

## TENDER ENQUIRY SCHEDULE

Tender Enquiry No. PUR/HMB/2023/962091/EL-6382

Date: 08.07.2023

Due date of Offer submission: .14.07.2023 by 1.00PM

**Subject: Tender Enquiry (E-Tender) with E- price bids consisting of design, engineering, manufacture, supply FOR HMBP stores at Ranchi, including inspection, testing at manufacturer's premises, supervision of erection & commissioning and demonstration of performance guarantee parameters for emergency disc brake system on main hoist rope drums on TURNKEY BASIS in seven numbers of liquid metal handling cranes of Converter (BOF) shop at DSP Durgapur.**

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

### **INSTRUCTION TO BIDDERS (ITB)**

Tenders are invited on line through website. Tenders are to be submitted strictly as per guidelines furnished in the website of <http://etenders.gov.in> here under:

#### **1.0 Tender Summary :**

Tender Ref No.	PUR/HMB/2023/962091/EL-6382 dated 08.07.2023	
Earnest Money Deposit	Rs. 10,90,000.00 (Rupees Ten Lakhs Ninty Thousand Only) in favor of "Heavy Engineering Corporation Limited "Payable at Ranchi. (To be submitted in form of DD/BG from any nationalized bank (as per annexure- C)" to the undersigned through courier/By Hand )	
Mode of Tender:	E tender with e price bid	
Type of tender	Two Bid System- (i) Techno-Commercial Bid (ii) Price Bid	
Last date and time for submission of tender through e-tender mode	14.07.2023	UPTO 13 Hrs (IST)
Due date and time for opening of tender through e-tender mode	15.07.2023	AT 15 Hrs (IST)
(Under unforeseen circumstances and if the due date falls on holiday, the tender will be opened on the next full working day at same time through e-tender mode only.		

*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 bidders through a notification on the e-tender portal.

2. For detailed guidance for online bid submission, please refer annexure-F.

**Contents of tender documents:**

1	Technical specification & Commercial Terms and Conditions of NIT	Annexure “H” & ‘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 upto 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.

**3.0** 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>

**5.0** 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.

Bidders should download the complete NIT including the Annexure and read carefully before filling the details and uploading the documents.

**6.0** The offers with any deviations to the NIT Terms and conditions may be liable for rejection.

**7.0** The bidder must upload all the documents required as per the terms of NIT.

**8.0** 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).

**9.0** There will be no physical sale of the tender documents.

**10.0 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. Techno-commercial offer (Part-1) – 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. Price-format/BOQ (Part-II): This part of the offer should contain price portion. The format of Price Bid/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-

**11.0 Please read carefully before you quote: -**

**Last date of Receipt of Tender Document: on 14/07/2023 by 1:00 PM (IST)**

**Due date of tender opening (Part-1): on 15/07/2023 at 3:00 PM (IST)**

**12.0 Disclaimer clause:-**The Company (Heavy Engineering Corporation Ltd.) nor the service provider ([www.etenders.gov.in](http://www.etenders.gov.in)) is responsible for any failure of submission of bids due to failure of internet or other connectivity problems or reasons thereof.

**Important Points & Commercial Terms & Conditions**

**Commercial terms and conditions:**

1. **Offers to be submitted on FOR HMBP Stores basis.** 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 90 days from the date of opening of tender.** The offer with a lower validity period other than 90 days will not be acceptable and such offer shall be ignored without assigning any reason.
4. **Payment terms shall be as under:**

<p><b>A) Payment for Supply of total materials</b></p>	<p>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-</p> <ul style="list-style-type: none"> <li>a) Guarantee certificate (Original + Triplicate copy)</li> <li>b) Test certificate (Original + Two copies)</li> <li>c) Inspection certificate/Dispatch Clearance (To be issued by HEC)</li> <li>d) CRV (To be issued by HEC)</li> <li>e) Packing List (Original + One Extra copy)</li> <li>f) Tax Invoice (Original + Triplicate copy)</li> <li>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."</li> </ul>
<p><b>B) Payment for balance 10% of supply part</b></p>	<p><b>Balance 10% of supply part shall be released within 30 days after submission of completion certificate of supervision of erection &amp; commissioning issued by Customer DSP or his representative however commissioning certificate shall be provided by executing agency duly signed &amp; stamped.</b></p>

C) For 'Supervision of erection & commissioning of Hydraulic Emergency Disc Brake for Seven number crane'	<b>100% payment for supervision of erection &amp; commissioning</b> charges along with 100% GST shall be paid through RTGS/NEFT within 30 days after submission of following documents: <ol style="list-style-type: none"> <li>Successful commissioning certificate issued by Customer DSP or his representative.</li> <li>Tax Invoice in triplicate.</li> <li>Bank mandate for RTGS/NEFT payment</li> </ol>
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**Note:**

- For payment all the processing charges by the bank shall be on account of the firm.

