

No. WEX/NBS/AMC/ EOI / 03/Scope

Name of work : Annual Break Down & Preventive Maintenance of Special purpose & Conventional machine tools used for Turbine Blade Manufacturing in New Blade Shop at BHEL, Haridwar.

1. Scope of Work :

1.1 Annual Maintenance Contract (Break down and preventive maintenance) of CNC & conventional machine tools listed below to ensure its Annual Average Availability of more than 95% in trouble free running condition on three shifts basis:

Sl.No.	Equipment	Model	Qty.(Nos.)
1.	CNC – 5 –Axis Machining Cell year of commissioning : 2006 Supplier : M/S Liechti Engg – AG , Switzerland.	TURBOMILL – 1200 03 Nos.	03
2.	CNC – 5 –Axis- Machining Cell year of commissioning : 2008 Supplier : M/S Liechti Engg – AG , Switzerland	g – mill – 550	02
3.	CNC – 5 –Axis Machining Cell year of commissioning : 2002 Supplier : M/S Starrag heckert , Switzerland.	HX – 151	02
4.	CNC – Horizontal Machining Center. year of commissioning : 2003 Supplier : M/S Starrag heckert , Switzerland	CWK – 800	01
5.	CNC Duplex Rhomboid Milling m/c Year of commissioning : 2003 Supplier : M/S EMAG, Germany.	FK - 32	02
6.	CNC Horizontal Milling machine Year of commissioning : 2003 Supplier : M/S EMAG, Germany.	FK - 32 B	01
7.	CNC – Horizontal Machining Cell. year of commissioning : 2003 Supplier : M/S Heller , Germany	MCH – 250	02
8.	CNC – Horizontal Machining Centre. year of commissioning : 2006 Supplier : M/S Huller Hille , Germany.	nbh– 290	01
9.	CNC – Horizontal Machining Centre. year of commissioning : 2008 Supplier : M/S Huller Hille , Germany	nbh– 170	03
10.	CNC Horizontal Milling machine Year of commissioning : 2003 Supplier : M/S Bharat Fritz Warner, Bangalore, India..	BFW - BHEL- 425-427.	04
11.	CNC Creep Feed Grinder. Year of commissioning : 2003 Supplier : M/S BLOHM, Germany.	Profimat – 1000.	01
12.	5 – Axis CNC Tool & Cutter Grinder. Year of commissioning : 2003 Supplier : M/S WALTER – AG, Germany.	Helitronic Power Production.	01

13.	5 – Axis CNC Tool & Cutter Grinder. Year of commissioning : 2008 Supplier : M/S ANCA Pty. Ltd. Australia.	RX-7	03
14.	Automatic Storage Retrieval System (ASRS)		01
	<u>CONVENTIONAL MACHINES :</u>		
15.	High Speed Band Saw Yr. of commissioning : 2002 Supplier : ITL Industries , Indore	IT 300DC PRO	03
16.	High Speed Band Saw Yr. of commissioning : 2008 Supplier : M/S LAXMAN (Lalita), Gujarat.	LX – 260 DCA	01
17.	High Speed Band Saw Yr. of commissioning : 2008 Supplier : Multicut Machine ,Tools, Vadodra	BDC 300A	01.
18.	Horizontal Milling m/c Yr. of commissioning : 2002 Supplier :Bharat , Fritz warner , Bangalore	BFW – HF 3.5	01
19.	Tool & Cutter Grinder. Yr. of commissioning : 2002 Supplier : M/S Geeta m/c Tools.	UTC-250T	02
20.	Vibro Finish Machine Yr. of commissioning : 2002. 2003, 2005 Supplier : Gala Precision ,Mumbai	VB 625 RD-3, VB-625 RD -2P	03
21.	Polishing Machines (for Turbine Blade) Yr. of commissioning : 2002 Supplier : GR Tools.		06

NOTE :

- Machines from SI.No. 1 to 11 are equipped with Siemens Control, SINUMERIK 840D
- Machine at SI No. 12 equipped with WALTER control , HMC -500.
- Machine at SI No. 13 equipped with Control ANCA – 5 DX.
- Machines at SI No. 1 to 13 are equipped with Auto Tool Changer, Mist Extractor, Vacuum filtration unit , chiller unit etc.

- Running of shifts : 24 hours including Sundays & Holidays.
- Machine Tools are installed in New Blade Shop (Block - 12) .Minimum one work center shall be ensured to provide efficient service.
- Each work center shall be supervised by one competent supervisor and the total Work shall be supervised by an engineer.
- The work center shall operate in three shifts with adequate workforce.
- Preventive maintenance of machine tools are to be carried out as per schedule And preventive maintenance check list. Party shall fill up the relevant formats and check lists during the course of preventive maintenance.
- Breakdown maintenance of the machine tools is to be carried out in three shifts.
- Party shall have adequate experience of manpower including Engineer, Supervisor & Artisan for attending CNC/ Electronic , Hydraulic, Electrical & Mechanical problems.

B. Terms and conditions:

1. Interested parties are requested to submit their EXPRESSION OF INTEREST (EOI) in the format at ANNEXURE –II . After technical evaluation, suitable vendors will be short listed for further participation.
2. NIT will be issued after the listing of suitable vendors & work will be awarded only through Works Contract.
3. Party has to deposit Earnest Money(EMD) Approximately 2% of the value of the work & Security Deposit @ 10% of the value of the work.
4. Vender has to abide by all labour law applicable, like PF , ESI etc.
5. Initial Period of contract shall be for one year duration. Contract may be renewed further at the discretion of BHEL on the basis of performance, response etc. of the party.
6. Annual average breakdown must be less than 5% of total available hours of these machines on three shift basis.
7. All tools and tackles required for maintenance works shall be arranged by party.
8. BHEL shall supply, free of cost, all consumables like grease, lubricating oil, cotton waste, welding rod, washing/cleaning liquid etc.
9. Repair and overhauling of all electric motor shall be undertaken by BHEL. Party Shall arrange to deliver damaged motor and collect repaired motor from BHEL's Electrical repair shop.
10. All spare parts shall be provided by BHEL free of cost.
Repair/rebuilding/manufacturing of mechanical spares/assemblies shall be done by BHEL free of cost. Preparation of drawings/sketches for the same shall be done by BHEL. However dismantling of spares/assemblies, delivering the same in CMWS for Repair/rebuilding/manufacturing, collecting the same after repair, reassembly on machine etc. shall be done by party.
11. Following records shall be maintained and kept ready for inspection by BHEL Engineer in charge, at all times.
 - (a) Preventive maintenance records and relevant forms (Forms shall be supplied by BHEL free of cost).
 - (b) Daily log book for reporting of breakdowns, repair and handing over history.
 - (c) Machine wise list of replacement of spares.
 - (d) Any other report desired by BHEL regarding the contract.
12. All works have to be carried out in BHEL premises.
13. No accommodation facility shall be provided by BHEL.
14. Office at site with relevant facility in BHEL shall be provided free of cost.
15. The interested parties may send their expression of interest in the prescribed format and the budgetary offer by 20/8/2011.

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Format for Expression of Interest :

1. **Name of Party :**
2. **Address for Communications :**
3. **Company Profile :**
4. **Engineering & Technical Capability for proposed work :** Please produce documental Proof of identical work performed/ performing with details.
5. **Financial Capability :** Please state your turnover for last three financial years.

Name , Signature & Contact Details of Authorized Signatory.