

## INVITATION FOR QUOTATION

TEQIP-III/2018/ntst/Shopping/36

29-Dec-2018

To,

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### Sub: Invitation for Quotations for supply of Goods

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure I,

Sr. No	Brief Description	Quantity	Delivery Period(In days)	Place of Delivery	Installation Requirement (if any)
1	Production Engineering laboratory -2	1	30	National institute of Technology, Sikkim: Ravangla-737139, South Sikkim, Sikkim, India	Yes Mandatory

2. Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme[TEQIP]-Phase III** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.
3. Quotation,
  - 3.1 The contract shall be for the full quantity as described above.

3.2 Corrections, if any, shall be made by crossing out, initialing, dating and re writing.

3.3 All duties and other levies payable by the supplier under the contract shall be included in the unit price.

3.4 Applicable taxes shall be quoted separately for all items.

3.5 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.

3.6 The Prices should be quoted in Indian Rupees only.

4. Each bidder shall submit only one quotation.

5. Quotation shall remain valid for a period not less than **45** days after the last date of quotation submission.

6. Evaluation of Quotations,

The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which

6.1 are properly signed ; and

6.2 confirm to the terms and conditions, and specifications.

7. The Quotations would be evaluated for all items together.

8. Award of contract:

The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.

8.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.

8.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.

9. Payment shall be made in Indian Rupees as follows:

**Delivery and Installation - 80% of total cost**

**Satisfactory Acceptance - 20% of total cost**

10. All supplied items are under warranty of **24** months from the date of successful acceptance of items.
11. You are requested to provide your offer latest by **17:00** hours on **31-Jan-2019** .
12. Detailed specifications of the items are at Annexure I.
13. Training Clause (if any) **Yes**
14. Testing/Installation Clause (if any) **Yes**
15. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.
16. Sealed quotation to be submitted/ delivered at the address mentioned below,  
NIT Sikkim, Barfung Block, Ravangla, South Sikkim Pin Code-737139
17. We look forward to receiving your quotation and thank you for your interest in this project.
18. You are requested to submit, necessary documents/work orders in support of the delivery of Production Engineering Lab equipments to NITs/ IITs.
19. DSIR certificates will be provided, if required.
20. Quality of equipment and accessories should be the responsibility of the supplier.
21. Institute committee constituted for this purpose has the full right to replace the items which do not adhere the quality parameters.
22. The supplier has to submit performance security deposit. It will be returned after the satisfactory performance of the individual equipment.



(Authorized Signatory)

Name & Designation

Nodal Officer (Procurement)  
TEQIP-III  
National Institute of Technology Sikkim

## Annexure I

Sr. No	Item Name	Specifications
1	Production Engineering laboratory -2	<p><b>1. CNC Vertical Milling Machining</b></p> <p><b>Quantity: 1</b></p> <p><b>(Brand/ Make: i.HMT, ii. HASS, iii. EMCO, iv. DECKLMAHO)</b></p> <p><b>Description/ Specification:</b></p> <ul style="list-style-type: none"> <li>- 20 Station tool magazine</li> <li>- AC Servo Axes Drive ( Fanuc make )</li> <li>- Ball screw stretching for X, Y &amp; Z Axes</li> <li>- Chip disposal to the rear side of the machine through two chutes on the sides</li> <li>- CNC System Fanuc 0i-MF with 10.4" Colour LCD</li> <li>- Coolant tank with chip tray</li> <li>- Fail safe brake for vertical axis (Z-Axis)</li> <li>- Flexible coupling for X, Y &amp; Z Axes</li> <li>- LM Guide ways for X, Y &amp; Z Axes</li> <li>- Manual Pulse Generator</li> <li>- One set of manuals</li> <li>- Panel cooler for electrical cabinet</li> <li>- Rapid traverse of 30 / 30 / 30 m/min. for X, Y &amp; Z Axes</li> <li>- Rigid tapping</li> <li>- Smart Feature – Machine Connect™ (OEM)</li> <li>- Spindle nose taper 7/24 No.40</li> <li>- Spindle power (Fanuc Make) 15 Min./Cont. Rating - 11 / 7.5 KW</li> <li>- Spindle speed of 60 - 6000 rpm (Indirect drive)</li> <li>- Standard CNC features of Fanuc 0i-MF with Colour LCD</li> <li>- Standard Worklight</li> <li>- Three tier indication lamp</li> <li>- Tool life management</li> <li>- Tool shank BT - 40</li> <li>- Total Machine Enclosure</li> <li>- Twin Arm (Random) type High Speed Auto Tool Changer</li> <li>- Flood Coolant System around the Spindle</li> <li>- Chip flushing system on the base</li> <li>- Full packing for basic machine.</li> <li>- Coolant gun</li> </ul>

Technical Specification:

