TENDER INVITATION FOR

SUPPLY, UNLOADING, INSTALLATION, COMMISSIONING, & TRAINING
of
CNC MACHINES, ASSOCIATED SOFTWARE & MEASURING INSTRUMENT
(SOLUTION ON TURNKEY BASIS)

Sealed tender offers are invited in two separate sealed covers (Technical and Commercial offers) from eligible manufacturers / suppliers or their direct Indian agents for the supply, unloading, installation, commissioning and training of the following equipment:

CNC MACHINES, ASSOCIATED SOFTWARE & MEASURING INSTRUMENT
(SOLUTION ON TURNKEY BASIS)

Please send offers ALONG WITH DESCRIPTIVE CATALOGUES/ BROCHURES / SUPPORTING PROOFS OF THE VARIOUS COMPONENTS OF THE TOTAL SOLUTION. The validity of the bid should be at least six months (180 days) or more from the date of the opening of this tender. Please ensure that your quotation reaches not later than 21/08/2020 (Friday) by 16:00 Hrs (IST) at the following address:

Professor-in-Charge,
Centre of Excellence in Advanced Manufacturing Technology,
(Inside Steel Technology Centre),
Indian Institute of Technology Kharagpur,
721 302, West Bengal, India

Earnest money (EMD) of Rs. 1,00,000/- (Rs. One Lakh only) is to be deposited in the form of Account Payee Demand Draft in favour of IIT Kharagpur, payable at Kharagpur, India. Any bid which is not accompanied with an EMD shall be summarily rejected. EMD will be forfeited if the vendor withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender. No interest will be paid on the EMD of the unsuccessful bidders. MSMEs, NSIC and Start-up certified vendors are exempted from submitting the EMD, as per GFR 2017, provided they must submit the valid certificate along with their technical bid.

<table>
<thead>
<tr>
<th>Tender Reference</th>
<th>IIT/OTG/CoEAMT/2020/CM&amp;MI dated 22/07/2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last date and time for submitting the</td>
<td>21/08/2020 (Friday) at 16:00 Hrs (IST)</td>
</tr>
<tr>
<td>tender document</td>
<td></td>
</tr>
<tr>
<td>Time and date for opening of Technical</td>
<td>21/08/2020 (Friday) at 17:00 Hrs (IST)</td>
</tr>
<tr>
<td>Bids</td>
<td></td>
</tr>
<tr>
<td>Place of opening tender</td>
<td>Centre of Excellence in Advanced Manufacturing Technology (Board Room), 5th floor, CRR Building, Indian Institute of Technology Kharagpur, 721 302, West Bengal, India</td>
</tr>
</tbody>
</table>
BASIC INFORMATION ABOUT THE REQUIREMENT

The required facility will consist of the following:

- CNC turning centre,
- 3-axis CNC vertical machining centre,
- CAD-CAM software for CNC turning centre and CNC machining centre,
- CNC simulator kit,
- NC guide software, and
- Measuring instrument

Some of the specific features of this requirement have been mentioned below:

1. The CNC turning centre and 3-axis CNC vertical machining centre must be of production type machines equipped with branded controller such as of Siemens, Fanuc, Mitsubishi or equivalent.
2. The CAD-CAM software will be utilized in part designing and code generation for machining and 3D simulation.
3. The CNC simulator kit will be a standalone (portable type) machine where the G & M-codes derived for a part will be tested for analysing the faults in the code. It must also have a screen (not less than 14”) for visualizing the simulation of the machining of the part. This simulator must have a controller of the same make as in the CNC turning centre and CNC vertical machining centre.
4. In addition to the CNC simulator, a NC guide software will be utilized for training and 3D simulation of the machining of the part.
5. High quality measuring instruments are required for quality assurance. The supplier must supply the instruments of branded makes such as Mitutoyo, Keyence, Zeiss or equivalent.
NOTE: The bidder must be capable of supplying the controller (i.e. Siemens/Fanuc/Mitsubishi or equivalent) as per the need of IIT Kharagpur, without change of any increase in the quoted price of the bidder.

IMPORTANT POINTS TO BE TAKEN CARE BY THE BIDDER

(1) TECHNICAL BID:

✓ The technical bid must have an Index (Contents) page listing the enclosures of the documents being submitted, with the respective page numbers.

✓ The bidder must provide a Technical Compliance Statement, with comprehensive information of each and every component, supported by documentary (catalogues/brochures from the OEMs) as evidence. The comprehensive information refers to specific value or equivalent as required. Mere stating ‘Compliance’/ ‘Offered’/ ‘Agreed’ etc. against any requirement will not be considered.

