

**BHARAT HEAVY ELECTRICALS LTD.**  
**HEEP, Hardwar - 249403**  
**WORKS ENGG. & SERVICES DEPTT.**  
**WEX/CNC DIVISION**

Ref. No.: WEX/CNC/WC/EN1/2-392

Annexure-A

**RETROFITTING OF BOEHRINGER CNC SLANT BED LATHE PLAN No. 2-392,Block-3**

**Requirement:**

CNC Slant Bed Lathe (Model VDF PNE 710 L) from M/s. Boehringer, Germany with following Broad Specifications is to be retrofit with Sinumerik 802D sl Pro along with Siemens 1FT6 series AC servomotors and AC servo drives , Siemens 1PH7 series AC motor & AC spindle drive. All existing features and functions of the machine need to be retained as such.

**Broad Specifications**

CNC Slant Bed Lathe (VDF PNE 710 L)   Boehringer, Germany

SOC                                   490 mm

SOB                                   360 mm

Distance between centers   2000 mm

Face plate RPM                 8--2800

No. of gear ranges               4

Transmission through V.belt pulley from motor to chuck gear box

Cross traverse (X)             495 mm

Transmission through timebelt pulley

Carriage traverse (Z)         2200 mm

Transmission through timebelt pulley

Feed speed ( X/Z )           0.1 to 6000 mm/min

Carriage with rotary drum type turret system for direct location of tool shanks 32\*25 mm

And boring bar dia. 60 mm, length 94 mm

No. of tool positions         6+6 (6Internal , 6 External)

Tail stock & quill             Tail stock (bottom part hydraulic) movement after coupling with carriage. Quill movement advanced and returned is hydraulic via pedal switch.

Chuck Hydraulic operated chuck with jaws movement via pedal switch  
 C-type roller steady rests with integral base movement after coupling with carriage. 1 Nos.  
 Chip conveyer BMF hinge plate conveyor, coolant system (Internal & External ), oil lubrication unit, Hydraulic unit etc.  
 CNC Controller HMT HInumerik 2000 T  
 NCN 20 –TNS 00=VZ

Main Spindle Motor Siemens AC motor 1PH7167-2NG30-0BD0

Feed motor SIEMENS 1HU3104—0AF01 27.5 Nm, 4.3 Kw, 2000 rpm for X Axis  
 SIEMENS 1HU3104—0AF01 27.5 Nm, 4.3 Kw, 2000 rpm for Z Axis  
 Measuring system for X Axis Heidenhain Encoder ROD 426, 2500 ppr(Mounted on Lead screw)  
 Measuring system for Z Axis Heidenhain Encoder ROD 426, 2500 ppr(Mounted on Lead screw)  
 Measuring system for Chuck/Spindle Siemens Encoder 6FX2001-2CB02, 1024 ppr(For spindle positioning)

Power Supply: 415V +/-10%, 50 Hz +/- 3%, 3 Phase, 3 wire without neutral 150 KVA

**A. SCOPE OF SUPPLY**

S.No.	Item	Qty	Vendor's Remarks	Compliance (Yes/No)
1.0	A CNC Controller with PLC, able to perform all the machine functions, should be provided. The CNC controller should be <b>Sinumerik 802D sl Pro</b> with 10.4 inch TFT monitor, Full CNC key board and standard Machine Control Panel (MCP) for turning operations and to cater all existing features( or more) and existing PLC Inputs and Outputs. <b>( CNC features, operation features and programming features as per para A.1.0.1)</b>	01 Set.		
2.0	AC Servo drives of suitable rating for Slide (X) and Longitudinal (Z) feeds should be provided. The AC Servo drives should be Sinamics.	01 Set.		
3.0	AC Servo Motors of existing rating or more for Slide (X) and Longitudinal (Z) feeds should be provided. <b>The motor of slide (X) should be with Brake.</b> The AC Servo motors should be <b>1FT6 series.</b>	01 Set.		
4.0	AC spindle drive of Suitable rating to run AC spindle motor 1PH7167-2NG30-0BD0. The AC spindle drive should be <b>Sinamics.</b>	01 No.		
5.0	AC Spindle Motor for Spindle chuck should be provided. The AC Spindle motor should be 1PH7167-2NG30-0BD0	01 No.		

