

**TENDER DOCUMENT**

**FOR**

**Engineering, Refurbishment, Supply, Installation and Commissioning of Emergency Brakes in Main Hoist Drives in Eight (08) nos. 300T EOT cranes supplied under package 29A and 29A2 to Bhilai Steel Plant, Bhilai**



**AN ISO 9000 COMPANY**

**TENDER NO: CED/HMBP/EDB/BSP/2024-03 Date 11.05.2024**

**HEAVY ENGINEERING CORPORATION LIMITED**

**CRANE EXECUTION DIVISION**

(A Government of India Enterprise)  
RANCHI – 834 004

## NOTICE INVITING TENDER (NIT)

Sub: Tender Enquiry (E-Tender) with E- price bids for Engineering, Refurbishment, Supply, Installation and Commissioning of Emergency Brakes in Main Hoist Drives in Eight (08) nos. 300T EOT cranes supplied under package 29A and 29A2 to Bhilai Steel Plant, Bhilai (C. G)

*This tender has detailed as below, please read carefully the tender document before uploading the offer through e-tender mode. In case, any clarification is required, it should be mailed to [soumyaranjan@hecltd.com](mailto:soumyaranjan@hecltd.com).*

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**Note:**

- i. Any corrigendum in the E-Tender Enquiry shall be notified at [www.etenders.gov.in](http://www.etenders.gov.in) only.
- ii. **Offer along with all documents have to be submitted only online** at E-tender Portal: [www.etenders.gov.in](http://www.etenders.gov.in). Offers submitted in Hard copy shall not be considered, however Earnest Money Deposit (Original Demand Draft/bank Guarantee in favour of Heavy Engineering Corporation, “Payable at Ranchi from any nationalized bank) may be submitted to us in hard copy separately so as it reaches to us before due date of opening of Tender.
- iii. Scan copy of EMD to be uploaded in part-1 of offer i.e. with techno-commercial bid

## **INVITATION FOR BID**

Heavy Engineering Corporation Limited, Ranchi invites sealed bids for the work of Engineering, Refurbishment, Supply, Installation and Commissioning of Emergency Brakes in Main Hoist Drives in Eight (08) nos. 300T EOT cranes supplied under package 29A and 29A2 to Bhilai Steel Plant, Bhilai.

### **Contact person: -**

1. Sri P K Mohan, Sr. DGM(I/c) CED.  
E-mail – [pkmohan@hecltd.com](mailto:pkmohan@hecltd.com), Contact No. 7547889184
2. Soumya Ranjan Das, Manager/CED.  
E-mail – [soumyaranjan@hecltd.com](mailto:soumyaranjan@hecltd.com), Contact No. 9692050500

### **Address:**

Crane Execution Division,  
HMBP Adm Building,  
Heavy Engineering Corporation Ltd.,  
Plant Plaza Road, Dhurwa,  
Ranchi – 834 004 (Jharkhand)

### **Sealed offers are to be submitted in two parts i.e.**

**Part A – Techno commercial bid (Not containing or indication of any price at all).**

**Part B- Price Bid (without any terms and conditions).**

**Part -A (Techno commercial bid)**– The bids are to be scanned and uploaded in CPP Portal as per technical details annexures & Commercial terms & conditions. The format as per Annexures to be downloaded and the same to be duly filled by the bidder and to be uploaded while submitting the offer. **No price part is to be uploaded in this part.** However **unpriced BOQ** must be uploaded along with techno-commercial bid.

**Part B – (Price Bid)**- This part of the offer should contain price portion. The format of PriceBid/BOQ in excel format has to be downloaded by the bidder and rate offered by the bidder shall be filled in the excel file and uploaded the same excel file of e-tendering system while submitting the offer. The price-format/BOQ which is incomplete and not submitted as per the instructions given will be liable for rejection.

### **EMD amount:**

Bid Security/ Earnest Money Deposit – Rs.8,17,000/- (Rupees Eight Lakh Seventeen Thousand) payable by DD/EMD in favor of “**Heavy Engineering Corporation Ltd**” Payable at “**State Bank of India, Hatia**” (To be submitted in form of DD/BG from any nationalized bank (as per annexure- E)” to the undersigned through courier/By Hand).

### **Cost of tender paper:**

NIL

### **Important Dates**

Last date of submission of tender: --- Up to **02.00 PM on 25.05.2024.**

Tender Opening date: --- At **03.30 PM on 27.05.2024.**

**Information for Bidder**

A.	TENDER NO.	CED/HMBP/EDB/BSP/2024-03 Date 10.05.2024
B.	DESCRIPTION	Engineering, Refurbishment, Supply, Installation and Commissioning of Emergency Brakes in Main Hoist Drives in Eight (08) nos. 300T EOT cranes supplied under package 29A and 29A2 to Bhilai Steel Plant, Bhilai as per Technical Specification and Bidding Document- enclosed herewith.
C.	COST OF BIDDING DOCUMENT.	NIL
D.	DOWNLOAD OF TENDER DOCUMENTS	Start :11.05.2024, 18.00 Hrs. Close (IST) :25.05.2024, 14.00 Hrs (IST)
E.	PRE-BID MEETING	Bidders shall be required to seek clarifications over e-mail at least two (02) days before scheduled TOD.
F.	TENDER SUBMISSION	25.05.2024 by 14:00 Hrs IST
G.	PLACE OF SUBMISSION OF BID	Crane Execution Division, HMBP Adm Building, Heavy Engineering Corporation Ltd., Plant Plaza Road, Dhurwa, Ranchi – 834 004 (Jharkhand)
H.	OPENING OF TENDER	27.05.2024, 15.30 Hrs “Indian Standard Time (IST)”
I.	BID SECURITY DEPOSIT / EMD	Rs. 8,17,000/- (Rupees Eight Lakh Seventeen Thousand) payable by DD/EMD in favor of “ <b>Heavy Engineering Corporation Ltd</b> ” Payable at “ <b>State Bank of India, Hatia</b> ” (To be submitted in form of DD/BG from any nationalized bank (as per annexure- E)” to the undersigned through courier/By Hand).  Micro & Small Enterprises (MSEs) / PSUs / Govt. Undertakings and Co-operative Societies / Start-ups as recognized by Department for Promotion of Industry and Internal Trade (DPIIT) etc., may be exempted from submission of EMD as per extant Government policy.  For MSEs, the exemption will be extended on the basis of;  (i) Self-certified copy of Udyam Registration Certificate, (ii) The concerned MSE is registered in MSME databank (iii) MSE is registered for given scope of job/ procurement.  SSI / NSIC certificate holders are also exempted from submitting EMD
J.	TIME FOR COMPLETION	Eight (8) months from Effective date of Contract/Order
K.	VALIDITY OF BID	60 days.
L.	CONSORTIUM BIDDING	NOT ALLOWED

*Bidders are requested to submit their most competitive offer through e-procurement mode only. Offer submitted through offline mode will not be considered. For more information, please visit our website <https://etenders.gov.in/eprocure/app>.*

Prospective Tenderers are advised to get registered themselves only on at NIC tender portal i.e. <https://etenders.gov.in/eprocure/app>, obtain 'User ID' & 'Password' and go through the 'Self Help files' available in the Home Page after log in to the portal <http://etenders.gov.in>. They should also obtain Class III Digital Signature Certificate (DSC) in parallel which is essentially required for submission of their application. A detailed instruction for online bid submission is mentioned below. No registration fee would be charged from the bidders.

Bidders are required to upload the bid along with all supporting documents including priced part (BoQ) only on the e-tendering website (<https://etenders.gov.in/eprocure/app>), on or before the due date and time for submission of bid.

NOTE:

1. HEC reserves the right to extend / change the schedule of any activity by intimating the bidder through a notification on the e-tender portal.
2. For detailed guidance for online bid submission, please refer annexure-G

**Contents of tender documents:**

1	Technical specification & Commercial Terms and Conditions of NIT	Annexure "J" & 'A' respectively
2	Template for Price format/BOQ for online submission by the bidder	BOQ.xls

**Requirements for Vendors:**

- A) P.C. connected with internet.
- B) Registration with Service provider portal <https://etenders.gov.in>
- C) The vendor should possess a Class-II or Class III Digital Signature certificate (Mandatory). (Bids will not be recorded without Digital Signature Certificate.).
- D) Registration / Enrollment of Bidder on e- tender Portal of HEC: In order to submit the bid, the bidders have to get themselves registered online on the e- tender portal of HEC Ltd with valid Digital Signature Certificate (DSC) issued from any agency authorized by CCA and which can be traced up to the chain of trust to the Root Certificate of CCA. The online Registration of the Bidders on the portal will be free of cost and one time activity only. The registration should be in the name of the bidder, whereas DSC holder may be either bidder himself or his duly authorized person.
- E) For **registration**, Submission procedure and method of correspondence etc. Please visit our website: <https://www.hecltd.com> / <https://etenders.gov.in> and click on the relevant link for help.

**Help for participating in e-tender:**

The detailed method for participating in the e-procurement are available in the website <https://www.hecltd.com> or <https://etenders.gov.in> The bidders have to Log on to official website and then click on the specified links to start participating in the e-procurement process.

Bidders are also free to communicate with the contact person of the service provider to get all

clarifications regarding the mode of the e-procurement process.

NB:

- (I) Please note that there is no provision to take out the list of parties downloading the tender document from the above referred web site. As such, tenderers are requested to see the website once again before due date of tender opening to ensure that they have not missed any corrigendum uploaded against the said tender after downloading the tender document. The responsibility of downloading the related corrigenda, if any, will be that of the downloading parties.
- (II) No separate intimation in respect of corrigendum to this NIT(if any) will be sent to tenderers who have downloaded the documents from website. Please see website i.e., <https://www.hecltd.com> or <http://www.etenders.gov.in>

1. The offer should be submitted (uploaded) strictly as per the terms and conditions and Procedures laid down in the website <https://etenders.nic.in> tender document failing which the offer is liable for rejection.
2. Bidders should download the complete NIT including the Annexure and read carefully before filling the details and uploading the documents.
3. The bidder must upload all the documents required as per the terms of NIT.
4. It may please be noted that E-tendering or e-procurement fall under the purview of the Information Technology Act 2000 and Information Technology (Amendment) Act 2008 and other relevant acts and subsequent amendments if any).
5. There will be no physical sale of the tender documents.

**6. PREPARATION OF TENDER DOCUMENTS:**

Tender is to be submitted in two bid systems in the following manner and shall be submitted through electronic mode only detailed below:

- a) **Part-A -Techno-commercial offer**– The bids are to be scanned and uploaded in CPP Portal as per technical details of annexure-H & Commercial terms & conditions as per annexure-A along with filled in annexure-B (Checklist of commercial terms & Conditions). The format as per Annexure-B to be downloaded and the same to be duly filled by the bidder and to be uploaded while submitting the offer. **No price part is to be uploaded in this part.** However **unpriced BOQ** must be uploaded along with techno-commercial bid.
- b) **Part-B- Price-format/BOQ** - This part of the offer should contain price portion. The format of PriceBid/BOQ in excel format has to be downloaded by the bidder and rate offered by the bidder shall be filled in the excel file and uploaded the same excel file of e tendering system while submitting the offer. The price-format/BOQ which is incomplete and not submitted as per the instructions given will be liable for rejection.

Note-

Bidders are requested to upload all the attachments /documents in one single PDF File in Other Important Documents (OID) or as indicated in the online instructions.
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## **1.1 INTRODUCTION**

HEC had supplied cranes of various capacity to BSP, Bhilai under Package 29A and 29A2. Under the aforementioned crane packages there were 09 nos. of 300T cranes with the provision of Emergency Disc Braking System. The equipment's of the Emergency Disc Braking System were supplied, installed/erected, but the system could not be commissioned as, due to delay in execution, the items supplied for Emergency Disc Braking System became out of guarantee/warranty. As such, commissioning of the Emergency Disc Braking System became part of commissioning defect.

Presently the Emergency Disc Braking System have not be commissioned in 08 nos. of 300T cranes. This tender is for the work of Design, Engineering, Refurbishment, Supply, Storage, Installation and Commissioning along with demonstration of performance of Emergency Brakes in Main Hoist Drives in Eight (08) nos. 300T EOT cranes supplied under package 29Aand 29A2 to Bhilai Steel Plant, Bhilai

## **1.2 BROAD SCOPE OF WORK**

Design, Engineering, Refurbishment, Supply, Storage, Installation and Commissioning along with demonstration of performance of Emergency Brakes in Main Hoist Drives in Eight (08) nos. 300T EOT cranes supplied under package 29Aand 29A2 to Bhilai Steel Plant, Bhilai.

## **1.3 QUALIFYING CRITERIA FOR SELECTION OF THE TENDERER.**

- 1) Experience of similar work executed successfully at Integrated Steel Plant in India.
- 2) Work order copies of similar job.
- 3) Last Three Years audited Balance Sheet.
- 4) GST Registration.

## **1.4 TIME SCHEDULE**

It is desired that the complete work of Design, Engineering, Refurbishment, Supply, Storage, Installation and Commissioning along with demonstration of performance of Emergency Brakes in Main Hoist Drives in Eight (08) nos. 300T EOT cranes supplied under package 29Aand 29A2 to Bhilai Steel Plant, Bhilai will complete within EIGHT (08) months from the date of issue of work order.

Our end customer has right to provide us machines as their own convenience and their maintenance schedule. The tenderer should have to complete the scope of work as per given schedule.

- a) Supply to be completed within 5 months from the date of placement of order.
- b) Refurbishment, erection, testing and commissioning to be completed within 8 months from the date of placement of order.

The successful tenderer shall be solely responsible for obtaining necessary clearance from various statutory bodies during execution of the work. Contractor has also responsibility for getting necessary approval/ clearance for the refurbishment work from Bhilai Steel Plant, Bhilai for the project.

## **1.5 GENERAL INSTRUCTION TO TENDERER**

- (i) Tenderer should visit to have better understanding of the requirements.
- (ii) Tenderer should have experience in similar work at Integrated Steel Plant in India.

- (iii) Tenderer should submit balance sheet of last 3 years.
- (iv) Tenderer shall quote their price in price format enclosed in Annexure-A.
- (v) Inspection & testing shall be carried out in presence of Successful Tenderer/HEC/ BSP, Bhilai/Third Party Inspection agency on the basis of drawings, specification & latest Indian standards & Quality assurance Plan.
- (vi) Successful tenderer shall not let-off the contractor part thereof to any sub-contractor without written permission of BSP, Bhilai/HEC. In case, subletting of any part of the work is permitted by BSP, Bhilai, the fact that such permission has been accorded, neither shall establish any contractual relationship between Sub-Contractor & BSP, Bhilai nor shall release the contractor from any of his obligations and liabilities under the specific and applicable contract.
- (vii) Successful tenderer shall clearly indicate deviations if any from the tender document so that same can be considered during tender evaluation.
- (viii) Successful tenderer shall clearly indicate the assumption made in respect of specification, date or any other details that have not been mentioned in the tender document but considered necessary for meeting the specified functional requirements.
- (ix) Once the work order is placed on the successful Tenderer within the validity period of his offer the awarded price shall remain valid throughout the entire period of the contract in terms of conditions stipulated in G.C.C. of HEC.
- (x) Approval of various procedures submitted by the successful tenderer shall not relieve him of his responsibilities towards completion of the work as defined in the contract.
- (xi) The Tenderer must have a valid electrical license issued by the concerned state government. Tenderer should have in his employment sufficient number of electricians and supervisors holding valid license.
- (xii) The Tenderer shall indicate his requirement of electrical power for erection purpose. Subject to the availability, the power shall be supplied at one point of erection site on cost/free basis as per BSP, Bhilai rules. The Erection Tenderer shall carry out further distribution to different points. The power normally shall be supplied at 415V, 50Hz. AC.
- (xiii) All the equipment, structures, mechanical and electrical shall be stored and handled in such a manner that they are not subjected to damage or excessive stress due to mishandling and environmental condition.
- (xiv) The successful tenderer shall be solely responsible for obtaining necessary clearance from various statutory bodies during execution of the work.
- (xv) The Tenderer shall carry out the work in accordance with relevant IS standards, and drawings, data, information, instructions furnished by the HEC/BSP, Bhilai. The testing and commissioning of the equipment shall be done in presence of the representative manufacturer and BSP, Bhilai.
- (xvi) The Tenderer has to carry out the work in such a manner that it does not affect the operation of the plant/shop. If other Tenderer is also engaged on the same work site for other jobs, the Tenderer shall work in close co-operation with them. The Tenderer shall get himself



acquainted with the prevailing working conditions, practices and arrangement at the plant site, failure to do so shall not relieve him of his responsibility of correct interpretation and execution of the work involved.

- (xvii) While conducting test on the equipment, the Tenderer shall not be held responsible for any manufacturing defect but shall be held responsible for defective workmanship carried out during the rectification work. The Tenderer shall arrange for slings, wire ropes, pallet to support test load wherever necessary, stop watches and other necessary equipment/instrument.
- (xviii) To carry out the work, the Tenderer shall arrange necessary equipment and light fittings with lamps and other accessories to adequately illuminate his work site. Maintenance of light fittings and replacement of fused lamps shall be Tenderer's responsibility.
- (xix) After completion of the work, the Tenderer shall promptly remove from the premises everything brought in by him and shall leave the premises in an acceptable clean condition.
- (xx) The Tenderer shall furnish daily progress report in an agreed format to HEC site office to monitor the progress of erection work.
- (xxi) During course of retrofitting work the Tenderer shall strictly follow all the safety norms/rules and regulations and shall abide by all the statutory rules and regulations.
- (xxii) The Tenderer shall make his own arrangement for alternative power in case BSP, Bhilai is not able to supply construction power.
- (xxiii) Necessary drawings and documents required for rectification made available to the Tenderer and which shall be return after completion of the scope of work.
- (xxiv) Tenderer should follow the safety rules and regulation as per BSP/SAIL requirements. Deputation of Safety Officer, training of workers in safety etc. are in the scope of tenderer.
- (xxv) HEC Management has right to change/add/ remove any clause, terms & condition in any further stage if required.

#### **1.6 Part-A should be submitted as per tender requirement.**

- i. Part-B - "Price" bids of technically and commercially acceptable bids will be opened at a later date in the presence of the Bidder's authorized representatives who choose to attend the price opening, for which HEC will send timely intimation to the acceptable bidders.
- ii. It shall be the responsibility of the parties submitting the bid to ensure that the bid has been submitted in the formats and as per the terms and conditions of the tender documents and no change should be made therein. In the event of any doubt regarding the terms and conditions/ formats, the party concerned may seek clarifications from the authorized officer of HEC. In case any tampering/ unauthorized alteration is noticed in the Bid submitted from the original Bidding Document available on the Website, the said Bid shall be summarily rejected and the company shall have no liability whatsoever in the matter. However, deviations, if any, proposed by the bidder may be separately indicated for acceptance or otherwise by HEC. Such proposed deviations will not be treated as tampering for the purpose of application of the clause.

- iii. Bidder should furnish Notarized copies of Power of Attorney in favour of Authorized signatory, Permanent Account Number (PAN) card, Bank details like name of bank, branch, IFSC code, Bank Account Number, GST Registration, along with the bid.
- iv. Any bid not accompanied by bid security of an amount stipulated, shall be rejected.
- v. The Bidders may be required to explain/ justify the basis of their quoted price as and when asked for. In case, any bidder fails to justify his quoted price or refuse to co- operate in this regard, such bidder will not be considered for participating in the re- tendering, if the contract is not finalized from the present bidding.
- vi. If tenderer quotes unworkable rates and is considered for placement of order, the party will be asked to justify the rate quoted. If it is felt that the bidder has failed to substantially demonstrate its capability to deliver the contract at the offered rate/ on refusal (by bidder) to justify the quoted rates, the bid/ quote may be rejected.
- vii. However, under compelling circumstances, where the tenderer/ bidder is considered for placement of order despite having quoted abnormally low bids, the bidder may be required to furnish Performance Guarantee Bond (in addition to Security Deposit, if applicable) in the form of Bank Draft/ bank Guarantee. The amount of this bond shall be decided at the time of placement of order. The said Performance Guarantee Bond must be submitted prior to release of order within the time stipulated by HEC. The amount towards Performance Guarantee Bond (PGB) is not adjustable from any due of contractor from HEC. In case of breach of contract, the Performance Guarantee Bond shall be encashed without prejudice to other remedial measures available to HEC to get the work done at the Risk and Cost of the tenderer on whom the order is placed. The Bank Guarantee will be discharged/ returned after successful/ satisfactory completion of the work as per the order.

