

**Government of India
Bhabha Atomic Research Centre
Radiochemistry Division**

Ref: RCD/SAA/2019/ 71416

Date: 15/04/2019

Sub: Fabrication and Supply of Mixer-Settler Assemblies

You are requested to submit your quotation in sealed envelope for the above mentioned job to be carried out at your workshop and supplied to RCD Zonal Store, BARC, Trombay. The reference number given above should be clearly mentioned on the sealed envelope.

Quotation, complete in all respects with regard to specifications, validity of offer etc., must reach to the following address **by speed post only** on or before **30/04/2019 by 14:00 hr**. The sealed envelope shall be opened on **30/04/2019 at 15:00 hr** in presence of the nominated officers by Accounts Division, BARC.

Dr. Seraj A. Ansari
Radiochemistry Division,
RLG, BARC, Mumbai – 400 085
Tel: 022-2559 6337

Brief Description of Work:

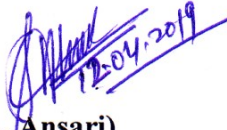
Fabrication, supply and demonstration of a six stage mixer-settler unit as per the conceptual drawing given in **Figure 1** in the Technical Specification. Fabrication of the mixer-settler unit must be done on mono-block acrylic to ensure leak tightness of each compartment of the battery. All the six stages of mixer shall be assembled with SS paddle type agitator, connected to each other with gears and driven by single motor having speed controller.

Notes:

Due consideration shall be given to the following aspects while you submit your offer:

1. The offer shall be valid for a period of 60 days from the date of opening.
2. The price shall remain firm during the above mentioned period.
3. The contractor shall arrange all equipment, material and personnel required for successful completion of the work.
4. Taxes, duties and other charges applicable, if any, shall be indicated separately.
5. Payment will be made after completion of work.
6. Work is to be completed as per the enclosed specification.
7. Work Completion period is 90 days after release of work order.

Yours sincerely,


(S.A. Ansari)
SO/F, RCD, BARC

Annexure II

Technical specifications, Terms and Conditions

Nature of Works:

Fabrication, supply and demonstration of a six stage mixer-settler unit as per the conceptual drawing given in **Figure 1** in the Technical Specification. Fabrication of the mixer-settler unit must be done on mono-block acrylic to ensure leak tightness of each compartment of the battery. All the six stages of mixer shall be assembled with SS paddle type agitator, connected to each other with gears and driven by single motor having speed controller.

Quantity: 01 No.

General Description:

The mixer Settler Unit: A 6 stage mixer settler unit CNC machined out of acrylic mono block to ensure leak tightness.

Motor: Suitable motor (1 no.)

Speed regulator: Suitable for motor (1 no.)

SS Spur Gears : 6 nos.

Agitator : 6 nos.

Technical Requirements:

The conceptual drawing is given in **Figure 1**. The Contractor has to prepare the final fabrication drawings of the mixer settlers units and get it approved from the indentor before starting of the fabrication work.

