

“Reconditioning of HMT make M3V Milling Machine, (Asset No. 10-1531)”
TENDER NOTICE NO.: HY/M&S/10-RS/RC/22-23/M3V/2608/1 Date: 26.08.2022

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/22-23/M3V/2608/1

Date: 26.08.2022

Bharat Heavy Electricals Limited, a Government of India Public Sector Undertaking having its registered office at Siri Fort, New Delhi through BHEL-HPEP, Ramachandrapuram, Hyderabad, one of its manufacturing units, invites sealed tenders in two-part bid (Part-A: Techno-commercial Bid & Part-B: Price Bid) from eligible contractors, who fulfill qualifying criteria as stipulated in the NIT for the work of **“Reconditioning of “HMT Make M3V Milling Machine (Asset No 10-1531)” as per scope of work, terms & conditions enclosed.”**

Sealed quotations in a single cover consisting of two inner sealed covers (containing Part-A: Techno-commercial Bid and Part-B: Price Bid superscribing the Tender Notice Number, Tender Date, Name of Work, Due Date of Opening, Techno-commercial Bid or Price Bid on top of cover) will be received upto 10.00 AM on or before 16.09.2022 at Vendor Complex, besides Administrative Building, BHEL-HPEP, Ramachandrapuram, Hyderabad-502032. Part A: Techno-commercial Bid will be opened at 13.30 PM on the due date in the presence of bidders or their authorized representatives. Further information if any, may be obtained from the office of. Reverse auction will be conducted online among techno-commercially qualified bidders through our service provider to arrive at optimum cost.

1. Name of work : **“Reconditioning of “HMT Make M3V Milling Machine (Asset No 10-1531)” as per scope of work, terms & conditions enclosed**
2. Earnest Money Deposit : **Rs. 25,000/-**
3. Estimated Cost to BHEL : **Rs. 12,39,680/- + GST as applicable.**
4. Cost of Tender documents : **NIL**
5. Tender sale starts from : **Not applicable**
6. Tender sale closes on : **Not applicable**
7. Last date of receipt of tenders : **16.09.2022 up to 10.00 AM**
8. Date and time of opening of tenders : **16.09.2022 at 13.30 PM**
(Part-A: Techno-commercial bid only)

Name & Address of the firm:

for BHARAT HEAVY ELECTRICAS LIMITED

-/

(CH MALLI BABU)

Sr.DGM/ 10-RS,AC,Electronics (M&S)

INSTRUCTIONS TO TENDERER

1. The bids shall be submitted in two parts.
 - a) Part-A: Techno-commercial Bid (to be submitted in sealed cover)
 - b) Part-B: Price Bid (to be submitted sealed in cover)
2. Part-A must be duly completed and super-scribed “Tender Notice Number, Tender Date, and Part-A: Techno-commercial Bid”. The tenderer shall not indicate the price or rate in the Part-A: Techno-commercial Bid. The tenderer shall expressly accept all the terms and conditions of the tender. The tender which does not comply with the BHEL terms & conditions may be rejected as non-responsive/non-conforming/ and non-acceptable.
3. Part-B must be duly completed with reference to the tender conditions and put in a separate sealed envelope and super-scribed “Tender Notice Number, Tender Date, and Part-B: Price Bid”.
4. The Techno-commercial Bid (Part-A) and general terms and conditions shall be attached to Techno-commercial offer with each and every page duly signed and stamped by the tenderer (at the bottom of each page) as a token of acceptance.
5. The Price Bid (Part-B) shall not carry any conditions. Price/rate should be quoted in clear terms in the format given by BHEL. The price/rate should be quoted in figures as well as in words. If there is a discrepancy between figures and words, the amount in words shall prevail.
6. The Price Bid (Part-B) will be opened in respect of those tenderers, who are qualified Techno-commercially.
7. The tender forms of both Part-A & Part-B duly filled in all aspects and shall be signed and stamped on each page of the tender document by the tenderer. The tenderer should submit the tender documents intact without detaching any page or pages. All entries in the tender document should be in one ink. Corrections, over-writings, cuttings etc. are not permitted.
8. All the columns in the tender form shall be filled without leaving any column blank in any page of the tender document. In case any of the columns left blank, the tender is liable to be rejected.
9. Before making of the offer, the tenderers are advised to carefully go through the terms and conditions, which form part of the Agreement.
10. Tender documents consisting of Part-A and Part-B duly sealed in separate envelopes should be sealed in another envelope and should be deposited in Vendor Complex, besides Administrative Building, BHEL-HPEP, Ramachandrapuram, Hyderabad-502032 addressed to CH MALLI BABU, Sr.DGM/10-RS, AC (M&S), BHEL, Ramachandrapuram, Hyderabad-502032 so as to reach on or before 10.00 AM on 16.09.2022. The tender documents may also be sent by registered post/speed post/courier so as to reach on or before the said date and time. BHEL is not responsible for any postal delay or other delays. Part-A of tender form i.e. Techno-commercial Bid will be opened at 13.30 PM on the due date in the presence of tenderers or their authorized representatives who are present for the