**Important Points & Commercial Terms & Conditions**

**Commercial terms and conditions:**

1. **Offers to be submitted on FOR BSP Bhilai.** The rate quoted shall be inclusive of all packing & forwarding, freight and transit insurance charges.
2. **The Price quoted by the tenderer should be exclusive of GST.** The rate and nature of GST applicable should be shown separately GST will be paid to the seller at the rate at which it is liable to be assessed or has actually been assessed on the date of supply provided the transaction of sale is legally liable to GST and within the delivery period.
3. **Validity of Offer should be minimum 60 days from the date of opening of tender.** The offer with a lower validity period other than 60 days will not be acceptable and such offer shall be ignored without assigning any reason.
4. **Payment terms shall be as under:**

<b>A) Payment for Supply of total materials</b>	90% of basic order value of supply part along with 100% GST shall be made through RTGS within 60 days of receipt and acceptance of materials along with the following documents on pro rata basis (Crane wise)- a) Guarantee certificate (Original + Triplicate copy) b) LR copy c) Test certificate (Original + Two copies) d) Packing List (Original + One Extra copy) e) Tax Invoice (Original + Triplicate copy) f) Receipted Challan (Original + Two copies) g) Performance bank guarantee of 10% of the supply value of the P.O. to be valid till full guarantee period from any nationalized bank only in HEC's Format." h) GST-1 Copy.
<b>B) Payment for balance 10% of supply part</b>	<b>Balance 10% of supply part shall be released within 30 days after submission of completion certificate of issued by Customer BSP or his representative duly signed &amp; stamped on pro rata basis (Crane wise).</b>
<b>C) For 'erection &amp; commissioning of Hydraulic Emergency Disc Brake for eight number cranes '</b>	<b>100% payment for erection &amp; commissioning</b> charges along with 100% GST shall be paid through RTGS/NEFT within 60 days after submission of following documents on pro rata basis (Crane wise): a. Successful completion certificate issued by Customer BSP or his representative. b. Tax Invoice in triplicate. c. Bank mandate for RTGS/NEFT payment

**Note:**

- i. **Payment shall be made directly through the end customer Bhilai Steel Plant, Bhilai on HEC's recommendation.**
- ii. **For payment, all the processing charges by the bank shall be on account of the firm.**
- iii. **Payment will be done as per the approved billing schedule, to be submitted by the contractor after placement of the order.**

## 5. Delivery Term:

<b>Delivery of materials</b>	Supply to be completed within 5 months from the date of placement of order.
<b>Delivery of refurbishment, erection, commissioning and load test</b>	Refurbishment, erection, testing and commissioning to be completed within 8 months from the date of placement of order.

6. Full particulars i.e. specification, literature and / or drawing wherever applicable has to be submitted along with the quotation. The 'Brand' and 'Make' name must be indicated.
7. **Earnest Money Deposit** - Earnest money Rs. 8,17,000/- (Rupees Eight Lakh Seventeen Thousand Only) will have to be deposited in form of demand draft / bank guarantee (format is enclosed at annexure-C) from any nationalized bank Payable on the State Bank of India, Ranchi Hatia Branch, in favor of Heavy Engineering Corporation Ltd. Ranchi. - 4. (Scan copy of DD to be uploaded along with techno-commercial bid & original DD to be sent through courier / submitted by hand undersigned.

Tenderers registered with National Small Industries Corporation/ Small Scale Industries/ Micro, Small scale Industry (MSE) or DGS&D for the tendered item will be exempted from submission of EMD. The tenderer should enclose an authenticated copy / notarized copy of their valid registration certificate with NSIC, MSE for grant of exemption.

**In case Bidder is covered under MSME criteria, it is mandatory to quote UAM no in Bid Documents. HEC is registered on TReDS governed by RBI Guidelines and our registration no is HE0000320. All MSME firms are advised to be get registered on RXIL (Receivable exchange of India-Mumbai).**

## 8. GENERAL INFORMATION TO TENDERER

- a) All correspondences/ documents made by the tenderer shall be in English Language and the data/measurement related results in Metric Units only, unless otherwise specified.
- b) Tenderer shall quote as per Performa. If any part / portion of scope are excluded from his offer, the same shall be brought out clearly in the offer and the quotation of the tenderer may be liable to get rejected.
- c) Tenderer shall submit credentials of past works done.
- d) During the course of execution of the contract, the department has the right to award additional work or deletion of work or advise removal/ repair /re-fabricate the work already executed. Under the above situation, the Tenderer shall agree for addition/ deletion of the works and such variation is limited to  $\pm 10\%$  of the order value.
- e) Technical specifications, drawings and bill of materials to be the basis of content of work, assignment and defining responsibility. Tenderer may suggest any improvement for the betterment of the operation of the system, which shall be reviewed by HEC and appropriate action should be taken.
- f) The offer shall clearly indicate any assumption made in respect of specification, data or any other details that have not been mentioned in this tender but considered necessary for meeting the

specified functional and duty requirements. Any such assumptions not indicated during tendering stage, will not be binding on HEC.

- g) Approval of various procedures submitted by the successful tenderer shall not relieve the tenderer of his responsibilities towards completion of work as defined in the contract. During the course of execution, if any additions/ alterations are found necessary and intimated to the tenderer before fabrication/installation of the equipment, the same shall be implemented by the tenderer without any extra cost.
- h) All necessary facilities including tools, tackles, safety appliances, measuring & testing equipment/ instruments, accessories & material handling equipment, etc. shall be provided by the successful tenderer to enable stage wise inspection of the system during erection, testing & commissioning at site.
- i) The Successful tenderer shall be solely responsible for obtaining necessary clearance from various statutory bodies including those of Central & State Government, as applicable, during the course of manufacture / fabrication, testing, transportation, erection and commissioning of the equipment at site.

#### **9. PAYING AUTHORITY:**

Finance Department  
Heavy Machine Building Plant,  
Heavy Engineering Corporation Limited,  
Ranchi- 834004

**The R. A. bill to be submitted (in Quadruplicate) with proper documentation.**

#### **10. GENERAL CONDITION OF CONTRACT**

Bidders shall abide by the General condition of contract of Heavy Engineering Corporation Ltd. Ranchi, a copy of GCC of Works Contract can be downloaded from the site [www.hecltd.com](http://www.hecltd.com) for ready reference.

#### **11. MAN POWER**

Contractor may have to mobilize additional man-hours and / or deploy work force for additional hours without any extra cost to HEC. Any statutory requirement for additional working hours or any manpower related issue shall be total responsibility of contractor.

#### **12. INSPECTION**

Rectification of the crane, testing & commissioning will be inspected by HEC along with or without the representative of end customer / customer's consultant. Contractor shall provide necessary assistance in carrying out inspection and if any defects are pointed out, they will carry out the necessary rectification / modification without any extra cost to HEC. Bidders will deploy sufficient manpower during pre and final inspection and handing over the entire jobs and a protocol will be drawn based on which the job will be accepted.

**13. RECONCILIATION OF FREE ISSUE ITEMS**

Bidders will submit reconciliation statement of free issue items if any, on monthly basis, failing which no progressive payment shall be released. However, any supply to contractor by the purchaser, which was originally in the scope of contractor will attract recovery with 22.5% overhead charge.

**14. STATUTORY RECOVERIES**

Statutory recoveries if any shall be made as per rule/rates prevailing at working site.

**15. GUARANTEE PERIOD**

The contractor shall stand full guarantee for workmanship / service for a period of 12 Months from the date of commissioning and acceptance of the system at site.

**16. ACCEPTANCE OF TENDER:**

Tender may be accepted for full. Any incomplete tender in any respect is liable to be rejected without any notice. The company is having rights to reject any tender without assigning any reason for which no question can be asked anywhere.

There is no obligation on our part to accept delayed/ late tender received after the due date of opening of tender and these are liable to be summarily rejected.

**17. EARNEST MONEY DEPOSITION (EMD)**

Bid Security/ Earnest Money Deposit – Rs.7,50,000/- (Rupees Seven Lakh Fifty Thousand) payable by DD/BG in favor of

*Heavy Engineering Corporation Limited*  
Payable at  
*State Bank of India, Hatia Branch (Code No. 0207)*

Earnest Money of unsuccessful bidders will be refundable immediately after finalization of contract on receiving a written request from the bidders.

Earnest Money of successful bidders will be refundable immediately after finalization of contract and submission of SD Bank Guarantee on receiving a written request from the bidders.

No interest will be payable on Earnest Money and Security Deposit.

Exemption from deposition of Earnest Money and security and Security Deposit for Small Scale Industries (SSI) or any other category will be guided as per prevailing Government directives on production of documentary evidence in its support.

**18. SECURITY DEPOSIT & PBG**

**Security deposit (BG format annexure-D):** 10 % of the contract price to be deposited by the successful bidder within 21 days from the date of issuance of purchase order by HEC which shall

remain valid for a period of 60 days beyond the completion of all contractual obligations of the firm. This clause is mandatory and has to be accepted by the firm. If Security deposit clause is not accepted then the offer of the bidder shall not be considered (Format is enclosed at annexure-D).

**Performance bank guarantee (BG format annexure-E):** The tenderer shall guarantee the equipment for its workmanship, materials, design and satisfactory operation in accordance with relevant specifications and provision of contract. The successful bidder has to submit the performance bank guarantee of 10% of total contract value valid till full guarantee period. If PBG clause is not accepted then the offer of the bidder shall not be considered. (Format is enclosed at annexure-E).

Note:-

- (i) The Bank Guarantee issued by a scheduled bank shall be operative at its branch situated at Ranchi (Jharkhand) or if the issuing bank does not have any branch at Ranchi then Bank Guarantee shall be operative at any of its Kolkata Branch.
- (ii) The Bank Guarantee (BG) issued by the issuing Bank on behalf of contractor in favour of "Heavy Engineering Corporation Limited" shall be in paper form as well as issued under "Structured Financial Messaging System (SFMS)".

The details of beneficiary for issue of Bank Guarantee (BG) under SFMS platform is furnished below: A. State Bank of India as advising Bank of HEC:

1	Name of the Beneficiary and his details	i	Name	Heavy Engineering Corporation Limited
		ii	Area	Ranchi
		iii	Name of Bank	State Bank of India
		iv	Bank Account No.	30073880917
		v	Swift No.	SBININBB387
2	Beneficiary Bank Branch and Address	i	Name of Bank	State Bank of India
		ii	Bank Branch name	SME Branch, MECON Campus
		iii	Branch code	09620
		iv	Beneficiary Bank Branch IFSC	SBIN0009620
		v	Beneficiary Bank Address	SME Branch, MECON Campus, Doranda-834002 (Jharkhand)

Failure of the successful bidder to comply with the requirement as above shall constitute sufficient ground for cancellation of the award of work and forfeiture of the bid security/ earnest money.

In addition to the above penal measures, the bidder will not be allowed to participate in the re-tendering process. The bidder may also be debarred from participating in future tenders in the subsidiary for a minimum period of 12 Months.

**Note:- Bidder to submit the BG as per the above mentioned details through SFMS mode. BG submitted through Non SFMS mode will be summarily rejected**

## 19. LOCAL CONTENT CERTIFICATE

Verification of local content-The 'Class-I local supplier'/ 'Class-II local supplier' at the time of tender, bidding or solicitation shall be required to provide self-certification that the item offered meets the minimum local content and shall give details of the location(s) at which the local value addition is made. (Annexure-5)

## 20. CUSTODY

Upon arrival of material at Works Site, all Materials, all consumables and Machineries, etc., belonging to the Contractor shall assume custody thereof and remain responsible therefore, until the Completion Certificate is issued by the Customer/Engineer/ Site In-charge.

## **21. LIQUIDATED DAMAGE**

If the tenderers fails to complete the work within the stipulated time fixed in the order, the tenderers shall be liable to pay to the purchaser as agreed liquidated damages and not by way of penalty a sum of 0.5% of the total contract price per weeks of delay or part thereof by which the completion of work has been delayed, subject to a maximum limit of 10% of the total contract price. In case of delay in completion of the work / project, LD to be levied at the rate of ½ % of the unfinished part per week of delay, subject to maximum deduction of 10% of the contract price.

## **22. FORCE MAJEURE**

Time being the essence of the contract, if either party is prevented from the Performance of its obligations in whole or in part for reasons of Force Majeure, viz acts of God, acts of Government, acts of Public enemy, war, hostility, civil commotion, sabotage, fire, flood, explosion, strike, and lawful lockout, then provided notice of happening of any such eventuality is given by the effected party to the other party immediately & maximum within 15 days from the date of occurrence and cessation of the force majeure, the period of Force Majeure shall be excluded accordingly.

If the Force Majeure event(s) continue beyond the period of 3 months, the parties shall hold consultation to chalk out the further course of action. Neither party can claim any compensation from other party on account of Force Majeure.

## **23. ARBITRATION**

All Disputes or differences, whatsoever, arising between the parties out of or in relation to the construction, meaning and operation or effect of this Contract or breach there of shall be settled amicably. If, however, the parties are not able to resolve them amicably, the same shall be settled by arbitration in accordance with the Rules of Arbitration of the Indian Council of Arbitration as per the provision of Arbitration Conciliation Act 1996 and the award made in pursuance there of shall be binding on the parties. The Arbitrator/Arbitrators will give reasoned award.

Work under the contract shall continue by the Bidders during arbitration proceeding unless otherwise directed in writing by HEC/ BSP or unless the matter is such that work cannot be continued until decision of the arbitrators or of the umpire , as the case may be, is obtained and save as those which are otherwise expressly provided in the contract, no payment due or payable by the purchaser shall be withheld on arbitration proceeding unless it is the subject matter or on the subject matter thereof.

The Venue of arbitration shall be Ranchi, Jharkhand

## **24. RISK AND COST**

Should the bidders fail to complete the work and comply with notice given in this regard within the period as considered reasonable for such compliance from the date of serving the notice, then in such case without prejudice to purchasers right under this clause the purchaser shall have at his option to take the affected work wholly or in part out of the bidder's hand and may complete the work at the risk & cost of the bidder.

## **25. NO CLAIM OR COMPENSATION FOR SUBMISSION OF TENDER**

The Tenderer whose offer is not accepted shall not be entitled to claim any costs, charges, expenses or and incidental to or incurred by him through or in connection with his submission of



Tenderer, even though HEC Ltd may decide to withdraw the invitation of Tender. No price ESCALATION will be considered for successful tenderer till completion of the project.

## **26. NOTICES ON BEHALF OF HEC LTD**

Notice and certificate on behalf of HEC LTD in connection with the Work order may be given by duly authorized officers of HEC LTD. Any modification which may become necessary in the interim period will be intimated to you as soon as possible.

## **27. CONTRACTOR'S RISK**

The contractor is responsible for the expected risks, which are:

- A) War, hostilities, invasion, act of foreign enemies, rebellion, revolution, insurrection of military or usurped power, or civil war;
- B) Riot, commotion, disorder, unless solely restricted to employees of the contractor.

## **28. JURIDICTION OF COURT**

The issue shall be under the jurisdiction of Ranchi High Court.

## **29. PRICE ESCALATION:**

No price escalation is admissible for execution of the scope of work after issue of LOI/work order. No extra payments shall be admissible to the contractor, consequent on any alleged misunderstanding or miscalculation or arising of any other mistake or factor not specifically provided in the offer.

## **30. AN AGREEMENT**

An agreement will have to be signed with HEC Ltd. on a non-judicial stamp paper of appropriate value as per provision of Indian Stamp Act as notified in its affiliation to Jharkhand purchased by you from the state of Jharkhand in a standard proforma within fifteen days. Failure to execute an agreement within specified period may entail forfeiture of security deposit.

## **31. ADDRESS FOR CORESPONDANCE:**

Any Correspondence on this tender is to be addressed to:

1. **Sri P.K Mohan**  
**Sr. DGM (I/c) CED**

**Crane Execution Division.**  
**HMBP Administrative**  
**Building**  
**Heavy Engineering Corporation Ltd.,**  
**Ranchi – 834 004 (Jharkhand)**  
**E-mail-pkmohan@hecltd.com**

## **DEFINITIONS**

- a. Prime Contractor: Heavy Engineering Corporation Limited, Ranchi
- b. End Customer: Bhilai Steel Plant, SAIL, (C.G)
- c. Contractor/Bidder: The successful bidder to whom the assignment/contract will be awarded.
- d. For any clarification contact person: **Mr. Soumya Ranjan Das, Manager/CED., HEC Ltd., Ranchi – 834004.**

Check List

(To be filled by bidder and scan copy of the same to be uploaded along with Techno-commercial part-1 bid on e-tender portal)

Sl No.	Terms & Conditions	Desired BY HEC	Bidders Comment (Accepted / Not accepted)	Remarks
1	Scope of supply & services as per NIT	Must be accepted		
2	Price Term (FOR BSP Bhilai )	FOR Bhilai Steel Plant Bhilai-490001		
3	Packing and Fwd charges	To be included in quoted price.		
4	GST Registration certificate	To be furnished		
5	TAXES (GST)	% of Applicable Taxes to be indicated Extra		
6	Payment Terms	To be confirm in line with NIT Clause No.4 of NIT's annexure-A		
7	Validity of Offer	Minimum 60 days from the date of opening of tender		
8	Price Variation Clause	Prices will be firm till the Complete execution of order. (To be confirmed).		
9	Delivery Schedule	To be confirmed as per Clause no. 5 of NIT's Annexure-A		
10	Inspection	To be confirmed as per Clause no. 9 of NIT's Annexure-A		
11	Freight Charges if Ex-Works	To be included in quoted price.		
12	EMD of Rs. 8,17,000/- (Rupees Eight Lakh Seventeen Thousand Only) (Mandatory) as per clause No. 17 of annexure-A	DD/BG from any nationalized bank in favor of HEAVY ENGINEERING CORPORATION LIMITED, payable at Ranchi (Exempted for MSME/NSIC/SSI registered firms)		
13	Security Deposit for 10% of supply value of PO as per clause No. 18 of annexure -A	To be deposited by successful bidder within 21 days after placement of order by HEC. <b>This clause is mandatory and has to be accepted by the bidder. If Security deposit clause is not accepted then the offer of the bidder shall not be considered.</b>		

14	Performance bank guarantee for 10% of supply value of PO as per clause No. 18 of annexure-A	Bank Guarantee for performance from any nationalized bank in favor of HEAVY ENGINEERING CORPORATION LIMITED, Ranchi as per tender enquiry. <b>This clause is mandatory and has to be accepted by the bidder. If PBG clause is not accepted then the offer of the bidder shall not be considered.</b>		
15	Guarantee/Warranty Certificate as per clause No.15 of annexure-A	To be provided		
16	L/D Clause	To be Accepted (As per NIT's clause No. 21 of annexure-A)		
17	Special terms (If Any)			
18	Acceptance of Risk Purchase Clause	To be Accepted (as per NIT's clause No. 24 of annexure-A)		
19	GCC of HEC (available in tender section at HEC website : <a href="http://www.hecltd.com">www.hecltd.com</a> )	To be accepted (as per NIT's clause No. 10 of annexure-A)		
20	Confirmation of Supplying the materials as per Enquiry Schedule	YES/ NO		
21	All NIT conditions are acceptable	Yes/No, if no then state the clause wise deviation		
22	If firm is owned by SC/ST /WOMEN Entrepreneurs	To be indicated		
23	UAM (Udyog Aadhar No) No if registered under MSME	To be mentioned by bidder if applicable		
24	Materials shall be manufactured & supplied in line with in adherence of QMS/EMS/OHSAS	To be confirmed		
25	Whether registered with RXIL	To be confirmed (YES/NO)		
26	Integrity Pact	Must be submitted in Original as per annexure- F (it is mandatory for bidder and If it is not submitted then offer shall not be considered)		
27	Please confirm that you have submitted last three years audited balance sheet	To be confirmed (YES/NO)		
28	DECLARATION OF SITE VISIT	To be confirmed (YES/NO) <b><u>Bidder must confirm that they have visited the site and fully understand the requirements and conditions</u></b>		

29	Please confirm that you have submitted experience certificate as per NIT (eligibility criteria requirement clause no. 1.3 of IFB)	To be confirmed by bidder (Yes/No)		
30	Please confirm if any equipment or tool and tackles will be required the same will be arranged by you at your own cost.	To be confirmed by bidder (Yes/No)		
31	Please confirm that you have submitted Local Content Certificate (Annexure-G) as per clause no. 19 of Annexure-A	To be confirmed by bidder (Yes/No)		
32	Please Confirm that you have submitted Annexure-H (Affidavit)	To be confirmed by bidder (Yes/No)		
33	Please confirm that you have submitted the blank price bid	To be confirmed by bidder (Yes/No)		

**NOTE:**

1. Please indicate whether your firm is covered under MSEs/MSEs owned SC/ST or covered under SSI separately in Tech. Bid.
2. Terms & Conditions duly filled in, signed and stamped to be submitted along with offer otherwise your offer may not be evaluated.

**Format of EMD Bank Guarantee**

**BANK GUARANTEE FOR EARNEST MONEY DEPOSIT**

**NO.**  
**TO**

**Dated:**

Sr.DGM(I/c) CED  
HEAVY MACHINE BUILDING PLANT  
HEAVY ENGINEERING CORPORATION LTD.  
RANCHI-834004, JHARKHAND  
INDIA

Dear Sirs,

In consideration of your agreeing to accept the Earnest money deposit of Rs.------(Rs-----  
-----) furnishable to you by M/s-----  
------(Hereinafter Referred to As Contractor) In terms of the  
Enquiry No.----- - ----- -Dtd. ----- for Supply of -----  
----- (Hereinafter Referred to as the Contract) in the form of a Bank Guarantee in the Manner  
hereinafter contained we -----, having registered office  
at -----do hereby covenant and agree with you as follows.

1. We hereby undertake to indemnify you up to a sum of Rs. ----- (Rs. -----  
----- only) against any loss or damage caused to or suffered by you or that may be caused to or suffered  
by you by reason of any breach or breaches on the part of the contractor of any of the terms and conditions contained  
in the said contract and in the event the Contractor shall make any default or defaults in carrying out any of the  
works under the said contract or otherwise in the observance and performance of any of the terms and conditions  
relating thereto in accordance with the true intent and meaning thereof, we shall forthwith on demand and without  
any protest or demur pay to you such sum or sums not exceeding in total the said sum of Rs.----- (Rs.  
-----~~amount~~-----  
--only) as may be claimed by you as your losses and/or damages, costs, charges or expenses by reason of such  
default or defaults on the part of the contractor.

2. Notwithstanding anything to the contrary contained in this guarantee your decision as to whether the contractor  
has made any such default or defaults and the amount or amounts to which you are entitled by reasons thereof will  
be binding on us and we shall not be entitled to ask you to establish your claim or claims or damages or losses  
suffered by you but will pay the amount demanded by you under this guarantee forthwith on your demand without  
any protest or demur.

