWER GENERATING COMPANY LTD**

CONSULTANT  
**DESEIN PVT. LTD., CONSULTING ENGINEERS, NEW DELHI**

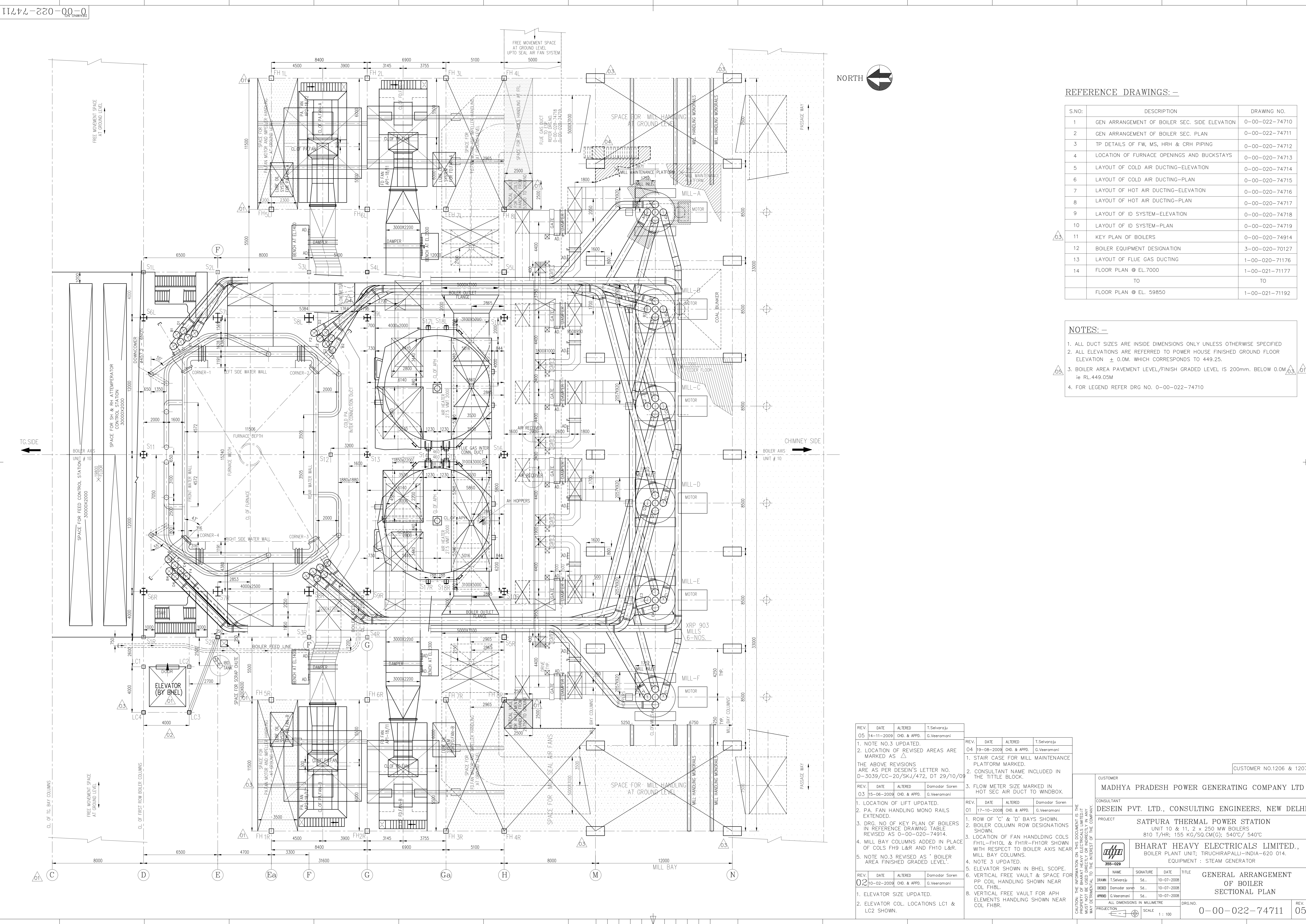
PROJECT  
**SATPURA THERMAL POWER STATION**  
 UNIT 10 & 11, 2 x 250 MW BOILERS  
 810 T/HR; 155 KG/SQ.CM(G); 540C/ 540C

**BHARAT HEAVY ELECTRICALS LIMITED.**  
 BOILER PLANT UNIT; TRICHIRAPALLI-INDIA-620 014.  
 EQUIPMENT : STEAM GENERATOR

NAME	SIGNATURE	DATE	TITLE
DRWN: S.Mahanta	Sd...	10-07-2008	GENERAL ARRANGEMENT OF BOILER SECTIONAL SIDE ELEVATION
CHD: Damodar soren	Sd...	10-07-2008	
APPD: G.Veeramani	Sd...	10-07-2008	

ALL DIMENSIONS IN MILLIMETRE  
 SCALE: 1:100  
 DRG NO: 0-00-022-74710  
 REV: 05

CAUTION: THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED & WILL BE CONFIDENTIAL TO THE INTEREST OF THE COMPANY.