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tender opening. Tenderers who qualify in Techno-commercial Bid will be intimated to attend the tender opening of Part-B: Price Bid, at a date to be notified separately. Part-B: Price Bid will be opened at the specified date in the presence of tenderers or their authorized representatives who are notified to attend the tender opening,

11. BHEL reserves the right to assess the capacity and capabilities of the parties for pre-qualification. The company also reserves the right to accept or reject any or all the tenders or any part thereof at any stage of process without assigning any reason whatsoever. The company has no obligation to accept the lowest tender.
12. BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among the techno-commercially qualified bidders. Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered for RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking
13. For any further clarifications, SRI A KUMARA AYYAPPA, Dy. Manager/10-RS, AC (M&S), BHEL, Ramachandrapuram, Hyderabad-502032 may be contacted in person or through phone numbers: 040-23182551, 9848998735.

EMD Payment

EMD of 2% of the Estimated Cost (i.e. Rs. 25,000/-) shall be paid in as cash deposit in BHEL cash office or by Electronic Fund Transfer (EFT) to BHEL Account Number: 62048154115 (IFS Code: SBIN0020075) or by Demand Draft/Banker’s Cheque/Pay Order drawn on any nationalised bank/scheduled bank in favour of “Bharat Heavy Electricals Limited” payable at Hyderabad shall be enclosed to the tender bid. Tender bids received without EMD will be rejected and will not be considered for evaluation. In the event of acceptance of tender, and if the contractor/bidder fails to commence the work within the 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.

Note: MSME registered contractors may be waived from EMD based on MSME certificate with latest Certification from Chartered Accountant about continuing MSME status.

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BHARAT HEAVY ELECTRICAS LIMITED
RAMACHANDRAPURAM: HYDERABAD-502 032

M&S/10-REPAIR SHOP

PART-A: TECHNO-COMMERCIAL BID

TENDER NOTICE NO.: HY/M&S/10-RS/RC/22-23/M3V/2608/1 Date: 26.08.2022

NAME OF WORK: **“Reconditioning of HMT make M3V Milling Machine, (Asset No. 10-1531)”** 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 and every page with tenderer’s covering letter. Quotations should be TYPED on tender schedules only. Any deviations/deletions should be brought out separately on tenderer’s letter pad and enclosed to the tender documents.

The following are to be filled up by the tenderer

Name of the Contractor :
Full Address :
Name of Contact Person :
Phone Number :
Fax Number. :
E-mail Address :
Mobile Number :

S No.	Description	Contractor’s Remarks
1	PF CODE	
2	ESI CODE	
3	PAN	
4	GST Registration. Number	
5	Price Validity: 90 Days from Techno-commercial bid opening date	
6	EMD: Rs.25,000/- Cash receipt/Banker’s 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	