3. This guarantee shall continue and hold good until it is released by you on the application by the contractor after  
expiry of the related warranty period of the said contract and after the contractor have discharged all their obligations  
under the said contract and produced a certificate of due completion of the work under the said contract and  
submitted a "NO Demand Certificate" provided always that this

guarantee shall in no event remain in force after the date of----- without prejudice to your claim or claims arisen and demanded from or otherwise notified to us in writing before the expiry of six months from the said date which will be enforceable against us notwithstanding that the same is or are enforced after the said date.

4. We-----, further undertake to extend the validity of this beyond the period prescribed in clause 3 or as extended from time to time for such further period as may be required in writing before the Expiry of this and upon such extension(s), all terms and conditions of this shall remain in full force till the expiry of this extended period(s).

5. You will have the fullest liberty without affecting this guarantee from time to time to vary any of the terms and conditions of the said contract or extend the time of performance of the contractor or to postpone for any time or from time to time any of your rights or powers against the contractor and either to enforce or forbear to enforce any of the terms and conditions of the said contract and we shall not be released from our liability under this guarantee by the exercise of your liberty with reference to matters aforesaid or by reason of any time being given to the contractor or any other forbearance, actor omission on your part or any indulgence by you to the contractor or by any other variation or modification of the said contract or any other act, matter or things whatsoever, which, under the law relating to sureties, would but for the provisions hereof, have the effect of so releasing us from our liability hereunder provided always that nothing herein contained will enlarge our liability hereunder beyond the limit of Rs. -----(Rs.-----) as aforesaid or extend the period of the guarantee beyond the said Date of ----- unless expressly agreed to by us in writing in terms of clause 4 hereof.

6. This guarantee shall not in any way be affected by your taking or varying or giving up any securities from the contractor or any other person, firm or company on its behalf or by the winding up, dissolution, insolvency or death as the case may be of the contractor.

7. In order to give full effect to the guarantee herein contained, you shall be entitled to act as if we are your principal debtors in respect of all your claims against the contractor hereby guaranteed by us as aforesaid and we hereby expressly waive all our rights of suretyship and other rights, if any, which are in any ways inconsistent with any of the provisions of this guarantee.

8. Subject to the maximum limit of our liability as aforesaid this guarantee will cover all your claim or claims against the contractor from time to time arising out of or in relation to the said contract and in respect of which your claim in writing is lodged on us before expiry of six months from the date of expiry of this guarantee.

9. Any notice by way of demand or otherwise hereunder shall be in writing and may be sent by special Courier or Telefax to us or our Local Address as aforesaid.

10. This guarantee and the powers & provisions herein contained are in addition to and not by way of limitation or substitution for any other guarantee or guarantees heretofore given to you by us whether jointly with others or alone and now existing uncanceled and that this guarantee is not intended to and shall not revoke or limit such guarantee or guarantees.

11. This guarantee shall not be affected by any change in the constitution of the contractor or us nor shall it be affected by any change in your constitution or by any Amalgamation or absorption thereof or therewith but will ensure for the benefit or and be available to and enforceable by the absorbing or amalgamated company or concern.

12. This guarantee is irrevocable during the period of its currency and shall not be revoked without your previous consent in writing.

13. We further agree and undertake to pay you the amount demanded by you in writing irrespective of any dispute or controversy between you and the contractor or any reference to arbitration of the said dispute/controversy pending or a civil suit filed by the contract or in respect of the dispute or controversy.

14. Notwithstanding anything contained herein above our liability under this guarantee is restricted to Rs.-----  
----- (Rs. -----only) and this guarantee shall remain in force until -----  
-----unless a written claim is lodged on us for payment under this guarantee within six months from the date of expiry of this guarantee . i.e. On or before-----all your rights under this guarantee shall be forfeited and we shall be deemed to have released and discharged from all liabilities there under, irrespective of whether or not the original guarantee is returned to us.

15. We have power to issue this guarantee in your favour under the memorandum and articles of association of the bank and the undersigned has full power to execute this guarantee under the power of Attorney Granted to them by the Bank.

FOR AND ON BEHALF OF

-----



**Format of BANK GUARANTEE of Security Deposit**

TO,  
M/S HEAVY ENGINEERING CORPORATION LIMITED  
PLANT PLAZA ROAD,  
DHURWA,  
RANCHI – 4

DEAR SIR,

IN CONSIDERATION OF YOUR AGREEING TO ACCEPT THE SECURITY DEPOSIT OF RS.  
.....'amount'..... FURNISHABLE TO YOU BY M/S  
.....'firms name'..... (HEREINAFTER REFERRED TO AS CONTRACTOR)  
IN TERMS OF THE CONTRACT NO. ....'HEC's purchase order no'.....FOR  
..... SUPPLY OF ..... 'details' ..... of  
*items'*..... (HEREINAFTER REFERRED TO AS THE 'CONTRACT' ) IN THE FORM  
OF A BANK GUARANTEE IN THE MANNER HEREINAFTER CONTAINED WE..... 'bank details'.....  
BRANCH, HAVING REGISTERED OFFICE AT ..... 'place'..... DO HEREBY COVENANT  
AND AGREE WITH YOU AS FOLLOWS:

1. WE HEREBY UNDERTAKE TO INDEMNIFY YOU UP TO A SUM OF RS.  
.....'amount'.....(RUPEES ..... 'amount in words'.....) AGAINST ANY  
LOSS OR DAMAGE CAUSED TO OR SUFFERED BY YOU OR THAT MAY CAUSED TO OR  
SUFFERED BY YOU BY REASON OF ANY BREACH OR BREACHES ON THE PART OF THE  
CONTRACTOR OF ANY OF THE TERMS AND CONDITIONS CONTAINED IN THE SAID  
CONTRACT AND IN THE EVENT THE CONTRACTOR SHALL MAKE ANY DEFAULT OR  
DEFAULTS IN CARRYING OUT ANY OF THE WORKS UNDER THE SAID CONTRACT OR  
OTHERWISE IN THE OBSERVANCE AND PERFORMANCE OF ANY OF THE TERMS AND  
CONDITIONS RELATING THERETO IN ACCORDANCE WITH THE TRUE INTENT AND  
MEANING THEREOF, WE SHALL FORTHWITH ON DEMAND AND WITHOUT ANY  
PROTEST OR DEMUR PAY TO YOU SUCH SUM OR SUMS NOT EXCEEDING IN TOTAL  
THE SAID SUM OF RS. .... 'amount' ..... (RUPEES  
..... 'amount in words' ) AS MAY BE CLAIMED BY YOU AS YOUR LOSSES AND / OR  
DAMAGES, COSTS, CHARGES OR EXPENSES BY REASON OF SUCH DEFAULT OR  
DEFAULTS ON THE PART OF THE CONTRACTOR.
2. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN THIS GUARANTEE  
YOUR DECISION AS TO WHETHER THE CONTRACTOR HAS MADE ANY SUCH DEFAULT  
OR DEFAULTS AND THE AMOUNT OR AMOUNTS TO WHICH YOU ARE ENTITLED BY  
REASONS THEREOF WILL BE BINDING ON US AND WE SHALL NOT BE ENTITLED TO  
ASK YOU TO ESTABLISH YOUR CLAIM OR CLAIMS OR DAMAGES OR LOSSES SUFFERED  
BY YOU BUT WILL PAY THE AMOUNT DEMANDED BY YOU UNDER THIS GUARANTEE  
FORTHWITH ON YOUR DEMAND WITHOUT ANY PROTEST OR DEMUR.

3. THIS GUARANTEE SHALL CONTINUE AND HOLD GOOD UNTILL IT IS RELEASED BY YOU ON THE APPLICATION BY THE CONTRACTOR AFTER EXPIRY OF THE RELATED WARRANTY PERIOD OF THE SAID CONTRACT AND AFTER THE CONTRTACTOR HAVE DISCHARGED ALL THEIR OBLIGATIONS UNDER THE SAID CONTRACT AND PRODUCED A CERTIFICATE OF DUE COMPLETION OF THE WORK UNDER THE SAID CONTRACT AND SUBMITTED A 'NO DEMAND CERTIFICATE' PROVIDED ALWAYS THAT THIS GUARANTEE SHALL IN NO EVENT REMAIN IN FORCE AFTER THE DATE OF ...'date'..... WITHOUT PREJUDICE TO YOUR CLAIM OR CLAIMS ARISEN AND DEMANDED FROM OR OTHERWISE NOTIFIED TO US IN WRITING BEFORE THE EXPIRY OF SIX MONTHS FROM THE SAID DATE WHICH WILL BE ENFORCEABLE AGAINST US NOTWITHSTANDING THAT THE SAME IS OR ARE ENFORECED AFTER THE SAID DATE.
  
4. WE .....*'bank name'*....., FURTHER UNDERTAKE TO EXTEND THE VALIDITY OF THIS BEYOND THE PERIOD PRESCRIBED IN CLAUSE 3 OR AS EXTENDED FROM TIME TO TIME, FOR SUCH FURTHER PERIOD AS MAY BE REQUIRED IN WRITING BEFORE THE EXPIRY OF THIS AND UPON SUCH EXTENSION(S), ALL TERMS AND CONDITIONS OF THIS SHALL REMAIN IN FULLFORCE TILL THE EXPIRY OF THIS EXTENDED PERIOD(S).
  
5. YOU WILL HAVE THE FULLEST LIBERTY WITHOUT AFFECTING THIS GUARANTEE FROM TIME TO TIME TO VARY ANY OF THE TERMS AND CONDITIONS OF THE SAID CONTRACT OR EXTEND THE TIME OF PERFORMANCE OF THE CONTRACTOR OR TO POSTPONE FOR ANY TIME OR FROM TIME TO TIME ANY OF YOUR RIGHTS OR POWERS AGAINST THE CONTRACTOR AND EITHER TO ENFORCE OR FOREBEAR TO ENFORCE ANY OF THE TERMS AND CONDITIONS OF THE SAID CONTRACT AND WE SHALL NOT BE RELEASED FROM OUR LIABILITY UNDER THIS GUARANTEE BY THE EXERCISE OF YOUR LIBERTY WITH REFERENCE TO MATTERS AFORESAID OR BY REASON OF ANY TIME BEING GIVEN TO THE CONTRACTOR OR ANY OTHER FORBEARANCE , ACT OR OMISSION ON YOUR PART OR ANY INDULGENCE BY YOU TO THE CONTRACTOR OR BY ANY OTHER VARIATION OR MODIFICATION OF THE SAID CONTRACT OR ANY OTHER ACT, MATTER OR THINGS WHATSOEVER, WHICH, UNDER THE LAW RELATING TO SURETIES, WOULD BUT FOR THE PROVISIONS HEREOF, HAVE THE EFFECT OR SO RELEASING US FROM OUR LIABILITY HEREUNDER PROVIDED ALWAYS THAT NOTHING HEREIN CONTAINED WILLENLARGE OUR LIABILITY HEREUNDER BEYOND THE LIMIT OF RS.  
.....*'amount'*.....(RUPEES .....*'amount in words'*.....) AS AFORESAIDOR EXTEND THE PERIOD OF THE GUARANTEE BEYOND THE SAID DATE OF ...*'date'*.... UNLESS EXPRESSLY AGREED TO BY US IN WRITING IN TERMS OF CLAUSE 4 HEREOF.
  
6. THIS GUARANEE SHALL NOT IN ANY WAY BE AFFECTED BY YOUR TAKING OR VARYING OR GIVING UP ANY SECURITIES FROM THE CONTRACTOR OR ANY OTHER PERSON, FIRM OR COMPANY ON ITS BEHALF OR BY THE WINDING UP, DISSOLUTION, INSOLVENCY OR DEATH AS THE CASE MAY BE OF THE CONTRACTOR.

7. IN ORDER TO GIVE FULL EFFECT TO THE GUARANTEE HEREIN CONTAINED, YOU SHALL BE ENTITLED TO ACT AS IF WE ARE YOUR PRINCIPAL DEBTORS IN RESPECT OF ALL YOUR CLAIMS AGAINST THE CONTRACTOR HEREBY GUARANTEED BY US AS AFORESAID AND WE HEREBY EXPRESSLY WAIVE ALL OUR RIGHTS OF SURETYSHIP AND OTHER RIGHTS, IF ANY, WHICH ARE IN ANY WAY INCONSISTENT WITH ANY OF THE PROVISIONS OF THIS GUARANTEE.
8. SUBJECT TO THE MAXIMUM LIMIT OF OUR LIABILITY AS AFORESAID THIS GUARANTEE WILL COVER ALL YOUR CLAIM OR CLAIMS AGAINST THE CONTRACTOR FROM TIME TO TIME ARISING OUT OF OR IN RELATION TO THE SAID CONTRACT AND IN RESPECT OF WHICH YOUR CLAIM IN WRITING IS LODGED ON US BEFORE EXPIRY OF SIX MONTHS FROM THE DATE OF EXPIRY OF THIS GUARANTEE.
9. ANY NOTICE BY WAY OF DEMAND OR OTHERWISE HEREUNDER SHALL BE IN WRITING AND MAY BE SENT BY SPECIAL COURIER, SPEED POST OR TELEFAX TO US AT OUR LOCAL ADDRESS AS AFORESAID.
10. THIS GUARANTEE AND THE POWERS & PROVISIONS HEREIN CONTAINED ARE IN ADDITION TO AND NOT BY WAY OF LIMITATION OF OR SUBSTITUTION FOR ANY OTHER GUARANTEE OR GUARANTEES HERETOFORE GIVEN TO YOU BY US WHETHER JOINTLY WITH OTHERS OR ALONE AND NOW EXISTING UNCANCELLED AND THAT THIS GUARANTEE IS NOT INTENDED TO AND SHALL NOT REVOKE OR LIMIT SUCH GUARANTEE OR GUARANTEES.
11. THIS GUARANTEE SHALL NOT BE AFFECTED BY ANY CHANGE IN THE CONSTITUTION OF THE CONTRACTOR OR US NOR SHALL IT BE AFFECTED BY ANY CHANGE IN YOUR CONSTITUTION OR BY ANY AMALGAMATION OR ABSORPTION THEREOF OR THEREWITH BUT WILL ENSURE FOR THE BENEFIT OF AND BE AVAILABLE TO AND ENFORCEABLE BY THE ABSORBING OR AMALGAMATED COMPANY OR CONCERN.
12. THIS GUARANTEE IS IRREVOCABLE DURING THE PERIOD OF ITS CURRENCY AND SHALL NOT BE REVOKED WITHOUT YOUR PREVIOUS CONSENT IN WRITING.
13. WE FURTHER AGREE AND UNDERTAKE TO PAY YOU THE AMOUNT DEMANDED BY YOU IN WRITING IRRESPECTIVE OF ANY DISPUTE OR CONTROVERSY BETWEEN YOU AND THE CONTRACTOR OR ANY REFERENCE TO ARBITRATION OF THE SAID DISPUTE / CONTROVERSY PENDING OR A CIVIL SUIT FILED BY THE CONTRACTOR IN RESPECT OF THE DISPUTE OR CONTROVERSY.
14. NOTWITHSTANDING ANYTHING CONTAINED HEREIN ABOVE OUR LIABILITY UNDER THIS GUARANTEE IS RESTRICTED TO RS. ....'amount'.....(RUPEES ..... 'amount in words'.....) AND THIS GUARANTEE SHALL REMAIN IN FORCE UNTILL ..... 'date'.... UNLESS A WRITTEN CLAIM IS LODGED ON US FOR PAYMENT UNDER THIS GUARANTEE WITHIN SIX MONTHS FROM THE DATE OF EXPIRY OF THIS GUARANTEE i.e. ON OR BEFORE

...*'date'* + *'6 month'*..... ALL YOUR RIGHTS UNDER THIS GUARANTEE SHALL BE FORFEITED AND WE SHALL BE DEEMED TO HAVE REALEASED AND DISCHARGED FROM ALL LIABILITIES THEREUNDER. IRRESPECTIVE OF WHETHER OR NOT THE ORIGINAL GUARANTEE IS RETURNED TO US.

15. WE HAVE POWER TO ISSUE THIS GUARANTEE IN YOUR FAVOUR UNDER THE MEMORANDUM AND ARTICLES OF ASSOCIATION OF THE BANK AND THE UNDERSIGNED HAS FULL POWER TO EXECUTE THIS GUARANTEE UNDER THE POWER OF ATTORNEY GRANTED TO THEM BY THE BANK.

FOR AND ON BEHALF OF  
*'name of bank'*

*'signature with seal'*

**FORMAT OF PERFORMANCE BANK GURANTEE**

(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT & TO BE ISSUED BY ANY NATIONALISED /SCHEDULED BANK AUTHORIZED BY RBI TO ISSUE A BANK GUARANTEE)

Name of Equipment: ..... Guarantee NO .....

Purchase Order No.: ..... dated: ..... - Date: .....

Validity .....

Claim period-----

To:

M/s Heavy Engineering Corporation  
Ltd. Heavy Machine Building Plant  
Ranchi-834004 Jharkhand

In consideration of your having placed an order bearing Purchase Order No.-----dated:----- with-----

----- (hereinafter referred to as Supplier) for the supply of-----

----- (hereinafter referred to as the .....

We ----- do hereby agree with you irrevocably that, should the machinery and equipment fail to give the guarantee performance and achieve the efficiency as stipulated in the Purchase Order within the period of guarantee or should the material and/or workmanship of the machinery and equipment supplied or any part thereof be found defective and/or fully, as per the purchase order, we undertake to pay without any demur merely on demand a sum of Rs. -----

----- being 20% of the value of Rs. .... for the supply of .....

Your decision whether the supplier have made any such defaults and the amount to which you are entitled by reasons thereof shall be conclusive and bind on us, subject to maximum of Rs. ----- as aforesaid.

We ..... further guarantee that the machinery and equipment manufactured and supplied by the supplier shall be new, of good quality materials and of the first class workmanship as specified in the Purchase order and should the machinery and equipment supplied or any part thereof be found defective and that should the defect as pointed out in inspection note be not made good and/or in case of failure within guarantee period same shall be replaced on free of cost or repaired on free of cost to the entire satisfaction of Heavy Engineering Corporation Ltd.

We ----- agree that the guarantee herein contained shall remain in full force and effect till the machinery and equipment give the desired performance and it shall continue to be enforceable till your dues have been fully paid and claims satisfied or discharged subject to a period not later than ----- . In the event of any extension granted for commissioning/dispatch suitable extension shall be given on your request.

We-----, further agree that any neglect, omission or forbearance or indulgence in enforcing any claim as per the terms and conditions of your purchase order or performance guarantee or any of them or any extension of the time granted for the performance or payment of penalty under the guarantee or any dispute between the supplier and yourselves as regard performance of machinery and equipment supplied or issued related to your Purchase order, shall not effect in any way our liability under this guarantee until the full payment, but in any case, shall not extend beyond --.

This guarantee is in addition and not substitution for guarantee given to you by the seller or by their bankers on their behalf.

We----- lastly undertake not to revoke this bank guarantee during its currency except with the previous consent of the corporation in writing.

Notwithstanding anything to contrary stated above, our liability under this guarantee will be restricted to Rs. ----

----- and shall remain in force up to -----, unless a demand or claim under

this guarantee is made from the date i.e. on or before-----all your rights under the saidguarantee shall be forfeited and we shall be released and discharged from all liabilities there under.

Dated at.....day of .....

Seal of the Bank

**INTEGRITY PACT**

Between

**Heavy Engineering Corporation Ltd.( HEC)** hereinafter referred to as “The Principal”,

and

.....hereinafter referred to as “The Bidder/ Contractor”

**Preamble**

The Principal intends to award, under laid down organizational procedures, contract/s for .....The Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness / transparency in its relations with its Bidder(s) and/ or Contractor(s).

In order to achieve these goals, the Principal will appoint an Independent External Monitor (IEM), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

**Section 1 – Commitments of the Principal**

1. The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -
  - No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
  - The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
  - The Principal will exclude from the process all known prejudiced persons
2. If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions

**Section 2 – Commitments of the Bidder(s) / contractor (s)**

1. The Bidders(s) / Contractor (s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
  - b. The bidder(s) / Contractor(s) will not, directly or through any other person or firm, offer promise or give to any of the Principal’s employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
  - c. The Bidder(s)/ Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelisation in the bidding process.

- d. The Bidder(s) / Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s)/Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
  - e. The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/ representatives in India, if any. Similarly the Bidder(s) /Contractors(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the “Guidelines on Indian Agents of Foreign Suppliers” (enclosed) shall be disclosed by the Bidder(s) / Contractor(s). Further, as mentioned in the Guidelines all the payments made to the Indian agent/ representative have to be in Indian Rupees only. Copy of “Guidelines on Indian Agents of Foreign Suppliers” attached.
  - f. The Bidder(s) / Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
2. The Bidder(s) / Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences

### **Section 3 – Disqualification from tender process and exclusion from future contracts**

If the Bidder(s) / Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s) / Contractors) from the tender process or take actions like Banning of business dealings etc.

### **Section 4 – Compensation for Damages**

1. If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit / Bid Security.
2. If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to Performance Bank guarantee.

### **Section 5 – Previous transgression**

1. The Bidder declares that no previous transgressions occurred in the last 3 years with any other Company in any country conforming to the anti corruption approach or with any other Public Sector enterprise in India that could justify his exclusion from the tender process.
2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or action can be taken against the bidder.

