

**Government of India  
Bhabha Atomic Research Centre  
Post Irradiation Examination Division  
Radiological Laboratories, Trombay, Mumbai 400 085**

Tel: 25594047, Fax: 2550 5151

Ref: PIED/KMP/2018/1154

22.11.2018

**Sub: Fabrication and Supply of Linear displacement measurement system for hot cells at PIED.**

Dear Sir,

Please send us your lowest quotation for the following fabrication, supply, installation and commissioning works at NHF, RLG as per the site condition and the scope of work given below:

**Scope of work:**

Fabrication and Supply of Linear displacement measurement system for hot cells at PIED consists of

| 1.0 Linear Variable differential Transformer as per the specifications.  |                    | Quantity – 4 nos.                              |
|--|--------------------|--|
| The linear Variable Differential Transducer (LVDT) shall be used in the gadgets for measurement of pressure tube ID variations in 3 directions. The LVDT shall have linear ball bearing and spring extend.<br>Model No. LBB 315PA-200<br>LVDTs shall meet following specifications |                    |  |
| Sr No.   | Item               | Specifications desired                         |
| 1  | Gaging Range       | : + 0.200 inches spring extend                 |
| 2  | Excitation Voltage | : 5 V rms                                      |
| 3  | Input Frequency    | : 2.5 to 10 KHz                                |
| 4  | Sensitivity        | : 4.3 mV/V/0.001 inches                        |
| 5  | Linearity          | : + 0.2 % of full range output                 |
| 6  | Repeatability      | : 0.1 µm                                       |
| 7  | Housing material   | : High carbon chromium heat treated tool steel |
| 8  | Body diameter      | : 0.315 inches                                 |
| 9  | Tip material       | : Carbide ball tip                             |
| 10   | Cable length       | : 2 m  |

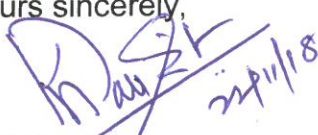
| 2.0 Signal conditioner for displacement transformer as per the specifications.  |                                 | Quantity – 4 nos.      |
|---|---------------------------------|------------------------|
| The Signal conditioner for displacement transformer shall supply excitation voltage to the LVDT and convert the output of the LVDT into 4 – 20 mA for transmission to the control lab.<br>Model No. LIM 4-40 OEM LVDT |                                 |                        |
| Sr No.  | Item                            | Specifications desired |
| 1   | Transducer Excitation Voltage   | : 3.5 + 10% V rms      |
| 2   | Transducer Excitation Frequency | : 2.5 KHz              |

|    |                 |   |                                |
|----|-----------------|---|--------------------------------|
| 3  | Output          | : | 4 – 20 mA DC                   |
| 4  | Sensitivity     | : | 0.1 to 5.6 V rms for FS output |
| 5  | Fixed gain      | : | 6                              |
| 6  | Adjustable gain | : | 2.5 to 1                       |
| 7  | Non linearity   | : | 0.05 %                         |
| 8  | Gain controls   | : | Multiturn Potentiometer        |
| 9  | Input Voltage   | : | 24 V dc                        |
| 10 | Connection      | : | Screw terminals                |

**Please note the following:**

1. The work is to be completed within 60 days of receiving the firm work order from us.
2. The sealed quotations shall reach the office of the Head PIED, New Hot Cells Facility, RLG, Mumbai – 85 on or before **30.11.2018 11:00hrs** only by **Indian Postal Service**.
3. Please address your offer to: **K M Pandit, SO/F, Post Irradiation Examination Division, RLG, BARC, Trombay, Mumbai-400 085.**
4. The quotations are to be sent in a sealed envelope with the following information marked on top of the envelope: "Linear displacement measurement system"
5. Offers sent by telegram, telex, fax or e-mail will **not** be considered.
6. All taxes should be mentioned clearly.
7. Quotation should be in the printed letter head /quotation format which should consist of GST Registration Number, PAN Number of the firm, etc.
8. **Good & Services Tax : 5%.** The goods proposed to be fabricated on this work order are meant for research purpose of Research Institution under Department of Atomic Energy and are exempt from payment of GST in terms of Notification No. 47/2017 integrated tax (rate) dated 14.11.2017 issued by Ministry of Finance, Department of Revenue of Government of India. In the event of order, the Purchaser will make available the certificate to avail integrated GST @5% duly signed by the authorized officer in the Department of Atomic Energy.
9. **Quotation shall be signed by proprietor or authorized person and affix company seal.**
10. Computer generated quotation form will not be accepted.
11. Income Tax @2%, surcharge on IT as applicable and educational cess @3% (on IT & surcharge) will be deducted at source from your bill
12. Offer should be on free delivery basis to RLG Zonal Stores, BARC, Trombay.
13. Delivery period should be mentioned with all the possible consideration.
14. Payment will be made within 30 days from the date completion.

Yours sincerely,

  
K M Pandit  
SO/F, PIED