## 5. Delivery Term :

<b>Drawing/Documents submission for approval after placement of PO</b>	Drawings & Documents and QAP as per technical specification of NIT has to be submitted within two weeks from the date of Issue of Purchase Order .
<b>Delivery of materials</b>	After readiness of the material firm will raise inspection call within 12 weeks maximum from the date of approval of drawings /manufacturing clearance from HEC along with test certificates & other relevant documents as per approved QAP. However Material shall be delivered to Stores/HMBP within 15 days after issuing the dispatch clearance from HEC.
<b>Supervision of erection &amp; commissioning of the Hydraulic Emergency Disc Brake for Seven Number of Crane.</b>	Supplier shall depute their engineers at site for Supervision of Erection & Commissioning of supplied material within maximum 5-7 days from the date of intimation from HEC for site availability. <b>Note: It will be supplier's responsibility to make the manpower available at site for 'Supervision of Erection' &amp; 'Commissioning of supplied items' till the completion of Erection &amp; commissioning of all supplied materials without any extra cost implication other than quoted charges for "Supervision of Erection' &amp; 'Commissioning' at site.</b>

- 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.
- Earnest Money Deposit** - Earnest money Rs. 10,90,000.00 (Rupees Ten Lakh Ninty Thousand Only) will have to be deposited in form of demand draft / bank guarantee (format is enclosed at annexure-III) 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. The Corporation does not pledge itself to accept the lowest or any tender and reserves to itself the right of accepting the whole or any part of tender or portion of the quantity offered and you shall supply the same at the rate quoted.
9. **Inspection** : Supplies will be subject to Inspection by our Inspection wing / or inspection Agencies prescribed by HEC. On intimation of readiness of the Product, HEC shall inspect at firm's Works and issue I/C immediately on satisfactory completion of inspection.
10. Order placed as a result of this tender will be subject to the Corporation's General Terms and Conditions of contract which can be down loaded from our website ([www.hecltd.com](http://www.hecltd.com)).
11. Corporation reserves the right to call for and examine at any time the books of accounts and other documents and papers of the firm for the purpose of ascertaining whether any excess payments has been made or the firm likely to be received / received undue benefit out of execution of the particular contract.
12. The final quantity may vary at the time of finalization of tender; however the proper clarification / confirmation shall be taken from the firms.
13. **Liquidated Damages-** For late delivery, LD shall be levied @0.5% per week (completed week) of the price of the stores (up to maximum 10%) as liquidated damages.
14. **Risk Purchase Clause:** The time for and the date of delivery of the Stores stipulated in the acceptance of tender shall be deemed to be the essence of the contract and delivery must be completed no later than the dates specified therein. Otherwise, The purchaser may procure the undelivered stores / similar items from elsewhere, without notice to the contractor at the risk of the contractor without canceling the contract in respect of the consignment not yet due for delivery, or May cancel the contract or a portion thereof, and if so desired, to purchase or authorise the purchase of stores not so delivered or others of as similar description at the risk and cost of the contractor.
15. **Guarantee/Warranty** – The tenderer shall guarantee satisfactory performance of the emergency braking system along with necessary accessories for a period of one year from the date of successful commissioning of each crane. Any defect found during this period due to poor material or workmanship shall be rectified free of cost by the supplier to the full satisfaction of executing authority.
16. **Security Deposit-** 5% of the supply value of the P.O. 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).**
17. **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 tenderer shall conduct the performance guarantee test after 6 months from the date of issuance of commissioning certificate. The successful bidder has to submit the performance bank guarantee of 10% of total supply value of material valid till full guarantee period after supply of material (in case order placed on the firm) . **If PBG clause is not accepted then the offer of the bidder shall not be considered.(Format is enclosed at annexure-E)**
18. Based on HEC's requirement and in order to ensure security of supply from sources and the repeat order for 100% quantity may be placed on successful bidder.
19. There is no obligation on our part to accept delayed / late tenders. Tenders received after the due date of opening are liable to be summarily rejected.
20. **General conditions of the contract** :Unless otherwise specified in the Terms & Conditions above, this order shall be governed by General conditions of contract of purchase of HEC Ltd, which is available in

the web site of HEC. ([www.hecltd.com](http://www.hecltd.com))

**Special Note:**

While submitting tender pl. mention your Registration No. with HEC as a registered vendor with valid paper.

