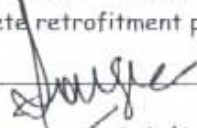


ANN. TO MIM 2009036: SPECIFICATIONS OF TWO AXIS CNC UPGRADATION PACKAGE FOR SB CNC LATHE 5/A/ 2055 of TXM (Existing configuration is as I attached Ann II.)

S.N.	ITEM	QTY.	PRICE
1	FANUC/ SIEMENS MAKE TWO AXES DIGITAL CNC DRIVE MOTOR PACKAGE WITH INTEGRATED PLC (WITH HARDWARE & SOFTWARE FOR ATLEAST 128 INPUTS & 64 OUTPUTS), 10" OR MORE LCD DISPLAY, RS232C SERIAL INTERFACES, PARALLEL INTERFACE, OPTIONAL USB INTERFACE, AXIS SELECTABLE HANDWHEEL WITH 1, 10,100,1000 MICRON INCREMENT OPTION, COMPLETE CABLES, CONNECTORS, ACCESSORIES AND ALLIED ELECTRONICS, ALL THE REQUIRED SOFTWARE PRE-LOADED WITH MIN 1 MB PART PROGRAM MEMORY	1 SET	
2	20 N-m 2000RPM AC SERVO MOTORS WITH MATCHING DIGITAL AC SERVO FEED DRIVES & 15 METER POWER & SIGNAL CABLES WITH PRE-ASSEMBLED CONNECTORS.	1 SET	
3	50 N-m 2000RPM AC SERVO WITH BRAKE MOTOR WITH MATCHING DIGITAL AC SERVO FEED DRIVE & 15 METER POWER & SIGNAL CABLES WITH PRE-ASSEMBLED CONNECTORS.	1 SET	
4	30 KW 3000RPM AC SERVO SPINDLE MOTOR WITH MATCHING AC SERVO DRIVE WITH 15 METER POWER & SIGNAL CABLES WITH PRE-ASSEMBLED CONNECTORS & ACCESSORIES.	1 SET	
5	HEIDENHAIN/FANUC/SIEMENS MAKE ROTARY POSITION FEEDBACK SYSTEMS (WITH MINIMUM 5000 PPR) FOR 2 AXES & 1 SPINDLE WITH 15 METER CABLES WITH PRE-ASSEMBLED CONNECTORS, A BALLUF EUCHNER/FANUC MAKE TOO TURRET ENCODER FOR 12 STATION BIDIRECTIONAL TOOL TURRET IS ALSO REQUIRED.	4 SET	
6	30MINUTE BACKUP 220V AC UPS FOR CNC SYTSTEM, DC POWER SUPPLIES, CONTACTORS, OVERLOADS, SWITCHGEARS, AC/DC RELAYS AND ALL SWITCHING & ACTUATING ELEMENTS REQUIRED FOR COMMISSIONING OF THE CNC PACKAGE ON THE MACHINE.	1 SET	
7	NEW ELECTRICAL PANEL OF RITTAL OR REPUTED MAKE WITH AC OF ADEQUATE CAPACITY , NEW CNC CONTROL PANDENT PANEL WITH AC OF ADEQUATE CAPACITY, NEW WIRING FOR THE COMPLETE MACHINE INCLUDING ALL THE POWER & SIGNAL CABLES, JBc & TBc REQUIRED FOR THE COMISSIONING OF THIS CNC PACKAGE.	1 SET	
8	COMMISSIONING & PROVE OUT OF ONE JOB. THE EXISTING CAPACITY, CAPABILITY AND ACCURACY OF THE MACHINE IS TO BE RESTORED.	LUMP-SUM	
9	3 HARD COPIES OF NEW ELECTRICAL CIRCUIT DIAGRAM, PLC PROGRAM LISTING, CNC OPEARTION, PROGRAMMING, INSTALLATION & MAINTENACE MANUALS.	LUMP-SUM	
10	STRUCTURED PROFESSIONAL TRAINING IN OPERATION, PROGRAMMING AND MAINTENANCE IS TO BE PROVIDED.	LUMP-SUM	

Being very critical item the following should be included in BHEL Terms :-

- 1. Qualifying Criteria:** The Supplier should have experience of commissioning of similar CNC packge/ packages on similar machine/ machines. A Performamce Certificate from the Costumer is to be furnished regarding the satisfactory permormance of such CNC upgraded machine.
- 2. Completion Period :** Maximum 4 weeks.
- 3. Tender Type :** Offers are to invited through Press tender in Two-bid formate (techno-commercial & price bid) Suppliers to quote Cost of Material and labour seperately alongwith Taxes & duties in the techno-commercial bid.
- 4. Paymet Terms :** 80% Payments shall be payable on receipt of material at BHEL and balance 20% after commissioning
- 5. Guarantee:** The supplier to provide 1 year (from the date of final acceptance by BHEL at BHEL works) guarantee for the complete retrofitment package.

  
 संतोष जानव डोगरे / P. A. DONGARE  
 Manager / Manager  
 इ.स.स. एवं अन्वेषण सेवा विभाग / IIT & CE  
 वी.एन.ई. १७, धुळे / B.H.E.L. DHULE