

**Annexure – 'A'**

**SCOPE OF SUPPLY AND WORK FOR RETROFITTING OF HMT LATHE, SBCNC55, PLAN NO.1-228, BLOCK-1**

S. N.	DESCRIPTION	QTY	COMPLIANCE / REMARKS
<b>1.0</b>	<b>CNC Control System:</b>		
1.1	SINUMERIK 828D with 10.4" color TFT/LCD monitor, for 1 Spindle, 2 Axes and 1 Tool Drive, having USB, RS232 and Ethernet ports and all necessary features for Turning, Threading, Milling, Drilling, Tapping and Grooving operations.	1 Set	
1.2	PPU Horizontal with Full CNC Key Board, MCP 483C and other Operator controls having necessary Push Buttons with Indicating Lamps and Selector / Toggle Switches.	1 Set	
1.3	PLC configuration having at least 96 Inputs and 64 Outputs, local/remote I/Os connected through Profibus/Canbus. Relays of sufficient rating should be used for connection of PLC Outputs to Solenoid Valves, Contactors and other elements.	1 Set	
1.4	Electronic Hand Wheel (MPG) for operating X & Z Axes in Jog / Setting Mode.	1 No	
1.5	Compact Flash card / Memory Key card 2GB minimum.	1 No	
1.6	Start up tool / Software along with interface cable for CNC System and Servo Drives.	1 set	
1.7	24VDC Power Supply of suitable rating of Siemens make one each for CNC control and PLC I/O's.	1 Set	
<b>2.0</b>	<b>Other Features of the CNC system in addition to its standard features:</b>		
2.1	USB & Ethernet port for Uploading & Downloading of Data and Part Programs.		
2.2	PP / User memory 5 MB minimum.		
2.3	Foreground / Background editing and Graphic Simulation		
2.4	Access locks on Operator Panel and Look Ahead of Minimum 75 Blocks		
2.5	Process Oriented Canned Cycles for Turning, Threading, Drilling, Tapping, Grooving and Stock Removal Operations.		
2.6	Automatic tool offset storage & Tool Life Monitoring		
2.7	Oriented / Fixed Spindle Stop and Spindle lock for Drilling & Tapping operations with Tool Drive		
2.8	12 Position Tool Turret Control in Manual, Automatic & MDI mode (in single step with M-codes).		
2.9	Manual control of the machine with selection of axis, direction of movement, feed ON/OFF, spindle ON/OFF etc. with Push Buttons and Selector Switches.		
2.10	Programmable and Manual Coolant ON/OFF		
2.11	Ready to operate connectivity with existing DNC system via RS232 port for program Input / Output from a central PC.		
2.12	On-line viewing of PLC program and PLC Inputs, Outputs & other components status on the monitor.		
2.13	On line help for Programming, Alarms and Machine Data with action log.		
2.14	On-line fault diagnostic system with required hardware and software should be supplied and installed on the CNC system. This shall include detailed Cause, Remedy & Address of Input / Element related to the Alarms / Messages.		