If not pl. get registered your firm with HEC Limited immediately.

Please indicate whether your firm covered under MSES/MSES owned by SC/ST or MSE Owned by Women covered under SSI separately in Techno-commercial bid.

Please submit the form of Terms & Conditions duly filled in and signed by the tenderer along with your offer in technical (part-1) bid.

21. **Declaration of site visit-** Tenderer will submit the declaration of site visit duly signed & stamped as per prescribed format of annexure- III of technical specifications of NIT.

22. **Law Governing contract-**

(1) This contract shall be governed by the laws of India for the being in force.

(2) Irrespective of the place of delivery, the place of payment under the contract, the contract shall be deemed to have been made at the place from which the acceptance of tender has been issued.

(3) Jurisdiction of Courts: The court of the place from where the acceptance of tender / purchase order has been issued shall alone have jurisdiction to decide any dispute arising out of or in respect of the contract,

(4) Marking of Stores: The marking of the stores must comply with the requirements of the laws relating to Merchandise Marks for the time being in force in India.

23. **ARBITRATION**

In the event of any dispute or difference of opinion between the Heavy Engineering Corporation or any of its units / division and the contractors as to the respective rights and obligation of the parties hereafter or to the true intent and meaning of these presents and the many articles of conditions thereto, such dispute of difference of opinion shall be referred to the many articles of conditions thereto, such dispute of difference of opinion shall be referred to the sole arbitration of the Chairman, Heavy Engineering Corporation and his decision shall be final, conclusive and binding on the parties.

24. **Mode of dispatch:**

By Road to the consignee at DGM/In-charge stores /HMBP/HEC Ltd. Ranchi. For the consignments dispatched by road, the supplier shall ensure that the following are observed by them:

- i) All dispatches must be affected only on receipt of written dispatch clearance from the purchaser.
- ii) Material shall be dispatched to In-charge stores/HMBP/HEC Ltd, Ranchi.
- iii) Care shall be taken to avoid damages during transit to ensure that all the packages are firmly secured by the successful bidder.



**Annexure B****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 HMBP)	FOR main Stores, HMBP, HEC Ltd., Ranchi-4		
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 90 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. 10,90,000.00 (Rupees Ten Lakhs Ninty Thousand Only) ( Mandatory) as per clause No. 7 of annexure-A	DD/BG from any nationalized bank in favor of HEAVY ENGINEERING CORPORATION LIMITED, payable at Ranchi ( <b>Exempted for MSME/NSIC/SSI registered firms</b> )		
13	Security Deposit for 5% of supply value of PO as per clause No. 16 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 Securitydeposit clause is not accepted then theoffer of the bidder shall not be considered.</b>		

14	Performance bank guarantee for 10% of supply value of PO as per clause No. 17 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	<b>To be provided</b> (The equipment supplied shall be under warranty for the period of 18 months from the date of dispatch or 12 months from the successful commissioning whichever is earlier.		
16	L/D Clause	To be Accepted (As per NIT's clause No. 13 of annexure-A)		
17	Special terms (If Any)			
18	Acceptance of Risk Purchase Clause	To be Accepted (as per NIT's clause No. 14 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. 20 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- G (it is mandatory for bidder and If it is not submitted then offer shall not be considered)		
27	<b>DECLARATION OF SITE VISIT</b> (To be filled up by the Bidder)	Bidder must be submitted along with offer (as per annexure-III of technical specifications)		
28	List of 2 year's operational spares shall be furnished with item wise prices as per technical specifications within 7 days after opening of price bids.	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.**

(P.S. Paswan)  
Mgr/Purchase  
Heavy Machine Building Plant  
Heavy Engineering Corporation Limited  
Dhurwa, Ranchi – 834004  
Jharkhand (India),

Format of EMD Bank Guarantee

**BANK GUARANTEE FOR EARNEST MONEY DEPOSIT**

NO.  
TO

Dated:

SDGM/PURCHASE /MM DIVISION  
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, 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 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 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 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 WILL ENLARGE OUR LIABILITY HEREUNDER BEYOND THE LIMIT OF RS.  
.....'*amount*'.....(RUPEES .....'*amount in words*'.....) AS AFORESAID OR 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 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 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 GUARANTEE**

**(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT & TO BE ISSUED BY ANY NATIONALISED /SCHEDULED BANK AUTHORISED 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 said guarantee shall be forfeited and we shall be released and discharged from all liabilities there under.

