CSIR-CENTRAL MECHANICAL ENGINEERING RESEARCH INSTITUTE
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AMENDMENT TO CSIR-CMERI BIDDING DOCUMENTS AFTER PRE-BID CONFERENCE

File Ref	Brief Description of the Item
PUR/199/ADMAC/02/2016-17	SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF CNC TURN MILL CENTER WITH COMPLETE PROGRAMMABLE TURNING AND MILLING CAPABILITY IN A SINGLE SETUP OF WORK PIECE ALONG WITH CAM SOFTWARE, TOOL HOLDERS, ETC.

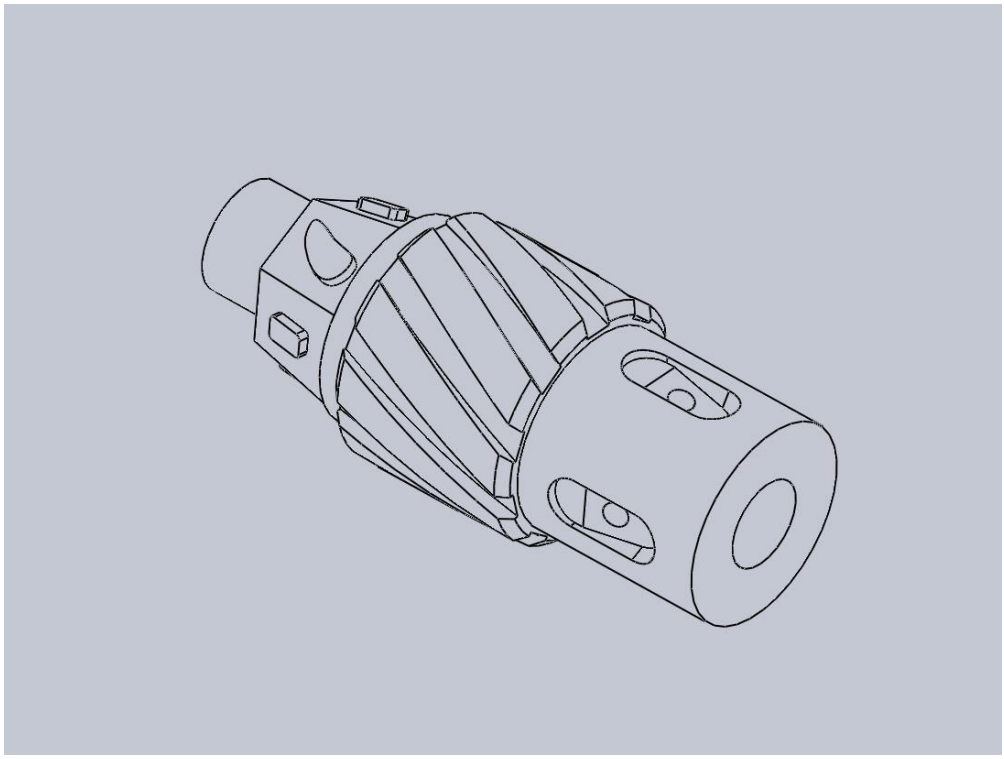
The following amendments have been made to the Technical Specifications

