



<b>2.0</b>	<b>SPECIFICATION:-</b>				
<b>2.1</b>	<b>JOB DATA</b>				
2.1.1	Max.Tip circle diameter/O.D.	400 mm			
2.1.2	Min. Tip circle diameter/O.D.	100 mm			
2.1.3	Max. Face width max	200 mm			
2.1.4	Weight max.	50 kg			
2.1.5	Module	4 to 15 mm			
2.1.6	Time cycle for 400 mm dia.(102 teeth, 4.22 mm module) , 18 teeth 216mm dia 10.18 mm module to be provided.	Vendor to specify			
<b>2.2</b>	<b>Machine Data</b>				
2.2.1	Workpiece holding -3-jaw self centering	Vendor to Confirm			
2.2.2	No. of deburring head -2 Nos	Vendor to Confirm			
2.2.3	Grinder-Pneumatic	Vendor to Confirm			
2.2.4	Wheel rpm	vendor to specify			
2.2.5	Mechanised Swinging feature	vendor to specify			
2.2.6	Mechanism to copy the Profile on gear tooth	vendor to specify			
2.2.7	Provision for adjusting position of grinding wheel	vendor to specify			
2.2.8	Provision for wheel wear compensation	vendor to specify			
2.2.9	System for Rotation of jobs	vendor to specify			
2.2.10	The machine should be stopped automatically after the completion of the cycle.	Vendor to Confirm			
<b>2.3</b>	<b>ELECTRICAL SYSTEM :</b>				
2.3.1	415V +/-10%, 50HZ +/-1.5 HZ, 3 Phase AC (3 wire system without neutral) Power Supply Source 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.	vendor to specify			



2.9.3	All the rotating parts used on machine should be statically & dynamically balanced to avoid undue vibrations.				
2.9.4	Emergency stop should be provided at suitable location.				
3.0	<b>TOOLS FOR ERECTION, OPERATION &amp; MAINTENANCE :</b>				
3.1	Special tools and equipment required for erection of the machine shall be brought by the vendor. Necessary tools like Torque Wrench, Spanners, Keys, grease guns etc.for operation and maintenance of the machine should be supplied. List of such tools should be submitted with offer	Vendor to Confirm			
4.0	<b>SPARES:</b>				
4.1	Itemise breakup of mechanical,pneumatic, electrical spares used on the machine 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. The list to include following, in addition to other recommended spares: <b>(Unit Price of each item of spare should be offered)Indentor to identify spares to be procured along with the machine</b>	Vendor to Confirm			
4.2	Vendor to confirm that complete list of spares for machine and accessories, along with specification / type / model, and name & address of the spare supplier shall be furnished along with documentation to be supplied with the machine	Vendor to Confirm			
5.0	<b>DOCUMENTATION :</b>				
5.1	4 Sets of operation & Maintenance manual to be supplied	Vendor to Confirm			
6.0	<b>TRAINING:</b>				
6.1	BHEL persons should be trained for the operation and maintenance of the machine for 6 days at BHEL.	Vendor to Confirm			

7.0	<b>FOUNDATION:</b>				
7.1	Vendor shall submit the preliminary layout drawing for getting BHEL's approval within one month from the date of Letter of Indent (LOI)/ P.O. , whichever is earlier. Soil condition data will be furnished by BHEL alongwith the approval. Complete Foundation Design including details, like Static/ Dynamic load details etc. and final Layout Drawings shall be submitted by the supplier within one month after getting BHEL's approval. The Layout should consist of all requirements pertaining to complete machine and all accessories. BHEL shall construct complete foundation for the machine under supervision of supplier and at supplier's responsibility. Vendor should arrange equipment required for the testing of foundation, if required by the vendor. The vendor shall also indicate detailed specifications of grouting compound and grouting procedure etc. for foundation bolts of the machine.	Vendor to Confirm			
8.0	<b>ERECTION &amp; COMMISSIONING</b>				
8.1	Supplier to take full responsibility for carrying out the erection, start up, testing of machine, it's control system & all types of other supplied equipment, machining of test pieces etc. Service requirement like power, air & water shall be provided by BHEL at only one point to be indicated by supplier in their foundation/layout drawings.	Vendor to Confirm			
9.0	<b>MACHINE ACCEPTANCE:</b>				
9.1	The eqpt. is to be completely Tested and inspected before Dispatch in presence of BHEL .Copies of inspection Certificate to be attached	Vendor to Confirm			
9.2	The machine should be tested for continuous running for 24 Hrs..	Vendor to Confirm			
9.3	Demonstration of all features of the machine, & all accessories to the satisfaction of BHEL for their efficient and effective use.	Vendor to Confirm			

9.4	Six days supervision by the supplier of independent operation of machine by BHEL after job proveout.				
10.0	<b>REFERENCE LIST / QUALIFYING CONDITIONS :</b>				
10.1	Only those vendors(OEM), who have supplied and commissioned at least one Pinion Deburring machine of same or higher sizes for similar applications in the past ten years (on the date of opening of tender) and such machine is presently working satisfactorily for more than one year after commissioning (on the date of opening of tender) , should quote. However if such machine(s) has/had been supplied to BHEL, then such machine should be presently working satisfactorily for more than six months after its commissioning and acceptance (on the date of opening of tender ) in BHEL should quote. 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			
	1. Name of the customer / company where similar machine is installed.				
	2. Complete postal address of the customer.				
	3. Month & Year of commissioning.				
	4. Parameters of machine(s) supplied & application for which the machine is supplied .				
	5. Name and designation of the contact person of the customer.				
	6. Phone, FAX no. and email address of the contact person of the customer.				
	7. Performance certificate from the customers regarding satisfactory performance of machine supplied to them ( original certificate or through E-mail directly from customer)The original may be returned after verification by BHEL,if required.				

	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.				
11.0	<b>GUARANTEE :</b>				
11.1	24 months from the date of acceptance of the machine.	Vendor to Confirm			
11.2	Free after sales service during Guarantee period	Vendor to Confirm			
12.0	<b>GENERAL : The vendor should submit the following</b>				
12.1	Machine Model	vendor to specify			
12.2	Total connected load (KVA):	vendor to specify			
12.3	Floor area required (Length, Width, Height) for complete machine & accessories	vendor to specify			
12.4	Painting of Machine/ Electrical Panels:	vendor to specify			
12.5	Total weight of the machine	vendor to specify			
12.6	Weight of heaviest part of machine	vendor to specify			
12.7	Vendor to submit, along with offer, the reference list of customers where similar machines have been supplied mentioning the customer, Machine Model, major specifications of the supplied machine, Year of Supply etc	vendor to specify			
12.8	Detailed catalogues , sketch/ photographs of the m/c and accessories/ attachments should be submitted with the offer.	vendor to specify			
12.9	Hydraulic, Pneumatic & oil pipings should be preferably metallic except places where flexible pipings are essential.All the pipes required for the same shall be included in the standard scope of the machine.	vendor to specify			