### **Section 6 - Equal treatment of all Bidders / Contractors / Subcontractors**

1. The Bidder(s)/ Contractor(s) undertake (s) to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
2. The Principal will enter into agreements with identical conditions as this one with all Bidders, Contractors and Subcontractors.
3. The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

### **Section 7 – Criminal charges against violation by the Bidder(s) / Contractor(s) / Subcontractor(s)**

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will



## **Section 8 – Independent External Monitor / Monitors**

1. The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
2. The monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, HEC.
3. The Bidder(s) / Contractor(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s) / Contractor(s)/ Subcontractor(s) with confidentiality.
4. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerated action.
6. The Monitor will submit a written report to the CMD, HEC within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
7. Monitor shall be entitled to compensation on the same terms as being extended to / provided to Independent Directors on the HEC Board.
8. If the Monitor has reported to the CMD HEC, a substantiated suspicion of an offence under relevant IPC / PC Act, and the CMD HEC has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
9. The word 'Monitor' would include both singular and plural

## **Section 9 – Pact Duration**

This Pact begins when both parties have legally signed it, it expires for the Contractor 12 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded  
If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged / determined by CMD HEC.

## **Section 10 – Other provisions**

1. This agreement is subject to Indian Law , Place of performance and jurisdiction is the Registered Office of the Principal, i.e. Ranchi.
2. Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
3. If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
4. Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

( For & On behalf of the Principal)

( For & On behalf of Bidder / Contractor )

( Office Seal)

( Office Seal )

Place.....

Date.....

Witness 1 :  
( Name & Address) .....

Witness 2 :  
( Name & Address) .....

**LOCAL CONTENT DECLARATION**

**Date:**

To,

M/s HEC Ltd ,  
Plant Plaza Road  
Ranchi-834004

**Sub: Certificate as per clause 9 (a) of Revised Public Procurement (Preference to Make in India Order, 2017 of DPIIT dated 04/06/2020 and 16/09/2020.**

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I (authorized signatory for M/s ..... ) declare the local content for the complete scope of work of the tender with their location details in the below mentioned table :

<b>Sl. No.</b>	<b>For Complete Scope of NIT &amp; TS</b>	<b>Local Content (in %)</b>	<b>Location details at which local value addition is made (Factory address)</b>
<b>1</b>			

We also certify that the above details are true & correct and if found to be false then it shall be a breach of the Code of Integrity and our bid will be liable to be rejected and we will have no objection against rejection of bid.

For M/s .....

Authorized Signatory  
(with company seal & Name)

**Note :**

- 1. In case the value of offer (Excluding Taxes) is more than 10 Crores INR , the above declaration will be required to be certified by Practicing CA with MRN & FRN of CA.**
- 2. The Local Content Declaration must be submitted by the bidder during submission of offer along with Techno-commercial Bid. No change in Local Content of declaration will be allowed once the bid is submitted.**

**AFFIDAVIT**

(NON JUDICIAL STAMP PAPER OF Rs. 50/-)

I..... Partner/Legal Attorney  
Proprietor/Accredited Representative of M/s.  
..... Solemnly declared that:

1. I/We are submitting tender for the work  
.....  
.....  
against Tender Notice No. ----- dated -----
2. None of the partners of our firm is relative of employee of Northern Coalfields Limited and Heavy Engineering Corporation Limited.
- 3 All information furnished by me / us in respect of fulfillment of eligibility criteria and information given in this Bid is complete, correct and true.
4. All documents / credentials submitted along with this tender are genuine, authentic, true and valid.
5. If, any information or document submitted is found to be false /incorrect at any time, Employer may cancel my Bid and action as deemed fit may be taken against me /us including termination of the contract, forfeiture of all dues including Earnest Money and blacklisting of our firm and all Partners of the firm etc.

Signature of the Tenderer

Dated-----

**Seal of Notary**

\_\_\_\_\_

**Instructions for Online Bid Submission**

*The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.*

*More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.*

**REGISTRATION**

- (i) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://etenders.gov.in/eprocure/app>) by clicking on the link “Online bidder Enrollment” on the CPP Portal which is free of charge.
- (ii) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- (iii) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- (iv) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- (v) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to *ensure that they do not lend their DSC's to others which may lead to misuse.*
- (vi) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

**SEARCHING FOR TENDER DOCUMENTS**

- i) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- ii) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- iii) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

**PREPARATION OF BIDS**

- i) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- ii) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of *each of the document that need to be submitted. Any deviations from these may*

*lead to rejection of the bid.*

- iii) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- iv) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” or “Other Important Documents” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

**Note:** My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.

## **SUBMISSION OF BIDS**

- i) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- ii) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- iii) Bidder has to select the payment option as “offline” to pay the tender fee / EMD as applicable and enter details of the instrument.
- iv) Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by as specified in the tender documents. The details of the DD / any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise, the uploaded bid will be rejected.
- v) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should

save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

- vi) The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- vii) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- viii) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

- ix) Upon the successful and timely submission of bids (i.e. after Clicking “Freeze Bid Submission” in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- x) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

#### **ASSISTANCE TO BIDDERS**

- i) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- ii) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 **CPP Portal** Helpdesk.  
Note: For any query related to registration and processing on the Portal please visit FAQ available at <https://etenders.gov.in/eprocure/app?page=FAQFrontEnd&service=page>  
You may call the Helpdesk. The 24 x 7 Help Desk

Numbers are 0120-4200462, 0120-4001002, 0120-4001005, 0120-6277787

E-Mail: [support-eproc@nic.in](mailto:support-eproc@nic.in)

**TECHNICAL SPECIFICATION**

1. The scope of work is Design, Engineering, Refurbishment, Supply, Storage, Installation and Commissioning along with demonstration of performance of Emergency Brakes in Main Hoist Drives in Eight (08) nos. 300T EOT cranes supplied under package 29A and 29A2 to Bhilai Steel Plant, Bhilai.
  - i. Supply of Emergency Brakes / Spares.
  - ii. Supply of Hydraulic Powerpack.
  - iii. Supply of Control Panel with Overspeed detection System for Brake.
  - iv. Supply of Hardware for Emergency Braking System.
  - v. Supply of Hydraulic Piping for connecting the HPP to the Emergency Brake where needed.
  - vi. Unloading, Storage and safe custody of the supplied items.
  - vii. Removal and installation of Emergency Braking System.
  - viii. Degreasing and inspection of Drum Discs.
  - ix. Repair of existing Emergency Brakes.
  - x. Carrying out Load Test – No Load & 1/3rd Load with assistance of HEC and BSP.
  - xi. Any other work required to be done for commissioning of the system designed by M/s Altra Motion India Pvt. Ltd.
  - xii. Training of BSP Personnel for 2 Days for complete project – (08 Cranes).
  - xiii. Testing and commissioning along with demonstration of performance of Emergency Disc Brake.
  - xiv. For operation of Emergency Disc Brake, System integration with the existing Main Hoist VFD (Siemens Sinamics S120) and cutting power supply to the Main Hoist Drive Motor mechanism through VFD panel is in scope of M/s Altra Industrial Motion India Pvt Ltd. Any software modification or parameterization, required cables for the same if needed in Main Hoist VFD panel will be in the scope of M/s Altra Industrial Motion India Pvt Ltd.
  - xv. Arrangement for speed sensing shall be provided for the two rope drums of the Main Hoist Mechanism for effective application of Emergency Disc Brake, in the event of over speeding of the load. For this purpose, a hollow shaft incremental encoder shall be provided with each drum. The pulse from the encoder shall be taken to the PLC for monitoring the speed of the



drum and building up the logic for application of the brake in the event of the following:

- a. Over speeding of the drum beyond the permissible limit as per customer/BSP, Bhilai requirement.
  - b. Mismatch of the direction of rotation between the motor and the drum. (Hoisting command given and rope drum is rotating in lowering direction).
  - c. Electrical brake is closed and rope drum starts rotating in lowering direction.
  - d. Emergency Disc operation from operator's cabin.
  - e. Oil level low indication and interconnection shall be provided.
- xvi. The control unit consisting of PLC with CPU, power supply module, necessary DI and DO and counter module for getting the speed (encoder feedback) of the drum, necessary relay boards shall be provided

**2. The detailed scope of work under this work order will generally include the following apart from specifically indicated as above for the specific equipment's as per the drawing, document and manuals to be supplied by the manufacturer/HEC.**

- a. Mobilization of labour, suitable mobile crane, tools and tackles, lifting and handling equipment, testing equipment and consumables etc.
- b. Contractors/Supplier are advised to visit site before quoting so that they are acquainted with site conditions and requirements.
- c. The contractor/Supplier shall arrange for handling and transportation of items / components from own store to the erection site as per the requirement of rectification.
- d. The Contractor/Supplier shall be responsible for arrangement of adequate material handling equipment like mobile cranes, trucks, trailers, fork lifters, tools and tackles as may be required for his work.
- e. The necessary lifting tackles, tools, wire rope, slings of suitable capacities and other equipment to carry out this work shall be arranged by the Contractor/Supplier. All such lifting tackles shall have valid test certificates. These certificates may be inspected by the Purchaser or any statutory agency from time to time.
- f. The Contractor/Supplier shall be responsible for all damages to his trucks/ trailers/ cranes which may take place during the course of execution of work.
- g. Supervision of erection, testing and commissioning of equipment.
- h. Earthing of various electrical equipment (if any).
- i. Supply of all consumables for rectification purpose like welding electrodes, PVC Tapes, grease and lubricants cotton waste etc.
- j. Supply and provision of packing plates shims up to thickness 3-8 mm etc.

**Conduct all Tests as required by Project/customer to obtain Performance Guarantee Certificate.**

1. **DE Bay:**
  - a. **Capacity (SWL) - 300 tonnes**
  - b. **Motor rating- 545 KW**
  - c. **Drum Diameter -1850 mm**
  - d. **Lifting Speed - 10 m/min**
  - e. **Drum Drive- Planetary Gear Box**
  - f. **Lifting Height – 18 +6 m**
  
2. **EF Bay:**
  - g. **Capacity (SWL) - 300 tonnes**
  - h. **Motor rating- 545 KW**
  - i. **Drum Diameter -1850 mm**
  - j. **Lifting Speed - 10 m/min**
  - k. **Drum Drive- Planetary Gear Box**
  - l. **Lifting Height – 22.5+6 m**
  
3. **IJ Bay:**
  - m. **Capacity (SWL) - 300 tonnes**
  - n. **Motor rating- 545 KW**
  - o. **Drum Diameter -1850 mm**
  - p. **Lifting Speed - 10 m/min**
  - q. **Drum Drive- Planetary Gear Box**
  - r. **Lifting Height – 26 +3 m**
  
4. **HI Bay:**
  - s. **Capacity (SWL) - 300 tonnes**
  - t. **Motor rating- 545 KW**
  - u. **Drum Diameter -2150 mm**
  - v. **Lifting Speed - 10 m/min**
  - w. **Drum Drive- Planetary Gear Box**
  - x. **Lifting Height – 26 +6 m**

5. **CRANE SCHEDULE: -**

SL. NO.	CRANE	Location	Quantity
<b>29A</b>			
1.	<b>300+80/25T X 22.5 M Span</b>	<b>DE Bay</b>	<b>1 No.</b>
2.	<b>300+80/25T X 22.5 M Span</b>	<b>DE Bay</b>	<b>1 No</b>
3.	<b>300+80/25T X 25 M Span</b>	<b>EF Bay</b>	<b>1 No</b>
4.	<b>300+80/25T X 25 M Span</b>	<b>EF Bay</b>	<b>1 No</b>
5.	<b>300+80/25T X 27.5 M Span</b>	<b>IJ Bay</b>	<b>1 No</b>
6.	<b>300+80/25T X 27.5 M Span</b>	<b>IJ Bay</b>	<b>1 No</b>
<b>29A2</b>			
1.	<b>300+80/25T X 23.75 M Span</b>	<b>HI Bay</b>	<b>1 No</b>
2.	<b>300+80/25T X23.75 M Span</b>	<b>HI Bay</b>	<b>1 No</b>

5. **ERECTION**

- a. Erection also involves assembly of equipment parts components as per approved drawings.
- b. During Erection, the steel work/equipment shall be securely bolted or properly fastened and when necessary, shall be temporarily braced to take care of all loads transferred to the structure during erection including those due to erection equipment and its operation.
- c. No permanent bolting or welding should be done until proper alignment has been made.
- d. Erection of the Emergency Disc Brake shall be carried out in a manner so as to ensure stability of the equipment.
- e. The contractor shall be held responsible for the assembly of the equipment parts within the required accuracy. The dimension, of the mechanisms rectified shall be within the tolerances as specified. All materials shall be straight unless required to be of curvilinear form and shall be free from twists. All cold straightening shall be done by pressure only.
- f. As far as possible sub-assembly if any should be carried out on the ground.
- g. Instrumental checking for correctness of alignment of the Gear Box, Rope Drum etc. shall be carried out by the Contractor. The necessary instrument shall be arranged by the Contractor.

- h. Bolting at site shall be carried out with the same accuracy and care as those adopted in the shop. When parts are to be joined by bolts, these shall be tightened to the maximum limit. The threaded portion of each bolt shall project through the nut by at least one thread. Bolts shall be fitted with spring washer. Where fitted bolts are required, new bolts shall be used with holes re-reamed to the required tolerances.
- i. WELDING- All field assembly and welding shall be executed in accordance with the requirements for shop fabrication. Electrodes used for welding shall be low hydrogen type. Only qualified welders shall be employed to carry out welding process. The welding shall be uniform and free from defects like slag inclusion, blow holes porosity, cracks, under cuts etc. There shall not be over lapping or undercutting of the parent metal.
- j. Erection of the electrical and mechanical equipment shall be carried out as per approved erection instructions/documents. Proper care shall be taken so that no chance of damaged due to faulty or carelessness. The Purchaser decision shall be final regarding any damage due to wrong rectification or faulty procedure and the entire cost of replacement of the damaged part shall be borne by the Contractor.
- k. Submission of As Built Drawings after completion of the work.

## 6. INSPECTION, TESTING & COMMISSIONING

The tenderer shall conduct all tests required to ensure that the equipment furnished shall confirm to requirement of the specification and in compliance with the requirements of the applicable codes. Necessary test certificate shall be submitted.

### a. TESTS AT SITE BY ERECTION CONTRACTOR

The crane after erection of emergency disc brake system shall be tested as given below:

- i. **No Load test:**  
After completion of erection, crane and shall be tested with no load to check the performance of the crane along with emergency disc brake system and associated parts.
- ii. **Performance Test:** The crane shall be tested with rated load for performance of machine with loaded condition.
- iii. **Insulation tests** and other tests mentioned shall be carried out as per the latest IS: 3177 & IS: 4137 (as applicable).

The crane shall be offered for inspection and testing during different stages of erection of emergency disc brake system.

### b. ACCEPTANCE TEST:

- i. The contractor shall inform sufficiently in advance regarding readiness of acceptance tests and commissioning.
- ii. The tests shall be carries out in presence of the HEC representatives. HEC further may invite Customer's representative and consultant's representative.
- iii. After erection of the emergency disc brake system and associated accessories has completed, visual inspection will be jointly made by the contractor,

manufacturer (HEC) and the purchaser (BSP). The defects and shortcomings found during visual inspection shall be rectified by the contractor.

- iv. After the power supply has been connected and before the complete crane installation is put to load test, tests shall be carried out to
  1. The satisfactory operation of all protective devices.
  2. The satisfactory operation of emergency braking system of the crane.
  3. The compliance of the crane with the specified performance requirements
- v. When conducting acceptance tests, erector shall provide his own operator. However, the end customer shall be entitled to employ his own operator, if he so desires.
- vi. A certified copy of the test figures shall be submitted to the end customer / consultant for his approval and record before acceptance of the Crane. After acceptance of crane, 15 copies of performance reports in bound volumes shall be furnished to the end customer within four weeks.

## 7. List of Drawings & Documents

The referential G.A drawing of the Equipment is as detailed below.

<b>S.No:</b>	<b>HEC Drawing NO.</b>	<b>Description</b>
<b>1</b>	<b>3719.70.000</b>	<b>G.A. of 300+80/25Tx22.5Mtr span DE bay Crane.</b>
<b>2</b>	<b>3720.00.000</b>	<b>G.A. of 300+80/25Tx27.5Mtr span IJ bay Crane.</b>
<b>3</b>	<b>3719.80.000</b>	<b>G.A. of 300+80/25Tx25Mtr span EF bay Crane.</b>
<b>4</b>	<b>3720.20.000</b>	<b>G.A. of 300+80/25Tx23.75Mtr span HI bay Crane.</b>

## BOQ/Price Bid format (Uploaded separately on the E- tenderportal)

Validate    Print    Help

### Item Wise BoQ

Tender Inviting Authority: < Sr. DOM I/C (CED)HMBP >

Contract No: < CED/HMBP/EDB/BSP/2024-03 Dated 11.06.2024

Note:

1. Full & Final total price for Entire Scope of Work has to be mentioned in the below price format.
2. Percentage (%) of GST must be mentioned in below price format. If not mentioned, then quoted price shall be considered inclusive of GST.

PRICE SCHEDULE (DOMESTIC TENDERS - RATES ARE TO GIVEN IN RUPEES (INR) ONLY)												
(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only.)												
NUMBER #	TEXT #	TEXT #	NUMBER #	TEXT #	NUMBER #	NUMBER	NUMBER	NUMBER #	NUMBER #	NUMBER #	TEXT #	
Sl. No.	Item Description	Item No.	Quantity	Units	BASIC RATE in Figures To be entered by the Bidder in Rs. /Po	GST rate in %	Total GST amount in Rs.	TOTAL AMOUNT Without Taxes	TOTAL AMOUNT With Taxes	TOTAL AMOUNT in Words		
								Total (12) = (4) x (7) In Rs. P	Total (14) = sum (8) to (13) In Rs. P			
1	300*80/25T X 22.5 M Span DE Bay (Supply)	Item1	2.00	Set			0.00	0.00	0.00	INR Zero Only		
2	300*80/25T X 22.5 M Span DE Bay (Refurbishment, Erection, Testing & Commissioning)	Item2	2.00	Set			0.00	0.00	0.00	INR Zero Only		
3	300*80/25T X 25 M Span EF Bay (Supply)	Item3	2.00	Set			0.00	0.00	0.00	INR Zero Only		
4	300*80/25T X 25 M Span EF Bay (Refurbishment, Erection, Testing & Commissioning)	Item4	2.00	Set			0.00	0.00	0.00	INR Zero Only		
5	300*80/25T X 27.5 M Span IJ Bay (Supply)	Item5	2.00	Set			0.00	0.00	0.00	INR Zero Only		
6	300*80/25T X 27.5 M Span IJ Bay (Refurbishment, Erection, Testing & Commissioning)	Item6	2.00	Set			0.00	0.00	0.00	INR Zero Only		
7	300*80/25T X 23.75 M Span HI Bay (Supply)	Item7	2.00	Set			0.00	0.00	0.00	INR Zero Only		
8	300*80/25T X 23.75 M Span HI Bay (Refurbishment, Erection, Testing & Commissioning)	Item8	2.00	Set			0.00	0.00	0.00	INR Zero Only		
<b>Total in Figures</b>								<b>0.00</b>	<b>0.00</b>	Zero Only		
<b>Quoted Rate in Words</b>		<b>INR Zero Only</b>										

## GENERAL CONDITIONS OF CONTRACT FOR WORKS CONTRACT

<b>1. General Obligations</b>	
1.1	The contractor shall deposit specified amount of Earnest Money (EMD) along with the offer.
1.2	The Earnest Money will be converted in to Security Deposit (SD) for the successful tenderer. This will form the initial Security Deposit. Subsequently a deduction at the rate of 10% (or as specified) from all “On account” payments to the contractor will be made till the total Security Deposit becomes 10% of the tender / contract value.
1.3	EMD and SD to be deposited in the form of Demand Draft (drawn in favour of Heavy Engineering Corporation Ltd.) or by Cash Receipt.
1.4	No interest shall be payable on the Earnest Money or the Security Deposit or the amount payable to the contractor under contract.
1.5	When the amount deducted from monthly “On account” bill aggregates to Rs. 5 Lakh or above, the contractor may be having the option to convert the cash portion into Bank Guarantee. The Bank Guarantee (BG) shall be valid for the complete contract period including maintenance / performance guarantee period (wherever applicable). In case of any extension of time is granted to the contractor for the completion of the work under this contract, the contractor shall simultaneously arrange for the extension of time validity of the BG.
1.6	On grant of completion certificate to the contractor, 50% of the SD shall be refunded to the contractor on his request which shall be payable within 14 days of time and the balance 50% will be retained as security against inaccuracy, omissions, shortcomings, quality deficiencies etc. On issue of no due certificate by the employer the remaining SD will be released. In the contracts where Performance Guarantee is an agreed / part of assignment, on completion of work, full Security Deposit will be converted to Performance Guarantee.
1.7	Performance Guarantee will be refunded after satisfactory completion of warrantee period against issue of written certificate in this regard by the executing department.
1.8	All compensations or other sum of money payable by the contractor to the employer under the terms of contract with the employer or under any other contract with the employer shall, without prejudice to any other mode of recovery, be recoverable from such contractor by way of deduction of payment or encashment of Bank Guarantee.
1.9	<p>The contractor shall, when called upon to do so by the employer, enter into and execute a contract agreement at his own cost. Unless specifically mentioned Contract agreement to be signed for value of work order of Rs. One lakh or more.</p> <p>The original contract document shall be signed on non-judicial stamp paper of value not below Rs.10 by the employer and the contractor. This document will be retained by the employer (Incharge Contract cell or his representative empowered as authorized signatory and Contract cell will be the custodian of original contract) and an authenticated copy thereof to be given to the contractor.</p>

1.10	The contractor shall be presumed to have satisfied himself about the quantum & nature of work and all associated working environment. He shall also be presumed to have satisfied himself the correctness and sufficiency of the tender for the work as quoted by him in the tender schedule and it will be justified to assume by employer that rates and prices quoted shall cover all his obligations under the contract and all matters and things necessary for the proper completion and maintenance of the work.
1.11	It is understood and agreed that no extra payments shall be admissible to the contractor, consequent on any alleged misunderstanding or miscalculation or arising of any other mistake or factor not specifically provided in the contract.
1.12	All contract documents are complementary to one another and what is required by one shall be as fully and effectually binding on a contractor as if the same is required by another documents; the intention of the documents is to include all - labour, material, equipment and transport and any other measure necessary for prompt and efficient execution of the work to be arranged by the contractor.
1.13	<p>The contractor shall not at any time assign or sublet his contract or any part thereof to any person or allow such person to become in any way interested therein in any manner whatsoever, without prior permission in writing of the employer. Any contravention of this condition shall entitle the employer to rescind the contract and shall also render such contractor liable for payment to the employer in respect of any loss or damage arising out of or ensuing from such rescission or contract.</p> <p>Provided further that where the subletting of work by the contractor in any case, is permitted by the employer, such subletting shall never be deemed to establish any contractual relationship between the subcontractor and the employer, and that the contractor shall not at any time, be absolved of any obligation or responsibility under the contract or any part thereof and shall continue to be responsible for all acts of omission and commission of the subcontractor, his agents, servants or workmen as fully and effectually as if the same were acts of omission and commission of the contractor, his agents, servants or workmen, as the case may be.</p>
1.14	All the contracts or terms thereof entered into between the employer and the contractor under these General Conditions of Contract shall be governed and regulated by the relevant laws being in force from time to time in the territory of India related to contracts. The contract shall strictly conform to the provisions, of any law related to works or any regulations and bye-laws made by any local authority. In case the contractor foresee that variation in specification and drawings are necessary in view of the provisions of the law or regulations or bye-laws, he shall immediately inform the employer / appropriate authority in writing specifying proposed variations and the reasons for such variations. The contractor shall take further action as per written instruction of the employer (appropriate authority).
1.15	The contractor shall, when he is not personally present on the site of work, invariably place and keep on such site a properly qualified agent, duly authorized and empowered to act on his behalf and receive on his behalf orders and instructions from the employer or his representative related to such work. The contractor shall furnish the name, designation of the agent. Any change in the agent to be suitably informed to the employer in written.