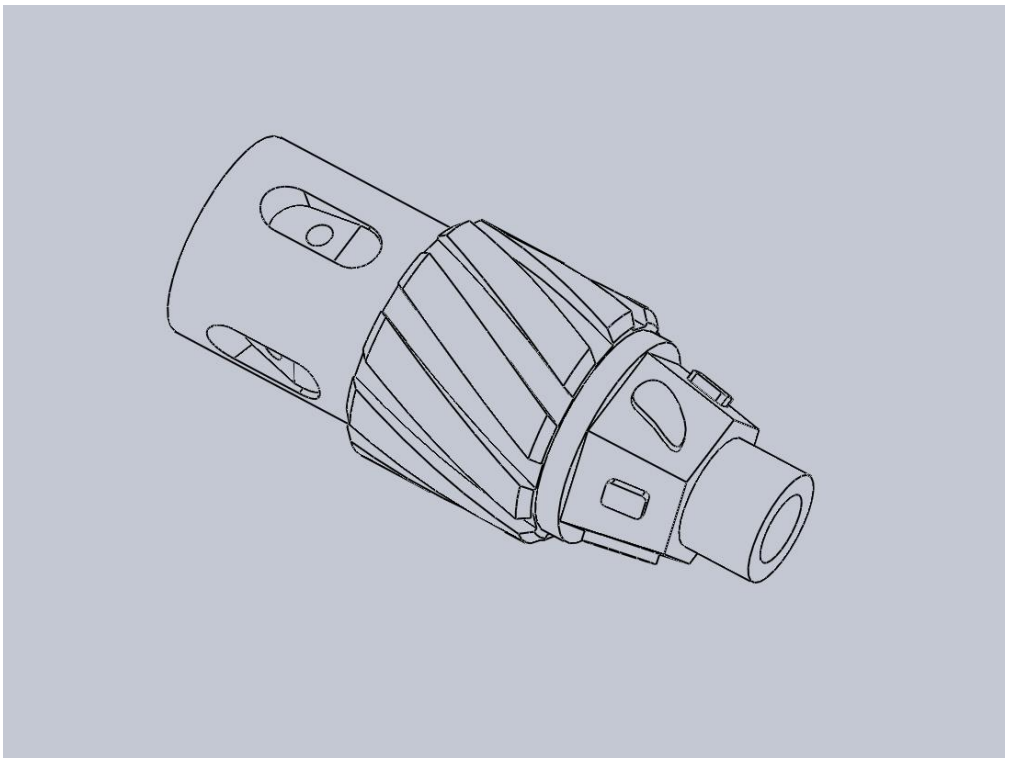
Section No.	Specification detailed in CSIR-CMERI bidding document (Ref: PUR/199/ADMAC/02/2016-17)	Amended Specification (After Pre-Bid Conference)
1.007	The specification covers, supply, erection, commissioning and training of CNC Turn Mill center along with accessories.	The specification covers supply, erection, commissioning and training of CNC Turn Mill center along with **CAM software** and accessories.
2.007	All linear X,Y,Z and B axes must be equipped with rotary encoder coupled with the ball screws or linear encoder and for B-axis with an incremental linear with suitable encoders coupled with ball screws. In case of linear encoder---zero maintenance linear encoder must be provided.	All linear X, Y, Z and B axes must be equipped with suitable encoders coupled with the ball screws.
3.034	Milling spindle speed: 8000 rpm or higher	Milling spindle speed: **7000 rpm** or higher
3.072	MANUAL PULSE GENRATOR (cordless hand wheel preferable): For manual movement and adjustment of slides handwheel must be provided with selectable amount of movement i.e. 0.001mm, 0.01mm, 0.1mm and 1mm per pulse.	MANUAL PULSE GENRATOR (**for remote operation**): For manual movement and adjustment of slides handwheel must be provided with selectable amount of movement i.e. 0.001mm, 0.01mm, 0.1mm and 1mm per pulse.
3.081	The accuracies & repeat-abilities must be as per ISO 230 standard, VDI/DGQ3441 or any other equivalent standard.	Geometrical accuracies of the machine as per ISO-230 (part 1) or any other equivalent standard. Positional accuracy and repeatability of the machine as per VDI/DGQ 3441 or any other equivalent standard.
3.082	Positional Accuracy --------- X ,Y,Z Axis = 12µm or better, W Axis = 10 µm or better B Axis = 0.002 degree or better C1,C2 Axis = 0.005 degree or better	Positional Accuracy : X ,Y,Z,W Axis = 12µm or better, B Axis = 0.002 degree or better C1,C2 Axis = 0.005 degree or better
5.001	OEM will manufacture at least 01 no. standard NAS test piece on the machine (which will be supplied to CMERI) and	OEM will manufacture at least 01 no NAS test specimen as per ISO 10791-7 on the machine and forward the NAS test specimen along with the drawing, inspection report,

	forward the inspection report, test piece to CSIR-CMERI along with M/C test Chart report. The cost involve in this will have to be borne by the OEM.	Machine test Chart report to CSIR-CMERI. The cost involve in this will have to be borne by the OEM.
6.002	During commissioning at least 01 no. of NAS test piece will be produced on the machine and test piece will be inspected for dimensional tolerance, accuracies, surface finish, straightness, perpendicularity, parallelism etc. All the tooling's, work holding devices & Standard Test piece will be supplied by the CSIR-CMERI for machining different samples.	During commissioning at least 01 no. of NAS test piece as per ISO 10791-7 will be produced on the machine and test piece will be inspected for dimensional tolerance, accuracies, surface finish, straightness, perpendicularity, parallelism etc and machine will be calibrated by using laser interferometer by CSIR-CMERI. Raw material of the Job will be provided by CSIR-CMERI. All the necessary tools, cutters and holders should be provided by the supplier.
6.003	All the other features/capabilities of the machine are to be proved on separate samples to be provided by CSIR-CMERI	All the other features/capabilities of the machine are to be proved as per drawing no. CMERI-AdMac- TS-T003. Raw material of the Job will be provided by CSIR-CMERI. All the necessary tools, cutters and holders should be provided by the supplier. Drawing no. CMERI-AdMac- TS-T003 is the isometric view of the component. The soft copy of model will be supplied prior to installation.
7.001	The OEM shall have to provide training exclusively for 6 to 7 working days in the field of programming, operation, maintenance, mechanical/ hydraulic/ electrical etc. to CSIR-CMERI personnel by OEM experts at CSIR-CMERI site during commissioning of the machine.	The OEM shall have to provide training exclusively for 6 to 7 working days in the field of programming, operation, maintenance (Mechanical, Hydraulic, Electrical & Electronics) etc. to CSIR-CMERI personnel by the OEM's engineer/ OEM certified factory trained engineer at CSIR-CMERI site after commissioning of the machine.
11.002	The machine model being offered must be a standard latest model. The OEM must have at least 5 installation of the offered configuration machine in India (Documentary evidence must be submitted).	The machine model being offered must be a standard latest model. The Date of dispatch should be within One Year from date of manufacturing. The OEM must have at least 5 installations of the offered system/configuration globally. (Documentary evidence must be submitted).
12.001	The basic machine cost should also include any optional items needed to comply the above specifications, the charges for the pre-dispatch inspection, installation & commissioning, training on site etc.	There may be some items which may be optional for some OEM/ bidders but are essential to demonstrate the machine as per specification. The cost of those items needs to be included in the basic machine cost. This basic machine cost along with the charges for installation & commissioning, training on site etc shall be considered in price bid evaluation.
12.002	The prices of the essential items (as per section no. 4.000 Essential Accessories) to be mentioned separately.	The prices of the optional items (as per section no. 10.000 Optional Accessories) to be mentioned separately but it will not be considered for price bid comparison.
12.008	The accuracies & repeatability's must be in ISO 230 standard or any other suitable international standard.	**Deleted**