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S No.	Pre-Qualification	Contractor’s Remarks
A	<p><u>PRE-QUALIFICATION REQUIREMENTS</u> <u>(documentary proofs should be enclosed)</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 average financial annual turnover during the last three years, ending 31st March 2022 should be at least 30% of the estimated cost. (vendor should submit balance sheet and P&L account for last 3 years duly certified by Chartered Accountant)</p>	
2	<p>The party must be a reputed machine tool manufacturer/reconditioner of heavy/medium machine tools. Copy of purchase orders/work orders and corresponding successful completion certificates should be submitted as a proof for verification. Offers without these documents will be rejected. List of the customers along with respective contacting officer’s address (including phone number/e-mail address) for whom machines were reconditioned/manufactured/rebuilt should be enclosed to the offer.</p>	
3	<p>Experience of having successfully completed similar works during the last 7 years ending 30th July-2022 should be either of the following:</p> <p>a) Three similar completed works each costing not less than the amount equal to 40% of the estimated cost (Rs.4.96 Lakhs)</p> <p align="center">OR</p> <p>b) Two similar completed works each costing not less than the amount equal to 50% of the estimated cost (Rs.6.20 Lakhs)</p> <p align="center">OR</p> <p>c) One similar completed work costing not less than the amount equal to 80% of the estimated cost (Rs.9.92 Lakhs)</p>	

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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. Vertical/Horizontal Milling Machines 2. Centre lathes equivalent to SU 63 of TOS make (bed length 4.9 m or more) 3. Horizontal boring machines of spindle diameter of 63 mm or more 4. Vertical boring machines equivalent to SK 12 of TOS make (table diameter 1200 mm or more) 5. Drilling machines of spindle diameter of 60 mm to 100 mm 6. Manufacturing of light or medium machines equivalent to HMT make radial drilling machines or lathes 7. General purpose CNC machines like HMC/VMC/Horizontal Borer/Vertical Borer/Lathes 	

B.	SPECIAL CONDITIONS
I	<p><u>(BANK GUARANTEE/ALL RISK INSURANCE COVERAGE AS SECURITY DEPOSIT</u> For safe custody of the machine and material being stationed at contractor’s works)</p> <p>The contractor has to submit the bank guarantee/all risk insurance coverage for Rs.20 lakhs for safe custody and as a security deposit for the period of machine and material being stationed at contractor’s works. This bank guarantee will be released after receipt of the reconditioned and tested machine at BHEL works. Any damage/loss shall be rectified by the contractor at their cost.</p>
II	<p>EMD of 2% of the Estimated Cost (i.e. Rs.25,000/-) shall be paid in as cash deposit at BHEL cash office or by Electronic Fund Transfer (EFT) to BHEL Account Number: 62048154115 (IFS Code: SBIN0020075) or by Demand Draft/Banker’s Cheque/Pay Order drawn on any nationalised bank/scheduled bank in favour of “Bharat Heavy Electricals Limited” payable at Hyderabad shall be enclosed to the tender bid. Tender bids received without EMD will be rejected and will not be considered for evaluation. In the event of acceptance of tender, and if the contractor/bidder fails to commence the work within the 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.</p>

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<p align="center">III</p>	<p><u>SECURITY DEPOSIT</u></p> <p>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. Security Deposit amount shall be returned to the contractor after successful completion of the contract work, i.e. handing over of the proved-out machine to regular production at BHEL works. The security deposit shall not carry any interest.</p> <p>Bidder agrees to submit performance security required for execution of the contract within the time period mentioned. In case of delay in submission of performance security, enhanced performance security which would include interest (SBI rate + 6%) for the delayed period, shall be submitted by the bidder. Further, if performance security is not submitted till such time the first bill becomes due, the amount of performance security due shall be recovered as per terms defined in NIT/contract, from the bills along with due interest.</p>
<p align="center">IV</p>	<p><u>TIME SCHEDULE</u></p> <p>SIXTEEN WEEKS for reconditioning, from the date of receipt of the machine at contractor’s works to the date of final inspection and acceptance of the reconditioned machine by BHEL at the contractor’s works.</p>
<p align="center">V</p>	<p><u>PAYMENT TERMS</u></p> <ol style="list-style-type: none"> 1) 30% of Part-I order (i.e. 30% of labour cost and 30% of initial spares cost) shall be paid after joint inspection of the completely 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 reached to BHEL works. 2) 60% of Part-I order (i.e. 60% of labour cost and 60% of initial spares cost) 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 re-erection, re-commissioning, job prove-out and handing over of the reconditioned machine for regular production at BHEL works. 3) Joint inspection spares shall be ordered separately (Part-II order). However, 90% of Part-II order shall be paid after re-erection, re-commissioning, job prove-out and handing over of the reconditioned machine for regular production at BHEL works. 4) Balance 10% of Part-I & Part-II orders shall be paid after submission of performance bank guarantee for like amount valid for the guarantee period of 12 months (on two-shift basis) from the date of handing over of the proved-out machine for regular production at BHEL works. 5) GST as applicable

