

Inviting Quotations for Battery test station

**Department of Chemical Engineering
Indian Institute of technology, Madras**

Reference number: CHE/16-17/147/MIMP/SREE/VRFB Cyclor

Tender date: 31/10/2017

Due date: 15/11/2017

Dear Sir,

1. Quotations are invited in duplicate for the battery test station shown in Annexure-I
2. The quotations are to be in two parts as technical offer and as commercial offer
3. The two parts of the offer are to be clearly marked on the envelopes. The two parts of the offer in separate envelopes must be enclosed in the one bigger envelope dully sealed and super scribed with relevant details and due date and must be addressed to the undersigned so as to reach him on or before the due date stipulated above
4. Fax and Email quotations are not acceptable
5. Quotations should be valid for 60 days from the due date and period of delivery required; warranty terms etc. should also be clearly indicated.
6. Imported suppliers should be quoted for CIF Madras
7. Local firms to quote for free delivery to this institute. If quoted for Ex-Godown delivery charges should be indicated separately
8. Firms outside Chennai: Quotations should be for F.O.R Chennai. If F.O.R consignor station, freight charge by passenger train/lorry transport must be indicated. If Ex-Godown packing, forwarding and freight charge must be indicated.
9. Relevant literature pertaining to the items quoted with full specifications (and drawings, if any) should be sent along with the Quotations, wherever applicable. Samples/Machine/ Equipment if called for should be submitted / demonstrated at free of charges and collected back at the supplier's expenses. Compliancy certificate is to be provided indicating conformity to the technical specifications

10. The rate of GST and percentage of such taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. If this is not indicated no such claim will be admitted at any stage.
11. IIT Madras is exempt from IGST and import and is eligible for concessional rate of customs duty. Necessary certificate will be issued on demand
12. Goods should be supplied carriage paid and insured
13. Goods shall not be supplied without an official supply order
14. In case of LC payment, 90% of the payment will be made after the completion of the supply. The balance 10% of the payment will be made after satisfactory installation of the equipment
15. Every attempt will be made to make payment within 30 days from the date of receipt, bill/ acceptance of goods whichever is later.
16. The guaranty period of the item may be indicated clearly
17. **Acceptance and Rejection:** IIT Madras has right to accept the whole or any part of the tender or portion of the quantity offered or reject it in full without assigning any reason
18. The sealed Quotations should be sent to the Following address

Department of Chemical Engineering Office

Attn: Prof. Sreenivas Jayanti

IIT Madras, Chennai-600036, India

Annexure-I

Parameters	Values / Notes
Number of Channels	2 (Minimum)
Charge discharge cycles	1000 (Minimum)
Life cycle mode	<ul style="list-style-type: none"> a. With constant current b. With constant voltage c. With constant power
Voltage	<ul style="list-style-type: none"> a. 0 to 48 V(Minimum) in Charging b. 0 to 40 V(Minimum) in discharging
Total current	Option A: 100 A (Minimum) Option B: 200 A (Minimum)
Current per channel	50 A (Minimum)
Accuracy	±0.1 % on full scale reading or better
Control of the system	Automatic and Self Programmable
Switching time between cycles	Automatic with zero seconds
Parameters to be displayed while life cycle testing	<ul style="list-style-type: none"> a. Count and display the cycles b. Display the elapsed time c. Display the OCV d. Changing the running program of any circuit at any time
Test leads length and quantity	Length : 4 meters (Minimum) Quantity: 2 (Minimum)
Operation with multi circuits	With parallel operation and independent controllers for each circuit

Software	For automatic measurement, monitoring, data logging and display of the parameters
Data acquisition speed	100 data points per channel per second (Minimum)
Safety functions	with Over charging, Over discharging and Overheating alarms
Instrument type	Either Bench top or Roller wheeled cabinet

Optional requirements to be quoted separately:

Parameters	Notes / values
Cell Voltage Monitoring	To measure each cell voltage in a multi cell battery. Quote for minimum of 12 cells
Measurement and Record of Temperature of Vanadium-based Liquid Electrolyte	Temperature range: from -50 with resolution of 0.1 probes should be supplied with necessary cabling and interfacing connectors
Extended Warranty	Price for Extended warranty of 3 years

Note:

1. A compliance statement needs to be provided by bidders clearly specifying COMPLY/ NON COMPLY with remarks of all the points mentioned above
2. It will be sole discretion of IITM to choose one or more technically qualified bidders.