

	BHARAT HEAVY ELECTRICAL LIMITED UNIT'S ADDRESS: HEEP, RANIPUR HARIDWAR - 249403 UTTARANCHAL, INDIA		Indent No.: 20164276 Enquiry No.: Due Date:	Dated:	17.11.2016
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SPECIFICATION CUM COMPLIANCE CERTIFICATE FOR DOT PIN MARKER 2 NOS

NOTE :-					
1. Vendor must submit complete information against clause No. 21 (Qualifying Criteria) of the offer. Only the offers complying this clause, would be considered					
2. The vendor should fill the Offered Column in compliance to specified requirements and also Deviations Column, where there is deviation from the requirement. In case any clause is not applicable to the vendors machine, it should be mentioned clearly next to said clause along with explanation for the same. Duly filled specification cum compliance certificate should be submitted along with the offer. Inadequate, incomplete, ambiguous or unsustainable information against any of the clauses of the specifications/requirements shall be treated as non-compliance. Any changes made to the clauses of the specification cum compliance certificate may be considered as grounds for non compliance and rejection of offer. Under no circumstances should any changes be made in the clauses of the specification cum compliance certificate.					
3. The offer and all documents enclosed with offer should be in English language only.					
ADDRESS OF THE SUPPLIER :			ADDRESS OF THE INDIAN AGENT(S) :		
TELEPHONE NOS.:			TELEPHONE NOS.:		
FAX NOS.:			FAX NOS.:		
E-MAIL ADDRESS :			E-MAIL ADDRESS :		
SCOPE: SUPPLY, INSTALLATION AND COMMISSIONING OF DOT PIN MARKER 2 Nos.					
S. No.	DESCRIPTION OF BHEL REQUIREMENT	REQUIRED	OFFERED	DEVIATION	REMARKS
1.0	Dot pin marking System to mark different alphanumeric & special characters on steam turbine blades and other components made of high temperature and creep resistant alloy steel hot rolled in material grade X22CrMoV12.1, X20Cr13, X19CrMoVNbN111, X12CrMoWVNbN10-1-1, X5CrNiCuNb16-4 and X10CrNiMoV12-2-2 having tensile strength up to 1050 N/MM2 and hardness up to 335 BHN.	Vendor to accept.			
2.0	The characteristics of the different alphanumeric & special characters to be marked should be easily set by software. The minimum character size, the machine should be capable of marking is 4 mm x 4mm. The software and hardware should have the following features (All the features of software shall be supported by supplied hardware).	Vendor to accept.			
2.1	Alphanumeric characters, symbols, geometric shapes (minimum 15 characters/symbols/geometric shapes in each row) shall be marked in several rows and height and width of the character should be easily changeable.	Vendor to accept.			
2.2	For marking on batches of work pieces, the machine should be capable of rapidly executing the same marking program on each work piece at the press of a single button.	Vendor to accept.			
2.3	Setting of marking position in the window	Vendor to accept.			
2.4	Setting of the font	Vendor to accept.			
2.5	Setting for linear and arc text	Vendor to accept.			
2.6	Setting for marking line, arc and circle	Vendor to accept.			
2.7	Flag commands to mark date, time, job serial number etc. in various formats	Vendor to accept.			
2.8	Ability to specify and set density of dots for marking	Vendor to accept.			
2.9	Selection of marking modes e.g. fast, normal, high quality etc.	Vendor to accept.			
2.10	Ability to store programs, marking designs, etc. for future use in memory (internal flash memory of controller should be 32mb or more).	Vendor to accept.			
2.11	Should be capable of being connected to a PC for transfer of marking programs/designs via USB.	Vendor to accept.			
3.0	The machine should be capable of making indentation of depth of 0.1 mm or more . It should be possible to set the depth of the indentation required in the machine.	Vendor to accept.			

