### **INVITATION FOR QUOTATION**

# TEQIP-II/2016/CH1G02/Shopping/115

29 -Feb-2016

To,

# **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.<br>No | Brief Description                         | Quantity | Delivery<br>Period(In<br>days) | Place of Delivery   | Installation<br>Requirement<br>(if any) |
|-----------|---|----------|--------------------------------|---|---|
| 1         | Thermal conductivity of Insulating powder | 1        | 40 days                        | Dr SS Bhatnagar University Institute of Chemical Engg and Tech, Panjab University, Chandigarh | Will be done at<br>the site             |
| 2         | Thermal conductivity of insulating slab   | 1        | 40 days                        | Dr SS Bhatnagar University Institute of Chemical Engg and Tech, Panjab University, Chandigarh | Will be done at<br>the site             |
| 3         | Thermal conductivity of metal rod         | 1        | 40 days                        | Dr SS Bhatnagar<br>University Institute<br>of Chemical Engg                                   | Will be done at<br>the site             |

| 4 | Heat Transfer in natural convection   | 1 | 40 days | and Tech, Panjab University, Chandigarh  Dr SS Bhatnagar University Institute of Chemical Engg and Tech, Panjab University, Chandigarh | Will be done at<br>the site |
|---|---|---|---------|--|-----------------------------|
| 5 | Heat Transfer in forced convection  | 1 | 40 days | Dr SS Bhatnagar University Institute of Chemical Engg and Tech, Panjab University, Chandigarh  | Will be done at<br>the site |
| 6 | Stefan Boltzmann's<br>Apparatus   | 1 | 40 days | Dr SS Bhatnagar University Institute of Chemical Engg and Tech, Panjab University, Chandigarh  | Will be done at<br>the site |
| 7 | COMPUTER CONTROLLED - HEAT TRANSFER THROUGH COMPOSITE WALL (With Data Logging Facility) | 1 | 40 days | Dr SS Bhatnagar University Institute of Chemical Engg and Tech, Panjab University, Chandigarh  | Will be done at<br>the site |

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 II** 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 on the prescribed format enclosed at Annexure II.
- 4. Each bidder shall submit only one quotation.
- 5. Quotation shall remain valid for a period not less than **55** 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 - 90% of total cost

Satisfactory Acceptance - 10% of total cost

- 10. All supplied items are under warranty of **36** months from the date of successful acceptance of items.
- 11. You are requested to provide your offer latest by 02:30 hours on 17th March 2016.

- 12. Detailed specifications of the items are at Annexure I.
- 13. Training Clause (if any): The bidder will provide training of the specified equipment at the time of installation without any additional cost.
- 14. Testing/Installation Clause (if any): The bidder will install the equipment's at the specified site without any additional cost.
- 15. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.
- 16. The vendor has to provide the detailed list of institutions/companies (in India) where he has supplied the items along with the list, year of installation and contact person details.
- 17. Each bidder will submit bid under two bid system as follow:-

#### (a) First Envelop will contain:

- i. Technical bid confirming specification as per Annexure-I
- ii. Information Brochure's/ Product catalogue clearly indicating the model quoted for
- iii. Detailed list of institutions/companies (in India) where you have supplied these items alogwith the list and year of installation and contract person on details

#### (b) Second Envelop will Contain:

Financial bid indicating items wise price for items mentioned in the technical bid on the format at Annexure-II.

The Vendor will submit the quotation in above envelops duly sealed. On first Envelop the vendor will mention Technical bid and on second envelop the vendor will mention price bid. Both these sealed envelop will be put in one closed envelop super scribing clearly the reference of NIQ and the date of opening of bid. The first envelope will be opened first After Evaluation of Technical bid, the second Envelop i.e. price bid will be opened only of those vendors who are meeting the technical specification.

