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“Computer controlled potentiostat”

Specifications

(1) Basic Equipment

Potentiostat/Galvanostat with Frequency Response Analyser

Equipment Technical Details (Hardware)

Power Supply : 230 V AC, 50 Hz

Potentiostat

Compliance Voltage: ± 12 Volts (or better)

Sweep: ± 3 Volts

Sweep Resolution: 25 micro Volt

Current Output: 500 mA (minimum)

Input Impedance: 10^{12} Ohms

Potential Measurement: 21 Bit A/D

Potential Resolution: $1\mu\text{V}$

Zero Resistance Ammeter / Galvanostat

Current Range: 100 pA to 500 mA (or better)

Input Offset Voltage: $10\mu\text{V}$

Potential Resolution: $1\mu\text{V}$

Frequency Response Analyzer

Frequency Range: 10 μHz to 100 kHz (or better)

Amplitude: 1 to 32 mV

Equipment Technical Details (Software)

Windows based software for conduct of potentiodynamic polarisation, linear polarisation, AC impedance, galvanic current measurements. The equipment should have provisions for sequencing the tests and the calibration simulator should also be provided.

Accessories

- (a) A flat cell (for electrochemical studies) consisting of an auxiliary (platinum) and a reference electrode (calomel).
- (b) A computer for operating the equipment, with the following configuration: P4, 3 GHz, 1GB RAM, 160 GB Hard disk, DVD Drive, USB ports (2.0 x 4), 15" LCD Monitor, Optical mouse

(2) Kit for Assessment of Critical Pitting Temperature (CPT)

- CPT cell with temperature probe, controller and calibration
- Incremental temperature facility
- To be integrated to the above potentiostat/electrochemical testing software

The potential suppliers required to quote for (a) The potentiostat with accessories and (b) the Optional CPT kit, separately.