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भारतीय रेलवे (ग्रुप कंपनी)  
**MATERIAL MANAGEMENT (PURCHASE)**  
भारतीय रेलवे (ग्रुप कंपनी), भारतीय रेलवे कार्यालय (भारत)  
**CENTRAL FOUNDRY FORGE PLANT, BHEL HARDWAR**  
भारतीय रेलवे, केंद्र (भारत)  
**RANIPUR, HARIDWAR (INDIA) – 249403**  
Phone No. +91-1334-285326/284548, FAX No. 225892  
e-mail : s\_kumar@bhelhwr.co.in

M/S

**Sub:** Tender Enquiry No: 3253/P/360/7/2249f/1 due on 04<sup>th</sup> June'2008 at 2.00 P.M.

Dear Sir,

We are pleased to invite offer as per enclosed specifications, drawings with terms and conditions in sealed covers for the under mentioned items.

SI No	Tender No	Description of Material	Qty Nos	Date & Time of Opening
01	3253/P/360/7/2249F/1	Re-conditioning of 7500/9000T Forging Press		04 <sup>th</sup> June'2008 2.00 P.M.

**KINDLY READ TERMS AND CONDITIONS. OFFER NOT IN ACCORDANCE WITH THE INSTRUCTIONS IS LIABLE TO BE DISQUALIFIED AND OR IGNORED.**

PLEASE VISIT [www.bhel.com](http://www.bhel.com) or [www.bhelhwr.co.in](http://www.bhelhwr.co.in) for more details and tender documents.

Thanking You,

Yours Faithfully,  
For & On behalf of CFFP BHEL Hardwar

(Sunil Kumar)  
Sr. Manager (Pur)

**Note:** Corrigendum if any shall not be published, kindly refer web for any changes.





ANNEXURE TO INDENT NO.360972249 DATED 07.03.2008

ANNEXURE-A

## GENERAL TERMS AND CONDITIONS OF TENDER ENQUIRY

### **1. Submit the tender in two parts i.e.**

**Part-I            Techno-Commercial Bid**  
**Part-II           Price Bid**

Techno-Commercial (part one) & Price Bid (part two) should be put in separate sealed envelopes. Both envelopes should be super scribed with **Tender Number, Date of Opening & Technical / Commercial Bid and Price Bid** respectively along with name of firm.

Both the envelopes i.e. containing Techno-Commercial Bid and Price Bid should again be kept in one envelope super scribed again with Tender No. and Date of Opening and the name of firm submitting the tender and sent by Registered A/D post to **SDGM(MM), Purchase Department ,CFFP ,BHEL ,Ranipur ,Hardwar 249403,Uttarakhand, India**

The bidder can download the technical and commercial specifications from our website: [www.bhelhwr.co.in](http://www.bhelhwr.co.in) or [www.bhel.com](http://www.bhel.com), other than the relevant drawings. Those who are downloading has to get the relevant drawings only after payment of Rs. 10000/- (Rupees Ten thousand only) for indigenous bidders and US \$250 (Two Fifty only) for foreign bidders as the relevant tender fees. Others can pay the tender fees of Rs. 10000/- and buy the documents.

1.1 PART-I (TECHNO-COMMERCIAL BID) shall comprise of the following documents :-

Part-I- Envelopes super scribed with **Techno-Commercial Bid** must contain all information especially:-

- Specification of the material offered should be strictly as per CFFP/BHEL specifications of Enquired material in tender documents. **Deviations if any must be indicated clearly in the offer .**
- All commercial terms i.e. packing, forwarding, Custom Duty ,Additional Duty , ST/STT/VAT/CST, Excise duty/CVD , Bank Charges, payment terms & Insurance etc as applicable should be clearly mentioned **except Price** .Also mention present rate of applicable taxes & duties even if inclusive in rates.
- Confirm to submit all required commercial documents (tax invoice, CENVATable duplicate copy of invoice, packing list, transit sale agreement etc.)& technical documents (TC/GC/QP etc.)
- Registration Numbers of SSI, Central Excise, Sales tax, Income tax, DGS & D, ECC etc.
- Un-priced copy of Price Bid** (i.e. Annexure I, confirming supply of all materials as per specification)

Part-II - Envelopes super scribed with **Price Bid** should contain **priced copy of Price Bid**.  
**The price should be mentioned both in figures and words.**

### **2. PART II (PRICE BID)**

The price bid with price in two sets (one original + one copy) in separate envelope for the complete scope as specified in the price format attached in Annexure - I.

2.0 Prices should be quoted as under :



## ANNEXURE-A

### 2.1 For Imported

a) FOB Dispatching Port & Country to be mentioned. The foreign bids are to be compared on FOB basis, when the freight rates from the port of shipment are same as per BHEL rate contract. However, foreign bids have to be compared on CIF Mumbai port basis, when the port of shipment is different. For this purpose, the freight rate as per BHEL's rate contract with Shipping Corporation of India shall be taken into account.

### b) For Indigenous - FOR Destination

1. Transportation & Transit Insurance to be taken care of by Vendor.
2. Applicable Sales Tax, Excise duty and any other statutory levy should be indicated separately and clearly in the quotation. The comparison between foreign and indigenous bid shall be done based on the landed price basis (FOR Destination). When indigenous bidders do not quote "FOR BHEL" basis, the freight rates as per BHEL's transport contract shall be taken into account.

2.2 Part-I containing techno-commercial part will be opened on the date and time specified in the covering letter in the presence of those tenderers who wish to attend.

2.3 BHEL reserves the right to open the price bid (Part-II) along with the opening of techno-commercial offer at its option.

2.3.1 The part II Price Bid along with supplementary price bid if necessary will be opened at a later date for those bidders whose techno-commercial bids have been found acceptable.

Note: Authorized signatory should authenticate all tender documents.

**3. Techno-commercial bid ( Part-I )** will be opened on the due date at 2.00 PM. In the presence of participating vendors or authorized representatives, who may wish to be present. Representative deputed to witness tender opening must produce an authority letter from the signatory of offer. After evaluation of technical bids & finalization of technical, commercial terms & condition, price bid of only successful vendors will be opened. Priced bid opening date will be intimated separately.

4. The material offered must conform to the required BHEL specifications and drawings as well as instructions and details made available.

### **5. Qualification/ Eligibility:**

The Quotation should be from the supplier who has the Minimum Qualification Requirements as below : (The documentary evidence of bidders qualifications to bid shall establish to the BHEL's satisfaction that the bidder has the required experience and qualification to perform the contract)

- a) The bidder shall have designed, engineered, supplied, erected, commissioned, reconditioned/modernised Hydraulic Forging Press of capacity of 3000Tons and above and Oil Hydraulic Manipulator 25T or higher size in India or abroad which are in successful operation for a period of not less than 2 years. The bidders shall furnish the names of such projects, year of order, time of completion, scope of work, customer name, estimated project value, direct contact number and qualification data of sub vendors.
- b) The bidder must provide all necessary data such as the type, capacity and duty conditions and the name of the manufacturers etc. in respect of each of the major equipments installed , including but not limited to those mentioned above as part of the bid.
- c) Established quality assurance systems to achieve high levels of equipment reliability, both during the manufacturing and the field installation activities.



## **ANNEXURE-A**

- d) No anticipated change in the ownership during the proposed period of work is foreseen. If such a change is anticipated, the scope and effect thereof shall be defined.
- e) The bidder should have adequate financial stability and status to meet the financial obligations pursuant to the scope of the work. The bidder shall submit copies of their profit and loss accounts and balance sheets for the last three years. The Vendor must submit the annual reports giving the audited profit or loss account and balance sheet for last three financial years with year ending 31.03.07.
- f) As the work will be given on a single party on package basis for total responsibility, the parties who are confident enough to do the total work only are requested to quote.

### **6. Evaluation of Bids:**

#### **Preliminary examination of bids:**

- a)- The CFFP/ BHEL will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required security have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.
- b)- Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price, which is obtained by multiplying the unit price and quantity, or between subtotal and the total price, the unit or subtotal price shall prevail, and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail. If the Bidder does not accept the correction of errors, the bid will be rejected and the bid security will be forfeited.

#### **6.1 Conversion to Single Currency:**

CFFP/ BHEL will convert all prices expressed in US Dollars or Euro in to Indian Rupees at the selling exchange rate in India on the date of bid opening.

#### **6.2 Technical Evaluation:**

The CFFP/ BHEL will carry out a detailed evaluation of the bids to determine whether the technical aspects are in accordance with the requirements set forth in the bidding documents. In order to reach such a determination, the CFFP/ BHEL will examine the technical aspects of the bids on the basis of the information supplied by the bidders, taking into account the following factors:

- a- Overall completeness and compliance with the Technical Specifications and Drawings; deviations from the Technical Specifications as to the bid; suitability of the facilities offers in relation to the environment and climatic conditions prevailing at the site; and quality, function and operation of any process control concept included in the bid. The bid that does not meet minimum acceptable standards of completeness, consistency and detail will be rejected for non-responsiveness.
- b- Undertaking for performance guarantee/ restoring of the specified original performance criteria laid down in the given scope of supply, erection and commissioning as per Annexure-I, II & III to be furnished by the bidder and will form part of the technical evaluation.

#### **6.3 Work, services, facilities etc are to be provided by CFFP/BHEL:**

Services facility like oxygen, water, air, cranes, electrical supply will be provided by CFFP/ BHEL.

#### **6.4 The bidder to indicate the skilled & unskilled laborers, the number in each category to CFFP/ BHEL, so that BHEL can provide the same for dismantling, erection & commissioning.**

A complete set of Bidding documents may be purchased by any interested Bidder on submission of a written request along with a payment (non-refundable) of the cost of tender documents as mentioned at clause above in form of a **Crossed Account payee Demand Draft in favor of CFFP, Bharat Heavy Electrical Limited, Hardwar payable at State Bank of India, Ranipur, Hardwar**. Issuance of bidding documents to any bidder shall not be construed that such Bidder is considered to be qualified to any Bidder shall submitted and opened at the address given below in the presence of Bidders representatives who choose to attend.



## ANNEXURE-A

**7. Original Test Certificate & other related Documents** from the Manufacturers or Government or Recognized Houses shall have to be produced as applicable without any extra cost. This may please be clearly confirmed in the quotation without which the offer may not be considered.

**8. Validity** of offers should be minimum of **180 working days** from the date of Tender (Techno-Commercial Bid) opening.

**9. Delivery** in the promised period is the essence of contract. Confirm to supply according to delivery schedule mentioned (Refer Annexure B)

**10. Payment Term** preferably should be within 30 days after receipt and acceptance of material through e-payment.

**11.** CFFP/BHEL Hardwar reserves the right to accept or reject any or all tenders without assigning any reason there of.

**12.** Tenders not submitted in the prescribed manner are likely to be ignored/ rejected.

**13. Agent /Agency Commission:** Payment of any kind at any stage will not be made to Agent on account of agent commission or otherwise by CFFP BHEL Hardwar.

**14**CFFP, BHEL, HARIDWAR may opt for **E-auction/Reverse auction** for obtaining best prices for part or full Tendered Quantity.

**15.** Please do intimate the personal contact details like Mobile Number, Email-Id, etc of authorized executive for correspondence.

**16. Penalty:** Orders placed against this Enquiry will be subject to normal clauses for imposing Penalty, Liquidated Damages, Risk purchases, cancellation, arbitration as per terms and conditions of Purchase Orders in case of delay in effecting supply and or other defaults.

**17. Inspection:** CFFP BHEL Hardwar inspection after receipt shall be final and binding. BHEL may inspect at Vendor's work also. BHEL may nominate any testing house for inspection .The report shall be final and binding to both concerned .In case store is found defective during warranty period,the same will be returned for repair (if not possible in India by Vendor) and or replacement .For this Vendor has to bear all the charges such as Freight ,i.e. to and fro ,insurance etc .Bank Guarantee for the equal amount to the cost of the item is to be furnished by Vendor. In case the repair is done at CFFP/BHEL the amount on actual shall have to be reimbursed by the Vendor and or adjusted on actual from their Bill.

**18. Security Deposit and Performance Bank Guarantee** is must .The percentage of both proposed (Annexure B) if decreased the % of decrement than that proposed shall be loaded on Landed Cost Calculation .The minimum % acceptable shall be decided by CFFP/BHEL beyond which offer may be rejected .

**19.Disputes :** In event of any dispute arising out of Contractual obligation ,the order being finalized at Hardwar ,India will be subject to Indian Laws and falls under jurisdiction of the Court

of Law at New Delhi ,India .The overseas supplier hereafter referred to as "Vendor" shall therefore ,abide by the verdict of Court of Law at Hardwar ,India as may occur .

