



**NATIONAL INSTITUTE OF TECHNOLOGY, DURGAPUR**  
**CIVIL ENGINEERING DEPARTMENT**  
**NOTICE INVITING TENDER**

Ref.: NITD/CIVIL/PDA/DSR/STRAIN-MEASURING\_SET-UP/01

Date : 22.12.2014

**Sub: Request for Quotation of Strain Measuring items & Set-up thereof**

Dear Sir,

Sealed tenders are invited from bonafide, resourceful and competent registered vendors for purchasing of LVDT, Data Logger, Electrical Strain Gauges, Connecting wires etc. and to develop a strain measuring Set-up thereof. The detailed specifications of these items are attached in the Annexure – I. Interested vendors are requested to bid competitive quotation along with the commercial terms and conditions for the said product. Prevailing Tender rules of the Institute will be followed.

Last date and time of Submission of Tender Documents: Up to 3.30 P.M. of 19-01-2015 and opening at a suitable date to be intimated.

The issue and acceptance of any tender rests solely with the Institute authority who is not bound to accept any tender without assigning any reason whatsoever.

**General terms and Conditions:**

- a) All duties, taxes and other levies payable by the bidder under the contract shall be included in the total price F.O.R. NIT Durgapur.
- b) The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- c) The price must be quoted in Indian Rupees & inclusive of all taxes.
- d) Detailed technical specifications, conforming to the given specifications.
- e) Quotation shall remain valid for 60 days from the date of tender submission.
- f) Payment will be made within one month from the date of delivery and satisfactory installation & commissioning of the items.
- g) Valid Trade licence are to be submitted
- h) Road Permit/ Way Bill ,if any, should be obtained/procured by the vendor.
- i) At least one year on-site comprehensive warranty of all items including requisite accessories & Set-up.
- j) All duties, taxes and other levies payable by the vendors under the contract shall be included in the total price F.O.R. NIT Durgapur
- k) Liquidated Damage will be applicable at the rate of 0.5% per week. The purchaser has the right to cancel the purchase order when LD accumulates to 10 %.
- l) The sealed quotations to be submit at “Department of Civil Engineering “ within stipulated days from the date of our tender notice.
- m) All other terms and conditions are follows as per the NIT Durgapur Purchase rules.

For any other quires, contact to the undersigned at Civil Engineering Department, NIT Durgapur.

(Dilip Kr. Singha Roy)  
Professor, CE Deptt.

Dr. S. Bhattacharayya  
Head, CE Deptt.

**The bid must be addressed to:**

**Head, Civil Engineering Department**

**NIT, Durgapur, Mahatma Gandhi Avenue, Durgapur - 713209**

**Contact Person: Dilip Kr. Singha Roy; Email Id: dsr\_rec\_dgp@yahoo.com; Contact No. 09434788039**

## Annexure-I

### Strain Measuring items & Set-up thereof

The measurement of stresses and strains in materials like concrete & steel is of primary importance in determining their useful active life or behavior under load. In this regards, a Laboratory Set-up is to be developed to study the load-deflection and stress-strain behaviours of steel and concrete & their composites. The basic tools to be used to obtain these measurements are the LVDTs & Strain gauges which are cemented to the specimen to be tested, so that the gauge is subjected to strain as the specimen itself. Subsequent change in gauge resistance can be able to conveniently converted into an equivalent reading of strain in the test specimen. A Data logger is to be provided with 16 inputs for measuring strains & deflections on 16 different points in combination which can also be able to store data not less than 2000 reading in respect of selected time interval. The Data Logger should be able to transfer stored data to computer with RS232/ USB port. Consequently, requisite connections to prepare/built the said Laboratory Set-up through proper connectivity by wires and cables to be made with Data logger to Strain gauges & LVDTs, and Strains gauges to the specimen to be tested & respective arrangement for fixing & connection, that is, the requisite adhesive, soldering iron, soldering wire and flux of sufficient quantity for fixing on the surface of concrete/steel specimen along with data transfer facilities should be supplied over and above the slated items mentioned below. The quantities may vary slightly specially the item No. 1 as per the availability of fund.

Item No.	Equipment Name	Technical Specification	Quantity
1.	<b>Electrical Strain Gauges:</b>  <b>25mm width</b>  <b>40mm width</b>  <b>65mm width</b>	25mm, 40mm and 65mm flat grid type linear moisture proof and to match temperature co-efficient; for long term applications, ideal combination with Quick Setting Acrylic Adhesive having the following features: Grid size : 25 x 1.0 mm for 25mm ; 50 x 1.0 mm for 50mm and 65x1.0mm or more for 65mm Nominal Resistance: 120 ohms Nominal Gauge Factor: $\pm 2.00$ Application: Concrete/Steel Surface application The requisite adhesive, soldering iron, soldering wire and flux of sufficient quantity for fixing on the surface of concrete/steel specimen should be supplied	100  100  50
2.	<b>LVDT 50mm Traveller</b>	Sensitivity :7mmV/mm/V; Core rod diameter: At least 6mm Material for housing and core shaft : Stainless steel; Least count : 0.01mm; Operating temperature range : 0 to 70o C; Excitation voltage : 1 to 5V rms at 5 KHZ	03
3.	<b>Data Logger of 16 Channel</b>	To have 16 inputs for measuring strains on 16 different points and can store the data upto 2000 readings; A terminal block to connect the 16 x 4 inputs from strain gauges. At least 3 inputs for measuring deflection in 3 different points may be made	01
4.	<b>Connecting Wire for LVDT/Data Logger</b>	4 core shielded cable wire of 90m roll	01
5.	<b>Connecting wire from Strain Gauge to wire Roll</b>	Single thin wire of 90m roll to connect the strain gauge to 4 core shielded cable	02