Dated at \_\_\_\_\_ day of \_\_\_\_\_.

Seal of the Bank

**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)

< Non Judicial Stamp Paper of Rs. 100>

**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 :-
  - a. 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.
  - b. 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.
  - c. 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.



- a. 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.
- b. 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.
- c. 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.
- d. 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.
- e. 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 inform the same to the Chief Vigilance Officer.

#### **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.
- (10) Name of present IEM
  - a. Dr. Bibhuti Bhushan Pattanaik, Ex-MD, CWC  
Address-302, New Shivalik CGHS,  
Plot No. GH-4, Sector-51, Gurugram-122002  
Contact No. 9818372724  
email- [pattanaik181@yahoo.com](mailto:pattanaik181@yahoo.com)
  - b. Shri Pradeep Kumar, IRSSE (Retired),  
Former Member Infrastructure, Railway Board.  
Address- Flat No. C-701, Bestech Park View Spa Apartments,  
Sector-47, Gurugram-122018  
Contact No. 8130820000  
email-[pradeepawasthi1981@gmail.com](mailto:pradeepawasthi1981@gmail.com) ,  
[pradeep.kumar.17@gov.in](mailto:pradeep.kumar.17@gov.in)

## **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)

## Technical Specification

### 1. INSTRUCTION TO TENDERER

#### a. Scope of work:-

The scope of work of this tender consists of design, engineering, manufacture, supply FOR HMBP stores at Ranchi, inspection, testing at manufacturer's premises, supervision of erection & commissioning and demonstration of performance guarantee parameters for emergency disc brake system on main hoist rope drums on **TURNKEY BASIS** in seven numbers of liquid metal handling cranes of Converter (BOF) shop at DSP Durgapur.

The complete electrical solution for the Emergency Disc Brake System is included in the scope of the tenderer and the supply of electrics shall be as per Annexure-II.

The supply shall include the required commissioning spares for each crane.

#### b. Qty. –1 set of Emergency Disc Brake system for each crane;

Each set consists

- Four Caliper Brakes (fails safe).
- Hydraulic Power Pack with suitable diameter interconnecting pipes, Pipe fittings, Clamps, etc.
- Pedestal Assembly for installation of Brake Callipers.
- Commissioning Spares for Emergency Disc Brake.
- Complete electrical solution for emergency disc brake system (refer Annexure II).

c. **Warranty:** - One year comprehensive warranty from the date of commissioning. Spares required during warranty shall be supplied free of cost FOR site.

#### d. **Information with the offer:-**

1. **The Technical Specification duly signed & stamped as a token of acceptance.**
2. Brake overall and installation dimensions.
3. Hydraulic power pack GA Drg.
4. Details of lining material and thickness.
5. Maximum stroke of both shoes.
6. Permissible brake switching frequency /Hr.
7. Guaranteed release and engagement times of the brakes.
8. Maximum braking force.
9. Adjustment range of Braking force in terms of percentage of Maximum braking force.
10. The list of recommended commissioning and 2 year's operational spares shall be furnished with item wise prices.
11. Details of the hydraulic power pack including

- Motor details like KW, rpm, duty, insulation, mounting, rated current, power factor efficiency, frame size, degree of protection for the enclosure, type of enclosure.
- Details of the solenoid operated valves and its coil voltage rating.
- Detail of electrical motor operated pump and Hand pump, Accumulator, valves, Tank volume etc.
- Hydraulic schematic diagram with complete BOM including type, rating & make of all components with electrical leaflets.
- Write up on hydraulic system and electrical system operation
- Interconnecting pipes layout drg. with bill of materials & makes of items

12. Recommended electrical schematic diagram **with bill of material** for operation of the brake.

13. Contact rating of brake proving switches.

**e. Drgs. & documents :-**

The following drgs. shall be furnished by the successful tenderer in 6 sets within 2 weeks of placement of order:-