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VI	<p><u>PENALTY</u></p> <p>0.5% of the total contract value (including labor cost, cost of initial spares & 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 clause-IV.</p>
VII	<p><u>PERFORMANCE BANK GUARANTEE</u></p> <p>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 of the proved-out machine for regular production at BHEL works.</p> <p>a) During the guarantee period contractor shall attend to the machine/replace failed parts free of cost 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).</p> <p>b) The discarded parts (old) during the guarantee period shall be taken back by the contractor at their own 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.</p>

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Specification of HMT Make M3V Milling Machine (Asset No 10-1531)

Kind of machine : **Vertical Milling Machine**
 Type : M3V
 Manufactured by : HMT

Description	Unit	Sizes
Standard working surface of table		
Width x length	mm	360 x 1600
Clamping “T” slots	Nos	3
Longitudinal travel of table /power feed/	mm	1120
Cross travel of milling head /power feed/	mm	315
Vertical travel of table /power feed/	mm	405
Minimum distance between left hand table end to center of Milling Spindle	mm	240
Milling Spindle		
Number of Speeds	Nos	18
Spindle Speeds, Range I standard	rpm	15 to 750
Range II standard	rpm	24 to 1200
Diameter of front taper bearing	mm	100
Spindle Nose		ISO Taper no.50
Min/Max distance lower face of milling spindle to table surface	mm	10/515
Distance spindle center to recess in column	mm	450
Distance spindle center to column guides	mm	360
Vertical Quill Movement	mm	100
Swivel of Milling Head, each way	Deg	45
FEEDS		
Number of Feeds (Longitudinal, cross, vertical etc..)	no	18
Feed Rates (Longitudinal and cross)	mm/min	10-480
Feed Rates (Vertical)	mm/min	7.5-360
Speed of longitudinal traverse	mm/min	3000
Power Required -		
Main Motor	KW	7.5
Rapid Traverse Motor	KW	1.0
Coolant Pup Motor		0.1
Machine main dimensions		
Overall length	mm	3450
Overall width	mm	2250
Overall height	mm	2250
Machine weight with Motors	kg	4600

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SCOPE OF WORK IN BRIEF:

Complete Reconditioning of HMT Make M3V Vertical Milling Machine (Asset No.10-1531) consisting of labor (Mechanical, Hydraulics & Electrical), replacement of lead screws and box nuts, bearings, gears, centralized lubrication system.

New winding to be done for Existing main motor of main spindle and Rapid feed motor, existing coolant pump to be replaced.

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.
4.	Replacement of all bearings (SKF/FAG/NTN makes only) 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 table longitudinal, up/down 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.	Existing X, Y, Z-axis of cross slide screw rods and corresponding boxnuts to be replaced with new.
8.	The electromagnetic clutch assembly of Rapid and feeds shall be replaced along with brushes. One set of spare clutch plates and brushes to be supplied
9.	The vertical milling attachment of the machine shall be completely reconditioned with new bearings and all worn-out gears shall be replaced. T Bolts were worn out same to be replaced.
10.	The tool clamping mechanism of the machine to be rectified.

