

		BHARAT HEAVY ELECTRICAL LIMITED					
BHEL JHANSI						Enquiry No. :	
UNIT'S PHONE NOS.						Due Date :	
						Machine No. MT-3/21523	
						Specification no. 6221/R1	
SPECIFICATION -CUM- COMPLIANCE CERTIFICATE							
THREADING MACHINE							
FOR PIPE							
NOTE:-							
1. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specifications/requirements shall							
2. The offer and all documents enclosed with offer should be in English language only.							
3. Vendor(OEM) must submit complete information against clause no. 20. The offer meeting this clause would only be processed.							
ADDRESS OF THE SUPPLIER :				ADDRESS OF THE INDIAN AGENTS :			
TELEPHONE NOS.:				TELEPHONE NOS.:			
FAX NOS.:				FAX NOS.:			
E-MAIL ADDRESS :				E-MAIL ADDRESS :			
SCOPE: SUPPLY, ERECTION & COMMISSIONING OF PIPE THREADING MACHINE COMPLYING WITH SPECIFICATION AS BELOW							
Sl. No	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED BY	OFFERED	DEVIATIONS	REMARKS		
1.0	PURPOSE & WORK PIECE MATERIAL						
1.1	Purpose: : This machine is intended for cutting ,external threading , deburring and reaming on steel pipes by using die/chaser. Machine must have capacity to do above functions on bolts also.	Vendor to confirm					
1.2	Work piece material : Hardness :20-25 HRC steel pipes . Supplier to furnish full list of materials which can be threaded on the offered machine.	Vendor to confirm and furnish					
2.0	Technical Data:						

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2.1.1	Model :	Pipe Threading Machine with electrical ,manually operated			
2.1.2	Type of machine	vendor to specify			
2.1.3	Minimum diameter of pipe to be threaded	1/4" N.B.Pipe			
2.1.4	Maximum diameter of pipe to be threaded	4" N.B.Pipe			
2.1.5	Threading type	NPT BSP			
2.1.6	Max length of thread to be cut	200 mm			
2.1.7	Saddle movement	vendor to specify			
2.1.8	Spindle Speed Range	vendor to specify			
2.1.9	Number of spindle speed	vendor to specify			
2.1.10	Main motor Capacity(H.P./RPM)	vendor to specify			
2.1.11	Standard Accessories :				
	a)all accessories required for completion of operation . Supplier to give details of accessories.	Vendor to confirm and submit			
2.2	Construction:				
2.2.1	Base:- Shall be made of Casted/stress relieved fabricated structure ,sturdy in construction to take maximum load & vibration.	Vendor to confirm and submit details			
2.2.2	Head Stock :- Shall be made of cast /stress relieved fabricated structure & very rigid and sturdy in design with heavy duty ball bearing/anti-friction taper roller bearings.It shall be oil filled and provision with oil filling,oil drain & oil level indicator. Other details are to be furnished by vendor.	Vendor to confirm and submit details			

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2.2.3	Saddle/Carriage :-shall be made of cast /stress relieved fabricated structure .It shall be provided with Gun Metal bushes precisely machined/bearings and Rack & Pinion/suitable arrangement to move the saddle/carriage to & fro with lubrication points wherever necessary.	Vendor to confirm and submit details			
2.2.4	Pipe Clamping Arrangement :-Suitable arrangement to clamp the pipe . Details to be furnished	Vendor to confirm and submit details			
2.2.5	Die Head :- Suitable die head arrangement to hold dies . Furnish details	Vendor to confirm and submit details			
2.2.6	Tool Holder :Supplier to furnish list of tools alongwith holders for following-				
	i)1/4" BSP to 4" BSP (To be included in scope)	Vendor to confirm and submit			
	i)1/4" NPT to 4" NPT	Vendor to offer as option with prices			
3.0	MACHINE LIGHTS:				
3.1	Machine Lights for sufficient illumination of complete working area should be provided for clear visibility.	Specify & confirm			
3.2	All light fittings, switches, boxes, adaptors, accessories should be compatible with Indian equipments	Specify & confirm			
4.0	Requirement of Utility services				