-OR-

All disputes arising out of or in connection with the present contract, if any, shall be finally settled under the rules of arbitration of International Chamber of commerce by one or more arbitrator appointed in accordance with the said Rules in India.

**ACCEPTANCE OF COMMERCIAL TERMS BY BIDDERS:**

NAME OF VENDOR:

TENDER ENQUIRY NO:

DESCRIPTION	VENDOR'S CONFIRMATION
<p>1) <b><u>PAYMENT TERMS:</u></b></p> <p><b>I .Material Supply:</b></p> <p>a. Advance payment ..... = Nil</p> <p>b. Material supply ..... = 70%</p> <p>c. After successful completion of erection and commissioning and = 30% and final acceptance (as per clause 25 of Annexure-III) and on submission of 10% performance bank guarantee, valid up to Performance Guarantee period (Eighteen Months from the date of final acceptance). The Completion Certificate will be issued by Maintenance &amp; Services Deptt. for release of payment.</p> <p><b>II. Supervision Charges for Dismantling, Erection &amp; Commissioning</b></p> <p>1. After final acceptance (as per clause 25 of Annexure-III) =100%</p>	
<p><b><u>L/C Schedule Only applicable for foreign bidders, No L/C to be opened for the Indian bidder</u></b></p> <p>1.1 First part (payment terms I, clause 1.0) of L/C to be established 30 days prior to scheduling delivery period for 70% material value.</p> <p>1.2 Second part (payment terms II, clause 1.0) and balance 30% of material supply L/C to be opened after confirmation of deputation of people for erection and commissioning.</p> <p>1.3 L/C processing charges on either side. L/C extension charges if any to be borne by the beneficiary.</p> <p>1.4 Charges for L/C confirmation if asked for will be borne by the beneficiary.</p> <p>1.5 <b><u>LOADING ( IF ANY TERM OF THIS ANNEXURE IS NOT AGREED BY VENDOR) WILL BE AS FOLLOWS:</u></b></p> <p><b>Loading: Advance amount, if any (Amount X):</b>1.5% per month for the quoted delivery period for the amount 'X'</p> <p><b>Say Payment at the time of dispatch against shipping/dispatch documents (Amount Y):</b>"1.5% per month for the amount X+Y exceeding 70% of contract value i.e. 1.5% of (X+Y-0.7Z) where Z is the contract value".</p> <p>In case any bidder does not accept any of the condition at (a) to (c) above then, their offer is likely to be rejected by BHEL and technical bid will not be processed, and no correspondence in this regards will be entertained.</p>	



**ANNEXURE B**  
**VENDOR'S**  
**CONFIRMATION**

DESCRIPTION	VENDOR'S CONFIRMATION
1.6 <b>P.B.G. TERMS:</b> Performance Bank Guarantee to be submitted on the prescribed format equal to the value of 10% of the total order value valid for agreed WARRANTY/GUARANTEE period. This bank guarantee, in the format to be prescribed by BHEL, shall have to be submitted before release of last balance payment.	
1.7 <b>CURRENCY OF PAYMENT:</b> Mention the currency in which payment has to be made (Only for Foreign Supplies).	
1.8 <b>FOR INDIGENOUS SUPPLY:</b> For indigenous supply the currency shall be Indian Rupees	
1.9 <b>SUPERVISION CHARGES:</b> * <b>For Indian Suppliers:</b> It should be quoted in Rupees. <b>For Foreign Suppliers:</b> If supervision is being carried out by persons residing in India, it should be quoted in Indian Rupees	
1.10 <b>TAXES:</b> All statutory taxes, if any, will be deducted at source & to be borne by the beneficiary. Tax deduction certificate shall be issued at the end of financial year if required.	
2.) <b>SECURITY DEPOSIT:</b> Vendor has to submit security equal to the amount of 10% of the total order value in the currency of order within one month of receipt of order in the form of Bank Guarantee in BHEL format valid for two months beyond shipment.	
2.1) <b>EMD</b> will be Rs. 200000/- (Indian Rupees) or equivalent applicable currency. (The bids without accompanying EMD will not be considered for evaluation). EMD shall be converted into part of the security deposit for the successful tendered. EMD of the unsuccessful tendered will be returned. EMD to be in the form of <b>Crossed Account payee Demand Draft in favor of CFFP, Bharat Heavy Electrical Limited, Hardwar payable at State Bank of India, Ranipur, Hardwar or electronic transfer.</b>	
2.2) <b>SUBMISSION OF BANK GUARANTEE :</b> All bank guarantees for security deposit as well as for performance should be from one of the BHEL consortium banks and the bank guarantee should be in the Performa prescribed by BHEL.	
3) <b>PENALTY FOR LATE DELIVERY:</b> Penalty shall be applicable for delayed delivery @ 0.5% per week and part thereof subject to a maximum of 10% for total P.O. value. <b>3.1 LOADING ON PENALTY FOR LATE DELIVERY IF NOT AGREED BY VENDORS ON ABOVE TERMS:</b> If any vendor does not accept the LD @ of 0.5% per week and part thereof subject to a maximum of 5% of total PO value, their offer will be ignored. Vendors accepting LD terms different from the proposed terms of 0.5% maximum 10% will be loaded @ %age deviation from the range of 10% on their prices (FOB for imported and ex-factory for indigenous). If the vendor does not accept as above their offer is likely to be ignored and technical bid will not be processed.	

\*(Free boarding, lodging and local transport only for experts will be provided by BHEL) (skilled/unskilled manpower will be provided by BHEL)

**ANNEXURE B**

<b>DESCRIPTION</b>	<b>VENDOR'S CONFIRMATION</b>
<p><b>- 4) DELIVERY OF THE EQUIPMENT:</b></p> <p>- Design, approval of scheme/Drawings, procurement and supply &amp; dispatch of all components to CFFP/ BHEL, Hardwar, India.= 10 months from the date of Order.</p> <p>- Dismantling, erection, commissioning and proving out= 4 months (This four months shall be mutually agreed between CFFP/BHEL and the successful bidder, depending on the production schedule of CFFP)</p>	
<p><b>5) BEGINNING OF THE WORK ORDER EXECUTION:</b></p> <p>The successful bidder shall start the process (after paying the security amount) of execution of the contract with in 30 days of awarding of the works order. Failing which the work order shall stand cancelled and the bidder has to forfeit the EMD.</p>	
<p><b>6) SETTLEMENT OF DISPUTES:</b></p> <p>In event of any dispute arising out of Contractual obligation ,the order being finalized at Hardwar ,India will be subject to Indian Laws and falls under jurisdiction of the Court of Law at New Delhi ,India .The overseas supplier hereafter referred to as "Vendor" shall therefore ,abide by the verdict of Court of Law at Hardwar ,India as may occur .</p> <p style="text-align: center;">-OR</p> <p>All disputes arising out of or in connection with the present contract, if any, shall be finally settled under the rules of arbitration of International Chamber of commerce by one or more arbitrator appointed in accordance with the said Rules in India.</p>	
<p><b>7) AUTHORIZATION OF PRE-INSPECTION:</b> BHEL is authorized to pre inspect the material at works. The material will be dispatched only after getting clearance form BHEL.</p>	
<p><b>8) DRAWING / DATA APPROVAL:</b> Any drawing / data approval required from BHEL after placement of order shall be the responsibility of the vendor and any delay on account of the same shall be the responsibility of the vendor and have no bearing on the penalty applicable.</p>	
<p><b>9) DRAWING/DESIGN/ INFORMATION USE:</b> The vendor will have to give an undertaking that the drawing / design / information enclosed with the enquiry / proposed order will not be parted to any agency and will also not be used for manufacturing for any other customer.</p>	
<p><b>10) 5 SETS OF O&amp;M MANUAL/ DRAWINGS (HARD COPY AND SOFT COPY i.e. IN CD):</b></p> <p>5 sets of operations and maintenance manuals/ drawings (hard copy and soft copy i.e. in CD) shall have to be supplied along with the equipment. Final payment will be released only after receipt of the required documentation, final acceptance criteria fulfilled as per clause 25 of Annexure III and issue of Completion Certificate by Maintenance &amp; Services Department of CFFP.</p>	

**ANNEXURE B**

<b>DESCRIPTION</b>	<b>VENDOR'S CONFIRMATION</b>
<p><b>11- DEPUTATION OF EXPERTS FOR ERECTION AND COMMISSIONING:</b> i- Time period for erection and commissioning: Vendor will have to ensure deputation of their people for erection with in 7 days of intimation. In case of delay BHEL will be within their rights to get the job completed at the risk and cost of supplier. ii- The vendor will ensure the deputation of their engineers for attending to any complaints during the guarantee period within seven of the complaint, failing which BHEL will take up the job and completed the dame at suppliers cost.</p>	
<p><b>12) PURCHASING OF BOI ITEMS:</b> The BOI should be from a reputed vendor and a list of all such vendors giving details such as contract person, phone-fax no and complete address should be part of the offer for future requirement of BHEL</p>	
<p><b>13) THE TOTAL WEIGHT OF THE CONSIGNMENT:</b> Total weight- Gross/ Net in Kg. (This is essential to arrive the freight from the port of shipment.</p>	
<p><b>14) TOOLS AND SPARES:</b> Special tools and recommended spares required.</p>	
<p><b>15) TRAINING:</b> Vendor shall provide required training to BHEL personnel at their works / at OEMs works for all major subsystems like hydraulic/Electronic Subsystems) free of cost. Vendor shall also provide on the machine training for operation and maintenance to BHEL employees at BHEL after successful erection and commissioning.</p>	
<p><b>16) WARRANTY/ GUARANTEE:</b> 18 months from the date of final acceptance.</p>	
<p><b>17) CONTACT DETAILS:</b> Details of Contact person Name, Designation, Department complete postal, E-mail address &amp; Fax no, phone, Mobile no. to be mentioned.</p>	
<p><b>18) VALIDITY:</b> Validity of the offer should be 180 days from tender opening.</p>	
<p><b>19) BANK CHARGES:</b> Bank Charges to be borne by vendor.</p>	

**Note:**

- a- Loading shall be applicable for any deviation in commercial terms viz payment terms, PBG etc. for the amount/period not agreed.
- b- Attach separate sheet for additional information if necessary. The above terms & condition supersedes the terms & conditions found contract.



**ANNEXURE C**

**LIST OF CONSORTIUM BANKS:**

1. State Bank of India  
CAG Branch,  
10-th Floor, Vijaya Building,  
Barakhamba Road,  
New-Delhi-110001
2. Canara Bank  
74, Janpath,  
New-Delhi-110001
3. Punjab National Bank  
74, Janpath,  
New-Delhi-110001
4. Bank of Baroda  
Corporate Banking Branch,  
11<sup>th</sup> Floor, BOB Building,  
Sansad Marg,  
New-Delhi-110001
5. Deutsche Bank  
Tolstoy Marg,  
New-Delhi-110001
6. State Bank of Hyderabad  
Surya Kiran Building,  
K. G. Marg,  
New-Delhi-110001
7. State Bank of Mysore  
Antriksh Bhawan,  
K. G. Marg,  
New-Delhi-110001
8. State Bank of Mysore  
Industrial Finance Branch,  
Ramanashree Arcade,  
MG Road,  
Bangalore-560001
9. State Bank of Travancore  
Travancore House,  
IF Branch, K G Marg,  
New-Delhi-110001
10. HDFC Bank Ltd  
5<sup>th</sup> Floor, HT House,  
K G Marg,  
New-Delhi-110001
11. CITI Bank N A  
Jeevan Vihar Building,  
Sansad Marg,  
New-Delhi-110001
12. Standard Chartered Bank  
H2 Block, Connaught place,  
New-Delhi-110001
13. ICIC Bank Ltd.  
ICIC Tower,  
Bisham Pitamah Marg,  
Pragati Vihar,  
New Delhi 110003
14. IDBI Bank Ltd.  
19, K G Marg,  
Surya Kiran Building,  
New-Delhi-110001
15. HSBC Ltd.  
ECE House,  
28 KG Marg,  
New-Delhi-110001



**ANNEXURE TO INDENT NO.360972249 DATED 07.03.2008**  
**TECHNICAL SPECIFICATION AND PRICE FORMAT**  
**SCOPE OF SUPPLY, DISMANTLING, ERECTION & COMMISSIONING FOR MODERNISATION/RECONDITIONING OF**  
**7500/9000T PRESS AND 32-65T/65mT MANIPULATOR IN HEAVY FORGE SHOP (CFFP) BHEL HARDWAR INDIA**

In general the specification includes Design, Selection of Material, Supply, Dismantling (of old components), Erection & Commissioning, including any auxiliaries, accessories and interface circuit elements (including special cables as needed), required for interfacing with the control system and also including any special tools required for installation, dismantling and maintenance of the equipment/assembly/subassembly. All steel made mechanical materials should be such that they should be able to operate in hydraulic medium as pure water. All press control unit valves of Main control, step control, switch control, Table control & Intensifier control material should be of Forged Aluminum Bronze. All field devices like limit switches, transducers, solenoid valves, non-return valves, pressure gauges etc. are to be supplied as per the reconditioning/modernization scheme by the party. If not otherwise mentioned all the hydraulics valve blocks etc to be provided with companion flanges and sealing rings for end pipe connections.

