

Government of India
Bhabha Atomic Research Centre
Electromagnetic Application and Instrumentation Division

Ref: EmA&ID/E-office /2022/ **EOP-38487**

Date: **6/4/2022**

Two-Part Tender

Sub: Detailed Engineering, Fabrication, Testing and supply of hydraulic measurement system as per drawing EMAS/SRM/2022/01

Dear Sir/Madam,

1. Quotations are invited for a two-part Minor fabrication of Detailed Engineering, Fabrication, Testing and supply of hydraulic measurement system as per drawing and specification in EMAS/SRM/2022/01
2. Bidders have to submit "TWO SEPARATE ENVELOPES" containing their "TECHNICAL STATEMENT" and a "FINANCIAL STATEMENT" respectively. The two envelopes should clearly mention at front "TECHNICAL STATEMENT" and "FINANCIAL STATEMENT" under the title and reference of the tender for which they are applying.
3. Technical statement from the Bidders will be opened first to assess their technical suitability based on the requirements described below. The financial statement of only those bidders, who have qualified the technical suitability assessment will be opened.
4. Bidder shall quote for deliverables as per technical specifications.
5. No Free Issue Material is involved.
6. Taxes and Excise Duties shall be quoted separately. Form AF / H whichever is applicable shall be provided, if required.
7. **The quotation must reach The Head, Electromagnetic Application and Instrumentation Division by 18/04/2022 and must be sent in a sealed envelope super scribed with the reference number & the due date given above. Courier are not allowed in BARC premises, the quotation shall be sent by speed post/registered post.**
8. The address on the envelop should read:

**The Head
Electromagnetic Application and Instrumentation Division
Bhabha Atomic Research Centre
Trombay, Mumbai-400085
Kind Attn:
(ShriSumit Meshram, SA/D)**

9. The bidder shall complete the job within 10 weeks from the date of firm work order issued to the bidder. Terms and conditions are mentioned in Annexure 'B'. The finished components shall be delivered by the bidder at Electromagnetic Application & Instrumentation Division, BARC, Trombay, Mumbai - 400 085.
10. Head, Electromagnetic Application & Instrumentation Division reserves the rights to accept / reject any or all quotations without assigning any reason.
11. Financial statement should include the basic price, relevant taxes (GST etc.), transportation cost, insurance cost and any other duties, as applicable, such as packaging etc and total cost. The price and charges will be fixed and no escalation / alteration will be permissible. Quotation must also indicate the validity of offer. Quotation must also indicate the VAT no and PAN no of the party.
12. Police Verification Certificate is must for entry inside the BARC.
13. Drawings / Sketches must be returned along with the offer.
14. The quotation has to be signed by authorized person with company seal.
15. Payment will be made by cheque only after satisfactory completion of work on production of bill, delivery challan and advance stamped receipt. It may be noted that IT @ 2% and surcharge on tax at 15% shall be deducted from your bills.
16. For queries, interested vendors may contact undersigned (Email ID: sumitrm@barc.gov.in, Telephone No: 022 2559 6438) for technical specifications.
17. The work shall be subjected to inspection by our representative before delivering to Site.
18. Any change, alteration etc. must be approved by the purchaser.