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<u>SCOPE OF WORK IN DETAIL</u>	
11.	The Axis clamping mechanism of all axis is not functioning, shall be restored. Leakages to be arrested.
12.	X, Y, Z Axis Backlash shall be eliminated.
13.	The gear shifting mechanism of spindle to be refurbished.
14.	All feeds and speeds mechanism to be restored to working condition.
15.	All engaging levers to be functioned properly. All limit switches and stoppers to be restored.
16.	Vibration in the machine to be rectified. Noise in headstock to be eliminated.
17.	Spindle braking not working. Servicing of spindle braking unit to be done.
18.	Providing centralized lubrication system of reputed make (Dropco, Cenlub systems make only) for all axes & spindle. Oil leakages to be arrested.
19.	coolant pump and its accessories and piping to be replaced
20.	Dials, nameplates, instruction plates including speed and feed chart plates shall be replaced with new ones.
21.	All the missing handles and levers to be renewed, if required to be replaced
22.	All levers and handles shall be Nickel-plated.
23.	General assembly of machine
24.	Telescopic covers to be replaced.
25.	Safety guards for chips and coolant to be provided
26.	Replacement of all seals, O-rings, wipers, rubber packing's etc.
27.	Hydraulic solenoid valves, pressure switches, relief valves of spindle gear shifting mechanism to be serviced and if required to be replaced.
28.	<p>PAINTING Machine outside body shall be painted with two coats of Apcolite (Asian paints) Premium enamel opaque green color paint. Interior of the machine has to be painted with two coats of red enamel paint. Wherever oil comes in contact with interior of the body, oil resistant paint to be used. Letters, numerals etc. will have to be painted with a different color as required / as indicated by BHEL at the time of final painting. For electrical panel boxes, the inside is to be painted with two coats of white enamel paint. Painting should be carried out according to the 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.</p>
B.	<u>ELECTRICAL:</u>
1.	New winding to be done for Existing main motor of main spindle and Rapid feed motor and existing coolant pump to be replaced
2.	<p>Supply, Installation & Commissioning of New Scales & Digital Read Outs (DROs) for X - & Z - axes as per the details below:</p> <p>1) LINEAR SCALES: (Quantity 2 Nos. – one each for X & Z axes) For X-Axis (Longitudinal axis):</p> <p>Incremental Linear Magnetic Scale: Type GVS100 with MP200 Magnetic Tape, MTS M sensor, 5V TTL, Accuracy of scale $\pm 10\mu\text{m/m}$ Make: Givi Misure Traverse of axis = 6000 mm.</p> <p>For Z-Axis (Cross slide axis):</p>

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<u>SCOPE OF WORK IN DETAIL</u>	
	<p>Incremental Linear Magnetic Scale: Type GVS100 with MP200 Magnetic Tape, MTS M sensor, 5V TTL, Accuracy of scale $\pm 10 \mu\text{m/m}$ Make : Givi Misure Traverse of axis = 1130 mm.</p> <p>Note: Vendor should confirm the required lengths of the scales before Installation and must ensure that the readings of the installed scales should cover the entire traverse lengths of the axes.</p> <p>2) 2-Axis DRO – Quantity 1 no. (for X & Z axes) Make: Givi Misure, Model: Vision 700</p> <p>3) Suitable cables, mounting brackets & fixing plates, screws, protection covers etc., for DRO’s and Linear Scales</p> <p>4) Documentation: 3 sets of Operation and Maintenance manuals.</p> <p>5) Additional Spare Sensor Heads of Scales should be supplied: Quantity – Two. <u>Other important features of DRO:</u> Zero setting and Pre-setting, Absolute and Incremental operation modes. MM/Inch conversion, Alarm messages in English. System to support feedback from linear encoders or rotary encoders. Input voltage Single phase, 230 volts AC. Retaining of Data.</p>
3.	Digital Energy meter, reputed make, to be provided on electrical control panel door to indicate and record total consumption of electric power for the machine including auxiliary systems.
4.	Dismounting all motors, interconnected cables and complete wiring on the machine. New electrical control panel to be provided.
5.	Dismantling of electrical panels, operator panel, all the interconnected cables and complete wiring on the machine.
6.	The motors other than the replaced ones have to be serviced, if necessary they have to be rewound and bearings to be replaced with new ones. Insulation values to be improved. Terminal blocks to be replaced.
7.	Installation of new electrical panel. All limit switches to be replaced with reputed make
8.	All fuses and overload relays to be replaced with Siemens make motor protection circuit breakers. Necessary modification to be done in the circuit.
9.	Replacement of all limit switches, limit dogs, mercury float switch, rotary switch, PVC conduits etc. with new ones of reputed make.
10.	LED Machine lamp should be mounted on the machine (Two Nos.)
11.	All switchgear items like MCBs, contactors, control relays, switches, push buttons shall be of SIEMENS make only.
12.	Terminal blocks of make WAGO/reputed make.
13.	Indication lamps wherever required to be provided (Siemens make).
14.	Indicating instruments shall be replaced with new ones of reputed make.
16.	All cables other than in-coming supply are in the scope of contractor.
17.	All equipment must be suitable to run with input voltage of 3 wire, 3 phase, 415 volts AC $\pm 10\%$, 50Hz $\pm 2\text{Hz}$.
18.	All equipment shall be tropicalized and suitable for operation in shop floor conditions,