**A. 7500/9000T FORGING PRESS**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
1.	Repair kit for Reconditioning of main cylinders on 7500/9000T Forging Press	Reconditioning of main cylinders, Drg no: 24.260-221, 24.260-222 Drg no for Packing 021,01,112	Top cross head of press	Existing three main cylinders are leaking through their packings. All guide bushes and packings to be replaced as per the original drawings to make the press free from water leakage during normal operation. All the cylinder mounting bolts, studs etc are to be replaced. Damaged threads on top cross head for fixing the press cylinder are to be reconditioned. All main cylinder packings should be of automatic 'V' shape type. (Cheverol packings- Merkel-1000 series) or equivalent consisting of one header ring+4 intermediate rings+1 gland ring	03 Sets	As per assembly Drg no: 24.260-221, 24.260-222 Drg no for Packing 021,01,112		



## A. 7500/9000T FORGING PRESS

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
2.	Repair kit for Reconditioning of return cylinders on 7500/9000T Forging Press	Reconditioning of Return cylinders Drg no: 24.260-241, 24.260-242	Press	Existing two return cylinders are leaking. Replacement of plungers, guide-bushes, packings and copper rings to make it free from water leakage during the normal operation of the press.	02 Sets	As per assembly Drg no: 24.260-241, 24.260-242		
3.	Repair kit for Reconditioning of longitudinal table cylinders on 7500/9000T Forging Press	Reconditioning of long table cylinder Drg no: 24.260-275, 24.260-276, 24.260-277, 24.260-290	Press cellar	LT cylinder consists of one plunger on either side of the press. Existing cylinders are leaking as packings got damaged due to large clearances between guide bushes and plungers that has occurred due to normal wear & tear. Replacement of wearable parts like plungers, bushes, automatic 'V' shapes packings guide strips for cylinders etc are to be done so that leakage totally gets eliminated during normal operation.	02 Set	As per assembly Drg no: 24.260-275, 24.260-276, 24.260-277, 24.260-290		

**A. 7500/9000T FORGING PRESS**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
4.	Complete system of centralized oil hydraulic Power Pack unit for 7500/9000T Forging Press	Centralized Power Pack unit Drg no: 24.260-381, 24.260-381/2, 24.260-381/3, 24.260-350	Near Press Rex-Roth Make	This will consist of Main Tank, Vane Pump Motor Sets, Heat Exchangers, Filters (pressure filter-2Nos. &c return filter-2Nos.), Cooling Pumps. Appropriate Oil Flow Control Valves, Temperature and contact Pressure Gauges etc. All Pilot Control Valves and Proportional Valves check valves, bypass valves, throttle valves etc for Operation of Different Sub-Systems of Press shall be mounted on this Oil Hydraulic Power Pack itself as per Drg.	01Set	As per assembly Drg no: 24.260-381, 24.260-381/2, 24.260-381/3, 24.260-350		
5.	Complete assembly for replacement of pilot valve for automatic shut off valve on 7500/9000T Forging Press	Replacement of Pilot valve for automatic shut off valve. Or equivalent.	1-Near Accumulator bottles (pneumatic) Type: Werner Pfleiderer	This is a pneumatic solenoid operated pilot valve and are to be replaced as this valve is malfunctioning and leaking. This Pilot valve is working for 'opening' and 'closing' of Automatic Shut-off valve. This valve consists of Solenoid valve, pneumatic control unit & direction control valve.	01Set.	As per control diagram of hydraulic power plant Drg no: 1-21-100-0128		



## A. 7500/9000T FORGING PRESS

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
			Make: Stutgant, Germany Nr. 51482/ 231 2- (Solenoid part) SEITZ- ROTEX V.U.NAGAR Type: 5R, Volt 220 Atm: 20 NW- 1.0 No: V4504					
6.	Kit for Replacement of control units suiting to pure water application on 7500/9000T Forging Press	Replacement of control valves, lifting rods, guide bushes, pins etc and packing sets to pure water application.	Main control, Step control , Switch control Table control & Intensifier control	Existing control units are either leaking or not functioning properly due to wear & tear of various internal and external components. Guide bushes & rocker shaft for main control unit needs to be replaced All lifting pins, guide pins, guided bushes, Automatic rings,	05 Sets	As per assembly Drg: 24.260-425, 24.260-426, 24.260-442, 24.260-461, 24.260-462, 24.260-481, 24.260-482,		



## A. 7500/9000T FORGING PRESS

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
				screwing, set of control valve completely assembled with sealing rings etc. as per assembly drg.		24.260-506, 24.260-507		
7.	Kit for reconditioning of High pressure shut off valve on 7500/9000T Forging Press	Reconditioning of high pressure shut off valve Ø180 Drg: 809/617	Accumulator trench.	All wearable components of high pressure shut off valve like valve seat, valve cover, packing 4 Nos. High pressure globe type shut off valve (Test pressure 350bars, working pressure 250bar, NW10 etc. are to be replaced for its smooth and proper function.	01 Set	As per assembly Drg: 809/617		
8.	Kit for reconditioning of automatic shut off valve on 7500/9000T Forging Press	Reconditioning of automatic shut off valve Drg: 24.260-351Bl.1 24.260-351 24.260-352	Accumulator trench	All wearable components like valve seat, valve cone, packings	01 No.	As per assembly Drg: 24.260-351Bl.1 24.260-351 24.260-352		
9.	Kit for replacement of components for filling valves on 7500/9000T Forging Press	Reconditioning of filling valves, NW200 Drg no: 24.260-401, 24.260- 403, 24.260- 404	Top of press	All the existing filling valves (3 sets) which are mounted on top of press cylinder are leaking and not functioning properly, wearable parts like bushes, packings, 'O' Rings, valve seat, valve cone etc. need replacement as per drgs.	03 Sets	As per assembly Drg no: 24.260-401, 24.260- 403, 24.260- 404		



## A. 7500/9000T FORGING PRESS

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
10.	Kit for replacement of Wear plates fitted under the Drag plate towards Re-Heating Furnace side	Replacement of Cast Iron Wear plates (GG26) Drg: 24.260-267	Under Drag plate	The Drag plate which is connected with the Press Table is fitted with wear plates. Due to normal wear & tear these plates got damaged and needs replacement with new plates, hex-bolts, dowel pins etc.	1Set	As per assembly Drg No: 24.260-267		
11.	Repair Kit for reconditioning of Equalizing cylinders on 7500/9000T Forging Press	Plungers for equalizing cylinders Drg No: 24.260-245 24.260-247	Press Top	Existing 2Nos. equalizing cylinders are badly leaking due to normal wear & tear of plungers & guide bushes. New plungers to be replaced with guide bushes, packings etc.	2Sets	As per assembly Drg No: 24.260-245 24.260-247		
12.	Repair Kit for reconditioning of Tie rods on 7500/9000T Forging Press	Tie rod components for equalizing cylinders Drg No: 24.260-240	Press Top	Existing 4Nos. guide bushes of tie rods are badly damaged due to normal wear & tear and needs replacement with new bushes etc.	4Sets	As per assembly Drg No: 24.260-240		
13.	Repair kit for Reconditioning of Intensifier cylinder on 7500/9000T Forging Press	Plunger for intensifier cylinder Drg No: 24.260-500 24.260-501	Press	Existing Intensifier cylinder is leaking due to deep scratches on the plunger. This plunger needs to be replaced with new one with guide bushes, V-shape packing etc.	1Set	As per assembly Drg No: 24.260-500 24.260-501		

**B. 65mT MANIPULATOR (MAKE: SACK, GERMANY)**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
14.	Travel oil motors (Make: PLEIGER, LMS B 370 Type: 0-022-719-55-002)	Hydraulic oil motors, Hydraulic scheme: 163150 for 73.1 & 73.2 Or equivalent	Inside the side walls of manipulator	There are two oil motors for longitudinal travel of manipulator on either side. These oil motors transmit power to the drive sprocket through gear boxes. One of its oil motor Make: PLEIGER, LMS B 370 Type: 0-022-719-55-002 is not working due to internal leakages, only one motor is presently working. Since these are not manufactured for the last 15 years, both oil motors with breaking systems needs to be replaced for greater efficiency with equivalent type of other make of reputed manufacturer.	2Sets	As per Hydraulic circuit diagram 163150		
15.	Oil circulation pump (Model: SNH 280 ER 46U3-W1)	Screw spindle pump, Hydraulic scheme: 163150 for P5 Or equivalent	Manipulator Oil tank	There is only one circulation pump working since last 15 years or more because of internal wear & tear in the pump Model: SNH 280 ER 46U3-W1, no spares/ similar type of pump are available in the market (import), in view of above this pump needs to be replaced with new equivalent pump of reputed manufacturer.	1Set	As per Hydraulic circuit diagram 163150		

**B. 65mT MANIPULATOR (MAKE: SACK, GERMANY)**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
16.	Axial piston pump (Model: Hydro-Gigant make Type: AV2 468 HM OR 1 G00P/ E)	Axial piston pump Make: Hydro-Gigant-pump, Hydraulic scheme : 163150 for P1 Or equivalent	Manipulator Oil tank	This axial piston pump Hydro-Gigant make Type: AV2 468 HM OR 1 G00P/ E is working for various auxiliary movements for lifting cylinder, tilting cylinder, and angular side shifting cylinder. This pump is very old working since last 15 years or more and is damaged because of internal wear & tear in the pump, in view of above this pump needs to be replaced with new equivalent pump of reputed manufacturer.	1Set	As per Hydraulic circuit diagram 163150		
17.	Axial piston pump (Model: Hydro-Gigant make Type: A2F468R2P2,)	Axial piston pump Make: Hydro-Gigant-pump, Hydraulic scheme : 163150 for P4 Or equivalent	Manipulator Oil tank	This axial piston pump, Hydro-Gigant make Type: A2F468R2P2 is working for various auxiliary movements for lifting cylinder, tilting cylinder, and angular side shifting cylinder. This pump is very old working since last 15 years or more because of internal wear & tear in the pump no spares/ similar type of pump is available in the market (import), in view of above this pump needs to be replaced with new equivalent pump of reputed manufacturer.	1Set	As per Hydraulic circuit diagram 163150		

**B. 65mT MANIPULATOR (MAKE: SACK, GERMANY)**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
18.	Combination pump (Rexroth Make, Type: PV 2 V4-1 x 120 RE01 MC 63 A1 (P6), Type: PF 2 G2-22/ 022 RA01 MSG (P7))	Combination pump Make: REXROTH, Hydraulic scheme : 163150 for P6 & P7 Or equivalent	Manipulator Oil tank	This combination pump Rexroth Make, Type: PV 2 V4-1 x 120 RE01 MC 63 A1 (P6), Type: PF 2 G2-22/ 022 RA01 MSG (P7). This combination is working for pilot/ break system and for cooling system respectively. This combination pump is very old working since last 15 years or more because of internal wear & tear in the pump similar type of combination pump is to be replaced with new pump set.	1Set	As per Hydraulic circuit diagram 163150		
19.	Manipulator wheels	Manipulator wheels for longitudinal travel Drg no: 163108	On rails of manipulator side frame	Existing side collars of front wheels of manipulator on either side have been worn out. One set consisting of two wheels mounted on a common bracket on either side of manipulator side frame. These wheels are to be replaced with new sets of wheel, wheel shaft and if needed Spherical bearing sets (23040CC/ W33) etc are also to be replaced for smooth Longitudinal Travel of manipulator.	2Sets (four wheels )	As per assembly Drg no: 163108		

**A. 7500/9000T FORGING PRESS**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
20.	Control Panel for press	Control Panel for press	Control Room	This will replace existing control system. The new control system shall be Simatic-S7-400 PLC based control system with profibus structure, distributed IOs and an appropriate industrial PC based MMI. A separate Lap Top Computer based Programming Unit for programming of PLC shall also be provided. Functionally, the system shall essentially be identical to the existing control system with all modifications in existing Hydraulic System as specified. The system will also include control and indication of <i>Power Water Station</i> (for controlling four nos. main pumps and level control). The control and indication of Power Water Station will be effected through existing PLC control of Power Water Station which shall be hooked to the Control Panel for Press through Profibus. The panel shall also be provided with a Mimic Diagram of Press functionality, placed on the Front with LED based Indicators. The Control System shall be housed in a Suitable Cabinet. All new Power contactors and Power supply units shall be placed in a separate Cabinet to the extent possible.	1 set			

**A. 7500/9000T FORGING PRESS**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
				All the Power Supply Units, Regulated or Unregulated shall be of capacity at least 200% of the actual load on respective Power Supply unit. The panel shall be appropriately interfaced to all the actuators, control elements, field devices, Power contactors etc. Interfacing to all the valves, Power Contactors etc. shall be through appropriate valve drivers/intermediate switches/relays. No power device/valve shall be driven directly by the PLC Output. At least one Spare Digital Input and one Digital Output Cards shall be provided on the panel itself. The wiring to the control panel shall be through Snap-On/Plug-In type terminals. Some spare elements to be provided for each item like valve drivers, contactors, MCBs etc. Min 10% Spare terminals in all TBs must be provided.-1 Set. The control voltages in Control Panel are to be only 24V DC (for relays, field devices and electronic controls) and 220V AC (for power contactors). 415V or 110V (AC or DC) or 220V DC control voltage shall not be acceptable.				



