T E N D E R S P E C I F I C A T I O N

No. BHE/PW/PUR/SKT-CRH/OJ-177

FOR

SERVICES OF VARIOUS CAPACITY CRAWLER CRANES ON MONTHLY HIRING BASIS

FOR

CONSTRUCTION WORK IN THERMAL POWER PROJECTS

AT

SIKKA THERMAL POWER PROJECT

GSECL

DIST- JAMNAGAR

GUJARAT

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

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LEGEND:

@: Issued as separate booklets titled **Part-II** in eleven volumes as hard copy. Soft Copy furnished as a single downloadable file containing all eleven volumes in the web page (www.bhel.com) as file titled "Price Bid OJ-177".

This entire document is also hosted in website (www.bhel.com) as downloadable file titled " Tech Bid OJ-177"

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/ SKT-CRH/OJ-177

ISSUE DETAILS

NAME OF THE WORK: **SERVICES OF VARIOUS CAPACITY CRAWLER CRANES ON MONTHLY HIRING BASIS FOR CONSTRUCTION WORK IN THERMAL POWER PROJECTS AT SIKKA THERMAL POWER PROJECT DIST:JAMNAGAR, GUJARAT.**

LAST DATE & TIME FOR SUBMISSION OF COMPLETED OFFERS: PLEASE OBTAIN THE LATEST DETAILS FROM OUR 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……

……..

……..

(THESE TENDER SPECIFICATION DOCUMENTS ARE NOT TRANSFERABLE)

FOR BHARAT HEAVY ELECTRICALS LIMITED

Dy. General Manager (Purchase)

PLACE: NAGPUR

DATE :

BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR-WESTERN REGION
'Shreemohini' Complex, 5th floor
345-Kingsway Nagpur 440001
Phone: 0712-3048600-604 Fax: 0712-3048 605, 698, 699

PROCEDURE FOR SUBMISSION OF SEALED TENDERS & INSTRUCTION TO BIDDERS

THE TENDERER MUST SUBMIT THEIR TENDERS AS REQUIRED IN TWO PARTS IN SEPARATE SEALED COVERS PROMINENTLY SUPERSCRIBED AS PART-I TECHNICAL BID AND PART-II PRICE BID AND ALSO INDICATING ON EACH OF THE COVERS THE **TENDER SPECIFICATION NUMBER AND DUE DATE AND TIME AS MENTIONED IN THE TENDER NOTICE.**

Bidder shall submit <u>separate sealed Price Bid for each individual crane</u> (Crane 1, Crane 2) super-scribed with appropriate unique "crane identification code" mentioned against the respective cranes in their technical details

PART-I (TECHNICAL BID) COVER-I

EXCEPTING RATE SCHEDULE, ALL OTHER SCHEDULES, DATA SHEETS AND DETAILS CALLED FOR IN THE SPECIFICATION SHALL BE ENCLOSED IN PART-I "TECHNICAL BID" ONLY.

PART-II (PRICE BID) COVER-II

ALL INDICATIONS OF PRICE SHALL BE GIVEN IN THIS PART-II "PRICE BID". **EMD SHALL NOT BE INCLUDED IN THIS COVER.**

THESE TWO SEPARATE COVERS-I AND II (PART-I AND PART-II) SHALL TOGETHER BE ENCLOSED IN A THIRD ENVELOPE (COVER-III) ALONGWITH REQUISITE EMD AS INDICATED EARLIER AND THIS SEALED COVER SHALL BE SUPERSCRIBED AND SUBMITTED TO ADDL. GEN MANAGER (PURCHASE) AT THE ABOVE MENTIONED ADDRESS ON OR BEFORE THE DUE DATE AS INDICATED.

THE QUALIFIED TENDERER WILL BE INTIMATED SEPARATELY ABOUT THE STATUS OF THEIR OFFER.