1.16	All notices, communications, references and complaints issued by employer or his representative or contractors shall be treated valid, if it is in writing.
1.17	<p>The work as per defined specification and quality standard shall be completed within the time specified in the order or with in extended time subsequently communicated to the contractor in writing.</p> <p>a) If there be any amount of extra additional work of any kind or other special circumstances of any kind whatsoever which may occur be such as fairly entitle the contractor to an extension of time for completion of work, the contractor shall make a request letter to the employer detailing the situation within 15 days of such work has been commenced or such circumstances have arisen. The employer / his representative will analyze and decide the amount of such extension and issue extension of time in writing.</p> <p>b) If the contractor fails to complete the work within the time prescribed or within extended time, the contractor shall be liable to pay the employer a Liquidated Damage (LD) at the rate of 0.5 % of the value of unfinished part of the work per delayed week maximum up to 10 % of the total project value. Or depending on the work it can be specifically defined in the work order / acceptance of the tender. The employer may without prejudice to any other mode of recovery deduct the amount of such damages from any money in his hand due or which may become due to the contractor. The payment or deduction of such damages shall not relieve the contractor of his obligation to complete the works or of any other obligations and liabilities under the contract.</p> <p>c) If the employer feels that the contractor in spite of imposition of LD may further delay the completion of work, the employer shall have the right to terminate the contract and forfeit the security deposit to the extent of 10% of the assignment value towards LD.</p>
1.18	No land / building belonging to or in possession of the employer shall be occupied by the contractor without permission of the employer. The contractor shall not use or permit use of the site for any purposes other than that for executing assigned work. Land / building rent, unless otherwise stipulated, shall be payable by the contractor.
1.19	In consequence to any difficulty in obtaining materials, the employer may, without any liability therefore, agree to endeavour to obtain or assist the contractor in obtaining the required quantities of such material. But if there be any delay or failure in obtaining the aforesaid materials of required quantities thereof, this will not relive the contractor from his obligation to complete the assigned work as per the quality, quantity and time schedule
1.20	If, at any time, any material, which the contractor would normally have to arrange himself, is supplied by the employer, either at the contractor's request or in view of avoiding possible delay, the recovery of cost of such material shall be made from contractor's bill at actual rate or at market price (calculated on landed basis, whichever is higher) along with interest rate of 10% per annum.
1.21	All the assistance extended to the contractor in the form of land, building, machinery, equipment, water, power etc. to be utilized economically and in proper manner. After completion of the work these shall be handed over by the contractor in good / working condition to the respective authorities.

1.22	The contractor shall not sell, or otherwise dispose off, or remove except for the purpose of work any material which may be obtained as a result of excavation. All such items shall be the property of the employer.
1.23	The contractor shall indemnify and keep indemnified the employer for all losses and claims for injures or damages to any person or property whatsoever which may arise out of or in consequence of the construction and maintenance of the works and against all claims demands proceeding damages costs charges and expenses whatsoever in respect thereof or relation thereto.
1.24	If any bribe, commission, gift or reward is given, promised or offered or attempted to be given by or on behalf of the contractor or his partner, agent or servant or by any other person on his behalf to any officer or employee of the employer or to any other person on his behalf for obtaining the contract or any other contract from the employer or for any other favour, without prejudice to any legal proceedings which may be instituted against the contractor in a court of law, it shall be open to the employer to rescind the contract and all other contracts which the contractor has entered into with the employer and to deduct any money due to the contractor under the contract or any other contract with the employer any loss or damage to the employer resulting from such rescission.
1.25	The contractor shall not lend, or borrow from, or have any pecuniary dealings or transactions either directly or indirectly with any employee of the employer, and if the employer has reasons to believe that the contractor has contravened the provision of this sub-clause the employer shall be entitled forthwith to rescind the contract and all other contracts with employer.
<b>2.</b>	<b>Execution of Works</b>
2.1	The contractor shall commence the work as per the start date given in the Work Order / Tender acceptance letter. If no such date is mentioned, it shall be assumed that the contractor to start the work within 15 days from receipt of such Work Order issued to him and in any case should not be delayed by more than 20 days from issue of such Work Order. Any delay beyond this will be treated as the contractor is not willing to execute the work and necessary measures will be taken by authority.
2.2	The contractor shall not engage another contractor or agency to execute full or part of the work without getting written approval of the employer. In case any such approval given by the employee the responsibility and obligation of execution will rest only with the contractor on whom the employer (HEC) has placed order.
2.3	The contractor shall take all work-related directions from the nodal executive of the executing department in performing the assigned work but contractor shall continue to be responsible and shall not in any way be absolved of his obligation or responsibility for the due performance of the whole of the work in all respects and due skill and efficiency. The contractor or his representative should have the obligation to respond and present before the nodal officer whenever he instructs to do so. <ul style="list-style-type: none"> <li>a) No alteration / addition / omission of any part of work shall be deemed unless written instruction of the nodal executive of the executing department is received.</li> <li>b) In case the additional work instructed has financial implication, the contractor should give in writing about the rate and quantum of additional financial impact promptly.</li> </ul>

2.4	Any representative of the nodal executive of the executing department will have the right to watch, supervise the work and to test and examine any material being used for the work or final product to ascertain workmanship.
2.5	The whole of the work shall be executed in perfect conformity with the specifications and drawings of the work. If the contractor performs the work in a manner contrary to the specifications or drawings or any of them, he shall bear all the costs arising or ensuring rectification or loss caused to the employer and the amount will be liable to be recovered from him.
2.6	All drawings, specifications, process / technology, technical directions and copies thereof furnished from time to time by employer to the contractor shall be deemed and always be deemed to be the properties of the employer, and they shall not be used at any other work or purpose. All such documents to be returned to the employer on completion or termination of work.
2.7	The concerned executive of executing department shall have full power to make and issue from time to time, such further drawings and give all such further instructions and directions as may appear to him to be necessary or desirable for the guidance of the contractor and for proper execution of work. Contractor shall obey accordingly and shall not be entitled to any extra payments outside the contracted value unless the concerned nodal officer issues an order in writing authorizing such extra payment.
2.8	If any dispute or doubt arises as to the meaning or intent of any portion of the specification and drawing or as to the execution of the work or the quality of any material or as measurement of the works with the decision / perception of the nodal officer of the executing department, the contractor should give in writing in support of his argument / point of view (preferably within fifteen days of the date of receipt of such decision by the contractor) and request to resolve the issue within ten days. If the contractor is not satisfied with the response / non response of nodal officer of the executing department, the contractor may approach Incharge Operation of the plant (or Incharge Project / Marketing / Township etc. as the case may be) with the aim of resolving the dispute.
2.9	If neither the drawing nor the specifications contain any mention of description of minor details of work (construction, fabrication etc.) which to the opinion of the concerned engineer are obvious and fairly intended for the satisfactory completion of the work, such minor details shall be worked out (documents, drawings etc.) by contractor at his own cost. The engineer's decision in such case shall be final and conclusive.
2.10	<ul style="list-style-type: none"> <li>a) All drawings, diagram, sketch which the contractor may require, under the condition of contract, to prepare and furnish shall duly furnished in triplicate to the employer at any time before commencement of the job or during the progress thereof for approval.</li> <li>b) Before undertaking any fabrication / work either in his workshop or site, the contractor is required to prepare detail drawing of the components and get them duly approved.</li> <li>c) The contractor shall also furnish drawings of all temporary buildings, set-ups for approval which he proposes to erect for the purpose of the work.</li> <li>d) All statutory statements, returns etc. which the contractor required to submit, should submit to the nodal officer of the executing department.</li> <li>e) All costs of expenditure which may be involved in the above a) to d) to be borne by the contractor.</li> </ul>

2.11	It shall be the contractor's responsibility to submit for approval and propose alteration of drawings which in his opinion are necessary for due execution of work in accordance with the contract and every such alteration of the drawings so submitted shall be fully detailed as the original drawings. Implementation of such alterations shall be done only after approval by competent authority.
2.12	The contractor shall at all times be responsible for any alleged discrepancies, errors or omissions in the drawings or other particulars supplied by him irrespective of the fact the drawings have been approved by competent authority and the contractor shall be liable to pay for any rectification.
2.13	The contractor shall at his own expense provide himself with sheds stores house and yards as required for the efficiently carrying out the work. The employer's representative shall have free access to the said sheds, storehouses and yards at all reasonable time for the purpose of inspecting the stock of materials and plant & equipment stored therein. Adequate measures for safety, security and preventive measures against fire & other accidents for such set-ups will be the sole responsibility of the contractor.
2.14	<p>a) The contractor shall keep adequate numbers of efficient and competent staffs to give necessary directions to the workmen in execution of the work. The contractor shall employ only such supervisors, workmen and labours in or about the execution of the work who are careful and skilled in their relevant trades.</p> <p>b) The contractor shall forthwith remove from work any agent, permitted subcontractor, supervisor and workman objected to by the nodal officer of the executing department.</p> <p>c) On demand the contractor shall submit a correct return showing the names of all staff and workmen employed by him.</p> <p>d) In the event that the nodal officer of the executing department or the concerned executing officer is of the opinion that the contractor is not employing on such number of staff and workmen as reasonably necessary for the proper execution / timely completion of the work, he shall forthwith communicate his opinion in writing to the contractor and the contractor shall within seven days of the receipt of the said communication be bound to employ such additional staff and labour as may be required by the concerned officer. Any failure on the part of contractor to comply shall entitle the employer to rescind the contract.</p>
2.15	The concerned officer / engineer shall have access to the work place / site at all time and the contractor shall provide all necessary assistance to facilitate inspection.
2.16	The contractor shall give at least seven days notice in writing to the nodal officer / concerned engineer whenever any work or materials intended to be covered up in earth, in bodies or walls or otherwise to be placed beyond the reach of measurement so that the work may be inspected or the correct dimension thereof may be taken before the work is so covered or placed beyond reach of measurement. Wherever the contractor fails to do so, the same shall, at the opinion of the concerned engineer / officer, be uncovered and measured at the expense of the contractor, or in the alternative, no payment shall be made for such work or materials.

2.17	<p>a) The contractor shall arrange testing and analysis of materials required by specification from authorized agency as required by concerned engineer. Depending on situation, the concerned engineer may authorize any person in writing to supervise the work and test the whole or each part of the work or material and directly get the report.</p> <p>b) The contractor shall forthwith prepare and / or submit samples of work and materials as and when required by the engineer to do so. Such samples will be non-returnable type and may be used for various purposes including approval.</p> <p>c) All materials of the work must comply with the requirements or specification and must satisfy the tests and / or analysis standard laid down in the specifications of the Indian Standards Institution or such other recognized standards as may be decided by the concerned engineer.</p>
2.18	<p>a) If it shall appear to the employer, at any time during the progress of the work or at any time prior to the expiration of the period of warrantee, of such work, that any work, has been executed with unsound, imperfect or unskillful workmanship or materials of inferior specification, or that any materials or articles provided by the contractor for the execution of the work are unsound or of inferior quality to the contracted for or otherwise not in accordance with the contract, the contractor shall, on demand in writing from the concerned engineer / officer specifying the work, materials or articles complained of, and within the period of time mentioned in the demand, pull down, take out work so compliance of or objected to, or remove from the site or separate from other materials or sort out the material or articles. If the value of any such work or materials or articles or any part thereof has been included in any “on account” payment to the contractor, the same shall be taken into account and deducted from any subsequent payment due to the contractor will be made.</p> <p>b) However, if the contractor is dissatisfied with such decision, may make an appeal to the Incharge- Operation / marketing / project as the case may be, who shall duly consider the same and pass such order as he may think fit, and any order passed upon such appeal shall be final and binding on the contractor.</p> <p>c) The contractor shall forthwith rectify or remove and reconstruct the work so specified either in whole or in parts, as the case may require, or as the case may be, and provide proper and suitable materials or articles for the material or articles complained of or objected to. If the contractor fails to remedy any defect within the specified period in a manner required, the concerned engineer may engage some other agency at his discretion for proper rectification and / or replacement of components, materials with proper ones at the cost and risk of the contractor. However, a written notice will be served to the contractor before proceeding with such step.</p>
2.19	<p>a) All temporary works necessary for the proper execution of the work shall be provided and maintained by the contractor, and shall, with the consent of the concerned engineer / officer, at any time when such temporary works are no longer required, be removed by the contractor at his expenses and in such manner as the engineer may direct. Failure to do so on the part of contractor, the work will be done by engaging some other agency and all the incidental cost will be recovered from the contractor.</p>

	<p>b) The temporary office, accommodation rooms of the labour which are no longer required on completion of the assigned work shall be handed over along with land to the employer in vacant possession. If the contractor's labour refuse to vacate, and the said offices / accommodation / premises has to be evacuated by the employer, all expenses incurred in the process will be recoverable from the contractor.</p>
2.20	<p>All the materials and plants brought by the contractor in or upon (unless otherwise declared in writing while bringing, as in the case of working gadgets, tools, equipments etc. which will not form part of the work) the site or on the land occupied by the contractor in connection with work and intended to be used for the execution thereof shall, as soon as they are brought in or upon the site or the said land, be deemed to be the property of the employer. Any rejected, unusable material should be immediately removed from the site as soon as they are declared so.</p>
2.21	<p>a) The contractor shall take all reasonable care of all tools, plants and materials or other property, weather of like description or not, belonging to the employer and issued to the contractor for the purpose of the work, and the contractor shall be liable for any damage or loss caused to the same by him, his agents or his workmen or others, whilst the same were in his charge. The contractor shall sign valid receipt for all tools, plants, and materials issued to him by the engineer from time to time, and, on completion of the work, shall be bound to return, subject to normal wear and tear, the unused balance of the same to the nodal officer in good order / working condition.</p> <p>b) In case of loss or damage, the cost / repair cost will be recoverable from the contractor.</p> <p>c) Issue of plants and equipments like compressors, mixtures, portable engines etc. will be covered under Special Terms of Contract.</p>
2.22	<p>a) The contractor shall take all necessary measures to ensure a safe working environment like stability of structure, excavations, fabrications, material handling etc. and further ensure that no physical injury of harm is caused or likely to be caused to any person or no damage or loss is caused or likely to be caused to any property.</p> <p>b) Existing roads or water pipelines shall not be blocked, cut through, damaged by the activities of contractor.</p> <p>c) The contractor shall be responsible for taking all precaution to ensure the safety of public and properties belonging to employer and others.</p>
2.23	<p>The contractor shall, at his own expenses and to the satisfaction of engineer / officer concerned reinstate and make good or liable for any compensation for any injury loss or damage occasional to any property or right, whatever, including the property and rights of the employer or agents, servants or employees of the employer, being injury, loss or damage arising out of or in any way connected with, the execution or purported execution of the contract and further, the contractor shall indemnify the employer against any agent, servant or employee of the employer or which would be so enforceable against the employer, where the employer a private person, in respect to any such injury (including injury resulting in death, disability (permanent or otherwise)), loss or damage to any person or property, including all claims which may arise under the Workmen's Compensation Act or under any other law for the time being in force or otherwise.</p>



2.24	Explosives shall not be used on the work or on the site by the contractor without the written permission of the engineer concerned and then only in manner and to the extent permitted by the engineer. The contractor should have proper and valid license from appropriate authority and should create all necessary infrastructure for use, handling and storing of explosives and deploy necessary skilled manpower as per prevailing regulation.
2.25	<p>The contractor shall, on an order issued by the engineer / officer concerned and duly communicated to him, suspend the progress of the work or any part thereof for such time or times and in such manner as the engineer may consider necessary, and shall during the period of such suspension, protect and render security to the work, to the extent necessary in the opinion of the engineer, if such suspension is :</p> <ul style="list-style-type: none"> <li>a) Provided for the contract, or</li> <li>b) Necessary for the proper execution of the work for reason of weather conditions or by some default on the part of the contractor, or</li> <li>c) Necessary for the safety of the work or any part thereof.</li> </ul> <p>The contractor shall not be entitled to any extra payments, but if the suspension ordered by the engineer is other than those mentioned above and if such period of suspension exceeds 14 days, the contractor shall entitled to such extension of time of completion of the work as engineer may consider proper and payment of such compensation as the engineer / officer may consider reasonable in respect of salaries / wage paid by the contractor to his employees during the period of suspension.</p>
2.26	The contractor will have to make provision for safety of the public, employees during execution of work, all sanitary and medical arrangements for labour, employee engaged by him and persons deputed by the employer for inspection, supervision etc..
2.27	Demurrage charges calculated in accordance with the scale in force for the time being on the Railways or other transport devices and incurred due to delay in unloading / detention of transport device by the contractor which he is supposed to do shall be recoverable from the contractor.
2.28	<p>The engineer / officer concerned may order the contractor to do any item of work whether or not the same is included in the accepted schedule of rates and the contractor shall be bound to comply with such order of engineer whether given in writing or orally. In case of the orders given orally by the engineer, the contractor shall comply with such order and confirm in writing of such order given by the engineer whether before or after the carrying out of the order shall be deemed to be an order in writing, provided further that the concerned engineer / officer do not contradict in writing about such order.</p> <p>All such work shall be valued at the rates set out in the accepted schedule of rate or derived rates (based on cost of material &amp; labour actually utilized plus 7.5% as supervision &amp; other charges) and with the agreement of the same by the engineer shall be acceptable.</p>

2.29	<p>a) The contractor shall be bound to handover all works executed under the contractor to the employer, complete in all respect and to the satisfaction of the engineer.</p> <p>b) The concerned engineer / officer shall determine the date on which the work shall be regarded completed as contemplated in (a) above and in support of his determination, grant a certificate to the contractor on an application being so made to him, that the work was duly executed, complete in all respects on a specific date. The concerned engineer may also comment on the actual dates of completion of different activities against planned / schedule dates of completion as decided / planned and if the corporation suffered any financial loss due to non-adherence of schedule or due to any other reason.</p> <p>c) On the completion of the work, the contractor shall clear away and remove from the site all temporary constructions, surplus materials, rubbish debris and all temporary works of every kind and leave the whole of the site and work in a neat and clear condition to the satisfaction of the engineer. Failure to do so on the part of the contractor, the cost of such cleaning by some other agency will be recoverable from the contractor.</p>
<b>3. Variations in contract</b>	
3.1	<p>In the event of any of the contract requiring modifications after the contract documents have been signed, such modification shall be made in writing and shall be signed by the in charge Contract cell (or equivalent) and the same shall be binding on the part of the contractor.</p>
3.2	<p>a) The engineer shall make any variation of the form, quality or quantity of the works or any part thereof that may in his opinion be necessary and, for that purpose or if for any other reason, it shall in his opinion be desirable, shall have power to order the contractor to do and the contractor shall do any of the following.</p> <ul style="list-style-type: none"> <li>i) Increase or decrease the quantity or any work included in the contract.</li> <li>ii) Omit any such work.</li> <li>iii) Change the character or quality or kind of any such work.</li> <li>iv) Change the levels, lines, position and dimensions of any part of the works, and</li> <li>v) Execute additional work of any kind necessary for completion of works and no such variation shall in any way vitiate or invalidate the contract, but the value (if any) of all such variations shall be taken into account in ascertaining the amount of contract price.</li> </ul> <p>b) No such variation shall be made by the contractor without an order in writing by the engineer concerned or appropriate authority.</p>
<b>4. Measurement Certificate and Payment</b>	
4.1	<p>The quantities set out in the accepted schedule of rates against items of works quantified are the quantities estimated to be required for such work and they may vary in actual.</p>