## A. 7500/9000T FORGING PRESS

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
21	Control Desk of Press and Auxiliary Control Cubicle	Control Desk of Press and Auxiliary Control Cubicle in Cellar for Service of Main Control, Step Control, Switch Control.  <i>Integrated operation of press and manipulator for automatic forging to be provided in control desk</i>	Control Room and cellar	The press shall be operating in 5 different modes namely 1. Forging manual uncontrolled 2. Forging with thickness control 3. Planishing manual 4. Automatic forging 5. Automatic Planishing and 3 different force levels namely 1) 25MN 2) 50MN and 3) 75MN as it is available with the existing control system/desk. Additionally, it will operate at 90MN through intensifier as in existing system. The Existing Control Desk shall be replaced with a new control desk, ergonomically designed with control layout preferably identical to the existing Control Desk. The control desk shall have separate place for the control Computer easily accessible to the operator. The Control Desk shall have all the switches, joy sticks, displays, indicators, counters, speed control POTs, Thickness Control dials etc. in a layout identical to the existing control desk. Various parameters shall be adjustable through the Control Computer and also through different POTs/Dials placed on the control desk.	01 Set			

**A. 7500/9000T FORGING PRESS**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
				<p>The main joy stick shall be designed in such a way so that the same can stand at all the four major positions namely 'Return', 'Stop', 'Approach' and, 'Press'. A second joystick shall control the intensifier movement and shall have three positions namely 'Intensify', 'Neutral' and 'Release' with normal position at 'Neutral'. Pressure transducers shall be provided (with indication available at the control desk/control computer) for centre cylinder and side cylinders, return cylinders and air vessel. The control desk will also provide level indication for accumulator bottle (water) and operation of high pressure pumps (4nos.) and automatic shut off valve On-Off operation and indication and all other existing controls as well as emergency stop. One small control cubicle for control of movement of main control, step control and switch control, rocker arm to be provided in cellar for testing the rocker arm movements of control valves in case of maintenance with change over option in control desk it self. <i>Integrated operation of press and manipulator to be done from the control desk for automatic forging</i></p>				

**A. 7500/9000T FORGING PRESS**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
22	Contact less Stroke Measurement Transducer	Contact less Stroke Measurement Transducer suitable for measuring 4 meters max with a resolution of 0.5mm with an accuracy of $\pm 3$ mm (forging) and $\pm 2$ mm (planishing)	Moving Cross Head : To be placed at opposite corners for improved measurement accuracy.	Required for stroke measurement of 7500T/9000T Forging Press moving cross head. Mounting arrangement must be incorporated to facilitate easy mounting on and over the existing mechanical structure without any major modification. The transducer is to be adequately protected against severe hot forging environment such as heat, scale, vibration, water & oil leakage and other associated conditions.	02  SETS			
23	Contact less Stroke Measurement Transducer	Contact less Stroke Measurement Transducer suitable for measuring 6 meters max with a resolution of 0.5 mm or better and an accuracy of $\pm 3$ mm or better	Table Long Travel : To be appropriately placed along the table shifting cylinders.	Required for stroke measurement of 7500T/9000T Forging Press Table Travel. Mounting arrangement must be incorporated to facilitate easy mounting on and over the existing mechanical structure. The transducer is to be adequately protected against severe hot forging environment such as heat, scale, vibration, water & oil leakage and other associated conditions. This system is required for measuring, centering and controlling table position and is also to be used as interlocking for safe movement of die (cross sliding)	01  SET			

**A. 7500/9000T FORGING PRESS**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
24	Contact less end limit sensors	Contact less end limit sensors for intensifier plunger	Intensifier: To be appropriately placed along the Die shifting cylinders.	Required for end movement control of 7500T/9000T Forging Press Intensifier. Mounting arrangement must be incorporated to facilitate easy mounting on and over the existing mechanical structure without any major modification The transducer is to be adequately protected against severe hot forging environment such as heat, scale, vibration, water & oil leakage and other associated conditions.	01 SET			
25	Level Measurement Device for High Pressure Accumulator	Level Measurement Device for High Pressure Accumulator (Non mercury type).	High Pressure Accumulator Bottle	Water level of high-pressure accumulator bottles are being controlled through magnetic float and level switches in existing system. This is not a fool proof unit. Many a times it gives, spurious indication to solenoid operated pilot valve of by pass valves unit of main pumps for loading and unloading of pumps. This magnetic level switch is to be completely replaced with continuous level measurement device (e.g. device based on differential pressure measurement or some other system) The working pressure for the device shall be 250kg/cm <sup>2</sup> and test pressure 300kg/cm <sup>2</sup> . The Level measurement	01 SET			

**A. 7500/9000T FORGING PRESS**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
				device must be provided with Visual Level Indicator and Level Feedback, to be read through PLC. The device shall be interfaced to the new Control System for Press for Display of Level and control of main pumps.				
26	Level Measurement Device for Low Pressure Air Vessel	Level Measurement Device for Low Pressure Air Vessel	Low Pressure Air Vessel	Required for measurement and feedback of water level in the Low Pressure Air Vessel. This will be same as that for high-pressure accumulator bottle except that the working pressure for the device shall be 20kg/cm <sup>2</sup> max and test pressure 30kg/cm <sup>2</sup> . Also, instead of controlling pump operation, this will issue Alarm Conditions like Tank Overfilled, Tank Empty etc. and display of level shall be only at Control Desk and MMI. Display will be for 5 different levels (i.e. 0%, 25%, 50%, 75% and, 100%.	01 SET			

**A. 7500/9000T FORGING PRESS**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
27	Level Measurement Device for Reservoir Tank & its display.	Level Measurement Device for Reservoir Tank & its display.	Main Reservoir Tank	Required for measurement and feedback of water level in main Reservoir Tank. This will be same as that for high-pressure accumulator bottle except that the working pressure for the device shall be 1kg/cm <sup>2</sup> and test pressure 5kg/cm <sup>2</sup> . Also instead of controlling pump operation, this will issue Alarm Conditions like Tank Overfilled, Tank Empty etc. Visual indicators for this are to be provided at Power Water Control Station and at two more points within 200Cable-meter distance from PLC. Display will be in form of %-age of Full Tank. This will also include all necessary modifications required in the existing system including modifications in the reservoir tank.	01 SET			
28	Pressure Measurement System for Outer and Middle Cylinders	Pressure Transducer and Display Unit	Press Complex	The pressure of Main Cylinders is to be continuously measured and monitored. A suitable transducer is to be installed at Middle & Outer Cylinders for the same. The display unit will display current pressure in Digital form as well as a Bar Graph	02 SETS			

**A. 7500/9000T FORGING PRESS**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
				and will be a large letter (not less than 100mm letter height), 4-Digit, high luminosity LED based Digital Read Out. The max Pressure for this will be 300 bar and resolution will be 1% of the max. Pressure. The test pressure will be 350 bar.				
29	Pressure Measurement System for Return Cylinders	Pressure Transducer and Display Unit	Press Complex	The pressure of Return Cylinders is to be continuously measured and monitored. A suitable transducer is to be installed at the Return Cylinders for the same. The display unit will display current pressure in Digital form as well as a Bar Graph and will be a large letter (not less than 100mm letter height), 4-Digit, high luminosity LED based Digital Read Out. The max Pressure for this will be 250 bar and resolution will be 1% of the max. Pressure. The test pressure will be 300 bar.	01 SET			
30	Pressure Measurement System for High Pressure Accumulator Bottle	Pressure Transducer and Display Unit	Press Complex	The pressure of High Pressure Accumulator Bottle is to be continuously measured and monitored. A suitable transducer is to be installed at the High Pressure Accumulator Bottle for the same.	01 SET			

**A. 7500/9000T FORGING PRESS**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
				The display unit will display current pressure in Digital form as well as a Bar Graph and will be a large letter (not less than 100mm letter height), 4-Digit, high luminosity LED based Digital Read Out. The max Pressure for this will be 250 bar and resolution will be 1% of the max. Pressure. The test pressure will be 300 bar.				
31	Pressure Measurement System for Low Pressure Air Vessel (Pre fill Tank)	Pressure Transducer and Display Unit	Press Complex	The pressure of Low Pressure Air Vessel is to be continuously measured and monitored. A suitable transducer is to be installed at the Pre Fill Tank for the same. The display unit will display current pressure in Digital form as well as a Bar Graph and will be a large letter (not less than 100mm letter height), 4-Digit, high luminosity LED based Digital Read Out. The max Pressure for this will be 10 bar and resolution will be 1% of the max. Pressure. The test pressure will be 20 bar.	01 SETS			

**A. 7500/9000T FORGING PRESS**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
32	Display units for level measurement	Display units for level measurement system of high pressure water accumulator bottle.	Accumulator station, supervisor room	The Level as measured shall be displayed at Control Desk, Operator Pendant for Power Water Station and at two more places within 100 cable meters of the Press PLC. The Level Indicators at these two additional points shall be of Large Display Type (Letter Height 300mm or more). Level Display shall also be provided in the MMI.	02 SETS			
33	Display Unit for Press Travel Measurement	High Luminosity LED Based Digital Display Unit for measuring Press Die Position	Control Room	This display unit will display current position of Upper Die of Press. The display unit must be a large letter (not less than 200mm letter height), 4-Digit D, high luminosity LED based Digital Read Out suitable for measuring 4000mm and will be placed at a location for easy viewing of operator.	01 SET			
34	Set of Power and Control cables	All Power and Control cables including a. All cables from control desk of press to PLC panel. (Length ~ 20m per cable)	Control Room	Special pluggable control cables to be provided between control desk of press to PLC panel. Existing cables to be dismantled and removed completely.	01 Set			



## A. 7500/9000T FORGING PRESS

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
		<p>b. All Control Cables from PLC Panel to Existing Power Water Control Station (Length ~ 200m per cable)</p> <p>c. All control and Power Cabling from PLC panel to press field devices, valves, Motor etc. (Max Length ~ 200m per cable)</p>	Press Complex	<p>Cables of the system to be laid in the existing trench. Having Profibus structure. This set will include Profibus cable only and this will replace any existing control cables</p> <p>All control and power cables required as per new scheme to be replaced in the existing trench.</p>				

**B. 65m-T MANIPULATOR (MAKE: SACK, GERMANY)**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
35	Control Panel for Manipulator	Control Panel for Manipulator	Control Room	<p>This will replace existing control system. The new control system shall be Simatic-S7-400 PLC based control system with profibus structure; distributed IOs and MMI installed with industrial PC. Preferably, same PC is to be used for both Press and Manipulator. Functionally, the system shall essentially be identical to the existing control system with all modifications in existing Hydraulic System as specified. The panel shall also be provided with a Mimic Diagram of Manipulator functionality, placed on the Front with LED based Indicators. The Control System shall be housed in a Suitable Cabinet. All new Power contactors and Power supply units shall be placed in a separate Cabinet to the extent possible. All the Power Supply Units, Regulated or Unregulated shall be of capacity at least 200% of the actual load on respective Power Supply unit. The panel shall be appropriately interfaced to all the actuators, control elements, field devices, Power contactors etc. Interfacing to all the valves, Power Contactors etc. shall be through appropriate valve drivers/intermediate switches/relays. No power device/valve shall be driven directly by the PLC Output. At least one Spare Digital Input</p>	1 set			

