



**BHARAT HEAVY ELECTRICALS LIMITED**  
(A Govt. of India Undertaking)  
ELECTRICAL MACHINE REPAIR PLANT  
Plot No.D-1, Cross Road 'C', Road No.16, MIDC, Andheri (East),  
**MUMBAI – 400 093**  
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**NOTICE INVITING TENDER.**

**BHEL/EMRP/PUR/II/211148309**

**Date: 22-09-2014**  
**W.O.No.-70**

M/s. ....  
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.....  
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**Sub: NIT for Repair / Renovation of Presses**

Sealed tender are invited in two bid system for the Renovation of two nos. (1 set), 20 Ton Hydraulic Coil Curing Pressing Machine (Qty. - 1 No.)

**1. Technical Terms & conditions and brief scope of work :**

- 1.1 Proposed scope for Renovation of existing, 20 Ton Hydraulic Coil Curing Pressing Machine.
- a) Design, Manufacture and Supply of New Power Pack consisting of Hydraulic Pumps, Motors, Valves, Pressure Gauges, Oil Level Indicator, etc. This **single power pack** shall be used to operate both the presses.
  - b) Manifold blocks for mounting various valves.
  - c) Header lines for both presses – four vertical and four horizontal separately
  - d) Ball valves for high pressure cylinders
  - e) Hose pipes for connecting header lines with hydraulic cylinders
  - f) Electrical panel of standard design consisting of - contactors, relays, push buttons, pilot lamps, selector switches and **PLC for providing various functions**.
  - g) New external piping
  - h) Hydraulic cylinder overhauling with replacement of seals and 'O' rings.
  - i) Standard components are to be used to facilitate easy replacement.
  - j) Oil will be provided by BHEL as a free issue material during installation.
  - k) The vendor scope of work will include a one year free maintenance including components replacement supplied by vendor.
  - l) Complete design and manufacture of the power pack and other accessories will be carried out by vendor at their works. Only installation will be done at BHEL.
  - m) Hydraulic cylinders will be handed to successful bidder for overhauling.
  - n) Any other related work for completeness of the system.
  - o) Vendors should inspect the presses to fully understand the scope of work and other relevant details.
- 1.2 Acceptance Norms: As per Detail scope of work as per Annexure – I.
- 1.3 The rates should be quoted in Indian Rupee only.

Important Note:

1. The offers of the bidders who are on the banned list, as also the banned list of offers of the bidders, who engage the services of the banned firms, shall be rejected. the list of banned firms available on BHEL site [www.bhel.com](http://www.bhel.com).
2. "MSE suppliers can avail the indented benefits only if they submit along with offer, attested copies of either EM II certificate having deemed validity (two years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with CA certificate (Format enclosed as per Annexure – I) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of EM II is over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE suppliers till the supplier submits these documents."
3. Evaluation Criteria: Price evaluation shall be on the basis of total landed cost to BHEL, EMRP, and Mumbai.

Commercial terms & conditions, General terms & conditions and Procedure for submission of tender is enclosed herewith offer should be submitted strictly in accordance with the same.

Tender Enquiry No. : BHEL/EMRP/PUR/ II/211148309 Date: 22-09-2014  
Tender Submission date : 14.10.2014 up to 2.00 pm.  
Tender Opening date : 14.10.2014 at 2.30 pm. in conference Hall.

Anticipating your reply,

Yours faithfully  
For Bharat Heavy Electricals Limited

  
Sr. Dy. General Manager (MM) 23/9/14

Encl.: As above

## Annexure I

Tender Enquiry No. / BHEL/EMRP/PUR/W/211148309 Date: 22-09-2014

Bidder's Ref No: \_\_\_\_\_

### NO DEVIATION CERTIFICATE

We here by accept and agree to all the Techno-Commercial & general terms & conditions given in the above referred tender enquiry without any deviation.

Authorized Signatory,  
With seal of the company

OR

### PROFORMA FOR DEVIATION TO TENDER TERMS SOUGHT BY BIDDERS

BHEL expects the bidders to fully accept the terms and conditions of the NIT. However, deviations if any considered essential by the bidder may be communicated in the following proforma. Deviation not listed in the following deviation proforma, even if mentioned else where in the offer document shall not be considered

