

**Reactor Engineering Division
Passive Component & Systems Section**

Engg. Hall No.7
Trombay
Mumbai 400085.

Ref: RED/PCSS/ MF/ **12448** /2022

December **05**, 2022

Sub: Invitation to quote

Dear Sirs,

For & on behalf of President of India sealed quotations are invited by Head, Reactor Engineering Division (RED), for "Repair work of Instrumentation systems for experimental facilities at Hall-7" as per the requirement given below:

General Terms and Conditions:

1. The quotations must reach Head, Reactor Engineering Division (RED), Hall-7, BARC, Trombay, Mumbai-400085, by 15.12.2022 in sealed envelope by speed post only. The quotation shall be in two parts; Part-1: Technical specifications and Part-2: Offer price for the job. Each part shall be enclosed in envelop & sealed and should be super scribed with part No and "Repair work of Instrumentation systems for experimental facilities at Hall-7" and indicate this office Ref. No. & due date of opening. These two parts shall be again enclosed in a single envelop and sealed. The envelope should be super scribed "Repair work of Instrumentation systems for experimental facilities at Hall-7" and indicate this office Ref. No. and due date of opening clearly.

If the above points are not followed, the offer will be rejected without giving any further reason/consideration. Based on the technical suitability given in Part-1; the envelop of Part-2 will be opened and considered for further evaluations.

- i. Scope of work and free issue material: As per attached technical specifications.
2. Bidders are required to furnish PAN No. & GST / Sales tax registration No. in their offer.
3. The work shall be carried out as per the technical specifications enclosed herewith. **The quotation must be in the format shown in Annexure-A only. If the quotation is not as per the Annexure - A, it may be rejected without giving any further reason/consideration.**
4. The works to be executed under this order shall be subjected to inspection by Shri S. Kundu (SO/G) / Shri T. Sultan, (SO/E), Reactor Engineering Division. The work shall be conducted under their supervision and to the full extent of their satisfaction. Shri. S. Kundu / Shri T. Sultan's decision in all respects will be final.
5. The period of completion of this minor fabrication is **8 months maximum** from the date of work order acknowledgement received from the contractor.
6. Payment will be made as per rules after 100% completion of the job satisfactorily as per Government rules. No part payment will be made during the course of fabrication.
7. Any delay which is attributable to the contractor is liable for **penalty @ ½ % per week (max. 5 %)** to be imposed on the contractor.

8. Validity: The offer shall be kept open for acceptance for a period of 90 days from the date of opening of quotation.
9. Proof of ability: A brief list of similar jobs executed, if any, and the name of the organisation should be furnished.

10. General Notes

The work at purchaser's site can be executed only working days (Monday to Friday) between 0930 hrs and 1730 hrs.

The bidder shall comply with all the necessary security requirements for entry into BARC premises. All the workers shall have valid **Police verification Certificate (PVC)**.

The bidder's personnel shall follow all safety norms while working inside BARC as per BSC/AERB guide line. They should wear safety gear according to the nature of work.

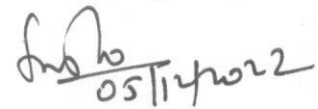
The bidder shall take all the necessary safety precautions during the work and they shall be responsible for any damage or accidents. No compensation in any case will be paid by the Department to the bidder.

11. Confidentiality Clause:

- a) No party shall discuss any information to any third party concerning the matters under this contract generally. In particular any information identified as "proprietary" in nature by the disclosing party shall be kept strictly confidential by the receiving party & shall not be disclosed to any third party without the prior written consent of the original disclosing party.
- b) Any contravention of the above mention provisions by any contractor, sub-contractor, consultant, advisor or the employees of a contractor will invite penal consequences under the aforesaid legislation.
- c) The contractor or subcontractor, consultant, adviser or the employees engaged by the contractor shall not use BARC's name for any publicity purpose through any public media like press, radio, T.V. or internet without the prior written approval of BARC.

14. Head, Reactor Engineering Division (RED) reserves the right to accept / reject any or all the quotations received without assigning any reason whatsoever.

Yours Sincerely,



(S. K. SINHA)

Head, Reactor Engineering Division.
(For & On behalf of President of India)

एस. के. सिन्हा
S. K. SINHA
अध्यक्ष / Head

रिएक्टर इंजीनियरी प्रभाग
Reactor Engineering Division
आर.ई.डी., भा.प.अ. केंद्र / R.E.D., BARC,
इंजीनियरी हॉल नं. 7 / Engineering Hall No. 7,
ट्रॉम्बे, मुंबई-85 / Trombay, Mumbai-400 085.