**B. 65m-T MANIPULATOR (MAKE: SACK, GERMANY)**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
				and one Digital Output Cards shall be provided on the panel itself. The wiring to the control panel shall be through Snap-On/Plug-In type terminals. Some spare elements to be provided for each item like valve drivers, contactors, MCBs etc. Min 10% Spare terminals in all TBs must be provided.-1 Set. The control voltages in Control Panel are to be only 24V DC (for relays, field devices and electronic controls) and 220V AC (for power contactors). 415V or 110V (AC or DC) or 220V DC control voltage shall not be acceptable.				
36	Control Desk of Manipulator	Control Desk of Manipulator <i>Integrated operation of press and manipulator for automatic forging to be provided in control desk</i>	Control Room	The Manipulator shall be operating in Manual and Automatic Modes. The Existing Control Desk shall be replaced with a new control desk, ergonomically designed with control layout preferably identical to the existing Control Desk. The control desk shall have separate place for the control Computer easily accessible to the operator. The Control Desk shall have all the switches, joy sticks, displays, indicators, counters, speed control POTs, Control dials etc. in a layout identical to the existing control desk. Various parameters shall be adjustable through the Control Computer and also through different POTs/Dials placed on the control desk.	01 Set			

**B. 65m-T MANIPULATOR (MAKE: SACK, GERMANY)**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
				Various parameters shall be adjustable through the Control Computer and also through different POTs/Dials placed on the control desk. The main joy stick shall be designed in such a way so that the same can be used for travel as well as the tong rotation movement of the manipulator. Other joy sticks and switches etc. will be provided for other movements of the manipulator like side shifting, peel up/down, peel tilt up/down etc. The manipulator is to be provided with position feedback devices for manipulator travel, tong rotation and peel lift position. The control desk will also provide level indication for accumulator bottle. An emergency stop push button for manipulator is also to be provided at the control desk. <i>Integrated operation of press and manipulator to be done from the control desk for automatic forging</i>				
37	Manipulator Travel Measurement Transducer	Travel Measurement Transducer suitable for measuring 30 meters max with a resolution of 1.0mm with an accuracy of $\pm 3\text{mm}$	Manipulator Travel Drive Mechanism.	Required for measuring Travel of the manipulator. There will be two such devices mounted on each side of the manipulator with one acting as main and the other as standby. The device is to be either contact-less or multi-turn absolute encoder based with encoder mounted on travel drive or other suitable location.	02 Sets			



**B. 65m-T MANIPULATOR (MAKE: SACK, GERMANY)**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
				, vibration, water & oil leakage and other associated conditions. The display of Manipulator Travel will be provided on Control Computer as well as a separate DRO of letter height not less than 200mm.				
38	Tong Rotation Measurement Transducer	Tong Rotation Measurement Transducer suitable for measuring 360 deg with a resolution of 1 deg and with an accuracy of 0.5 deg	Manipulator Tong Rotation Drive Mechanism.	Required for measuring Tong rotation of the manipulator. The device is to be either contact-less or single-turn absolute encoder based with encoder mounted on rotation drive or other suitable location. The transducer is to be adequately protected against severe hot forging environment such as heat, scale, vibration, water & oil leakage and other associated conditions. The display of Tong Rotation Angle will be provided at the Control Computer.	01 SET			
39	Contact-Less Peel Lift Measurement Transducer	Contact-Less Peel Lift Measurement Transducer with a resolution of $\pm 1$ mm and an accuracy of $\pm 1$ mm, Range: 600mm	Manipulator Tong Lift Mechanism	Required for measuring Peel/Tong Lift with a resolution of $\pm 1$ mm and an accuracy of $\pm 1$ mm. The measurement of Tong/Peel Lift is also to be used for maintaining accuracy during automatic forging. There will be two such transducers provided one each at front and back of Peel/Tong Structure. The transducer is to be adequately protected against severe hot forging environment such as heat, scale, vibration, water & oil leakage and other associated conditions. The lift measurement will be displayed on control computer.	01 SET			

**B. 65m-T MANIPULATOR (MAKE: SACK, GERMANY)**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)	
							RATE	AMOUNT
40	Display Unit for Manipulator Travel Measurement	High Luminosity LED Based Digital Display Unit for measuring Press Die Position	Control Room	This display unit will display current position of Manipulator. The display unit must be a large letter (not less than 200mm letter height), 5-Digit D, high luminosity LED based Digital Read Out suitable for measuring 30000mm and will be placed at a location for easy viewing of operator.	01 SET			
41	Set of Power and Control cables	All control and power cables including a. All Control cables from control desk of Manipulator to PLC panel. (Length ~ 20m per cable)  b. Control cables from control panel to MCC Panel. (Length ~ 50m per cable)	Control Room	Special pluggable control cables to be provided between control desk of manipulator to PLC panel. Existing cables to be dismantled and removed completely.  Control cables to be provided between control panel of manipulator to PLC panel. Existing cables to be dismantled and removed completely.	01 Set			

**B. 65m-T MANIPULATOR (MAKE: SACK, GERMANY)**

SL NO	MATERIAL / DRG NO. & SPECIFICATION	SYSTEM/ITEM/ MATERIAL REQUIRED	LOCATION	DETAILED DESCRIPTION / SCOPE OF SUPPLY / SCOPE OF WORK	QTY	SCOPE OF SUPPLY OF MATERIAL	PRICE(CURRENCY)		
							RATE	AMOUNT	
		c. All control and Power Cabling from PLC panel to Manipulator field devices, valves etc. (Max Length ~ 300m per cable)	Press Complex	All control and power cables except cables for various motors, required as per new scheme to be replaced in the existing trench. These cables are to travel with manipulator and hence are to be so designed as to minimize wear and tear with manipulator movement. The cables are to run over existing cable traveling mechanism. All the intermediate terminal blocks and cables between various parts of manipulator will form part of this set of cables. The cables are to be protected from severe forging conditions.	01 Set				
P1.	<b>TOTAL PRICE FOR MATERIALS (41 ITEMS)</b>								
P2.	<b>SUPERVISION COST FOR DISMANTLING, ERECTION AND COMMISSIONING (FREE BOARDING, LODGING AND LOCAL TRANSPORT ONLY FOR EXPERTS WILL BE PROVIDED BY BHEL) (SKILLED/UNSKILLED MANPOWER WILL BE PROVIDED BY BHEL)</b>								
P3.	<b>RECOMMENDED SPARES FOR 2 YEARS TROUBLE FREE OPERATION</b>								
P4.	<b>GRAND TOTAL FOR EVALUATION (P1+P2+P3)</b>								

**ANNEXURE TO INDENT NO.360972249 DATED 07.03.2008**



**ANNEXURE II**

**PERFORMANCE PARAMETERS AND SPECIFICATIONS OF 7500/9000T WATER HYDRAULIC,  
4 COLUMN PUSH DOWN FORGING PRESS**

<b>MAKE-HYDRAULIC DUISBURG, GERMANY</b>		
<b>SL. NO.</b>	<b>DESCRIPTIONS</b>	<b>VALUE</b>
<b>01</b>	<b>PRESS</b>	
	<b>WORKING PRESSURE</b>	<b>250BAR</b>
	<b>PRESSURE WITH INTENSIFIER</b>	<b>300BAR</b>
	<b>WORKING MEDIUM</b>	<b>PURE WATER</b>
	<b>PRESS POWER STEP-I</b>	<b>2500TON</b>
	<b>PRESS POWER STEP II</b>	<b>5000TON</b>
	<b>PRESS POWER STEP III</b>	<b>7500TON</b>
	<b>STROKE</b>	<b>3000mm</b>
	<b>DAYLIGHT</b>	<b>8000 mm</b>
	<b>COLUMN SPACING</b>	<b>5000x2500 mm</b>
	<b>COLUMN DIA.</b>	<b>720mm</b>
	<b>PRESS PLUNGER DIA.</b>	<b>1130mm</b>
	<b>OVERALL HEIGHT ABOVE FLOOR LEVEL</b>	<b>15800mm</b>
	<b>OVERALL HEIGHT BELOW FLOOR LEVEL</b>	<b>4890mm</b>
<b>02</b>	<b>SHIFTING TABLE</b>	
	<b>TABLE DIMENSIONS (USEFUL CLAMPING AREA)</b>	<b>3000x12000 mm</b>
	<b>STROKE OF SHIFTING CYLINDER</b>	<b>3000mm</b>
	<b>SHIFTING STROKE OF TABLE FROM PRESS CENTRE TO EITHER SIDE (BY RESETTING THE COUPLING PIN)</b>	<b>3000 mm</b>

**ANNEXURE II****PERFORMANCE PARAMETERS AND SPECIFICATIONS OF 32/ 65TON RAIL BOUND FORGING MANIPULATOR****MAKE-SACK, GERMANY**

<b>SL. NO.</b>	<b>DESCRIPTIONS</b>	<b>VALUE</b>
<b>03</b>	<b>TECHNICAL DATA</b>	
	<b>TOTAL LENGTH</b>	<b>10000mm</b>
	<b>TOTAL WIDTH</b>	<b>4700mm</b>
	<b>TOTAL HEIGHT</b>	<b>4200mm</b>
	<b>TRACE WIDTH</b>	<b>3800mm</b>
	<b>MAX. ROTATION DIAMETER</b>	<b>2400mm</b>
	<b>CLAMP POSSIBILITY (MIN. - MAX.)</b>	<b>500 - 1250mm</b>
	<b>SLOPE OF TONG CARRIAGE</b>	<b>Approx. 10°</b>
	<b>SWIVEL OF TONG CARRIAGE</b>	<b>Approx. 6.5°</b>
	<b>MINIMUM HEIGHT OF TONG CARRIAGE OVER THE FLOOR</b>	<b>1000mm</b>
	<b>MAXIMUM HEIGHT OF TONG CARRIAGE OVER THE FLOOR</b>	<b>2000mm</b>
	<b>MAXIMUM TONG CLAMPING</b>	<b>1500mkp</b>
	<b>MAXIMUM TRAVEL LENGTH</b>	<b>24000mm</b>
	<b>MAXIMUM CARRYING POWER</b>	<b>32/75 TON</b>
	<b>MAXIMUM LOAD MOVEMENT</b>	<b>65mt</b>



## ANNEXURE TO INDENT NO.360972249 DATED 07.03.2008

ANNEXURE-III

### GENERAL TECHNICAL TERMS AND CONDITIONS :-

1. In general the supply voltage in the PLC panels will be given as 415V AC, 3-phase, 3-wire, 50HZ. Earthing will be provided by CFFP/BHEL/HARDWAR. All control voltages, valve voltages to be taken through 415/230V Transformers.
2. All the Control Panels shall have proper, independent Panel Air-conditioning System for proper cooling of the Panel.
3. All special control cables, plug in cables to be supplied by the supplier. Any other control and power cable to be required for the reconditioning work to be listed by the supplier and will be procured by CFFP/BHEL/HARDWAR. 415V AC, 3-phase, 3-wire, 50HZ supply will be provided for erection purposes.
4. All major hydraulic elements will be of Rexroth make.
5. The major electrical/electronic elements will be of Siemens make.
6. The hydraulic cylinders/equipments will be tested at 140% of max operating pressure of the system i.e. 300 bar.
7. All bought items and major raw materials should be supplied with OEM test and guarantee certificates.
8. The supplier is responsible for the proving out of the equipment as per original specifications of Press & Manipulator attached in Annexure I of specification.
9. The supplier will ensure the supply of any other major/critical component to be required for the successful commissioning of Press and Manipulator.
10. The supplier will ensure to stop all water, oil, air leakages in the complete Press & Manipulator Complex.
11. All field devices, limit switches, valves, flow switches, pressure switches and any other sensors to be required for the modernization work will be supplied by the party and the original terminal nomenclatures to be maintained to linkup old drawing with new drawing. The device nomenclature will also to be maintained for ease of maintenance.



**ANNEXURE-III**

12. Programmer (**Laptop based programming unit**) for programming of press and manipulator application software will be a part of the packages and to be clearly indicated in the offered document.
13. **PLC** : There will be two PLCs namely 1. Press 2. Manipulator. The press and manipulator both should operate in 1. Manual, 2. Semi Automatic, 3. Automatic. Integrated operation of press and manipulator will be a part of supply. Complete software listing to be given for press and manipulator. One set of CDs containing all application programmes of press and manipulator to be given. One LAN based MMI computer system with 19” LCD display and one laser printer to be supplied alongwith the system. All software’s like application software, programme for PLC, operating system etc. to be supplied. PLC User Programme to be given in 1. Ladder diagram 2. Statement listing.
14. **Integration** : Integrated operation of press and manipulator will be part of supply.
15. Before finalization, **all drawings to be approved by CFFP/BHEL/HARDWAR.**
16. **Drawing and Documentation : O&M Manuals (Hardcopy and Softcopy in CD)** for machine and all attachments & accessories in English language. Qty. = 5 sets

***NOTE : In addition to other information, O&M Manual should also contain the following in English language (Qty. = 5 Sets each):***

- Electrical schematic diagram
- Hydraulic diagram
- Detailed documentation and drawings.