- I) Brake data sheet.
- II) GA drg. containing the following information
  - A) Brake overall and installation dimension.
  - B) Maximum and minimum braking force.
  - C) Adjustment range of braking force in terms of percentage of maximum braking force.
- III) Motor data sheet for the hydraulic power pack motor indicating KW rating, rpm, insulation class, frame size, mounting, rated current, power factor, degree of protection for the enclosure etc.
- IV) Hydraulic schematic diagram with BOM for brake control, & GA Drawings of power pack.
- V) Recommended electrical schematic diagram **with Bill of material** for proper operation of the brake.
- VI) Interconnecting pipes layouts drg. with BOM.

f. All the submission of drgs. / documents / calculations by successful tenderer for approval from M/s DSP shall be routed through M/s HEC. But the approval of drgs / documents / calculations from M/s DSP shall be the responsibility of the tenderer. Any minor change required by customer during drawing approval stage shall have to be incorporated by the successful tenderer without any price implications.

g. 6 sets of print and CDs of all approved drgs, design calculation and operation and

maintenance manuals shall be furnished by the manufacturer for necessary distribution. All drawings shall be made in AutoCAD, Release- 2010 version. Soft copies of the drawings made in AutoCAD shall also be submitted after commissioning at site, incorporating corrections, if any.

The instruction manuals shall present the following basic categories of information in a comprehensive manner.

- i) Instruction manual for pre commissioning check up, operation, abnormal condition, maintenance and repair.
- ii) Schedule of preventive maintenance.
- iii) Ordering information for spares.
- iv) Testing procedure of the brake during emergency stopping with rated load.

**h. Basic and site condition:-**

- 1. Ambient temperature : - 60 degree centigrade.
- 2. Relative humidity : - 100% maximum (both max. not occurring simultaneously).
- 3. Area of installation : - EOT crane in a steel plant with lots of shock and vibrations.
- 4. Supply condition:-
  - Supply voltage :- 415V $\pm$  10%, 50Hz $\pm$  5%, 3ph supply.
  - Any other voltage, if required, shall be generated using suitable transformer in the electrical panel in their scope. The three phase symmetrical short circuit rating of the switch gear at 415V shall be 50KA for 1 second

**2. Technical specification**

- I) The brake shall be spring actuated & released by hydraulic pressure and direct acting type. The brake shall be suitable for continuous duty.
- II) The brake shall be complete with lining wear detector. Initial setting shall be only 70% of the maximum possible stroke of the shoes in order to maintain reserve for lining wear. The braking force shall be adjustable to within 40% & 100% of the rated maximum braking force.
- III) Shoe supports shall be spring balanced so that shoe's clearance is equalized automatically throughout the life of the lining. Brake have to be fitted with pivoting shoes (pivoting pads support) to follow run out of the disc. Callipers have to be fitted with direct acting proving switch and with direct acting wear control switch (providing information after each mm of wear)
- IV) Callipers must be fitted with softer (organic) linings.
- V) A suitable arrangement shall be provided for manual release of brake to lower the hook of crane in case of emergency. However, in case of manual operation auto operation of the brake shall be inhibited.
- VI) Disc brake shall be suitable for indoor duty and should be protected from dust.
- VII) The brake unit shall be suitable for being energized for a long period without undue heating.

- VIII) The Liner shall be screwed on the shoes by counter sunk screws. The liner shall be renewable. Nominal opening per shoe has to be : 1mm gap between disc and brake pad. It shall be possible to remove and replace the shoes quickly.
- IX) The brake must be provided by a monitoring system which is capable of detecting overspeed, slipping of load and lack of speed signal.
- X) A junction box shall be provided on the hydraulic power pack. Connection from all the electrical components on the power pack shall be taken to the terminals provided on this junction box.
- XI) Brake proving switches shall be provided **with** the calipers.
- XI) Power pack shall be suitable for dust laden steel plant environment with tight fitting plug stainless steel manometer with glass window, suction strainer and drain valve (02 nos.).
- XII) Power supply for hydraulic system to be tapped from incoming of Isolator panel (MCCB/ACB).