TENDERER ARE REQUESTED TO MAKE SPECIFIC NOTE OF THE FOLLOWING CONDITIONS:

- CONTRACTOR SHOULD HAVE ADEQUATE RESOURCES INCLUDING MAJOR T&PS AT HIS DISPOSAL FOR THIS JOB.
- CONTRACTOR SHOULD HAVE SOUND FINANCIAL STABILITY.
- TENDERER SHOULD MEET QUALITY REQUIREMENT REGARDING WORKMANSHIP, DEPLOYMENT OF PERSONNEL, ERECTION TOOLS AND NECESSARY INSPECTION, MEASUREMENT & TESTING INSTRUMENTS.
- ALL INFORMATION AS CALLED FOR IN VARIOUS APPENDICES AND CLAUSES OF TENDER SPECIFICATION SHOULD BE FURNISHED IN COMPLETENESS. PLEASE REFER THE CHECKLIST.
- CLARIFICATION ON TENDER IF ANY, SHALL BE OBTAINED BY THE TENDERER BEFORE SUBMITTING THEIR OFFER.
- OFFERS MUST BE SUBMITTED WITHOUT ANY DEVIATION.
- OFFERS RECEIVED WITH ANY DEVIATION OR WITHOUT RELEVANT INFORMATION AS DESCRIBED ABOVE ARE LIABLE TO BE REJECTED. PRICE BIDS RECEIVED IN THE FORM OTHER THAN SPECIFIED IN PART-II (PRICE BID) ARE LIABLE TO BE REJECTED.
- In case customer approval is required for this package, bidder's offer will be accepted subject to approval of bidder by customer.

PROJECT INFORMATION

BHEL's Client M/s Gujarat State Electricity Corporation Limited (GSECL) has their 2x120 MW Pulverized Coal based Power Plant at their Sikka Thermal Power Plant, Distt-Jamnagar, Gujarat. The said client has undertaken the process of expanding the capacity of the power plant by setting up two more power generation units each of 250 MW rating.

LOCATION & APPROACH

1) Project Name: Sikka thermal Power Station Units # 03 & 04 (250 MW each).

2) Project Location: The Project site is located at about 12 km distance from the nearest city Jamnagar on the on the State Highway No. 25 leading to Dwarka.

3) Transport facilities:

A) Nearest Railway: The nearest railway station is Jamnagar in Western Railway. Nearest Airport Jamnagar is about 12 km away.

B) Road:

C) Nearest Airport:

CLIMATIC CONDITIONS:

The climatic conditions of the project are as under.

1. Maximum ambient Temperature: 44.4^{o} Centigrade
2. Minimum ambient Temperature is about 1.7^{o} Centigrade
3. Seismic Zone: Zone IV as per IS:1893-2002
4. Relative Humidity: 70%
5. Wind Speed 10.8 kmph.

GEOGRAPHICAL CONDITIONS:

Geographical position of the project premises is at 22^{o} 26' N Latitude and 69^{o} 46' E Longitude

Bidder is advised to visit the project sites and appraise himself about the local conditions and infrastructure available in the area for fulfilling their commitments under the contract. BHEL will not admit any claims whatsoever on account of Contractor's non-familiarization of local conditions.

CHECK LIST

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	WHETHER NO DEVIATION CERTIFICATE FURNISHED	YES	NO
5	TENDERER HAS VISITED THE PROJECT SITE AND ACQUAINTED WITH THE SITE CONDITIONS	YES	NO
6	HEAD QUARTER'S ORGANISATION IS FURNISHED	YES	NO
7	PROFIT & LOSS ACCOUNT FOR PRECEDING THREE YEARS IS FURNISHED	NA	NA
8	COPY OF PAN CARD ACCOMPANIED BY 'IT RETURN' COPY IS FURNISHED	YES	NO
9	POWER OF ATTORNEY ENCLOSED IN FAVOUR OF PERSON MAKING OFFER.	YES	NO
10	BIDDER HAS FMILIARIZED HIMSELF WITH ALL RELEVANT LOCAL LAWS & CONDITIONS.	YES	NO
11	WHETHER ALL THE PAGES OF THE TENDER DOCUMENTS ARE READ, UNDERSTOOD AND SIGNED	YES	NO
12	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 } 1. Name of the Company 2. Name of Bank 3. Name of Bank Branch 4. City/Place 5. Account Number 6. Account type 7. IFSC code of the Bank Branch 8. MICR Code of the Bank Branch NOTE: In case Bank endorsed certificate regarding above has already been submitted earlier, Kindly submit photocopy of the sam	YES	NO

NOTE : STRIKE OFF YES OR NO, AS APPLICABLE

DECLARATION BY BIDDER'S AUTHORIZED SIGNATORY

TENDER SPECIFICATION No. BHE/PW/PUR/SKT-CRH/OJ-177

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/ SKT-CRH/OJ-177

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.