6.0	Complete switchgears for feed drives, Spindle drive, CNC and PLC, all accessories and to cover all other machine functionalities.	01 Set		
7.0	Operator Control panel standalone , fixed type should be of <b>Rittal</b> make incorporating the CNC Controller, MCP and selector switches for other functions as required. ( <b>Operation features as per para A.1.0.1</b> )	01 Set.		
8.0	For Existing Manual Operating panel which slides along the machine all type of control elements for different functions as required in Operational Features to be provided. ( <b>Operation features as per para A.1.0.1</b> )	01 Set.		
9.0	A hand held unit with handwheel (MPG) and selector switches for manual operations of the axes and spindle.	01 No.		
10.0	Portable machine lamp with magnetic base operating at 220 V AC with 3 meter cable with conduit	01 No.		
11.0	Machine illumination light of reputed make (one on tailstock side, two on chuck side) well guarded from chips and coolant. Illumination light in all electrical cabinets and Operator control panel .	01Set.		
12.0	Door mounted Air conditioners of M/s. Advance make with sufficient capacity for Operator control panel and electrical cabinet.	01Set.		
13.0	All the Mechanical & Electrical fittings, Flanges, pulleys, belts, Brackets etc. required for the retrofitting work.	01 Set.		
14.0	Control cables , Power cables ,signal cables, conduits of suitable length, cable tray , connectors, Lugs, Terminal Blocks, ferrules etc. required to interface the CNC/PLC system with servomotors, Spindle motor , drives and field devices to successfully complete the project.	01 Set.		
15.0	Heidenhain Incremental rotary encoders with coupling for X , Z axis position feedback and Heidenhain rotary encoder for spindle position feedback with coupling, compatible to the CNC controller and machine along with necessary interface.	01 Set		
16.0	Conduflex ( made of Stainless Steel casing mounted to the PVC links) drag chain of required size & length for sliding manual control panel , movable steady and tail stock .	01 Set		
17.0	Metallic Cable conduits of required size & length for interfacing the pedal switches for quill movement and chuck jaws movement.	01 Set		

18.0	<b>Program conversion software</b> to convert the part programs and all cycles including (L94 to L97) of the existing HInumerik 2000T CNC system as per the offered CNC system. The converted programs shall be able to run directly on the offered CNC system.	01 Set		
19.0	Electro magnetic brake on Slide axis (X axis) lead screw to replace existing ( Binder make) brake to hold the carriage.	01 No.		

### Para A.1.0.1

#### CNC FEATURES:

The CNC controller should be offered with following features:

1. 2 axes continuous path control system for Turning operations.
2. Mode selection through mode selector switch.
3. TFT/LCD monitor for display 10.4 “or more.
4. Graphic simulation.
5. Display of NC & PLC Alarms.
6. Full alphanumeric key board for input of part programs.
7. RS 232 C and USB port for serial communication.
8. Minimum 3MB user memory along with flash card 1GB or more for program storage.
9. Facility to store up to 999 subroutines & 9999 part programmes.
10. Background editing of programs.
11. Part program renaming & copying facility.
12. Block search with calculations in automatic mode.
13. Facility to store 4 zero offsets & 2 additive zero-offsets.
14. It should be possible to store 128 tool offsets.
15. Resolution of 0.001 mm.
16. Backlash & pitch error compensation facility.
17. Software limits through machine parameters.
18. Automatic tool offset loading facility.

## OPERATIONAL FEATURES:

The Operator Control panel standalone fixed type incorporating the CNC Controller should have the following operational features either on the MCP or provided additionally.