S. N.	DESCRIPTION	QTY	COMPLIANCE / REMARKS
<b>3.0</b>	<b>Drives, Motors, and Cables:</b>		
3.1	SIEMENS 1PH7/8, AC Spindle Motor, Rated Power 37 kW or above, Rated Speed 1500 RPM or above, having built-in Encoder with preassembled power and encoder cables of minimum 10 mtrs. Length.	1 Set	
3.2	SIEMENS 1FT AC Servomotor for X-Axis, Mo= 27 Nm or above, 2000 rpm, with brake, along with preassembled power and encoder cables of minimum 15 mtrs. length.	1 set	
3.3	SIEMENS 1FT AC Servomotor for Z-Axis, Mo= 36 Nm or above, 2000 rpm, without brake, along with preassembled power and encoder cables of minimum 10 mtrs. length.	1 set	
3.4	SIEMENS 1PH7/8 AC Spindle Motor for Tool Drive in Milling Mode, 5 kW or above, 2000 rpm, with IP44 protection, having built-in encoder with preassembled power and encoder cables of minimum 15 mtrs. length.	1 set	
3.5	Suitably-rated SIEMENS make SINAMICS S-120 Digital AC Servo drives for motors of Spindle, Tool, X & Z -Axes, along with necessary interfacing Cables, Line Filters & Chokes, for Spindle & Feed drives.	1 set	
3.6	Design and supply of intermediate Flanges, Couplings, Pulleys and any other parts required for mounting of the motors.	1 set	
3.7	The vendor should submit the manufacturer's catalogue of the offered Motors & Drives along with the offer.	1 set	
<b>4.0</b>	<b>External Measuring System:</b>		
4.1	SIEMENS / HEIDENHAIN make Rotary Encoder, TTL / 1Vpp (equivalent to ROD426/1024PPR), along with Coupling, Clamps and Cable (15 Mtrs.) with connector, suitable for interfacing with CNC control for Spindle.	1 set	
4.2	SIEMENS / HEIDENHAIN make Rotary Encoder, TTL / 1Vpp (equivalent to ROD426/2500PPR), along with Coupling, Clamps and Cable (15 Mtrs.) with connector, suitable for interfacing with CNC control for X & Z- axis.	2 set	
4.3	SIEMENS / HEIDENHAIN / BALLUF make Position Encoder (equivalent to BALLUFF make BWG1-12-07-00-P-R-00-5 Encoder), along with Coupling, Clamps and Cable (15 Mtrs.) with connector, suitable for interfacing with CNC control for 12-Position (binary coded) Tool Turret.	1 set	
4.4	Suitable Mountings, Couplings & Signal Converter / Processing Unit required for interfacing all the External Encoders with CNC Control as per requirement.	1 set	
<b>5.0</b>	<b>Electrical Cabinet, Operator Panel, Cables and Other Accessories:</b>		
5.1	Electrical Cabinet of RITTAL/SSK make of appropriate size. The cabinet shall accommodate CNC System, PLC Modules, Servo Drives, SMPS, Relays, Contactors, Control transformers and all other elements required for retrofitting.	1 set	
5.2	Operator Pendant of RITTAL/SSK make suitable for CPU, MCP, NC KB, Monitor, Handwheel & other operator control elements. Cable / wire length required between Operator and Electrical Panels is minimum 10 meters.	1 set	
5.3	The electrical cabinet will be fitted with suitable illumination & 220 VAC/5A socket. A working area hand lamp with magnetic base shall also be supplied.	1 set	
5.4	Air conditioner of Rittal/Chilton/ Advance make and sufficient rating for electrical cabinet.	1 set	
5.5	All the machine control functions available on existing Operator Panel should be available on the new Operator Panel.	1 set	

S. N.	DESCRIPTION	QTY	COMPLIANCE / REMARKS
5.6	All the electrical switch gear such as Main Disconnect Switch, Fuses, Contactors, Relays, MPCB, MCB, and other accessories of suitable rating and reputed make as required for retrofitting the machine. All the switchgears should be minimum 25% over-rated to actual requirement.	1 set	
5.7	Suitably rated Control transformers of reputed make for new CNC control and Servo Drives if required.	1 set	
5.8	Panel Meters for display of Voltage & Current of main supply.	1 set	
5.9	Multiple Limit Switch Block, with 4 Roller Plungers, spacing 12mm, snap action, 1NC+1NO, IP67 protection, Yamatake Honeywell make LDV-5412 or its equivalent.	2 Nos	
5.10	Enclosed Limit Switch, SPDT, Top Plunger, 1NC+1NO, 2M Cable, IP68 protection, Honeywell make 14CE2-3J or its equivalent.	10 Nos	
5.11	Inductive Proximity Switches M8X1, SN=1 mm, L= 40-50 mm, flush mount with LED, PNP, NO, 10-30VDC, IP67, metal housing with 2 meter cable of TEKNIC/PEPERL/IFM/BALLUFF make.	10 Nos	