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<u>SCOPE OF WORK IN DETAIL</u>	
	where temperature variation is between 10° to 45°C. All the electrical equipment on the machine shall be properly earthed and the earth point shall be brought to the supply mains terminal box of the machine for further connecting to the earth wire of the incoming cable.
19.	Before commencing manufacture of the panels, electrical and general arrangement, drawings should be submitted to BHEL for approval. All of the components that have been used shall be labelled with permanent labels. Control panel layout should be provided inside the panel door. Name tags should be provided for all of the cables.
20.	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.
21.	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.
22.	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.
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 based on availability of foundation.
4.	All the above tests should be witnessed by our representatives and certified.
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.	a) The complete machine is to be re-assembled, re-erected and re-commissioned at BHEL works by the Contractor. b) The reconditioned machine shall be proved out at BHEL Works as mentioned at ‘C’ c) Handing over the proved out machine to production.
E.	DOCUMENTATION
1.	Complete Electrical drawings
2.	Detailed component assembly, Mechanical and electrical drawings for modified portions.
3.	Catalogues of bought-out items

“Reconditioning of HMT make M3V Milling Machine, (Asset No. 10-1531)”
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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 Name (of Bank) :
- I. Account Number :
- J. Account 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

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 equipment 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.

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- 16) Shift timings: 1st shift – 06:30 to 14:45 Hrs with Lunch break from 11:00 to 11:30 Hrs
 2nd shift - 14:45 to 22:45 Hrs with Dinner break from 19:00 to 19:30 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 RPF.
- 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.
- 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

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- 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 DGM/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 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.

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- 20) 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.
- 21) It shall be contractor’s sole responsibility to protect the public and his employees against accident from any cause and provide required safety equipment 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.
- 22) In the event of any accident in respect of which compensation may become payable under the Employees’ 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.
- 23) 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.
- 24) The contractor shall keep his work place clean and safe to avoid injuries to men and damage to finished products / equipment.
- 25) 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.
- 26) 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.
- 27) The contractor shall ensure adherence to all statutory requirements applicable to BHARAT HEAVY ELECTRICALS LIMITED, RAMACHANDRAPURAM, HYDERABAD-502032.
- 28) 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.
- 29) The contractor should engage only those labourers who shall be more than 18 (eighteen) years of age.
- 30) 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.
- 31) The contractor shall be responsible to settle any grievances of the labour deployed by him.
- 32) 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.
- 33) 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.

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- 34) 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 from time to time shall be done by the company official.
- 35) 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.
- 36) 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.
- 37) Sample of materials shall be furnished by the contractor at his expense to the company when called for before execution of any work.
- 38) 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.
- 39) 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.
- 40) 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.
- 41) 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.
- 42) 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.
- 43) 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.
- 44) 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.
- 45) 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.
- 46) 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.
- 47) 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.
- 48) In case of any suit or other legal proceeding arising under this contract, the courts at Sangareddy (Sangareddy Dist.), Telangana State only shall have the Jurisdiction.

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- 49) Disputes, grievances between the contractor and his labour, will have to be settled by the contractor only.
- 50) 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.
- 51) Wherever, BHEL/COMPANY standards are mentioned shall be strictly followed.
- 52) 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.
- 53) 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.
- 54) 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, Sangareddy District, Telangana State.