- Axes selection keys X & Z.
- Directional keys + & - for axis movement in jog.
- Rapid traverse key.
- Emergency stop.
- Reset key.
- Single block switch.
- Dry run switch.( Dry run freely executable during program run in automatic)
- Coolant ON / OFF switch/key.
- Spindle continuous/inch selector switch/key.
- Spindle Forward/Reverse selector switch/key.
- chip conveyer forward/reverse push button
- mode selector switch
- Feed override switch
- Spindle override switch

The Manual Operating panel which slides along the machine should have the following operational features.

- Emergency stop
- Functional switch 3 positions (Automatic mode, feed hold, spindle rotation stop)
- Cycle start switch
- Spindle speed Override Switch
- Selector switch for chip conveyer Forward/Stop/Reverse
- Non Locking switch for spindle jogging
- Red signal light for any alarm
- Non Locking push button for Index tool Carrier
- Directional switch joy stick type for both axis Feed/Rapid traverse
- Selector switch for Tailstock Released/Clamped
- Selector switch for coolant pump ON/OFF
- Rotary switch for steady TOP Open /Closed
- Selector switch for steady Released / Clamped
- Non locking ,illuminated push button for Change Chuck Jaws

## PROGRAMMING FEATURES:

1. ISO code (G&M mode type) programming.
2. Absolute/incremental programming.
3. Decimal point programming.
4. Linear & circular interpolation on both axes.
5. Programmable dwell.
6. Scaling factor.
7. Storage of user defined subroutine independent of the main program.
8. Variable parametric programming with mathematical functions including trigonometric & logic functions.
9. Programmable software limits.
10. Arc-programming with radius & end-point.
11. Conditional & unconditional jump.
12. Programmable tool offset.
13. Programmable zero offset.
14. Two Programmable additive zero offset.
15. Subroutine nesting up to 3 levels.
16. Programmable skip.
17. Facility of inclusion of message in the part programme.
18. Corner rounding & chamfering.
19. Diameter programming.
20. Canned cycles for:
  - Axis parallel routing, with option of semi finishing cut parallel to contour.
  - Counter parallel roughing.
  - Diameter grooving.
  - Thread cutting
  - Face grooving.
21. Tool nose radius compensation G41, G42
22. Coolant on/off should be programmable.
23. Programming of primary , auxiliary & existing functions through M, S, T codes.

**Note: Complete breakup of all the constituent items with Siemens type number for CNC system and drive modules shall be provided .**

## B. SCOPE OF WORK

S.No.	Activities	Vendor's Remarks / Compliance
1.0	Dismantling and removal of all drives , switch gears ,CNC, PLC, <b>all Relay logic</b> , along with old cabling and wirings, cable trays etc. in the existing Electrical cabinet(s). Dismantling of feed motors and field devices.	
2.0	Installation of all drives , PLC, CNC , switch gear etc in the existing electrical cabinet(s) with required new cable trays. <b>(Switch gear and electrical system details as per PARA B.2.0.1)</b>	
3.0	Dismantling of old fixed standalone CNC operator Control panel and Installation of new fixed standalone CNC operator control panel at the existing location.	
4.0	Mounting and installation of feed motors, Spindle motor, electro magnetic brake of slide(X) axis, Incremental encoders and spindle encoder. Design, Modification / re-engineering, manufacturing of pulley, flanges and encoder couplings etc. for feed motors, spindle motor, position feedbacks as per requirement.	
5.0	Cabling and wiring of CNC, PLC, Drive system, control panels and field devices. Entire Cabling including Position Feedback of the machine routed through the caterpillar/ Drag chain is to be replaced with the new cabling. Laying and routing of new conduits, cables from electrical cabinet to machine and CNC operator panel through new conduits. Cabling of manual operator panel slides along the machine & steady should be through new Conduflex Drag chain. Refurbishment and rewiring of all the terminal boards, Junction Boxes as per requirement	
6.0	Interfacing of new fixed CNC operator control panel and manual operating panel.	
7.0	Interfacing of the existing pedal switch for Quill advance/return movement, pedal switch for chuck jaws outwards / Inwards movement , steady rest, tail stock, coolant unit, hydraulic unit, chip conveyer with the new scheme.	
8.0	Installation, Interfacing & commissioning of the CNC, PLC, Position feedback, , spindle & Feed drives systems, Machine lights and portable lamps .	
9.0	Implementation of New PLC Program required as per New CNC controller to cater all existing functions of Machine.	
10.0	Laser calibration of X & Z axes and generation of compensation data for pitch error and backlash from a reputed agency.	
11.0	Prove-out of all existing main functions (axis &spindle )including M19, auxiliary functions (Drum type turret, Coolant system, hydraulics, lubrication, chip conveyer etc.). Demonstration of drum type turret Tool carrier with T- codes/Manual Index as in	