✓ In case, the bidder fails to attach required catalogues/brochures from the OEM to support their claim for the product components listed and required for this facility, IIT Kharagpur has the authority to disqualify the bidder without any further communication. Technical comparative study will be made purely based on the documents submitted by the bidder at the time of tender submission.

✓ All the pages of this tender document (25 pages in total) must duly be signed (with seal) by the bidder, and a copy of the same must be submitted along with their bids. Please note that this signed copy is in addition to the Technical Compliance Statement.

✓ The date and time of the price bid opening will only be communicated to the technically qualified bidders.
(2) COMMERCIAL BID

✓ The price bid must strictly adhere to the format given below (Table 1).

✓ Since the required facility is on a turnkey basis, the bidder MUST quote for all the 8 points, as mentioned in Table 1. Total cost (TC) will only be considered for the price-bid comparison.

✓ It lies in the interest of IIT Kharagpur to purchase / discard any of the modules of this facility, as listed in Table 1, i.e. 1 / 2 / 3 / 4 / 5 / 6.

✓ IIT Kharagpur will stick to the payment terms as per the norms of the Institute / GoI; and the supplier in order to comply must also adhere to the same.

Table 1: Format for price bid

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Item description</th>
<th>Rs (in case of Indigenous purchase)</th>
<th>FCA International Port (in case of Foreign purchase)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CNC Turning Centre</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accessories needed for Sl. no. 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3-axis CNC Vertical Machining Centre</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accessories needed for Sl. no. 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>CAD-CAM software (15 or more network licenses)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>CNC simulator kit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>NC Guide software (15 or more network licenses)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Various measuring instrument</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Others</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Transportation, Unloading, Installation, Commissioning, Training charges, if any</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Additional warranty charges, if any (for 24 months; after the expiry of Free 1-year Standard Warranty)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Cost (TC) =**

**Taxes / GST:** As applicable.

- Tax / GST amount will not be added during the price comparison.
(3) GENERAL POINTS

✓ The supplier must mention the following: (a) Tender reference number with date, (b) tender name, (c) subject matter on the envelope (Technical / commercial bid as applicable), on all of the sealed envelopes.

✓ The supplier must provide the documents regarding the company’s portfolio as specified in this tender. This requirement can be found in point no. 19 of “GENERAL TERMS AND CONDITIONS” mentioned at the end.

✓ The required facility must have a comprehensive warranty for a period of three years (36 months) for all the components, from the date of successful installation and commissioning at IIT Kharagpur.

✓ IIT Kharagpur will only provide the dedicated space for installing the facility on-site with electrical source, water point and LAN port ONLY. It is the responsibility of the supplier to unload the components on-site, and the charges for the same (if any) have to be borne by the supplier.

✓ It is the responsibility of the supplier to mention and quote all the accessories required for proper functioning of any of the items of this turnkey solution in their technical bid. This must include, but not limited to, voltage stabilizer, hydraulic oil, coolant oil, air compressor (if any, along with FRL unit, pneumatic tubing, connectors etc.), electrical and network cables, mechanical fixtures, lube oil, etc. The cost of the items should be mentioned in the accessories, as applicable, in Table 1.

✓ All the accessories required to install and run the entire solution smoothly must be specified in the technical bid and accordingly quoted in the price bid. After issuance of PO, requests for purchase of any accessory will NOT be entertained.

NOTE: If all the above points (as mentioned in Technical, Commercial, and General points) are not taken care by the bidder in their both Technical and Commercial bids, IIT Kharagpur has the authority to disqualify the bidder without any further communication.
DETAILED TECHNICAL SPECIFICATIONS

Please refer to the following annexures for the detailed technical specifications of each module of the required facility:

ANNEXURE-1  CNC TURNING CENTRE
ANNEXURE-2  3-AXIS CNC VERTICAL MACHINING CENTRE
ANNEXURE-3  CAD-CAM SOFTWARE
ANNEXURE-4  CNC SIMULATOR KIT
ANNEXURE-5  NC GUIDE SOFTWARE
ANNEXURE-6  MEASURING INSTRUMENT
ANNEXURE-7  SUPPLEMENTARY INFORMATION
ANNEXURE – I

CNC TURNING CENTRE (Quantity : 1)

