

**Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)**

**BHARAT HEAVY ELECTRICALS LIMITED
RAMACHANDRAPURAM: HYDERABAD – 502032**

M&S/10-REPAIR SHOP

Phone No.: 040--23185324

Fax No.: 040–23183285

email: mbchandana@bhel.in

TENDER NOTICE NO.: HY/M&S/10-RS/RC/20-21/STALLION/1306/1

Date: 13.06.2020

Tender in two parts (Techno-commercial & Price Bid) will be received by the undersigned in sealed cover from the contractors satisfying the prequalification requirements. The following should be legibly written on the cover -- Tender notice number, Tender date, name of the work, due date of opening, techno commercial bid or price bid on top of cover. Tenders will be opened at 14.30 hrs. On the due date in the presence of bidders or their authorized representatives in BHEL, Ramachandrapuram, Hyderabad.

1. Name of work : **“Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps
production (Asset No.70-1192)”** as per
scope of Work, terms & Conditions enclosed.
2. Earnest Money Deposit : **Rs. 68,947/-**
3. Estimated Cost to BHEL : **Rs. 34,47,360/-+ GST** as applicable.
4. Cost of tender documents
(non-refundable) : **NIL**
5. Tender sale starts from : **Not applicable**
6. Tender sale closes on : **Not applicable**
7. Last date of receipt of tenders : **07.07.2020 up to 11.00 Hrs.**
8. Date and time of opening of tenders: **07.07.2020 at 14.30 Hrs.**
(Techno-commercial bid only)

Name & Address of the firm:

**TENDERERS ARE REQUESTED TO SIGN AND PUT SEAL ON ALL PAGES OF TENDER
DOCUMENT AND SUBMIT.**

For BHARAT HEAVY ELECTRICAS LIMITED

-/
(Ch.Malli Babu)
DGM (M&S) 10- RS,AC

<p style="text-align: center;">Reconditioning and CNC Retrofitting of HMT make STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)</p>

TENDERING PROCEDURE:

Tenders may be dropped in Tender Box at Vendor Complex adjacent to Administrative Building. Of BHEL, R.C.Puram, Hyderabad – 502 032

The bids shall be submitted in two part.

1. Techno commercial bid 2. Price bid

The envelope shall contain only the price bid to be quoted. Any other information in the price bid shall not be considered and the quotation is likely to be rejected. Price bid document shall be signed by the bidder at the bottom of the page. The envelope shall be sealed and super scribed “Price Bid ----- (name of work)”.

The cover shall be super-scribed with “Quotation for ----- (name of work)” and shall be addressed to Sri Ch.Malli Babu DGM(M&S) / 10-Repair Shop, Bharat Heavy Electricals Limited, Ramachandrapuram, Hyderabad – 502032 to reach at or before 11.00 hrs on the due date and it should also contain Bidder address, Tender No. & due date.

BHEL is not responsible for any postal delay. The price bids will be opened in BHEL R.C.Puram Hyderabad- 32 on tender due date at 14.30 hrs in presence of those bidders who choose to be present.

EMD Payment:

An amount of **Rs. 68,947/- (Rupees Sixty Eight Thousand Nine Hundred and Forty Seven Rupees Only)** towards EMD shall be Deposited in cash at BHEL Cash office or by way of Demand Draft / Bankers cheque drawn in the name of M/s. Bharat Heavy Electricals Limited payable at Hyderabad and shall be enclosed to the tender bid. No other means of payment will be accepted, no interest on EMD will be payable.

Cash office timings: 09.30 AM to 11.30 AM & 1.30 PM to 3.30 PM

**Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)**

**BHARAT HEAVY ELECTRICAS LIMITED
RAMACHANDRAPURAM: HYDERABAD-502 032**

M&S/10-REPAIR SHOP

TECHNO- COMMERCIAL BID

TENDER NOTICE NO.: HY/M&S/10-RS/RC/20-21/STALLION/1306/1 Date: 13.06.2020

**NAME OF THE WORK: “Reconditioning and CNC Retrofitting of HMT make STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)”,
as per scope of Work, Terms & conditions enclosed.**

**THIS IS AN INDIVISIBLE WORKS CONTRACT AND THE CONTRACTOR SHALL
FILL REMARKS COLUMN AGAINST ALL ITEMS.**

This tender schedule must be submitted along with the General Conditions, Special conditions etc. enclosed herewith duly signed and stamped on each page with bidder's covering letter. Quotations should be TYPED on tender schedules only. Any deviations / deletions should be brought out separately on bidder's letter pad and enclosed to the bid documents.

The following are to be filled up by the Bidder:

Name of the Contractor :
Full Address :
Name of contact person :
Phone No. :
Fax No. :
E-mail Id. :
Mobile no. :

Sn.	Description	Contractor's Remarks
1	PF CODE NO	
2	ESI CODE NO	
3	PAN No.	
4	GST Regn. No.	
5	Price Validity: 90 days from techno-commercial bid opening date.	
6	EMD : Rs.68,947/- Cash receipt / bankers cheque details	
7	Security Deposit clause : acceptance (See terms and conditions for details)	
8	Taxes and duties : mention whether included and firm during contract period OR extra as applicable	
9	Payment Terms: Progressive payments as mentioned in the scope of work enclosed for the work completed successfully in all respects.	

**Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)**

Sl. No.	Pre-Qualification	Contractor Remarks
A1	<p><u>PRE-QUALIFICATION REQUIREMENTS (Proofs to be enclosed for verification):</u></p> <p>All the following conditions are to be satisfied by the bidder. Documentary proof is to be enclosed with techno-commercial bid satisfying all these conditions. In case the bidder fails to enclose the same, the offer is liable to be rejected.</p>	
1.	<p>The annual turnover during the last three years ending March 31st March 2020 should be at least 30% of the estimated cost (CA certified copy of balance sheet / P&L statements to be enclosed).</p>	
2.	<p>The party must be a reputed machine tool builder / Reconditioning Light machine tools / Medium machine tools. Copies of purchase orders/work orders and Corresponding successful completion certificates should be submitted as proof for Verification. Offers without these documents will be rejected. List of the customers along with respective contracting officer's addresses (including Phone no./E-mail ID) for whom machines were Reconditioned and Retrofitted /manufactured / rebuilt should be enclosed to the offer.</p>	
3.	<p>Experience of having successfully completed similar works during last 7 years ending last Day of month previous to the one in which applications are invited should be either of the following:</p> <p>a) Three similar completed works costing not less than the amount equal to 40% of the Estimated cost.</p> <p style="text-align: center;">Or</p> <p>b) Two similar completed works costing not less than the amount equal to 50% of the Estimated cost.</p> <p style="text-align: center;">Or</p> <p>c) One similar completed work costing not less than the amount equal to 80% of the estimated cost.</p>	

<p align="center">Reconditioning and CNC Retrofitting of HMT make STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)</p>

4.	<p><u>Similar Machines definition:</u></p> <p>Manufacture / Reconditioning of Medium size machine tools like</p> <ol style="list-style-type: none"> 1. Lathes equivalent to L-45 of HMT make (Job diameter 900 mm, Length 3 Mtrs, Wt.3 Tons.) 2. Centre lathes equivalent to SU-63, (Bed length 4.9 Mtrs. of TOS make or bigger) 3. Horizontal Borers Spindle Diameter 63 mm OR Equivalent. 4. Vertical Borers equivalent to SK-12 of TOS, CSSR make (table diameter 1200 mm). 5. Drilling machines of spindle dia. 60 mm to 100 mm 6. Manufacturing of light or medium machines equivalent to HMT make Radial drilling machines/Lathes 7. General purpose CNC machines like HMC/VMC/ H. Borer/Vertical Borer/Lathe Machines 	
----	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