XIV) The following features shall also be provided

- a. For increased security, return circuit consisting of 02 nos. of solenoid valve (1 working +1 Standby).
- b. Accumulator with flow restrictor or check valve for smooth & positive braking. If necessary.
- c. Solenoid operated 2/2 way poppet valve for loading / unloading of pump.
- d. For controlled manual collapsing with active security in case of no operation from operator.
- e. For air pollution resistant unit, metallurgy type.
- f. Thermostat for monitoring of high hyd oil temp.
- g. Level switch for monitoring low level of oil in hyd tank.
- h. Filter clogging indicator across filter.

**3. Spares:** - List of commissioning spares per crane shall be indicated with item wise prices. List shall indicate item, description, quantity, type and make. Commissioning spares shall be sufficient for actual commissioning of the crane.

The list of commissioning spares to be supplied shall include min. the following items:-

- a) Brake lining pads - 02 pairs.
- b) Gasket & seals - 02 sets of each type.
- c) Solenoid coil for 2/2 sol. valve - 02 nos.

List of 2 year's operational spares shall be furnished with item wise prices.

**The list must include the following items:-**

- a) Brake shoes with lining pads – 02 pairs.
- b) Gaskets & seals – 02 sets of each.
- c) 2/2 solenoids operated poppet valves, 24V DC- 02 nos.
- d) Check valve- 02 nos.



e) Flexible coupling- 01 no.

**4. Tests:** - Inspection shall be carried out as per relevant national/ international standards and agreed QAP

a) The contractor shall conduct all tests required to ensure that the equipments supplied shall confirm to the requirements of the specification and is in compliance to the requirements of the applicable codes.

b) The particulars of the proposed tests and the procedures for the tests shall be submitted for approval before conducting the tests.

**5. Tender drgs. & documents:-**

Technical parameters of the Disc Brakes- ANNEXURE-1

**6. Make of Emergency Disc Brake: SIBRE Only.**

## **7. SITE VISIT AND OTHER REQUIREMENTS**

The bidder shall visit the site, study drawings/ documents, take relevant measurements and discuss with the executing authority, if required, regarding any technical clarification and get satisfied with respect to the nature and extent of work involved. The bidder shall also obtain first-hand information regarding location, work terrain, climate condition, railways, roads, airports and communication etc. before offering the bid for the job.

**Bidder has to submit the Site Visit declaration as per ANNEXURE- III.**

All materials/ equipment/ machinery/ fabricated items used in the subject package shall be according to the specification given herein and any deviation should be clearly brought-out in schedules of exclusions and deviations attached with this TS. No mention of exclusions and deviations will mean that the bidder has accepted the scope and specification given herein.

Any equipment/ work/ service, which may not have been specifically mentioned in this document but is necessary for completeness of the work, shall be clearly brought out in the offer and included in their scope of work.

**8. Commissioning at site:** - Supervision of erection and commissioning at our customer's site to be provided by the emergency disc brake manufacturer.

The emergency disc brake with the existing hoist system shall be load tested. The **demonstration** and commissioning the emergency disc brake system with load test for individual crane shall be deemed to be successful when kept in operation for 72 hours with available load of the existing system without any failure.

**9. After sale service:** - Brake manufacturer/ their Indian representative shall attend problems, if any, free of cost during warranty.

9. **Guarantee:** The tenderer shall guarantee satisfactory performance of the emergency braking system along with necessary accessories for a period of one year from the date of successful commissioning of each crane. Any defect found during this period due to poor material or workmanship shall be rectified free of cost by the supplier to the full satisfaction of executing authority.

10. **Performance Guarantee:** The tenderer shall guarantee the equipment for its workmanship, materials, design and satisfactory operation in accordance with relevant specifications and provision of contract. The tenderer shall conduct the performance guarantee test after 6 months from the date of issuance of commissioning certificate.

11. **Commissioning spares per crane:** The equipment shall be supplied with all necessary commissioning spares including special tools and tackles required for subsequent maintenance of the equipment after commissioning.

12. **Training:** Comprehensive on-site training to be imparted to DSP personnel for operation and maintenance of the equipment for a period of 7 days after successful commissioning of the equipment.

13. Tenderer shall indicate separately his charges for supervision of erection and commissioning of emergency disc brake system.