Signature of the Bidder

Date:

CERTIFICATE CONFIRMING KNOWLEDGE ABOUT SITE CONDITIONS

TENDER SPECIFICATION No. BHE/PW/PUR/ SKT-CRH/OJ-177

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:

NOTICE INVITING TENDER (Page 1 of 3)

Sealed tenders are invited in two bid system (viz. Part-I: Technical cum Commercial Bid and Part-II: Price Bid) from bidders meeting Qualifying Requirements (QR) as specified later in this NIT. Brief details of job and Tender Specification (T. S.) No. are as under.

Tender Specs. No. **BHE/PW/PUR/SKT-CRH/OJ-177**

JOB: **PROVIDING SERVICES OF VARIOUS CAPACITY CRAWLER CRANES ON MONTHLY HIRING BASIS FOR CONSTRUCTION WORK IN THERMAL POWER PROJECTS AT 2x250MW SIKKA THERMAL POWER PROJECT DIST:JAMNAGAR, GUJARAT.**

Sale and Web Page Hosting of T.S. documents:	12/08/2010 to 01/09/2010
Last Date and Time for Offer Submission:	02/09/2010* (latest by 15:00 Hrs)
Opening of Technical Bids:	02/09/2010* (at 16:00 Hrs)

*Please obtain latest information regarding these dates from the web page www.bhel.com (Tender Specification → View Corrigendums)

EMD: EMD for this tender is Rs. 2.0 Lakh (Rs. Two Lakhs Only by DD or One Time EMD of Rs. 2.0 lakh.

- Tender Specs documents with complete details are hosted in web page (**www.bhel.com**). Bidders can directly download the same and use for submission of offer. Tender Document charges shall be paid to BHEL along with or before submission of Offer.
- Interested bidders may alternately collect hard copy of T.S. documents from this office on all working days within the sale period on payment of Tender Document charges.
- Tender Specification document Charges: Rs. 2,000/- by DD (in favour of BHEL payable at Nagpur) or by Cash. Courier charges will be Rs. 500/- extra if T.S. documents are requested through courier.
- BHEL takes no responsibility for any delay/loss of documents or correspondences sent by courier/post.
- Bidders who have deposited One Time EMD of Rs. 2.00 Lakhs with BHEL: PSWR: Nagpur will be exempted from submission of EMD with these tenders.
- Acceptance of any tender shall be subject to it's approval by BHEL's customer.
- BHEL reserves the right to accept or reject any or all tenders without assigning any reasons whatsoever.
- Dates of Price Bid opening will be intimated to bidders later.
- All corrigenda, addenda, amendments and clarifications to Tender Specifications will be hosted in the web page (**www.bhel.com** → **Tender Notifications** → **View Corrigendums**) and not in the newspaper. Bidders shall keep themselves updated with all such developments.
- BHEL reserves the right to reject any tender on the basis of unsatisfactory performance of the bidder in any ongoing job or any similar job in the last seven years.

Qualifying Requirements (QR)

Bidder must fulfill the Qualifying Requirements as under in order to be considered as technicall qualified for this tendering process:

a)

a.1) Bidder must be in the business of providing Services of Crane Hiring/ Leasing in last seven years as on 31/07/2010

AND

a.2) The crane offered by the bidder must meet the technical requirements of BHEL.

AND

b) Average annual financial **turnover (Audited) of Rs 95.00Lakhs** or more over the last three financial years i.e. 2007-08, 2008-09 & 2009-10 **OR** 2006-07, 2007-08 & 2008-09 if Accounts for FY 09-10 has not been audited.

AND

c) Net worth of the Bidder based on the latest Audited Accounts as furnished by Bidder in case of 'b' above should be higher than 50% of the Paid-up Capital in case of Companies.