4.2	<p>The contractor shall be paid for the work at the rate specified in the accepted schedule of rate (HEC Schedule / CPWD schedule / schedule notified by State Govt.) and for any extra work at the rates determined under clause 2.28 of these conditions on the basis of actual measurements of such work taken by the engineer's representative / declared by the contractor in accordance with the rules prescribed for the purpose by the employer. The item wise amount so calculated (based on quantities for items in actual and rates in the accepted schedule of rates) be rounded to nearest whole number.</p> <p>Unless specified otherwise, the engineer at the end of a month, shall record in the Measurement Book, the quantity of work completed during the month and cumulative up to the month in physically measurable terms (after completion of joint inspection if any) and submit the same to the concerned officer / engineer.</p>
4.3	<p>a) The contractor shall be entitled to be paid, from time to time, by way of "On account" payments for such works as he has, in the opinion of the engineer, executed in terms of the contract. All such payments to the contractor shall be due on the certificate of measurements having been granted or issued by engineer / officer concerned.</p> <p>b) On account payments made to the contractor shall be without prejudice to the final making up of the accounts (except where measurements are specifically noted in the Measurement Book as "Final Measurements") and shall in no respect be considered or used as evidence of any fact stated in or to be inferred from such accounts nor of any particular quantity of work having been executed nor of the manner of its execution being satisfactory.</p> <p>c) Unless otherwise specified, payments to the contractors will be made by cheques, but no cheque will be issued for an amount less than one hundred rupees.</p>
4.4	<p>The contractor shall all time during the progress and continuance of the work and during the period of performance warranty / maintenance, as specified in the tender acceptance or subsequent communication / order, shall be responsible for maintenance and uphold in good condition all and every part of the work.</p>
4.5	<p>a) On the issue of certificate of completion by the concerned engineer / officer in respect of the work, an adjustment of accounts shall be made and the balance of the accounts, based on engineer / officer's certified measurements of the total quantity of work executed by the contractor up to the date of completion and on the accepted schedule of rates, and for any extra works, on rates determined under clause 2.28, shall be paid to the contractor, subject always to any deductions as the employer's representative raise and submission of "No claim" certificate by the contractor.</p> <p>The total security deposit shall become due and shall be paid to the contractor after the issue of certificate of completion by the concerned engineer / officer. If the scope of work includes performance warranty / maintenance, the security deposit shall be converted into Performance Guarantee. If the contractor submits Bank Guarantee of equal amount to cover the performance warranty / maintenance period, he may be paid the security deposit.</p>

4.6	Unless otherwise agreed upon between the parties, payment for deliverables and services will be made on submission of bills in the prescribed form which may be obtained from the purchase Officer in accordance with the instructions given in the Acceptance of Tender, by <b>E-payment or cheque or demand draft</b> .
<b>5</b>	<b>Employer's lien over all money due to the contractor</b>
5.1	The employer shall have a lien over all moneys that may become due and payable to the contractor or also on or over the deposit or security amounts made under the contract and becoming repayable to the contractor under the conditions of the said contract or in respect of debt or sum of money that may become due and payable to the employer by the contractor either alone or jointly with another or others and under the subjected contract or other or transaction of any nature, whatsoever, between the employer and the contractor, and further and unless the contractor pays and clears the claims of the employer immediately on demand, the employer shall at all times be entitled to deduct the said debt or sum due by the contractor from the moneys, securities or deposits which have become payable to the contractor.
<b>6</b>	<b>Regulation of labour employed by contractor</b>
6.1	The contractor shall comply with the provision of the Minimum Wage Act 1948, and all the rules made there under, in respect of any employees or workmen employed or engaged by him for the purpose of carrying out contract. The directive, rules and regulations of the state government in respect to minimum wage shall be accepted by HEC management with upward or without modification. The contractor intending to deploy labourer and workmen should be a labour licence holder from the Govt. of Jharkhand (or respective state government where the work is being carried out).
6.2	The contractor shall comply with the provisions of payments of wages Act. 1936, and the rules made there under, in respect of all employees or workmen employed or engaged by him in the work for the purposes of carrying out the contract.
6.3	The contractor shall be responsible for the safety of all employees or workmen employed by him on and in connection with the work and shall forthwith report to the concerned engineer / officer / employer's representative in all cases of accidents, howsoever caused, and make adequate arrangements for rendering all possible aids to the victims of the accidents.
6.4	In every case in which by virtue of the provisions of sub-section (1) of section 12 of the Workmen's Compensation Act. 1932, the employer is obliged to pay any compensation to the workmen employed by the contractor in execution of the work, the employer (HEC) shall recover from the contractor the amount of compensation so paid and, without prejudice to the rights of the employer under sub-section (2) of section 12 of the said Act. The employer shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due from the employer to the contractor. The employer shall not be bound to contest any claim made against under sub-section (1) of section 12 of the same Act except on the written request of the contractor and upon his giving to the employer full security for all costs for which the employer may become liable in consequence of contesting such claim.

6.5	No quarter / accommodation shall normally be provided by the employer for the accommodation of the contractor or any of his staff employed on the work. In exceptional cases, if any accommodation is provided, the same will be on chargeable basis and the charges shall be decided by the employer wherein clarification for different elements like electricity, water charges etc. will be made. The charges / rents shall be recoverable from the payments to contractor.
6.6	<ul style="list-style-type: none"> <li>a) The contractor shall at his own expense make adequate arrangements for housing, supply of drinking water and for temporary crèche where 50 or more women are employed at a time.</li> <li>b) The contractor shall conform to all laws, rules and regulations for the time being in force pertaining to the employment for local or imported about and shall take all necessary precautions to ensure and preserve the health and safety of all staff and workmen employed on the work.</li> <li>c) The contractor shall be bound to comply with strictly all sanitary rules and regulations and to carry out all sanitary measures which may from time to time be determined by the Government, local authority, health authority or medical authority of the employer.</li> <li>d) Contractor shall not employ children below the age of 12 years as labourers for and in connection with the execution of the work.</li> </ul>
7	<b>Determination and Termination of Contract</b>
7.1	<ul style="list-style-type: none"> <li>a) The employer shall, at any time be entitled to determine and terminate the contract, should the employer's opinion, the cessation of work becomes necessary owing to paucity of funds or for any other cause whatsoever, in which case the cost of approved materials at the site and of the value of the work done in writing form employer to contractor of such determination and termination and the reason therefore shall be conclusive proof of the fact that the contract so determined and terminated by the employer.</li> <li>b) Should the contract be determined and terminated under sub-clause ( a ) above and the contractor claim payments to compensate expenditure incurred by him in the expectation of completion of the whole work, the employer shall consider and admit such claims as are deemed fair and reasonable and are supported by vouchers to the satisfaction of the engineer. The employer's decision in this regard shall be final and conclusive and binding on the contractor.</li> </ul>
7.2	<p>If the contractor shall at any time</p> <ul style="list-style-type: none"> <li>a) Become bankrupt or insolvent, or</li> <li>b) Make arrangement with, or pass the assignment in favour of, his creditors, or agree to carry out the contract under the direction of his creditors, or</li> </ul>

- c) Being a company or corporation, go into liquidation (other than a voluntary liquidation for the purpose of amalgamation), or
- d) Have an execution levied on his goods or property on the work, or
- e) Assign the contract or any part thereof, otherwise than as provided in clause : 1.13, or
- f) Abandon the contract, or
- g) Persistently discharge the instructions of the employer or contrivance and provision of contract, or
- h) Fail to adhere to the agreed programme of the work by a margin 10% or more of stipulated period, or
- i) Fail to remove material from the site or to pull down and replace any work after receiving from the engineer a notice to the effect the said materials or work have been condemned or rejected under clause 2.14, or
- j) Fail to take steps to employ competent or additional staff and labour as required and instructed by the concerned engineer in writing, or
- k) Fail to provide the engineer or engineer's representative proper facilities for inspection of the work of any part thereof as required under clause 2.24, or
- l) Promise, offer or give any bribe or commission gift or advantage either himself or through his partner, agent or servant to any officer or employee of the employer or to any persons on his behalf as provided in clause 1.25,

then, and in any of the said cases, the concerned engineer / officer may on the behalf of employer serve the contractor with a notice to effect, and if the contractor does not within seven days after delivery to him of such notice proceed to good his default / rectify accordingly, the employer shall be entitled after giving the contractor forty eight hours notice in writing to remove the contractor from the whole or any portion or portions (as may be specified in such notice) and adopt any or several of the following clauses:

- i) Rescind the contract (of which a rescission notice in writing to the contractor from the concerned engineer / incharge contract cell shall be conclusive evidence), in which case the security deposit of the contractor shall be forfeited to the employer, without prejudice to employer's right to recover from the contractor any amount by which the cost of compensating the work by any other agency shall exceed the value of the contract.
- ii) Carry out the work, or any part thereof, by the employment of the required labour and materials, the cost of which shall include freight, supervision and all incidental charges and to debit the contractor with such costs, the amount of which is certified by the engineer, shall be final and binding upon the contractor.

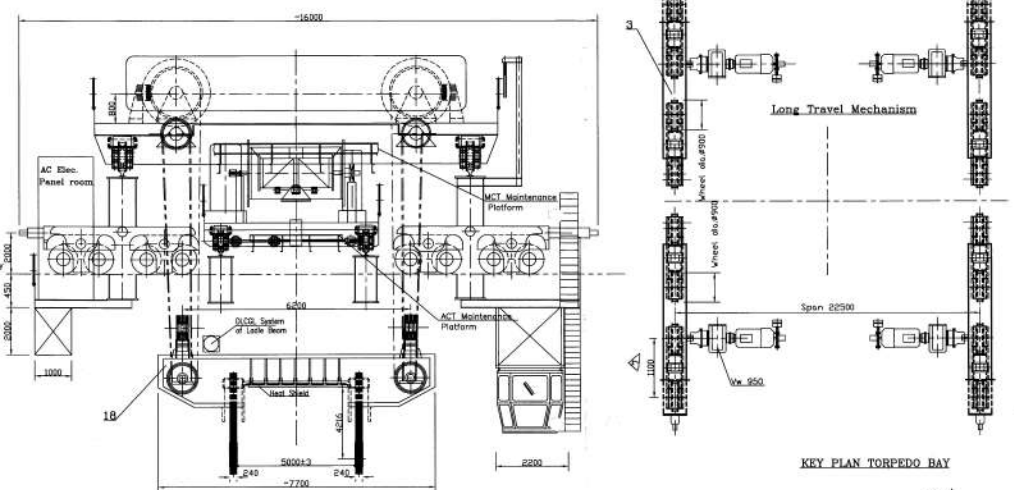
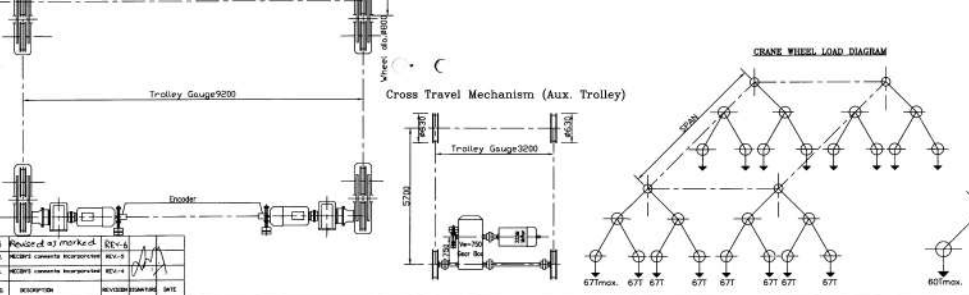
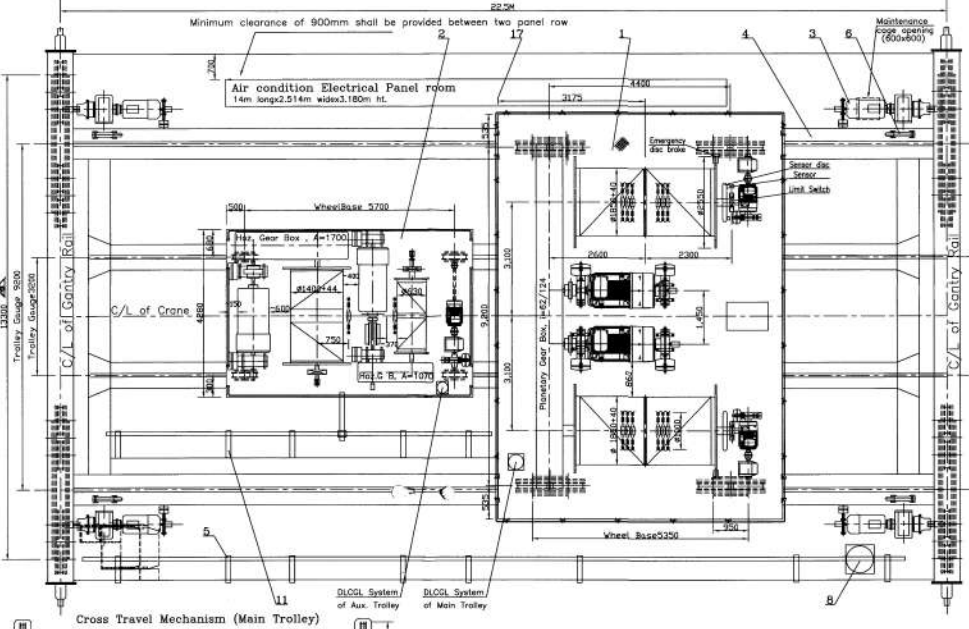
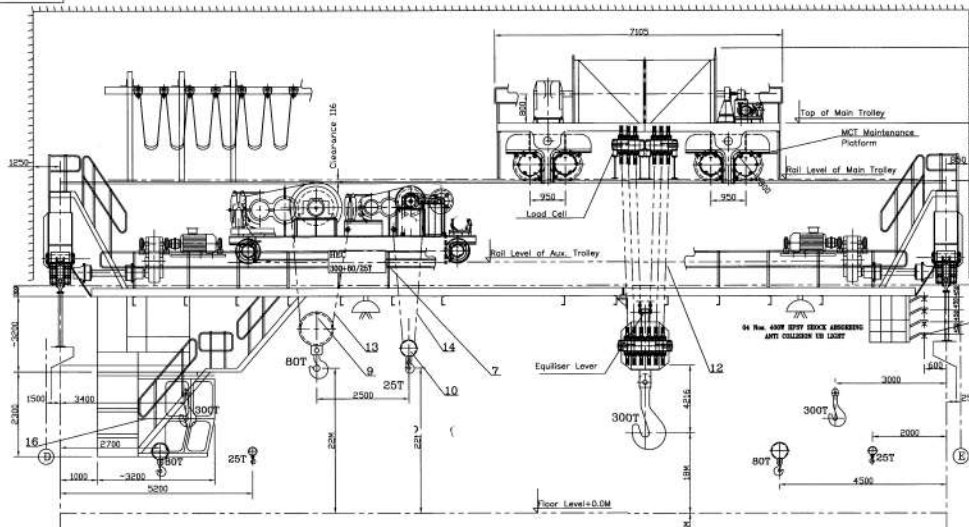
	<p>iii) Measure up the work executed by the contractor and to get the remaining work, completed by another contractor at the risk and expenses of the contractor in all respect in which case any expense that may be incurred in excess of the sum which would have paid to the contractor if the work had been carried out by him under the terms of contract, the amount of which in excess as certified by the engineer shall be final and binding upon contractor and shall be borne and paid by the contractor and may be deducted from any moneys due to him from the employer under the contractor or otherwise or from his security deposit.</p> <p>Provided that in any case in which any of the powers conferred upon the employer by sub- clause (a) to (l) above, shall become exercisable and the same shall not be exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions thereof and such powers shall notwithstanding, be exercisable in the event of any future case of default by the contractor for which his liability for past and future shall remain unaffected.</p>
7.3	<p>In the event of any or several of the courses referred to in clause 7.2 above being adopted:</p> <p>a) The contractor shall have claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials, or entered into any commitments, or made any advance on account of, or with a view to, the execution of the work or performance of the contract, but the contractor shall not be entitled to recover or paid any sum for any work actually performed under the contract, unless and until the engineer shall have certified the performance of such work and the value payable in respect thereof, and the contractor shall be entitled to be paid the value so certified. The contractor shall have no claim to any payment, or compensation or otherwise howsoever, on account of any profit or advantage which he might have derived from the execution of the work in full, but which he did not derive consequence of the determination of the contract.</p> <p>b) The engineer / officer shall be entitled to take possession of any materials, tools, machinery, building on the work or the property on which these are being or ought to have been executed, and to retain and employ the same in the future execution of the work or any part thereof until the compensation of the work without the contractor being entitled to any compensation for the use and employment thereof, or for wear and tear or destruction thereof.</p> <p>c) The engineer shall, as soon as may be practicable after termination / removal of the contract, fix and determine ex-parte, or by or after reference to the contractor, or after such investigation or enquiries as he may consider fit to make or institute and shall certify, what amount (if any) had at the time of rescission of the contract been reasonable earned by or would reasonably accrue to, the contractor in respect of the work then actually done by him under the contract and what was the value of any unused or partially used materials any constructional plant and any temporary work upon the site.</p>

8. **Settlement of dispute by arbitration**

- 8.1
- a) All questions, disputes or differences of any kind, whatsoever arising out of, or in connection with, the contract, at any time, whether during the progress of the work or after its completion, or whether before or after the determination of the contract, other than questions, disputes or difference for the decision of which specific provisions have been made in the foregoing clauses (hereafter referred to as “excepted matters” and decisions on such “excepted matters” according to the said specific provisions shall be final and binding on the contractor and shall not be reopened or attempted to be reopened on the ground of informality, omission, delay or error in the proceeding in or about the same or on any other ground whatsoever) shall, be submitted in writing by the contractor to the employer, and the employer, shall, within a reasonable time ‘after the submission of the same, make and notify its decision thereon in writing.
  - b) If the contractor be dissatisfied with the decision of the employer on any matter in question, dispute or difference, on any ground, or as to the withholding by the employer of any certificate to which the contractor may claim to be entitled to, if the employer fails to make a decision within reasonable time, then and in any such case but not including any of the “excepted matters”, the contractor may, within ten days of the receipt of such decision or after this expiry of a reasonable period of time, the case may be demanded in writing that such matter in question, dispute or difference be referred to arbitration. Such demand for arbitration shall be delivered to the employer by the contractor and shall specify the matters which are in question, dispute or difference and only such question, dispute or difference of which the demand has been made no other shall be referred to arbitration.
  - c) The future progress of any work under the contract shall, unless otherwise directed by the engineer, continue during the arbitration proceedings, and payment due or payable by the employer shall be withheld on account of such proceedings, provided however that it shall also be open to the arbitrators to consider and decide whether or not such work shall continue during arbitration proceedings.
  - d) Matter in question, dispute or difference to be submitted to arbitration as aforesaid shall be referred for decision to two arbitrators, one to be nominated by the Chairman and the other to be nominated by the contractor. In the event of the two arbitrators being divided in their opinion, the matter under dispute shall be referred for decision to an umpire to be appointed by the two arbitrators not later than one month from the last date of their respective appointments and, in any case before they enter upon and proceed with the reference.
    - i) The arbitrator or the umpire shall have power to call for such evidence by way of affidavits or otherwise as the arbitrators or the umpire, as the case may be, shall think proper, and it shall be the duty of the parties or umpire to make the award without delay.
    - ii) Unless otherwise agreed upon by the parties, the venue of the arbitration proceedings under these conditions shall be at Ranchi in the state of Jharkhand.
    - iii) Subject as aforesaid, the provisions of the Arbitration Act 1940, or any statutory modifications or re-enactment thereof and of the rules made thereunder for the time being in force, shall apply to all arbitration proceedings under this clause.
- Provided, however, that the arbitrators or as the case may be, the umpire, may from time to time, with the consent of the parties, enlarge the time for making the award.





