

Technical Specifications

- 1 Modular design system, should be upgradable with different modules with 10 or more channels in same system/chassis
- 2 Independent channels - Five
- 3 All Channels with simultaneous EIS Facility
- 4 Current range: 20 nA- 400 mA or higher (with at least six intermediate selection options)
- 5 Output Voltage range: ± 10 V or better
- 6 Compliance voltage: 20 V or higher
- 7 Voltage Resolution: 5 μ V or better
- 8 Current Resolution : 760 pA or better
- 9 Electrometer Impedance : $> 100 \text{ T}\Omega // < 20 \text{ pF}$
- 10 Potentiostat Bandwidth: 1 MHz or higher
- 11 Operational Frequency range: 10 μ Hz - 1MHz or more
- 12 Softwares must include: a) Corrosion and Electrochemical software with facility for Tafel Plot, Linear Polarization Resistance, Corrosion Potential and Corrosion Current calculation, Rate of corrosion calculation etc. b) Impedance Spectroscopy software with frequency sweeping option in current and voltage mode c) Voltammetry software with facility for Cyclic Voltammetry, Linear Sweep Voltammetry, Square Wave Voltammetry, Pulse Measurement etc. d) Equivalent circuit fitting and simulation e) Critical Pitting Temperature
- 13 Temperature probe/sensor: Pt1000 Temperature sensor for pitting corrosion experiments with 2 m electrode cable and 2×2 mm plugs
- 14 Electrochemical cell (300 ml or higher) having nitrogen purging option with PTEE Purge tubes and consisting of Pt mesh counter electrode, Ag/AgCl reference electrode and Glassy Carbon working electrode
- 15 Complete Corrosion Flat cell kit with double jacketed cell including saturated calomel reference Electrode and Platinum Mesh Counter electrode (Sample expose area 1 cm^2 and 10 cm^2)
- 16 At least three reference samples with known redox profile with certificate from any NABL accredited Lab to calibrate the instrument
- 17 To control data acquisition and saving of data, a suitable system (Dell/HP/Lenovo) having compatible all in one with latest configurations having at least i7 Processor (with anti-virus facility) min. 3.6 GHz, 4 Cores, at least 8 GB Ram and 1 TB HDD 23'' Colour Monitor, External DVD Writer, Laser Jet Multi-Functional Colour Printer 600 dpi (MFP), Wireless Optical Mouse, Wireless Keyboard etc. with latest genuine licensed Window Pro version compatible with above mentioned softwares
- 18 System should operate as per Indian Standards
- 19 UPS 2 KVA offline with at least 30 min backup time
- 20 Free Installation, commissioning and operational training of instrument for at least two days at our lab
- 21 *Two years onsite warranty on complete system with free lifetime up-gradation of softwares and one year extended warranty on complete system*
- 22 One Pt mesh counter electrode (54 mm wire / 80 mesh) – Flat cell design
- 23 One Calomel Reference electrode length: (a) 92 mm (b) 120 mm
- 24 One Cu/CuSO₄ electrode length (a) 100 mm (b) 150 mm
- 25 One Graphite rod counter electrodes (L 145 mm, OD 6 mm)
- 26 One Reference Electrode Ag/AgCl – length: (a) 80 mm, (b) 160 mm
- 27 One Paint cell consisting of Glass for Coating cell, Nylon base with three feet, Rubber cup with two holes, Metallic clamp, O-ring etc.
- 28 Ten Luggin probe/Bridge tubes in respect with reference electrodes
- 29 Five Salt bridges
- 30 Electrode Polishing Kit
- 31 20x Mask for 1 cm^2 and 10 cm^2 each