18. Sealed quotation with proper **TEQIP quotation number** written on the envelope which is to be submitted/ delivered at the address mentioned below,

The Chairman,

TEQIP-II,

Dr.S.S.Bhatnagar University Institute of Chemical Engineering and Technology,

Panjab University,

Chandigarh - 160 014

19. We look forward to receiving your quotation and thank you for your interest in this project.

(Authorized Signatory)

Name & Designation

### **Annexure I**

| Sr. | Item Name                                 | Specifications  |
|-----|---|---|
| No  |   |   |
|     |   |   |
| 1   | Thermal conductivity of Insulating powder | Inner Sphere: Dia 100 mm. Outer Sphere: Dia 200 mm. Heater: Nichrome Wire. Heating control: Special arrangement to control heat input Control panel comprising of: Digital Voltmeter: 0-300 Volt. Digital Ammeter: 0-2 Amp. Variac: 0-230 V, 2 Amp, Temperature Measurement: By Temperature Measurement: By Temperature transmitter, Output 4-20 mA - 10 Nos. With standard make On off switch, Mains Indicator etc.  |
| 2   | Thermal conductivity of insulating slab   | Specimen Diameter : 180 mm (approx). Thickness : 12 mm (approx). Central Heater : Dia 100 mm, sandwiched between copper plates. Ring Guard Heater : Width 35 mm, sandwiched between copper rings. Cooling Chamber : Made of Aluminum for water circulation Heating control : Special arrangement to control heat input Insulation : Ceramic wool Control panel comprising of: Digital Voltmeter: 0-300 Volt. Digital Ammeter: 0-2 Amp Variac : 0-230 V, 2 Amp, (2 Nos.) (One each for central & ring guard heater) Temperature Measurement :By temperature transmitter, Output 4-20 mA -6Nos. With standard make On off switch, Mains Indicator etc. MS Cabinet to accommodate the slab assembly. |
| 3   | Thermal conductivity of metal rod         | Metal Bar Material : Copper  Length : 400 mm (approx.)  Diameter :25 mm  Insulating shell  Length : 250 mm  Diameter : 200 mm  Cooling Water Jacket  Length : 75 mm  Diameter : 100 mm  Heater : Nichrome Wire.   |