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4.1	<u>Electrical</u> : 415V $\pm$ 10%, 50HZ $\pm$ 3 HZ, 1 PH / 3 Phase AC (4 wire system with neutral) Power Supply Voltage will be provided by BHEL at a single point near the 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. Requirement of grounding/earthing with required material details is to be informed by vendor well in advance so that same could be incorporated during construction of foundation.	Electrical drawing clearly indicating the connections			
4.1.1	Motor shall confirm to IEC/Indian standard	Vendor to specify			
4.1.2	Cables and other electrical material shall meet relevant BIS standards	Specify & shall be of reputed make			
4.2	<u>Pneumatic</u> : We shall provide air with pressure of 5kg/cm2 at one point.	Vendor to note			
4.3	If any specific requirement , same to be mentioned in the offer itself.	Vendor to confirm and offer			
5.0	SAFETY ARRANGEMENTS:				
	Pipe Threading Machine should have adequate and reliable safety interlocks / devices to avoid damage to the equipment, work piece and the operator due to the malfunctioning or mistakes.	Details to be furnished			
6.0	ENVIRONMENTAL PERFORMANCE OF THE MACHINE :				
6.1	If any environmental protection enclosure is required it should be built in the machine by the vendor.	Confirm			
7.0	TOOLS FOR OPERATION & MAINTENANCE :				

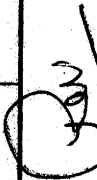
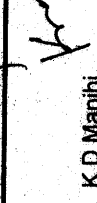
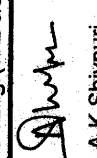
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7.1	Special tools and equipment required for operation & maintenance of the machine shall be supplied by the vendor	Confirm			
8.0	SPARES: Itemized breakup of mechanical, electrical & electronics, if any, spares used on the equipment in sufficient quantity as per recommendation of Vendor for 2 years of trouble free operation on three shifts continuous running basis should be offered by vendor.	Confirm			
9.0	Accessories (Optional) i) Adjustable pipe support to hold upto 6 mtr length of 20 mm thick pipe ii) Manual pipe stopper iii) Clamping jaws EN-31 Material	required required required			
10.0	COOLANT SYSTEM (If required)	specify			
10.1	Coolant Tank Capacity	Specify			
10.2	Coolant pump & motor details	Specify			
10.3	If any specific coolant oil /cutting oil recommended	Specify			
11.0	FOUNDATION :				
11.1	Vendor shall submit the preliminary layout drawing for getting BHEL's approval within one month from the date of Letter of Intent (LOI)/ P.O., whichever is earlier. The vendor shall submit detail civil foundation drawings with reinforcement details within 4 weeks from the date of approval of layout drawings. Civil foundation shall be made by BHEL, however supervision will be done by vendor for correctness of the foundation.	Confirm			
12.0	Painting:	Specify Paint details / manufacture's name			

also indicate Indian equivalent of coolant, recommended.

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13	DOCUMENTATION :				
	Five sets of the Operation & Maintenance manuals (Mechanical, Electrical & Electronics maintenance) of the equipment should be supplied along with the machine	Confirm			
13.1	Operating manuals of Machine	Confirm			
13.2	Catalogues, O&M Manuals of all bought out items including drawings, wherever applicable.	Confirm			
13.3	Complete Master list of parts used in the machine shall be submitted by the vendor.	Confirm			
14.0	ERECTION & COMMISSIONING				
14.1	Supplier to take full responsibility for carrying out the start up & testing of equipment and it's control etc.	Confirm			
14.2	Tools, Tackles, instruments and other necessary equipment required to carry out all above activities should be brought by the supplier .	Confirm			
15.0	MACHINE ACCEPTANCE: (Tests/Activities should be Performed by Vendor)	Confirm & Vendor to specify the applicable standard (IS / ISO / Any			
15.1	Tests/Activities should be carried out at supplier's works on the machine before dispatch :	Vendor to specify the applicable standard (IS / ISO / Any other)			
15.2	Demonstration of all features of the equipment and accessories in the presence of BHEL personnel	Confirm			
15.3	Threading on test piece of different thread sizes. Vendor to supply test piece	Confirm			
15.4	The machine should be tested for continuous running of 6 hrs. If any break down occurs during this test, the test should be repeated for 6 hrs from that time.	Confirm			