- Wiring diagram indicating lay out of cables, plugs, junction boxes, terminal strips etc.
- Ladder diagram/ statement list, cross-reference list. I/Q/F list in English language(hard copy and on CD/Floppy).
- Alarm list and fault diagnostic manual.

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### ANNEXURE-III

- Detailed assemblies drawing with clear markings of each component giving reference of manufacturer of each assembly/sub assembly.
  - Operation and maintenance manual of all auxiliary systems/ equipment/ bought out items.
  - Spares part list along with specification, part number and address of manufacturer.
  - Programming manual of PLCs (English language).
  - Circuit diagram of auxiliary system/equipment.
  - Complete Operating Guide and User manuals guide.
17. **Design and Engineering** : Being a turn key project, bidder shall be responsible for providing the complete engineering, design, drawing and documents, supply of all materials and equipment, erection and commission and services etc. specified or otherwise which are required to complete the job as per enquiry. Successful bidder without any financial implication shall incorporate any changes in this account.
18. **Proving Test** :
- a. **No Load Test** : The performance parameters (as per Annexure-II) of the Reconditioned/Modernized Press and Manipulator will be checked jointly by production, maintenance department of CFFP/BHEL/HARDWAR and the supplier.

- b. **Load Test** : Proving of main capacity data's (as per Annexure-II) of each movement of Press and Manipulator will be checked jointly by production, maintenance department of CFFP/BHEL/ HARDWAR and the supplier with hot forging between the dies.
19. **Inspection for Assessment of Job** : Bidder may depute their representative for assessment of whole job before giving quotations.
20. **Shut Down Period and Time Schedule** : The party has to mention in their offer the minimum shutdown period for the total work and detailed time schedule for the work.
21. **Special Tools** : The party will bring any special tool required for the erection work. The special tool will be retained by BHEL.

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### ANNEXURE-III

22. **Makes of Major Equipment** : Party has to give makes of major equipment at the time of quotation.
23. **Availability of Spares** : The contractor/bidder shall ensure the long terms availability of spares to the BHEL for the full life of the equipment covered under the contract. The bidder shall guarantee that before going out of production of spare parts of the equipment covered under the contract. He shall give at least 12 months advance notice, so that BHEL may order bulk requirement of spare, Further incase of discontinuance of supply of spare by the contractor or his sub contractor, the contractor shall provide the BHEL, with full information for replacement of spares with other equivalent make.
24. **Civil Work** : All civil work will be done by CFFP/BHEL/HARDWAR in existing space as per the foundation drawing supplied by the party.
25. **Final Acceptance** : Final acceptance shall be made by M/s CFFP/BHEL at BHEL, Hardwar following successful completion of erection and commissioning, achieving the operational & functional accuracies of the machine as per proving test and performance

criteria as detailed below. The equipment shall be deemed to have been successfully erected/commissioned after it gives desired accuracy as per Annex. I & Annex II of technical specifications for five consecutive jobs or one month period whichever is later and also the accuracy of the forge job of the reconditioned machine will be 1. Circularity:  $\pm 1.5\text{mm}$ , 2. Linearity:  $\pm 3\text{mm}$ , 3. Planishing Speed-20-30 strokes/min. Manipulator should attend the speed of various motion and the lifting capacity as mentioned in annexure-II. Press and Manipulator will be able to work in integrated fashion and automatic forging is possible.

26. **Guarantee** : The Reconditioned and Modernised Press and Manipulator will be Guaranteed for Final Acceptance Criteria Detailed in No. 25 above for a time period of 18 months from the date of final acceptance. The party has to submit a bank guarantee as per clause no. 1.2 in commercial terms in Annexure-B attached. The party has to replace (free of charge) any materials supplied by them which breaks down in the Guarantee period.

**PROFORMA BANK GUARANTEE  
(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT)**

This deed of guarantee made this.....day of.....two thousand.....by (bank)hereinafter call 'the Guarantor') which expression shall unless repugnant to be context or meaning thereof be deemed to include its successors and assigns) IN FAVOUR OF M/s Bharat Heavy Electrical Limited(A Government of India Undertaking) a Company incorporated under the Companies Act, 1956 having its registered office at "BHEL House" Siri Fort, New Delhi 110 049, through its Unit/Division at Hardwar (Central Foundry Forge Plant)hereinafter called " the Company" (which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and assigns).

WHEREAS M/s.....(hereinafter referred to as the vendor) have entered into a Contract bearing no.....dated.....(hereinafter referred to as " the Contract") or the supply of .....with the Company.

AND WHEREAS the contract interalia provides that the vendor shall furnish to the Company a Performance Bank Guarantee for sum of.....as security for due a faithful performance of the Contract in the form and may be specified therein

AND WHEREAS THE VENDOR has approached the Guarantor and in consideration of the arrangement arrived between the vendor and Guarantor, the Guarantor has agreed to give the Guarantee as hereinafter mentioned in favour of the Company.

NOW THIS DEED WITNESS AS FOLLOWS:

- (1) The Guarantor do hereby guarantee to the company the due and faithful performance, observance of discharge of the Contract by the Vendor and further unconditionally and irrevocably undertake to pay the Company without demur and merely on demand to the extent of .....any claim made by the Company on them for any loss, damage, costs, charges and expenses caused to or suffered by the Company by reason of the vendor making any default in the performance, observance or discharge of the terms, conditions stipulations or undertakings or any one of them as contained in the Contract.
- (2) The Company shall have fullest liberty without affecting in any way the liability of the Guarantor under this Guarantee, from time to time to enforce or forbear from enforcing any of the terms and conditions governing the contract or securities available to the Company and the Guarantor shall not be released from its liability under these presents by any exercise by the Company of the liberty with reference to the matters aforesaid or by reason of time being given to the Vendor any other forbearance, act or commission on the party of the Company or any indulgence by the Company to the vendor or of any other matter or thing whatsoever which under the law relating to sureties would, but for this provision have the effect of so releasing the Guarantor from its liability under this Guarantee.

- (3) The Guarantor further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken to the performance of the contract and that it shall continue to be enforceable till all the dues of the Company under or by virtue of the said contract have been fully paid and its claims satisfied or discharged and till the Company certifies that the terms and conditions of the Contract have been fully and properly carried out by the Vendor and accordingly discharges this guarantee, subject, however that this Guarantee is only valid for written demands by the Company on or before .....(specify date).

The Guarantor undertake not to revoke this Guarantee during the period it is in force except with the previous consent of the Company in writing and agree that any liquidation or winding up or insolvency for discharge the Guarantor's liability hereunder:

It shall not be necessary fo the Company to proceed against them notwithstanding any security which the Company may have obtained or obtain form the Vendor shall at the time where proceedings are taken against Guarantor, hereunder be outstanding or unrealized.

The Guarantor hereby declares that it has power to execute the guarantee under it is Memorandum and Articles of association and the executants has full powers to do so on its behalf under the Powder of Attorney dated.....granted to him by the proper authorities of the Guarantor.

IN WITNESS: whereof the .....(Bank) have caused his deed to be signed hereunder on their behalf on the date first above mentioned.

Signed for and on behalf of the (Bank)

Name:

Designation

Address:

Fax No.(with country code)

E-mail address

NOTE: IN CASE A BANK IN INDIA IS GIVING THIS BANK GUARANTEE, IT WILL BE EXECUTED ON A NON JUDICIAL STAMP PAPER OF Rs. 100.00- BUT IF IT WILL BE FROM AND OVERSEAS BANK. IT WILL HAVE TO BE EXECUTED AS PER LAWS OF THAT COUNTRY.

**PROFORMA FOR SECURITY DEPOSIT  
(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT)**

This deed of guarantee made this .....day of .....Two Thousand.....by (bank) hereinafter called ‘the Guarantor’) which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and assigns)IN FAVOUR OF M/s Bharat Heavy Electricals Limited (A Government of India Undertaking ) a Company incorporated under the Companies Act, 1956 having its registered office at “BHEL House” Siri Fort, New Delhi 110 049 , through its Unit/Division at Hardwar (Central Foundry Forge Plant) hereinafter called “ the Company” (which expression shall unless repugnant to the context of meaning thereof be deemed to include its successors and assigns).

WHEREAS M/s..... (hereinafter referred to as the vendor) have entered into a contract bearing no.....Dated.....(Hereinafter referred to as “the Contract”) for the supply of .....With the Company.

AND WHEREAS the Contract interalia provides that the vendor shall furnish Security Money to the Company in the form a Bank Guarantee for a sum of Rs.....(Rs.....only) as Security for due and faithful execution of deliveries within specified period in the contract.

AND WHEREAS THE VENDOR has approached the Guarantor and in consideration of the arrangement arrived at between the Vendor and Guarantor; the Guarantor has agreed to give the guarantee as hereinafter mentioned in favour of the Company.

**NOW THIS DEED WITNESS AS FOLLOWS:-**

- (1) The Guarantor do hereby guarantee to the Company the due and faithful performance, observance or discharge of the Contract by the Vendor and further unconditionally and irrevocable undertake to pay the Company without demur and merely on demand to the extent of ..... Any claim made by the Company on them for any loss, damage, costs charges and expenses caused to or suffered by the company by reason of the vendor making any default in the performance, observance or discharge of the terms , conditions stipulations or undertakings or any one of them gas contained in the Contract.
- (2) The decision of the Company whether any default has occurred or has been committed by the Vendor in the execution of the supplies, observance or discharge of any of the terms, conditions stipulations or undertakings or any one of them as contained in the Contract and or as to the extent of loss, damage, costs ,charges and expenses caused to or suffered by the Company by reason of the vendor making any default in the performance, observance or discharge of any of the terms, conditions, stipulations or undertakings or any one of them shall be conclusive and binding on the Guarantor irrespective of the fact whether the vendor admits or denies the default or questions the correctness of any demand made by the company in any Court, Tribunal or Arbitration Proceedings or before any other authority.
- (3) The Company shall have fullest liberty without affecting in any way the liability of the Guarantor under this guarantee, from time to time to enforce or forbear from enforcing any of the terms and conditions governing the contract or securities available to the Company and the Guarantor shall not be released from its liability

**ANNEXURE-V**

- (4) under these presents by any exercise by the Company of the liberty with reference to the matters aforesaid or by reason of time being given to the vendor or any other forbearance, act or commission of the part of the company or any indulgence by the company to the vendor or of any other matter or thing whatsoever which under the law relating to sureties, would but for this provision have the effect of so releasing the Guarantor from its liability under this Guarantee.
- (5) The Guarantor further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken to the performance of the Contract and that it shall continue to be enforceable till all the dues of the Company under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged and till the Company certifies that the terms and conditions of the Contract have been fully and properly carried out by the Vendor and accordingly discharges this Guarantee, subject, however, that this Guarantee is only valid for written demands by the Company on or before.....(specify date).

The Guarantor undertake not to revoke this Guarantee during the period it is in force except with the previous consent of the Company in writing and agree that any liquidation or winding up or insolvency or dissolution or any change in the constitution of the Vendor or the Guarantor shall not discharge the Guarantor's liability hereunder:

It shall not be necessary for the Company to proceed against the Vendor before proceeding against the Guarantor and the Guarantee herein contained shall be enforceable against them notwithstanding any security which the Company may have obtained or obtain from the Vendor shall at the time where proceedings are taken against the Guarantor hereunder by outstanding or unrealized.

The Guarantor hereby declares that it has power to execute this guarantee under its Memorandum and Articles of association and the executants has full powers to do so on its behalf under the Power of Attorney dated.....granted to him by the proper authorities of the Guarantor..

IN WITNESS whereof the ..... (Bank) have caused this deed to be signed hereunder or their behalf on the date first above mentioned.

**Signed for and on behalf of the (Bank)**

Name:  
Designation:  
Address:

Fax No. (With country code):  
E-mail address:

**NOTE: IN CASE A BANK IN INDIA IS GIVING THIS BANK GUARANTEE; IT WILL BE EXECUTED ON A NON JUDICIAL STAMP PAPER OF Rs. 62.50 BUT IF IT WILL BE FROM AN OVERSEAS BANK, IT WILL HAVE TO BE EXECUTED AS PER LAWS OF THAT COUNTRY.**





## GENERAL TERMS AND CONDITIONS OF TENDER ENQUIRY ANNEXURE-A

1. Submit the tender in two parts i.e.

**Part-I Techno-Commercial Bid**

**Part-II Price Bid**

Techno-Commercial (part one) & Price Bid (part two) should be put in separate sealed envelopes. Both envelopes should be super scribed with **Tender Number, Date of Opening & Technical / Commercial Bid and Price Bid** respectively along with name of firm.