| Sr. No. | Clauses                                       | Accepted | Not Accepted | Deviation | Cost Implication |
|---------|---|----------|--------------|-----------|------------------|
| 1.0     | Technical clause 1.1 to 1.2                   |          |              |           |                  |
| 2.0     | <b>Commercial Clause:</b><br>Price clause 1.1 |          |              |           |                  |
| 3.0     | Price variation clause 1.2                    |          |              |           |                  |
| 4.0     | Validity clause 1.3                           |          |              |           |                  |
| 5.0     | Delivery required clause 1.4                  |          |              |           |                  |
| 6.0     | Delivery place clause 1.5                     |          |              |           |                  |
| 7.0     | L. D. Clause 1.6                              |          |              |           |                  |
| 8.0     | Packing & Forwarding cl 1.7                   |          |              |           |                  |
| 9.0     | Payment terms clause 1.8                      |          |              |           |                  |
| 10.0    | Transportation clause 1.9                     |          |              |           |                  |
| 11.0    | Taxes & duties clause 1.10                    |          |              |           |                  |
| 12.0    | Transit insurance cl. 1.11                    |          |              |           |                  |
| 13.0    | Octroi clause 1.12                            |          |              |           |                  |
| 14.0    | Inspection clause 1.13                        |          |              |           |                  |
| 15.0    | General terms & conditions clause 3.1 to 3.5  |          |              |           |                  |

We confirm acceptance of all other terms and conditions of NIT

Signature of the bidder  
Seal of the company

**Note:** It may be noted that offers with deviation without price implications are liable to be rejected



## Annexure II

Tender Enquiry No.: **BHEL/EMRP/PUR/II/211148309** Date: **22-09-2014**

Bidder's Ref No: \_\_\_\_\_

### **Proforma for Price Bid Part "B"**

| Sl. No. | Description  | Qty.   | Total cost to BHEL as per break up below in Rs. | Total Price |
|---------|--|--------|---|-------------|
| 1.0     | Repair / Renovation of 20 Ton Hydraulic Coil curing pressing machine | 2 sets |   |             |

### **Break-up of above total unit rate:**

| Sl. No. | Description   | Repair / Renovation of 20 Ton Hydraulic Coil curing pressing machine (Rs.) |
|---------|---|--|
| 1.0     | Basic rate for power pack & other accessories as per scope of work. |  |
| 2.0     | Excise duty (Specify rate)  |  |
| 3.0     | CST / VAT (Specify rate)  |  |
| 4.0     | Transportation charges (Specify)                                    |  |
| 5.0     | Installation charges  |  |
| 6.0     | Service Tax on installation   |  |
|         | <b>Total (1+2+3+4+5+6)</b>  |  |

### **Note :**

1. Vendors should clearly indicate the rates of taxes and duties applicable as per above Proforma.
2. Final evaluation shall be carried out after considering CENVAT / VAT credit available to BHEL.

**Authorized Signatory, with  
Seal of company**

**PRE-QUALIFICATION CRITERIA**

Tender Enquiry No.: **BHEL/EMRP/PUR/II/211148309** Date: **22-09-2014**

Bidder's Ref No: \_\_\_\_\_

- 1.0 Bidder should be in the field of design and manufacturing of customer built Hydraulic Presses and systems including integrated Hydraulic, Electrical. List of clients should be supplied with the technical bid.
- 2.0 Bidder should submit copy of at least one PO for the similar job as per 1.0 above on hydraulic system carried out in last three years from the date of bid submission.
- 3.0 Vendor should have the turnover of Rs.25 lakhs in last two years. Copy of the audited balance sheet for the last two years to be submitted.
- 4.0 If the Bidder is register with any BHEL unit for this type of work, the vendor code , name of the unit and PO copies if any to be submitted.

**Note:** Necessary supporting documents should be submitted with Technical Bid

**Submission of documents for pre-qualification criteria:**

| Sl. No. | Description                            | Remarks                   |
|---------|--|---------------------------|
| 1.0     | Client List                            | Submitted / Not submitted |
| 2.0     | One PO copy for similar work           | Submitted / Not submitted |
| 3.0     | Balance sheet for last two years       | Submitted / Not submitted |
| 4.0     | BHE vendor code, unit, PO copy, if any | Submitted / Not submitted |