5.12	Inductive Proximity Switches M12X1, SN=2 mm, L= 40-50 mm, flush mount with LED, PNP, NO, 10-30VDC, IP67, metal housing with 2 meter cable of TEKNIC/PEPERL/IFM/BALLUFF make.	10 Nos	
5.13	All the Cables (LAPP/FINOLEX/SAB make) with conduits, Mating Connectors, Cable Terminations (Phoenix/ Elmax) and cable accessories required to interface the new CNC system, Feed/Spindle Drives and Control Magnetics.	1set	
5.14	Cable lugs/thimbles, ferrules and other elements required for rewiring of electrical cabinets, Operator Panel and field devices. Identification Tags / Nos. should be clearly mentioned for all the items in the Cabinet as per Electrical Schematic.	1 set	
5.15	Any other item not mentioned but required for successful commissioning of the machine will be in the scope of the vendor.	1 set	
5.16	The vendor should get BHEL approval for design & size of Operator and Electrical Panels.	1 set	
<b>6.0</b>	<b>Spares (to be quoted separately):</b> (should be same as used in the machine)		
6.1	SINUMERIK 828D control CPU with Monitor, Machine Control panel (MCP) and Key Board.	1 set	
6.2	PLC Input / Output Boards and Relay Boards, one no. of each type.	1 set	
6.3	Spindle, Tool and Axis Drive Modules, one no. of each type.	1 set	
6.4	Power and Signal cables with connectors, 15 meter length one no. of each type.	1 set	
6.5	Push Buttons, Selector Switches and other Switches, 5 nos. of each type.	1 set	
6.6	Indicator Bulbs, 20 nos. of each type	1 set	
6.7	24 VDC Power Supply, one nos. of each type.	1 set	
6.8	External Rotary Encoders, one no. of each type for Spindle, Axes and Turret.	1 set	
6.9	Signal Converter / Processing Unit (if used) , one no. of each type.	1 set	
6.10	Compact Flash card / Memory Key card.	1 set	
6.11	Motor Couplings (as used), one no. of each type.	1 set	

S. N.	DESCRIPTION	QTY	COMPLIANCE / REMARKS
<b>7.0</b>	<b>Manuals / Documents:</b>		
7.1	Operating & Programming Manual of CNC Control.	3 set	
7.2	Interface, Commissioning, Diagnostic and Maintenance manual of CNC Control & Drives.	3 set	
7.3	Electrical Schematic and wiring diagram with proper identification and cross reference of all the elements.	3 set	
7.4	List of Inputs, Outputs, Alarms/Messages showing detailed Cause and Remedy.	3 set	
7.5	PLC program print-out including Cross Reference & Comments in English.	3 set	
7.6	Drawings of all mechanical modifications, mountings, flanges & couplings.	3 set	
7.7	Service catalogues of all bought-out items.	3 set	
7.8	All the above documentation on CD/DVD ROM/USB Disk.	2 set	
7.9	Complete back-up of CNC Control, PLC and Drives on USB Disk.	1 set	
<b>8.0</b>	<b>Scope of Work and Commissioning:</b>		
8.1	Removal of existing electrical cabinet along with existing CNC System, PLC, Drives, Encoders and accessories.		
8.2	Removal of existing Motors, Cables, Wires, and Cable terminations.		
8.3	Mounting & installation of CNC Control, Drives, Encoders & Accessories in the new Electrical Cabinet, Operator Panel & Machine.		
8.4	Cabling & Interfacing of Spindle Drive, Feed Drives, Encoders & accessories with CNC System.		
8.5	Modification / re-engineering and manufacturing of Feed Motor couplings and flanges for motor mounting as per requirement.		
8.6	Installation of new Motors, laying of new cables and interfacing with the drives in the electrical cabinet.		
8.7	Mounting, installation, cabling, connection of I/Os and interfacing of new Magnetics & Switchgear with the machine elements.		
8.8	Mounting, installation, cabling, connection of Solenoid valves, Limit / Proximity / Pressure / Flow Switches and other Sensors.		
8.9	Refurbishment and rewiring of Connectors & Junction Boxes as per requirement.		
8.10	<b>Start-up and commissioning of new CNC Control, Drives, Motors etc.</b>		
8.11	Development of PLC program, generation of Operator Messages and Alarms and Fault Diagnostic system.		
8.12	Start-up and trial of CNC control, Drives, Turret and other functions.		
8.13	To establish the DNC connection of the new CNC Control via RS232 port for program Input / Output from an existing DNC PC.		
