

# NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

DEPARTMENT OF CIVIL ENGINEERING  
POST SRINIVASNAGAR, MANGALORE – 575 025 (D K)

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## NOTICE INVITING QUOTATION

Notification. No: NITK/CED/MPSW-NMPT/BC/2022-23/4

Date: 16-08-2023.

|  |   |
|--|---|
| <b>Name of Goods</b>   | <b>Dynamic amplifier and other transducer</b>   |
| <b>Estimated Amount:</b>                                       | <b>INR 2.00 Lakhs.</b>  |
| <b>Time for Supply of item after release of Purchase order</b> | <b>15 Days</b>  |
| <b>Document Download / Sale Start Date</b>                     | <b>17-08-2023, 03:00 PM</b>   |
| <b>Clarification Start Date</b>                                | <b>17-08-2023, 03:00 PM</b>   |
| <b>Clarification End Date</b>                                  | <b>04-09-2023, 03:00 AM</b>   |
| <b>Bid Submission Start Date</b>                               | <b>17-08-202, 03:00 PM</b>  |
| <b>Last Date for submission of bids</b>                        | <b>05-09-2023, 11:00 AM</b>   |
| <b>Bid Opening Date</b>  | <b>06-09-2023, 03:00 PM</b>   |
| <b>Address for Submission of bids</b>                          | Dr. Babloo Chaudhary, Dept. of Civil Engg., NITK Surathkal, Mangalore – 575025, Karnataka,<br>Phone No: 0824 2473041(O), 8724041225(M)<br>Email: <a href="mailto:babloo@nitk.edu.in">babloo@nitk.edu.in</a> |



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**NOTICE INVITING QUOTATION (NIQ)**

The National Institute of Technology Karnataka, Surathkal (in short – NITK, Surathkal) is an Institute Of National Importance Under Ministry of Education Govt of India, imparting Technical Education and engaged in Research Activities. It is proposed to procure the items for the departmental academic/research activities.

Sealed Quotations as per the Price Schedule given in this NIQ are invited for the following items subject to the terms and conditions, from the reputed manufacturers or its authorised dealers so as to reach on or before scheduled date and time. The quotations in the firm's Business letter head should be address to the "Director, NITK, Surathkal". The envelope shall be superscribed with the Quotation Notification Number and the Name of the Goods for which quotation is submitted.

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**Sd/-  
HOD**

Note: Institute shall not be responsible for any postal delay about non-receipt /non-delivery of the bids or due to wrong addressee.

**SECTION-1**  
**Terms and Conditions**

1. The rates should be quoted for preferably FOR destination from supply within India.
2. The bidder shall indicate the excise duty exemption for the goods if applicable.
3. The rate quoted should be on unit basis. Taxes and other charges should be quoted separately, considering exemptions if any. The rate should be quoted in INR only
4. Rate quoted should be inclusive of Testing, commissioning and Installation of equipment and Training.
5. Payment: No advance payment will be made. Payment will be made only after the supply of the item in good and satisfactory condition and receipt of performance security by supplier.
6. Guarantee/Warranty period should be specified for the complete period should be specified in section 3 of this tender document.
7. Period requirement for the supply and installation of item should be specified in section 3 of this tender document.
8. In case of dispute, the matter will be subject to Mangalore Jurisdiction only.

**SECTION-2**  
**SCHEDULE OF REQUIREMENTS, SPECIFICATIONS AND ALLIED DETAILS**  
[ To be filled up by the Department / Centre of NITK, Surathkal ]

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|   |  |
|---|--|
| Item(s) Name to be Procured   | : <b>Dynamic amplifier and other transducer</b>  |
| Brief Specifications of the Item(s)<br>(Attach Additional Sheet if necessary) | : <b>Dynamic amplifier – 18 Channels</b> [10 channels for 10 strain gauges, 03 channels for 01 tilt sensor (3 directions) and 05 channels for 05 earth pressure cells]<br><i>Detailed Specifications are given at the end of the document.</i> |
| Quantity  | : 01 Set   |
| Any other details / requirement   | : Detailed Specifications are given at the end of the document.  |
| Warranty Period required  | : 2 Years & AMC-3Years   |
| Delivery Schedule expected<br>after placement of Purchase order<br>(in Weeks) | : 2 weeks or 15 days   |

**SECTION 3**  
**PRICE SCHEDULE**

[ To be used by the bidder for submission of the quotation]