Reconditioning and CNC Retrofitting of HMT make STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)

SPECIFICATION OF STALLION200/SIEMENS 828D CNC SYSTEM

1. CAPACITIES:

Type of Bed.	Offset bed with slant saddle
Swing Over Telescopic Covers	460 mm
.Maximum turning Dia of over cross slide	250 mm
Maximum turning Dia of chucking job	300 mm
Maximum chuck size	250 mm
Distance between spindle face to torret face	480 mm
Distance between centres	400 mm

2. SPINDLE

Spindle nose	A2-6
Hole through spindle	53 mm
Spindle socket taper	Metric-60

3. SPEEDS

Spindle speed range	100 – 4000 rpm
Selection of speeds	Through program
Type of spindle drive	AC variable speed drive

4. Longitudinal Feed drive

Feed range	mm/min	1 – 5000
Rapid traverce rate	mm/min	20000
Stroke	mm	450
Type of drive		AC – Servo

5. Cross feed drive

Feed range	mm/min	1 – 5000
Rapid traverce rate	mm/min	15000
Cross slide stroke	mm	250
Type of drive		AC-SERVO

6. TAILSTOCK

Tailstock spindle diameter	mm	90
Spindle stroke (Hyd)	mm	120
Spindle taper		MT4

7. TURRET

Type	std	Wedge lock
No. of Tools (external/internal)		8
Turret indexing positions		8 (Bi-directional Random)
Turret actuation		Hydraulic
Turning tool shank size	mm	25 X 25
Max.boring bar size	mm	40

<p align="center">Reconditioning and CNC Retrofitting of HMT make STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)</p>

8. POWER

Spindle power (cont./inter)	Kw	7.5/11
Hydraulic power pack motor	Kw	2.2
Incoming supply		Hz 50 +/-2% 3phase

9. CNC SYSTEM

SIEMENS828D

10. ACCURACIES

(As per JIS)

11. POSITIONING

X-Axis	mm	0.008 mm over 300 mm
Z- Axis	mm	0.015 mm over 300 mm

12. Repeatability

X-Axis	mm	+ / - 0.002
Z- Axis	mm	+ / - 0.003

13. WEIGHT OF MACHINE

Kg 3000

14. FLOOR SPACE (L X W X H)

mm 2530 X 1990 X 1650

<p align="center">Reconditioning and CNC Retrofitting of HMT make STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)</p>

SCOPE OF WORK IN BRIEF:

Complete Reconditioning and CNC Retrofitting of HMT Make STALION Lathe (Asset N0.70-1192). Existing system FANUC OI to be replaced with new CNC system Siemens 828D spindle drive and X&Z axis Drives. Design, Manufacture and Supply of New Electrical Cabinet with new elements to the latest design and complete machine rewiring with new cables and suitable A/C unit. Hydraulic power pack to be replaced with new system including hoses. Both axes Ball screw and nut to be replaced with new.

Transportation and transit insurance both ways by BHEL. Packing & forwarding by BHEL approved transporter at BHEL scope.

	<u>SCOPE OF WORK IN DETAIL</u>
A.	<u>MECHANICAL :</u>
1.	Measurement of geometrical accuracies and sound levels as per manufacturer's charts before dismantling of the machine at BHEL by contractor with his personnel and measuring instruments.
2.	Removing the machine from foundation, dismantling it into transportable lots and minimum packing required for further transportation to contractor works. The necessary personnel and tools are in contractor's scope.
3.	Unpacking the transported parts at contractor's works, complete dismantling of machine assemblies into individual parts, degreasing, chemically cleaning; pre-painting of structural parts, detailed inspection of parts to confirm accuracies, identifying of spares to be replaced, joint inspection to finalize the detailed list of 1) spares to be bought out, 2) spares to be manufactured. The list has to be approved by BHEL. Drawings of manufacturing spares and specifications for bought-out items shall be prepared and submitted to BHEL for approval. BHEL may procure and supply these items to the contractor from any other sources as well.
4.	Replacement of all bearings existing in the machine as per HMT list includes main spindle bearings irrespective of their size and present condition
5.	Replacement of all worn out gears (Spur, Helical, Spiral and Bevel) other parts in machine head stock and carriage movement with new ones to I.S. standards and specified quality materials complying with the original manufacturer's specified tolerances.
6.	All slide ways / guide ways of machine bed longitudinal, cross slide and saddle have to be ground and blue-matched with mating parts to obtain final alignment. Scraping of all sliding parts, gibs etc. Final alignment scraping. Pasting of Turcite-B anti-friction bearing material on all slides, wherever required
7.	Tailstock mechanism to be serviced and any damaged parts to be replaced with new.
8.	Turret rotation movements are jamming frequently and problem to be resolved Turret mechanism to be repaired & serviced and any damaged parts to be replaced with new.
9.	Both axes Ball screw and nut to be replaced with new.
10.	Telescopic covers to be repaired with new.

**Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)**

	<u>SCOPE OF WORK IN DETAIL</u>
11.	Hydraulic power pack to be replaced (Rexroth make) with new system including hoses. All solenoid valves, pressure switches are to be replaced with new parts
12.	Lubrication system to be replaced with new including hoses.
13.	Coolant system including hoses to be replaced with new.
14.	Oil leakages from machine to be arrested & Noise levels during operation of machine shall be normal level.
15.	Geometrical accuracies should be as per machine test chart and components machining prove out to be done.
16.	PAINTING Painting should be carried out according to the HMT new machine standard procedure for painting including cleaning and removing old paint, applying metal primer putty etc. Good finish should be ensured. Overall, Machine aesthetic view should be taken care of.
B.	<u>Electronics and Electricals:</u>
1.	CNC system Siemens 828d, PPU 281.3 horizontal format or higher with minimum 10 inch display & MCP 483 PN machine control panel. Siemens make Mini HHU (6FX2007-1AD03) is to be provided for manual axis movement. PLC (integral with CNC) with minimum 72 inputs and 48 outputs PLC I/O Module PP 72/48D PN Type: 6FC5311-0AA00-0AA0, Make : Siemens
2.	Existing Motor details: 1) X-axis 2000Rpm Stall torque 10 NM 2) Z-axis 2000Rpm Stall torque 10 NM Suitable motors of Siemens make 1FK7/ 1FT7 with holding brake & with Key way is to be provided. 3) Spindle Motor details are: A06B-0846-B100 C01/K015/ S1 11KW 1500-4500 Rpm 54A. 7.5KW 6000Rpm S2 15KW 1500-4500 75A. 11KW 6000 75A Suitable Siemens make 1PH7/1PH8 motor is to be supplied. Vendor should take approval from BHEL while choosing the motors. External feedback encoder (Siemens /Heidenhain) for spindle axis is to be interfaced for getting actual RPM. Existing Spindle motor is placed with in the machine bed. It is very difficult to access motor during maintenance related activities. The new motor has to be placed outside the machine bed with suitable base & Mounting plate and with proper alignment provision.
3.	Operator pendent & Electrical Panel cooling AC system is to be provided with displaying existing temperature & Set point temperature. The over temperature alarm input interfaced to PLC to generate warning message. 2 No's four-core signal cable to be provided from PPU to Electrical drive panel to meet future requirements.
4.	Operator pendent layout drawing is to be submitted(to know the Operator Push buttons & Switches placement).The following push buttons like Chuck OD/ID clamping ,Quill Forward , Quill retract ,Turret index , Emergency override, Control ON with light , Coolant ON/OFF .

**Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)**

	<u>SCOPE OF WORK IN DETAIL</u>
5.	Complete 3 sets of Electrical drawings, PLC logic soft copy & hard copy with comments are to be provided.
6.	Siemens Make Energy meter PAC5200 with Ethernet port facility should be provided on main electrical control panel door to indicate and record total consumption of electric power for the machine including auxiliary systems. Scope should include necessary current transformers & relevant accessories. Vendor shall get approval from BHEL with respect to Make & Model of Digital Energy Meter before procurement of the same. The vendor has to demonstrate features like Total energy consumption, Trends in Voltage, Current & PF and energy. The vendor has to supply necessary software & Communication cables.
7.	Laser calibration of X& Z axis are to be carried out.
8.	Spare motor measuring system cable for two axis motors and spindle to be provided
9.	One spare Turret encoder to be supplied for trouble free operation
10.	All fuses and overload relays to be replaced with Siemens make motor protection circuit breakers. Necessary modification to be done in the circuit.
11.	Tower lamp to be provided to indicate machine running status.
12.	Replacement of all limit switches, limit dogs, mercury float switch, rotary switch, PVC conduits etc. with new ones of Euchner/ Balluf /Teknic or reputed make.
13.	All switchgear items like MCBs, contactors, control relays, switches, push buttons shall be of SIEMENS make only.
14.	Terminal blocks of make WAGO/reputed make.
15.	Indication lamps wherever required to be provided (Siemens make).Tower lamp to be placed on machine
16.	Indicating instruments shall be replaced with new ones of reputed make.
17.	M codes and switch control to be provided for all auxiliary functions like coolant, spindle, etc.
18.	Two industrial grade LAN cables to be laid from Electrical panel to operator pendent for Network connectivity.
19.	All cables other than in-coming supply are in the scope of contractor.
20.	All equipment must be suitable to run with input voltage of 3 wire, 3 phase, 415 volts AC $\pm 10\%$, 50Hz ± 2 Hz.
21.	All equipment shall be tropicalized and suitable for operation in shop floor conditions, where temperature variation is between 10° to 45°C.
22.	Before commencing manufacture of the panels, electrical and general arrangement drawings should be submitted to BHEL for approval.
23.	Each panel and the equipment mounted on each panel shall be securely connected to the earth bus. For this purpose, the earth wire shall be looped from equipment to equipment and both the ends of the earth wire shall be connected to the earth bus.
24.	All non-current carrying metallic parts shall be earthed. All doors and movable parts shall be connected to the earth bus with flexible copper connections.
25.	Any other work/item (electrical, mechanical) not mentioned in this scope of work, but required to keep the machine in working condition with all features and functions are in the scope of the contractor.

**Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)**

	<u>SCOPE OF WORK IN DETAIL</u>
26.	An Isolation Transformer & Servo stabilizer of suitable capacity is to be provided (with safety enclosure) for entire machine covering complete electrics (CNC, PLC, drives, motors and other electrical Devices). These should be installed outside the control panel. Make: Reputed Indian make. To be furnished with test certificate. Catalogs and trouble shooting manuals are to be provided.
27.	Taparia make screwdriver sets Model 840 for Electronics Maintenance Personnel for maintenance of the supplied equipment. Quantity : 2 sets
28.	Compact Flash cards (2 Nos.) of the CNC system with commissioning data (after machine prove out) should be provided after testing on the machine
29.	32 GB USB 3.0 pen drives (3 Nos.) to be provided for part program transfer & backup and machine archives back up.
30.	Training: Contractor should arrange training on maintenance of CNC and PLC systems (4 persons) free of cost at CNC system manufacturer's training facility. Training for CNC programming & Operation (4 persons) at supplier's works free of cost. Expenditure for Lodging & Boarding facilities will be borne by BHEL
31.	All the control cables must be of LAPP make
32.	Terminal blocks of make WAGO/reputed make.
33.	All electrical & electronic cabinets/panels shall be ensured to be dust & vermin proof. Vendor should properly close the panel holes to prevent entry of RODENTS, RATS & VERMINS into the panels/pendants/cabinets.
34.	All the conduits must be Steel reinforced PVC and of reputed make
35.	Work area lamps (LED) should be mounted on the machine.
36.	Any other work/item (electrical, mechanical and electronics) not mentioned in this scope of work, but required to keep the machine in working condition with all features and functions are in the scope of the contractor.
C.	<u>COMMISSIONING AT CONTRACTOR WORKS</u>
1.	Testing for functioning of the machine and total features of the machine
2.	The machine should be brought back to 100% of the original accuracies as specified by the manufacturer test chart and it have to be recorded. (Geometrical test chart will be provided by BHEL)
3.	Two sample work pieces have to be machined to check the accuracy of the job from rebuilt & retrofitted machine.
4.	All the above tests should be witnessed by our representatives and certified.

<p align="center">Reconditioning and CNC Retrofitting of HMT make STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)</p>

	<u>SCOPE OF WORK IN DETAIL</u>
5.	<p>a) Laser calibration shall be carried out. Calibration equipment in contractor's scope. Details as below: (Laser calibration equipment in contractor's scope) Checking of positional accuracies and repeatability as per VDI/DGQ 3441 latest version by Linear method</p> <p>i) Positional accuracy X-axis 0.020 (over full length of X-traverse) Z-axis 0.020 (over full length)</p> <p>ii) Repeatability X-axis 0.010 (per meter) Z-axis 0.010 (per meter)</p>
D.	RE-ERECTION & RE-COMMISSIONING OF THE RECONDITIONED MACHINE AT BHEL WORKS.
1.	Dismantling of machine after satisfactory final inspection at vendor works. Minimum packing required for transportation and dispatch by BHEL approved transporter, by the contractor. Cost of transportation and transit insurance in BHEL scope.
2.	<p>a) The complete machine is to be re-assembled, re-erected and re-commissioned at BHEL works by the Contractor.</p> <p>b) The reconditioned machine shall be proved out at BHEL Works as mentioned at 'C'</p> <p>c)Handing over the proved out machine to production.</p>
E.	DOCUMENTATION
1	Detailed & complete drawings of Electrical circuit, Hydraulics, Lubrication system and Mechanical drawings along with location of various components (lay out) – 3 copies
2	Catalogues of all bought-out items --- 3 copies
3	PLC logic in English along with comments (3 hard opies)
4	Complete Data backup of NC/PLC/drives (3 soft copies)
5	PLC logic (S7 format & pdf format) (3 soft copies)
6	One complete set of above documentation on DVD.

**Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)**

F.	GENERAL CONDITIONS :
1.	The machine is to be reconditioned at contractor works. Contractor personnel will be allowed to work inside BHEL premises only during checking of machine before taking for reconditioning, during re-commissioning and any maintenance work during the guarantee period.
2.	Transport & transit insurance both ways in BHEL scope.
3.	All works connected to guideways of all axes (eg. Slideways, gibs), repair by machining (grinding, milling, hand scraping), suiting with turcite material and matching are also covered under labour charges. However, bought-out items like turcite etc. are covered under spares.
4.	<u>SPARES :</u> <ol style="list-style-type: none"> The spare parts (electrical / mechanical) required to be replaced (manufacturing spares and bought-out spares) will be to BHEL account. Contractor has to quote for these spares along with manufacturing drawings for manufacturing items and specifications for bought-out items for approval. BHEL will supply spares available with them. BHEL may procure and supply these items to the contractor from any other sources as well. Spares not supplied by BHEL shall be purchased / manufactured by the contractor. Spares required to be replaced other than those agreed to during joint inspection will have to be approved by BHEL before such replacement is affected. Cost of such spares shall be absorbed by the contractor. BHEL will not pay for these items. Prior intimation has to be given to BHEL by the contractor for deputing the team for joint inspection at contractor works. Contractor must submit the quotation for joint inspection spares within a week of joint inspection
5.	<u>REWORK IN LIEU OF REPLACEMENT :</u> Reworks in lieu of replacement on all parts (guideways / sliding surfaces like spindle, bushes, box nuts, screw rods etc.) by machine grinding preferably/chrome plating / welding / machining etc. identified initially and also during joint inspection are covered under labour charges only. For such works BHEL will not pay extra. Repair of spindle (if required) by machining, chrome plating etc. are also covered under labour only.
G.	SPECIAL CONDITIONS:
1.	BANK GUARANTEE / ALL RISK INSURANCE COVERAGE AS SECURITY DEPOSIT (for safe custody of machines and material): The contractor has to submit Bank Guarantee / All risk insurance coverage for Rs.35 lakhs for safe custody and as security deposit for the period of machine and materials being stationed at contractor works. This bank guarantee will be released after receipt of reconditioned and tested machines at BHEL works. Any damage / loss shall be made good by contractor at their cost.
2.	EMD of 2% of the estimated value (i.e.Rs. 68,947/-) shall be deposited to BHEL account by the bidder along with the offer. In the event of acceptance of tender, and if the contractor/bidder fails to commence the work within promised period, BHEL shall without prejudice to any other right or remedy be at liberty to forfeit the said earnest money absolutely. EMD does not carry any interest. Offers without EMD will be rejected and will not be considered for evaluation.

**Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)**

3.	<p>SECURITY DEPOSIT FOR WORK: The total amount of Security Deposit will be 5% of the contract value. EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit. This is as per clause 5.2.1 of BHEL Works policy and reproduced in terms & conditions. This amount shall be returned after successful completion of the contract work.</p>
4.	<p><u>TIME SCHEDULE :</u> Twenty weeks for reconditioning from the date of receipt of the machine at contractor works to the date of inspection and acceptance of reconditioned machine at contractor works.</p>
5.	<p><u>PAYMENT TERMS:</u></p> <ol style="list-style-type: none"> 1. 30% of Part-A order (i.e. 30% of labour cost and 30% of initial spares cost) shall be paid after joint inspection of fully dismantled machine for 1) identification of spares and 2) deciding detailed scope of repair / rework on various components / parts and submission of quotation for joint inspection spares along with manufacturing drawings . This is subject to submission of Bank guarantee for like amount valid for the period till the reconditioned machine is handed over to Production at BHEL works. 2. 60% of labour cost and 60% of initial spares cost (both Part-A and Part-B together) along with 100% taxes and duties at actuals (against submission of documents to BHEL for reimbursement of the same from authorities concerned) shall be paid after prove out and handing over the reconditioned machine to Production at BHEL works. 3. Joint inspection spares shall be ordered separately (Part-B). However, 90% of Part B order shall be paid after prove out and handing over the reconditioned machine at BHEL works 4. Balance 10% of Part-A & B orders shall be paid after submission of Performance Bank Guarantee of like amount valid for the guarantee period of 12 months (two-shift basis).
6.	<p><u>PENALTY:</u> 0.5% of the total contract value (including labor cost, cost of initial & joint inspection spares) per week or part thereof up to a maximum of 10% of the total contract value shall be levied beyond the time specified in IV.</p>
7.	<p><u>PERFORMANCE BANK GUARANTEE :</u></p> <ol style="list-style-type: none"> a) Satisfactory performance of the reconditioned machine shall be guaranteed for a period of 12 months (on two shift basis) from the date of handing over the machine to production at BHEL works. b) During the guarantee period contractor shall attend to the machine / replace failed parts free of charge as and when called upon to do so for defects / failures noticed and attributable to contractor's work & supplies (both manufactured and bought-out by them) c) The discarded parts (old) during the guarantee period shall be taken back by contractor at its expenses. Repairs, if any, shall be carried out either at BHEL / contractor works as agreed mutually but cost of transportation both ways shall be on contractor's account. BHEL will not pay for this.
8.	<p>General tools / instruments / gauges required for</p> <ol style="list-style-type: none"> a) Checking and packing of the machine at BHEL works for transporting the same to contractor works for reconditioning. b) Re-commissioning and prove out of the reconditioned machine at BHEL works shall be arranged for by the contractor. Special tools / instruments / gauges for these works will be provided by BHEL. <p>All these instruments / gauges should have valid calibration certificates from recognised agencies.</p>

<p align="center">Reconditioning and CNC Retrofitting of HMT make STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)</p>

9.	BHEL reserves the right to inspect the progress as well as workmanship at any stage of the work Decision of BHEL Representative shall be final in the matter of inspection at any stage. Contractor shall extend necessary co-operation to enable such inspection
10.	All discarded parts shall be returned to BHEL
11.	MACHINE will be kept in open condition. No air conditioner is provided for this machine. The machine shall be given specified accuracies in these conditions only.
12.	General terms and conditions of BHEL as per enclosure shall be acceptable.
13.	Any other activity (electrical and mechanical) not mentioned in this scope of work to bring back the machine to satisfactory working condition with all features and accuracies after reconditioning is in the scope of contractor
14.	The contractor is required to study the machine and the scope of work and satisfy himself about completeness of the scope in order to submit his offer. In case of any discrepancies in the scope of work or material supply the contractor is required to highlight the same to BHEL in his offer
15.	The contractor may visit our works to see the machine, which is presently in working condition.
16.	Lodging & Boarding facilities for the contractor personnel are at Contractor's scope (during dismantling period, re-erection & re-commissioning period and for troubleshooting during performance guarantee period). BHEL is not responsible for this.
17.	Material handling facilities such as crane, battery truck, slings, lifting tackles etc. along with operator, consumables like cleaning solvents, cotton waste etc. and utilities like electric power, compressed air etc. shall be provided by BHEL for the works performed at BHEL works
19.	The enclosed National Electronic Funds Transfer Format should be submitted along with offer for payments (CVC Guidelines).

**Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)**

TENDER NOTICE NO.: HY/M&S/10-RS/RC/20-21/STALLION/1306/1

Date: 13.06.2020

**Price estimate for Reconditioning and CNC Retrofitting of HMT Make
STALION Lathe (Asset N0.70-1192)**

Sl No.	Description of activity / material	BHEL Estimate Rs.
A. LABOUR : (Activities A-E of the scope of work) including engineering & design charges		2,80,000
B. Material :		
	Initial spares	
B1.1	Mechanical	
B1.1.1	All slide ways / guide ways of machine bed longitudinal, cross slide and saddle have to be ground and blue-matched with mating parts to obtain final alignment. Scraping of all sliding parts, gibs etc. Final alignment scraping. Pasting of Turcite-B anti-friction bearing material on all slides, wherever required.	84,000
B1.1.2	Replacement of all worn out gears (Spur, Helical, Spiral and Bevel) other parts in machine head stock and carriage movement with new ones to I.S. standards and specified quality materials complying with the original manufacturer's specified tolerances.	1,15,200
B1.1.3	Replacement of all bearings existing in the machine as per HMT list includes main spindle bearings irrespective of their size and present condition	2,88,000
B1.1.4	Tailstock mechanism to be serviced and any damaged parts to be replaced with new.	28,800
B1.1.5	Turret rotation movements are jamming frequently and problem to be resolved Turret mechanism to be repaired & serviced and any damaged parts to be replaced with new	96,000
B1.1.6	Both axes Ball screw and nut to be replaced with new.	1,72,800
B1.1.7	Telescopic covers to be repaired.	60,000
B1.1.8	Hydraulic power pack to be replaced(Rexroth make) with new system including hoses.All solenoid valves, pressure switches are to be replaced with new parts.	2,30,400
B1.1.9	Lubrication system to be replaced with new including hoses.	74,880
B1.1.10	Coolant system including hoses to be replaced with new.	1,04,000
B1.1.11	PAINTING Painting should be carried out according to the HMT new machine standard procedure for painting including cleaning and removing old paint, applying metal primer putty etc. Good finish should be ensured. Overall, Machine aesthetic view should be taken care of.	1,28,000

**Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)**

Sl No.	Description of activity / material	BHEL Estimate Rs.
	Total B1.1	
B1.2	ELECTRONICS AND ELECTRICAL SCOPE OF MATERIAL SUPPLY BY THE CONTRACTOR:	
B1.2.1	CNC system Siemens 828d, PPU 281.3 horizontal format or higher with minimum 10 inch display & MCP 483 PN machine control panel. Siemens make Mini HHU (6FX2007-1AD03) is to be provided for manual axis movement. PLC (integral with CNC) with minimum 72 inputs and 48 outputs PLC I/O Module PP 72/48D PN Type: 6FC5311-0AA00-0AA0, Make : Siemens	10,36,800
B1.2.2	Existing Motor details: 1) X-axis 2000Rpm Stall torque 10 NM 2) Z-axis 2000Rpm Stall torque 10 NM Suitable motors of Siemens make 1FK7/ 1FT7 with holding brake & with Key way is to be provided. 3) Spindle Motor details are : A06B-0846-B100 C01/K015/ S1 11KW 1500-4500 Rpm 54A. 7.5KW 6000Rpm S2 15KW 1500-4500 75A. 11KW 6000 75A Suitable Siemens make 1PH7/1PH8 motor is to be supplied. Vendor should take approval from BHEL while choosing the motors. External feedback encoder (Siemens /Heidenhain) for spindle axis is to be interfaced for getting actual RPM. Existing Spindle motor is placed with in the machine bed. It is very difficult to access motor during maintenance related activities. The new motor has to be placed outside the machine bed with suitable base & Mounting plate and with proper alignment provision.	-----
B1.2.3	Operator pendent & Electrical Panel cooling AC system is to be provided with displaying existing temperature & Set point temperature. The over temperature alarm input interfaced to PLC to generate warning message. 2 No's four-core signal cable to be provided from PPU to Electrical drive panel to meet future requirements.	48,000
B1.2.4	Operator pendent layout drawing is to be submitted(to know the Operator Push buttons & Switches placement).The following push buttons like Chuck OD/ID clamping ,Quill Forward , Quill retract ,Turret index , Emergency override, Control ON with light , Coolant ON/OFF . Complete 3 sets of Electrical drawings, PLC logic soft copy & hard copy with comments are to be provided.	14,400
B1.2.5	Siemens Make Energy meter PAC5200 with Ethernet port facility should be provided on main electrical control panel door to indicate and record total consumption of electric power for the machine including auxiliary systems. Scope should include necessary current transformers & relevant accessories. Vendor shall get approval from BHEL with respect to Make & Model of Digital Energy Meter before procurement of the same. The vendor has to demonstrate features like Total energy consumption, Trends in Voltage,	86,400

**Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)**

Sl No.	Description of activity / material	BHEL Estimate Rs.
	Current & PF and energy. The vendor has to supply necessary software & Communication cables.	
B1.2.6	One spare Turret encoder to be supplied for trouble free operation.	1,03,680
B1.2.7	All fuses and overload relays to be replaced with Siemens make motor protection circuit breakers. Necessary modification to be done in the circuit.	16,000
B1.2.8	Replacement of all limit switches, limit dogs, mercury float switch, rotary switch, PVC conduits etc. with new ones of Euchner/ Balluf /Teknic or reputed make.	34,560
B1.2.9	All switchgear items like MCBs, contactors, control relays, switches, push buttons shall be of SIEMENS make only. Terminal blocks of make WAGO/reputed make.	2,53,440
B1.2.10	Indication lamps wherever required to be provided (Siemens make). Tower lamp to be placed on machine. Indicating instruments shall be replaced with new ones of reputed make.	24,000
B1.2.11	Two industrial grade LAN cables to be laid from Electrical panel to operator pendent for Network connectivity.	5,760
B1.2.12	An Isolation Transformer & Servo stabilizer of suitable capacity is to be provided (with safety enclosure) for entire machine covering complete electrics (CNC, PLC, drives, motors and other electrical Devices). These should be installed outside the control panel. Make: Reputed Indian make. To be furnished with test certificate. Catalogs and trouble shooting manuals are to be provided.	1,38,240
B1.2.13	Laser calibration of X&Z axis shall be carried out. Calibration equipment in contractor's scope. Details as below: (Laser calibration equipment in contractor's scope) Checking of positional accuracies and repeatability as per VDI/DGQ 3441 latest version by Linear method. i) Positional accuracy X-axis 0.020 (over full length of X-traverse) Z-axis 0.020 (over full length) ii) Repeatability X-axis 0.010 (per meter) Z-axis 0.010 (per meter)	24,000
	Total B 1.2	
C	Total material cost B=B1.1+B1.2	31,67,360
D	Total Labor and material cost D = A+ C	34,47,360
E	GST @18 % on D	6,20,524
F	Grand total including GST i.e D+E	40,67,884
G	Cost to BHEL after availing credit on GST i.e F-E	34,47,360

**Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)**

TENDER NOTICE NO.: HY/M&S/10-RS/RC/20-21/STALLION/1306/1 Date: 13.06.2020

1. Tenderer required to quote their percentage of less/excess/at par in figures and Words over the Estimate as stated above.
2. Tenderer is not allowed to change the estimate. Alteration of estimate by tenderer leads to rejection of his bid.
3. The below offered percentage by the tenderer is proportionately applicable for all item rates.

Tender %	In Words	Figures
Excess		
Less		
Estimate		

Note:

1. In case of mismatch of words and figures, lower of the two will be taken.
2. GST @ 18% Extra on total order value.
3. Kindly note vendor has to bear the excess in taxes and duties in case of delayed delivery schedule.

**Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)**

NATIONAL ELECTRONIC FUND TRANSFER FORMAT

(To be furnished on Contractor's Letter head)

Ref No. :

Date :

Dy.Manager/Finance-CM
Bharat Heavy Electricals Limited
Ramachandrapuram
Hyderabad 502 032

Dear Sir,

Sub: Details for National Electronic Fund Transfer

We request and authorize you to effect payment through NEFT to our Bank account, subject to RBI Guidelines, as per the details given below.

- A. Supplier code (As per PO/SCO) :
- B. Beneficiary (Name as per PO/SCO) :
- C. PAN of Beneficiary :
- D. TIN of Beneficiary :
- E. e-mail address of Beneficiary :
- F. City (of Beneficiary) :
- G. Bank Name :
- H. Branch (of Bank) :
- I. A/c Number :
- J. A/c Type (Savings or Current) :
- K. MICR Code of the branch (9 digit) :
- L. IFSC for EFT (11 char) :
- M. IFSC for RTGS (if different from L) :
- Thanking you,

(Signature with Seal)
Authorized Signatory

Name :

Designation :

Certified that the particulars furnished above are correct as per our records.

Date:

(Signature of authorized official of bank)

Bank Stamp

**Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)**

BHEL TERMS AND CONDITIONS

A. CONTRACTUAL :

- 1) The Contractor will ensure that the employees deployed by him in the premises of BHEL are physically and mentally fit and do not have any criminal record.
- 2) The Contractor will maintain records of his employees deployed to carry out the job. The Contractor will provide employment card/Identity card with photograph duly attested by him to his employees.
- 3) In the event of termination of contract for any reason whatsoever, the contractor shall withdraw all his employees from the establishment of BHEL.
- 4) The Contractor will obtain insurance cover for his employees and take third party risk insurance coverage at his own cost.
- 5) The Contractor will be solely entitled to dictate such workers about the manner of carrying out the work.
- 6) The Contractor or his authorized representative will supervise the work allotted to him and being carried out by his employees or will post a Supervisor for this purpose.
- 7) The Contractor will be responsible for the good conduct of his employees. In case of any misconduct / misbehavior by any employee, contractor will replace such employee immediately.
- 8) The Contractor will keep watch on his employees and he will be liable for any pilferage / loss to BHEL due to acts of omission and commission by his employees. Similarly, liability for any compensation to outsiders on account of any act of omission and commission by the employees deployed by the contractor shall lie exclusively with him.
- 9) The Contractor will ensure that all precautions are taken for the safety of his employees.
- 10) The Contractor will provide to his employees all tools, tackles and equipments required to carry out the job under the contract at his own cost.
- 11) The Contractor will provide safety appliances at his own cost which may be required under the statute or otherwise.
- 12) The Contractor will provide all material at his own cost as mentioned in the contract to his employees for carrying out the job.
- 13) Transportation facility for the employees to come to BHEL works is in the scope of the contractor.
- 14) Consumables like air, water, power supply will be supplied by BHEL free of cost.
- 15) No accommodation will be provided by BHEL to the contractor personnel deputed for performing the contract work.
- 16) Shift timings: 1st shift – 06:45 to 15:15 hrs with lunch break from 11:30 to 12:00 hrs
2nd shift—15:00 to 23:30 hrs with dinner break from 19:30 to 20:00 hrs

B. STATUTORY :

- 1) The Contractor shall comply with all statutory requirements, rules, regulations, and notifications in relation to employment of his employees issued from time to time by the concerned authorities.
- 2) The Contractor shall provide PF passbook to his employees and ensure payment of PF, EDLI, and pension dues under EPF & MP Act, 1952 to the RPFC.
- 3) The Contractor shall produce proof of deductions as well as remittances of PF, EDLI, Pension, ESI contribution, administrative charges etc. wherever applicable and shall maintain proper records.
- 4) The Contractor shall furnish proper returns to the concerned statutory authorities.
- 5) The Contractor shall be solely responsible for nonpayment/delayed payment of wages, contributions under EPF & MP Act, ESI Act etc.
- 6) In case the contractor fails to make payment of wages to his employees or remittance of contribution to the concerned authorities, the security deposit/other dues under the contract can be utilized by BHEL to discharge the liability of the contractor.

<p style="text-align: center;">Reconditioning and CNC Retrofitting of HMT make STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)</p>

- 7) The Contractor shall indemnify BHEL against all claims and losses under various statutes or any civil or criminal law in connection with employees deployed by him.
- 8) The liability for any compensation on account of injury sustained by an employee of the contractor will be exclusively that of the contractor.
- 9) The Contractor shall obtain license under CL(R&A) Act, 1970.

C. GENERAL:

- 1) The contractor shall pay minimum wages to workers as per minimum wages act. Contractor shall make PF, ESI contributions as per applicable rules. ESI Cards should be arranged to contract labour and their wards by the contractor. These records need to be preserved for a period of at least 3 years and made available even after the contract is over for any verification by the statutory authorities.
- 2) Contractor shall provide personnel protective equipment like safety uniform in blue color, safety shoe in black colour and should ensure that they wear them daily while on work.
- 3) Contract operates on Unit rates, contract labour should get at least Daily Unit rate as per the minimum wages act from the contractor.
- 4) Contractor should pay double amount to the contract labour, if they are engaged more than 8 hours (normal).
- 5) Permissions for labour and materials shall be obtained in the prescribed formats.
- 6) **Break:** contract labour should be given break period for about 15 days once in every 6 months in case of long duration contracts, for one time/ short period contracts this clause will not apply
- 7) The contractor is wholly responsible for any loss of life or partial disability of any of their labour while on duty
- 8) In case of occurrence of any accident/ injury of contractor's staff, BHEL will not pay any compensation while they are on duty and contractor has to take care of health of workers under statutory obligation.
- 9) BHEL reserve the right to cancel the work order in part or in full without assigning any reason.
- 10) Upon awardal of the work, the contractor has to execute an agreement with BHEL on a non-judicial stamp paper worth Rs.200/- as per General Agreement Conditions before commencement of work.
- 11) BHEL shall have the privities of the contract with the contractor only and will give instructions to the contractor or his authorized representative. BHEL will have nothing to do or be concerned with the employment of employees working for the contractor. The relationship between BHEL and the Contractor will be that of independent entities and nothing herein contained will amount to joint venture, partnership or an employer-employee relationship.
- 12) The contractor shall maintain regular contact with the designated employee(s) of BHEL and will interact on matters relating to the work awarded under this contract.
- 13) In case the Contractor does not carry out the Contractual/Statutory obligations or the services rendered by him are found to be unsatisfactory, BHEL shall bring the same to his notice and he will be obliged to discharge the obligations and rectify the efficiency/anomaly within three days time failing which, BHEL reserves the right to terminate the contract without assigning any reason whatsoever. In such an event, no damages will be payable for short closure of the contract.
- 14) Notwithstanding anything contained in the contract Agreement which will be entered after awardal of work, the contract may be terminated by BHEL without assigning any reason thereof by giving a notice of 30 days to the contractor.
- 15) The Entry permits are to be issued to the Contract Labour by Assistant Commandant / CISF (Plant), based on the requisition submitted by Contract Executing Officer and forwarded by Dy.General manager / Personnel.
- 16) Every contractor shall submit a notice regarding commencement and completion of work in form – VI A&B [Rule 25 (VIII) & 81 (3)] to HR Department, IR section through his contract executing officer, for forwarding the same to State Labour Department.
- 17) Non – compliance of any provisions under the act / rule / instructions / guidelines shall make the contractor liable for penal action including termination of contract.
- 18) Contractor shall furnish in a separate letter his place of residence and postal address. The delivery at the above named place or posting in a Post box regularly maintained by the post and telegraph Department or sending letters registered for acknowledgement of any notice, letter or other communication to the contractor. Change in address shall come into force at any time by an instrument executed by the contractor and delivered to the Company official who has signed the contract.
- 19) The contractor must satisfy himself by personal study and
- 20) examination of the drawings / specifications furnished and understands thoroughly the scope of proposed work in detail and all conditions affecting the work before entering into the contract. There shall not be at any time dispute / complaint of any misunderstanding with regard to scope of work and interpretation of specifications or any misunderstanding with regard to nature or omission of the work to be done not shall any application for compensation in terms of time and money shall be accepted by company regarding the above.