8.14	To provide suitable provision for switch-over of measuring system to run the machine with built-in encoders of the axes Servomotors. This facility is intended to be used in the event of failure of the second measuring system.		
8.15	Prove out of working of Spindle Drive, Tool Drive, Axes Drive, Turret and all other machine functions.		
8.16	Complete control of machine as available on existing Control Panel with required PBs, Switches & Keys, shall be provided on new operator panel for selection of axis, axis direction & feed ON/OFF, display of axis position values etc.		
8.17	Prove out of different features of the control viz. Turning, Milling, Threading, Drilling, Tapping, Grooving and Stock Removal Operations.		

S. N.	DESCRIPTION	QTY	COMPLIANCE / REMARKS
8.18	Job Prove-out by machining on 2 (two) different type of jobs and handing over of machine.		
<b>9.0</b>	<b>Part Program Converting Software (Price to be quoted separately):</b>		
9.1	Latest Windows based Program Converter Software to convert the Part Programs of existing Sinumerik 3T system according to new CNC system.		
9.2	The vendor shall install the conversion software on a BHEL PC and demonstrate conversion of two sample Programs provided by BHEL. The testing of the conversion software shall be done by BHEL Engineers through visual checking of the two sample converted programs. The Program conversion should be without any data loss and the converted data should be acceptable to new CNC System without any Syntax / Format error.		
9.3	Preferably 100 % conversion of Programs / Subprograms regarding program Numbers, Sequence Numbers, Operator Messages / Instructions, G & M codes, F/S/T/D codes with their values and Axes values suitable for new CNC system. In case of any constraint, minor editing after conversion is permissible at the discretion of BHEL.		
9.4	The two sample converted NC programs shall be loaded on the machine and testing shall be done based on Block search from the start to the end Block without any syntax or data format error.		
9.5	The two sample converted NC programs shall also be checked by graphic simulation feature, on the retrofitted CNC system.		
9.6	An installable CD/DVD/USB DISK of the conversion software shall be supplied by the vendor.		
<b>10.0</b>	<b>Training:</b>		
10.1	The vendor shall arrange the training of BHEL personnel for mutually agreed period, prior to retrofitting and commissioning of the system, at Vendor's / CNC system manufacturer's training centre, in the area of: (a) Part Programming with all CNC Features of CNC Control for one Engineer. (b) Maintenance of CNC Control, PLC and Drives for one Engineer. (c) Operation of the machine with the new CNC Control for two operators.		
10.2	Expenditure for fare, boarding & lodging for the trainees shall be borne by BHEL.		
<b>11.0</b>	<b>Warranty:</b>		
11.1	The vendor shall stand warranty for the material supplied and work done for a period of 18 months from the date of delivery of material or 12 months from the date of commissioning and acceptance of the machine, whichever is later. Any material (supplied by the party) found defective within warranty period will be replaced free of cost by the party.		