AND

d) Bidder must have earned cash profit in any one of the three Financial Years as applicable in case of 'b' above based on latest Audited Accounts

Explanatory Notes for QR 'a' and 'b'

i) The words 'provided services' mean the bidder should have achieved the criteria specified in the QR even if the total contract has not been completed or closed

……
…

GENERAL

1) **Timing of sale of Documents:** Tender Specification documents will be issued from BHEL PSWR Nagpur office from 10:00 AM to 4:00 PM on all working days within the period specified in the NIT.

2) **Holidays:**
Sale of Tender Documents shall not take place on National Holidays, holidays declared by the Central or State Governments, Sundays, second and last Saturdays and holidays of BHEL PSWR Nagpur HQ.

3) **Seeking Clarifications on Tender Specification:**
Clarifications on the Tender Specifications, if any, may be sought by the bidders so as to reach this office at least **seven days before the Due Date** for submission.

4) **Fulfillment of Qualifying Requirements:**
A bidder must satisfy **all the Qualifying Requirements** stipulated under 'a', 'b' etc of this tender concurrently in order to get qualified.

5) **Customer Approval**: In case customer approval is required for this package, bidder's offer will be accepted subject to approval of bidder by customer.

6) Supporting Documents:

Bidders shall submit documents in support of possessing "Qualifying Requirements" as under duly self-certified and stamped by the authorized signatory.

- List of jobs done with Name of the Project, Owner of Project, Name of Customer, Work Order Ref. No. & Date, Brief Details of Job, Executed Value, Date of Start, Date of Completion.
- Photocopies of Work Orders issued by the Customer containing details of Bill of Quantities/Schedule of Rates.
- Photocopies of Completion Certificate issued by Customer or Owner of Project.
- Photocopies of audited Profit and Loss accounts accompanied by relevant schedules for turnover figures.

7) Earnest Money Deposit (EMD): Refundable, Non-interest bearing EMD for each tender is indicated against each job earlier here. Bidders may also opt to deposit "One Time EMD" of Rs. 2.0 lacs and thus be exempted henceforth from payment of EMD with each Erection and Commissioning tender of BHEL-PSWR Nagpur. EMD shall be paid ONLY by **Account Payee Demand Draft** in favour of "Bharat Heavy Electricals Limited" payable at Nagpur.

Those bidders who have already deposited 'One Time EMD' earlier need not submit EMD with the present tenders. Please indicate the payment details of the 'One Time EMD' in each tender.

8) Tender Document Cost and Courier Charges:
Tender document charges @ Rs 2000/- per set and courier charges @ Rs 500/- per set shall be made by Account Payee Demand draft in favour of "Bharat Heavy Electricals limited" payable at Nagpur or in cash payable at cash counter of this Office. Courier charges shall be paid in case bidders requests for dispatch of Tender specifications by courier. In case bidder downloads the Tender specifications etc from web page, they shall remit the Tender document charges (Rs 2000/-) positively along with or before submission of offer.

9) **Liquidated Damages/Penalty:** BHEL will impose Liquidated Damages and Penalty as per suitable clauses in the respective Tender Specifications on account of delay, violation of contract conditions and non-performance attributable to the contractor.

10) LATE TENDER: Tender received after the specified time of submission shall not be considered in any circumstances.

Sr. Dy. General Manager (Purchase)
BHEL: PSWR: Nagpur

1.0 BROAD SCOPE OF WORK.

Services of various **Crawler Cranes with operation & maintenance crew** on lease basis at 2x250 MW Sikka Thermal Power Plant of Gujarat State Electricity Corporation Limited, Distt - Jamnagar, Gujarat.

The cranes shall be engaged in the project construction works ofl power plants consisting of Boiler, Electrostatic Precipitator, Various Structures, Tanks, Vessels and other equipments of these plants as per instructions of the BHEL Engineer-in-Charge.

The intent of this tender specification is to hire the services of following listed crawler cranes on monthly lease basis to suit the specified requirements.

1.1) CRANE NO. 1:

Heavy-Lift, High-Reach (HLHR) Crawler Crane, required at Sikka Thermal Power Plant, Jamnagar, Gujarat.

