

	BHARAT HEAVY ELECTRICAL LIMITED		Enquiry No. :		
	UNIT'S ADDRESS:		Due Date :		
	UNIT'S PHONE NOS.		Machine No. MT-3/2/1523		
	CONTACT PERSON'S NAME/DESIGN./PHONE NO./E-MAIL (FROM PURCHASE DEP'T.)		Specification no. 6221		

SPECIFICATION -CUM- COMPLIANCE CERTIFICATE					FOR PIPE
<u>THREADING MACHINE</u>					
	NOTE:-				
	1. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specifications/requirements shall be treated as non-compliance				
	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				
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: (Operations/Jobs involved): For cutting external threading on steel pipes by chasing method using thread chaser	Vendor to confirm			

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1.2	Work piece material : Hardness :20-25 HRC	ASTM/ASME -SA 106 Gr.B			
2.0	Technical Data:				
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 of Cast Iron ,sturdy in construction to take maximum load & vibration.	Vendor to confirm			
2.2.2	Head Stock :- Shall be made of cast iron & 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. Two Hard chrome Plated pillar will be fittedin Head Stock body precisely aligned with main Spindle axis.	Vendor to confirm			

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2.2.3	Saddle :-shall be made of Cast Iron and moved on pillars of head stock.It shall be provided with Gun Metal bushes perezisely machined and Rack & Pinion/suitable arrangement to move the saddle to & fro with lubricaion points wherever necessary.	Vendor to confirm			
2.2.4	Clamping Vice :-Shall be made of Closed Grain Cast Iron,fitted on saddle.The vice shall be provided with Finger Type Clamping Jaws for clamping the entire range of pipe sizes in its Cap.	Vendor to confirm			
2.2.5	Die Head :- Shall be made out of Forged Steel.A Gun metal ring provided on the Die Head shall be attached with the Saddle by means of a Nut & Screw/suitable arrangement which makes the Die Head to release the pipe after cutting a specified thread length .	Vendor to confirm			
2.2.6	Chaser Holder : Chasers will be clamped in the Chaser holders.	Vendor to confirm			
	Sizes of Thread chasers with holders				
	i)1/4" BSP to 4" BSP	Vendor to confirm			
	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, consumables, adapters/receptacles should have compatibility with Indian equivalents	Specify & confirm			
4.0	Electrical :				

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4.1	415V \pm 10%, 50HZ \pm 3 HZ, 1 PH / 3 Phase AC (3 wire system with out 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			
4.2	Motor shall confirm to IEC/Indian standard	Vendor to specify			
4.3	Cables and other electrical material shall meet relevant BIS standards	Specify & shall be of reputed make			
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 :				
7.1	Special tools and equipment required for operation & maintainance of the machine shall be supplied by the vendor.	Confirm			

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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	required			
	ii)Manual pipe stopper	required			
	iii)Clamping Jaws EN-31 Material	required			
10.0	COOLANT SYSTEM (If required)				
10.1	Coolant Tank Capacity	specify			
10.2	Coolant pump & motor details	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			
13	DOCUMENTATION :				

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	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 other)			
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 :				

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18.1	Equipment Model No.	Specify			
18.2	Space area required	Specify			
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			

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20.0	Qualifying condition: Only 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) . 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.	Vendor to confirm			
20.1	Name of the customer / company where similar machine is installed.	Vendor to furnish			
20.2	Complete postal address of the customer.	Vendor to furnish			
20.3	Name and designation of the contact person of the customer.	Vendor to furnish			
20.4	Phone, FAX no. and email address of the contact person of the customer.	Vendor to furnish			
20.5	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			

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