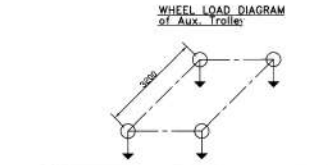
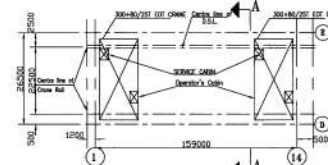


CRANE CHARACTERISTICS:-

Hoist Mechanism	Main Hoist			Aux. Hoist I	Aux. Hoist II	Travel Mechanism			
	300T	80T	25T			Main C.T	Aux.C.T	Long Travel	
Duty Class/S.4137-85	MB					CR120	CR100	CR120	
Speed M/min.	10.0/1.0	12/1.2	16/1.6	Speed M/min.		30	40	80	
Total Height of Lift (M)	18.0+6.0	22.0	22.0	Trolley Gauge mm		9200	3200		
Nos. of Rope Fall	14+14	4	4	Wheel Base mm		5350	5700	13300	
Specification As per IPSS-1.08.003.97	#40, 6x36 Con. Steel Core		#44, 6x36 Con. Steel Core	#25, 6x36 Con. Steel Core	Wheel dia(mm) of HEC make as per IPSS-08-001-83	#900	#630	#900	
Breaking Strength	177DN/mm <sup>2</sup>		HWRC		No. of Wheel (Material EN28)	8	4	16	
Make	Preferred Make					Rail Level		24670mm	
Starts / Hours	300			150			Starts / Hours		
Use of Hoist Drum	#1850	#1500	#530	Buffer-type-Hydraulic Make-Oleo	Hydraulic Make	Spring Loaded			
Use of Spindle	#1120/1000	#600	#430	Size of Spindle	250Mx2nos.	225Mx1nos.	315Lx4nos		
Size	450x2nos.	350x1nos.	310x1nos.	Capacity	37kw	30kw	132kw		
Capacity	54Skw	290kw	132kw	Capacity	3050	1000	1000		
W. of Rope	750	750	750	Make	Preferred Make				
Make	Preferred Make			W. of Rope					
Type/Qty/Centre Distance	Planetary Gear Box 4=1700		Horz. 1nos. 4=1070	Type/Qty/Centre Distance	Vertical, 2nos.	Vertical, 1nos.	Vertical, 4nos.		
Gear ratio/rating	i=62/124/54Skw	i=42.0/290kw	i=61/132kw	Gear ratio/rating	i = 84.0/37kw	i = 48.0/30kw	i=35.0/132kw		
Gear/Lubrication type	Helical Gears/Splish/motorised			Helical Gears/ Inbuilt Pump					
Type	DCM		DCM	Type	DCM	DCM	DCM		
Break dia. mm	#900	#500	#400	Break dia. mm	#250	#250	#400		
Qty.	4	2	2	Qty.	2	1	4		
Breaking Moment kgm	555.0		138.0	Breaking Moment kgm	27.0	27.0	138.0		
Make	Preferred Make			Make	Preferred Make				
Control	HEC GC No.-8	GC No.-7	GC No.-5	Input	HEC GC No.4	GC No.-3	GC No.-5		
Limit Switch	Rotary Limit Switch & Counter Wt. Limit Switch of Preferred make			Output	HEC H.G.C.No.9	H.G.C.No.-9	GC No.-11		
Hooks	For 300T-As per IPSS-1-08-009-93 No.-V. For 80T -As per IPSS-1-08-004-94 SI. No.-21 type B For 25T -As per IPSS-1-08-004-94 SI. No.-16 type A			Track Limit Switch of Preferred Make					
Type of Cabin	AC Cabin with Radio Remote Control			Wt. of Ladle Beam=	41T				
Power Supply	800V/10S, 3PAC 50 Hz 42K			Wt. of 80T B.B.=	3.391T				
Supply Voltage	240V, 16AC			Wt. of 25T B.B.=	0.820M				
Ambient temperature	50°C			Wt. of Main Trolley=	130T				
Attachment	Ladle beam 300T			Wt. of Aux. Trolley=	45T				
				Wt. of Crane =	520T				

Technical Instructions:-

- Strain gauge Load/Bay Beam type(Cap 50T x 04 No.) cell is to be provided under upper pulley block of 300 T Hoist.
- Final Wt. of each item to be furnished after detail design.
- The clearance for jacking pad shall be 500mm (approx.) from rail top.
- Stacked vertical type A/C of 2T shall be provided.
- Lubrication system details to be indicated after detail engineering.
- Main Trolley Dimension to be indicated after detail engineering.
- Length and diameter of Rope drums for hoists shall be as per drg.
- 300T Ladle beam, 80T and 25T hoists shall be as per relevant IPSS.
- Hydraulic disc Brakes are to be mounted on the Flange of 300T Rope drums.
- Anticollision device shall be provided on Crane.
- Wire rope shall be in two pieces for rope equalizer block.
- Makes of all bought out items shall be as per approved vendor's list/GTS/contract specification.



Sl. No.	Drawing No.	Description	Material	Qty	Remarks
18	3719.70.400	Ladle Beam- 300T		1	
17	--	General View of Electrical Equip.		1	
16	--	Installation of Cabin		1	
15	--	Installation of Oil Collector		1	
14	--	New rope 408 6x36 con. Stel	Steel	1	
13	--	New rope 300 6x36 con. Stel	Steel	1	
12	--	New rope 250 6x36 con. Stel	Steel	1	
11	--	Installation of Hoist Cable and hardware (A.1)		1	
10	3719.70.600	25T Bottom Shce		1	
9	3719.70.500	80T Bottom Shce		1	
8	--	Dual Line Anticollision Cassse Cab. Sign for 1T		1	
7	--	Installation of hoist pulley		1	
6	--	Installation of Limit Switches		1	
5	--	Installation of Hoist Cable and hardware (A.1)		1	
4	3719.73.000	Crane Brake		1	
3	3719.72.000	Long travel mechanism		1	
2	3719.74.000	GA of 80/25T today		1	
1	3719.71.000	GA of Main trolley 300T		1	

**APPROVED**

CATEGORY OF DRG: APPROVAL INFORMATION REFERENCE RECORD CONTRACT

**BHILAI STEEL PLANT, BHILAI, CHHATTISGARH 7.0 MTPA EXPANSION**

CONSULTANT: **MECON LIMITED**

CONTRACTOR: **HEAVY ENGINEERING CORPORATION LTD. RANCHI**

PACKAGE DESCRIPTION: **BOF & CCP OF SMS III(PACKAGE -029A)**

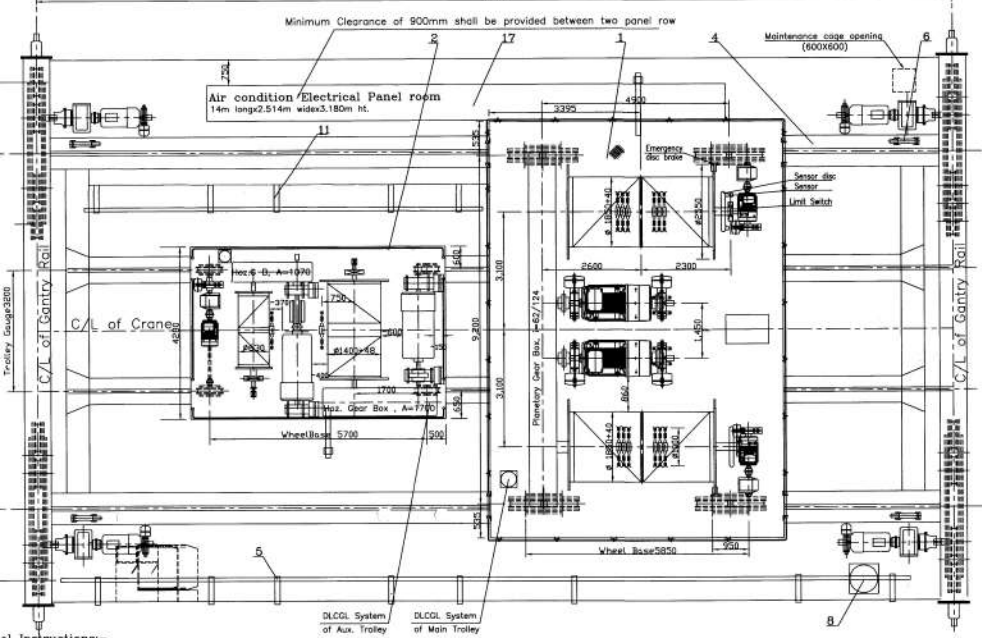
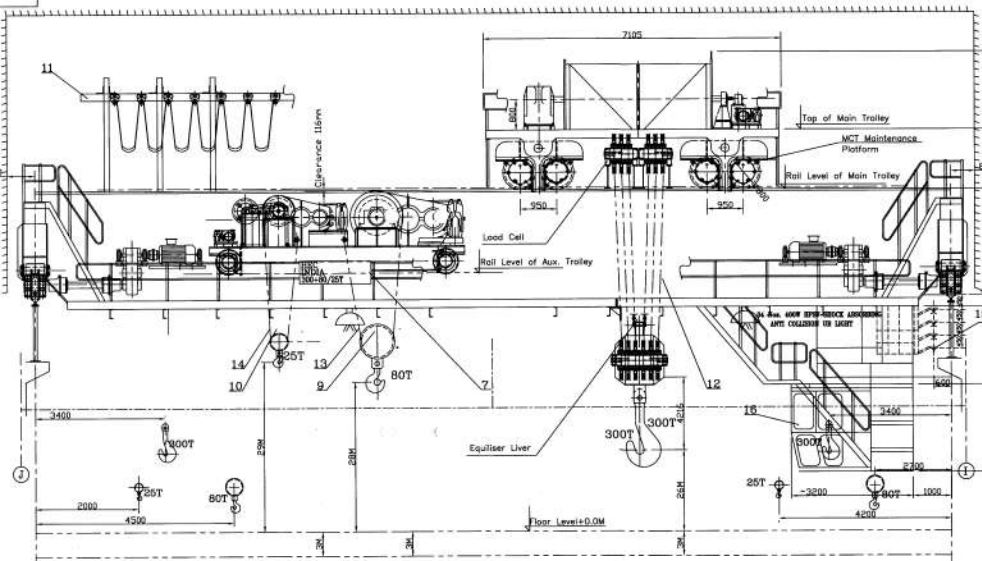
DESIGN: **Dr. V.K. Singh** TITLE: **G.A. of 300+80/25Tx2.5m FG Ladle Crane in Torpedo Bay**

CHKD: **Dr. V.K. Singh** REVISION: **REV 01** DATE: **12/01/2010**

APPROVED: **Dr. V.K. Singh** PROJECT DRAWING NO: **BSP-HEC-14-029A-14-000-55-BE-00002**

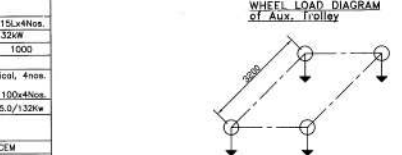
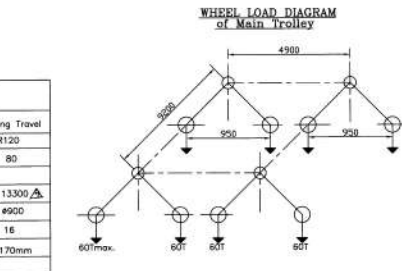
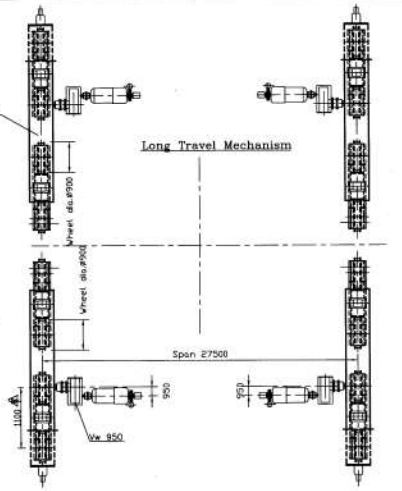
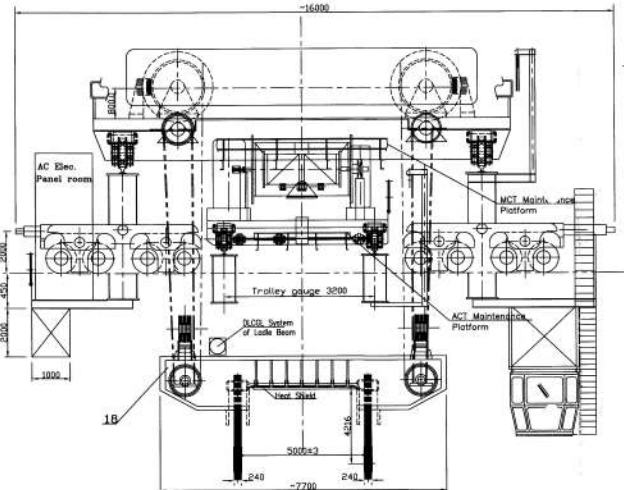
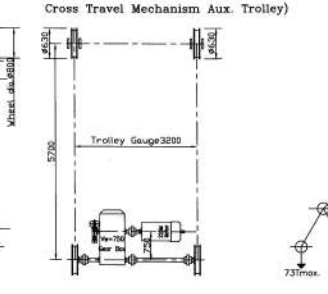
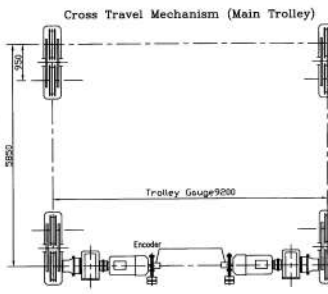
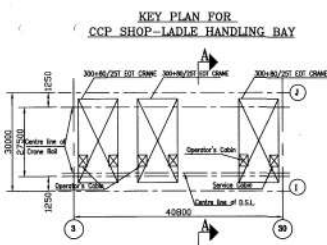
DATE: **12/01/2010**





**Instructions:-**  
 1. Gauge/boy beam type Load cell (cap. 50T x 4 nos.) is to be used under upper pulley block of 300 T Hoist.  
 2. Wt. of each item to be furnished after detail design.  
 3. Clearance for jacking post shall be 500mm (approx.) for roll top and vertical type A/C (Liners make) of 2T shall be provided. Installation system details to be indicated after detail engineering.  
 4. Trolley Dimension to be indicated after detail engineering.  
 5. Hoist and diameter of Rope drums for hoists shall be as per drg. Ladle beam, 80T and 25T hooks shall be as per relevant IPSS. Hydraulic disc Brakes are to be mounted on the Flange of OT Rope drums.  
 6. Safety devices shall be provided on Crane.  
 7. Rope shall be in two pieces for rope equaliser block.  
 8. All of all bought out items shall be as per approved vendor's TS/conytract specification.

Sl. No.	Material	Qty	Remarks
1	30000		
2	27000		
3	18000		
4	15000		
5	12000		
6	10000		
7	8000		
8	6000		
9	4000		
10	2000		



**CRANE CHARACTERISTICS:-**

Hoist Mechanism	Main Hoist	Aux. Hoist I	Aux. Hoist II	Travel Mechanism		
				Main C.T	Aux. C.T	Long Travel
Duty Class: J5:4137-85				CR120	CR100	CR120
Speed M/min.	10.0/1.0	12/1.2	16/1.6	30	40	80
Total Height of Lift (M)	26.0+3.0	26.0+3.0	29.0+3.0	9200	3200	
No. of Rope Fall	14+14	4	4	4850	5700	13300
Specification As per IPSS: 1.08.003.97	440.6x36Cons Steel Core	444.6x36Cons Steel Core	426.6x36Cons Steel Core	4800	4630	4900
Breaking Strength	1770N/mm <sup>2</sup>	MIRC		8	4	16
Make	Preferred Make					32170mm
Starts / Hours	300			Starts / Hours	150	
Dia of Hoist Drum	φ1850	φ1400	φ630	Buffer Type-Hydraulic Make-Oleo	Spring Loaded	
No. of Splice	φ1120/1000	φ900	φ550	Size/B3 Mounting	250Ma2nos.	225Ma1nos.
Capacity	450x2nos.	355x1nos.	315x1nos.	Capacity	37kw	30kw
Make	750	750	750	r.p.m.	1000	1000
Type/Qty/Centre Distance	Planetary Gear Box 1no. Am5000	Horz. 1nos. Am 1700	Horz. 1nos. Am 1070	Make	Preferred Make	
Gear ratio/rating	=82/124/545kw	=142.0/290kw	=48.1/132kw	Type/Qty/Centre Distance	Vertical, 2nos. Vw=950	Vertical, 1nos. Vw=750
Gear/Lubrication type	Helical Gears/Splash/motorised	Helical Gears/Splash	Helical Gears/Splash	Gear ratio/rating	l = 84.0/37kw	l = 48.0/30kw
Type	DCEM	DCEM	DCEM	Gear/Lubrication type	Helical Gears/ Inbuilt Pump	
Brake dia. mm	φ600	φ600	φ400	Type	DCEM	DCEM
Breaking Moment kgm	555.0	555.0	138.0	Brake dia. mm	φ250	φ400
Make	Preferred Make			Breaking Moment kgm	27.0	27.0
Input	HEC GC No.-8	GC No.-7	GC No.-5	Make	Preferred Make	
Output	m/m/m/dia./journe	ITX-42, 2nos.	ITX-10, 1no.	Counting		
Limit Switch	Rotary Limit Switch & Counter Wt. Limit Switch of Preferred make			Input	HEC GC No.4	GC No.-3
Hooks	For 300T -As per IPSS: 1-08-009-93 No.-VI, For 80T -As per IPSS: 1-08-004-94 SL No.-21 type B, For 25T -As per IPSS: 1-08-004-94 SL No.-16 type A			Output	HEC H.G.C.No.9	H.G.C.No.-9
Type of Cabin	AC Cabin with Radio Remote Control			Limit Switch	Track Limit Switch of Preferred Make	
Power Supply	800V±10%, 3 AC 50 Hz ±6%			Hooks	Wt. of Ladle Beam = 41T	
Supply Voltage	240V, 1φ AC			Input	Wt. of 80T B.B. = 3.391T	
Ambient temperature	60°C			Output	Wt. of 25T B.B. = 0.820T	
				Limit Switch	Wt. of Main Trolley = 140T	
					Wt. of Aux. Trolley = 45T	
					Wt. of Crane = 570T	

No.	Drawing No.	Description	Material	Qty	Remarks
18	3719.70.400	Ladle Beam 300T		1	
17	-	General view of Electrical Equip.		-	
16	-	Installation of Cabin		-	
15	-	Installation of DGL Collector		-	
14	-	New rope φ26 6x36 core. Lx=10200mm	Steel	1	
13	-	New rope φ40 6x36 core. Lx=10200mm	Steel	1	
12	-	New rope φ40 6x36 core. Lx=10200mm	Steel	1	
11	-	Installation of Spring Cable and Hardware (S.C.)	Any	1	
10	3719.70.500	25T Bottom Block	Any	1	
9	3719.70.500	80T Bottom Block	Any	1	
8	-	Load Line Selflocking Great Lub. Sys. for L.I.	Any	1	
7	-	Installation of Name plates	Any	1	
6	-	Installation of Load System Sliding and Buffer Stops	Any	1	
5	-	Installation of Spring Cable and Hardware (S.C.)	Any	1	
4	3720.03.000	Crane Brake	Any	1	
3	3720.02.000	Long travel mechanism	Any	1	
2	3720.04.000	SA of 80T/25T trolley	Any	1	
1	3720.01.000	SA of main trolley 300T	Any	1	

**CATEGORY OF DRG. APPROVAL INFORMATION REFERENCE RECORD CONT.**

**BHILAI STEEL PLANT, BHILAI, CHHATTISGARH**

**CONSULTANT: MECON LIMITED**

**CONTRACTOR: HEAVY ENGINEERING CORPORATION LIMITED**

**RANCHI**

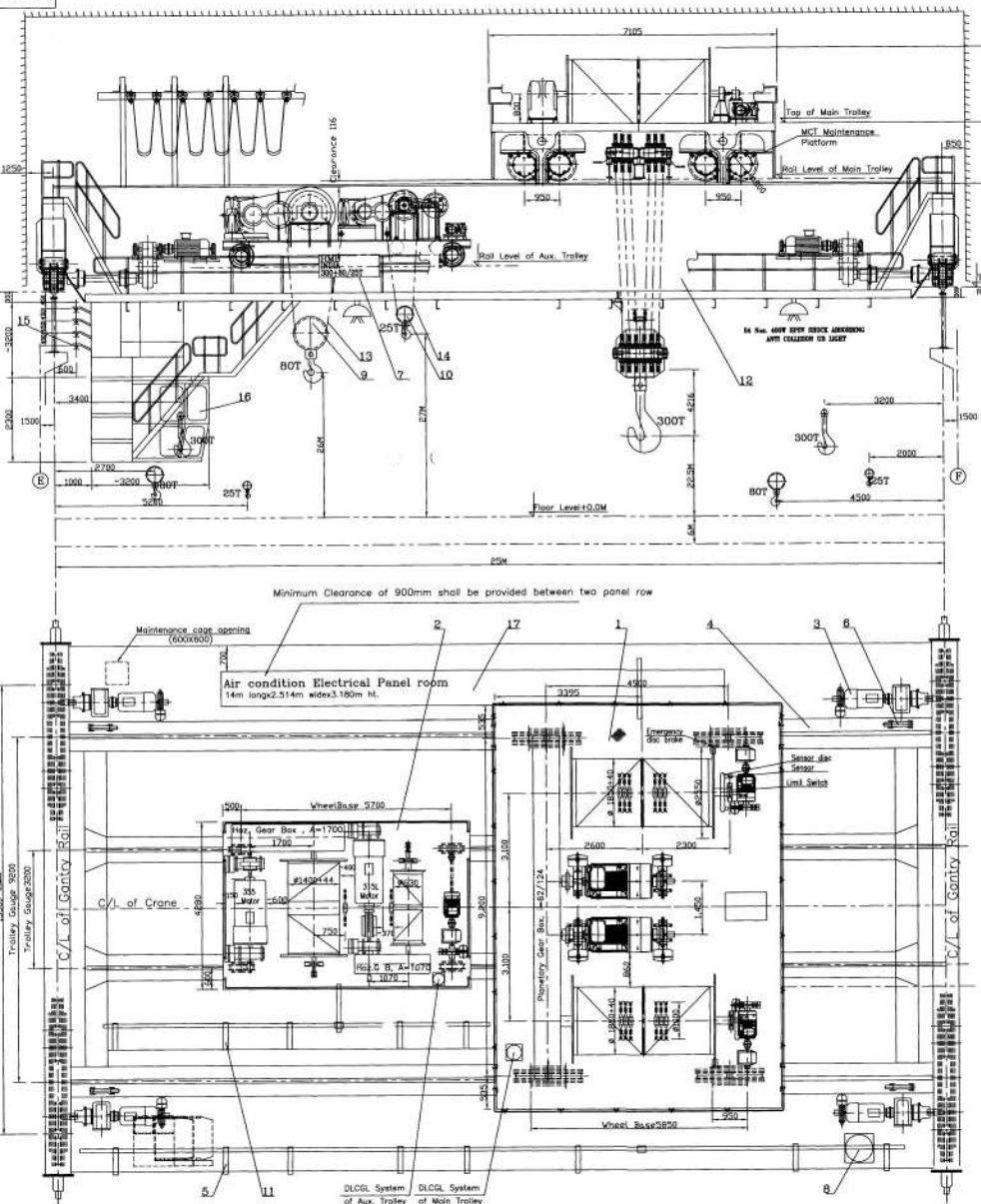
**PACKAGE DESCRIPTION: BOF & CCP OF SMS III (PACKAGE-02)**