Description	Specification
<b>TABLE</b>	
Table size	Not less than <b>1000 x 450 mm</b>
T-slot dimension (N x W x P)	Not less than 4 x 18 x 100
Max. load on table	Not less than <b>400 mm</b>
Dist. from floor to table top	Not less than 925 mm
<b>MACHINE CAPACITY</b>	
X - Axis Travel	Not less than <b>800-850 mm</b>
Y - Axis Travel	Not less than <b>450-500 mm</b>
Z - Axis Travel	Not less than <b>500-550 mm</b>
Dist. from spindle face to table top	Not less than 175 – 675 mm
Dist. from spindle center to column guide ways	Not less than 510 mm
Coolant supply - through flexinox hoses	Not less than 20 lpm
<b>SPINDLE</b>	
Spindle nose taper	7 / 24 No.30
Spindle speed - indirect drive (std.)	Minimum 60 – 6000 rpm
Spindle bearing dia.	Minimum 70 mm
<b>FEED</b>	
Rapid traverse x, y & z axes	Not less than <b>30 / 30 / 30 m/min.</b>
Cutting feed	Not less than 1 – 10000 mm/min
Guide ways for X, Y & Z axes	Linear Motion
<b>AUTOMATIC TOOL CHANGER</b>	
Number of tools	Minimum 20 Nos.
Max. tool dia.	Minimum 80 mm
Max. tool dia. With adjacent pockets empty	Minimum 155 mm
Tool selection	Bi - Directional
Tool length max.	Not less than 250 mm
Tool weight max.	Not less than 8 kg
Chip to chip time	4.5 Sec.
Tool change system	Twin Arm
Tool shank type	BT-40
Pull stud type	MAS-403
<b>ACCURACY WITH ROTARY ENCODER</b>	
Positioning for x, y & z axes as per ISO 230-2	0.010 mm
Repeatability for x, y & z axes as per ISO 230-2	± 0.003 mm

<b>MOTORS</b>	
Spindle power (continuous)	<b>7.5/11 kw or higher</b>
Feed motor X, Y & Z axes	12 / 12 / 20 Nm or higher
<b>MISCELLANEOUS</b>	
Machine width	2200 mm
Machine depth	3100 mm
Machine height	2550 mm
Machine weight – net	<b>Not Less than 5300 KG</b>
Input Power supply for basic machine	25 KVA
Pneumatic pressure required	5 Kgf / Cm <sup>2</sup>
<b>TANK CAPACITY</b>	
Coolant tank	300 liter minimum.
Lubrication tank	3 min.
<b>Machine Features / Accessories - Standard</b>	
Panel Cooler For Electrical Cabinet	
Fail Safe Brake For Z – Axis	
Standard Work Light	
Coolant Tank & Chip Tray	
Three Tier Indication Lamp To Indicate Cycle Running Ready For Next Cycle & Machine In Alarm Status	
Flexible Coupling For X, Y & Z Axes	
Manual Pulse Generator	
Rigid Tapping	
Total Machine Enclosure	
Chip Disposal To The Rear Side Of The Machine Through Two Chutes On The Sides	
Manuals - One Set	
Ball Screw Stretching For X,Y & Z Axes	
Tool Life Management	
Machine Connect	
Coolant gun	
Flood coolant system around the spindle	
Chip flushing system on the base	
Full packing for basic machine	

**2. Inverter Based Pulse TIG DC Welder**

**Quantity: 1**

**(Brand/ Make: i. ADOR , ii. ESAB, iii. OERLIKON, iv.GYS, v. REHM)**

**Description/ Specification:**

- Three phase inverter based, high frequency and high power factor Pulse

TIG/MMA DC Welder

- Useful for wide variety of material types and thickness
- Full featured TIG controls possible.
- HF ignition.
- Intelligent protection: over/ under voltage, over current/temperature
- Water cooled torch with cooling unit option.
- Latest PWM inverter technology.
- High efficiency (>85%)
- Smooth and stable arc with spatter less welding.
- Pulse TIG for precision welding

Technical Details:

Input:

- Input voltage: 415V,+15%,-10%
- Phase : Three(3)
- Frequency: 50/60Hz
- Efficiency@100% duty cycle: 85%
- Power factor@100% duty cycle: 0.94 max.
- Max Input @100% duty cycle:
  - ✓MMA Mode: 13KVA
  - ✓TIG Mode : 10 KVA
- Max Input @No load:
  - ✓MMA Mode: 0.13 KVA
  - ✓TIG Mode : 0.13 KVA

Output:

- Open circuit voltage: 70V
- Welding current range:
  - ✓MMA Mode: 50-400A
  - ✓TIG Mode : 10-400A
- Welding current@ 100% Duty Cycle: 310A  
@60% Duty Cycle:400A

Pulse TIG Parameters

- Duty ratio: 10-90%
- Pulse frequency:0.5-10Hz
- Base current: 10-90% of  $I_{pulse}$  Current
- Pulse current: 10-400A
- Start current: 10-400A
- Current unslope time: 0-10sec
- Current down slope control: 0-10sec
- Pre-flow:0-5sec
- Post flow:0.1-20sec
- Crater current: 10-400A
- Current/Voltage Display: 7 Segment LED display for current &other parameter
- Ingress protection: IP23 Class
- Cooling: Forced Air
- Insulation: H
- Welding Output Terminals: Cam Lock Connections
- Length: 660mm

