

	BHARAT HEAVY ELECTRICALS LIMITED	Date : _____
	Heavy Power Equipment Plant, Ramachandrapuram, Hyderabad - 502 032. INDIA.	Due Date : _____
	Phones : _____ FAX: _____	Supplier Qtn. No.: _____
	E-mail : _____	Date : _____

**TENDER DOCUMENTS TO BE FILLED BY THE SUPPLIER FOR SUPPLY OF
TIG WELDING MACHINE - 400A - 2 NOS**

Note : 1. Vendor must submit complete information against clause no : 13. The offers meeting this clause will only be considered. 2. Inadequate/Incomplete, ambiguous or unsustainable information against any of the causes of the specification/requirements shall be treated as non-compliance and are liable for rejection without further correspondence nor intimation to the vendor.
3. The offer and other documents shall be in English language only. 4. Machines from China and Taiwan are generally not preferred

ADDRESS OF THE SUPPLIER :	E-MAIL ADDRESS :
TELEPHONE NOS.:	FAX NOS.:

Sl. No.	DESCRIPTION	Specified/To be confirmed by	Offered	Deviations	Remarks
1.0	PURPOSE : For TIG welding of Carbon steels ,Stainless steels other ferrous and non ferrous metals	Vendor to confirm			
2.0	TECHNICAL PARAMETERS				
2.1	Power source : MAKE : any of the following makes only : KEMPPPI, LINCOLN, MIGATRONIC, EWM , ESAB and PANASONIC	vendor to specify and confirm			
2.1.1	Type: Programmable Digital micro process controlled high speed IGBT Inverter based welding equipment with Water Cooling Unit.	Vendor to confirm			
2.1.2	Welding current range : 10 - 400A DC	Vendor to specify			
2.1.3	Duty cycle @100% 10 minute base : 270A minimum at 40 deg C	Vendor to specify			
2.1.4	Duty cycle @30% 10 minute base : 400A at 40 deg C	Vendor to specify			
2.1.5	Open circuit voltage > 70 VDC	Vendor to specify			
2.1.6	No Load power < 15 W	Vendor to specify			
2.1.7	Max. connecting load	Vendor to specify			
2.1.8	Machine Dimensions (L x W x H)	Vendor to specify			
2.1.9	Outer body of machine should be of metallic material.	Vendor to confirm			
2.1.10	Weight of the machine	Vendor to specify			
2.1.11	Protection class	Vendor to specify			

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2.1.12	Insulation class	Vendor to specify			
2.1.13	Welding current control : Digital on power source & stepless control on remote	Vendor to confirm			
2.1.14	Power factor	Vendor to specify			
2.1.15	Efficiency	Vendor to specify			
2.1.16	Standard features	Vendor to specify			
2.1.17	Power source cooling: Isolated cooling system with forced air through separate tunnel for electronics and power parts.	Vendor to specify			
2.1.18	Special features (Including Service channel indicator for trouble shooting)	Vendor to specify			
2.1.19	The machine should have a Standard EURO type connector for the torch.	Vendor to confirm			
2.1.20	Digital / analog meters are to be duly calibrated with certificate for Ammeter and volt meter.	Vendor to confirm			
2.1.21	Power source is to be tested for its full capacity for Ten minutes. Vendor shall specify the % over load for testing purpose.	Vendor to specify			
2.1.22	Vendor shall submit power source testing standards and applicable IS / International standards.	Vendor to submit			
2.2	Water cooling unit (inbuilt in the power source)				
2.2.1	Cooling output (Ltrs/Min)	Vendor to specify			
2.2.2	Pressure - above 2.5bar	Vendor to confirm and specify			
2.2.3	Tank Capacity	Vendor to specify			
2.3	Water cooled TIG torch (TWO NOS TORCHES FOR EACH MACHINE) with one set of all accessories 400Amps to be supplied along with the machine	Vendor to confirm			
2.3.1	Make of Power source and Torch to be same.	Vendor to confirm			
2.3.2	Model of torch - 4 mtr., 4-WAY CONNECTION WITH CURRENT CONTROL ON TORCH	Vendor to specify			
2.3.3	Torch should have "EURO type" end connection	Vendor to specify			
2.3.4	If the torch end connection is not of " EURO type", vendor to provide Adapter to suit standard EURO type torches.	Vendor to confirm			
2.4	Earthing cable - 5 meters with earth clamp.	Vendor to confirm			

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2.5	Transport unit for Gas cylinder along with machine.	Vendor to confirm			
2.6	Regulator for argon to be supplied.	Vendor to confirm			
2.7	SPARES : TO BE QUOTED AS OPTIONAL - VENDOR TO QUOTE FOR THE FOLLOWING SPARES GIVING ITEMISED PRICE	Vendor to quote			
2.7.1	Coolant pump - 2 No	Vendor to quote			
2.7.2	ONE SET of all PCBs used in the machine . Vendor to give pricing of each PCB seperately	Vendor to quote			
2.7.3	ONE SET of four meter torch along with the set of accessories to be quoted seperately	Vendor to quote			
2.7.4	One regulator for argon - for each machine	Vendor to quote			
3.0	Power supply details : 415V AC + 10% - 15% volts 50 Hz , 3 Phase.	Vendor to confirm			
4.0	Detailed catalogue of the machine and torches to be furnished along with offer	Vendor to confirm			
5.0	SAFETY: The equipment should have adequate safety devices to avoid damage to the equipment, work piece and the operator due to the malfunctioning or mistakes. Furnish details.	Vendor to specify			
6.0	PROVE OUT OF THE EQUIPMENT & operator training: The equipment is to be proved at BHEL works for its proper function and operational training to the operator.	Vendor to confirm			
7.0	MACHINE ACCEPTANCE: During pre-inspection of the equipment by BHEL Engineers at supplier's works, the supplier to demonstrate proper function of the equipment.	Vendor to confirm			
7.1	BHEL engineers shall witness peak load test of equipment at vendors works	Vendor to confirm			
8.0	PACKING: Proper packing of the equipment is to be ensured to avoid any damage in transit.	Vendor to confirm			
9.0	DOCUMENTATION:- Five sets of operation and maintenance manual along with complete set of circuit diagrams to be submitted.	Vendor to confirm			
10.1	COMMISSIONING:- The supplier shall commission the machine at BHEL works and prove the performace.	Vendor to confirm			
10.2	Delivery period in months	vendor to specify			

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10.3	Training for trouble shooting maintenance (electrical and electronics) for two days to be given to BHEL personnel at the time of commissioning	Vendor to confirm			
11.0	GUARANTEE:- 24 months from the date of commissioning.	Vendor to confirm			
12.0	QUOTATION:- Quotations should be submitted with point to point answers.	Vendor to confirm			
13.0	REFERENCE LIST / QUALIFYING CONDITIONS :				
13.1	Only those vendors, who have supplied and commissioned in Govt organizations / public sectors , atleast one Machine of similar Capacity, Rating, or higher for similar applications in the past ten years (On the Date of Opening of tender) and such machine is working satisfactorily for more than 12 months, after commissioning (On the Date of Opening of tender) 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 furnish			
13.2	Name of the customer / company where similar machine is installed.				
13.3	Complete postal address of the customer.				
13.4	Month & Year of commissioning.				
13.5	PO copy from the customers and performance certificate regarding performance of machine supplied to them.				
13.6	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.				