1.0 **COMMERCIAL TERMS AND CONDITIONS**

- 1.1 **Price:** Price should be quoted for complete scope of work...
- 1.2 **Price variation clause:** Price offered should remain firm till the completion of the work and handing over...
- 1.3 **Validity:** Your offer should be valid for a period of 60 days from the date of opening of the Techno-Commercial Bid extendable further for 30 days.
- 1.4 **Delivery Required:** Specified delivery within **12 weeks** from the date of issue from the date of issue of P.O. / LOI. Earlier delivery will be preferred.
- 1.5 **Delivery Place:** Free delivery to our stores at BHEL, EMRP, MIDC, Andheri (E), Mumbai-400 093.
- 1.6 **L D Clause:** LD @ 0.5%per week shall be deducted from the bill subject to maximum of 10% of the basic price, if the work is not completed within the contractual delivery period as per purchase order.
- 1.7 **Packing & Forwarding:** Vendor should duly pack all the material in wooden boxes to avoid any damage during transit.
- 1.8 **Payment Terms:** Our standard payment terms are **90 days, (45 days for MSMED Vendors)** from the date of completion and acceptance of the work.
- Payment will be made through e-payment only. Vendor shall submit bank details if not submitted earlier.
  - Deviation in the payment terms is not accepted.
- 1.9 **Transportation:** Transportation of the material is in vendors scope. The quoted prices should be inclusive of transportation. However, vendor may choose to quote the transportation cost separately in the price bid.
- 1.10 **Taxes & Duties:** Bidders to clearly specify the taxes and duties applicable on the date of submission of offer. However, any statutory variation in the rates and taxes and duties shall be considered and actual rates applicable at the time of dispatch of material shall be payable at actual against documentary evidence.
- 1.10.1 **Excise Duty:** Excise duty shall be paid as applicable against CENVAT / Excisable invoice, for evaluation of bid, prevailing rates will be considered.
- 1.10.2 **Sales Tax:** Extra at actual against Form 'C' shall be paid wherever applicable for outside Maharashtra suppliers. For suppliers within Maharashtra, VAT shall be paid as applicable against Tax invoice. For evaluation of bid, prevailing rates will be considered.
- 1.11 **Transit Insurance:** Material shall be insured by vendor .
- 1.12 **Octroi Charges:** Octroi, Octroi service charges OR any other Octroi related charges at Mumbai, as applicable, shall be borne by vendor . .
- 1.13 **Inspection:** Material will be inspected at vendors work by BHEL before dispatch or on receipt of material at our works..
- 1.14 **Evaluation criteria :** Price will be evaluated based on the landed cost to BHEL .



**2.0 PROCEDURE FOR SUBMISSION OF TENDER**

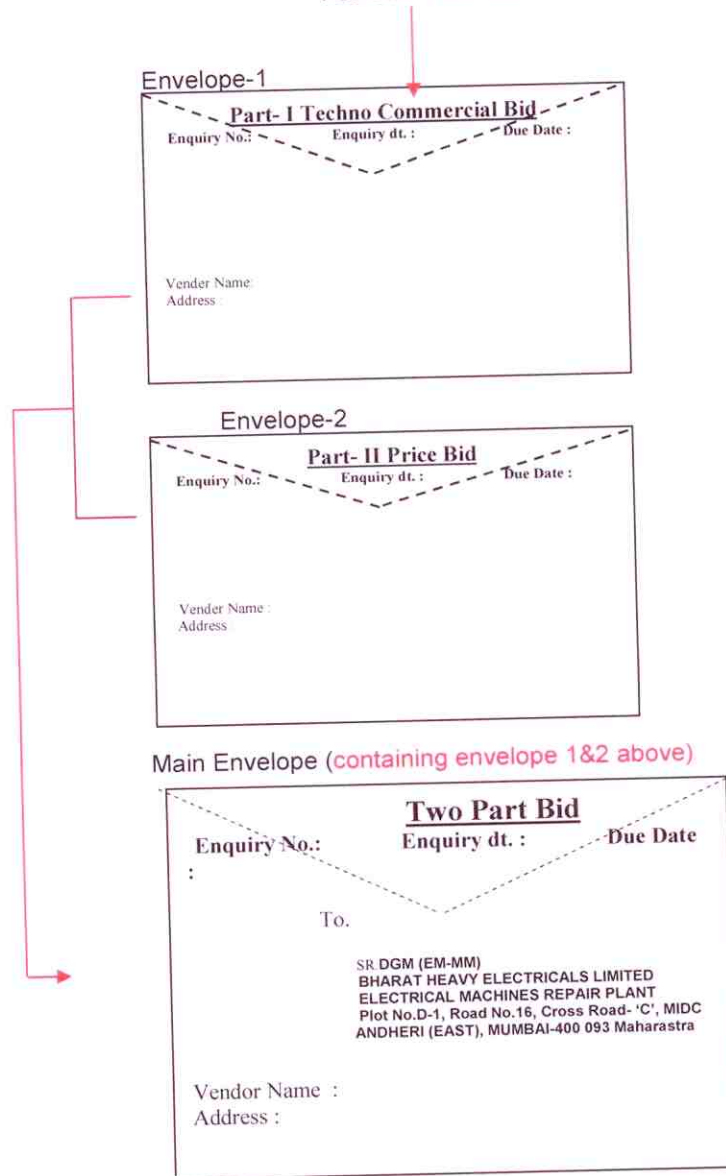
- 2.1 Bidder shall submit the offer in two bid system in two different sealed covers.
- 2.2 Part 'A': Techno-Commercial Bid
- 2.3 Part 'B': Price Bid
- 2.4 Tender No., date and due date of opening should be written on both the covers.**
- 2.5 These two covers shall then be placed in a large cover and sealed. The large cover should also have Tender no., Date and Due Date. This should be dropped in the tender box placed at the entrance of our works before due date and time.
- 2.6 **Part 'A': Techno Commercial Bid:** Techno Commercial Bid shall contain technical and commercial offer as per NIT Proforma, indicating acceptance of NIT terms, as per Annexure-I. Acceptance of all technical and commercial terms and conditions given in the format Annexure I. (No Deviation certificate and deviation Proforma), duly filled in signed as required. Blank price-bid proforma indicating only rates of taxes and duties applicable without rate / price of material should be enclosed with the techno-commercial bid Part A
- 2.7 Any deviation in the above mentioned terms and conditions or conditional offer may render the offer invalid and shall be liable to be rejected, and price bid of such bidders shall not be opened. Price bid of only those bidders shall be opened whose Techno-Commercial offer is found suitable and acceptable.
- 2.8 **Part 'B':** Price Bid Part B should contain only the price duly filled in Price Bid Proforma Annexure II, without any terms and conditions. Any terms and conditions, if mentioned in the price bid, shall be ignored and not considered.

