

Annexure-A

SCOPE OF SUPPLY AND WORK WITH TERMS & CONDITIONS

NIT No.- 02/WEX/MCR/NIT/2-440/2013-14/Dt. 26.04.2013

Name of work:- Reconditioning of Band Saw Machine, Plan No. 2-440,BI-3, Model- HBP-260A

MACHINE SPECIFICATIONS:

1. Make : BEHRINGER
2. Model : HBP-260A
3. Purpose of machine :Used for cutting of turbine blade flats. the blade material is high temperature and creep resistant alloy steel (X22CrMoV12.1, X20Cr13, X19CrMoVNbN111, X12CrMoWVNbN10-1-1) having tensile strength 1050 N/MM² and hardness up to 335 BHN
4. Main Drive motor : 5 KW, 220V AC
5. Saw band dimensions : 4100 X 32 X1.1 (In mm)
6. Main Hydraulic motor : 1.5 KW
7. Hydraulic pump : Maximum pressure – 100 Bar,
Discharge – 4 LPM

Clause No.	Description
1	<u>MECHANICAL RECONDITIONING WORK:-</u>
1.1	Complete reconditioning and accuracy restoration. Taper accuracy required is 0.1 mm for 100 mm and accuracy of length required is 0.3 mm for 100 mm for materials described at Sl. No. 3 above under machine specifications
1.2	<u>MODIFICATION IN POWER TRANSMISSION SYSTEM :-</u> The power transmission system for saw movement shall be modified. The existing variable pulley and belt system shall be replaced by new inverter grade pulley less motor with variable feed drive. The

	motor shall be coupled with gear box. The gear box shall also be modified to suit new arrangement. New power transmission arrangement scheme shall be submitted by the vendor with full details
1.3	Repair/ replacement of all worn out parts
1.4	Replacement of all brass/bronze parts (bushes etc.)
1.5	Arrangement to prevent entry of chips into blade guide shall be made
1.6	Reconditioning of existing roller table
1.7	Provision of suitable covers for: Coolant Splashing, Hydraulic accessories protection, Wire brush motor etc.
1.8	Safety devices shall be replaced. There are two safety devices in the machine which prevent running of machine in case of (i) Saw cover left open. (ii) Blade is broken.
1.9	Dial for setting job length shall be replaced
1.10	Chip conveyor system including motor shall be replaced.
1.11	Coolant system shall be overhauled with new flexible PVC pipelines and ON/OFF valve for the same.
1.12	Replacement of all bearings of the machine.
1.13	Reconditioning of feed mechanism of the machine
1.14	Replacement of all oil seals, o-rings and other sealing components of the machine. Vendor shall also provide one complete set of all oil seals & o-rings as spare and properly packed in a good wooden or plastic case.
1.15	<u>IMP:- THE PRESENT ARRANGEMENT OF MAIN VICE & SHUTTLE VICE IS TO BE RETAINED TO FACILITATE TO CLAMP MINIMUM 250MM LONG BAR AND TO CUT MINIMUM 85MM LONG PIECE FROM 250MM BAR ON AUTO AS WELL AS MANUAL MODE</u>
2	<u>MODIFICATION IN HYDRAULIC SYSTEM:-</u>
	Following piston cylinders along with Pump(Maximum Pressure-100kg/cm ² , 4LPM), Motor (1.5 KW), Direction Control Valves & Other Hydraulic components including Pipes, connectors , ferrules etc shall be installed – (i) Cylinder for vertical movement of the saw (ii) Index table cylinder for longitudinal movement of shuttle vice (movable vice) (iii) Main vice cylinder (iv) Shuttle (movable) vice cylinder (v) Work piece clamping cylinder for main vice

	(vi) Work piece clamping cylinder for shuttle(movable) vice (vii) Saw tension adjusting cylinder. All the hydraulic components shall be of latest version Rexroth/ Parker/Hydac/Vickers make only. Motor shall be of Siemens/ABB/Bharat Bijli/GE make only. Size and specifications of all hydraulic components such as pump, piston-cylinders, valves etc. shall be selected such as to ensure proper functioning of the machine as per its original capability. No compromise with machine's original capability shall be accepted.
3	<u>ELECTRCAL WORK:-</u>
3.1	Installation and commissioning of new Siemens/ABB make PLC system for machine control.
3.2	New electrical control cabinet with new switchgear of Siemens/ABB/GE make only to be installed at the same place vacated by old cabinet.
3.3	New operator panel for machine control
4.	<u>DESPATCH OF MACHINE TO VENDOR'S WORKS:-</u> Vendor shall dismantle the machine at BHEL, Hardwar in transportable lots for further transportation of the machine to vendor's works.
5.	<u>PAINTING OF MACHINE AFTER RECONDITIONING:-</u>
5.1	Moving units/parts of the machine shall be painted in Satin Blue (RAL 5012) Shade.
5.2	Non-moving units shall be painted in Phirozi Blue (RAL 5017) shade after reconditioning.
5.3	Putty to prepare the surface for painting shall be applied on machine surfaces before painting.
6.	<u>PRE DESPATCH INSPECTION(PDI):-</u> Inspection of the machine after reconditioning shall be carried out by BHEL at vendor's works to check functioning of machine as per requirement mentioned at point no. 3 of machine specifications & clause no. 1 to 5 of this scope and to check accuracies as per para no. 1.1.Only after the clearance given by BHEL, shall the machine be dispatched to BHEL, Hardwar.
7.	<u>ACCEPTENCE CRITERIA:-</u>
7.1	All tests and checking carried out during PDI will be repeated at BHEL , Hardwar during commissioning of machine.