Sumit Meshram, SA/D,

EmA&ID

Technical Specifications

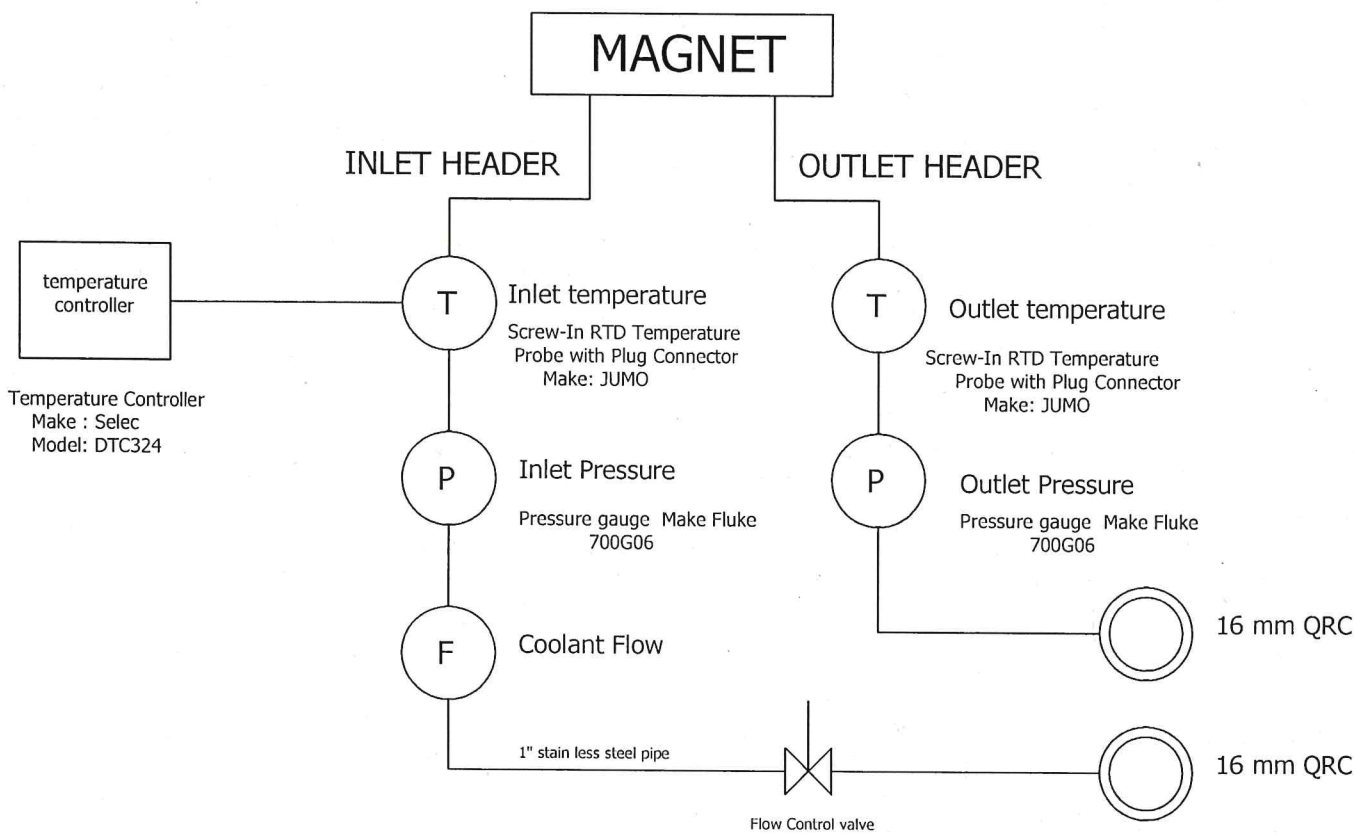
Document Number: EMAS/SRM/2022/01

Total number of pages: 3

These tenders Specifications of Detailed Engineering, Fabrication, Testing and supply of hydraulic measurement system as per drawing and specification as following.