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4.0	There should be two axes, X and Y, each powered by a stepper motor in the marking head, to determine the movement of the pin and the precision of the point in the marking window through controller.	Vendor to accept and provide details of the stepper motors.			
5.0	The entire system dimensions should not exceed 1mx1mx1m.	Vendor to accept.			
6.0	The entire system should consist of: 1. Vertical Marking Head with suitable cartridge and carbide pins (diameter 3 mm) 2. Controller with cable 3. Regulator. 4. Power supply system. 5. Tool Stand & Base Assembly with column with wheel for adjustment of height of vertical marking head. 6. In addition, vendor shall supply one number permanent Magnetic Vee Block for each machine (i.e. 2 Nos for 2 machines) (Minimum cross section : 100 mm x 70 mm & Maximum height : 100 mm) with on/ off regulator for magnetic clamping / unclamping of work piece for vertical marking.	Vendor to accept and provide details and pictures, catalogues with offer.			
7.0	The system should be capable of accommodating different components of height up to 500 mm height or more and carry out marking on its top surface.	Vendor to accept.			
8.0	The marking head should have a marking area of 50mmx90mm or more.	Vendor to accept.			
9.0	The controller should have a display along with suitable keypad to input commands (touch screen interface is preferred).	Vendor to accept and supply details of controller.			
10.0	The cable connecting the controller to the marking head should be at least 2m long to allow ease of operation.	Vendor to accept.			
11.0	The system should have USB interface(s) or connector(s) to transfer marking program/data/designs made on PC to controller for marking via pen drive. Essential software for exporting marking program/data/designs to machine from PC shall be supplied along with. The drawing software on PCs at BHEL shall be AutoCAD or CorelDraw only.	Vendor to accept and provide details.			
12.0	A) Vendor shall supply 10 extra carbide pins (3mm Diameter) along with each machine (i.e. 20 pins for 2 machines). B) The vendor shall also supply 2 numbers of pen drives (4 GB or more memory each). C) Vendor shall supply 3 metres of suitable flexible pipes for compressed air supply along with connectors for each machine.	Vendor to accept & provide details (Inner/ Outer diameter) of compressed air pipes.			
13.0	DOCUMENTS AND OTHER TECHNICAL DETAILS				
13.1	The vendor shall supply 2 sets of each of the following documents in hard copy as well as DVDs/CDs.	Vendor to accept			
13.1.1	Basic machine operation and maintenance/ service manual containing all assembly/ sub assembly drawings, construction details of all assemblies and sub assemblies, electrical and electronic circuit diagrams of the machine systems with proper identification no. and descriptions.	Vendor to accept and submit necessary details.			
13.1.2	Complete list of parts used in the machine along with specification, part/ ordering numbers and address of manufacturer in case of purchased item.	Vendor to accept and submit necessary details.			
13.1.3	Spare part list and lists of consumables and accessories along with specification, part number, ordering codes and address of manufacturers (including Bought out items).	Vendor to accept and submit necessary details.			
13.1.4	Vendor shall supply licensed copy of all softwares as used in the machine & installation CDs/ DVDs: 2 sets.	Vendor to accept and submit necessary details.			
13.2	The total connected load of the machine and peripherals.	Vendor to submit necessary details.			
13.3	Details of vibration damping arrangement if applicable.	Vendor to submit necessary details.			
13.4	Detailed catalogues, sketch/ photograph of the machine accessories/ attachments.	Vendor to submit necessary details.			
14.0	PRE DISPATCH INSPECTION (PDI)				