<b>12.0</b>	<b>Delivery Period:</b>		
12.1	Material : Max. 6 months from the date of award of contract. Early delivery shall be acceptable.		
12.2	Work : Max 8 weeks from the date of release of machine.		

S. N.	DESCRIPTION	QTY	COMPLIANCE / REMARKS
<b>13.0</b>	<b>Qualifying Conditions:</b>		
13.1	<p>Party should have successfully done at least one <b>similar</b> type of work in last 5 years and the machine should be working successfully for at least 1 Year from the date of opening of tender.</p> <p><b>Definition of Similar works:</b> Successful supply &amp; commissioning of CNC control SINUMERIK 802D/828D/840D along with SIEMENS make AC Servomotor &amp; Drive package with a new CNC Machine or for Retrofitting of old CNC Machine.</p>		
13.2	<p>The Vendor has to submit the name, address, phone no. &amp; email address of the customer(s), along with copies of P.O./Work Order, performance certificate from the customer(s) for whom same/similar work has been done, along with the offer. BHEL reserves the right to verify the provided information. The dates of P.O./Certificates should be within the period as mentioned in above clause no. 13.1 In case the information is found to be false/incorrect, the offer shall be rejected.</p>		
13.3	<p>The average annual turnover during the last three years ending March 31st 2013 should be at least Rs. 20 Lacs. Audited balance sheets for the last three years should be submitted by the party.</p>		
13.4	<p>Experience of having successfully completed similar works in last seven years from NIT date, should be either of the following.</p> <p>(a) Three similar completed works costing not less than Rs. 26 Lac each. <b>OR</b></p> <p>(b) Two similar completed works costing not less than Rs. 32 Lac each. <b>OR</b></p> <p>(c) One similar completed works costing not less than Rs. 51 Lac.</p>		
<b>14.0</b>	<b>Late Delivery (LD) Clause:</b>		
14.1	<p>LD @ 0.5% per week subject to a maximum of 10% of the material cost shall be applicable for delay in deliveries. In case of any change to order value , the LD should be 0.5% of the revised material cost per week of delay or part thereof subject to a maximum of 10% of the revised material cost.</p>		
14.2	<p>LD @ 0.5% per week subject to a max. of 10% of the Commissioning Charges shall be applicable for delay beyond scheduled commissioning date for reasons attributed to the party.</p>		
14.3	<p>Vendor should intimate BHEL regarding Pre dispatch inspection at least two weeks in advance. The time period from date of invitation from vendor to the date of arrival of BHEL team for PDI at vendor's works in excess of two weeks due to any reason attributed to BHEL will not be accounted for delay in delivery period and will be excluded for calculating Liquidated Damages.</p>		
<b>15.0</b>	<b>Pre-Dispatch Inspection:</b>		
15.1	<p>Pre-dispatch inspection of all the items covered under Scope of Supply shall be carried out by BHEL at party's works. Supplier shall send invitation to BHEL for carrying out pre-dispatch inspection.</p>		
15.2	<p>Deputed BHEL persons shall do PDI at vendor's works as per the BOM as well as Scope of Supply and give dispatch clearance.</p>		
15.3	<p>Expenses of Boarding and lodging of BHEL personnel during PDI shall be borne by BHEL.</p>		
<b>16.0</b>	<b>Earnest Money Deposit ( EMD):</b>		
16.1	<p>Tenderer have to deposit the EMD of Rs. 1.5 Lakh. The EMD may be submitted in cash(as permissible under Income Tax Act), through pay order or Demand Draft in favour of BHEL, Haridwar only.</p>		

S. N.	DESCRIPTION	QTY	COMPLIANCE / REMARKS
16.2	EMD of successful tenderer shall be converted to Security Deposit if the work is awarded.		
16.3	EMD given by all unsuccessful tenderer shall be refunded back normally within fifteen days of acceptance of award of work by the successful bidder.		
16.4	EMD shall not carry any interest.		
16.5	EMD by tenderer will be forfeited as per tender document, if (a) After opening the tender, the tenderer revokes his tender within the validity period or increases his earlier quoted rates. (b) The tenderer does not commence the work within the period as per LOI/contract.		
<b>17.0</b>	<b>Security Deposit (SD):</b>		
17.1	Successful vendor shall deposit security. The rate of security deposit will be as below: • For work Up to Rs. 10 Lakhs : 10% of work order value. • Above Rs. 10 Lakhs upto Rs. 50 Lakhs : Rs. 1 Lakh + 7.5% amount exceeding Rs. 10 Lakhs. • Above Rs. 50 Lakhs: Rs. 4 Lakhs + 5% amount exceeding Rs. 50 Lakhs.		
17.2	The security deposit should be submitted before the start of work in the following forms: (a) Cash (As permissible under the Income Tax Act) (b) Pay Order, Demand Draft in favour of BHEL, Haridwar. (c) Local cheques of Scheduled Banks, subject to realization. (d) Bank Guarantee from Scheduled Banks/Public Financial Institution as defined in the companies Act. The Bank guarantee format should have the approval of BHEL.		
17.3	Security Deposit shall not carry any interest.		
17.4	EMD of successful tenderer can be converted and adjusted against the Security Deposit.		
17.5	100% of the Security Deposit amount shall be refunded to the vendor after post commissioning successful running of the machine for one month. SD shall be released after the submission of Performance Bank Guarantee(PBG) by the vendor.		