7.2	Machine will be run for one full day (two shift basis) on load (job cutting as per requirement mentioned in this scope).BHEL shall provide all necessary jobs, tooling, material handling facilities, operator and inspection aid for the same.
7.3	Machine will be finally accepted after successful demonstration of all requirements under clause 7.1 & 7.2 of this scope.
8.	<u>PERIOD OF RECONDITIONING:-</u>
8.1	Period of reconditioning of the machine as per the scope of work shall be four(4) months maximum from the date of receipt of machine at vendor's works (i.e, period between receipt and dispatch from vendor's works).
8.2	Vendor shall intimate date of receipt of the machine at their works to BHEL, Hardwar.
8.3	Vendor shall depute their manpower within 7 days of intimation for erection and commissioning of the machine at BHEL, Hardwar.
8.4	The erection and commissioning work should be completed within 7 days from the date of start of erection and commissioning at BHEL, Haridwar.
9.	<u>LATE DELIVERY:</u> LD of 0.5% of the total cost of work per week, subject to a maximum of 5% shall be imposed on delay in delivery from scheduled delivery date and delay in commissioning from scheduled commissioning date. Delay in commissioning due to reasons attributed to BHEL shall not attract LD.
10.	<u>OTHER TERMS & CONDITIONS:</u>
10.1	List of all parts repaired or replaced to be furnished to BHEL along with reconditioned machine.
10.2	Old parts, which would be replaced by new ones, shall be returned to BHEL Hardwar properly tagged.
10.3	Any material or any activity if not covered in the scope of supply and scope of work but necessary for proper reconditioning of the machine should be offered and quoted by the vendor. No price additions shall be allowed after placement of the Work Order and the supply of all such material and activities shall be the responsibility of the vendor.
10.4	Vendor shall bring all tools and manpower for dismantling, erection & commissioning of the machine at BHEL, Hardwar.
11.	<u>DEFECTS LIABILITY PERIOD- PERFORMANCE BANK GUARANTEE:-</u>

11.1	Vendor shall submit performance bank guarantee of 10% of total work order value for the entire guarantee period of one year from the date of successful commissioning of the machine.
11.2	Vendor shall attend the machine free of cost during the guarantee period.
11.3	Vendor shall replace/repair any defective part/item free of cost during the guarantee period.
12.	<u>TRANSPORTATION AND INSURANCE:-</u>
12.1	Transportation & transit insurance will be on BHEL account.
12.2	Transportation by BHEL approved Transporters only.
12.3	Road permit, Form '31' & Form 'C' will be provided by BHEL.
13.	<u>BANK GUARANTEE:-</u> For shifting of machine outside the premises of BHEL, Hardwar for execution of the work of reconditioning and retrofitting, a bank guarantee of Rs.1,00,000 (Rs. one lakh)for salvaged value of machine shall be submitted by the vendor. It shall be valid for the duration of reconditioning of machine at vendor's works. Machine shall be dispatched to vendor's works only after submission of this bank guarantee. This bank guarantee shall be returned on dispatch of machine to BHEL, Hardwar after reconditioning.
14.	<u>DOCUMENTS:</u> Vendor shall submit three(3) sets of operational and maintenance manual for electrical & mechanical separately and modifications made at the time of erection and commissioning of machine
15.	<u>PAYMENT TERMS:-</u> No advance payment shall be made to the vendor. Part payment will be made after completion of following milestones-
15.1	First payment of 30% of total work order value shall be payable after dismantling of machine in transportable lots at BHEL, Hardwar and submission of bank guarantee of like amount which shall be valid for the duration of reconditioning. This bank guarantee shall be released on dispatch clearance given by BHEL at the time of PDI.
15.2	Second payment of 60% of total work order value along with 100% Taxes and Duties will be made after successful commissioning and job prove out at BHEL, Hardwar.
15.3	Final payment of 10% of total work order value will be made after post commissioning successful running of the machine for one month at BHEL Haridwar. It shall be released after submission of performance bank guarantee of 10% of total work order value as per para 11.1