<table>
<thead>
<tr>
<th><strong>A. Machine details</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bed type</td>
</tr>
<tr>
<td>Chuck size</td>
</tr>
<tr>
<td>Chuck type</td>
</tr>
<tr>
<td>Turning length</td>
</tr>
<tr>
<td>Ball screw X/Z</td>
</tr>
<tr>
<td>Guideways</td>
</tr>
<tr>
<td>Centre height</td>
</tr>
<tr>
<td>Swing over cross slide</td>
</tr>
<tr>
<td>Swing over bed</td>
</tr>
<tr>
<td>Distance between centre</td>
</tr>
<tr>
<td>Turning diameter</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>B. CNC controller details</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Controller</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>C. Accuracy</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Positioning</td>
</tr>
<tr>
<td>Repeatability</td>
</tr>
<tr>
<td>Resolution</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>D. Spindle details</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Spindle motor</td>
</tr>
<tr>
<td>Spindle motor capacity</td>
</tr>
<tr>
<td>Spindle rotational speed</td>
</tr>
<tr>
<td><strong>Spindle speed</strong></td>
</tr>
<tr>
<td><strong>Spindle nose</strong></td>
</tr>
<tr>
<td><strong>Hole through spindle</strong></td>
</tr>
</tbody>
</table>

**E. Axis details**

| **Axis motor and drive** | Servo motor and servo drive |
| **X-axis stroke** | 110 mm or more |
| **Z-axis stroke** | 220 mm or more |
| **Feed rate** | 0 to 15 m/min or more |
| **Rapid travel** | 15 m/min or more |

**F. Turret and tooling details**

| **Turret type** | Bidirectional turret |
| **Number of stations** | 8 |
| **Tool cross section** | 16 mm x 16 mm or more |
| **Boring bar size** | 25 mm or more |

**G. Tailstock details**

| **Tailstock base stroke** | 170 mm or more |
| **Tailstock quill stroke** | 30 mm or more |
| **Tailstock quill diameter** | 50 mm |
| **Tailstock quill taper** | MT-4 |

**H. Other requirements**

| **Lubrication** | Automatic |
| **Coolant** | Automatic |

**I. Turning tool set details**

Carbide inserts must be supplied of the following numbers and configuration:
- 2 numbers of LH turning tool holders (one will be for TNMG and one will be for VNMG) with ten (10) numbers of inserts (5 inserts of TNMG and 5 inserts of VNMG)

- Drill bits (having carbide tip) of the following diameters:
  1. 2.5 mm (quantity – 2) with parallel sleeve
  2. 4 mm (quantity – 2) with parallel sleeve
  3. 5 mm (quantity – 2) with parallel sleeve
  4. 6 mm (quantity – 2) with parallel sleeve,
  5. 8 mm (quantity – 2) with parallel sleeve,
  6. 10 mm (quantity – 2) with parallel sleeve, and
  7. 12 mm (quantity – 2) with parallel sleeve

- LH parting tool holder (quantity-1), with ten (10) numbers of inserts of width 2 mm

- Outer threading tool holder (quantity-1), with following inserts:
  1. 1 mm inserts (quantity – 10)
  2. 1.2 mm inserts (quantity – 10)
  3. 1.5 mm inserts (quantity – 10)

- Internal boring tool holder of 10 mm shank diameter (quantity-1), with ten (10) number of inserts and one (1) suitable sleeve

**J. Accessories**

All the essential accessories needed for the operation of this module must be quoted accordingly.

- Please note for training of each operation (using this CNC turning centre) such as, but not limited to, rough turning, finish turning, drilling, boring, parting, threading, etc., necessary metal workpiece materials must be provided by the supplier.
# ANNEXURE – 2

**3-AXIS CNC VERTICAL MACHINING CENTRE (Quantity: 1)**

## A. Machine details

<table>
<thead>
<tr>
<th>CNC machining centre</th>
<th>3-axis CNC controlled vertical machining centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table size</td>
<td>650 × 300 mm or more</td>
</tr>
<tr>
<td>Maximum load on table</td>
<td>250 Kgf or more</td>
</tr>
<tr>
<td>Distance from floor to table top</td>
<td>Within 800 to 900 mm</td>
</tr>
<tr>
<td>Job clamping vice type</td>
<td>High quality manual type vice. Jaw opening 0-300 mm and width of the jaw must be 250 mm.</td>
</tr>
</tbody>
</table>