**3.0 GENERAL TERMS AND CONDITIONS**

- 3.1 BHEL reserves the right to reject the offer and or award the work in full or part without assigning any reason.
- 3.2 Tender should be free from over writing and erasers, additions if any must be attested.
- 3.3 Purchase Order will be subject to general conditions of purchase prevailing in Bharat Heavy Electricals Limited.
- 3.4 Any dispute arising out of this shall be referred to the sole arbitration of Unit Head, BHEL, EMRP, Mumbai OR any other officer nominated by him and his award shall be final and binding on the parties. The venue of the arbitration in all cases shall be Mumbai.
- 3.5 All suits in respect of this NIT shall be in the courts of Mumbai.

  
29/14  
Sr. Dy. General Manager (MM)

## SUBMISSION OF TENDER For Two Part Bid



**Sealed envelope should reach addressee on or before 02:00 p.m. of Enquiry Due Date**

### PROCESS:-

- On the due date, after 2:00 pm, the main envelope containing the other two sealed envelopes would be opened. Thereafter, the envelope containing the techno – commercial bid (part – I) would be opened.
- The price bid envelope would be kept sealed which would be opened at a later date for only those suppliers who would qualify in the techno commercial bid. During scrutiny of offer, suppliers are supposed to reply for clarifications, if asked, within a week's time.
- The bids shall be evaluated on total delivered cost to BHEL (HESG rate).
- The offers shall also be suitably loaded for any deviation from the Terms & Conditions to arrive at the HESG rate.

*[Signature]*  
23/9/14  
Sr. Dy. General Manager (MM)



## **BEMCO 20 Ton 4-HEAD DUAL RAM COIL CURING PRESS**

### **Scope of work**

The proposed Repairing is to be done using the existing fabricated bed, rack & pinion based head traverse arrangement

**New Power pack:-** The tank capacity should be around 250 litres and should be provided with suitable water based chiller unit. The working pressure of hydraulic power pack should be around 250 bars.

New hydraulic power pack consisting assembly of following

- 1) One no high pressure hydraulic piston pump (6.5 ltrs/min.x300 bar)
- 2) One no low pressure hydraulic gear pump (12 ltrs./min.x150 bar)
- 3) One no Electric motor rating 5 HP / 415 volts/50 hzs.
- 4) Bell housing connecting electric motor and high pressure pump
- 5) Extension bracket connecting high pressure pump and low pressure pump
- 6) Oil tank of 150 ltrs. Cap. with accessories i.e. oil level indicator, drain plug, pressure gauges etc.
- 7) Manifold block mounting separate solenoid valves to unload the high pressure and low pressure pumps. The low pressure pump will operate up to 150 kg/cm<sup>2</sup> and then the high pressure pump will operate up to 280 kg/cm<sup>2</sup>.
- 8) Oil water heat exchanger of suitable cap. To keep oil temperature within limit.
- 9) Return line filter.