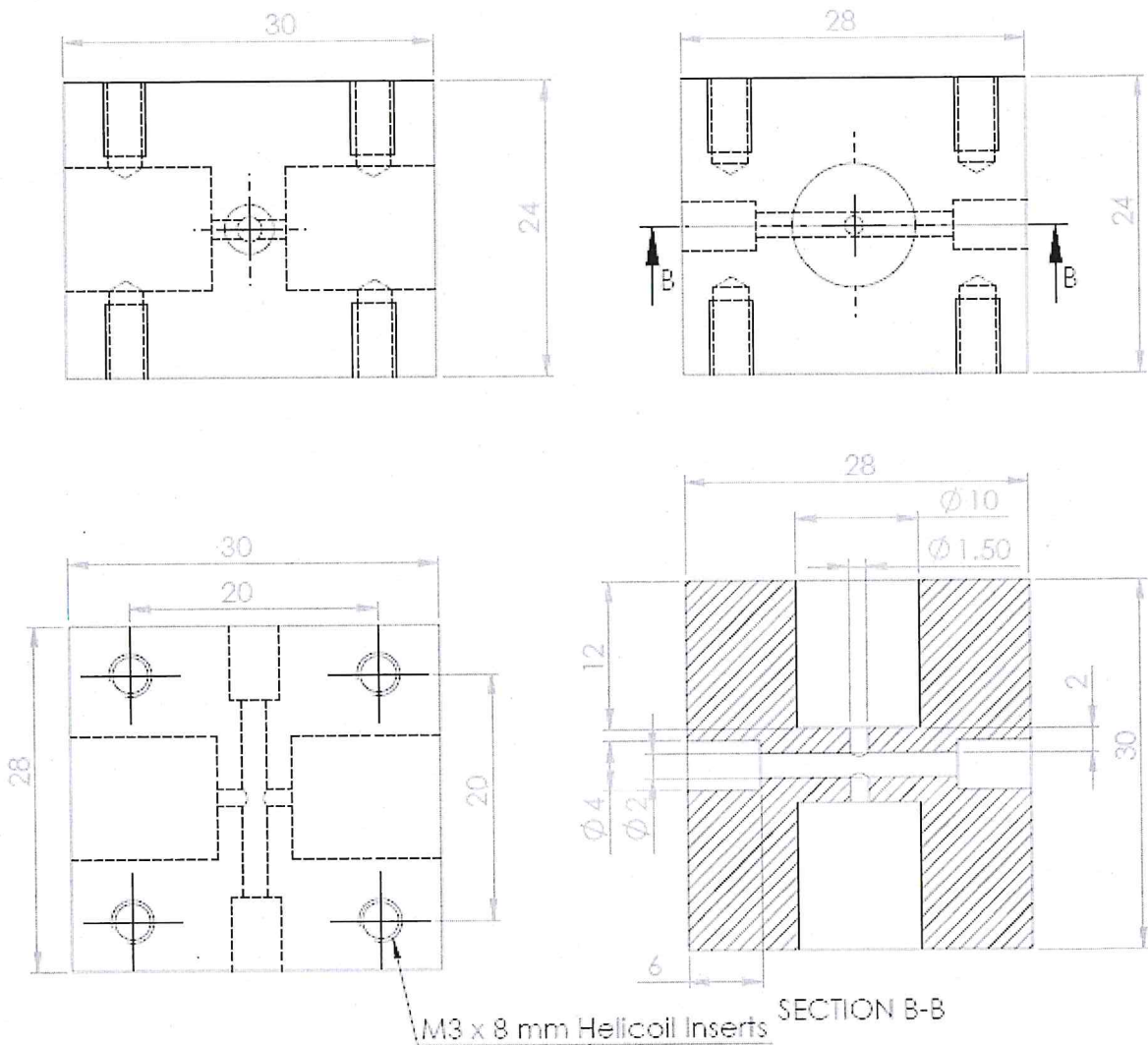
Table below gives required Specification.

Sr. No.	Index	Qty	Features	Range/ Description
1	Pressure gauge Make: Fluke 700G06	2 No	Range	-12 to 100 PSI
			Resolution	0.01 PSI
			Accuracy	Positive pressure $\pm 0.05\%$ FS Vacuum $\pm 0.1\%$ FS
			Burst Pressure	400 PSI
			Display	Digital ; 5-1/2 digits, 16.53 mm (0.65 in) high 20-segment bar graph, 0 to 100%
			Pressure connection	1/4 in NPT Male
2	FLOWMETER (Variable area digital Flow meter with transmitter)	1 No.	Range	0 – 2 LPM
			Fluid	WATER
			End Connection	25 NB SS 304 ASA 150 flanges at top & bottom
			Power supply	24V. DC
			Display	4 Digit flow rate & 8 Digit Totalizers
			Pressure	80 kg/cm ²
			Temp.	90 DEG Celsius
			Wetted parts	SS 304
			Accuracy	+/- 1.5% of FSR
			Range ability	10:01
			Repeatability	+/- 0.25% of FSR
			Temperature rating	-50 to 120 °C
			Transmission	2 wire loop powered ; 4-20mA output
			Enclosure	Flameproof / weatherproof
3	Temperature sensor Screw-In RTD Temperature Probe with Plug Connector Make: JUMO (902040/10-370- 1003-0-7.5-29-121- 20/000)	2 No.	Operating Temperature	-50 to +150 ° C
			Protection tube	Stainless steel
			Measuring insert	1 x Pt100 in Two Wire Circuit
			Protection tube diameter D in mm	Dia 7.5 mm Stepped Down to Dia. 4 mm
			Insertion length EL in mm	29 mm
			Process connection	M14
			Vibration stability	Frequencies from 10 to 3000 Hz Acceleration up to 30 g Shock up to 100 g/5 ms
			Protection type	IP67/IP69
			Response times	In water with a flow velocity of 0.4 m/s Ø 4 mm: t _{0.5} = 1.2 s, t _{0.9} = 6 s
4	Temperature Controller Make : Selec Model: DTC324		Display Type	7 Segment LED Single Display
			Display Configuration	4 digits
			Type of Input	Thermocouple (J,K,T,R,S) / RTD (PT100)
			Resolution	0.1/1° for TC/RTD(fixed 1° for R and S TC)
			Accuracy	For TC (J, K, T) inputs: 0.25% of F.S. $\pm 1^\circ$ For R & S inputs: 0.5% of F.S. ± 2 (20min of warm up time) For RTD inputs: 0.1% of F.S ± 1
			Control Output	RELAY or SSR.
			Auxiliary Output	RELAY
			Control Mode	Auto Tune PID / ON-OFF
Supply Voltage	90 to 270V AC/DC			
5	Ceramic Fixture for Thermocouple as per drawing	6 No.	Composition	99.70% pure Alumina