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.
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.

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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 Equipment (like safety helmet) wherever applicable to their labour.
16. **Earnest Money Deposit:** Earnest Money is to be paid by tenderers to for securing fulfillment of any obligations in terms of NIT. EMD is to be paid by each tenderer to ensure that the

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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 shall not carry any interest.

EMD by the tenderer will be forfeited as per Tender Documents if:

- i). After opening the tender and within the offer validity period, the tenderer revokes his tender or makes any modifications in his tender, which is not acceptable to BHEL.
- ii). The contractor fails to deposit the required Security Deposit or commence the work within the period as LOI/Contract.
- iii). EMD by the tenderer shall be withheld in case any action on tenderer is envisaged.

17. **SECURITY DEPOSIT:** Security Deposit is to be provided by the contractor towards fulfillment of any obligations in terms of the provisions of the contract. SD shall be 5% of the contract value. EMD of the successful tenderer shall be converted and adjusted towards required amount of Security Deposit.

- The SD may be accepted only in the following forms
 - Cash deposit as permissible under the extant Income Tax act
 - Electronic Fund Transfer (EFT) to BHEL Account Number: 62048154115 (IFS Code: SBIN0020075)
 - Banker’s Cheques of Scheduled Banks/Pay Order/Demand Draft, in favour of BHEL
 - Bank Guarantee from Schedules Banks/Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL
 - Fixed Deposit Receipt issued by Schedules Banks/Public Financial Institutions as defined in the Companies Act. (FDR should be in the name of Contractor, Account of BHEL)
 - Securities available from Indian Post Office, such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/hypothecated/pledged, as applicable, in favour of BHEL)
- At least 50% of required SD, including EMD should be collected before start of the work. Balance can be collected by deducting 10% of gross amount progressively from each of the running bills.
- If the value of work done at any time exceeds the contract value, the amount of SD shall be correspondingly enhanced and additional SD shall be collected from the Contractor or recovered from the payments due to the Contractor
- In case of (a) small value contracts not exceeding Rs. 20 lakhs or (b) SAS jobs, work can be started before the required SD is collected. However, payments can be released only after collection/recovery of initial 50% SD
- SD shall be released to the Contractor upon fulfillment of contractual obligations as per terms of the contract

Signature of the Bidder with seal

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PART – I

PRICE BID FOR Reconditioning of HMT Make M3V Milling Machine (Asset No 10-1531)

TENDER NOTICE NO.: HY/M&S/10-RS/RC/22-23/M3V/2608/1 Date: 26.08.2022

Sl. No.	Description	BHEL Estimate in INR (Rs).
A	LABOUR: Activities of the scope of work including Engineering & Design charges	390000
B	Initial spares	
B1.1	Mechanical	
B1.1.1	Replacement of all bearings as per Annexure I (SKF/FAG/NTN make only)	84240
B1.1.2	Replacement of all worn out gears (Spur, Helical, Spiral and Bevel)	122400
B1.1.3	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	80000
B1.1.4	Existing Z axis of cross slide screw rod to be replaced with new. Existing Lead Screw of tool slide to be replaced with new. (Replacement of all screw rods, lead screws, box nuts etc..) (Vendor shall confirm the sizes of lead screws and nuts with BHEL Before replacement)	98400
B1.1.5	Spindle drive clutch assemblies inclusive clutch plates to be replaced, replacement of all brake pads	57600
B1.1.6	Providing centralized lubrication system of reputed make for both axes & spindle.	21600
B1.1.7	Replacement of coolant pump and its accessories and piping.	19200
B1.1.8	Dials, name plates, instruction plates including speed and feed chart plates shall be replaced with new ones.	9600
B1.1.9	All the missing handles and levers to be replaced. All levers and handles shall be Nickel-plated.	9600
B1.1.10	Replacement of all seals, O-rings, hose pipes, wipers, rubber packing's etc.	15200
B1.1.11	Machine Painting as mentioned in scope of work	21600
	Total B1.1	539440
B1.2	Electrical	
B1.2.1	New winding to be done for Existing main motor of main spindle and Rapid feed motor and existing coolant pump to be replaced	15200
B1.2.2	Supply, Installation & Commissioning of New Scales & Digital Read Outs (DROs) for X - & Z - axes as per the details below: i) LINEAR SCALES: (Quantity 2 Nos. – one each for X & Z axes) For X-Axis (Longitudinal axis): Incremental Linear Magnetic Scale: Type GVS100 with MP200 Magnetic Tape, MTS M sensor, 5V TTL, Accuracy of scale $\pm 10\mu\text{m/m}$ Make: Givi Misure	120000