- Width: 315mm
- Height: 485mm
- Weight: 46kg

Water Cooling Unit

- Input supply voltage(AC): 230V
- Phase : 1
- Frequency: 50/60Hz
- Water reservoirs: 8 Ltrs  
Flow rate: 10Ltr/Min

**3. Inverter based MIG Welding**

**Quantity: 1**

**(Brand/ Make: i. ADOR, ii. ESAB, iii. OERLIKON, iv.GYS, v. REHM)**

**Description/ Specification:**

- Inverter based digitally controlled GMAW outfit
- High efficiency and high power factor- resulting energy saving
- Enhanced reliability due to SMD technology
- Auto “Weld Stop” when welding torch is taken away from weld job
- Compatible to Power Generator Supply
- Digital panel for adjusting the welding parameters
- 25% more energy efficient than conventional machines
- Maximum power factor is 0.93
- Excellent dynamic response enables superior arc characteristics
- 2T, 4T operating modes
- Electronic choke adjustment for better arc control
- Crater voltage and crater current adjustment through digital panel
- Unique feature of Fresh Tip Transfer(FTT) to avoid globule formation
- Automatic “Weldstop “ facility

Protection:

- The equipment is provided with following protections.
  - a. Under voltage and Over Voltage: Error message is displayed and the equipment shuts down if the
  - b. Over temperature: Error message is displayed and the equipment shuts down if the temperature of the main power components exceeds the safe limits.
  - c. Single phasing protection: Error message is displayed and the equipment shuts down if any one of the three phase supply line is absent (single-phasing prevention / protection)

Power Source Specifications:

Input:

- Input voltage: 415V,+15%,-10%
- Phase : Three(3)Φ
- Frequency: 50/60Hz
- Input @ 100% duty cycle : 12KVA  
@No load : 0.24 KVA



**Output:**

- Open circuit voltage: 65V±5%
- Welding current range: 50-400A
- Welding current@ 100% Duty Cycle: 400A  
@60% Duty Cycle:310A
- Welding Voltage Range: 16-39V
- Crater current Range: 50-400A
- Crater Voltage Range: 16-39V
- Mode of operation: 2 track, 4 track, Gas check, OCV check facility
- Remote control available for setting voltage and current
- Power factor: max 0.93
- Efficiency: 87% @ 100% duty cycle
- Ingress protection: Class IP23
- Cooling: Forced Air
- Insulation: H
- Length:700mm
- Width: 450mm
- Height: 600mm
- Weight: 44kg
- Audio Noise Emission: 70dB

**Wire Feeder Specifications**

- Wire feed speed: 1.5-18m/min
- Suitable welding wire Aluminum: 1.2- 1.6  
diameter : Steel:0.8, 1.0,1.2,&1.6
- Wire Roll Drive : Four
- Wire drive motor: permanent magnet DC
- Wire Feeder Motor Voltage: 42V
- Wire Feeder Fitted with Rollers : 1.2/1.6 for  
solid wire 2 no.
- Wire spool capacity : 15kg
- Length:563mm
- Width: 230mm
- Height: 410mm
- Weight(without Spool): 16kg

**Torch Specifications:**

- Rating: 400A @60% Duty Cycle for CO2
- End Connection To Torch: Euro
- Suitable For Wire: 0.8, 1.0, 1.2, 1.6  
Torch length: 3m

**4. Horizontal Spindle Surface Grinding Machine**

**Quantity: 1**

**(Brand/ make: i. PHILIPS CROP, ii. KEHEREN, iii. HMT,  
iv. CHEVALIERMACHINERY)**

**Description/ Specification:**

Table size: 600 X 300 mm

		<p>Table movement motorized  Max longitudinal travel : 625mm  Cross wise travel: 315mm  Hand wheel per / rev. 100 mm (4"),  Motorized cross maximum 262 mm  Auto transverse increment 1-10mm  Hand wheel per / rev. 5mm  Hand wheel per graduation 0.02mm  Manual vertical movement 400mm  Hand wheel per / rev. 1mm  Hand wheel per graduation 0.01mm  Grinding spindle drive 1 HP 415 V 2800 RPM  Table drive motor 1 HP 415 V 1500 rpm</p> <p>Complete with electrical, grinding wheel, wheel flange, flange puller,  magnetic chuck setting screw, diamond dresser block, spindle locking  spanner, coolant pump with tank &amp; spout assembly, close pole magnetic  chuck 20"x12", machine lamp</p>
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**FORMAT FOR QUOTATION SUBMISSION**

(In letterhead of the supplier with seal)

Date: \_\_\_\_\_

To:

\_\_\_\_\_  
\_\_\_\_\_

Sl. No.	Description of goods (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
<b>Total Cost</b>							

Gross Total Cost (A+B): Rs. \_\_\_\_\_

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. \_\_\_\_\_ (Amount in figures) (Rupees \_\_\_\_\_ amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of ————— months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Contact No: \_\_\_\_\_