## B. Axis details

<table>
<thead>
<tr>
<th>Axis motor and drive</th>
<th>Servo motor and servo drives</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-axis</td>
<td>400 mm or more</td>
</tr>
<tr>
<td>Y-axis</td>
<td>300 mm or more</td>
</tr>
<tr>
<td>Z-axis</td>
<td>400 mm or more</td>
</tr>
<tr>
<td>Ball screw X/Y/Z</td>
<td>Class 3 or better</td>
</tr>
<tr>
<td>LM guideways</td>
<td></td>
</tr>
<tr>
<td>Distance between table top and spindle nose</td>
<td>125 to 500 mm or more</td>
</tr>
<tr>
<td>Cutting feed rate</td>
<td>1 to 10 m/min or more</td>
</tr>
<tr>
<td>Rapid travel</td>
<td>36 m/min or more</td>
</tr>
</tbody>
</table>

## C. CNC controller details

| Controller | The facility must include controller from reputed manufacturers such as Siemens, Fanuc, Mitsubishi or equivalent |

## D. Accuracy

| Positioning | 0.01 mm or better |


Repeatability | ± 0.003 mm or better  
Resolution | 0.001 mm or better  

**E. Spindle details**  
| Spindle motor capacity | Continuous capacity 4.5 kW or more  
| Motor type | Servo spindle motor with servo drive  
| Spindle rotational speed | Up to 6000 rpm or more  

**F. Automatic tool changer**  
| Tool changer type | Automatic twin-arm tool changer  
| Tool selection | Bidirectional based shortest path selection  
| Number of tools | 20 or more  
| Tool length | 250 mm or more  
| Tool diameter | 80 mm or more  
| Tool shank | BT-40  
| Pull stud | MAS403  

**G. Milling tool set details**  
✓ One (1) HSS drill bit, each of the following diameters:  
1. 2.5 mm  
2. 4 mm  
3. 5 mm,  
4. 6 mm,  
5. 8 mm,  
6. 10 mm,  
7. 12 mm, and  
8. 16 mm  
✓ One (1) carbide drill bit each of the following diameters:  
1. 2.5 mm,  
2. 4 mm  
3. 6 mm,  
4. 8 mm,
5. 10 mm  
6. 12 mm, and  
7. 16 mm

✓ One (1) HSS tap each of the following diameters:  
   1. 4 mm  
   2. 5 mm,  
   3. 6 mm,  
   4. 8 mm,  
   5. 10 mm, and  
   6. 12 mm

✓ One (1) carbide tap each of the following diameters:  
   1. 4 mm  
   2. 5 mm,  
   3. 6 mm,  
   4. 8 mm,  
   5. 10 mm, and  
   6. 12 mm

✓ One (1) carbide tipped end-mill cutter each of the following diameters:  
   1. 5 mm,  
   2. 6 mm,  
   3. 8 mm, and  
   4. 10 mm

✓ Two (2) numbers of carbide tipped face-mill cutters of the following diameters:  
   1. 50 mm (Quantity – 1)  
   2. 63 mm (Quantity – 1)

✓ Ten (10) numbers of BT-40 tool holder with ten (10) numbers of collets of different diameters for holding the drills and end-mill and face-mill cutters

**H. Accessories**

All the essential accessories needed for the operation of this module must be quoted accordingly.

- Please note for training of each operation (using this 3-axis CNC vertical machining centre) such as, but not limited to, facing, drilling, taping, milling (both face and end) etc., necessary metal workpiece materials must be provided by the supplier.
ANNEXURE – 3

CAD-CAM SOFTWARE (Minimum 15 network license)

The required (CAD-CAM) software must be compatible with the CNC turning centre and 3-axis CNC vertical machining centre mentioned in Annexure – 1 and Annexure – 2, respectively. The supplier must ensure this feature. Thus, the software must have the following configuration:

1. Two axis (Lathe machine)
2. Three axis (Vertical machining centre)
3. Must have Postprocessor of the lathe and vertical machining centres to be supplied in Annexure – 1 and Annexure – 2.
4. It must have at least 15 numbers of network license.
5. The software must be capable of generating G and M-code of a part being designed using this software.
ANNEXURE – 4

CNC SIMULATOR KIT (Quantity: 1)

The CNC simulator kit will be a standalone (portable type) machine where the G & M-codes derived for a part will be tested for analysing the faults in the code. It must also have a screen for visualizing the simulation of the machining of the part. This simulator must have a controller of the same make as in the CNC turning centre and CNC vertical machining centre.