- 
1. Item Name :
  2. Specifications  
(Conforming to Schedule of requirements  
Enclose additional sheets if necessary) :
  3. Currency and Unit Price :
  4. Quantity :
  5. Item Cost (Sl No. 3 \* Sl. No. 4 ) :
  6. Taxes and Other Charges :  
(i) Specify the type of taxes and duties  
in percentages and also in figures.  
(ii) Specify Other Charges in figures.
  7. **Warranty Period** :  
**(Conforming to the Schedule of requirements)**
  8. Delivery Schedule :  
(Conforming to the Schedule of requirements)
  9. Name and address of the Firm for  
placing purchase order :
  10. Name and address of Indian authorized  
agent ( in case of imports only) :

**Signature of the Bidder:** \_\_\_\_\_

**Name and Designation:** \_\_\_\_\_

**Business Address** : \_\_\_\_\_

\_\_\_\_\_

**Place:**

**Date:**

**Seal of the Bidder's Firm**

**SECTION 4**  
**CONTRACT FORM**

[ To be provided by the bidder in the business letter head]

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1. (Name of the Supplier's Firm) hereby abide by the delivery schedule mentioned in this document for supply of the items if the purchase order is awarded.
2. The item will be supplied conforming to the specifications stated in this document without any defect and deviations.
3. Warranty will be given for the period mentioned in this document and service will be rendered to the satisfaction of NITK, Surathkal during this period.

**Signature of the Bidder:** \_\_\_\_\_

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

**Business Address** : \_\_\_\_\_

\_\_\_\_\_

**Place :**

**Date :**

**Seal of the Bidder's Firm**

## Specifications

### 1) Dynamic Amplifier/Analyzer (18 channels) - 01 Number

Supplying of dynamic amplifier for collecting and amplifying the data received from sensors/gauges/transducers and feed into the data acquisition system (DAQ). The dynamic amplifier/analyzer must be simple to operate, compact and able to handle large data with high speed. It must be able to work well with real earthquake data, dynamic loadings and sinusoidal waves (with very low to high frequency). The dynamic amplifier must be suitable for all the transducers mentioned in the documents. This item must be ready to use in all the sense (e.g. software installation, update, etc.). Its body should be made of aluminum or better material(s). Each and every part of the item must be corrosion resistant. Warranty (all parts and as a whole) for the item must be of 02 years and AMC must be of 03 years from the date of supply of the item. No extra money will be provided for the AMC and warranty. Specifications for dynamic amplifier are given below:

| Item(s)                | Description(s)   |
|------------------------|--|
| Channel No             | 16 or more<br>(each channel should be able to connect all wires of each gauge/transducer. That means, the analyzer should be able to connect with 16 gauges at a time) |
| Channel Type           | Dedicated channel as per sensor  |
| Accuracy               | 0.01%  |
| Linearity              | 0.1%   |
| Bandwidth              | 200kHz   |
| Power Supply           | 220 VAC 50Hz   |
| Compatible             | It must be compatible with the existing data acquisition system(see Figure 1)*.  |
| Channel configurations | 10 channels for 10 strain gauges<br>03 channels for 01 tilt sensor or inclinometer (3-axis/directions)<br>05 channels for 05 earth pressure cells                      |



Figure 1. Existing data acquisition system( the dynamic amplifier/analyzer must be compatible with the existing DAQ

## 2) Tilt Sensor (3 Axis) - 01 Number

Supplying of tilt sensor/inclinometer for field/lab tests. The tilt sensor should give the side way tilts and fore-and after tilt of the towed body without affecting the normal performance of the towed body. It simple to operate, compact and able to handle large data with high speed Its body should be made of aluminum or better material(s). Each and every part of the item must be corrosion resistant. Warranty (all parts and as a whole) for the item must be of 02 years from the date of supply of the item. Specifications for tilt sensor are given below:

| Item(s)  | Description(s)  |
|--|---|
| Range (Heading, Tilt and Roll)   | ± 90 degree   |
| Accuracy   | 0.1 degree  |
| Resolution   | 0.1 degree  |
| Output   | Analog output   |
| Operating Voltage  | 9 ~ 12 VDC  |
| Operating Current  | 20mA  |
| Cable Length   | 20 Metres   |
| Installation   | Inhouse Installation  |
| Software   | Windows based Data Acquisition Software                                       |
| Warranty   | 3 Years   |
| Compatible   | The tilt sensor zmust be interfaced and compatible with the dynamic Amplifier |
| Waterproof   | 100% waterproof upto 2m depth of water  |
| The tilt sensor should measure the degrees of freedom in roll, pitch and yaw motion (rotation in x, y and z direction) |   |
| The tilt sensor should measure in degrees with respect to time.  |   |

\*\*\*\*\***End of the Document**\*\*\*\*\*