14. **Performance Guarantee Parameters:** The tenderer will have to demonstrate following parameters as listed hereunder:

Sl. No.	PG parameters	Guarantee Value
1	Performance of Emergency Braking System along with Rope drums for each crane under full load due to intentional power outage in the hoist drives in the crane.	100% prevention of downward movement of the ladle during operation
a)	All the defects noticed during the performance guarantee test shall be rectified by the successful tenderer to the entire satisfaction of the Employer. The work shall not be taken to be finally accepted till all the defects are satisfactorily rectified by the successful tenderer.	
b)	Liquidated damage for non-fulfillment of PG parameters shall not be applicable	

**ANNEXURE- I**

	CODE	SPECIFICATION (Main Hoist Capacity)	180T	200T	150T	UNIT
Number of Crane			2	3	2	
Type of Crane			Hot Metal Handling Crane, M8 Duty	Teeming Crane, M8 Duty	Mixer Charging Crane, M8 Duty	
Span			22	16	23.5	m
ESSENTIONAL INFORMATION	F	SAFE WORKING LOAD (SWL)	180	200	150	T
	P	Total Sprung weight	215000	236000	165000	Kg.
	V	Hoist Speed	8	8	8	M/min
	V <sub>l</sub>	Lowering normal speed	10	10	10	M/min
	NB	No. of motors	2	2	2	
	KW	Motor Power	360	360	360	KW
		Motor Frame Size	500L	500L	500L	
	N	Motor nominal speed Corresponding to V	600	600	600	RPM
Overall efficiencies of Rope & Gears 0.956	NBB	No. of revving lines	14+14	14+14	10+10	
	NBM	No. of Motors per drum	1	1	1	
	NT	No. of drums	2	2	2	
	DT	Rope winding diameter along with rope drum & rope	1.950+0.032= 1.982	1.950+0.032= 1.982	1.950+0.032= 1.982	M
	DD	Max. diameter of disc	2.600	2.600	2.600	M
	ND	Drum speed when over speed detected (20%over speed)	10.8	10.8	8	RPM
	TD	Detection time	0.5	0.5	0.5	Sec.
	FES	Static test load	225	250	187.5	T
	FED	Dynamic test load	180	200	150	T
	EH	Brake	Hydraulic	Hydraulic	Hydraulic	
DESIRABLE INFORMATIONS	R	Reduction ratio /motor	I=61.72/ 123.44	I=61.72/ 123.44	I=90/ 180	
	JTT	GD <sup>2</sup> of Drum with Load & coupling referred to I/P Shaft	40	45	20	Kgm <sup>2</sup>
		GD <sup>2</sup> of Motor	332	332	332	Kgm <sup>2</sup>
		GD <sup>2</sup> of Input Shaft	452	455	433	Kgm <sup>2</sup>

	D	Stopping distance	0.03	0.03	0.03	M
<b>No of Caliper per Drum</b>			<b>2</b>	<b>2</b>	<b>2</b>	
SPECIAL CONDITIONS	CR	Please specify any additional required				
	AF	Is controlled lowering required with emergency brake (Yes / No)	Yes	Yes	Yes	
	Ha	If yes, max. Lowering distance	25	18	25	M
	Tb/Ts	Special ratio: braking torque/torque due to load.	2 (Minimum)	2 (Minimum)	2 (Minimum)	
		Ambient Temp.	60	60	60	°C

**Supplier should submit calculation & selection of Total no of Pair Caliper and Hydraulic Power Pack for Technical Scrutiny.**

**Information to be provided by Supplier**

	Rope Drum Flange	Disc Thickness (min)		
		Disc Seating Width (min)		
	DD	Disc Diameter of Rope Drum (min)		
	Ts	Braking Torque per Drum		
	Tb/Ts	Ratio: Braking Torque/Torque due to Load		
		Quantity of Caliper per Rope Drum		
		Total no of Caliper per Crane		
		Hydraulic Power pack per Crane		
Item Code	1	Caliper , Console & Mountings	6414020030	
	2	Hydraulic Power Pack & Mountings	6414020035	
	3	Interconnecting Pipes & Fittings between Power pack to Brakes	6414020036	