|   | <u> </u>                            | Harting Control  |  |  |  |  |
|---|-------------------------------------|--|--|--|--|--|
|   |                                     | Heating Control : Special arrangement to control heat input  |  |  |  |  |
|   |                                     | Water Flow Measurement : By flow   |  |  |  |  |
|   |                                     | sensor   |  |  |  |  |
|   |                                     | Control panel comprising of  |  |  |  |  |
|   |                                     | Digital Voltmeter : 0-300 Volt.  |  |  |  |  |
|   |                                     | Variac : 0-230 V, 2 Amp.   |  |  |  |  |
|   |                                     | Digital Temp. Indicator: 0-199.9°C, with multi-channel switch,                                     |  |  |  |  |
|   |                                     |  |  |  |  |  |
|   |                                     | Temperature measurement : By   |  |  |  |  |
|   |                                     | temperature transmitter, Output 4-20 mA - 8 Nos. With standard make on/off switch, Mains Indicator |  |  |  |  |
|   |                                     |  |  |  |  |  |
|   |                                     | etc.   |  |  |  |  |
| 4 | Heat Transfer in natural convection | Test Section   |  |  |  |  |
|   |                                     | Diameter: 38 mm (approx).  |  |  |  |  |
|   |                                     | Length : 500 mm (approx).  |  |  |  |  |
|   |                                     | Heater: Nichrome Wire.   |  |  |  |  |
|   |                                     | Heating Control : Special arrangement to   |  |  |  |  |
|   |                                     | control heat input   |  |  |  |  |
|   |                                     | Control panel comprising of:   |  |  |  |  |
|   |                                     | Digital Voltmeter:0-300 Volt.  |  |  |  |  |
|   |                                     | Digital Ammeter: 0-2 Amp.  |  |  |  |  |
|   |                                     | Variac: 0-230 V, 2 Amp.  |  |  |  |  |
|   |                                     | Temperature Measurement: By Temperature  |  |  |  |  |
|   |                                     | transmitter, Output 4-20 mA -8Nos.   |  |  |  |  |
|   |                                     | With standard make On/Off switch, Mains  |  |  |  |  |
|   |                                     | Indicator etc.   |  |  |  |  |
|   |                                     | MS Duct to accommodate the assembly with front   |  |  |  |  |
|   |                                     | window of Acrylic.   |  |  |  |  |
| _ | Heat Transfer in forced convection  | ,  |  |  |  |  |
| 5 | Treat Transfer in forced convection | Test section: Horizontal, externally heated  |  |  |  |  |
|   |                                     | Diameter : 28 mm (approx.)   |  |  |  |  |
|   |                                     | Length : 400 mm (approx.)  |  |  |  |  |
|   |                                     | Blower : FHP of Standard make  |  |  |  |  |
|   |                                     | Heater: Nichrome Wire.   |  |  |  |  |
|   |                                     | Heating Control: Special arrangement to  |  |  |  |  |
|   |                                     | control heat input   |  |  |  |  |
|   |                                     | Air Flow Measurement : Orificemeter with   |  |  |  |  |
|   |                                     | differential pressure transmitter  |  |  |  |  |
|   |                                     | Control panel comprising of:   |  |  |  |  |
|   |                                     | Digital Voltmeter:0-300 Volt.  |  |  |  |  |
|   |                                     | Digital Ammeter :0-2 Amp.  |  |  |  |  |
|   |                                     | Variac : 0-230 V, 2 Amp  |  |  |  |  |
|   |                                     | Temperature Measurement: By Temperature  |  |  |  |  |
|   |                                     | transmitter, Output 4-20 mA -6Nos.   |  |  |  |  |
|   |                                     |  |  |  |  |  |
|   |                                     | With standard make On off switch, Mains  |  |  |  |  |
|   |                                     | Indicator etc.   |  |  |  |  |
| 6 | Stefan Boltzmann's Apparatus        | Hemisphere : Dia 200 mm (approx.) made of  |  |  |  |  |
|   |                                     | Copper   |  |  |  |  |
|   |                                     | Jacket: Dia. 250 mm (approx.) made of Stainless  |  |  |  |  |