**TITLE: G.A. of 300\*80/25T x 27.5m Ladle Handling Bay (LJ) of CCP S**

**SCALE: 1:50**

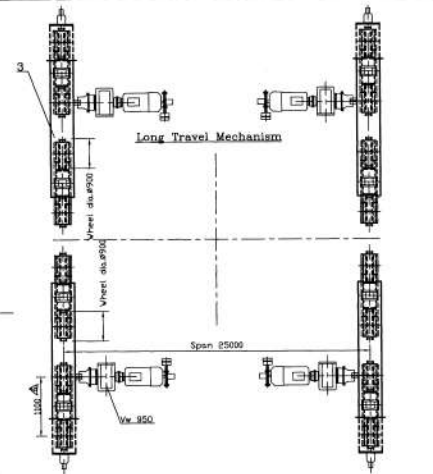
**DRG. NO: 3720.00.000**

**PROJECT NO: BSP-HEC-14-029A-14-000-55-BE-001C**

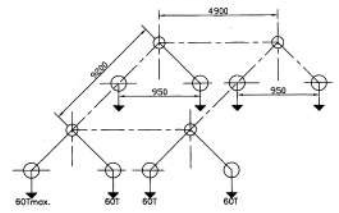


CRANE CHARACTERISTICS:-

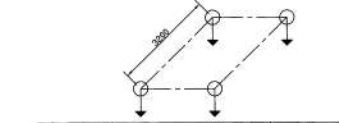
Hoist Mechanism	Main Hoist			Aux. Hoist I			Aux. Hoist II			Travel Mechanism			
	300T	80T	25T	80T	25T	80T	80T	25T	80T	Main C.T	Aux.C.T	Long Travel	
Duty Class: S4137-85	M8			M8			M8			CR120	CR160	CR120	
Speed M/min.	10.0/1.0	12/1.2	16/1.6	10.0/1.0	12/1.2	16/1.6	10.0/1.0	12/1.2	16/1.6	30	40	80	
Total Height of Lift (M)	22.5+6.0	26.0	27.0	22.5+6.0	26.0	27.0	22.5+6.0	26.0	27.0	9200	3200	13300	
No. of Rope Fall	14/14	4	4	14/14	4	4	14/14	4	4	5850	5700	13300	
Specification as per IPSS:1-08.003.97	#40.6x36Cons. Steel Core			#44.6x36Cons. Steel Core			#28.6x36Cons. Steel Core			Wheel dia(mm) of HEC make as per IPSS-08-001-83	#800	#630	#900
Breaking Strength	1770K/mm <sup>2</sup>			±MRC			±MRC			No. of Wheel	8	4	16
Make	Preferred Make			Preferred Make			Preferred Make			Roil Level	28670mm		
Starts / Hours	300			300			300			Starts / Hours	150		
Di. of Hoist Drum	#1850	#1400	#630	#1850	#1400	#630	#1850	#1400	#630	Buffer-Type	Hydraulic	Spring Loaded	
Di. of Spool	#1100/1000	900	#630	#1100/1000	900	#630	#1100/1000	900	#630	Size/B3 Mounting	250Mx2nos.	225Mx1nos.	315Lx4Nos.
Capacity	450x2nos.	355x1nos.	315x1nos.	450x2nos.	355x1nos.	315x1nos.	450x2nos.	355x1nos.	315x1nos.	Capacity	37kw	30kw	132kw
Make	Preferred Make			Preferred Make			Preferred Make			Make	1000	1000	1000
Type/Qty/Centre Distance	Planetary Gear Box Ino. A=1700 A=1070			Planetary Gear Box Ino. A=1700 A=1070			Planetary Gear Box Ino. A=1700 A=1070			Type/Qty/Centre Distance	Vertical, 1nos.	Vertical, 1nos.	Vertical, 4nos.
Gear ratio/rating	i=62/124/545Kw i=142.0/290Kw i=61/132Kw			i=62/124/545Kw i=142.0/290Kw i=61/132Kw			i=62/124/545Kw i=142.0/290Kw i=61/132Kw			Gear ratio/rating	V=950 V=750 V=1100x4nos.	V=950 V=750 V=1100x4nos.	V=1100x4nos.
Gear/Lubrication type	Helical Gears/Splash			Helical Gears/Splash			Helical Gears/Splash			Gear/Lubrication type	Helical Gears/ Inbull Pump	Helical Gears/ Inbull Pump	Helical Gears/ Inbull Pump
Type	DCEM	DCEM	DCEM	DCEM	DCEM	DCEM	DCEM	DCEM	DCEM	Type	DCEM	DCEM	DCEM
Brake dia. mm	#550	#600	#400	#550	#600	#400	#550	#600	#400	Brake dia. mm	#250	#250	#400
Qty.	4	2	2	4	2	2	4	2	2	Qty.	2	1	4
Braking Moment kg.m	555.0	555.0	138.0	555.0	555.0	138.0	555.0	555.0	138.0	Braking Moment kg.m	27.0	27.0	138.0
Make	Preferred Make			Preferred Make			Preferred Make			Make	Preferred Make		
Input	HEC GC No.-8	GC No.-7	GC No.-5	HEC GC No.-8	GC No.-7	GC No.-5	HEC GC No.-8	GC No.-7	GC No.-5	Input	HEC GC No.4	GC No.-3	GC No.-5
Output	TX-42, 2nos.	TX-62, 1no.	TTX-10, 1no.	TX-42, 2nos.	TX-62, 1no.	TTX-10, 1no.	TX-42, 2nos.	TX-62, 1no.	TTX-10, 1no.	Output	HEC H.G.No.9	H.G.C.No.-9	GC No.-11
Limit Switch	Rotary Limit Switch & Counter Wt. Limit Switch of Preferred Make			Rotary Limit Switch & Counter Wt. Limit Switch of Preferred Make			Rotary Limit Switch & Counter Wt. Limit Switch of Preferred Make			Limit Switch	Track Limit Switch of Preferred Make		
Hooks	For 300T-As per IPSS:1-08-009-83 No.-A, For 80T -As per IPSS:1-08-004-94 St. No.-21 type B For 25T -As per IPSS:1-08-004-94 St. No.-16 type A			For 300T-As per IPSS:1-08-009-83 No.-A, For 80T -As per IPSS:1-08-004-94 St. No.-21 type B For 25T -As per IPSS:1-08-004-94 St. No.-16 type A			For 300T-As per IPSS:1-08-009-83 No.-A, For 80T -As per IPSS:1-08-004-94 St. No.-21 type B For 25T -As per IPSS:1-08-004-94 St. No.-16 type A			Hooks	Wt. of Ladle Beam = 41T		
Type of Cabin	AC Cabin with Radio Remote Control			AC Cabin with Radio Remote Control			AC Cabin with Radio Remote Control			Type of Cabin	Wt. of 80T B. B. = 3.391T		
Power Supply	600V/10K/3Φ AC 50 Hz ±6%			600V/10K/3Φ AC 50 Hz ±6%			600V/10K/3Φ AC 50 Hz ±6%			Power Supply	Wt. of 25T B. B. = 0.820T		
Supply Voltage	240V, 1Φ AC			240V, 1Φ AC			240V, 1Φ AC			Supply Voltage	Wt. of Main Trolley = 135T		
Ambient temperature	60°C			60°C			60°C			Ambient temperature	Wt. of Aux. Trolley = 45T		
											Wt. of Crane = 540T		



WHEEL LOAD DIAGRAM of Main Trolley



WHEEL LOAD DIAGRAM of Aux. Trolley



Sl. No.	Drawing No.	Description	Material	Qty	Remarks
18	3719.70.403	Ladle Beam 300T	Steel	1	
17	-	General use of Electrical Cable	-	1	
16	-	Installation of Cable	-	1	
15	-	Installation of Oil Collector	-	1	
14	-	Min rope #40 638 coils	Steel	1	
13	-	Min rope #40 638 coils	Steel	1	
12	-	Min rope #40 638 coils	Steel	1	
11	-	Installation of Ladle Trolley and accessories (A)	Asfy	1	
10	3719.70.600	25T Bottom Block	Asfy	1	
9	3719.70.500	80T Bottom Block	Asfy	1	
8	-	Test the Overhaul Crane (Asfy. for 10)	Asfy	1	
7	-	Installation of Home plates	Asfy	1	
6	-	Installation of Limit Switches, Drums and Pulley Drums	Asfy	1	
5	-	Installation of Rope Drums and Handholds (1)	Asfy	1	
4	3719.83.000	Crane limits	Asfy	1	
3	3719.82.000	Long travel mechanism	Asfy	1	
2	3719.84.000	CA of 80/25T trolley	Asfy	1	
1	3719.81.000	CA of Main trolley 300T	Asfy	1	

CATEGORY OF BIDD. APPROVAL INFORMATION REFERENCE RECORD CONTRACTS

**BHILAI STEEL PLANT, BHILAI, CHHATTISGARH 7.0 MTPA EXPANSION**

CONSULTANT: **MECON LIMITED**

CONTRIBUTOR: **HEAVY ENGINEERING CORPORATION LTD. RANCHI**

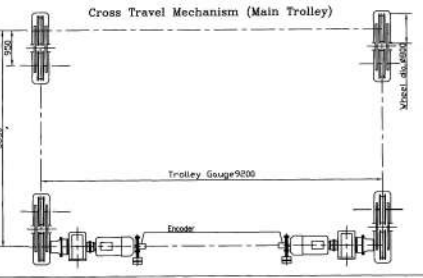
PACKAGE DESCRIPTION: **BOF & CCP OF SMS III(PACKAGE -029A)**

DESIGN TITLE: **G.A. of 300+80/25Tx25m FG Ladle Crane in Charging Bay (EF)**

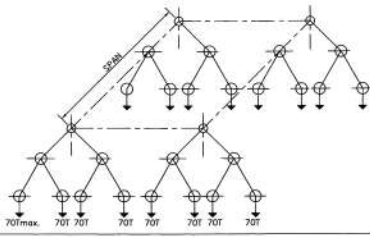
DATE: 18/06/2010

PROJECT NUMBER: BPS-HEC-14-029A-14-000-55-BE-00052

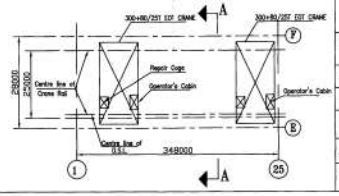
- Technical Instructions:-
- Strain gauge Load cell/body beam type (capacity 50T x nos.) is to be provided under upper pulley block of 300 T Hoist.
  - Final Wt. of each item to be furnished after detail design.
  - The clearance for jacking pad shall be 500mm (approx.) from rail top.
  - Stacked vertical type A/C (Linter make) of 21 shall be provided.
  - Lubrication system details to be indicated after detail engineering.
  - Main Trolley Dimension to be indicated after detail engineering.
  - Length and diameter of Rope drums for hoists shall be as per drg.
  - 300T Ladle beam, 80T and 25T hooks shall be as per relevant IPSS.
  - Hydraulic disc Brakes are to be mounted on the Flange of 300T Rope drums.
  - Anticollision device shall be provided on Crane.
  - Wire rope shall be in two pieces for rope equalizer block.
  - Makes of all bought out items shall be as per approved vendor's list/GIS/contract specification.

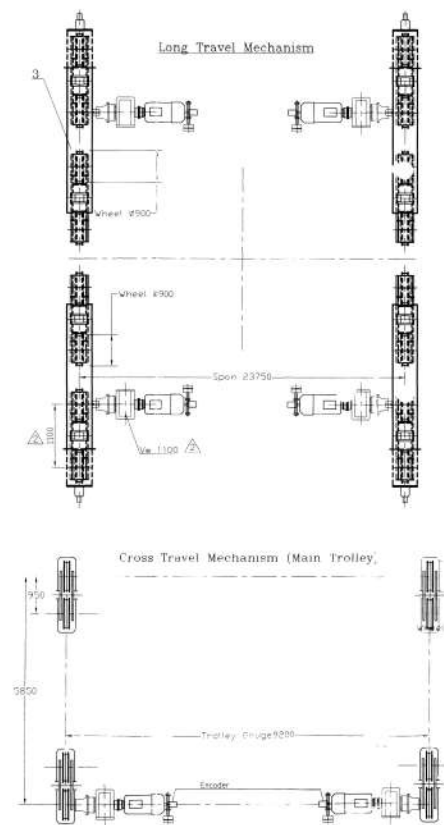
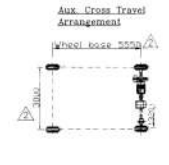
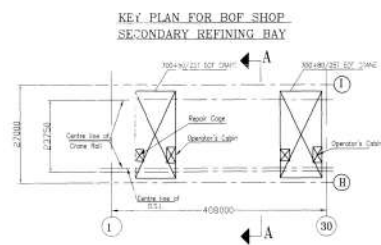
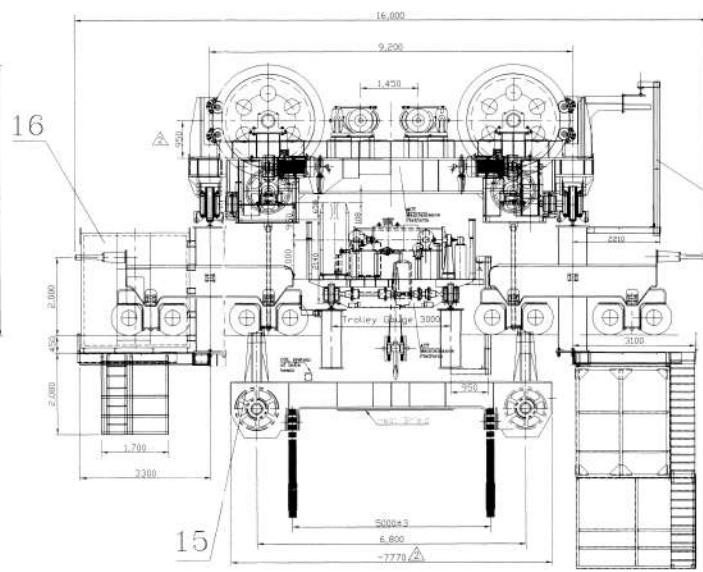
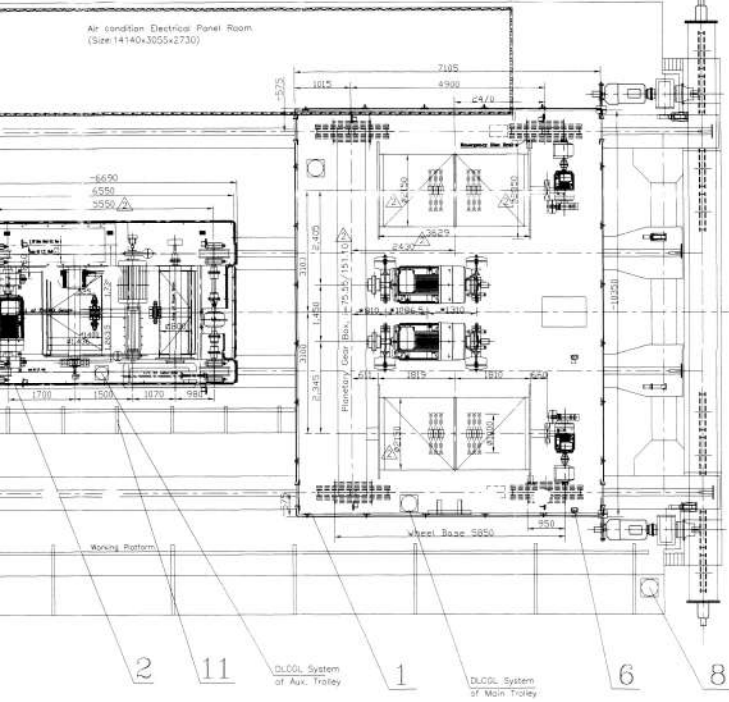
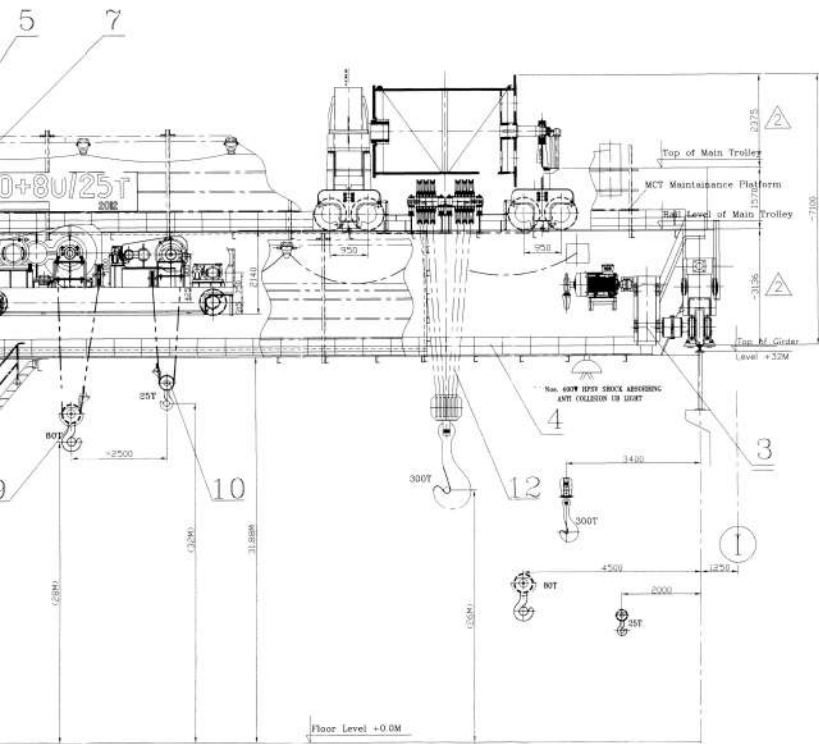


CRANE WHEEL LOAD DIAGRAM



KEY PLAN FOR SECONDARY 40T METAL CHARGING BAY





**Technical Instructions:-**

1. Strain gauge Load cell/weigh beam type (capacity 50Tx4nos.) is to be provided under upper oulley block of 300 T Hoist.
2. Final Wt. of each item to be furnished after detail design.
3. The clearance for jacking pad shall be 500mm (approx.) from rail top.
4. Stacked vertical type A/c (Lintern make) of 2T shall be provided.
5. Lubrication system details to be indicated after detail engineering.
6. Main Trolley Dimension to be indicated after detail engineering.
7. Length and diameter of Rope drums for hoists shall be as per drg.
8. 300T Ladle beam, 80T and 25T hooks shall be as per relevent IPSS.
9. Hydraulic disc Brakes are to be mounted on the Flange of 300T Rope drums.
10. Anticollision device shall be provided on Crane.
11. Wire rope shall be in two pieces for rope equalizer block.
12. Makes of all bought out items shall be as per approved vendor's list/GTS/contract specification.
13. Jacking pad shall be provided as per TS

**CRANE CHARACTERISTICS:-**

300+80/25Tx23.75M Spen PG Lude Crane

Hoist Mechanism	Hoist			Travel Mechanism		
	Main Hoist	Aux. Hoist	Aux. Hoist	Main CT	Aux. C.T.	Long Travel
Lifting Capacity	300T	80T	25T			
Duty Class	C4137-85	M8	M8	CR120	CR100	CR120
Speed M/min	10.0/1.0	12.0/1.2	16.0/1.5	30	40	30
Total height of LPH(M)	26.00±0.0	28.00±0.0	32.00±0.0	Trolley Gauge mm	8200	3000
No. of Fall	11+14	4	4	Wheel base mm	5850	5550
Specification	IS: 6326	IS: 4444, IS: 2838	IS: 6326	Wheel dia(mm) of HEC make as per IPSS-08-001-B3	#800	#630
As per IPSS: 08.003.97	Steel Core	Steel Core	Steel Core	No. of Wheel	8	4
Breaking Strength	1770N/mm <sup>2</sup>	MRC	MRC	Rail Level		32000
Make	Preferred Make			Start/Hours	150	
Start/Hours	300	#1400	#500	Buffer-Type	Hydraulic	Spring loaded
Dia of Hoist Drum	#2150	#1400	#500	Size/UL Mounting	250N/2nos	225N/1nos
Dia of Sheave	#1120/#1000	#600	#300	Capacity	370W	300W
Size	#600 nos	300T nos	1114 nos	Capacity	1000	1000
Capacity	145 Kw	250 Kw	130Kw	From		
From	750	750	750			
Type/Qty/Centre distance	Planetary Gear Box, No. 4	Horizontal, Inos. A=1700	Horizontal, Inos. A=1070	Type/Qty/Centre Distance	Vertical, 2nos. Ino=550	Vertical, 1no. Ino=750
Gear ratio/Rating	75.05/151.10, Ino=142.0/290K	Ino=81.00/1320W		Vertical, 4nos. Ino=1100		
Gear/Lubrication type	Helical Gears/Space/multigraded	Helical Gears/Solex		Vertical, 130W		
Type	DCEM	DCEM				
Gross Dia mm	#600	#600	#400			
Stroke	4	2	2			
Braking moment Kg.m	555.0	550.0	138.0			
Input	EC GC 1-8	HEC GC No-7	HEC GC No-5	Input	HEC GC No-4	HEC G 3-3
Output	4nos/4nos/7nos	TTXs-62, 1no	TTXs-10, 1no	Output	HEC GC No-8	HEC GC No-8
Limit Switch	Rotary Limit Switch & counter wt.			Limit Switch	Track Limit Switch	
Hoists	For 300T-As per IPSS:1-08-009-83 No.-VI For 80T-As per IPSS:1-08-004-94 No.-21 type B For 25T-As per IPSS:1-08-004-94 SI No.-10 type A					
Type of Cabin	AC Cabin					
Power Supply	680V 110% 3Φ AC					
Supply voltage	50Hz 48% 240V 14 AC					
Ambient temperature	60°C					

Wt. of Crane-540T