1.1.1 Technical Requirement & Duration of Deployment

The offered crane shall meet the following requirements.

HLHR Crane for BHEL Sikka (Gujarat) project		
SN	**Description of Parameter/Feature**	**Details/Requirement**
	Details of Critical Lifts in Boiler (Heavy Object, High Elevations)	
01	Heaviest Single Assembly (Boiler Ceiling Girder) to be lifted	69 MT
02	Elevation of Boiler Ceiling Girders after installation	65.755 m (**Top** of Girder) 61.955 m (**Bottom** of Girder)
03	Dimensions of Boiler Ceiling Girders	Built-up I beam Depth: 3.800 m Width of Flange: 0.950 m
04	Boiler Ceiling structures, Boiler Roof Structures, Silencers etc.	Up to around 10 MT at elevations of up to around 94 m. **Majority of these would require 'Boom + Jib' combination to obtain required elevation and horizontal reach at those elevations.**

HLHR Crane for BHEL Sikka (Gujarat) project		
SN	**Description of Parameter/Feature**	**Details/Requirement**
05	Overall dimension of crane with HLA, Counterweight, Guy Rope, Boom, Jib etc. vis-à-vis critical space restriction for crane movement.	For **heavy lifts** and **higher** elevations in Boiler, the crane shall have to operate in about 30 m long stretch between Boiler Cavity and Electrostatic Precipitator. The crane will be able to operate with small working radius for Ceiling Girders. Erection of Coal Bunker Bay will be taken up later than that of Boiler and the crane should be capable to lift from a longer working radius. The overall dimension of offered crane with all necessary assemblies shall be suitable for this. Bidder in his offer (Technical Bid) shall furnish complete dimensional details of crane assembly with sketch in this regard.
06	Boom & Jib Lengths	**Boom** Length: To suit aforesaid lift requirements. **Jib** Length: At least 18 m.
07	Crawler to Crawler outer dimension	Maximum 10.5 m
08	Heavy Lift Attachment (HLA)	Crane may have HLA for lifting higher loads and/or higher elevations. In addition, **it shall also be capable to lift regular loads without HLA.**
09	Deployment tentatively by	**10-April-2011**
10	Duration of Hiring	**Regular Duration: Six months, Extendable by Two months.**

Steps involved during erection by HLHR crane at site are:

- Girder A will be lifted in 2 part.
- Girder B will be lifted
- All WB's and RB's in between girder A and B will be lifted.
- Girder C will be lifted
- All WB's and RB's in between girder B and C will be lifted.
- Girder D will be lifted
- All WB's and RB's in between girder C and D will be lifted.
- Girder E will be lifted in two parts.
- All WB's and RB's in between girder D and E will be lifted.

Note -1 -HLHR crane has to lift the above mentioned items sequentially with single boom + jib configuration together in operational condition.

Note -2 - No boom shortening/ lengthening and jib assembly/dismantling will not be done at site for above during erection sequence. Bidder is also required to confirm that crane main boom can be used for lifting when jib is attached and crane must have the provision for independent operation of main boom hook block and auxiliary hook block attached with jib when jib is attached with main boom.

Note -3: Apart from these Silencer, top roof structures and other misc. items has to be lifted by HLHR Crane.

Note -4 : Direction of crane movement is towards Girder- E progressively after erection completion of other girders and structures.

1.2) CRANE NO. 2:

100 MT or higher basic capacity Crawler Crane, required at Sikka Thermal Power Plant, Jamnagar, Gujarat.

1.2.1 Technical Requirement & Duration of Deployment

The offered crane shall meet the following requirements.

100 MT of Higher Capacity Crawler Crane for BHEL Sikka project		
SN	**Description of Parameter/Feature**	**Details/Requirement**
01	Rated Capacity of Crane (with Basic Boom at Minimum Operating Radius) **without** Heavy Lift Attachment	100 MT or higher
02	Boom Type	Tubular Lattice
03	Total Boom Length	70 m or above
04	Total Jib Length	18 m or above
05	Jib Angle	Minimum two positions.
06	Crawler to Crawler outer dimension	Maximum 8.5 m
07	Heavy Lift Attachment (HLA)	BHEL will **not** accept crane with HLA; bidder shall offer only such cranes which are capable to work in its full range without HLA, even if the crane might have HLA as an additional feature.
08	Deployment tentatively by	**10 –Jan-11**
09	Duration of Hiring	**Regular Duration: 24 (twenty four) months,** **May be extended** by another **6 (six) months** under the contractually agreed terms & conditions.

