INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
Powai, Mumbai 400076

Purchase Requisition No. 1000012414 (SRM/RFX No. 6100000216)

Technical Specifications for Potentiostat/ Galvanostat (Electrochemical Workstation) with Impedance Spectroscopy

Control Amplifier:

1) Compliance voltage: ±12V or better
2) Maximum Current: 400 mA or More

Voltage Control:

1) Applied Potential range: ±10V or more
2) Voltage Resolution: at least 1 to 1.5 µV or better
3) Voltage Accuracy: < ± 0.1% of range, ±0.03% of setting

Current Control:

1) Current Ranges: ±10 nA to ± 400 mA or better
2) Current Resolution: 760fA
3) Current Accuracy: < ± 0.1% of range, ±0.03% of setting

Acquisition speed/ Data Sampling: 100,000 samples/second or better

Frequency range: 10 µHz - 1 MHz or more

AC sine wave Amplitude: 1mV to 1V or more with 1 mV or better resolution

Bandwidth of electrometer: 8 MHz or better

Input Impedance: 1 TΩ

Cell connection/Electrode Configuration: 2, 3 electrode or more

Floating Mode: Should be available

Interface: Ethernet LAN and/ or USB

Software required:

1. Fundamental Electrochemistry – OCV, CV, LSV, Batteries, Fuel cell/ Photovoltaic Testing Techniques
2. Electrochemical Impedance Spectroscopy Technique
3. Corrosion software including LPR, Tafel etc.
4. Pulse software including DPV, NPV, RNPV, SWV etc
5. Equivalent EIS fitting circuit software
6. Analysis tools for Corrosion Rp and Tafel Fit, battery CED fit

Terms and conditions:

1) Free Software support in case of software updates and up-gradation
2) WARRANTY – Min. 1 year
3) Warranty should cover all the critical parts of the setup

After sales "Service and Maintenance" of the setup should be available in India. Details to be mentioned in the Technical bid.