**Reconditioning and CNC Retrofitting of HMT make
STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)**

- 21) Contractor shall in his absence keep competent agent constantly on the works and any directions or explanations given by the "Contract Signing Officer" or his representative to such agent shall be held to have been given to the contractor himself.
- 22) It shall be contractor's sole responsibility to protect the public and his employees against accident from any cause and provide required safety equipments and shall indemnify, the company against any claims for damages for injury to the person or property resulting from any such accidents and shall, where the provisions of the workmen's compensation act apply, take steps to properly insure against any claims there under.
- 23) In the event of any accident in respect of which compensation may become payable under the workmen's compensation act VIII of 1923 whether by the contractor or by the company as principle employer, it shall be lawful for the company to retain out of monies due and payable to the contractor such sum or sums of money as may, in the opinion of the company shall be final in regard to all matter arising in this clause.
- 24) No work shall be done on Sundays or on other declared holidays of the company without the written permission of the company officer in-charge of the work. The contractor shall comply with the provisions of the Factories Act Rules framed there under if the same are applicable.
- 25) The contractor shall keep his work place clean and safe to avoid injuries to men and damage to finished products / equipments.
- 26) On the occurrence of an accident, which results in the death of any of the workmen employed by the contractor or which is so serious as to be likely to result in the death of any such workmen, the contractor shall intimate within 24 hours of the happening of such an accident intimate in writing to the company official in-charge of the work.
- 27) The contractor shall indemnify the company against all losses or damages sustained by the company resulting directly or indirectly from his failure to give intimation in the manner aforesaid including the penalties or dues if any and become payable by the company, as a consequence of failure, the company to give notice under the workmen's compensation act or otherwise confirm to the provisions of the said act in regard to such accident.
- 28) The contractor shall ensure adherence to all statutory requirements applicable to BHARAT HEAVY ELECTRICALS LIMITED, RAMACHANDRA PURAM, HYDERABAD-502032.
- 29) Notwithstanding the clause, in case of any financial loss incurred by the company on account of contravention of the Provident Fund regulations or any regulations of rule touching the same by the contractor, the contractor shall submit an undertaking to indemnify the company to the extent of the loss incurred by the company.
- 30) The contractor should engage only those labourers who shall be more than 18(eighteen) years of age.
- 31) The contractor shall not resort to subcontracting under any circumstances. If found subcontracting at a later date, BHEL reserves the right to take whatever action it deems fit, including cancellation of the contract.
- 32) The contractor shall be responsible to settle any grievances of the labour deployed by him.
- 33) Whenever the term "CONTRACTOR" is used, it shall be understood to refer to the particular person, firm or corporation with whom an agreement has been made by the concerned company official for executing the work defined in the concerned agreement and for the purpose of instructions regarding compliance with contract conditions, it shall include the contractor's authorized agents, who are entrusted with the work by contractor.
- 34) The quantities mentioned in the agreement schedule are worked out from the relevant drawings in the company and may not be the actuals required for execution. The company does not expressly or by implication agree that the actual amount of the work to be done shall correspond therewith, but reserves the right to increase or decrease the quantity of any class or portion of the work as he deems necessary.
- 35) All the works shall be carried out in accordance with the directions and to the satisfaction of the company official in accordance with the drawings, specifications and instructions. Supplementing or explaining the same as may from time to time shall be done by the company official.
- 36) For all modifications, omissions or additions to the approved drawings and specifications, the company shall issue revised plans or written instructions and no modifications, omission or addition shall be made unless at any time before completion of the work.
- 37) All materials, articles, and workmanship shall be the best of their respective kinds for the class of work described in the contract specifications and schedule and materials to be obtained by the contractor shall be from sources approved by the company.
- 38) Sample of materials shall be furnished by the contractor at his expense to the company when called for before execution of any work.
- 39) The company shall have power to reject at any stage, any work which is considered to be defective in quality of materials of workmanship and shall not be debarred from rejecting wrong material by reasons of having previously passed them in an unworked condition. Any portion of the work or materials rejected or pronounced to be inferior or not in accordance with specifications shall be taken down and removed from the work site at the contractor's expenses.
- 40) The decision of the company shall be final and binding on the contractor on all technical questions which may arise in the contract with respect to material, workmanship, removal; of improper work, interpretation of the working drawings, specifications, notes, procedures etc.

<p style="text-align: center;">Reconditioning and CNC Retrofitting of HMT make STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)</p>

- 41) The decision of the “Contract Signing Officer” or any officer deputed by him duly authorized on his behalf, in respect of the rate of progress and the quality of work or material shall be final.
- 42) Contracts shall be deemed to have included in his tender price of all the plant, machinery and appliances required for the purpose of all operations connected to secure a satisfactory quality of work within the opinion of the company will ensure the completion of the work within the time specified.
- 43) It is open to the company to lend or supply to the contractor any tools, implement, material and machinery that are needed by the contractor, which in the opinion of the company is essential to improve the quality or progress of work. The contractor shall pay such deposit or charges that may be fixed or determined by the company for any such articles or machinery lent or hired to the contractor.
- 44) All rubbish as it accumulates shall be removed from the site to the point of disposal as indicated from time to time by the company. If this is not adhered to, the company shall remove the scrap and recover the cost of these operations from the bills of the contractor.
- 45) Any sum due from the contractor on account of tools and plants, stores, or any other items provided by the company shall be deducted from the respective bill due to him.
- 46) In case the contractor does not execute the work awarded to him as per the terms and conditions of the agreement, the same shall be got executed by some other contractor and the excess cost incurred shall be recovered from the contractor’s security deposit/pending bills.
- 47) In case of breach of any of the terms and conditions of the contract, a claim shall be lodged under the bank guarantee with the guarantor at the discretion of the competent authority of the company. On successful completion of the contract to the satisfaction of the company, the bank guarantee shall be released after due claim period.
- 48) In the event of any question or dispute or under this contract, the same shall be referred to a competent Authority in the company for sole arbitration and his decision shall be final and binding on the parties to the contract.
- 49) In case of any suit or other legal proceeding arising under this contract, the courts at Sangareddy (Medak Dist.) A.P only shall have the Jurisdiction.
- 50) Disputes, grievances between the contractor and his labour, will have to be settled by the contractor only.
- 51) The labour employed by the contractor, if found in abetting and fellow labour or contractors or any BHEL employee, the same shall be considered as an act of indiscipline. Such labourers shall be removed from the services of the contractor, on the advice of BHEL. Further the contractor shall initiate every necessary action in accordance with the relevant Laws, Rules & Regulations and enactments of State and Central Government.
- 52) Wherever, BHEL/COMPANY standards are mentioned shall be strictly followed.
- 53) Nothing contained in the contract agreement and its conditions shall be deemed to preclude or render inoperative the service of any notice, letter or other communication upon the contractor personally.
- 54) The decision of the “Contracting Signing Officer” shall be final and binding on the contractor on all technical questions which may arise touching the contract with respect to the quality of material, workmanship, removal of improper work, interpretation of the working drawings, specifications, notes, procedures etc.
- 55) All disputes, claims and demands arising in connection with the contract shall be settled by mutual consultation. If no such agreement is reached between the parties each party can appoint one Arbitrator and the Arbitrators so appointed can appoint a Presiding Arbitrator. The proceedings of the tribunal shall be in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and the rules made there under. The venue of the Arbitration shall be at BHEL, Hyderabad or at such place as the Arbitrators may direct. The Award to be given by the Arbitral Tribunal shall be a speaking award. The arbitration costs, fees and expenses shall be borne by both the parties equally. The award of the tribunal shall be final and binding on both the parties equally. The award of the tribunal shall be final and binding on both the parties. All questions, disputes, differences arising under, out of or in connection with this contract shall be exclusive jurisdiction of the Courts at Sangareddy, Medak District, Andhra Pradesh.

