

SPECIFICATION CUM COMPLIANCE CERTIFICATION FOR WATERJET CLEANING EQUIPMENT

	<u>BHARAT HEAVY ELECTRICAL LIMITED</u>			Enquiry No. :	
	<u>UNIT'S ADDRESS</u>			Due Date :	
	<u>UNIT'S PHONE NOS.</u>			Supplier TN. No.:	
	<u>CONTACT PERSON'S NAME/DESIGN./PHONE NO./E-MAIL (FROM PURCHASE DEPTT.)</u>			Date :	
	NOTE:-				

1. Vendor must submit complete information against clause no. 10.0 The offer meeting this clause would only be processed.

2. The "Offered" Column and where applicable, the "Deviations" & "Remarks" Column of this format shall be filled in by the Vendor and 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. One soft copy of the offer is also to be submitted by Vendor along with hardcopy.

3. The offer and all documents enclosed with offer should be in English language only.

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

SCOPE: SUPPLY & DEMONSTRATION OF WATERJET CLEANING EQUIPMENT COMPLYING WITH SPECIFICATION AS BELOW:

SL. NO.	DESCRIPTION OF BHEL REQUIREMENT	SPECIFIED /TO BE CONFIRMED BY	OFFERED	DEVIATIONS	REMARKS
1.0	PURPOSE & WORK PIECE MATERIAL				
1.1	Purpose: This Waterjet Equipment is mainly intended for cleaning of repair items such as Bladed Rotors, Guide Blade Carriers, Steam Chambers and other components which are received from site in heavy rusting/ heavy scaling condition.	Vendor to confirm			
2.0	SPECIFICATION				
2.1	Operating Pressure	600 bar (min)			
2.2	Power Input/ Motor Power	50HP/37KW (min)			
2.3	Flow Rate	30 lpm (min)			
2.4	The pump shall be of triplex plunger type.	Vendor to confirm			
2.6	The pump shall be fitted with suction strainer.	Vendor to confirm			
2.7	Valves shall be fitted vertically for ease of operation.	Vendor to confirm			

SPECIFICATION CUM COMPLIANCE CERTIFICATION FOR WATERJET CLEANING EQUIPMENT

SL. NO.	DESCRIPTION OF BHEL REQUIREMENT	SPECIFIED /TO BE CONFIRMED BY	OFFERED	DEVIATIONS	REMARKS
2.8	Piston stroke shall be of 50mm(min).	Vendor to confirm			
2.9	Splash lubrication system.	Vendor to confirm			
2.10	Crank case shall be made up of High resistance light alloy steel.	Vendor to confirm			
2.11	The pump shall be fitted with tapered roller rim bearings.	Vendor to confirm			
2.12	The connecting rods shall be made up of ligh alloy and anti friction material.	Vendor to confirm			
2.13	Crank shaft shall be forged,made up of alloy steel, hardened, tempered and nitrated.	Vendor to confirm			
2.14	Cranck shaft driven by means of built in gear.	Vendor to confirm			
2.15	Piston guide shall be made up of cast iron & nickel treated.	Vendor to confirm			
2.16	The plungers should be made of Solid ceramic type.	Vendor to confirm			
2.17	The material of valves shall be of Stainless steel.	Vendor to confirm			
2.18	Electrical control panel shall be of star delta starter type.	Vendor to confirm			
2.19.0	Following accessories are to be supplied along with the equipment.	Vendor to confirm			
2.19.1	Pressure regulating cum safety valve shall be made up of stainless steel.	Vendor to confirm			
2.19.2	Suitable electrical cable (Copper) of 10 meters.	Vendor to confirm			
2.19.3	Braided suction hose of 10 meters.	Vendor to confirm			
2.19.4	High Pressure delivery hose of 10 meters (2nos) (1000bar/ 14500psi) .	Vendor to confirm			
2.19.5	Round jet nozzle (2nos) (Material & type)	Vendor to confirm			
2.2	Hand operated stainless steel gun with shoulder support and stainless steel extension of 750mm(min)with handle.It should be provided along with nozzle.	Vendor to confirm			
3.0	DEMONSTRATION AND JOB PROVEOUT				
	In addition to demonstration of the equipment, water jet cleaning of component shall be done by Vendor at BHEL works (one or two component based on availability of the job) to the full satisfaction of BHEL. Job/Material for cleaning shall be provided by BHEL.	Vendor to confirm			
4.0	TRAINING				
	Operator training shall be given at the time of proveout.				

