

BHARAT HEAVY ELECTRICALS LIMITED
HERP, TARNA, SHIVPUR, VARANASI-221003 (UP)
Fax: 0542-2282239/2282241, Phone: 6545322/6536334
E-mail: abhay@bhel.co.in

No. Cap/OT/08-09/02

Date: 30th Aug.'08

Subject: Open tender as detailed below:

OPEN TENDER

1. Sealed tenders with the Tender No. and opening date clearly superscribed on the cover are invited from the original equipment manufacturers agents for the supply of the following items:-

Sl. No.	Tender No.	Description of Equipment	Qty. (No.)	Last date to get from BHEL	Opening date
1.	E-588-08-0003-69-1	CNC Cylindrical Grinding Machine, Max. Grinding Dia. 600 mm & Max. Grinding Length 3000 mm (as per enclosed specification as Annexure-V)	01	16.10.08	17.10.08

2. Last date for purchase of the tender documents and opening of tenders is indicated against each tender. Tenders will be received up to 14:00 hrs on opening date and opened on the same day at 14:30 hrs.
3. Intending vendors must remit the tender fee of Rs. 2000.00 along with the requisite EMD in the form of separate demand drafts while submitting the tender documents as detailed in "Instruction to Bidders", after down loading from this web site. They should write 'Tender Fee' & 'EMD' and the Tender no. alongwith the name of bidding party on the back of demand draft. The demand drafts should be put in different envelopes superscribed "Tender Fee" & "EMD" as the case may be. These envelopes are to be put in the bigger envelope (refer clause 3.0 of 'Instruction to bidders for open tender').
4. BHEL will not be responsible for any type of postal delay / incomplete information from vendor.
5. Other terms and conditions will be as per enclosed tender documents.

(Abhay Kumar)
Sr. Manager (Pur.)



BHARAT HEAVY ELECTRICALS LIMITED
HERP, TARNA, SHIVPUR, VARANASI -221003
FAX NO: 0091 542 2282239/2282241
PHONE NO: 0091 542 6542322/6536334

Enq. No.: E-588-08-0003-69-1

Date of issue: 30th Aug.'08
Due Date: 17th Oct.'08

M/S.....

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Sub: Tender Enquiry No. E-588-08-0003-69-1.

Dear Sir,

We are pleased to invite your offer in TWO PARTS, Strictly as per enclosed terms and conditions and instruction to bidders, in sealed covers for the under mentioned equipment/systems.

S.N.	Description	Qty.	Delivery Required	EMD (Earnest Money Deposit)
1.	CNC Cylindrical Grinding Machine, Max. Grinding Dia. 600mm & Max. Grinding Length 3000 mm (as per enclosed specification as Annexure-V)	01	31.10.2009	Rs.1,00,000.00/- (One Lakh only or equivalent Foreign currency)

Please submit your lowest quotation / offer for the above requirement subject to our terms and conditions. Your offer should reach us on or before the due date by 14:00 hrs.

NOTE: The vendor should submit their best price at this stage it self as they will not be allowed to revise the price. Any revision / discount given by vendor subsequently will be ignored & the bid is likely to be rejected.

Part-1 bids shall be opened of those vendors **ONLY AFTER ENSURING PROOF OF EMD AND TENDER FEE (PLEASE SUBMIT SEPARATE DRAFTS FOR EMD AND TENDER FEE {drawn in favour of BHEL Varanasi} IN ANOTHER ENVELOPE SUPERSCRIBED WITH BOLD LETTERS "EMD & TENDER FEE")** at 14:00 hrs on the due date in the presence of authorized representatives of the bidders who may like to be present. The authorized representative should bring authority letter from their principals (if any) for attending the bid opening. All Govt. of India / PSU / State Govt. entities are exempted from submission of EMD. Purchase preference will be given to CPSE s as per GOI notification no. DPE/13(12) 2003-Fin. Dated 26th Oct'04.

KINDLY READ "INSTRUCTIONS TO BIDDERS". QUOTATION NOT IN ACCORDANCE WITH THE ABOVE INSTRUCTIONS ARE LIABLE TO BE DISQUALIFIED AND IGNORED.

Thanking You,
Yours Faithfully,
For & ON BEHALF OF BHEL, VARANASI

(Abhay Kumar)
Sr. Manager (Purchase)

INSTRUCTIONS TO BIDDERS FOR OPEN TENDER

Only those bids will be opened which has been submitted with requisite EMD & tender fee.

1.0 The tenders shall be submitted in three parts (part I Techno -Commercial Bid & part II Price Bid & part III Vendor Registration & Evaluation Form) as described below on or before the due date.

- **The Quotation should be from the Principal / Original Equipment Manufacturer, failing which the quotation is likely to be ignored.**
- Any corrections / amendments shall be properly & fully authenticated with signature.

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

- a) Complete Technical offer in TWO sets (one original + one copy).
- b) Catalogue of the Equipment, Complete reference of the past supply of equipment for the same or similar specification giving details of customer with Name of the contact person, Fax no, phone no, E-mail if available.
- c) Acceptance of commercial terms by vendor as per **Annexure I**.
- d) Deviation with reference to specification to be laid down on separate sheet.
- e) Copy of Un-priced Bid (without prices).
- f) Validity of offer should be at least 120 days from the date of tender opening.
- g) Quality plan to be submitted on the prescribed format as per BHEL Quality requirements for approval, Quality plan should enclose vendor's own standard, test procedures, list of sub vendors for Bought out items cross-referred, if any.
- h) Acceptance to submit Security Deposit and Performance Bank Guarantee as per enclosed format **Annexure-IV**.
- i) Guarantee/Warranty of 18 months from the date of commissioning of the equipment unless other wise specified in the technical specifications.
- j) Any additional documents (please specify).
- k) Consortium Bank List at **Annexure-III**.

1.2 PART-II (PRICE BID)

The price Bid (with price), which has been submitted with part I as **Un-priced Bid**, for the complete scope as specified in the price Format attached as **Annexure-II**.

- 1.2.1 a) Dispatching port & Country to be mentioned: The vendor has therefore **essentially to quote sea freight up to Mumbai port** / (Air freight up to Delhi AirPort). The foreign bids will be compared on C&F Mumbai port basis. For this purpose, the freight rates as per BHEL's rate contract shall be taken into account if the vendor has not quoted the freight rate up to Mumbai Port.
- b) Indigenous Supplies: - F.O.R. Destination means FOR – BHEL, Stores (Packing & Forwarding, Freight & insurance are in supplier scope i.e., included in the quoted price).
 - c) Applicable sales Tax, Excise duty, service tax, educational cess and any other statutory levy should be indicated separately and clearly in the quotation, else it will be concluded that the offer is inclusive of all taxes and duties. The comparison between foreign and indigenous bids shall be done based on the Landed price basis (FOR DESTINATION).

1.3 Part-III (Vendor Registration/ evaluation form)

The VREF (to be downloaded from www.bhel.com or <http://varanasi.bhel.co.in>) duly filled up will be assessed for manufacturing capability, quality systems being followed, organizational soundness and financial worthiness.

2.2 PART-I containing techno-commercial part and part-III containing vendor Registration/ evaluation form will be opened on the date and time specified in the covering letter, in the presence of those tenders 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 and in that case vendor will be informed accordingly.

2.3.1 The part-II price Bid along with supplementary priced bid if necessary will be opened at a later date of only those bidders whose techno-commercial bid and financial health has been found acceptable.

3.0 MARKING OF ENVELOPE:

3.1 The part-I, part-II & part-III and the envelope containing drafts for EMD and tender fee shall be individually sealed and super scribed as indicated above and shall be enclosed further in the envelop duly sealed and super scribed as "TENDER FOR (ITEM NAME) AGAINST TENDER NO.----- DUE ON -----CONTAINING PART-I & PART-II OF THIS OFFER.

3.2 The following shall be subscribed on the envelopes:

- | | | |
|----|-----------------------|---|
| 1. | EMD AND TENDER FEE. : | Details of Drafts attached (No, Bank, Branch, Issue date) |
| 2. | PART-I | 1. TENDER NO. AND ITEM DESCRIPTION.
2. DUE DATE FOR OPENING.
3. "TECHNO-COMMERCIAL BID PART-I" |
| 3. | PART-II | 1. TENDER NO. AND ITEM DESCRIPTION.
2. DUE DATE FOR OPENING OF PART-I.
3."PRICE BID PART-II". |
| 4. | PART-III | 1. TENDER NO. AND ITEM DESCRIPTION.
2. DUE DATE FOR OPENING.
3. Vendor evaluation / registration form. Can be downloaded from www.bhel.com or http://varanasi.bhel.co.in |

3.3 Envelopes not marked as above are liable to be ignored and will not be opened.

4.1 Tenders when finalized shall be in the name of the bidder only and change of name during tender evaluation (without certificate from registrar of company) and after submission of the tender is liable to make the offer ineligible for participation.

4.2 All test certificates / Guarantee certificates to be submitted in TRIPLICATE prior to despatch of materials for review and acceptance by BHEL.

IN CASE YOU ARE NOT MAKING AN OFFER AGAINST THIS ENQUIRY, THEN PLEASE ARRANGE TO SEND A LETTER OF REGRET IF YOU HAVE COLLECTED THE TENDER DOCUMENTS FROM BHEL.

Thanking You,

Yours faithfully,
For & on behalf of BHEL, Varanasi.

(Abhay Kumar)
Sr. Manager (Purchase)

ANNEXURE-I

ACCEPTANCE OF COMMERCIAL TERMS BY VENDOR

TENDER NO. E-588-08-0003-69-1 SL. NO. DESCRIPTION	VENDOR'S CONFIRMATION
1) <u>Payment terms:</u> 80% of equipment cost plus 100% taxes & duties will be paid directly through EFT (Electronic Fund Transfer) within 90 days of receipt of equipment at BHEL, Stores. Balance 20% of material cost and E&C charges, if applicable will be paid after successful Erection & Commissioning.	
NOTE: a) As per payment terms, minimum 20% will be released by BHEL after successful erection, commissioning. Further this 20% will be released against submission of performance bank guarantee valid for entire Guarantee/Warranty period from the date of commissioning. b) The security deposit is to be as per the tender condition. c) Dispatch of Goods on door delivery basis only. Goods dispatched with documents presented through Bank will not be accepted. d) In no case BHEL shall accept to pay advance / liability towards interest. (Request for Advance payment may be liable for rejection) e) Offer with deviations to BHEL payment terms will be loaded accordingly.	
In case any bidder does not accept any of the condition at (a) to (e) 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.	
1.2 <u>P.B.G. TERMS:</u> Performance Bank Guarantee to be submitted on the prescribed format equal to the value of 10% of the total order value valid for WARRANTY / GUARANTEE agreed period. This bank guarantee in the format to be prescribed by BHEL, shall have to be submitted before release of last balance payment. The Bank Guarantee is to be furnished only through one of the consortium banks listed in Annexure-III. The bank guarantee of foreign bidders should be from any overseas branch of the consortium banks.	
1.3 <u>CURRENCY OF PAYMENT:</u> (Euro / Dollar / CHF etc.)	
1.4 For indigenous supply the currency shall be Indian Rupees.	
1.5 <u>SUPERVISION CHARGES:</u> For Indian Suppliers: It should be quoted in Rupees. For Foreign suppliers: If supervision is being carried out by persons residing in India, it should be quoted in Indian Rupees.	

<p>1.6 TAXES 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.</p>	
<p>2. Security Deposit: Vendor has to submit security equal to the amount of 5% 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.</p>	
<p>2.1 Submission of Performance Bank Guarantee : PBG to be submitted for 10% of order value valid for Guarantee/Warranty period. Offers with the condition of non-acceptance of PBG are liable to be rejected.</p>	
<p>2.2 F.O.R. CONDITION: The prices should be quoted on F.O.R., Destination (BHEL, Stores) basis indicating the freight element separately mentioning the weight & size of the consignment.</p>	
<p>3. Liquidated damages: L.D. shall be applicable for delayed delivery @ 0.5% per week and part thereof subject to a maximum of 10% for total P.O. value.</p> <p>Loading Factor for non-acceptance of Penalty Clause: Will attract maximum 10% loading on the offer and accordingly proportionate percentage will be loaded for accepting less percentage of penalty clause. Example: If the supplier has accepted for maximum 5% penalty clause, then balance 5% will be loaded.</p>	

<p>4) <u>Delivery of the equipment:</u></p> <ul style="list-style-type: none"> • Categorically indicate time period required for delivery of the equipment. • Firm delivery period for the equipment to be stated w.e.f. date of LOI/ Order. • Commissioning & Handing over of complete system in weeks. 	
<p>5) <u>Settlement of Disputes:</u></p> <ul style="list-style-type: none"> • Settlement of disputes through arbitration for foreign suppliers shall be in accordance with Arbitration Rules of Conciliation and Arbitration of the ICC, Paris. The venue of arbitration shall be Delhi. The courts of Delhi shall have exclusive jurisdiction. • For Indigenous Source. The venue of arbitration shall be Varanasi Courts, which will have exclusive jurisdiction. 	
<p>6) <u>Authorization for pre-inspection:</u> BHEL is authorized to pre inspect the material at supplier's works. The material will be dispatched only after getting clearance from BHEL.</p>	
<p>7) <u>Drawing / data approval</u> 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>8) <u>Drawing / design / information use:</u> 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 other agency and will also not be used for manufacturing for any other customer.</p>	
<p>9) <u>Time period for Foundation / Erection & Commissioning:</u> Vendor will have to ensure deputation of their people for Erection & Commissioning or for attending to any complaint during Guarantee / Warrantee period within 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 the supplier.</p>	
<p>10) <u>3 Sets of O&M Manual:</u> 3 Sets of Operation & Maintenance Manual alongwith relevant schematic/wiring drawings etc. shall have to be supplied along with the equipment. Final payment will be released only after receipt of the required documentation.</p>	
<p>11) <u>Training:</u> Vendor shall provide required training to BHEL personnel (Our Operation & Maintenance Team) free of cost at their works as well as at BHEL premises to the entire satisfaction of BHEL.</p>	
<p>12) <u>Purchasing of BOI items:</u> Vendor shall purchase the BOUGHT OUT ITEMS only from vendors of repute and indicate the same to BHEL at the time of approval of GA drawing. BHEL reserves the right to visit / inspect the works of supplier and that of their sub contractors before or after placement of order.</p>	

<p>13) Spares, tooling, jigs and fixtures: The equipment being new, above items shall be needed in bulk at a later stage. However two separate lists of spares, tooling, consumables viz: grinding wheels, jigs and fixtures etc. should be sent along with quotation giving their individual prices.</p> <ol style="list-style-type: none"> 1. Items which you recommend very necessary to be available along with the equipment. 2. Item which may be required at a later stage for normal maintenance for two years of trouble free operation. (The price validity of these items should be for a minimum period of one year from the date of commissioning of the equipment). 	
<p>14) Warranty/ Guarantee: Guarantee regarding workmanship, material used, design and performance should be for a period of 18 months from the date of commissioning of equipment.</p>	
<p>15) Details of Contact person Name, Designation, Department complete postal, E-mail address & Fax no, phone, Mobile no. to be mentioned.</p>	
<p>16) Validity: Validity of the offer should be at least 120 days from tender opening.</p>	
<p>17) Erection & Commissioning Charges:</p> <ul style="list-style-type: none"> • Erection & Commissioning shall be done by the Vendor at our Works. • Civil Foundation work will be carried out by BHEL. • Foundation drawing shall be provided by the Vendor within one month of order placement. • Specify clearly the charges as i.e., Extra/Included/Free of Cost. • All T&P required shall have to be arranged by the vendor. 	
<p>18) Servo controlled Voltage Stabiliser and Ultra Isolation Transformer will be arranged by BHEL. However, vendor must confirm ratings for the same in their offer.</p>	
<p>19) Prove Out: The jobs prove out for two components as per details given in Technical Specification at Annexure-V enclosed shall be done by the vendor at our works after commissioning of the machine. Required Toolings (adequate quantity) & consumables viz: grinding Wheels etc. for prove out of these machined components shall be arranged by vendor and cost of such toolings & consumables must be included in the basic cost of the machine.</p>	
<p>20) The charges for prove out to be quoted separately along with applicable taxes & duties if any.</p>	
<p>21) The first / initial fill of all types of Oil is to be provided by the vendor.</p>	
<p>22) Test Certificate: Laser Calibration and testing of the machine for its Geometrical & Positional accuracies as per details mentioned in Technical Specification shall be conducted at Vendor's Works before dispatch and at our works after erection & commissioning of the machine in presence of BHEL representative.</p>	
<p>Note: Attach separate sheet for additional information if necessary. The above terms & condition supercedes the terms & conditions found contradictory written else where in the tender enquiry.</p>	

PRICE SCHEDULE**ANNEXURE-II****FOR INDIGENOUS OFFERS / SUPPLIES****FOR BASIC EQUIPMENT****Table -1**

SL. NO.	DESCRIPTION	PRICE (IN Rs.)
1	COST OF BASIC MACHINE (WITH DETAILED BREAKUP IF ANY)	
2	COST OF ACCESSORIES (WITH DETAILED BREAKUP)	
3	<u>ESSENTIAL SPARES</u> (COMMISSIONING AND OPERATIONAL SPARES FOR TWO YEARS TROUBLE FREE OPERATION)	
4	TOTAL EX-WORKS COST (1+2+3)	
5	PACKING AND FORWARDING CHARGES Rs.: (OR PERCENTAGE OF EX-WORKS PRICE)	
6	<u>EXCISE DUTY @ _____ Rs.:</u> (4+5) * _____ %	
7	EDUCATIONAL CESS @ 3% ON ED Rs.: (6) * 0.03	
8	VAT/CST @ _____ Rs.: (4+5+6+7) * _____ %	
9	FREIGHT CHARGES Rs.: (OR % ON EX-WORKS PRICE)	
10	INSURANCE CHARGES Rs.: (OR PERCENTAGE ON EX-WORKS PRICE)	
11	TOTAL VALUE Rs.: (4 + 5 + 6 + 7 + 8 + 9 + 10)	
12	LESS : EXCISE DUTY + CESS + VAT(IF APPLICABLE) Rs.: (6 + 7+ 8)	
13	TOTAL COST TO BHEL Rs.: [NET OF CENVAT] (11 – 12)	

FOR SERVICES

Table - 2

SL. NO.	DESCRIPTION	PRICE (IN RS.)
1	TRAINING CHARGES (IF ANY)	
2	ERECTION & COMMISSIONING CHARGES	
3	WARRANTY ENHANCEMENT CHARGES (IF ANY)	
4	ANY OTHER CHARGES (IF ANY)	
5	TOTAL SERVICE CHARGES (1+ 2 + 3 + 4)	
6	SERVICE TAX INCLUDING CESS @ _____ ON TOTAL SERVICE CHARGES (5 * _____ %)	
7	TOTAL SERVICE CHARGES (5 + 6)	
8	NET SERVICE CHARGES AFTER TAKING CREDIT OF SERVICE TAX INCLUDING CESS (7-6)	

TOTAL COST TO BHEL

Table - 3

SL. NO.	DESCRIPTION	PRICE (IN RS.)
1	BASIC MACHINE COST (13 OF TABLE 1)	
2	TOTAL SERVICE CHARGES (8 OF TABLE 2)	
3	TOTAL COST TO BHEL (1 + 2)	

PRICE SCHEDULE**ANNEXURE-II****FOR FOREIGN OFFERS / SUPPLIES****FOR BASIC EQUIPMENT****Table - 4**

SL. NO.	DESCRIPTION	PRICE (MENTION CURRENCY)
		TO BE FILLED BY VENDOR
1	COST OF BASIC MACHINE (WITH DETAILED BREAKUP IF ANY)	
2	COST OF ACCESSORIES (WITH DETAILED BREAKUP)	
3	<u>ESSENTIAL SPARES</u> (COMMISSIONING AND OPERATIONAL SPARES FOR TWO YEARS TROUBLE FREE OPERATION)	
4	TOTAL EX-WORKS COST (1+2+3)	
5	FOB / FCA CHARGES	
6	TOTAL FOB COST (4 +5)	
7	EXCHANGE RATE (AS ON TENDER OPENING DATE PUBLISHED IN NEWSPAPERS)	
8	TOTAL FOB COST OF THE MACHINE Rs.: (6 * 7)	
		NOT TO BE FILLED BY VENDOR
9	CIF @ 5% (COST OF INSURANCE AND FREIGHT) Rs.: (8 * 0.05)	
10	CUSTOM DUTY @ 15% Rs.: (8 + 9) * 0.15	
11	CVD @16% Rs.: (COUNTER VAILING DUTY) (8+9+10) * 0.16	
12	EDUCATIONAL CESS @3% ON CVD Rs.: (11) *0.03	
13	TOTAL DUTY Rs.: (10+11+12)	
14	EDUCATIONAL CESS @3% ON TOTAL DUTY Rs.: (13)*0.03	
15	MISC @3% ON FOB COST Rs.: (8) *0.03	
16	TOTAL Rs.: (8+9+13+14+15)	
17	LESS: CVD+CESS ON CVD (11+12)	
18	TOTAL COST OF MACHINE Rs.: (16 – 17)	

FOR SERVICES

Table - 5

SL. NO.	DESCRIPTION	PRICE (MENTION CURRENCY)
1	TRAINING CHARGES (IF ANY)	
2	ERECTION & COMMISSIONING CHARGES	
3	WARRANTY ENHANCEMENT CHARGES (IF ANY)	
4	ANY OTHER CHARGES (IF ANY)	
5	TOTAL SERVICE CHARGES (1+ 2 + 3 + 4)	
6	EXCHANGE RATE (AS ON TENDER OPENING DATE PUBLISHED IN NEWSPAPER)	
7	TOTAL SERVICE CHARGES In Rs.: (5 *6)	
8	SERVICE TAX @ _____INCLUDING CESS ON TOTAL SERVICE CHARGES In Rs.: (7 * _____ %)	
9	TOTAL SERVICE CHARGES in Rs.: (7 + 8)	
10	NET SERVICE CHARGES AFTER TAKING CREDIT OF SERVICE TAX INCLUDING CESS (9-8)	

TOTAL COST TO BHEL

Table - 6

SL. NO.	DESCRIPTION	PRICE (IN RS.)
1	BASIC MACHINE COST (8 OF TABLE 4)	
2	TOTAL SERVICE CHARGES (10 OF TABLE 5)	
3	TOTAL COST TO BHEL (1 + 2)	

NOTES :-

- a) Item wise breakup of the prices shall be as per TECH. SPECIFICATION / DISCUSSIONS; ELSE, THE BID IS LIABLE FOR REJECTION.
- b) Bidder to note that total price indicated above shall be considered for evaluation and hence should be complete in all respects for the full scope defined and considering all terms and conditions. Optionals if indicated in your offer will not be taken for evaluation.
- c) Any item not included in this price bid quoted above and shown separately will not be taken cognizance of and shall be ignored while evaluation.
- d) Taxes and duties will be taken prevailing at the time of opening of the tender.
- e) Total weight -- /Gross / Net in Kg. Also package size essentially should be indicated if not exact then approximate

REMARKS:

1. BHEL will evaluate the technical bids against essential criteria/requirements. BHEL may seek clarifications, if required, from the qualified bidders only. These clarifications will be communicated to the eligible vendors and they will be asked to attend techno-commercial discussions on specified dates. The bidders will be given 15 days notice to come prepared with the required documents/ clarifications. No extension will be given. **The offers of those bidders, who are unable to respond in this time frame, are likely to be ignored.**
2. The vendors found technically acceptable against their original technical offer and subsequent technical discussions, BHEL will communicate equivalent scope of supply to the qualified bidders who will be required to submit their supplementary technical bid along with impact in the form of addition and deletion in their price bid in separate sealed envelopes. They will also be required to submit copy of un-priced price bid of these impacts in a 3rd sealed envelope duly super-scribed. These will be submitted within 15 days. The technical bid along with un-priced price bid of impact will be opened on the communicated date and no extension in this time will be given.

It is clarified that no correspondence – technical or commercial – other than the above bids is permissible. In case any uncalled for correspondence – technical or commercial – is received, the same will be ignored and entire bid also may be ignored. It is also clarified that no commercial discount after opening of the price bid will be acceptable.

3. All the bidders whose offers have been accepted by BHEL will be given one-week notice for opening of their original price bid and supplementary impact.

Date

Signature

Name

Designation

Department

M/S

LIST OF CONSORTIUM BANK

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



ANNEXURE-IV

WAM-28

Proforma for Bank Guarantee

In consideration of the Bharat Heavy Electrical Limited Siri Fort New Delhi through Division HERP Varanasi (hereinafter called the Company') having agreed to exempt ----- (hereinafter called 'the said Contractor' which term includes 'Suppliers' for the purpose of this Bond) from the demand under the terms and conditions of an Agreement date. ----- made between ----- and ----- for (hereinafter called 'the said Agreement') of Security Deposit for the due fulfillment by the said Contractor of the terms and conditions contained in the said Agreement, on production of a Bank Guarantee for Rs. ----- (Rupees-----only).

1. *We, ----- (Indicate the name of the Bank) (hereinafter referred to as 'the Bank') at the request of----- (Contractor (s) do hereby undertake to pay to the Company an amount not exceeding Rs. ----- against any loss or damage caused to or suffered or would be caused to or suffered by the Company by reason of any breach by the said Contractor (s) of any of the terms and conditions contained in the said Agreement.*
2. *We, ----- (indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Company stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Company by reason of breach by the said Contractor(s), of any of the terms of conditions contained in the said Agreement or by reason of the contractor(s), failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.----- .*
3. *We undertake to pay to the Company any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto our liability under this present being absolute and unequivocal.*

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Contractor(s) shall have no claim against us for making such payment.

4. We, -----(indicate the name of the Bank) further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Company under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till ----- Office / Department / Division of Bharat Heavy Electrical Limited certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said contractor(s) and accordingly discharged this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the ----- we shall be discharged from all the liability under this guarantee thereafter.
5. We, -----, further agree with the Company that the (indicate the name of the Bank) Company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the power exercisable by the company against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by any reason of any such variation or extension being granted to the said contractor(s) or for any forbearance, act or omission on the part of the company or any indulgence by the company to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.
6. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).
7. We,----- lastly undertake not to revoke this guarantee during its (indicate the name of Bank) currency except with the previous consent of the Company in writing.

Date the -----day of -----
For -----
(Indicate the name of the Bank)

BROAD SPECIFICATION & SCOPE OF SUPPLY OF CNC CYLINDRICAL GRINDING MACHINE:

Cylindrical Grinding Machine, travelling wheel head type with two Axes controlled plus two spindle Axes, suitable for precision grinding, roughing and finishing of cylindrical parts, complete with standard accessories consisting of following major equipments:

- CNC SIEMENS SINUMERIK 840 D System (two Axes Z-X and two Spindles S1-S2).
- GAP elimination safety device.
- Wheel bearing spindle.
- Workhead digital brushless motor.
- Wheelhead brushless motor.
- Electric Tailstock and Load Cell for displaying of tailstock centre thrust on part
- 1 Set of two centre angles 60° Carbide Tipped.
- One OD grinding wheel complete with grinding wheel flange.
- Hook for wheel change.
- 24 V Work light.
- MODEL Remote diagnosis.

TECHNICAL FEATURES:

Height of centres	: 300 mm
Max. Swing over Bed	: 600 mm
Max. Grinding Diameter	: 600 mm
Max. Grinding Length	: 3000 mm
Maximum weight allowed between centres	: 4000 Kgs
Maximum weight allowed in chuck, including tooling (maximum overhang 250 mm from the spindle nose)	: 300 Kg
Wheel-head at fixed position (standard execution)	: 90°
Wheel standard dimensions (dia. x thickness x bore)	: 760 x 100 x 304.8 mm
Wheel peripheral speed	: 33/45 mt /sec.
Wheel carriage longitudinal travel (Z axis)	: 3300 mm
Speed of wheel carriage longitudinal travel	: 0 ÷ 8000 mm/1'
Speed of wheel slide cross travel	: 0 ÷ 8000 mm/1'

Working infeeds surveyed on work piece diameter:

Gap elimination speed	: 0.1 ÷ 100 mm/1'
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Speed of working feed-in

In plunge grinding

Roughing	: 0.1 ÷ 5 mm/1'
Finishing	: 0.001 ÷ 0.01 mm/1'

In traverse grinding

Roughing	: 0.01 ÷ 0.05 mm/1'
Finishing	: 0.0005 ÷ 0.01 mm/1'

Spark-out time

In plunge grinding	: 0 ÷ 60 sec.
In traverse grinding	: 0 ÷ 99 traverses

Automatic compensation of wheel dressing

Carried out by the CNC after each dressing cycle

Repeatability accuracy	: ± 0.001 mm
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Work head

Programmable speed of rotation with brushless motor	: 1 ÷ 400 rpm
brushless motor	: 16 Nm

Tailstock

Quill travel	: 80 mm or More
Brushless motor for quill longitudinal displacement	: 6.1 Nm
Motor for tailstock longitudinal movement	: 0.37 kw
Equipped with load cell for sensing center pressure on the part	

Working Accuracies:

Straightness of a roll table, maximum deviation	: 0.003 mm/m
Concentricity on diameter, maximum deviation (*)	: 0.003 mm
Surface finishing achievable with grinding operation	: 0.8-0.4 Ra µm

Electric Motors:

Motor for work piece rotation (S1) brushless SIEMENS	: 22 Kw
Motor for grinding wheel rotation (S2) brushless SIEMENS	: 33 Kw
Motor for wheel carriage longitudinal movement (Z Axis)	
Brushless SIEMENS	: 14.7 Kw
Motor for wheel head slide cross movement (X Axis)	
Brushless SIEMENS	: 7 Nm
Motor for tailstock quill longitudinal motion, brushless SIEMENS	: 6.1 Nm
Geared motor for tailstock longitudinal motion, ROSSI	: 0.37 Kw
Motor for hydraulic clamps power pack A.C. SIEMENS	: 0.37 Kw
Motor for lubrication power pack A.C. SIEMENS	: 0.07 Kw
Motor for coolant cleaning plant A.C. SIEMENS	: 0.36 Kw
Coolant electro pump	: 0.33 Kw

Note: Ratings of the motors given above are tentative one and are liable for minor changes by suppliers based on their design without compromising the performance of the machine.

Salient features of the machine:

Sl No	Component	Features
1	Machine Bed	Material: Highly resistant thermally stabilised cast iron. Ball screws and guide ways to be protected by means of telescopic metal sheet covers with top & lateral sealing.
2	Wheel Carriage	Material: Highly resistant thermally stabilised cast iron. Guideways : One flat and one V shaped, both covered with plastic antifriction coating. There should be provision for pressure lubricant oil to lubricate the guideways.
3	Wheel head Bearing Spindle (Spindle Axis)	Designed for high speeds and capable of absorbing all kind of thrusts originating from grinding process. Spindle should be designed to work without need for lubrication for several years under full employment. Spindle speed rotation to be controlled by the CNC
4	Work head (Spindle Axis)	Material: High resistance cast Iron. Work head should rest on guide ways and should work either with dead or rotating spindle clockwise or anticlockwise. The spindle should be fitted with precise ball bearings.
5	Table	Fixed type bed with two flat machined and ground guideways on which workhead and tailstock can be moved. Table profile should allow safe locking of both workhead and tailstock in case positioning is effected.
6	Electric Tailstock	Material should be extremely strong cast iron. Tailstock quill opening and closing to be supplied by brushless motor. The tailstock should be equipped with a programmable load cell complete with digital display to show the thrust exerted by the centre on work piece.
7	Diamond Dresser	Should be fixed on tailstock body to enable wheel dressing or profiling by moving Z and X axes in synchrony
8	CNC Control Unit	Machine should be provided with SIEMENS SINUMERIC 840D with PCU50 microprocessor and integrated PLC with two controlled axes and two spindle axes, 12" TFT colour screen. CNC running under Latest version of Microsoft Windows software. A special software should be provided for grinding machine in parametric form for programming and all grinding operations.
9	Automatic Grinding via CNC	Executing the three steps of traverse grinding of a part OD in three

	control	subsequent steps controlled by the operator: <ul style="list-style-type: none"> • Plung rough grinding + semi finishing or traverse rough grinding. • Traverse grinding with decreasing cutting depths. • Wheel spark out or wheel sleeping
10	Remote diagnosis	Provision of MODEM for remote diagnosis
11	Safety Feature	Electronic device for gap elimination & crash elimination.
12	Electric Supply	415 Volt, 3 Phase, 50 Hz Provision of control push button panel on machine board with one hand held electronic hand wheel for axes JOG positioning. Water tight electrical cabinet complete with air conditioner separate from the machine containing all electrical & electronic equipment.

Note: Geometrical Accuracy Tests shall be in accordance with Standard or equivalent applicable Standard. Detailed Test Charts for the same, clearly showing the accuracies to be achieved on the machine, shall also be submitted with the offer.

Proposed List of Spare Parts:

1. Spare for all types of O-Rings, seals and wipers for the machine	1 Set
2. Spare Drive Belts	1 Set
3. Spare Fuses	1 Set
4. Spare Limit Switches (1 No. in each type)	1 Set
5. Spare Solenoids for Valves (1 No. in each type)	1 Set
6. Spare Relays (1 No. in each type)	1 Set
7. Spare Filter cartridges	1 Set
8. Spare Paper Filter Roll	1 No
9. Power Module for Wheel Head Drive	1 No
10. Power Module for Z-Axis Drive	1 No
11. Power Module for X-Axis Drive	1 No
12. Linear Scale for Z-Axis	1 No
13. Linear Scale for X-Axis	1 No

Qualifying conditions for Bidders

REFERENCE LIST / QUALIFYING CONDITIONS :	
Only those Vendors (OEM), who have supplied and commissioned at least one CNC CYL. GRINDING MACHINE of same or higher sizes (Height of Centres, Max. SOB, Max. grinding Diameter, Max. Grinding Length, Max. Wt. Allowed between centres , Max. Wt. Allowed in chuck including Tooling (Max. Overhang 250 mm from the spindle nose), for similar applications in the past ten years (On the Date of Opening of tender) and such machine is presently working satisfactorily for more than one year after commissioning (On the Date of Opening of tender), should quote. However, if such machine(s) has/had been supplied to BHEL, then such machine should be presently working satisfactorily for more than six months after its commissioning and acceptance (On the Date of Opening of tender) in BHEL, should quote. The following information should be submitted by the vendor about the companies where similar machines have been supplied. This is required from all the vendors for qualification of their offer.	Vendor to accept and confirm
1. Name of the customer / company where similar machine is installed.	Vendor to inform
2. Complete postal address of the customer.	Vendor to inform
3. Month & Year of commissioning.	Vendor to inform
5. Parameters of machine(s) supplied and application for which the machine is supplied.	Vendor to inform
5. Name and designation of the contact person of the customer.	Vendor to inform
6. Phone, FAX no. and email address of the contact person of the customer.	Vendor to inform
7. Performance certificate from the customers regarding satisfactory performance of machine supplied to them (Original certificate or through e-mail directly from customers) . The original may be returned after verification if required	Vendor to submit
8. BHEL reserves the right to verify the information provided by vendor. In case the information provided by vendor is found to be false/incorrect, the offer shall be rejected.	Vendor to note