15.4	All the payments shall be made through e-payment after submission of following documents along with first bill- i) E-payment form duly filled.(form will be provided by BHEL) ii) Bar chart of the machine showing the milestones iii) Income tax exemption letter(if applicable) iv) Receipt from the vendor that machine has been received by them at their works
16.	<u>OFFER:-</u> The offer should be submitted in two parts in separate sealed envelopes.
16.1	PART-1 : Techno-commercial bid containing technical details and commercial terms & conditions. (Annexure-A of tender document)
16.2	PART-2 : Price bid. (Annexure-B of tender document)
16.3	Price bid shall be opened for only techno commercially accepted offers.
16.4	Point-wise compliance of this scope of work is to be given by vendors while submitting their offer.
16.5	The offer should be valid for at least 180 days
17.	<u>QUALIFYING CRITERIA:-</u> The vendors meeting any of the following criteria would only be considered:
17.1	Who have Manufactured OR Reconditioned & Retrofitted at least one no. band saw of capacity to cut square pieces singly or jointly totaling final size of 260X260 mm² or more during last ten years and the same is working satisfactorily for last one year on the date of opening of tender.
17.2	The vendor shall submit "Performance Certificate(s)" of the machine(s) from the end user along with the offer and should agree to arrange the visit of BHEL team for verification at the end user's works, if BHEL so desires.
18.	<u>EARNEST MONEY DEPOSIT (EMD):</u>
18.1	Vendors have to deposit Rs. 20,000 as the EMD. EMD may be deposited in cash, through pay order in favor of BHEL, Hardwar or through demand draft only.
18.2	EMD shall be converted to security deposit if the work is awarded.
18.3	EMD of unsuccessful bidders shall be refunded back normally within fifteen days of acceptance of award of work by the successful bidder.
18.4	EMD shall not carry any interest.
19.	<u>SECURITY DEPOSIT:-</u>

	Successful vendor shall deposit security.
19.1	The rate of security deposit will be as below: • For work Up to ` 10 Lakhs : <u>10% of work order value</u></li> <li>• Above ` 10 Lakhs upto ` 50 Lakhs : <u>` 1 Lakh + 7.5% amount exceeding ` 10 Lakhs</u></li> <li>• Above ` 50 Lakhs: <u>` 4 Lakhs + 5% amount exceeding ` 50 Lakhs</u>
19.2	The security deposit should be submitted before the start of work in the following forms: - Cash (As permissible under the Income Tax Act) - Pay Order, Demand Draft in favour of BHEL, Hardwar - Local cheques of Scheduled Banks, subject to realization. - Bank Guarantee from Scheduled Banks/Public Financial Institution as defined in the companies Act. The Bank guarantee format should have the approval of BHEL.
19.3	Security Deposit shall not carry any interest.
19.4	EMD of successful tenderer can be converted and adjusted against the Security Deposit.
19.5	100% of the Security Deposit amount shall be refunded to the vendor after post commissioning successful running of the machine for one month.
20.	Vendors are strongly advised to visit BHEL, Hardwar and study machine documents in detail on any working day between 8 am to 5 pm before submitting their offer.
21.	Vendors have to deposit Rs. 250/- as tender cost through demand draft in favour of BHEL, Hardwar

Ajay Kumar

Sr. Engr.(WEX-MCR)

Annexure-B

PRICE-BID FORMAT

NIT No.- 02/WEX/MCR/NIT/2-440/2013-14/Dt. 26.04.2013

Name of work:- Reconditioning of Band Saw Machine, Plan No. 2-440,BI-3, Model- HBP-260A

Sl.No.	Description of Items	Charges (Rs.)
1.	Material charges	
2.	Labour charges	
3.	Commissioning charges	
	Total cost	
	Taxes & duties	

Other terms & conditions(If any)-

(Signature & Seal)

ANNEXURE-C

CHECK LIST-

Vendors are advised to ensure following before submitting their offer-

1. Techno-commercial bid with point wise compliance, signed and stamped on each page.
2. Price-bid signed and stamped.
3. Proof of meeting qualifying criteria.
4. EMD of Rs. 20,000/- in prescribed form.
5. Tender cost of Rs. 250/- in prescribed form.

KINDLY NOTE THAT INCOMPLETE TENDERS IN ANY FORM ARE LIABLE FOR REJECTION.

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