	existing system.	
12.0	Alarms and message should be displayed on CNC along with remedial description. PLC alarms & messages should include the device number and/or the operand.	
13.0	Prove-out of the DNC function (Part program & parameter transfer).	
14.0	Manual Control of Machine independent of MDI/ CNC Part Program: Presently, following operations can be performed manually independent of MDI/ CNC Part Program. Same status is to be maintained after retrofitting also: <ul style="list-style-type: none"> <li>a. Start (CW/CCW) &amp; Stop of spindle rotation</li> <li>b. Inching (CW&amp;CCW) of spindle rotation</li> <li>c. Regulation &amp; Indication of spindle speed</li> <li>d. Start, Stop, Regulation &amp; Indication of feed, fast traverse, inching in X &amp; Z</li> </ul>	
15.0	Prove out and demonstration of all existing machine functions and programming features of new CNC System including manual control of the machine.	
16.0	Successful machining of a work piece provided by BHEL by machining of different straight, taper, radius turning cuts, Grooving & Threading cuts.	

### PARA B.2.0.1

#### SWITCH GEAR AND ELECTRICAL SYSTEM:

1. **In the existing** electrical panel(s) all drives, all switch gear, relay, contactors, overloads, fuses, MCB's should be suitably positioned and all compartments should be illuminated for ease of maintenance and proper air conditioning ensured for the cooling of the devices.
2. The switchgear (MCBs, Overloads, Contactors, and Relays etc) should be of any one of the following makes: **Siemens, Schneider, Phoenix, Telemecanique or ABB.**
3. Operator control Panel should be of **Rittal** make with proper air conditioning and vermin proof.
4. The operator's control panel, should be suitably positioned in the existing location for ease of operation & maintenance.
5. All the panels, Junction boxes, devices should have nomenclatures and individual wires ferruled as per the electrical schematics. The field devices if found unhealthy will be replaced by the party.
6. The wiring of the entire machine should be replaced by new ones of adequate capacity and reputed make..
7. 220VAC, 5A plug points should be provided in the Electrical Cabinet and 220 VAC, 5 A plug point on the Operator Panel.

8. Sufficient lighting should be fixed on the machine. It should be well guarded from the chips & coolant.

C.	<b><u>DOCUMENTATION:</u></b>	<b>Vendor's Remarks / Compliance</b>
	<i>Following documents shall be supplied with above supply</i>	Qty.
	Documents consisting of <input type="checkbox"/> Electrical circuit diagram <input type="checkbox"/> PLC printout in ladder form with symbols & comments in English <input type="checkbox"/> O&M manuals (hard copy) for CNC, PLC, Drives & Measuring systems. <input type="checkbox"/> Programming manual (hard copy) for CNC system – <input type="checkbox"/> Machine data (NC, PLC, Setting & Alarm texts), Drives data & PLC program (soft copy) <input type="checkbox"/> Details of all mechanical modifications & fittings with drawings. <input type="checkbox"/> One additional set of all the above documents on CD ROM.	 3 sets. 3 sets. 1 set. 3 sets. 3sets 1 set.
D.	<b><u>WARRANTY:</u></b>	
	Party shall stand warranty for all the supplied material and work for a period of one year from the date of successful commissioning of the material and final acceptance ( clause -F)	
E.	<b><u>TRAINING:</u></b>	
	Party shall impart training to BHEL staff for programming & maintenance of the system at the manufacturers works for a mutually agreed period. .	
F.	<b><u>FINAL ACCEPTANCE:</u></b>	
	Upon completion of the scope of supply and scope of work, successful machining of 1 no. of BHEL component shall constitute the FINAL HAND-OVER of the machine and completion of the job.	
G.	<b><u>DELIVERY:</u></b>	
1.	<b>Material:</b> Max. 4 months from the date of award of contract. Early delivery shall be acceptable.	
2.	<b>Work :</b> Within 45 days from the date of release of machine for work.	
H.	<b><u>LIQUIDATED DAMAGES (LD) CLAUSE:-</u></b>	
1.	Liquidated damages @ ½% per week subject to a maximum of 5% of the order value shall be applicable for delay in deliveries.	
2.	Liquidated damages @ 2% per week subject to a maximum of 10% of the Commissioning Charges shall be applicable for delay beyond scheduled commissioning date for reasons attributed to the party.	

