

Government of India
Bhabha Atomic Research Centre
Electromagnetic Applications & Instrumentation Division

Ref No: EmA&ID/2021/SSR/49/15805

Date: 24/11/2021.

-----To whom so ever it may concern-----

Sub: Supply and integration of pressure measurement system with inert gas circulation system conforming to technical specifications EmA&ID/EMAS/CRY/21/49 dated 22.11.2021

Dear Sir/Madam,

1. Quotations are invited for supply and integration of pressure measurement system with inert gas circulation system conforming to technical specifications EmA&ID/EMAS/CRY/21/49 dated 22.11.2021.
2. Bidder shall quote for above job inclusive of raw material
3. Taxes and Excise Duties shall be quoted separately. Form AF / H whichever is applicable shall be provided, if required.

The quotation must reach The Head, Electromagnetic Application & Instrumentation Division by 3.12.2021 and must be sent in a sealed envelope super scribed with the reference number & the due date given above only through India Ordinary Post/Speed Post.

4. The address on the envelop should read: The Head,
Electromagnetic Application & Instrumentation
Division,
RCnD Bldg., North Site
BARC, Trombay,
Mumbai - 400 085.
(Kind Attn: S.Sundar Rajan, SO/G)
5. The bidder shall complete the job within 2 months from the date of firm work order issued to the bidder.
6. Head, Electromagnetic Application & Instrumentation Division reserves the rights to accept / reject any or all quotations without assigning any reason.
7. Quotation must also indicate the validity of offer. Quotation must also indicate the GST No and PAN number of the supplier.
8. The quotation has to be signed by authorized person with company seal.
9. Payment will be made by EFT only after satisfactory completion of work on production of bill, delivery challan and advance stamped receipt. Income tax as applicable will be collected at the time of payment.
10. In case of any technical clarifications, the supplier may kindly contact the indenting officer through Email only. (Email ID:sundara@barc.gov.in)

Encl.: Technical Specification Sheet no: EmA&ID/EMAS/CRY/21/49 dated 22.11.2021

S.Sundar Rajan.
S.Sundar Rajan 24/11/2021.
SO/G,EmA&ID

Technical specification

Document no.	Revision no.	Date of Issue	No of pages
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Supply and integration of pressure measurement system with inert gas circulation system

1.0 SCOPE

This document specifies the requirement of supply and integration of pressure measurement system with inert gas circulation system. The complete job shall be carried out strictly as per requirements, specifications and its compliance standards as detailed in this document. In this specification the supplier shall be referred to as the “supplier” and Bhabha Atomic research Centre shall be referred to as the “buyer”.

Supplier shall provide complete raw material to carry out the above jobs. The brief description of contents of the tender specification document is as described below.

Para 2.0 gives the detailed job description.

Para 3.0 gives the general requirements.

Para 4.0 gives the requirements for raw material procurement.

Para 5.0 gives the requirements of supplier qualifications.

Para 6.0 gives the requirements of packaging and safe delivery.

Para 7.0 gives the confidentiality clause.

2.0 DETAILED JOB DESCRIPTION

2.1 A custom pressure gauge measurement system is required for measuring the pressure in the helium recirculation system. This pressure gauge needs to be integrated with the loop and tested for its rated performance.

2.2 Tee, Flanges and piping assemblies required for integration of the sensor with the loop shall be carried out and integrated.

2.3 The complete system shall be developed and tested for its rated performance. The technical requirement of the system is as listed below

S.No	Description	Minimum requirements
1	Measurement range	10-4 mBar to 3 Bar
2	Linearity	$\leq 0.5\%$
3	Material of construction	SS (outer enclosure)
4	Output signal	+/- 10V
5	Output signal load	10 kOhms
6	Maximum without pressure	5 Bar
7	Protection degree	IP65
8	Supply voltage	15 Volt.
9	Pressure measuring method	Pirani from atmospheric to 10^{-4} mBar and Piezo electric from atmospheric to 3 Bar
10	Signal processing cable	6m long shielded twisted pair separate for power and output signal
11	Quantity	3 Sets

3.0 GENERAL REQUIREMENTS

3.1 The supplier shall workout a detailed design to meet fabrication requirements and work description, quantity and main fabrication material. They shall submit along with the offer dimensional drawing giving all the salient features, material details of individual items and assembly view of the fixtures.