D. GENERAL INSTRUCTIONS REGARDING BHEL TENDERING PROCESS:

1. If the tender is made by an individual, it shall be signed with his full name and his address shall be furnished. If it is made by firm, it shall be signed with the co-partnership name by a member of the firm, who shall also sign his own name, also furnish the name and address of each member of the firm. If the tender is made by a corporation, it shall be signed by a duly authorized Officer who shall produce with the tender, satisfactory evidence of his authorization. Such tendering corporation/firm is required to furnish evidence of its existence along with bid.
2. The EMD will be refunded to the unsuccessful Tenderers after rejection of the tender is intimated. The earnest money will be retained in the case of the successful tenderers and either of the cases will not carry any interest. It will be dealt with as provided in the conditions attached to the tender.

Reconditioning and CNC Retrofitting of HMT make STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)

3. Whenever a tender is to be accepted, the tenderer, whose tender is under consideration, shall attend the Office of "Officer Inviting the Tender " on the date fixed by written intimation to him. He shall forthwith, upon intimation being given to him by the " Officer Inviting the Tender" for acceptance of his tender, complete the execution of the agreement by signing all documents connected therewith. Failure to do so and not to commence the work within one month from the date of intimation shall entail forfeiture of the earnest money.
4. Tenderers shall pursue carefully the instructions and directions to the parties given in the tender document and the conditions thereof and all other relevant documents before quoting the rates for the work. The approximate quantity of work to be executed under each class is given in the schedule. The quantities are given with a view to enable tenderer to quote his overall rate for each class of work in the tender form and for a uniform comparison of tenders. It shall be definitely understood that the schedule is liable to alterations at the discretion of accepting authority.
5. Tenderers shall keep the offer valid for a period of 90 days from the date of opening of tender. After submitting the tender, he will not recall his offer or modify the terms and conditions thereof. Should the tenderer fail to observe or comply with the foregoing stipulations, the EMD shall be forfeited.
6. Tenderers have to quote their rates in the tender schedule legibly written in figures and words and those not submitted in proper form are liable for rejection.
7. The submission of tender shall be strictly in accordance with the terms and conditions stipulated in this tender notice. No counter conditions will be acceptable or valid.
8. Contractor shall be deemed to have included in his tender price of all the plant, machinery and appliances required for the purpose of all operations connected with the work embraced under the contract to secure a satisfactory quality of work and rate of progress which in the opinion of the " Contract Signing Officer" will ensure the completion of the work within the time specified.
9. The rates quoted by the contractor should be firm for the contract period. There shall be no revision in contract rates during the period of the contract. Any increase of statutory levies during the period of the contract will be reimbursed on production of relevant proof of incurring expenditure for the same.
10. **BHEL reserves the right to negotiate for price reduction with lowest quoted (L1) party and negotiated price will be considered as contract amount for all practical purposes.**
11. The contractor must have phone facility at his office/ residence or cellular phone for proper communication.
12. Withdrawal from contract during contract period in BHEL will entail forfeiture of security deposit.
13. The contractor should abide by the company's **CISF** Security / safety rules and provide such safety requirements as per statutory rules and requirements of the factories act.
14. In case of breach of any of the terms and conditions of the contractor, BHEL reserves the right to cancel the contract either in part or full.
15. Contractor shall provide uniform, shoes and other Personal Protective Equipments (like safety helmet) wherever applicable to their labour.
16. **Earnest Money Deposit** : Earnest Money is to be paid by each tenderer to ensure that the tenderer does not refuse to execute the work after it is awarded to him. The rate of earnest money deposit shall be as per tender schedule. EMD by the Tenderer will be forfeited as per Tender Documents 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. In case the LOI / contract is silent in this regard then within 15 days after award of contract.
 - iii). EMD shall not carry any interest
17. **Security deposit:** (Clause 8.2 of BHEL Works Policy)
 The total amount of security deposit will be 5% of the contract value.

<p style="text-align: center;">Reconditioning and CNC Retrofitting of HMT make STALLION 200 U model CNC centre lathe of pumps production (Asset No.70-1192)</p>

This is as per clause 5.2.1 of BHEL Works policy and security deposit shall be released to the contractor upon Fulfilment of contractual obligations as per terms of contract.
The security deposit shall not carry any interest.

The security Deposit should be collected before start of the work by the contractor.

8.2.2 Security Deposit may be furnished in any one of the following forms

- i). Cash (as permissible under the Income Tax Act)
- ii). Pay Order, Demand Draft in favor of **BHEL**.
- iii). Local cheques of scheduled banks, subject to realization.
- iv). Securities available from Post Offices such as National Savings Certificates, Kisan Vikas Patras etc. (Certificates should be held in the name of Contractor furnishing the security and duly pledged in favor of **BHEL** and discharged on the back).
- v). Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of **BHEL**.
- vi). Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The FDR should be in the name of the contractor, A/C **BHEL**, duly discharged on the back.
- vii). Security deposit can also be recovered at the rate of 10% from the running bills. However in such cases at least 50% of the Security Deposit should be collected before start of the work and the balance 50% may be recovered from the running bills.

(Note: In case of small value contracts not exceeding Rs.10 lakhs and all SAS jobs, work can be started before Security Deposit is collected. However, payment can be released only after collection / recovery of initial 50% Security Deposit)

- a. EMD of the successful tenderer can be converted and adjusted against the security deposit.
- b. The security deposit shall not carry any interest.

(NOTE: Acceptance of Security Deposit against Sl. No. (iv) and (vi) above will be subject to hypothecation or endorsement on the documents in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

8.2.3 Security deposit shall not be refunded to the contractor except in accordance with the terms of the contract.

Signature of the Bidder with seal