<b>I.</b>	<b><u>PRE-DISPATCH INSPECTION</u></b>	
1.	Pre-dispatch inspection of all the items covered under Scope of Supply at para (A) shall be carried out by BHEL at party's works.	
2.	Supplier shall invite BHEL for carrying out pre- inspection.	
3.	Deputed BHEL persons shall do pre acceptance at vendor works and give despatch clearance.	
4.	Expenses of Boarding and lodging of BHEL personnel during PDI shall be borne by BHEL.	
<b>J.</b>	<b><u>SUBMISSION OF BILL OF MATERIAL (BOM)</u></b>	
	Before inviting BHEL for Pre-dispatch inspection, vendor shall submit to BHEL the Bill of Material (BOM) for scrutiny.	
<b>K.</b>	<b><u>EARNEST MONEY DEPOSIT ( EMD):</u></b>	
1.	Vendors have to deposit <b>1, 00,000</b> as the EMD. EMD may be deposited in cash, through pay order in favour of <b>Account officer, HEEP, BHEL, Hardwar payable at Haridwar</b> or through demand draft only.	
2.	EMD shall be converted to security deposit if the work is awarded.	
3.	EMD of unsuccessful bidders shall be refunded back normally within fifteen days of acceptance of award of work by the successful bidder.	
4.	EMD shall not carry any interest.	
5.	EMD by bidder will be forfeited as per tender document, if	
i)	After opening the tender, the tenderer revokes his tender within the validity period or increases his earlier quoted rates	
ii)	The tenderer does not commence the work within the period as per LOI/contract.	
6.	<b>Offers without EMD will be rejected and will not be considered for evaluation.</b>	
<b>L.</b>	<b><u>SECURITY DEPOSIT (SD):-</u></b>	
1.	Successful vendor shall deposit security. The rate of security deposit will be as below: <ul style="list-style-type: none"> <li>• For work Up to ₹ 10 Lakhs : <u>10% of work order value</u></li> <li>• Above ₹ 10 Lakhs upto ₹ 50 Lakhs : <u>₹1 Lakh + 7.5% amount exceeding ₹ 10 Lakhs</u></li> <li>• Above ₹ 50 Lakhs: <u>₹ 4 Lakhs + 5% amount exceeding ₹ 50 Lakhs</u></li> </ul>	
2.	The security deposit should be submitted before the start of work in the following forms: <ul style="list-style-type: none"> <li>i) Cash (As permissible under the Income Tax Act)</li> <li>ii) Pay Order, Demand Draft in favour of <b>Account officer, HEEP, BHEL, Hardwar payable at Haridwar</b></li> </ul>	