Following must be the features of this machine:

✓ It must be having a controller of the same make as equipped in the CNC turning centre and CNC vertical machining centre.
✓ It must have an interface where the real-time simulation of the machining of a part can be seen.
✓ It must have USB and Ethernet ports for transferring a program
✓ It must also have an operator panel for providing the inputs
✓ The screen size should not be less than 14”
✓ It must be of switchable type, i.e. from 2-axis to 3-axis (turning to vertical machining)
ANNEXURE – 5

NC GUIDE SOFTWARE (Minimum 15 network license)

The required software must have the following configuration and must also be capable of the following:

✓ Single hardware system, i.e. it must be switchable between lathe and vertical machining system
✓ 2-axis turning / 3-axis vertical machining
✓ Inch / metric switchable
✓ Part program storage with 500 or more registered programs
✓ 30 tool offset pairs or more
✓ Minimum 15 numbers of licenses must be included with this system.
## ANNEXURE – 6

### MEASURING INSTRUMENT

#### A. Vernier Calliper

- Two (2) numbers, digital type, where the range will be from 0 to 200 mm with least count of 0.01 mm
- Five (5) numbers, dial type, where the range will be from 0 to 150 mm with least count of 0.02 mm or 0.05 mm
- One (1) number, conventional type where the range will be from 0 to 300 mm with least count of 0.02 mm

#### B. Micrometer

- One (1) number, digital type, where the range will be from 0 to 25 mm with least count of 0.001 mm
- Four (4) numbers, conventional type, where the range will be from 0 to 25 mm with least count 0.01 mm
- Four (4) numbers, conventional type, where the range will be from 25 to 50 mm with least count 0.01 mm
- Material of the measuring face of these instruments must be of carbide for resistance to heat

#### C. Thread pitch gauge

- Two (2) numbers, metric type, where the range will be from 0.4 mm to 7 mm

#### D. Spirit level gauge

- One (1) number, spirit level gauge, where the least count would be 0.02 mm per 1 m

#### E. Dial gauge with stand

- One (1) number, flexible type, magnetic stand for holding the dial gauge
- Two (2) numbers, plunging type dial, where the least count must be 0.01 mm and the range up to 10 mm
- Two (2) numbers, lever type dial, where the least count must be 0.01 mm up to 2 mm range
- One (1) number, millimess mechanical dial indicator, where the least count must be 0.001 mm and range up to 1 mm

#### F. Height gauge with stand

- One (1) number, height gauge digital type stand, where the least count must be 0.05 mm and the range 0 to 300 mm
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>G. Depth micrometer</strong></td>
<td>✓ One (1) number, depth micrometer digital type, where the least count must be 0.01 mm and the range up to 30 mm</td>
</tr>
<tr>
<td><strong>H. Bore gauge</strong></td>
<td>✓ One (1) number, bore gauge set dial type, where the least count must be 0.01 mm and the range up to 150 mm</td>
</tr>
</tbody>
</table>
| **I. Steel ruler** | ✓ One (1) number of scale, where the least count must be 0.5 mm and the range up to 150 mm  
✓ Three (3) numbers of scale, where the least count must be 0.5 mm and the range up to 300 mm  
✓ One (1) number of scale, where the least count must be 0.5 mm and the range up to 1000 mm |
| **J. Toolbox** | ✓ Two (2) numbers tool box (of reputed make, trolley type) must be supplied with minimum of 6 drawers of different dimensions. It must also have large size wheels for easy movement  
✓ It must be anti-rust and solvent resistant powder coat paint type |
ANNEXURE – 7

SUPPLEMENTARY INFORMATION

The below mentioned requirements are generic for all facilities.

A. Unloading and installation

- It is the responsibility of the supplier to take care of unloading of the items on-site at IIT Kharagpur.
- IIT Kharagpur will provide the dedicated space for installation of the facility.
- Along with the space, IIT Kharagpur will also provide the 3-phase electrical power supply points and Ethernet points ONLY as required for the units.
- The supplier will be responsible for the required cables, plugs, LAN wire etc. as required getting the facility in running condition.

B. Post installation requirement at IIT Kharagpur

- It is the responsibility of supplier to fully erect, integrate, and commission the different units at IIT Kharagpur.
- Performance and accuracies are to be demonstrated as per ISO standards, at IIT Kharagpur.
- The supplier shall bring all necessary calibration standards for proving the machine accuracies with valid traceability certificates, at the time of installation and training at IIT Kharagpur.