Line diagram of hydraulic measurement system

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Ceramic Fixture for Thermocouple/Temperature sensor

1. Good quality material from reputed supplier to be used for the job.
2. **Hydraulic measurement system should be housed in a powered coated metal box , making a provision of slots for installation of digital temperature reader/ pressure reader / flow meter reader and 16 mm Quick release coupling .**
3. The work shall be subjected to inspection by our representative before delivering to Site.
4. Fresh drawing / specifications will be made available at the time of issue of purchase order.
5. Any change, alteration etc. must be approved by the purchaser.
6. Head, EmA&ID, BARC, reserves the right to accept/reject any or all quotations without assigning any reason.
7. Terms and conditions are mentioned in Annexure 'B'. Delivery period should be within **10 weeks** from the date of release of Purchase order.
8. The offer should be inclusive of all the charges or vendor should mention the charges separately. The price and charges will be fixed and no escalation / alteration will be permissible.
9. Police Verification Certificate is must for entry inside the BARC.

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Annexure-B

Price : Inclusive of free and safe delivery at our site. Price once quoted & accepted shall remain final.

Taxes: GST as applicable may be specified separately.
Income Tax @ 2%, as applicable at the time of payment will be deducted from your bill.
GST TDS @2% or as applicable shall also be deducted from your bill.

Excise Duty: Nil, *Excise duty is not payable by the Purchaser. Exemption certificate will be provided.

Octroi Duty: Nil. Exemption certificate will be provided for the end product on specific request as applicable.

Delivery : The material should be delivered at Kind Attn:- Mr. Sumit Meshram (EmA&ID) RCZ STORES, BARC, Trombay, Mumbai - 400085 within **5 weeks**.

Payment : Payment will be made only after satisfactory completion of work and on submission of printed Delivery Challan, Bill cum Invoice in Triplicate and an Advanced Stamped Receipt for the amount of the bill

Penalty Clause: Any delay which is attributed to the contractor is liable for penalty @ ½ % per week (max. 5%) to be imposed on the contractor.

Note : Quotations, challans, invoice, receipt etc should be in printed form only. These should consist of Sales Tax Registration Number registered with local ST authority / CST authority, PAN Number of the firm, Service Tax Registration Number, etc.

Quality Surveillance, Inspection and Inspection report : All work covered by the specifications shall be subject to quality surveillance by the purchaser or his authorised representatives for which purpose the fabricator shall allow access at all reasonable times during manufacture to :

1. The premises in which work is being carried out.
2. The drawings and / or tooling involved.
3. Gauges, instruments etc. required for inspecting the work.

Inspection and tests shall be carried out by the fabricator as per the requirements detailed in the drawings and these specifications. Components found unsatisfactory as to workmanship or material shall be removed by fabricator and replaced by components, which are satisfactory. Vendor will be responsible for the any damaged occurred during transit / transportation.

Warranty (If applicable): Minimum 1 year from the date of acceptance of the job against any manufacturing & material defect.

Confidentiality: 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 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.

The clause shall apply to the sub-contractors, advisers, or employees engaged by a party with equal force.

1. "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, adviser or the employees of the contractor will invite penal consequences under the aforesaid legislation.

2. Prohibition against use of BARC's name without permission for publicity purposes :-

The contractor, sub-contractor, 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., and Internet without the written approval of BARC.

***Excise Duty Clause** as mentioned vide circular No. BARC/Accts/GSS/97/983 dated 14.7.97 is quoted below:

"Since the goods to be supplied against this work order meant for research purpose of a Research Institute under the Department of Atomic Energy, No Excise Duty is payable for the goods covered by this work order. The Indenter shall make available the excise duty exemption certificate to avail of the Excise Duty exemption well before the delivery date stipulated in work order. It shall however be the responsibility of the contractor also to ensure that they dispatch the goods only after getting excise duty exemption certificate from the indenter"