	iii) Local cheques of Scheduled Banks, subject to realization.	
	iv) Bank Guarantee from Scheduled Banks/Public Financial Institution as defined in the companies Act. The Bank guarantee format should have the approval of BHEL.	
<b>3.</b>	Security Deposit shall not carry any interest.	
<b>4.</b>	EMD of successful tenderer can be converted and adjusted against the Security Deposit.	
<b>5.</b>	100% of the Security Deposit amount shall be refunded to the vendor after final acceptance of the machine. <b>SD shall be released after the submission of Performance Bank Guarantee(PBG) by the vendor</b>	
<b>M.</b>	<b><u>Performance Bank Guarantee (PBG):</u></b>	
<b>1.</b>	Vendor shall be required to submit a performance bank guarantee (PBG) for 10% of the total work order value which shall be valid for a period of 12 months from the date of Final acceptance of machine.	
<b>2.</b>	The PBG shall be submitted on a non-judicial stamp paper of value not less than Rs.80/- issued by any one of the nationalised banks.	
<b>N.</b>	<b><u>PAYMENT TERMS:</u></b> <b>(Note: No advance payment shall be made to the vendor.)</b>	
<b>1.</b>	Part payment will be made after completion of following milestones	
<b>i)</b>	First payment of 80% of material cost along with 100% taxes & duties shall be payable after receipt of material at HEEP, BHEL, Haridwar	
<b>ii)</b>	Final payment of balance 20% of material cost, 100% of commissioning cost and refund of 100% of the Security Deposit amount will be made after final acceptance, subject to submission of PBG as per para 'M'	
<b>2.</b>	All the payments shall be made through e-payment after submission of following documents along with first bill	
<b>i)</b>	E-payment form duly filled (Form will be provided by BHEL)	
<b>ii)</b>	Income tax exemption letter( if applicable)	
<b>3.</b>	Excise duty & CST/VAT will be paid on material cost and service tax will be paid on commissioning charges at actual. Related original documents to be submitted for availing MODVAT credit by BHEL.	

		<b>Vendor's Remarks / Compliance</b>
<b>O.</b>	<b><u>COMMERCIAL TERMS :-</u></b>	
<b>1.</b>	Prices shall be quoted on "Firm Price" basis only. The prices should only on F.O.R BHEL, Haridwar basis inclusive of Packing & Forwarding charges. Applicable % of ED & Sales Tax, Freight & Insurance, Installation & Commissioning Charges should be clearly indicated in attached Price bid format as per "Annexure-B"	
<b>2.</b>	Validity of offer shall be for a minimum period of 120 days from the date of Tender Opening	

3.	Freight & transit insurance charges from Dispatching station to BHEL, Haridwar shall be borne by party.	
4.	All the material has to be sent through BHEL approved transporter only.	
<b>P.</b>	<b><u>QUALIFYING CRITERIA:-</u></b>	
	The vendors meeting following criteria would only be considered:	
1.	The party must be a reputed machine tool retrofitter (having done retrofitting with Siemens CNC systems on center lathes / vertical boring machines) with min. 3 years experience, from the date of tender notice, in retrofitting field. List of the customers along with respective contracting executive officers addresses (including phone No. / E-mail ID) for whom machines were retrofitted shall be enclosed with the offer.	
2.	The average annual turnover during the last three years ending March 31 <sup>st</sup> 2011 should be at least 50 Lac. Audited balance sheets for the last three years should be submitted.	
3.	Machines previously retrofitted by the party should be running satisfactorily for at least 6 months prior to the date of enquiry. Vendor shall provide performance certificates for satisfactory operation of above similar retrofitted machines from his customers along with name, address & contact details. BHEL reserves the right to verify the information provided.	
		<b>Vendor's Remarks / Compliance</b>
<b>Q.</b>	<b><u>BHEL'S OBLIGATION:</u></b>	
1.	Existing electrical schematic of the machine shall be provided by BHEL to the vendor.	
2.	Crane facility and lifting tackles like slings, rope, D-Shackles shall be provided.	
3.	Any machining facility required for rectification/fitting of supplied material, subject to the extent available in BHEL, shall be provided.	
4.	Any civil work required for the erection of panel shall be done by BHEL.	
5.	Electricity, water, fasteners, welding sets, Gas cutting equipment, general purpose welding rods and holders required during commissioning shall be provided.	
<b>R.</b>	<b><u>GENERAL CONDITIONS</u></b>	<b>Vendor's Remarks / Compliance</b>
1.	<b><u>A point wise compliance statement shall be submitted for above scope of supply and work against each clause/subclause.</u></b>	
2.	Complete specifications such as Model/Type of the CNC,PLC, heidenhain encoders, motor and drive controllers etc shall be stated in the offer by the party. Ordering brochure/catalogue should be attached in which offered parts are highlighted.	

