Department of Metallurgical and Materials Engineering

Indian Institute of Technology, Madras, Chennai – 600 036

Enquiryu. No.	MET	2018	001	Dr. Prathap.

Date: 25.06.2018

Due Date 10.07.201

Dear Sirs,

1. Quotations are invited **in duplicate** for the various items shown below / overleaf / enclosed list.
2. The Quotations duly sealed and superscribed on the envelope with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.
3. The Quotations should be valid for sixty days from the due date and the period of delivery required should also be clearly indicated.
4. If the item is under DGS & D Rate contract, Rate Contract Number and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the Rate contract price. If so, please send copy of the R.C. (Please note that we are not Direct Demanding Officers).
5. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples if called for, should be submitted free of charges, and collected back at the supplier's expenses.
6. **Local Firms**: Quotations should be for free delivery to this Institute. If Quotations are for Ex-Godown, delivery charges should be indicated separately.
7. **Firms Outside Chennai** : Quotations should be for F.O.R Chennai. If F.O.R. consignor station, freight charges by passenger train / lorry transport must be indicated. If Ex-Godown, packing, forwarding and freight charges must be indicated.
8. The rate of Sales / General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales / General Taxes will be admitted at any stage and on any ground whatsoever. **The taxes leviable should take into consideration that we are entitled to have Concessional Sales Tax applicable to non-Government Educational Institutions run with no profit motive for which a concession. Sales Tax Certificates will be issued at the time of final settlement of the bill.**
8. Goods should be supplied carriage paid and insured.
9. Goods shall not be supplied without an official supply order.
10. Payment: Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later.

Yours faithfully,

1) Electro chemical workstation Specification.
enclosed, requirement - 1 No.

for ~~*The Head of the Department*~~
✓ *The Project Co-ordinator*
Met. & Materials Engineering
IIT Madras, Chennai – 600 036

PROJECT CO-ORDINATOR
DEPT. OF METALLURGICAL & MATERIALS ENGG.
INDIAN INSTITUTE OF TECHNOLOGY MADRAS
CHENNAI-600 036.

*Strike Out whichever is not applicable.

Electrochemical Workstation Specifications

Hardware Requirements:

- Maximum Current: ≥ 1 Ampere
- Current Resolution: ≥ 50 Femto Ampere
- Applied Potential Ranges: ±10V
- Potential Resolution: ≤ 5 μV
- Impedance Frequency Range: ≤ 10μHz to ≥ 1MHz
- Amplitude: ≤ 0.1mV to ≥ 5V
- Sweep Rate (CV) : 5000 V/sec (specifically including ≤ 1mV to ≥ 0.5V)
- Data Acquisition: 16 bit, 5,00,000 samples/sec
- Internal Memory for data Storage within Potentiostat: >200,000 data points
- Electrode Configuration: Two Working Electrodes, One Auxiliary Electrode, One reference Electrode
- Channel: Single Channel
- Warranty: 1 Year

Software Requirements:

- Analysis software for CV
- EIS circuit fitting facility and software that enables entry and simulation of user defined circuits

Measurement Techniques:

- Cyclic Voltammetry; Linear Sweep Voltammetry, Half Cell Potential, Tafel Experiment, Rp (Polarization Resistance), Galvanic Corrosion
- Solar Testing, IR testing
- Electrochemical Impedance Spectroscopy, Potentiostatic EIS, Galvanostatic EIS, Bode and Nyquist plots

Technical Need & Specification:

Research in Fuel cell, requires an electrochemical workstation mainly to measure the Impedance of the cell at specific Relative Humidity and to also measure the electrochemically active surface area of catalyst. It's also useful to measure the impedance and electrical conductivity of conductive and nonconductive materials. It would be of relevance to also characterize photo catalytic materials and to conduct Corrosion studies.

PROJECT CO-ORDINATOR
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