|   |                           | T  |  |  |  |
|---|---------------------------|--|--|--|--|
|   |                           | Steel  |  |  |  |
|   |                           | Test Disc Size:20 mm Dia. x 1.5-mm thickness   |  |  |  |
|   |                           | made of Copper   |  |  |  |
|   |                           | Water Tank : Stainless steel 12 Ltrs. cap.   |  |  |  |
|   |                           | Heater: Nichrome wire immersion heater.  |  |  |  |
|   |                           | Heating control: Special arrangement to  |  |  |  |
|   |                           | control heat input   |  |  |  |
|   |                           | Control panel comprising of:   |  |  |  |
|   |                           | Digital Temp. Controller: PID Controller, 0-199.9°C (for water tank)                 |  |  |  |
|   |                           | Temperature Measurement: By Temperature  |  |  |  |
|   |                           | transmitter, Output 4-20 mA -2Nos.   |  |  |  |
|   |                           | With standard make on/off switch, Mains Indicator                                    |  |  |  |
|   |                           | etc.   |  |  |  |
| 7 | COMPUTER CONTROLLED -     | Slab assembly arranged symmetrically on both   |  |  |  |
|   | HEAT TRANSFER THROUGH     | sides of heater.   |  |  |  |
|   | COMPOSITE WALL (With Data | Slab Material: Slab Size   |  |  |  |
|   | Logging Facility)         | Cast Iron: 250 mm dia. & 20mm thick.   |  |  |  |
|   | 20 0 7                    | Bakelite: 250 mm dia. & 15 mm thick.   |  |  |  |
|   |                           | Press Wood: 250 mm dia. & 12 mm thick.   |  |  |  |
|   |                           | Heater: Nichrome wire type   |  |  |  |
|   |                           | Heating control: Special arrangement to control                                      |  |  |  |
|   |                           | heat input   |  |  |  |
|   |                           | Temperature Measurement: By Temperature  |  |  |  |
|   |                           | transmitter, O/P 4-20mA- 8Nos.   |  |  |  |
|   |                           | Control panel comprising of  |  |  |  |
|   |                           | Digital Voltmeter: 0-300 Volts.  |  |  |  |
|   |                           | Digital Ammeter: 0-2 Amp.  |  |  |  |
|   |                           | Variac: 0-230 V, 2Amp.   |  |  |  |
|   |                           | With standard make On/off switch, Mains  |  |  |  |
|   |                           | Indicator etc.   |  |  |  |
|   |                           | Cabinet to accommodate the slab assembly with  |  |  |  |
|   |                           | front window of glass/acrylic.   |  |  |  |
|   |                           | Computer System: Branded PC(HP/DELL) with  |  |  |  |
|   |                           | ± ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '  |  |  |  |
|   |                           | I5/I7 processor, DVD Drive, preloaded windows, Windows 8, MS-Office pre-loaded, DATA |  |  |  |
|   |                           | ACQUISITION CARD.  |  |  |  |
|   |                           | ACQUIRTION CARD.   |  |  |  |
| L |                           |  |  |  |  |

#### Annexure-II

# FORMAT FOR QUOTATION SUBMISSION

(In letterhead of the supplier with seal)

|                            | Date:                |  |             |  |             |            |                     |            |
|----------------------------|----------------------|--|-------------|--|-------------|------------|---------------------|------------|
| To:                        |                      |  |             |  |             |            |                     |            |
|                            |                      |  |             |  |             |            |                     |            |
| SI.                        | Description of       | Description of Qty. Unit Quoted Unit rate in Rs. |             | Quoted Unit rate in Rs.                                    | Total Price |            | Sales tax and other |            |
| No.                        | goods (with full     |  |             | (Including Ex Factory price, excise duty, packing and      | (A)         |            | taxes p             | ayable     |
|                            | Specifications)      |  |             | forwarding, transportation, insurance, other local         | In          | In         | In                  | In figures |
|                            |                      |  |             | costs incidental to delivery and warranty/ guaranty        | figures     | words      | %                   | (B)        |
|                            |                      |  |             | commitments)   |             |            |                     |            |
|                            |                      |  |             |  |             |            |                     |            |
|                            |                      |  |             |  |             |            |                     |            |
|                            |                      |  | 1           | <br>Total Cost   |             |            |                     |            |
|                            |                      |  |             |  |             |            |                     |            |
|                            |                      |  |             |  |             |            |                     |            |
| Gross Total Cost (A+B): Rs |                      |  |             |  |             |            |                     |            |
| We agr                     | ee to supply the abo | ve goods   | s in accord | dance with the technical specifications for a total contra |             |            |                     |            |
| _                          |                      | _  |             | —————amount in words) within the period specif             | -           |            |                     |            |
|                            |                      |  |             | ranty/ guarantee of ————— months shall apply               |             |            |                     |            |
|                            |                      |  |             | d in the Invitation Letter.                                |             |            | , and the also      |            |
| •                          |                      |  |             | o ensure that no person acting for us or on our behalf wi  | ll engage i | n briberv. |                     |            |
|                            | ,,                   |  |             | ,  |             | ,          |                     |            |
| Signatu                    | re of Supplier       |  |             |  |             |            |                     |            |
| _                          |                      | _  |             |  |             |            |                     |            |
|                            | s:                   |  |             |  |             |            |                     |            |
| Contac                     |                      |  |             |  |             |            |                     |            |