<b>18.0</b>	<b>Performance Bank Guarantee (PBG):</b>		
18.1	Vendor shall be required to submit a performance bank guarantee (PBG) for 10% of the total order value which shall be valid for full guarantee period from the date of commissioning.		
18.2	The PBG shall be submitted on a non-judicial stamp paper of value not less than Rs.100/- issued by any one of the nationalized banks.		
<b>19.0</b>	<b>Payment Terms: (No advance payment shall be made to the vendor.)</b>		
19.1	Part payment will be made after completion of following milestones: (a) First payment of 80% of material cost along with 100% taxes & duties (Excise duty, CST/VAT as applicable) shall be payable after receipt of material at BHEL and joint inspection of material with the vendor. (b) Final payment of balance 20% of material cost +100% of commissioning charges+ service taxes as applicable and refund of 100% of Security deposit will be made after post commissioning successful running of the machine for one month. This payment shall be released against PBG (as per clause no. 18).		

S. N.	DESCRIPTION	QTY	COMPLIANCE / REMARKS
19.2	<p>All the payments shall be made through e-payment after submission of following documents along with first bill.</p> <p>(a) E-payment form duly filled (Form will be provided by BHEL).</p> <p>(b) Income tax exemption letter ( if applicable).</p> <p>(c) Excise duty/CVD &amp; CST/VAT will be paid on material cost and service tax will be paid on commissioning charges at actual rates.</p> <p>Related original documents to be submitted for availing MODVAT credit by BHEL.</p>		
<b>20.0</b>	<b>General Conditions:</b>		
20.1	A point wise compliance statement shall be submitted by the party in the same format, against each clause. Non-compliance to any of the clause can lead to dis-qualification of the offer. All the documents must be signed by the party.		
20.2	Technical details of the machine are given in annexure 'D'. The Vendors is advised to visit the site before submitting their offer. Vendor must quote the quantity exactly as per the Scope of Supply. No reduction in quantity is permissible.		
20.3	The vendor is advised to inspect the machine to ascertain all the relevant details required for successful completion of the work. Any part not mentioned above but required for retrofitting and running of the machine shall be in the scope of the vendor.		
20.4	Complete specifications such as part no., model, type etc. of the CNC control, PLC, Motors Drive Modules and all other components shall be stated in the offer. Final Bill of Material (BOM) shall be supplied by the party before signing of contract. The proposed electrical schematic for the machine shall be provided by the vendor prior to start of commissioning work.		
20.5	Vendor must give the prices of Spare Parts (with price break up of all the items individually), Works and the Converter Software separately along with the offer.		
20.6	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>		
20.7	The award of work will be made on the basis of the " <b>Total cost to BHEL</b> ".		
20.8	The Vendor should submit their best price at this stage itself and they will not be allowed to revise the price. Any revision / discount given by the vendor subsequently will be ignored.		
20.9	BHEL reserves the right to cancel the tender at any stage of tendering till signing of agreement without assigning any reason(s). The tender cost in that event shall not be refunded.		
20.10	Party shall bring all types of tools, tackles & testing equipments with them required for successful installation & commissioning of the supplied items.		
20.11	Any material not specified in scope of supply but required for successful commissioning shall be provided by the vendor free of cost.		
20.12	<p><b>RULES AND REGULATIONS OF THE CENTRAL/STATE GOVERNMENT:</b></p> <p>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.</p>		

S. N.	DESCRIPTION	QTY	COMPLIANCE / REMARKS
<b>21.0</b>	<b>Commercial Terms:</b>		
21.1	Prices shall be quoted on "Firm Price" basis only. The prices should be only on F.O.R BHEL, Haridwar basis inclusive of Packing & Forwarding, transit insurance & Transportation charges. Applicable % of ED & Sales Tax, Installation/ Commissioning Charges & Service Tax should be clearly indicated in attached Price bid format as per "Annexure B". No other charge shall be acceptable later on.		
21.2	Validity of offer shall be for a minimum period of 180 days from the date of Tender Opening.		
21.3	BHEL Reserves right to go for reverse auction (RA). In case of RA, terms & conditions for covering RA shall be intimated to the techno-commercially accepted bidders without opening of price bid.		