ANNEXURE- II			
Scope of supply and work related to electrics of Emergency Disc Brake System			
Sl. No.	Points	Supplier's reply	Comments if any
i	<p>The electrical solution for Emergency Disc Brake system shall contain PLC with interfacing cards and control relays, junction boxes, LCS at operator cabin, power and control cables, incremental pulse encoders and any other item required for its proper functioning and completeness of the system is deemed to be included in the scope of tenderer. The speed monitoring module shall be fitted with auto control system which secures the overall operation of overspeed detection system and shall be properly interfaced with the existing hoist control panel taking into consideration the main hoist motor encoders &amp; rope drum encoders.</p> <p>Proper selection of the devices and cabling shall be done to prevent any noise pick up in the system.</p> <p>Control unit in sheet steel housing consisting PLC with CPU, power supply module, necessary DI and DO and counter modules for getting the speed (Encoder Feedback) of the drum, necessary 8-channel relay boards for giving potential free contact shall be provided. Developed application software with programming tool (laptop) &amp; communication cable shall be supplied.</p> <p>All the electrical equipments shall be of reputed make and proven quality with regard to their performance.</p> <p>Only 415V, 3 phase, 50 Hz supply shall be made available to the tenderer. Any other voltage, if required, shall be generated using suitable transformer in the electrical panel in their scope. The three phase symmetrical short circuit rating of the switch gear at 415V shall be 50KA for 1 second</p>		

ii	A panel viewer with touch pad not less than 8 inches will be provided on PLC panel door for communicating with PLC for viewing the online status of the logic. Panel mounted AC may be considered for PLC operation at 60°C ambient temperature on crane.		
iii	Arrangement for speed sensing has to be provided for the two rope drums of the main hoist mechanism for effective application of emergency disc brakes in the event of over speeding of the load. For this purpose a hollow shaft incremental encoder shall be provided with each drum which shall be suitable for drum shaft dia. of 75mm. The hollow shaft incremental encoder shall be Hubner Type No - HG18 DN 1024 or equivalent.		
iv	Power supply for emergency disc brake system shall be tapped from incoming side of the existing Isolator (ACB/MCCB) Panel. The route length from isolator panel to the emergency disc brake system on trolley shall be considered as 80M i.e. 50m for fixed cable and 30m for festooning cable. All power cables, control cables and communication cables including cable lugs and cable glands along with erection accessories such as angles, channels, cable trays, earthing material etc required for emergency disc brake system will be in scope of supply of the tenderer.		
	a. Flexible cable shall be 1.1KV grade, EPR insulated, PCP/CSP sheathed copper conductor confirming to IS: 9968 (Part 1).		
	b. All fixed cables shall be 1.1.KV grade, HRPVC insulated, HR-PVC FRLS sheathed armoured copper conductor confirming to IS:1554 (Part 1)		
v	Emergency disc brake system shall work in line with tentative operational philosophy as mention below intable-A. The firm has to develop the PLC program accordingly.		

	TABLE-A		
1	Power supply for emergency disc brake system to be tapped from incoming side of the existing Isolator (ACB/MCCB) Panel.		
2	Even if isolator/ACB is OFF, emergency brake should remain open.		
3	Emergency brake which remains open under following condition:-		
	➤ DSL power is ON		
	➤ Emergency disc brake Actuate push button is not pressed in operator's cabin.		
4	Emergency disc brake will close under following condition :		
	➤ Electrical brake is close and rope drum start rotating in lowering direction.		
	➤ Hoisting command given, rope drum rotating in lower direction.		
	➤ Over speed occurs in drum rotation.		
	➤ Emergency disc brake push button is pressed in operation cabin.		
5	Emergency disc brake system healthy indication to be given on hydraulic panel & in the operator cabin and its interlock for existing main panel shall also be provided.		
6	If emergency disc brake is operated (closed), an alarm hooter (audible) provision shall be provided in operator cabin and trolley.		
7	If emergency disc has operated, push button to reset to make it open shall be provided in hydraulic panel.		

8	<p>For achieving all the above condition, a PLC with CPU, power supply module, necessary DI and DO and counter modules for getting the speed (Encoder Feedback) of the drum is required in ac mounted panel enclosure. Necessary 8 channel relay boards to be incorporated for giving potential free contact. Necessary logic to be incorporated for achieving the above condition. Programming tool (Laptop) along with software and its communication cable along with final PLC program backup to be provided.</p>		
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### **ANNEXURE III**

#### **DECLARATION OF SITE VISIT** (To be filled up by the Bidder)

I, hereby, declare that I have visited the site to understand the site conditions, and acquainted myself with atmosphere prevalent therein. I have also understood the extent of total works involved for this package.

Seal of Company

Signature of the Bidder:  
Name:  
Designation: