



An ISO 9001
Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT / MATERIALS MANAGEMENT

ENQUIRY	Phone: +91 431 257 78 30 Fax : +91 431 252 00 31 Email : skaruna@bheltry.co.in Web : www.bhel.com
NOTICE INVITING TENDER	

TWO PART BID	Enquiry Number:	Enquiry Date:	Due date for submission of quotation:
Tender to be submitted in two Parts	2621200085	26.11.2012	26.12.2012

You are requested to quote the Enquiry number date and due date in all your correspondence. This is only a request for quotation and not an order.

Please note that under any circumstances both **delayed offer** and **late offers** will not be considered. Hence vendors are requested to ensure that the offer is reaching physically our office before 14.00 hrs on the Date of **tender opening**.

Item	Description	Quantity
10	Cross Rail for Vertical Turning Lathe as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in)	01 No.

Important points to be taken care during submission of offer

1. The rate of EMD for this Tender will be (INR) : 2,00,000.00
2. Delivery required 5 months from the date of purchase order.
3. Checklist to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
4. All updates, amendments, corrigenda, etc., (if any), for each tender will be posted only on the above websites from time to time, as and when required, until each tender is opened. There will be no publication of such updates, amendments, corrigenda, etc., through newspapers or any other media.

BHEL's General guidelines / instructions (refer **MM/CE/GENL/001-EMD) including bank guarantee formats and list of consortium banks, commercial terms check-list can be downloaded from BHEL web site <http://www.bhel.com> or from the Government tender website <http://tenders.gov.in> (public sector units > Bharat Heavy Electricals Limited page) under above Enquiry reference.**

Tenders should reach us before 14:00 hours on the due date
Tenders will be opened at 14:30 hours on the due date
Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED

Engineer / Capital Equipment / MM

PART A
VERTICAL TURNING LATHE

SECTION – I: QUALIFYING CRITERIA

The BIDDER has to compulsorily meet the following requirements to get qualified for considering the technical offer:

Sl. No	REQUIREMENTS	Vendor's Response
1	<p>Only the following category of vendors are eligible to quote</p> <p>a. OEMs who have supplied and commissioned at least one double column VTL of table diameter not less than 2000mm in the past ten years as on the date of opening of this Tender and such machine should be working satisfactorily for a minimum period of one year after commissioning, as on the date of opening of this Tender</p> <p>or</p> <p>b. Those vendors who have done MECHANICAL reconditioning of at least one double column VTL of table diameter not less than 2000mm in the past five years as on the date of opening of this Tender and such machine should be working satisfactorily for a minimum period of one year after commissioning, as on the date of opening of this Tender</p>	
1.1	The vendor should submit the contact information such as postal address, contact person, email, phone etc. where similar machine has been supplied/ Reconditioned for qualification of their offer.	
1.2	Month and Year of supply /Reconditioning of the machine.	
1.3	Parameters of machine supplied like table diameter/ The detailed scope of work under reconditioning	
1.4	Along with the Technical offer, the Vendor should submit one Performance certificate from the customer for the satisfactory performance of the machine supplied/ Reconditioned to them. For obtaining the Performance certificate, a suggestive format is provided in SECTION – IV .	
1.5	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.	
1.6	The vendor should have manufacturing capacity of heavy weight machine components of at least 5Tons.	
2.0	DELIVERY - The bidder shall quote the best possible delivery. However the delivery shall not exceed 5 months with an additional grace period of 3 months. The additional grace period will attract a penalty of 2% per month for calculation of L1. The delivery period shall be reckoned from date of purchase order to despatch from the vendor works.	
3.0	Since the scope of supply involves study of the damaged equipment, the vendors must visit BHEL and study the m/c before submitting the offer. The offer submitted shall be in terms with the scope of supply minuted at BHEL during the visit of the vendor.	

SECTION – I I

The BIDDER / VENDOR is requested to provide the following information:

S. No.	REQUIREMENTS	Vendor's Response
3.0	The BIDDER/VENDOR to furnish Reference List of Customers, with full address, details of contact person, where VTL have been supplied/ Reconditioned in the past.	
4.0	Details of VTL supplied/ Reconditioned to other BHEL units, if any. (Year of commissioning, Table diameter etc.).	
5.0	Details on SERVICE-AFTER-SALES Set-Up in India including the Address of Agents / Service Centers in South India.	
6.0	Any Additional Data to supplement the manufacturing capability of the BIDDER for the subject equipment.	

SECTION – III

The BIDDER to note:

S. No.	PARTICULARS	Vendor's Response
7.0	The BIDDER / VENDOR shall submit the offer in TWO PARTS. 1. Technical Offer [with PART A & PART B] and Commercial offer. 2. Price Bid.	
8.0	The Technical Offer shall contain a comparative statement of Technical Specifications demanded by BHEL and Offer Details submitted by the Bidder, against each clause. A just 'CONFIRMED' or 'COMPLIED' or 'YES' or 'NO-DEVIATION' or similar words in the technical comparative statement may lead to disqualification of the Technical Offer.	
9.0	The Technical Offer shall be supported by product Catalogues & Data Sheets and also technical details of Bought-Out-Items with copies of Product Catalogue to the extent possible.	
10.0	The Commercial Offer (given with the Technical Offer) shall contain the Scope of Supply and the Un-Priced Part of the Price-Bid, for confirmation.	

SECTION – IV

The performance certificate should be produced **on Customer's Letter Head.**

PERFORMANCE CERTIFICATE

1. Supplier/ Reconditioner of the machine		
2. Make & Model of the M/C		
3. Month & Year of Commissioning		
4	a) Table Power (cont. rating) b) Table diameter-Min 2000mm c) Ram dimension d) No of stations of ATC e) Make and model of CNC system	
6. Performance of the Equipment (Tick whichever is applicable)		Satisfactory
		Good
		Average
		Not Satisfactory
7. Service after sales		Satisfactory
		Good
		Average
		Not Satisfactory
<p>Date:</p> <p style="text-align: right;">Signature & Seal of the Authority Issuing the Performance Certificate</p>		

Annexure 1

**SCOPE OF WORK FOR SUPPLY & COMMISSIONING OF CROSS RAIL, CROSS SLIDE WITH RAM SLIDE
ASSEMBLY OF VERTICAL TURRET LATHE**

1.0	SPECIFICATION OF THE CNC VERTICAL TURNING LATHE		
1.1	Double column, single ram CNC Vertical Turning Lathe – Model SC30-CNC-1S-1MS-3H, Table dia 2500mm – with four independent jaws – Table weight carrying capacity: 18 Tons – Max Turning dia: 3000mm – Max Ht of facing and turning: 3000mm – Min boring dia: 350mm - Table motor power : 100kW – with the following features		
1.2	Movable chip / splash guard		
1.3	Vertical travel of cross rail: 2600mm Ram cross section: 250mm x 250mm Ram vertical travel: 1500mm		
1.4	Grinding attachment – Grinding spindle power – 4kW Grinding wheel dressing unit on the machine		
1.5	Rust resistant metallic telescopic covers with wipers		
1.6	Chip conveyer and chip bin		
1.7	Automatic tool changer – 12 station		
1.8	CNC system – FANUC 32i		
1.9	Handheld unit - FANUC		
1.10	Refrigerated type cooling system for hydraulic oil, lubrication oil, gear box oil		
1.11	Coolant system		
2.0	SCOPE OF WORK FOR SUPPLY & COMMISSIONING OF CROSS RAIL AND ITS ASSEMBLY		
Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDER'S OFFER	
2.1	<ol style="list-style-type: none"> 1. Supplier to take full responsibility for supply, commissioning and testing of cross rail, cross slide with ram, ATC and its mechanical drive assembly. 2. Service requirement like power, air & water shall be provided by BHEL at one point. 3. Other requirements like crane shall be provided by BHEL, free of cost. 	Vendor to confirm	
2.2	Supply and commissioning of cross rail and its assembly includes the following items <ol style="list-style-type: none"> 1. Cross rail with hydraulic clamping brakes and hydraulic clamping cylinders. 	Vendor to confirm and specify	

	<ol style="list-style-type: none"> 2. Cross rail ball screws and nut 3. Cross slide 4. Ram slide 5. Cross rail encoder for read-out 6. X axis ball screw rod 7. Z axis ball screw rod 8. X axis linear scale 9. Z axis linear scale 10. X axis servo motor 11. Z axis servo motor 12. Power and feedback cables for servo motors 13. ATC with 12 stations 14. ATC servo motor and encoder system 15. Grinding attachment with support flanges and motor 16. Counterbalance cylinder for Ram slide <p>Hydraulic and Hydrostatic power pack for functioning of above components.</p>		
2.3	All the items mentioned in clause 2.2 shall be designed by the vendor to suit the specification of the machine given in clause 1.0 and to suit the existing machine column.	Vendor to confirm	
2.4	Grinding attachment with motor and flanges shall be designed and supplied along with cross rail for internal grinding of valve bodies.	Vendor to confirm	
2.5	Drawings for all the items and design calculations shall be submitted and explained to BHEL executive before start of manufacturing.	Vendor to confirm	
2.6	All the supplied parts shall be commissioned and tested in BHEL by the vendor and its smooth functioning is to be proved out.	Vendor to confirm	
2.7	Suitable safety locking arrangements to be provided to avoid free falling of cross rail in case of any mechanical damage to the cross rail ball screws.	Vendor to confirm	
2.8	Supply and installation of Voltage stabilizer - 150kVA and isolation transformer - 150 kVA	Vendor to confirm	
2.9	PLC program to be modified to suit the functions of the new Ram Assembly being replaced and the new program to be Proved out completely.	Vendor to confirm	
2.10	PLC program to be suitably modified to incorporate safety interlocks for the cross rail in order to avoid any accidents related to cross rail.	Vendor to confirm	
2.11	The supplier shall visit BHEL and study the machine. Any additional materials	Vendor to confirm	

	required for complete supply of cross rail shall be specified by the vendor.		
2.12	In case any suitable mechanical modification & electrical modification in the panel required at the time commissioning of the cross rail assembly shall be done by the vendor.	Vendor to confirm	
2.13	Complete Electrical wiring for the supplied components shall be done by the supplier.	Vendor to confirm	
2.14	Schedule of designing, manufacturing and supply of items shall be included in the offer.	Vendor to confirm	
2.15	The vendor shall use the following approved makes only. Servomotor: Fanuc Linear scales for X & Z : Heidenhain Hydrostatic power pack & Components : Rexroth or Vickers Hydrostatic power pack & Components : Rexroth or Vickers	Vendor to confirm	
2.16	Inspection by BHEL executives shall be arranged at supplier works before dispatch of all the manufactured and brought out items.	Vendor to confirm	
2.17	Trouble free operation of all the supplied items must be warranted at least for two years after commissioning.	Vendor to confirm	
3.0	ACCURACY TESTS:		
3.1	GEOMETRICAL ACCURACY:		
3.1.1	Geometrical Accuracy Tests shall be in accordance with ISO 10791 standard or equivalent applicable standard. Detailed Test Charts for the same, clearly showing the accuracies to be achieved on the machine. The accuracy should be within the designers tolerance limit. Deviation, if any, shall be corrected by supplier and the test has to be carried out again.	Vendor to confirm	
3.1.2	All the above accuracies to be demonstrated to BHEL engineers during testing & commissioning of supplied items by the vendor.	Vendor to confirm	
4.0	AMBIENT CONDITIONS:		
4.1	Power Supply : AC 415 V \pm 10% Frequency : 50 Hz \pm 3HZ Phases : 3 phase 3 wire system Compressed air supply: 60-70 psi Ambient Temperature: max 45 °C Relative Humidity = 85%	Vendor to confirm	

6.1.3	Prove-out machining.	Vendor to confirm	
8.0	DOCUMENTATION:		
8.1	Complete set of assembly, parts, mechanical drawings and electrical drawings shall be submitted by the vendor.	Vendor to confirm	
8.1.5	PLC program printouts (Ladder diagram & Statement list) with comments in English.	Vendor to confirm	
8.2	PLC program on CD, NC data & PLC data on CD.	Vendor to confirm	