1.11 GENERAL REQUIREMENTS (Applicable to all cranes)

1. The offered cranes 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 cranes indicated earlier here is tentative. Notwithstanding such indications, **you shall deploy and make the cranes 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 for each crane by BHEL.

5. 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.

1.12 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. Normally the sequence of erection of ceiling girder will be from ‘A’ Girder to ‘F’ Girder, i.e. from front of boiler to rear (i.e. from Boiler to Electrostatic Precipitator). The Crane has to move out of the boiler cavity while erecting the last girder (exit from rear).

3. While erecting the Boiler Ceiling Structure, the Heavy Lift - High Reach (HLHR) crane has to erect a Ceiling Girder followed by the Girder interconnecting structure (built up & rolled sections) between the pair of Ceiling Girders prior to taking up erection of the next Ceiling Girder. Similarly during and/or after the erection of Boiler Ceiling Structure, certain equipment/structure/assemblies such as Safety Valve Silencers, Roof Structure etc. have to be erected above the Ceiling Structure. HLHR Crane with main boom or main boom & jib combination shall be in position to erect these equipment/structures/assemblies.

4. 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.

5. 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.

6. 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.

1.13 HEAVY LIFT ATTACHMENT (HLA)

100 MT capacity cranes shall **not** have any HLA within the said lift range. Cranes that necessitate HLA up to and including these rated capacities will not be accepted by BHEL.

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 cranes with operating crew shall be made available for duration of **twelve (12) hours per day** including total one-hour break for lunch and tea intervals. 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 project site from time to time.

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

Bidders shall quote their price in the Rate Schedule furnished in "Price Bid Specification" issued as Part-II of this tender specification. The bidder may please note that the award of work shall be **evaluated** on the basis of rates quoted for crane individually (100MT & HLHR)

5.01

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

SN	Description of Crane	Total Amount for Mobilization and Demobilization
1	HLHR Crane	**Rs. 25,50,000/=**
2	100 MT crane	**Rs. 10,50,000/=**

Respective amounts are also indicated in the Rate Schedule for respective cranes. Bidder shall neither quote any amount towards mobilization and de-mobilization separately nor make any alteration in these amounts 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 comprising of total monthly hire charges and mobilization & de-mobilization charges for the crane. 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 respective 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 these periods.

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 Prices shall be inclusive of all applicable taxes (**excepting Service Tax**), levies, services, consumables (**excepting fuel**), as per provisions under the Terms & Conditions in scope of contractor mentioned in this Tender Specification.

5.07 Bidders **shall not include** Service Tax in their price. Service Tax, as applicable, will be paid by BHEL extra at prevailing rate. Before raising invoices for Service Tax, the Contractor shall submit copy of Service Tax Registration Certificate. Proof of remittance of Service Tax must be furnished within 25 days of payment of Service Tax invoice by BHEL. Failing this, BHEL will recover such amounts from the bidder and also shall not make any subsequent payments against Service Tax invoice.

5.08 Bidder shall quote price for the services as specified in this Tender Specification Payment shall be regulated as per clause no. 6.4 of this Tender Specification.

5.09 In case the bidder quotes multiple options/models of crane the lowest rate/price among the technically accepted models shall be considered for awarding of contract.

5.10 The Contract Value for the purpose of Offer Evaluation, Work Order and Security Deposit shall be as following.

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

(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.

5.10.2 **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: EMD for this tender is Rs. 2,00,000/- (Rupes Two lakhs only). For remittance of EMD and other details pertaining to EMD, **please refer GCC.**

06.2 Security Deposit: Please refer GCC.

06.3. 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	The Hongkong and Shanghai banking Corporation Ltd.
ICICI Bank 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 Hydrabad
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.

7.0 PAYMENT TERMS

7.1

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.