C. Training

- Extensive training shall be provided to the scholars / staff members of IIT Kharagpur by the supplier at IIT Kharagpur.
- The training should cover the following:
  ✓ Complete operation, and safety measures, of both the CNC machines
  ✓ Each and every feature of the CAD – CAM software, quoted by the bidder
  ✓ Each and every operation of the CNC simulator, quoted by the bidder

D. Warranty

- The entire facility must have a comprehensive warranty (parts, labour and visit by the service engineers) for a minimum period of 3 years (36 months) for all components after commissioning for defect-free operation and specified accuracies at IIT Kharagpur.
- Any defect observed during the warranty period shall be replaced / repaired free of cost with minimum down time.
- All the software updates during the warranty period shall be supplied, installed and trained to the scholars of IIT Kharagpur on real time basis at free of cost.
**E. Documentation**

The following documents (hard copy (2 sets) & soft copy in CD/Pendrive) in English language must be provided to IIT Kharagpur:

- **Operating manual:** Separate operating manuals must be supplied for CNC turning centre and vertical machining centre, NC guide software. These manuals must describe respectively each and every operation of the concerned machine / process. The **machine assembly (CAD files) with kinematics of both the machines must also be supplied separately.** License certificates of the CAD-CAM, NC guide software and CNC controllers (in the CNC machines) must also be supplied.

- **Service manual:** Separate manuals including information related to each component, **electrical wirings**, technical specification of both CNC machines must be supplied. These documents should explain the detailed system configuration and administration with the help of sketches. It should also explain the known possible errors and solution for the same. The documents for CNC turning centre and vertical machining centre must describe the safety measures to be taken during each operation.

- All the **data and results of testing and calibration** of both the CNC machines at supplier site as well as at IIT Kharagpur on-site shall be properly documented and supplied to IIT Kharagpur.
GENERAL TERMS & CONDITIONS

PLEASE SPECIFICALLY INDICATE THE FOLLOWING POINTS IN YOUR QUOTATIONS AND COMPLY THE TERMS AS MENTIONED HEREUNDER:

1. TENDERS ARE INVITED COMPLYING THE REQUIREMENT FOR TENDER AS DETAILED IN THE TENDER SPECIFICATION TO BE SUBMITTED IN THE COMPANY’S / FIRM’S LETTERHEAD NEATLY PRINTED / TYPED DULY SIGNED BY AUTHORIZED PERSON WITH THE SEAL OF THE BIDDERS. ALL ENVELOPES CONTAINING THE TENDER SHOULD BE PROPERLY SEALED. SEPARATE ENVELOPES SHOULD BE USED FOR TECHNICAL AND PRICE BID AND INDICATION TO THEIR EFFECT MAY PLEASE BE SUPERSCRIBED ON THE ENVELOPE.

THE FOLLOWING DOCUMENTS ARE REQUIRED FROM THE INDIAN AGENTS OF FOREIGN FIRMS:

1.1 FOREIGN PRINCIPAL’S PROFORMA INVOICE INDICATING THE COMMISSION PAYABLE TO THE INDIAN AGENT AND NATURE OF AFTER SALES SERVICE TO BE RENDERED BY THE INDIAN AGENT.

1.2 COPY OF THE AGENCY AGREEMENT WITH THE FOREIGN PRINCIPAL INDICATING THE NATURE OF AFTER SALES SERVICES, PRECISE RELATIONSHIP BETWEEN THEM AND THEIR MUTUAL INTEREST IN THE BUSINESS.

2. TECHNICAL CATALOGUE/LEAFLET SHOULD BE ENCLOSED WITHOUT FAIL. PROVIDE COMPLIANCE STATEMENT WITH RESPECT TO THE TECHNICAL SPECIFICATIONS MENTIONED ABOVE.

3. PLEASE CONFIRM WHETHER YOU ARE AUTHORISED TO QUOTE ON BEHALF OF YOUR PRINCIPALS AND IF SO, PLEASE ENCLOSE A COPY OF SUCH AUTHORISATION WITH YOUR QUOTATION.

4. PRICE BIDS FOR FOREIGN FIRMS: PRICES ARE TO BE QUOTED ON ‘EX-WORKS’ DULY PACKED OR ON “FCA/FOB” INTERNATIONAL PORT” BASIS AND ALSO INCLUDING AGENCY COMMISSION PAYABLE TO YOUR INDIAN AGENTS, IF ANY, SHOWING CLEARLY THE FOLLOWING BREAK UP:-

I) EX-WORKS PRICE
II) PACKING & FORWARDING
III) FREIGHT
IV) ANY OTHER RELEVANT EXPENSES.
V) TAXES PAYABLE BY THE INSTITUTE
INSURANCE WILL BE PAID BY OUR INSTITUTE SEPARATELY AND SHOULD NOT FORM PART OF THE QUOTED PRICE.