3.	Parties are requested to visit the site before making an offer.	
4.	Any material not specified in scope of supply but required for successful commissioning shall be provided by the vendor free of charge.	
5.	Material to be used should be of reputed make or as per IS standards.	
6.	Party shall bring all tools and testing equipment with them during erection and commissioning.	
7.	The offers of the bidders who are on the banned list as also the offer of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site <a href="http://www.bhel.com">www.bhel.com</a>	
8.	<b>RULES AND REGULATIONS OF THE CENTRAL/STATE GOVERNMENT:</b> In the event of award of any contract, vendor will have to comply and abide by all the laws/enactment of state and central government. Documents regarding registration with Sales Tax and Excise authorities may also to be forwarded along with income tax clearance.	
9.	The award of works will be made on basis of the "Total Cost to BHEL" .	
<b>S.</b>	<b><u>OFFER :-</u></b> The offer should be submitted in two parts and in following manner.	
1.	<b><u>Techno-commercial Bid :</u></b>	
i)	The envelop shall contain the Techno-commercial Bid with Unpriced priced bid as per ANNEXURE 'B' along with relevant documents like copies of ESI, PF code, PAN No., Service Tax Reg. No., TIN No., CST No., Experience Certificates, Audited Balance Sheet of last 3 years, Banker's Solvency and <b>EMD</b> . (Demand draft for tender document cost shall also be accompanied in case tender documents are down loaded from BHEL website. Offers without the EMD and DD towards Tender documents cost will not be considered)	
ii)	The envelop shall be super scribed with "Techno-Commercial Bid", Name of work & NIT No. and Date of opening	
iii)	Point-wise compliance of the above scope of supply and work against each clause/ sub-clause is to be given by vendors while submitting their techno-commercial offer.	
2.	<b><u>Price Bid :</u></b>	
i)	The second envelope shall contain only the price bid with separate price for material & work on Price Bid Format as per <u>ANNEXURE 'B'</u> .	
ii)	Any other information in the price bid shall not be considered and the quotation is likely to be rejected. Price bid document shall be ink signed by the bidder at the bottom of each page.	
iii)	The envelope shall be sealed and super scribed with "Price Bid", Name of work & NIT No.	
iv)	Price bids of only techno commercially accepted vendors shall be opened.( In presence of available vendors at the time of opening)	
3.	Both the above two envelopes shall be kept in another sealed cover. The cover shall be super-scribed with "Quotation for (name of work), NIT No. & due date and shall be addressed to Sr. Manager (WEX-CNC), CNC Lab , Block-6, HEEP, BHEL, Haridwar and it should also contain vender's name & contact details.	

ANNEXURE 'B'

**PRICE BID FORMAT**

Name of Work :

NIT No. & Date :

Bidder's Offer No. & Date :

Sl. No.	Description of item	Unit	Qty	Basic Rate (in `)	Excise Duty (in %)	VAT/CST (in%) (VAT with FORM-17 or CST with C-FORM)	Service Tax (in %)	Value (in `)	
1	Material	Set	01		%	%			
2	Installation & Commissioning	Set	01				%		
3	Packing & Forwarding charges in both % and Lumpsom (in `)							%	
4	Transportation Charges F.O.R. BHEL, Haridwar (in `)								
5	Transit insurance charges, in both percentage and Lumpsom (in `)from Dispatching station to BHEL, Haridwar (Note: Material shall be despatched through BHEL approved transporter only)						%		
	<b>TOTAL COST</b>								

Signature & Seal of Vendor