REVISED ESSENTIAL CRITERIA, AFTER INCORPORATION OF AMENDMENTS

SL. No.	ESSENTIAL CRITERIA:
01	Welded construction shall not be acceptable.
02	Liner Motion roller guides in all axes.
03	Machining diameter: minimum ø480 mm
04	Machining length: minimum 1200 mm ,
05	Bar work capacity: minimum ø60 mm
06	X axis travel: minimum 480 mm
07	Y axis travel: minimum 220 (± 110) mm
08	Z axis travel: minimum 1200 mm
09	B axis travel/ Swivel Angle range : ≥ 210 degree or better
10	Rapid traverse rate : X,Y,Z,W axis- minimum 30000 mm/min
11	C1, C2, B- Axis Indexing increment: 0.001° or better
12	Main spindle and second spindle speed: 3000 rpm or higher
13	Main spindle power (40% duty cycle/100% duty cycle) :≥ 22 kW/ 15 kW
14	Second spindle Power (40% duty cycle/100% duty cycle) :≥ 18 kW/ 15 kW
15	Milling spindle speed: 7000 rpm or higher
16	Milling spindle power(40% duty cycle/ 100% duty cycle):≥ 20 kW /14 kW
17	Look ahead blocks minimum 1000 or block processing time ≤1.0 milisecond
18	MANUAL PULSE GENRATOR (For Remote Operation): For manual movement and adjustment of slides hand wheel must be provided with selectable amount of movement i.e. 0.001mm, 0.01mm, 0.1mm and 1mm per pulse.
19	Geometrical accuracies of the machine as per ISO-230 (part 1) or any other equivalent standard. Positional accuracy and repeatability of the machine as per VDI/DGQ 3441 or any other equivalent standard.
20	The machine model being offered must be a standard latest model. The Date of dispatch should be within One Year from date of manufacturing. The OEM must have installed at least 5 installations of the offered system/configuration globally. (Documentary evidence must be submitted).
21	**Comments like “yes”, “agreed”, “will be given at the time of supply”, “confirmed” and “will be completed” are not acceptable where numerical values are required to be quoted.**





Drg. No.- CMERI-AdMaC-TS-003

Blank Size: Ø100mm x Length 250 mm

Material: Alloy Steel 40Ni6Cr4Mo3 [IS: 1570-88(pt.4)] Equivalent to En24

Operations: Turning, Boring, Milling, Drilling, Polygon Turning for Machining of Elliptic and Polygonal Shapes on End Faces, Parting, Tapping Operations and 6 side complete machining.

THE DEADLINE FOR SUBMISSION OF BIDS / DATE OF OPENING OF TECHNO-COMMERCIAL BIDS OF THE AFORESAID TENDER IS ALSO EXTENDED AS SHOWN BELOW :

REVISED DEADLINE FOR SUBMISSION OF BIDS	**09 MARCH 2017 UPTO 2.30 PM IST**
REVISED DATE FOR OPENING OF TECHNO-COMMERCIAL BIDS	**09 MARCH 2017 AT 3.00 PM IST**

THE BIDDING DOCUMENT OF THE ABOVE CSIR-CMERI TENDER IS AMENDED TO THE EXTENT INDICATED ABOVE. ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.

THE ABOVE AMENDMENTS ALSO AMOUNT TO AMENDMENTS OF THE RELEVANT PROVISIONS OF THE BIDDING DOCUMENTS

STORES AND PURCHASE OFFICER