**PRICE BIDS FOR INDIAN FIRMS**: PRICES ARE TO BE QUOTED ON F.O.R., IIT KHARAGPUR, ON DOOR DELIVERY BASIS CLEARLY SHOWING THE BREAK UP.

5. **PERIOD OF VALIDITY**: BIDS SHALL REMAIN VALID FOR ACCEPTANCE FOR A PERIOD OF 180 DAYS FROM THE DATE OF OPENING.

6. INDIAN AGENTS ADDRESS AND PERCENTAGE OF AGENCY COMMISSION INCLUDED IN ABOVE F.O.B./EX-WORKS PRICE. (THIS WILL BE PAID TO THE INDIAN AGENTS IN INDIAN RUPEES ONLY AND NOT IN FE). PLEASE ENCLOS COPY OF AGENCY AGREEMENT ENTERED INTO WITH YOUR PRINCIPALS INDICATING THE NATURE OF AFTER SALES SERVICES OF INDIAN AGENTS, PRECISE RELATIONSHIP & MUTUAL INTEREST IN THE BUSINESS.


8. **SCOPE OF SUPPLY**: SHOULD INCLUDE FREE INSTALLATION AND COMMISSIONING

9. **PAYMENT TERMS** FOR FOREIGN FIRMS

   A) 90% PAYMENT THROUGH SIGHTDRAFT/FOREIGN DEMAND DRAFT/LC (EXCEPTIONAL CASES)/SWIFT TELE TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION AND 10% AFTER SUCCESSFUL INSTALLATION & COMMISSIONING.

   B) BANK CHARGES ON LC/SD (WITHIN INDIA APPLICANT ACCOUNT AND OUTSIDE INDIA TO BENEFICIARY ACCOUNT).

**PAYMENT TERMS** FOR INDIAN FIRMS

   A) 90% PAYMENT SHALL BE MADE AFTER RECEIPT OF STORE IN GOOD ORDER & CONDITIONS, SUCCESSFUL INSTALLATION, COMMISSIONING AND TRAINING. THE BALANCE 10% MAY BE RELEASED AGAINST SUBMISSION OF PERFORMANCE BANK GUARANTEE TO THE TUNE OF 10% OF THE TOTAL PURCHASE ORDER VALUE. THE PERFORMANCE BANK GUARANTEE SHALL BE ISSUED BY ANY NATIONALIZED BANK,
VALID FOR A PERIOD OF 60 DAYS BEYOND THE EXPIRY DATE OF WARRANTY PERIOD OF THREE YEARS.

B) ENSURE MENTIONING

i) BANK DETAILS OF THE BENEFICIARY, GST NO. AND PAN NUMBER

ii) FULL NAME AND ADDRESS OF THE BENEFICIARY ON WHOM ORDER HAS TO BE PLACED

10. WHETHER ANY EXPORT LICENCE IS REQUIRED FROM YOUR GOVERNMENT, IF SO, PLEASE CONFIRM WITH DETAILS.

11. COUNTRY OF ORIGIN OF THE GOODS IS TO BE MENTIONED.


13. LIQUIDATED DAMAGES: THE STORES SHOULD BE DELIVERED/ DISPATCHED TO DESTINATION AND READY FOR OPERATION NOT LATER THAN THE DELIVERY DATE SPECIFIED. IF THE SUPPLIER FAILS TO DELIVER ANY OR ALL THE STORES OR PERFORM THE SERVICE BY THE SPECIFIED DATE, LIQUIDATED DAMAGES AT 1% PER MONTH OR PART THEREOF IN RESPECT OF THE VALUE OF STORES WILL BE DEDUCTED FROM THE CONTRACT PRICE SUBJECT TO A MAXIMUM OF 5%. ALTERNATIVELY, THE ORDER WILL BE CANCELLED AND THE UNDELIVERED STORES PURCHASED FROM ELSEWHERE AT THE RISK AND EXPENSE OF SUPPLIER.

14. PATENT RIGHTS: THE SUPPLIER SHALL INDEMNIFY THE PURCHASE AGAINST ALL THIRD PARTY CLAIMS OF INFRINGEMENT OF PATENT, TRADEMARK OR INDUSTRIAL DESIGN RIGHTS ARISING FROM USE OF THE GOODS OR ANY PART THEREOF IN INDIA.