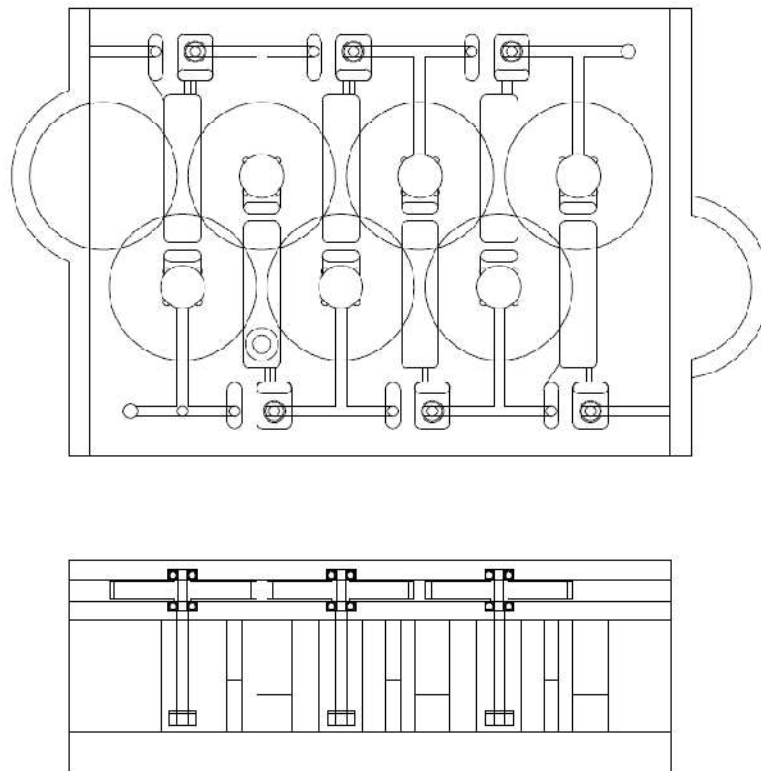


Figure 1. Conceptual drawing of 6 stages mixer-settler

Technical Details:

A mixer settler unit with individual mixing stage capacity of 15 mL has to be CNC machined out of Acrylic mono block. The interface adjustment should be done using a straight tube with external thread joined with a tube connector. The mixer unit shall be equipped with straight type impeller at the bottom mounted directly on the motor driven gear. The entire mixer-settler unit should be as per the **Technical Data Sheet** given below. The entire mixer unit should be driven by single motor equipped with gear to transmit motion to the entire agitator.

Technical Data Sheet

Category / Subcategory		Component / Material	Dimensions / Specifications
Complete Mixer-Settler Unit	Material of construction	Single block acrylic	
	Dimension of complete unit	L x W x H	To be proposed by vendor and approved by indentor
	Wall thickness between each compartment	10 mm or more	
Mixer Unit	Mixer type		Box type (Square with bottom orifice plate)
	Mixer volume	15 mL each	
	Mixer dimensions	L x W x H	To be proposed by vendor and approved by indentor
	Impeller Type	SS	Straight blade
	Motor	Suitable motor with gear arrangement and speed regulator	RPM range: 50 - 500
Settler Unit	Settler Type		Rectangular box with no stationary parts or baffles
	Settler volume	60 mL each	
	Settler Dimensions	L x W x H	To be proposed by vendor and approved by indentor
Interface Control	Aqueous interface control		Vertical pipe with interface adjustment
	Organic interface control		Rectangular Weir

Terms and conditions:**1. Qualifying criteria for bidders**

Mixer-settler unit has to be CNC machined out of acrylic mono block to ensure leak tightness. Only the manufacturer who has past experience in CNC machining of intricate components of similar nature in BARC / DAE should apply.

2. Inspection and Testing

The supplier shall check the dimensions with the approved drawing and conduct the suitable functioning test of the equipment before dispatch. The equipment should be tested for leaks in all compartments. The dimension, functioning and leak test shall also be done at the indenter's laboratory. The test certificate duly signed and sealed by the supplier must be sent along with the dispatch documents.

3. Guarantee

All the items fabricated / supplied shall be guaranteed against defective workmanship for a minimum period of 12 months from the date of supply.

4. Safety and security rules

Vendor should take care of safety and security while supply and testing of material at site. Any mishap occurring on the job due to unsafe work practice shall be vendor's liability. Police verification certificates are required for supervisor and all workers employed by the contractor inside the BARC premise. Security and transport regulation at BARC premises shall be strictly followed.

5. Work completion period


90 days after release of the work order.

6. Payment

No advance payment will be made. Full payment shall be made on satisfactory completion of the works.

7. Compensation for delay

In the event of grant of extension of time, the government shall be entitled to recover at its discretion from the vendor / contractor agreed liquidated damages at ½% (half percent) per week of the total value of the work in areas subject to a ceiling of 10% of the total value of the contract whether any loss is suffered by the government on account of such delay or not.


(S.A. Ansari)
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