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15.5	Tests/Activities should be carried out at BHEL works while commissioning the equipment :	Confirm			
15.6	Demonstration of all features of the equipment and accessories to the satisfaction of BHEL for efficient and effective use of the equipment	Confirm			
15.7	Prove out of the equipment for BHEL component. Active jobs will be supplied by BHEL.	Confirm			
15.8	Training of BHEL machine operators in the area of operation, Safety and Mechanical, Electrical & Preventive maintenance of complete equipment & accessories etc by the supplier's engineers during their stay at BHEL works	Confirm			
15.9	The machine should be tested for continuous running of 6 hrs. If any break down occurs during this test, the test should be repeated for 6 hrs from that time.	Confirm			
16.0	Packing				
16.1	Sea worthy & rigid packing for all items of complete machine, all accessories and other supplied items to avoid any damage/loss in transit.	Confirm			
16.2	When machine is dispatched in containers all small loose items shall be suitably packed in boxes.	Confirm			
17.0	GUARANTEE :				
17.1	24 Months satisfactory operation from the date of acceptance of the machine.	Confirm			
17.2	Service beyond guarantee period	Specify			
17.3	Supplier shall be responsible for after sales service of the equipment.	Confirm			
18.0	GENERAL :				
18.1	Equipment Model No.	Specify			
18.2	Space area required	Specify			

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18.3	Painting of Machine	Specify			
18.4	Total weight of the equipment	Specify			
18.5	Vendor to submit , along with offer, reference list of customers where similar or higher capacity Pipe Threading Machine have been supplied mentioning broad specifications of the supplied machine i.e. Model, Threading size range etc.	Confirm			
18.6	Detailed catalogues , sketch/ photographs of the Pipe Threading Machine and accessories/ attachments should be submitted with the offer.	Confirm			
18.7	Vendors shall submit his latest design. In case of any variance with the present Spec., BHEL reserves the right to study & make minor changes.				
19.0	Delivery	specify			
20.0	Qualifying condition: Offers meeting following conditions only will be accepted-	Vendor to confirm			
	A) Those vendors, who have supplied at least five similar machines or higher capacity in the past five years (on the date of opening of tender)				
	B) Vendor should submit latest performance certificate for satisfactory performance for minimum one year period (on the date of opening of tender) of atleast two similar machines				
	C) Generally offers of OEM would be accepted. In case of trader/agent proper contract agreement to be submitted. Also guarantee and spares supply to be owned by supplier and suitable undertaking to be submitted.				
	D) The following information should be submitted by the vendor about the companies where similar machines have been supplied. This is required from all the vendors for qualification of their offer.				

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	1. Name of the customer / company where similar system is installed. (Copy of Purchase order should be furnished)	Vendor to submit			
	2. Complete postal address of the customer.	Vendor to submit			
	3. Year of commissioning. (Copy of commissioning report should be	Vendor to submit			
	5. Name and designation of the contact person of the customer.	Vendor to submit			
	6. Phone, FAX no. and email address of the contact person of the customer.	Vendor to submit			
	7. Performance certificate from the customers regarding satisfactory performance of system supplied to them	Vendor to submit			
	8-BHEL reserves the right to verify information provided by vendor. In case the information provided by vendor is found to be false/incorrect, the offer shall be rejected.	vendor to confirm			
	 Arjun Singh Manager (WE&S)  Umesh Sagar Mgr. (LMM)  Y K Dhangra Sr. Engr (WE & S)				
	 S. J. Chakraborty SR. DGM (WE&S)  K. D. Manjhi Sr DGM (LMM & LMP)  A K Shivpuri Sr. Manager (WE&S)				

Rev1- Specification revised to generalise constructional features.