3.2 The part number and the source of all the hardware's shall be cleared mentioned before purchase of the same from the market. They shall be purchased and installed only after prior approval from BARC. Any component of inferior quality purchased without prior approval will be rejected strictly.

3.3 The Supplier shall indicate in detail the standards adopted for the materials and processes and the quality control procedures followed by them.

3.4 Supplier can suggest the color, aesthetics, and other details as suitable. Supplier must offer best quality/IS certified material only.

3.5 Supplier should have similar work experience and along with the offer, shall submit the details of past experience with documentary proof.

3.6 Materials, tools, manpower etc required for the above work will not be supplied by the user. Supplier has to arrange the above on his own (No free issue material).

3.7 The supplier shall incorporate minor changes in the design as required at the time of execution of work at no extra cost.

3.8 The above job shall be done strictly under the supervision of our engineers in test facility at BARC premises.

3.9 Working personnel shall observe all the safety precaution during working.

3.10 The working personnel shall behave well with other officers and workers inside BARC campus.

3.11 The contractor shall be solely responsible, in case of any casualty involving working personnel. However, first aid will be provided by BARC.

3.12 General BARC security rules shall apply to all the working personnel.

3.13 Entry permit will be issued on weekly basis and contractor shall have valid photo pass with valid Police Verification certificate (PVC) as per the norms of BARC security.

3.14 Prior permission will be taken from security if the persons are required to do the job on Saturday, Sunday, Holidays and beyond normal working hours (08:00 to 18:00 hrs).

4.0 RAW MATERIAL PROCUREMENT

4.1 The raw material, electrical components used by supplier for the manufacturing of these components shall be of brand new and shall not be used previously.

4.2 All the material shall strictly confirm to their corresponding IS standards and shall be purchased only after prior approval from the purchaser.

5.0 REQUIREMENTS OF SUPPLIER QUALIFICATIONS

5.1 The supplier shall be evaluated on the basis of the following criteria

5.2 The supplier shall have previous experience in carrying out similar such jobs inside BARC and copy /proof of the same shall be attached.

5.3 The supplier shall submit the details of the welder, fitter and other man power, facility available with the supplier to carry out the job successfully.

5.4 The supplier shall provide the list of their employees along with their valid PVC certificate, who are intended to work in this job.

5.5 The supplier shall have minimum experience of 5 years in the development of high vacuum systems and proof of document of the same shall be provided.

6.0 REQUIREMENTS OF PRICE AND DELIVERY SCHEDULE

6.1 The supplier shall give lump sum price for the raw materials and man power to complete this job.

6.2 The complete job is expected to be completed in a duration of 3 Months.

7.0 CONFIDENTIALITY CLAUSE

7.1 No party shall disclose any information to any third party concerning the matters under this Contract generally. In particular, any information identified as "Proprietary" in nature by disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party. This clause shall apply to sub-contractors, consultants, advisors or the employees engaged by a party with equal force.

7.2 "Restricted information" categories under section 18 of the Atomic Energy Act, 1962 and "Official secrets" under section 5 of the Official Secrets Act, 1923: Any contravention of the above mentioned provisions by any contractor / sub-contractor, consultant, advisor or the employees of the contractor will invite penal consequences under the aforesaid legislation.

7.3 Prohibition against the use of BARC's name without permission for publicity purpose. The contractor or sub-contractors, consultants, advisors or the employees engaged by a party shall not use BARC's name for publicity purpose through any public media like: press, radio, TV or Internet without any prior approval of BARC (wide circular ref.: 2/Misc-9/Lgl/2001/92 date 30/04/2001).