7.2

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.

7.3
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.

7.4
No advance payments shall be made by BHEL for this contract.

7.5
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.

7.6 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.

7.6.1 Pro Rata Daily Hire Charges = Monthly Hire Charges divided by 30
7.6.2 Pro Rata Hourly Hire Charges = Monthly Hire Charges divided by 360

8.0 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)

9.0 Safety, Occupational Health and Environmental Management

Introduction:-

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 B.9 in case of award of contract.

B.0 Responsibility of The Contractor In Respect Of Safety Of Men, Equipment, Material And Environment.

B.1 The Contractor Shall

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 B.10

B.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.

B.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 authorised by the Customer/Client

B.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

B.1.5 prepare a sign board giving the following information and display it near the work site:

Name of Contractor
Name of Contractor Site-in-charge & Telephone number
Job Description in short
Date of start of job
Date of expected completion
Name of BHEL Site-in-charge

B.1.6 Abide by the rules and regulations existing during the contract period as applicable for the contractors at the Project premises.

B.1.7 Observe the timings of work as advised by BHEL Engineer-in-charge for carrying out the contract work.

B.2 SPECIAL CONDITIONS

B.2.1 Safety

B.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.

B.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.

B.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 PPE of standard ISI make as may be prescribed

B.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

B.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.

B.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.

B.2.1.7 The contractor shall adopt all fire safety measures as per relevant Indian Standards

B.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.

B.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.

B.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.

B.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.

B.2.1.12 No persons shall remove guardrails, covers or protective devices unless authorized by a responsible supervisor and alternative precautions have been taken.

B.2.1.13 Access ways, means of escape and fire exits shall be clearly marked, kept clear and unobstructed at all times

B.2.1.14 Only authorized persons holding relevant license will drive and operate site plant and equipments e.g. crane, dumpers, excavators, transport vehicles etc.

B.2.1.15 Only authorised personnel are allowed to repair, commission electrical equipments.

B.2.1.16 Gas cylinders shall be handled and stored as per Gas Cylinder Rules and relevant safe working practices

B.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.

B.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.

B.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.

B.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

B.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.

B.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.

B.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.

B.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.

B.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 authorised 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.

B.2.1.26 Emergency Response

B.2.1.26.1 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.

B.2.1.26.2 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 aid personnel shall be included in the emergency response team. Contractor employees and workmen are encouraged to participate in first aid training programmes whenever organised by BHEL.

B.2.2 OCCUPATIONAL HEALTH

B.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.

B.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

B.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

B.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 PPEs 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

B.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

B.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

B.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

B.2.2.8 Adequate arrangements shall be made to provide safe drinking water

B.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

B.2.3 HYGIENE and HOUSEKEEPING

B.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.

B.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.

B.2.3.3
BHEL may take up appropriate remedial measures at the cost of the contractors if the contractor fails in good house keeping and if there is an imminent risk of pollution

B.2.4 ENVIRONMENT MANAGEMENT

B.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.

B.2.4.2 WASTE MANAGEMENT

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.

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

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

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

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

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

B.3 SUPERVISION

B.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.

B.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

B.3.3
Contractor, supervisor must attend all schedule safety meetings as would be intimated to him by the BHEL Engineer in Charge.

B.3.4
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.

B.3.5
Contractor must ensure that in his work site appropriate display boards are put displaying signs for site safety, potential hazards and precautions required

B.4.0 TRAINING & AWARENESS

B.4.1

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

B.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.

B.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

B.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.

B.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

B.5 REPORTING

B.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.

B.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.

B.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.

B.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.

B.5.5

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

B.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.

B.6 AUDIT REVIEW AND INSPECTION

B.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.

B.6.2
Inspections shall be carried out regularly by the contractors and by BHEL engineers on activities, facilities, equipment and 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 Co-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.

SN	Equipment	Scope of inspection	Inspection by	Schedule
1	Hand tools	To identify unsafe/defective tool	User	Daily
2	Power tools	To identify unsafe/defective tool	User	Daily
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

B.6 NON COMPLIANCE:-

B.6.1 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**:

SN	Violation of Safety Norm	Fine (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 Sling	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/-
14.	Accident Resulting in Partial Loss in Earning Capacity	25,000/- per victim
15.	Fatal Accident/Accidents Resulting in total loss in Earning Capacity	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.