Both the envelopes i.e. containing Techno-Commercial Bid and Price Bid should again be kept in one envelope super scribed again with Tender No. and Date of Opening and the name of firm submitting the tender and sent by Registered A/D post to **SDGM(MM),Purchase Department ,CFFP ,BHEL Hardwar,Ranipur ,Hardwar 249403.Uttrakhand ,India**

Part-I Envelopes super scribed with **Techno-Commercial Bid** must contain all information especially:-

(a) Specification of the material offered should be strictly as per CFFP/BHEL specifications of Enquired material in tender documents. **Deviations if any must be indicated clearly in the offer .**

(b) All commercial terms i.e. packing, forwarding, Custom Duty ,Additional Duty ,ST/STT/VAT/CST, Excise duty/CVD , Bank Charges, payment terms & Insurance etc as applicable should be clearly mentioned **except Price** .Also mention present rate of applicable taxes & duties even if inclusive in rates.

(c) Confirm to submit all required commercial documents (tax invoice, CENVATable duplicate copy of invoice, packing list, transit sale agreement etc.)& technical documents (TC/GC/QP etc.)

(d) Registration Numbers of SSI, Central Excise, Sales tax, Income tax, DGS & D, ECC etc.

(e) **Un-priced copy of Price Bid.**

Part-II Envelopes super scribed with **Price Bid** should contain **priced copy of Price Bid**. The price should be mentioned both **in figures and words**.

2. Authorized Signatory should authenticate all tender documents.

**3. Techno-commercial bid ( Part-I )** will be opened on the due date at 2.00 PM. In the presence of participating vendors or authorized representatives, who may wish to be present. Representative deputed to witness tender opening must produce an authority letter from the signatory of offer. After evaluation of technical bids & finalization of technical, commercial terms & condition, price bid of only successful vendors will be opened. Priced bid opening date will be intimated separately.

4. The material offered must conform to the required BHEL specifications and drawings as well as instructions and details made available .

### **5. Eligibility :**

a) The Vendor must submit the annual reports giving the audited profit or loss account and balance sheet for last three financial years with year ending 31.03.07.

b) The Vendor have to submit the details of recent orders of similar material ( not earlier than 31.03.05) executed mentioning the Name and address of Customers with technical details preferably in India .

The Vendors who are registered with any unit of BHEL ,India, in related category are exempted of above two . They should however give details of their registration.



**6. Original Test Certificate & other related Documents** from the Manufacturers or Government or Recognized Houses shall have to be produced as applicable without any extra cost. This may please be clearly confirmed in the quotation without which the offer may not be considered.

**7. Validity** of offers should be minimum of **180 working days** from the date of Tender (Techno-Commercial Bid) opening.

**8. Delivery** in the promised period is the essence of contract. Confirm to supply according to delivery schedule mentioned (Refer Annexure B)

**9. Payment Term** preferably should be within 30 days after receipt and acceptance of material through e-payment.

**10.** CFFP/BHEL Hardwar reserves the right to accept or reject any or all tenders without assigning any reason there of.

**11.** Tenders not submitted in the prescribed manner are likely to be ignored/ rejected.

**12. Agent /Agency Commission:** Payment of any kind at any stage will not be made to Agent on account of agent commission or otherwise by CFFP BHEL Hardwar.

**13**CFFP, BHEL, HARIDWAR may opt for **E-auction/Reverse auction** for obtaining best prices for part or full Tendered Quantity.

**14.**Please do intimate the personal contact details like Mobile Number, Email–Id, etc of authorized executive for correspondence.

**15. Penalty :** Orders placed against this Enquiry will be subject to normal clauses for imposing Penalty, Liquidated Damages, Risk purchases, cancellation ,arbitration as per terms and conditions of Purchase Orders in case of delay in effecting supply and or other defaults .

**16. Inspection :**CFFP BHEL Hardwar inspection after receipt shall be final and binding . BHEL may inspect at Vendor's work also. BHEL may nominate any testing house for inspection .The report shall be final and binding to both concerned .In case store is found defective during warranty period ,the same will be returned for repair (if not possible in India by Vendor) and or replacement .For this Vendor has to bear all the charges such as Freight ,i.e. to and fro ,insurance etc .Bank Guarantee for the equal amount to the cost of the item is to be furnished by Vendor. In case the repair is done at CFFP/BHEL the amount on actual shall have to be reimbursed by the Vendor and or adjusted on actual from their Bill.

**17. Security Deposit and Performance Bank Guarantee** is must .The percentage of both proposed (Annexure B) if decreased the % of decrement than that proposed shall be loaded on Landed Cost Calculation .The minimum % acceptable shall be decided by CFFP/BHEL beyond which offer may be rejected .

**18. Disputes :** In event of any dispute arising out of Contractual obligation ,the order being finalized at Hardwar ,India will be subject to Indian Laws and falls under jurisdiction of the Court of Law at New Delhi ,India .The overseas supplier hereafter referred to as "Vendor" shall therefore ,abide by the verdict of Court of Law at Hardwar ,India as may occur .

-OR-

All disputes arising out of or in connection with the present contract ,if any ,shall be finally settled under the rules of arbitration of International Chamber of commerce by one or more arbitrator appointed in accordance with the said Rules in India .



**निविदा सूचना**  
**TENDER ENQUIRY**

**भारत हैवी इलैक्ट्रिकल्स लिमिटेड**  
**Bharat Heavy Electricals Ltd**  
सेन्ट्रल फाउन्डी फॉर्ज प्लांट- हरिद्वार-249 403 (भारत)  
**Central Foundry Forge Plant, Hardwar-249 403 INDIA**

AA-17001 Phone : (0091) (133) 485356, 485269 • Telefax : (0091) (133) 425892 • Telex : 05909-213 UPTT NO. HR-0041496 Dt. 01-04-1994 C S T NO. HR-5018287 Dt. 16-03-1995

निविदा सूचना सं. ENQUIRY NO.*	3253/P/360 /7/2248F/1	दिनांक Date	08.03.2008
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कृपया निम्नलिखित के लिए निविदा दें। PLEASE QUOTE FOR THE FOLLOWING :

ENQUIRY DUE DATE: 04.06.2008

LIST OF VENDORS/AGENTS

S.N.	CODE	VENDOR/AGENT	ADDRESS
1	T09285	M/S. :	INDIA

  

SL NO	MATERIAL CODE	UNIT	TOTAL QTY	DELIVERY LOT	QTY	SCHEDULE DELY_DT
1	FF8181260015 REPAIR KIT FOR RECONDITIONING OF MAIN CYLINDERS ON 7500/9000 T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	3	1	3	before 01.02.2009
2	FF8181260023 REPAIR KIT FOR RECONDITIONING OF RETURN CYLINDERS ON 7500/9000 T FORGING PRESS (AS PER A OF ANNEXURE-I). DIM : S	ST	2	1	2	before 01.02.2009
3	FF8181260031 REPAIR KIT FOR RECONDITIONING OF LONGITUDINAL TABLE CYLINDER S ON 7500/9000T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	2	1	2	before 01.02.2009
4	FF8181260040 COMPLETE SYSTEM OF CENTRALISED OIL HYDRAULIC POWER PACK UNIT FOR 7500/9000T FORGING PRESS (AS PER A OF ANNEXURE-I). DIM : S	ST	1	1	1	before 01.02.2009
5	FF8181260058 COMPLETE ASSEMBLY FOR REPLACEMENT OF PILOT VALVE FOR AUTOMATIC SHUT OFF VALVE ON 7500/9000 T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	1	1	1	before 01.02.2009
6	FF8181260066 KIT FOR REPLACEMENT OF CONTROL UNITS SUITING TO PURE WATER A	ST	5	1	5	before 01.02.2009

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AA-17001

निविदा सूचना  
**TENDER ENQUIRY**

भारत हैवी इलेक्ट्रिकल्स लिमिटेड

**Bharat Heavy Electricals Ltd**

सेन्ट्रल फाउन्ड्री फॉर्ज प्लांट- हरिद्वार-249 403 (भारत)

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UPTT NO. HR-0041496 Dt. 01-04-1994  
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निविदा सूचना सं. ENQUIRY NO.*	3253/P/360 /7/2249F/1	दिनांक Date	08.03.2008
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कृपया निम्नलिखित के लिए निविदा दें। PLEASE QUOTE FOR THE FOLLOWING :

SL NO	MATERIAL CODE MATERIAL DESCRIPTION	UNIT	TOTAL QTY	DELIVERY LOT	SCHEDULE DELY_DT
	APPLICATION ON 7500/9000T FORGING PRESS (AS PER A OF ANNEXURE -I) DIM : S				
7	FFB181260074 KIT FOR RECONDITIONING OF HIGH PRESSURE SHUT OFF VALVE ON 7500/9000T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	1	1	1 before 01.02.2009
8	FFB181260082 KIT FOR RECONDITIONING OF AUTOMATIC SHUT OFF VALVE ON 7500/9000T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	1	1	1 before 01.02.2009
9	FFB181260090 KIT FOR REPLACEMENT OF COMPLETE FILLING VALVES ON 7500/9000T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	3	1	3 before 01.02.2009
10	FFB181260139 KIT FOR REPLACEMENT OF WEAR PLATES FITTED UNDER THE DRAG PLATE TOWARDS RE-HEATING FURNACE SIDE ON 7500/9000T FORGING PRESS (AS PER A OF ANNEXURE-I). DIM : S	ST	1	1	1 before 01.02.2009
11	FFB181260104 REPAIR KIT FOR RECONDITIONING OF EQUALISING CYLINDERS ON 7500/9000T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	2	1	2 before 01.02.2009
12	FFB181260112 REPAIR KIT FOR RECONDITIONING OF THE TIE RODS ON 7500/9000T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	4	1	4 before 01.02.2009
13	FFB181260120 REPAIR KIT FOR RECONDITIONING OF INTENSIFIER CYLINDER ON 7500/9000T FORGING PRESS (AS PER	ST	1	1	1 before 01.02.2009

\* महत्वपूर्ण : कृपया कोटेशन देने से पूर्व पीछे दिए गये अनुदेशों को ध्यानपूर्वक पढ़िये।

IMPORTANT: PLEASE READ CAREFULLY THE INSTRUCTIONS...



AA-17001

निविदा सूचना  
**TENDER ENQUIRY**

भारत हेवी इलेक्ट्रिकल्स लिमिटेड  
**Bharat Heavy Electricals Ltd**  
सेन्ट्रल फाउन्ड्री फॉर्ज प्लांट- हरिद्वार-249 403 (भारत)  
**Central Foundry Forge Plant, Hardwar-249 403 INDIA**

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UPTT NO. HR-0041495 Dt. 01-04-1994  
C S T NO. HR-5018287 Dt. 16-03-1995

निविदा सूचना सं. ENQUIRY NO.*	3253/P/360 /7/2249F/1	दिनांक Date	08.03.2008
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कृपया निम्नलिखित के लिए निविदा दें। PLEASE QUOTE FOR THE FOLLOWING :

SL NO	MATERIAL CODE MATERIAL DESCRIPTION	UNIT	TOTAL QTY	DELIVERY LOT	QTY	SCHEDULE DELY_DT
	A OF ANNEXURE-I) DIM : S					
14	FF8181260147 TRAVEL OIL MOTORS FOR MANIPULATOR (AS PER B OF ANNEXURE-I) DIM : S	ST	2	1	2	before 01.02.2009
15	FF8181260155 OIL CIRCULATION PUMP OF MANIPULATOR (AS PER B OF ANNEXURE-I) DIM : S	ST	1	1	1	before 01.02.2009
16	FF8181260163 AXIAL PISTON PUMP TYPE AV2468 HM FOR MANIPULATOR (AS PER B OF ANNEXURE-I) DIM : S	ST	1	1	1	before 01.02.2009
17	FF8181260171 AXIAL PISTON PUMP TYPE A2F468 R2P2 FOR MANIPULATOR (AS PER B OF ANNEXURE-I). DIM : S	ST	1	1	1	before 01.02.2009
18	FF8181260180 COMBINATION PUMP FOR MANIPULATOR (AS PER B OF ANNEXURE-I) DIM : S	ST	1	1	1	before 01.02.2009
19	FF8181260198 MANIPULATOR WHEELS (AS PER B OF ANNEXURE-I) DIM : S	ST	2	1	2	before 01.02.2009
20	FF8181260252 CONTROL PANEL FOR 7500/9000T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	1	1	1	before 01.02.2009
21	FF8181260260 CONTROL DESK OF 7500/9000T FORGING PRESS AND AUXILIARY CONTROL CUBICLE (AS PER A OF ANNEXURE-I) DIM : S	ST	1	1	1	before 01.02.2009
22	FF8181260279 CONTACT LESS 4-MR STROKE MEASUREMENT TRANSDUCER FOR 7500/9000T FORGING PRESS (AS PER A OF	ST	2	1	2	before 01.02.2009