21.4	Freight & transit insurance charges from Dispatching station to BHEL, Haridwar shall be borne by the party.		
21.5	The material will be dispatched to Central Plant Stores, HEEP, BHEL, Haridwar with instructions to forward the same to Manager (WEX-CNC), Block-1, HEEP, BHEL, Haridwar-249403		
<b>22.0</b>	<b>Final Acceptance</b>		
	<p>Final Acceptance shall be at HEEP, BHEL, Haridwar after:</p> <p>a) Completion of the scope of supply and scope of work at BHEL.</p> <p>b) Final acceptance shall include clearance of all pending issues related to the work contract.</p> <p>c) Successful Commissioning &amp; Demonstration of various cycles and control functions as envisaged in the technical scope.</p> <p>d) Successful machining of 2 no. of component provided by BHEL using CNC program (converted &amp; provided by vendor) under supervision of vendor .</p> <p>After settlement of all the above points a certificate of Completion will be issued by BHEL which will be the referred document for Final Acceptance and final payment to the vendor.</p>		
<b>23.0</b>	<b>Bhel's Obligation:</b>		
23.1	Existing electrical schematic of the machine shall be provided by BHEL to the vendor.		
23.2	Crane facility and lifting tackles like slings, rope, D-Shackles shall be provided.		
23.3	Any machining facility required for rectification/fitting of supplied material, subject to availability in BHEL, shall be provided.		
23.4	Any civil work required for the erection of panel shall be done by BHEL. (vendor shall inform in advance for the requirement)		
23.5	Electricity, water, welding sets, Gas cutting equipment required during commissioning shall be provided subject to availability.		
<b>24.0</b>	<b>Packing:</b>		
24.1	Supplier shall arrange for adequate protection and packing of the consignment so as to avoid loss and damage during transit and also take appropriate measures to prevent metal parts from rusting, corrosion and collision during transit. Handling instructions shall be clearly printed /painted on the packages. Each package should carry a detailed packing slip. Supplier shall be responsible for any loss/damage during transit due to defective/inadequate packing.		

S. N.	DESCRIPTION	QTY	COMPLIANCE / REMARKS
25.0	<b>Offer :- The offer should be submitted in two parts in following manner.</b>		
25.1	<b>Techno-commercial Bid :</b> The first envelop shall contain the Techno-commercial Bid (Annexure "A") with technical details and commercial terms & conditions along with unpriced price bid as per annexure "B" with clear undertaking that no deviation from BHEL's price bid format will be entertained in the final evaluation. Relevant documents like copies of ESI, PF code, PAN No., Service Tax Regn. No., TIN No., CST No., Experience Certificates, Audited Balance Sheet of last 3 years, Tender Fees, EMD and Check List as per ANNEXURE 'C' (Demand Draft for tender document cost shall also be accompanied in case tender documents are downloaded from BHEL Website. Offers without EMD & DD towards tender documents cost will not be considered). The envelop shall be super scribed with "Techno-Commercial Bid", Name of work & NIT No. and Date of opening of Tender. Point-wise compliance of this scope of supply and work is to be given by vendors while submitting their techno-commercial offer in the format provided by BHEL. Each page of the compliance list has to be ink signed & stamped by the vendor.		
25.2	<b>Price Bid :</b> The second envelope shall contain only the price bid with separate price for material & work on Price Bid Format as per ANNEXURE 'B'. 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 the page. The envelope shall be sealed and super scribed with "Price Bid", Name of work & NIT No. All amounts shall be indicated both in words as well as in figures. In case of any difference between amounts quoted in words and figures, amounts quoted in words shall prevail.		
25.3	Tenders should be free from corrections, Corrections if any, must be attested.		
25.4	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 submitted in Tender Box kept in the Tender room of Purchase department at the 4th floor of the Main Administrative Building of HEEP-BHEL, Haridwar-249403,Uttarakhand and it should also contain Bidder address.		
25.5	Price bids of techno-commercially suitable bidders alone would be opened after complete evaluation of techno-commercial bid. Date and time of price bid opening shall be intimated to the techno-commercially acceptable bidders only. Clarifications if any required by BHEL for techno-commercial evaluation would be sought from bidders before opening of price bid.		