**Technical Specifications
For
Repair work of Instrumentation systems for experimental facilities at Hall-7**

1. Scope of Work

The scopes of work for the bidder are as follows;

- Repair & servicing of instruments, valves, controllers.
- Multicore cables from control panels and Junction Boxes shall be removed, re-routed and re-wired. Clamping, tagging and termination of multistrand instrumentation wire to respective terminals by crimping type lugs shall be carried out. Cables shall be dressed properly with proper support for cabling.
- Removal of Differential pressure transmitter, pressure transducer, Flowmeters, temperature transmitter, level transmitter, thermocouple etc. from facilities.
- Calibration check of Pressure transducers, DP transmitters, Thermocouples, Temperature transmitters. Instruments need to be connected back to the facility with associated tubing and wiring with lugs & tag.
- Instrumentation tubing work includes removal & laying of 3/8 inch SS tube and 1/2 inch Copper tube with necessary fittings and swaging work. Instrumentation tubes shall be laid out (with /without bending as required in the field) and properly marked for identification of each line.
- Removal, servicing of Controllers/Recorders/Display devices in field/Panel.
- Wiring rectification in Junction box with Din-Rail, terminal blocks, PVC duct, cable entry.
- Removal of old instruments with associated cables and termination from existing panel. All wire terminations removed from panels shall be reconnected to the panel using 0.75 mm² Teflon wire as per the identification details with proper ferrule and lugs. Before removal of wires, all termination shall be noted down, tagged and reconnected with proper laying of cables and wires.
- Current circuit continuity checking of the new/old wiring with instruments.

2.0 Inspection & testing

All the repair / serving work carried out shall be checked and tested after completion. Any abnormal performance shall be repaired and retested until satisfactory results are obtained.

3.0 Workmanship

All workmanship, required for fulfilment of this specification shall comply with best standards of practice and shall be subject to the approval by the Purchaser.

4.0 Cleanliness

The finished work site shall be clean and no unwanted material shall be present.

5.0 Fabrication place

The work shall be carried out at Hall-7, BARC.

6.0 Guarantee

The contractor shall guarantee for a period of 12 months against defects in works by him. The contractor shall rectify any such defects, free of cost, to the entire satisfaction of the Purchaser.

7.0 Quantity of work and estimate procedure

The quantities for the repair / servicing work are given in **Annexure-A** shown below. The contractor shall complete the format by writing the rates in respective columns.

Annexure – A

| Sr. No. | MF work | Quantity | Total cost in Rs. | Remarks |
|---------|--|------------|-------------------|--|
| 1 | Removal / laying of 1 sq. mm. multi-pair instrumentation cable | 200 meters | | 1. Existing cables in various experimental facilities will be used. Cables will be removed and laid as required for augmentation of facilities. |
| 2 | Removal / laying of 3 core cable along with lugs, ferruling and tagging | 100 meters | | |
| 3 | Removal & calibration of pressure transducer, level transmitter | 40 Nos. | | |
| 4 | Removal & calibration of differential pressure transmitter, flow transmitter | 60 Nos. | | |
| 5 | Calibration of thermocouple, connection to recorder | 80 Nos. | | 2. Existing tubing in various facilities will be laid, swaged as required for augmentation of facilities. |
| 6 | Removal & calibration of temperature transmitter | 20 Nos. | | |
| 7 | Laying of 3/8 inch SS tube | 120 meters | | 3. Existing wiring in facility panels, junction box will be used for re-wiring, terminations as required. |
| 8 | Laying of 1/4-inch SS / Copper tubing | 20 meters | | |
| 9 | Removal & servicing of 3/8 inch needle valve | 50 Nos. | | |
| 10 | Servicing of Control valves | 10 Nos. | | 4. All the instruments, valves, thermocouples, transmitters, tubing, wiring, junction box etc. are of existing facilities. Under any shortage, the required quantity will be provided as free issue materials. |
| 11 | Swaging of tube fittings | 300 Nos. | | |
| 12 | Removal, repair / servicing of Controllers/Recorders/Display devices in field/Panel | 20 Nos. | | |
| 13 | Wiring of Junction box with cable entry, DIN rail, Terminal block, PVC ducts arrangement | 10 Nos. | | |
| 14 | Removal of old cables | 200 meters | | |
| 15 | Removal of old connection from facilities | 300 Nos. | | |
| 16 | Removal of old instruments from facilities | 40 Nos. | | |
| 17 | Panel re-wiring with 0.75 mm ² Teflon wire | 300 meters | | |
| 18 | Termination with lugs & ferruling | 500 Nos. | | |
| 19 | Current circuit continuity checking | 60 Nos. | | |