

Retrofitting of table motor, drive, control panel and operator panel in COOPER Vertical Boring M/c. (4253-2252) (BAY 5 - BLDG 5)		
ANNEXURE III		VENDOR TO CONFIRM
SCOPE OF WORK		
1	DESIGN & PREPARATION:	
1.1	Preparation of new circuit diagram for complete electrical systems with the new Drives/Motor.	
1.2	Design of mounting brackets for the all new motor.	
2	DISMANTLING: Disconnect and remove the old panel/drive/spindle motor/electrical elements and other accessories. Note: Before dismantling the existing wiring & drive, the vendor should check and record the performance of the m/c like i) Table RPM min and max, ii) cutting speed and feed (max), iii) Quality of job, etc.	
3	ELECTRICAL	
3.1	Installation of spindle motor, drive, control panel, operating pendant, cables etc in the machine.	
3.2	Integration of all the subsystems with the machine.	
3.3	Complete re wiring of the machine to establish all the existing machine functions.	
3.4	Installation of all supplied electrical / electronics items.	
4	MECHANICAL	
4.1	Complete cleaning of the machine and its accessories.	
4.2	Dismantling and fixing of new Central Lub System, lubrication lines, guide wipers, DC valves, drive chains and inline filter.	
4.3	Dismantling of old and fixing of Screw rod (2 no's), boxnut and all hydraulic hoses of machine.	
4.4	Dismantling of old and fixing of new lubrication pump with motor for gear box system.	
4.5	Dismantling of old and fixing of new induction motor for cross rail movement.	
4.6	Any mechanical modification required for mounting the new spindle motor and other induction motors to be done.	
4.7	Installation of all supplied mechanical items.	
5	INTERFACING AND PROVE OUT:	
5.1	Interfacing the drive, motor, lubrication system and other accessories to establish the complete functioning of the machine.	
5.2	The wiring on the machine side will be changed in totality and the same will be routed to the panel in a proper manner with conduits/ hoses etc.	
5.3	Prove out of the machine - including verification of all functions of the machine, testing the machine with no load and with full load.	
5.4	The complete system will be integrated and proved out for performance with a standard test piece and also regular production components.	
5.5	All the existing machine functions to be proved out.	
6	DOCUMENTATION: Three sets of the following documents to be supplied along with the retrofitting packages.	
6.1	Original drive manual, motors catalogues and also for the other bought out items.	
6.2	Drives commissioning/ Trouble Shooting manuals.	
6.3	Complete Electrical and Electronics wiring diagram as per retrofitting / modification.	
7	TRAINING:	
7.1	Training to be imparted to BHEL personels on operation and maintenance of the machine at BHEL.	
8	GENERAL:	
8.1	The equipments should be suitable for 415V, 3ph, 50Hz, a.c. supply	
8.2	The vendors (except OEM of the machine) must visit BHEL, to study the existing machine & assess the work content before submitting the offer. Otherwise the offer shall not be considered for technical evaluation.	