15. ONLY THOSE BIDDERS WHO’S BIDS HAVE BEEN TECHNICALLY FOUND ACCEPTABLE WILL ONLY BE INVITED FOR PARTICIPATION IN THE PRICE BID.

16. THOSE BIDDERS WHO DO NOT RECEIVE ANY COMMUNICATION FOR PARTICIPATION IN PRICE BID OPENING MEETING MAY PRESUME THAT THEIR BID HAS NOT BEEN ACCEPTED BY THE INSTITUTE.
17. CONDITIONAL OFFER WILL NOT BE ACCEPTED.

18. LATE TENDERS I.E. TENDER RECEIVED AFTER THE DUE DATE AND TIME OF SUBMISSION AS MENTIONED ABOVE SHALL NOT BE ACCEPTED.

19. BIDDERS TO ENCLOSE THE FOLLOWING DOCUMENTS:-

   A) INCOME TAX RETURN (OF THE LAST 3 YRS), LATEST SALES TAX RETURN (GST No.), AND PAN NO.

   B) BANKER’S SOLVENCY CERTIFICATE.

   C) SUMMARY OF AUDITED STATEMENT OF ACCOUNTS FOR THE LAST THREE YEARS TO BE ENCLOSED AND FINANCIAL HIGHLIGHTS AND THE KEY PERFORMANCE DURING THE LAST THREE QUARTERS TO BE ENCLOSED AS PER FORMAT:-

COMPANY’S KEY PERFORMANCE

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>JAN. TO MARCH</th>
<th>APRIL TO JUNE</th>
<th>JULY TO SEPT.</th>
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<tr>
<td>GROSS REVENUE</td>
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<td>PROFIT BEFORE TAX</td>
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<td>PROFIT AFTER TAX</td>
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<td>RETURN ON INVESTED</td>
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<tr>
<td>CAPITAL (ROIC)</td>
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D) CUSTOMER SATISFACTION CERTIFICATE FROM ONE SUCH ORGANIZATION IS TO BE ATTACHED WITH THE TECHNICAL BID AND PRICE BID.

E) NAME AND ADDRESS OF MINIMUM THREE CLIENTS TO WHOM SUCH EQUIPMENT HAVE BEEN SUPPLIED SHOULD BE MENTIONED.

20. WARRANTY/ GUARANTEE: THIS COMPREHENSIVE WARRANTY/ GUARANTEE SHALL REMAIN VALID FOR 36 MONTHS AFTER THE GOODS (OR ANY PORTION THEREOF AS THE CASE MAY BE) HAVE BEEN DELIVERED AND COMMISSIONED AT THE FINAL DESTINATION.
21. THE INSTITUTE DOES NOT BIND ITSELF TO OFFER ANY EXPLANATION TO THOSE BIDDERS WHO’S TECHNICAL BID HAS NOT BEEN FOUND ACCEPTABLE BY THE EVALUATION COMMITTEE OF THE INSTITUTE.

22. ALL TENDERS (UNLESS OTHERWISE SPECIFIED) ARE TO BE SUBMITTED / HANDED OVER TO

Office of Professor-in-Charge,
Centre of Excellence on Advanced Manufacturing Technology,
(Inside Steel Technology Centre),
Indian Institute of Technology Kharagpur,
721 302, West Bengal, India

AND ACKNOWLEDGEMENT TO BE OBTAINED.

IMPORTANT

1. IIT Kharagpur authority may accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid. The Institute at its discretion may change the quantity/upgrade the criteria/drop any item or part thereof at any time before placing the Purchase Order.

2. Promptly make arrangements for repair and/ or replacement of any damaged item(s) irrespective of settlement of claim.

3. In case of any dispute, the decision of the Institute authority shall be final and binding on the bidders.

4. For any query pertaining to this bid document correspondence may be addressed to

Professor-in-Charge,
Centre of Excellence on Advanced Manufacturing Technology,
(Inside Steel Technology Centre),
Indian Institute of Technology Kharagpur 721 302,
West Bengal, India
E-mail: coeamt@iitkgp.ac.in

1) Please Note that the Institute remains closed during Saturdays & Sundays and all specified government holidays.

2) Fax, e-mail Tender will not be accepted.

3) The General Terms and Conditions as stated above relate to supply of stores/ equipment/assets etc. and for specific service other terms and conditions of the Institute will apply.

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