All hydraulic valves and pumps will be of polyhydron, yuken, supremo or equivalent ISI make.

#### **A) Manifold Block (MBI):-**

Mounting various valves for set A (consisting of 4 Horizontal, 4 Vertical cylinders as under.

\* Two nos. double solenoid operated direction control valves to control movement of all horizontal and vertical cylinders. The 4 vertical cylinders will be controlled by single valve and 4 horizontal cylinders will be controlled by another valve.

\* Pressure holding type pilot operated check valve will be provided in cylinder forward lines for vertical cylinders and horizontal cylinders separately.

\* Two nos. pressure transducers will be provided one each in the forward line of horizontal and vertical cylinders respectively to monitor the pressure.

#### **C) Manifold Block (MBI):-**

Manifold block mounting various valves for set B (consisting of 4 horizontal and 4 vertical cylinders) as under

\* Two nos. double solenoid operated direction control valves to control movement of all 4 horizontal and 4 vertical cylinders. The 4 vertical cylinders will be controlled by single valve and 4 horizontal cylinders will be controlled by another valve.

\* Pressure holding type pilot operated check valve will be provided in the cylinder forward lines for vertical cylinders and horizontal cylinders separately.

\* Two nos. pressure transducers will be provided one each in the forward line of horizontal and vertical cylinders respectively to monitor the pressure.

#### **D) Header Lines:**

Header lines will be provided for 4 vertical and 4 horizontal cylinders separately for both machines set A & B for forward as well as reverse lines of the cylinders.

The beds of both the presses have been matched & aligned, so as to enable pressing of Diamond/ Hydro generator coils.

**E) Ball Valves:-**

High pressure ball valves will be provided to isolate individual cylinders as per requirement.

**F) Hose pipes:-**

Hose pipe connecting the header lines with hydraulic cylinders will also be provided.

**G) Electrical panel:-**

The press will be operated through electrical control panel which will consist of push buttons, pilot lamps, selector switches, emergency stop etc. Temperature controller will be provided with contactors to control the temperature of vertical and horizontal heaters. This control panel will be standard design having contactors and relays suitable for operating input voltage of 415 volts AC. Suitable PLC will be provided for operating the various functions of the press.

**Cycle operation of machine:-**

- On pressing cycle start push button on the control panel vertical and horizontal rams will start moving down and forward until set pressure PS1 is reached. (PS1 is settable on PLC / HMI which is called low pressure or hold on pressure. in case of tandem operation both A and B machines will start simultaneously in cycle operation)
- After attaining set temperature T1, i.e. low temperature setting (normally 110 C) signal will be given for high pressure as per preset value (200 bar.) and heating will remain continue up T2 temp. setting (high temperature setting) which is normally 160 C. After attaining the said high temperature, actual constant temperature and pressure cycle starts which is preset by timer (PLC) which is normally 2 to 3 hrs.
- After completion of this preset curing cycle the cooling on signal will be given and water cooling will be started till preset time. Then air flow signal will be given to wipe out remaining water in planterns.
- On completion of water cooling and air flow total cycle will complete and give the Alarm indication to operator for removing the coil manually for repeating the next cycle.

Separate heaters control will be provided for horizontal and vertical heaters for both A and B machines (total 4 nos. planterns)

. On pressing cycle start push button again similar cycle will be repeated. Machine A and B will be controlled separately through single control panel placed on the side of the machine. The sequencing of all the operations is to be done by a common PLC. There should be flexibility for any change in function of the cycle is required.

**Electrical Accessories:-**

- 1) Switchgear:- Siemens, L&T, Schneider or equivalent
- 2) Limit switches :- BCH, Teknik, Brisk, JAI or equivalent
- 3) Selector switches:- Selec, JAI or equivalent
- 4) Timers, TIC', Selectron or equivalent
- 5) Push buttons, Pilot lamps:- Technic or equivalent
- 6) PLC :- Selectron, Unitronics, Omron, Delta or equivalent



**Note:-**

**External piping and wiring: -**

New piping will be done on the machine and power unit including new hose pipes, ball valves and fittings. New wiring will be done for existing heaters.

**Hydraulic cylinders overhauling:**

Existing hydraulic cylinders will be overhauled. oil seals and O rings will be changed with new.

Complete painting of the press with heat resistance paint of Opaline Green color.

Any other work needed to ensure satisfactory operation of the presses as per standards and process cycle specification.

Vendor should inspect the presses and fully understand the operation and technical requirements.

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