**REFERENCE DRAWINGS: -**

S.NO:	DESCRIPTION	DRAWING NO.
1	GEN ARRANGEMENT OF BOILER SEC. SIDE ELEVATION	0-00-022-74710
2	GEN ARRANGEMENT OF BOILER SEC. PLAN	0-00-022-74711
3	TP DETAILS OF FW, MS, HRH & CRH PIPING	0-00-020-74712
4	LOCATION OF FURNACE OPENINGS AND BUCKSTAYS	0-00-020-74713
5	LAYOUT OF COLD AIR DUCTING-ELEVATION	0-00-020-74714
6	LAYOUT OF COLD AIR DUCTING-PLAN	0-00-020-74715
7	LAYOUT OF HOT AIR DUCTING-ELEVATION	0-00-020-74716
8	LAYOUT OF HOT AIR DUCTING-PLAN	0-00-020-74717
9	LAYOUT OF ID SYSTEM-ELEVATION	0-00-020-74718
10	LAYOUT OF ID SYSTEM-PLAN	0-00-020-74719
11	KEY PLAN OF BOILERS	0-00-020-74914
12	BOILER EQUIPMENT DESIGNATION	3-00-020-70127
13	LAYOUT OF FLUE GAS DUCTING	1-00-020-71176
14	FLOOR PLAN @ EL. 7000	1-00-021-71177
	TO	TO
	FLOOR PLAN @ EL. 59850	1-00-021-71192

**NOTES: -**

1. ALL DUCT SIZES ARE INSIDE DIMENSIONS ONLY UNLESS OTHERWISE SPECIFIED
2. ALL ELEVATIONS ARE REFERRED TO POWER HOUSE FINISHED GROUND FLOOR ELEVATION ± 0.0M. WHICH CORRESPONDS TO 449.25.
3. BOILER AREA PAVEMENT LEVEL/FINISH GRADED LEVEL IS 200MM. BELOW 0.0M.
4. FOR LEGEND REFER ORG NO. 0-00-022-74710

REV.	DATE	ALTERED	T.Selvaraju
05	14-11-2009	CHD. & APPD.	G.Veeramani
1. NOTE NO.3 UPDATED.			
2. LOCATION OF REVISED AREAS ARE MARKED AS Δ			
THE ABOVE REVISIONS ARE AS PER DESEIN'S LETTER NO. D-3039/CC-20/SKJ/472, DT 29/10/09			
REV.	DATE	ALTERED	Damodar Soren
03	15-06-2008	CHD. & APPD.	G.Veeramani
1. LOCATION OF LIFT UPDATED.			
2. PA. FAN HANDLING MONO RAILS EXTENDED.			
3. DRG. NO OF KEY PLAN OF BOILERS IN REFERENCE DRAWING TABLE REVISED AS 0-00-020-74914.			
4. MILL BAY COLUMNS ADDED IN PLACE OF COLS FH9 L&R AND FH10 L&R.			
5. NOTE NO.3 REVISED AS 'BOILER AREA FINISHED GRADED LEVEL'.			
REV.	DATE	ALTERED	Damodar Soren
02	10-02-2008	CHD. & APPD.	G.Veeramani
1. ELEVATOR COL. LOCATIONS LC1 & LC2 SHOWN.			

REV.	DATE	ALTERED	T.Selvaraju
04	19-08-2009	CHD. & APPD.	G.Veeramani
1. STAIR CASE FOR MILL MAINTENANCE PLATFORM MARKED.			
2. CONSULTANT NAME INCLUDED IN THE TITLE BLOCK.			
3. FLOW METER SIZE MARKED IN HOT SEC AIR DUCT TO WINDBOX.			
REV.	DATE	ALTERED	Damodar Soren
01	17-10-2008	CHD. & APPD.	G.Veeramani
1. ROW OF 'C' & 'D' BAYS SHOWN.			
2. BOILER COLUMN ROW DESIGNATIONS SHOWN.			
3. LOCATION OF FAN HANDLING COLS FH1L-FH10L & FH1R-FH10R SHOWN WITH RESPECT TO BOILER AXIS NEAR MILL BAY COLUMNS.			
4. NOTE 3 UPDATED.			
5. ELEVATOR SHOWN IN BH&L SCOPE.			
6. VERTICAL FREE VAULT & SPACE FOR PP COIL HANDLING SHOWN NEAR COL FH9L.			
8. VERTICAL FREE VAULT FOR APH ELEMENTS HANDLING SHOWN NEAR COL FH8R.			

CUSTOMER NO.1206 & 1207

CUSTOMER  
**MADHYA PRADESH POWER GENERATING COMPANY LTD**

CONSULTANT  
**DESEIN PVT. LTD., CONSULTING ENGINEERS, NEW DELHI**

PROJECT  
**SATPURA THERMAL POWER STATION**  
UNIT 10 & 11, 2 x 250 MW BOILERS  
810 T/HR; 155 KG/SQ.CM(G); 540°C/ 540°C

**BHARAT HEAVY ELECTRICALS LIMITED.**  
BOILER PLANT UNIT; TIRUCHIRAPALLI-INDIA-620 014.  
EQUIPMENT : STEAM GENERATOR

355-029

GENERAL ARRANGEMENT OF BOILER SECTIONAL PLAN

SCALE: 1 : 100

DRG. NO: 0-00-022-74711

REV. 05

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