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Sl. No.	Description	BHEL Estimate in INR (Rs).
	<p>Traverse of axis = 6000 mm.</p> <p>For Z-Axis (Cross slide axis):</p> <p>Incremental Linear Magnetic Scale: Type GVS100 with MP200 Magnetic Tape, MTS M sensor, 5V TTL, Accuracy of scale $\pm 10 \mu\text{m/m}$ Make : Givi Misure</p> <p>Traverse of axis = 1130 mm.</p> <p>Note: Vendor should confirm the required lengths of the scales before Installation and must ensure that the readings of the installed scales should cover the entire traverse lengths of the axes.</p> <p>ii)2-Axis DRO – Quantity 1 no. (for X & Z axes) Make: Givi Misure, Model: Vision 700</p> <p>iii)Suitable cables, mounting brackets & fixing plates, screws, protection covers etc., for DRO’s and Linear Scales</p> <p>iv)Documentation: 3 sets of Operation and Maintenance manuals.</p> <p>v) Additional Spare Sensor Heads of Scales should be supplied:</p> <p>Quantity – Two.</p> <p><u>Other important features of DRO:</u> Zero setting and Pre-setting, Absolute and Incremental operation modes. MM/Inch conversion, Alarm messages in English. System to support feedback from linear encoders or rotary encoders. Input voltage Single phase, 230 volts AC. Retaining of Data.</p>	
B1.2.3	Digital Energy meter, reputed make, to be provided on electrical control panel door to indicate and record total consumption of electric power for the machine including auxiliary systems.	14400
B1.2.4	Installation of new electrical panel.	108480
B1.2.5	LED Machine lamp should be mounted on the machine.	
B1.2.6	All L.T. switchgear items like MCBs, contactors, control relays, MPCBs, switches, pushbuttons and OLRs shall be replaced with SIEMENS make only.	
B1.2.7	Rotary / program switches should be of Jyothi / Kaycee / Salzer make. Other electrics should be of standard make approved by us.	
B1.2.8	All fuses and overload relays to be replaced with motor protection circuit breakers. Necessary modification to be done in the circuit.	
B1.2.9	Electrical panel wiring is to be done as per the original drawings. BHEL will provide the drawings.	
B1.2.10	All the conduits must be Steel reinforced PVC and of reputed make. Wiring accessories shall be reputed make.	
B1.2.11	Indication lamps wherever required to be provided with new ones.	5760
B1.2.12	Indicating instruments shall be replaced with new ones.	12000
B1.2.13	Replacement of coolant system including coolant motor, piping and nozzle	16000
B1.2.14	All cables other than in-coming are in the scope of contractor and reputed make (IS standard) shall be used.	18400
B1.2.15	All the electrical equipment on the machine shall be properly earthed and the	

“Reconditioning of HMT make M3V Milling Machine, (Asset No. 10-1531)”
TENDER NOTICE NO.: HY/M&S/10-RS/RC/22-23/M3V/2608/1 Date: 26.08.2022

Sl. No.	Description	BHEL Estimate in INR (Rs).
	earth point shall be brought to the supply mains terminal box of the machine for further connecting to the earth wire of the incoming cable.	
	Total B1.2 (Electrical Spares)	310240
B	Total material cost B=B1.1+B1.2	849680
D	Total D = A+ B	1239680
E	GST @18% on D	223142
F	Grand total including GST i.e D+E	1462822
G	Cost to BHEL after availing credit on GST i.e F-E	1239680

- 1. Tenderer is 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 the estimate by the 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 that, the vendor has to bear the excess in taxes and duties in case of delayed delivery schedule