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14.1	Pre-acceptance test of the machines to be supplied shall be done at vendor's works by BHEL deputed personnels. Dispatch clearance by BHEL personnels will be given only after satisfactory performance of the machines from all angles. Vendor shall give pre dispatch inspection call to BHEL at least 15 days prior to PDI date.	Vendor to accept.			
15.0	PROVEOUT AND ACCEPTANCE				
15.1	After successful installation and commissioning at BHEL, Haridwar, supplier shall carry out field testing to prove the machines at BHEL works. Vendor will provide training to BHEL personnel regarding operation, programming & maintenance during prove out. Final acceptance shall be made by BHEL at BHEL, Haridwar only after successful completion of installation, commissioning and testing (Satisfactory operation for two working days).	Vendor to accept.			
16.0	OPERATING CONDITION:				
16.1	Power Supply will be provided by BHEL at a single point near each machine, as per layout recommended by Vendor. All types of cables, connections, circuit breakers etc. required for connecting BHEL's power supply point to different parts of the machine/control cabinets, shall be the responsibility of vendor. Vendor should ensure the proper earthing for the equipment and its peripherals/accessories if required.	Vendor to accept & confirm.			
16.2	The machine should work satisfactorily under input pneumatic pressure 6 BAR maximum.	Vendor to accept & confirm.			
17.0	SAFETY ARRANGEMENTS				
	Following safety features in addition to other standard safety features should be provided on the machine:				
17.1	Emergency Switches at suitable locations should be provided.	Vendor to accept and comply			
17.2	Adequate protection for all moving and rotating parts to be ensured	Vendor to accept and comply			
17.3	The machine should safely stop in case of sudden power trip and should be able to withstand minor power fluctuations safely.	Vendor to accept and comply			
18.0	ENVIRONMENTAL PERFORMANCE OF THE MACHINE				
	The Machine should conform to following factors related to environment :	Vendor to accept.			
18.1	Maximum noise level shall be 85 dB (A) at 0.5 meter away from the machine with correction factor for back ground noise, if necessary. This will be measured as per international standards like DIN 45635-16. Supplier to demonstrate compliance to noise level, if asked for.	Vendor to accept.			
18.2	If any safety / environmental protection enclosure is required it should be supplied with the machine by the vendor.	Vendor to accept.			
19.0	PACKING				
19.1	Rigid packing to be made for all items of complete machine, all accessories and other supplied items to avoid any damage/loss in transit. When machine is despatched in containers, all small and loose items shall be suitably packed in boxes.	Vendor to accept.			
20.0	GUARANTEE				
20.1	Guarantee for complete machine, control system, softwares and all supplied accessories/equipments for 24 months from the date of final acceptance of the machine as per Clause 15.1. Any spare required during guarantee period shall have to be arranged by the vendor free of cost at BHEL and duty levied (if any) has to be borne by the vendor. Guarantee & Test certificates for each machines individually are required.	Vendor to accept.			
21.0	QUALIFYING CRITERIA:				

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21.0	QUALIFYING CRITERIA:				
21.1	Only those vendors(OEM) or OEM authorised vendors should quote who have supplied at least one dot pin marker machine of same or similar specifications in the past ten years (from the date of opening of Tender) and referred machine is working satisfactorily for more than one year after commissioning, on or before the opening of tender.	Vendor to accept & confirm			
21.2	Vendor to provide list of companies where referred machines as per clause 21.1 are supplied.	Vendor to accept.			
21.3	The following informations are to be submitted by the vendor about one of the companies as listed against clause number 21.2, where similar machines have been supplied. This is required from all the vendors for qualification of their offer.				
21.3.1	Name of one customer / company as per clause 21.3.	Vendor to inform			
21.3.2	Complete postal address of the customer mentioned by vendor in clause 21.3.1.	Vendor to inform			
21.3.3	Name, designation & contact details (Phone number, email ID, etc) of the contact person of the customer mentioned by vendor in clause 21.3.1.	Vendor to inform			
21.3.4	Performance certificate from the mentioned customer regarding satisfactory performance of machine supplied to them (Original/ Authenticated Certificate (With signature, name, seal, date on customer's letterhead) or through E-mail directly from the customer to BHEL). Original performance certificate may be returned after verification by BHEL, if required.	Vendor to submit.			
21.4	BHEL reserves the right to verify the information provided by vendor. In case the information provided by vendor is found to be false/ incorrect, the offer shall be rejected	Vendor to accept & confirm			