B.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 recognise the safety performance of the contractor may be considered by BHEL after completion of the job

B.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 authorised representative of M/s----------

Name :

Place & Date:

B.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 SEWARAGE SYSTEM
IS 1287	1986		ELECTRIC TOASTER
IS 13063	1991		STRUCTURAL SAFETY OF BUILDINGS ON SHALLOW FOUNDATIONS ON ROCKS
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 No.	YEAR	Amd. upto	Description
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 No.	YEAR	Amd. upto	Description
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 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 No.	YEAR	Amd. upto	Description
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 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 No.	YEAR	Amd. upto	Description
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

10.00 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 holidays 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.

11.0 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.

13.0 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.

14.0 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.

15.0 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.

16.0 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.

17.0 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/cranes, 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.

18.0 ACCOMODATION & LOCAL CONVEYANCE

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

19.0 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.

20.0 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 STATUTORY REQUIREMENTS

ESI & EPF as applicable shall be obtained by the Contractor within the quoted rates.

28.0 REJECTION OF TENDER & OTHER CONDITIONS

The decision regarding 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 reason whatsoever: -

- To reject any or all the tenders.
- To split up the work amongst two or more bidders.
- To award the work in part.
- Either of the contingencies stated above to modify the time for completion suitably.
- Conditional and Un-witnessed tenders, tender containing absurd unworkable rates and tenders which are incomplete or otherwise defective and tenders not in accordance with the tender conditions, specifications, etc., are liable to be rejected.

29.0 GENERAL

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.

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.

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

Bidders are free to quote separate rates/prices in case alternative models/make of crane offered for a specific requirement. In case more than one such option is found technically acceptable for the same requirement, BHEL's choice for order will be based on the lowest (L-1) price of all such options. However, Contractor will be permitted to deploy other technically acceptable models within the ordered (L-1) price for the same requirement.

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

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** CRAWLER CRANE FOR BHEL SIKKA PROJECT (CRANE NO. 1)			
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 PROPVIDED. 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** CRAWLER CRANE FOR BHEL SIKKA PROJECT (CRANE NO. 1)			
Option No. …… of ……. (please indicate in **'X of Y'** format)			
SN	**DESCRIPTION**	**AS BEING OFFERED BY BIDDER**	**SUPPORTING DOCUMENT REFERENCE**
16	COPY OF LATESTTEST CERTIFICATE		
17	CRANE LOAD CAPACITY CHART ENCLOSED		
18	CRANE PRODUCT CATALOGUE ENCLOSED		
19	DETAILS OF SAFETY FEATURES IN THE OFFERD CRANE		
20	CERTICIATION 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 ENGEGEMENT OF THE OFFERED CRANE **WITH CONTACT TELEPHONE NUMBERS** 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	02-03 03-04 04-05 05-06 06-07	A) B) C) D) E)

TECHNICAL DETAILS OF OFFERED **100 MT** CRAWLER CRANE FOR BHEL SIKKA PROJECT (CRANE NO. 2)			
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 PROPVIDED. 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		

TECHNICAL DETAILS OF OFFERED **100 MT** CRAWLER CRANE FOR BHEL SIKKA PROJECT (CRANE NO. 2)			
Option No. …… of ……. (please indicate in **'X of Y'** format)			
SN	**DESCRIPTION**	**AS BEING OFFERED BY BIDDER**	**SUPPORTING DOCUMENT REFERENCE**
15	WIDTH OF EACH CRAWLER ASSEMBLY		
16	COPY OF LATESTTEST CERTIFICATE		
17	CRANE LOAD CAPACITY CHART ENCLOSED		
18	CRANE PRODUCT CATALOGUE ENCLOSED		
19	DETAILS OF SAFETY FEATURES IN THE OFFERD CRANE		
20	CERTICIATION 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 ENGEGEMENT OF THE OFFERED CRANE **WITH CONTACT TELEPHONE NUMBERS** 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	02-03 03-04 04-05 05-06 06-07	A) B) C) D) E)