SPECIFICATION CUM COMPLIANCE CERTIFICATION FOR WATERJET CLEANING EQUIPMENT

SL. NO.	DESCRIPTION OF BHEL REQUIREMENT	SPECIFIED /TO BE CONFIRMED BY	OFFERED	DEVIATIONS	REMARKS
5.0	SPARES				
	Supplier shall offer the free Spares for at least 2 years, two shift trouble free working of equipment. Spares items shall be quoted with complete item-wise break up of prices and specification and source of supply of all items. The following are the List of Spares for at least 2 years, two shift trouble free working of the equipment	Vendor to comply,			
5.1	High Pressure Seal (3 nos)	Vendor to confirm			
5.2	Low Pressure Seal (3 nos)	Vendor to confirm			
5.3	Ceramic Piston (3 nos)	Vendor to confirm			
5.4	Suction Non Return Valve (3nos)	Vendor to confirm			
5.5	Delivery Non Return Valve (3 nos)	Vendor to confirm			
5.6	Coupling Sleeve (2 nos)	Vendor to confirm			
6.0	DOCUMENTATION				
	Three sets of following Operating manuals, maintenance manual/documents (Hard copies) in English language should be supplied along with the equipment.	Vendor to confirm			
7.0	GUARANTEE				
	Vendor should offer performance guarantee of 24 months for the total system from the date of handing over. Any spare required during guarantee period shall be arranged by the vendor free of cost. Vendor to take full guarantee of the total system including all accessories supplied along with the equipment.	Vendor to comply			
8.0	ANNUAL MAINTENANCE CONTRACT				
	Vendor should offer as an option Annual Maintenance Contract charges for up keeping the machine and control with detailed terms and conditions. The offer is to be submitted separately with and without spares.	Vendor to submit			
9.0	SAFETY ARRANGEMENTS				
	Vendor to provide 3 sets of mask, gloves and other safety equipments required for carrying out the cleaning operation.	Vendor to submit			

SPECIFICATION CUM COMPLIANCE CERTIFICATION FOR WATERJET CLEANING EQUIPMENT

SL. NO.	DESCRIPTION OF BHEL REQUIREMENT	SPECIFIED /TO BE CONFIRMED BY	OFFERED	DEVIATIONS	REMARKS
10.0	QUALIFYING CONDITIONS				
10.1	Only those vendors should quote who have supplied at least ONE no. waterjet cleaning equipment of same or higher Pressure capacity for similar application for cleaning Rotors / Steam Turbine Accesories (Heat Exchanger Tubes, Re-Heaters/ Condenser Tubes/ Water Heater Tubes/ Evaporators) in last 10 years and the supplied machines are working satisfactorily for more than one year after supply . However, if such equipment had been supplied to BHEL, then such machine should be working satisfactorily for more than six months after its commissioning and acceptance in BHEL.	Vendor to comply			
10.2	The following information should be submitted by the vendor about the companies where similar machines have been supplied. This is required for all vendors for qualification of their offer.				
10.3	Name & complete address of the customer / company, where such equipment(s) is(are)supplied.	Vendor to submit			
10.4	Year of sale of the supplied equipment.	Vendor to submit			
10.5	Name, designation, address, Phone no., FAX no. and email address of the issuer of the Performance Certificate/ contact person of the customer.	Vendor to submit			
10.6	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.	Vendor to submit			
	Priyadarshini Mahanand/ Sr.Engineer - T & C Tech	K. S. N. Murthy/ AGM - T & C Tech			
	Santosh Kumar Rathod/Engineer - T & C PPC	Shankar Singh L / Sr.DGM (Maintenance)			