\* महत्वपूर्ण : कृपया कोटेशन देने से पूर्व पीछे दिए गये अनुदेशों को ध्यानपूर्वक पढ़िये।

IMPORTANT : PLEASE READ CAREFULLY THE INSTRUCTIONS GIVEN ON REVERSE BEFORE SUBMITTING



निविदा सूचना  
**TENDER ENQUIRY**

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**Bharat Heavy Electricals Ltd**  
सेन्ट्रल फाउन्ड्री फॉर्ज प्लांट- हरिद्वार-249 403 (भारत)  
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AA-17001

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निविदा सूचना सं. ENQUIRY NO.*	3253/P/360 /7/2249F/1	दिनांक Date	08.03.2008
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कृपया निम्नलिखित के लिए निविदा दें। PLEASE QUOTE FOR THE FOLLOWING :

SL NO	MATERIAL CODE MATERIAL DESCRIPTION	UNIT	TOTAL QTY	DELIVERY LOT QTY	SCHEDULE DELY_DT
	ANNEXURE-I) DIM : S				
23	FF8181260287 CONTACT LESS 6-METERS STROKE M EASUREMENT TRANSDUCER FOR 7500 /9000T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	1	1	1 before 01.02.2009
24	FF8181260295 CONTACT LESS END LIMIT SENSORS FOR 7500/9000T FORGING PRESS ( AS PER A OF ANNEXURE-I) DIM : S	ST	1	1	1 before 01.02.2009
25	FF8181260309 LEVEL MEASUREMENT DEVICE FOR H IGH PRESSURE ACCUMULATOR ON 75 00/9000T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	1	1	1 before 01.02.2009
26	FF8181260317 LEVEL MEASUREMENT DEVICE FOR L OW PRESSURE AIR VESSEL ON 7500 /9000T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	1	1	1 before 01.02.2009
27	FF8181260325 LEVEL MEASUREMENT DEVICE FOR R ESERVOIR TANK & ITS DISPLAY ON 7500/9000T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	1	1	1 before 01.02.2009
28	FF8181260333 PRESSURE MEASUREMENT SYSTEMFOR OUTER AND MIDDLE CYLINDERS ON 7500/9000T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	2	1	2 before 01.02.2009
29	FF8181260341 PRESSURE MEASUREMENT SYSTEM FO R RETURN CYLINDERS ON 7500/900 0T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	1	1	1 before 01.02.2009
30	FF8181260350	ST	1	1	1 before 01.02.2009

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**निविदा सूचना**  
**TENDER ENQUIRY**

**भारत हेवी इलैक्ट्रिकल्स लिमिटेड**  
**Bharat Heavy Electricals Ltd**  
सेन्ट्रल फाउन्डी फॉर्ज प्लांट- हरिद्वार-249 403 (भारत)  
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निविदा सूचना सं. ENQUIRY NO.*	3253/P/360 /7/2249F/1	दिनांक Date	08.03.2008
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कृपया निम्नलिखित के लिए निविदा दें। PLEASE QUOTE FOR THE FOLLOWING :

SL NO	MATERIAL CODE MATERIAL DESCRIPTION	UNIT	TOTAL QTY	DELIVERY LOT	SCHEDULE DELY_DT
	PRESURE MEASUREMENT SYSTEM FOR HIGH PRESSURE ACCUMULATOR BOT TLE ON 7500/9000T FORGING PRES S (AS PER A OF ANNEXURE-I) DIM : S				
31	FF8181260368 PRESSURE MEASUREMENT SYSTEM FO R LOW PRESSURE AIR VESSEL(PRE FILL TANK)ON 7500/9000T FORGE PRESS(AS PER A OF ANNEXURE-I) DIM : S	ST	1	1	1 before 01.02.200
32	FF8181260376 DISPLAY UNITS FOR LEVEL MEASUR EMENT ON 7500/9000T FORGING PR ESS (AS PER A OF ANNEXURE-I) DIM : S	ST	2	1	2 before 01.02.200
33	FF8181260384 DISPLAY UNIT FOR PRESS TRAVEL MEASUREMENT ON 7500/9000T FORG ING PRESS (AS PER A OF ANNEXUR E-I) DIM : S	ST	1	1	1 before 01.02.200
34	FF8181260392 SET OF CONTROL AND POWER CABLE S FOR 7500/9000T FORGING PRESS (AS PER A OF ANNEXURE-I) DIM : S	ST	1	1	1 before 01.02.200
35	FF8181260414 CONTROL PANEL FOR MANIPULATOR (AS PER B OF ANNEXURE-I) DIM : S	ST	1	1	1 before 01.02.200
36	FF8181260422 CONTROL DESK OF MANIPULATOR (A S PER B OF ANNEXURE-I) DIM : S	ST	1	1	1 before 01.02.200
37	FF8181260430 TRAVEL MEASUREMENT TRANSDUCER FOR MANIPULATOR (AS PER B OF A NNEXURE-I) DIM : S	ST	2	1	2 before 01.02.200
38	FF8181260449 TONG ROTATION MEASUREMENT TRAN SDUCER FOR MANIPULATOR (AS PER B OF ANNEXURE-I)	ST	1	1	1 before 01.02.200

\* महत्वपूर्ण : कृपया कोटेशन देने से पूर्व पीछे दिए गये अनुदेशों को ध्यानपूर्वक पढ़िये।

IMPORTANT : PLEASE READ CAREFULLY THE INSTRUCTIONS GIVEN ON REVERSE BEFORE PREPARING



निविदा सूचना  
**TENDER ENQUIRY**

भारत हैवी इलैक्ट्रिकल्स लिमिटेड  
**Bharat Heavy Electricals Ltd**  
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निविदा सूचना सं. ENQUIRY NO.*	3253/P/360 /7/2249F/1	दिनांक Date	08.03.2008
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कृपया निम्नलिखित के लिए निविदा दें। PLEASE QUOTE FOR THE FOLLOWING :

SL NO	MATERIAL CODE MATERIAL DESCRIPTION	UNIT	TOTAL QTY	DELIVERY LOT	QTY	SCHEDULE DELY_DT
	DIM : S					
39	FF8181260457 CONTACT LESS PEEL LIFT MEASURE MENT TRANSDUCER FOR MANIPULATO R (AS PER B OF ANNEXURE-I) DIM : S	ST	1	1	1	before 01.02.2009
40	FF8181260465 DISPLAY UNIT FOR TRAVEL MEASUR EMENT OF MANIPULATOR (AS PER B OF ANNEXURE-I) DIM : S	ST	1	1	1	before 01.02.2009
41	FF8181260473 SET OF CONTROL AND POWER CABLE S FOR MANIPULATOR (AS PER B OF ANNEXURE-I) DIM : S	ST	1	1	1	before 01.02.2009

- 1 This enquiry is 2 part tender. Techno-Commercial bid (Part - 1) and Price Bids (Part-2) should be submitted in separate envelopes. These two envelopes should be submitted in a common sealed envelope. Techno-Commercial Bid shall contain detailed Technical Specification, Drawings Technical documents, Catalogues, taxes & duties, payment terms, delivery period, Validity of offer, Replica of Price Bid (Copy of price bid without price part) etc. The confirmation to the special terms & conditions must be submitted alongwith Techno-Commercial bid. Price bid (Part - 2) shall contain only prices.

RECONDITIONING OF 7500/9000T FORGING PRESS IN HEAVY FORGE SHOP CFFP/BHEL HARDWAR AS PER ENCLOSED TERMS & CONDITIONS GIVEN BELOW:

- 01 TECHNICAL SPECIFICATION & PRICE FORMAT AS PER ANNEXURE-I.
- 02 PERFORMANCE PARAMETERS & SPECIFICATION OF PRESS & MANIPULATOR AS PER ANN.II.
- 03 GENERAL TECHNICAL TERMS AND CONDITIONS AS PER ANNEXURE-III.
- 04 PROFORMA OF BANK GUARENTEE AS PER ANNEXURE-IV.
- 05 PROFORMA OF BANK GUARENTEE AS PER ANNEXURE-V.
- 06 DISMANTLING, ERECTION & COMMISSIONING OF 7500/9000T EXISTING PRESS & MANIPULATOR ON SUPERVISION BASIS ALONGWITH SPARE PARTS FOR TWO YEARS TO BE QUOTED SEPARATELY IN PRICE FORMAT OF ANNEXURE-I.
- 07 BHEL WILL PROVIDE SKILLED/UNSKILLED MANPOWER AS PER REQUIREMENT.
- 08 QUALIFICATION CRITERIA TO BE EXAMINED BY BHEL AS GIVEN IN ANNEXURE-A.
- 09 ALL CORRESPONDENCE REQUIRED IN ENGLISH ONLY.
- 10 GENERAL TERMS & CONDITIONS OF TENDER ENQUIRY AS PER ANNEXURE-A
- 11 ACCEPTANCE OF COMMERCIAL TERMS BY VENDOR AS PER ANNEXURE-B.

-----contd.-----

\* महत्वपूर्ण : कृपया कोटेशन देने से पूर्व पीछे दिए गये अनुदेशों को ध्यानपूर्वक पढ़िये।

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**Bharat Heavy Electricals Ltd**  
सेन्ट्रल फाउन्ड्री फोर्ज प्लांट- हरिद्वार-249 403 (भारत)  
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UPTT NO. HR-0041436 Dt. 01-04-1994  
C S T NO. HR-5018287 Dt. 16-03-1995

निविदा सूचना सं. ENQUIRY NO.*	3253/P/360 /7/2249F/1	दिनांक Date	08.03.2008
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कृपया निम्नलिखित के लिए निविदा दें। PLEASE QUOTE FOR THE FOLLOWING :

- 12 LIST OF OUR BANKERS AS PER ANNEXURE AS PER ANNEXURE-C.
- 13 AUTHORISATION LETTER FOR E-PAYMENT AS PER ANNEXURE-D.

- \*\*\*\*\*
- \*\* Please submit authorization letter (format enclosed) for facilitating e-payment/electronic transfer of funds
  - \*\* Vendors can avail credit facilities provided by financial institutions to BHEL vendors. However to provide finance or not shall be the sole discretions of HDFC Bank/Financial institutions and ot avail or not will be the sole discretion of vendor.CFFP/BHEL role is limited to facilitating the scheme.
  - \*\* 100% payment within 30 days after receipt & acceptance of material at CFFP BHEL, Hardwar through e-payment.
  - \*\* CFFP/BHEL Reserves the right to procure from more than one vendor.

For BHARAT HEAVY ELECTRICALS LIMITED

  
(SUNIL KUMAR)  
SR MANAGER (PUR)

You may contact the signatory at email: [satul@bhelhwr.co.in](mailto:satul@bhelhwr.co.in)

★ महत्वपूर्ण : कृपया कोटेशन देने से पूर्व पीछे दिए गये अनुदेशों को ध्यानपूर्वक पढ़िये।

IMPORTANT : PLEASE READ CAREFULLY THE INSTRUCTIONS GIVEN ON REVERSE BEFORE QUOTING

AUTHORISATION LETTER  
FOR E-PAYMENT/ELECTRONIC FUNDS TRANSFER (EFT/RTGS)  
PLEASE FILL UP THE FORM IN CAPITAL LETTERS ONLY

TYPE OF REQUEST (Tick One)       CREATE       CHANGE

BHEL Vendor/ Supplier Code     

Company's Name        
Address        
City        
Pincode        
State     

Contact Person(S)        
Telephone NO.        
FAX. No.        
e-mail id     

1. Bank Name        
2. Bank Address        
3. Bank Telephone No.        
4. Bank Account No.        
5. Account Type.        
6. Bank's Branch Code        
7. Bank Swift Code        
    (aplicable to EFT only)  
8. Enclose blank cancelled cheque     

DECLARATION

1. I as representative/Owner of the above named company, hereby authorize BHEL CFFP, Ranipur, Haridwar to electronically make payments to the designated bank account.      I hereby certify that the particulars given above are true, complete and correct.
- (2) If the transsation is delayed or not effected at all for reasons of incomplete or incorrect information, I would not hold BHEL/transfereing Bank responsible.
3. This authority remains in full force untill BHEL, CFFP, Ranipur, Haridwar receives & acknowledge written notification requesting a change or cancellation.
4. I have read the contents of the covering letter and agree to discharge the responsibilty expected of me as a participant under E-payment/EFT/RTGS.

Date:  
Authorized Signatory  
Designation

Company Seal

Verification By Bank

D