

**INFORMATION PERTAINING TO PROCUREMENT OF EQUIPMENT COSTING**  
**RS.10 LAKHS AND ABOVE DURING THE YEAR 2006-07**

Sl. No.	PO No. & Date	Description	Cost in Foreign Currency	Equivalent Rs.	Supplier
1	FE 04049 – 24/01/2005	<p><u>Part No.12608W</u> Full Electrochemical System – 1 No</p> <p><u>Part No.1260A</u> Impedance Analyser 10 uHz to 32 MHz – 1 No.</p> <p><u>Part No.1287A</u> Electrochemical Interface (2A current) – 1 No.</p> <p><u>Part No.USB125587S</u> Zplot + corrWare combination packing (1 Dongle) – 1 No.</p> <p><u>Part No.56001160</u> USB to GPIB Controller Cable – Win 2000/XP/Me/98 – 1 No.</p> <p><u>Part No.31203B</u> 2M IEEE Cable</p>	GBP 28,974	26,00,000	M/s.C-Tech (Int) Ltd. 37 A Beach Road, Emsworth, Hampshire, PO10-7HR, UK
2	FE 04053 – 10/02/2005	Autolab Potentiostat / Galvanostat Autolab PGSTAT30 with FRA2 module & BSTR 10A x Current Booster 10A	Euro 26,000	16,50,000	M/s.Eco Chemie BV Kanaalweg, 29G, 3526 KM Utrecht, The Netherlands
3	FE 04067 – 16/03/2005	Thermo Noran SIX-NSS-300 EDS System with accessories BSED(50e-0584), NSS-Sizing & NSS Drift	US\$ 89,500	45,00,000	M/s.Thermo Electron Scientific Instruments LLC, 5225 Verona Road, Madison WI 53711-4995, USA
4	FE 04068 – 18/03/2005	<p>Scanning Vibrating Electrode Technique (SVET) system with a Scanning Kelvin Probe (SKP) measurement system, Model SVP/SKP 100E, Combined SVP/SKP 100E System</p> <p>1) Model K0309 Probe for SVP 100/SVP100</p> <p>2) Model SVP/SKP 100E. Combined SVP/SKP 100E System</p>	US\$ 110,744	55,00,000	M/s.Advanced Measurement Technology, Inc 801, South Illinois Avenue, Oak Ridge, TN 37830 USA
5	FE 04069 – 22/03/2005	<p>Bruker 400 MHz FT-NMR Spectrometer with all accessories and probes</p> <p>(1) 400 MHz 2 frequency channel system with standard bore, actively shielded magnet.</p> <p>(2) Cryomagnet system with low liquid nitrogen and liquid helium evaporation losses, corresponding to long filling refill intervals;</p>	US\$ 306,000	1,48,00,000	M/s.Bruker Biospin International AG Gotthardstrasse 18 CH-6301 Zug Switzerland

		<p>and/or liquid nitrogen-free, long helium hold cryomagnet system an option</p> <p>(3) Flexible, fast RF phase, frequency and amplitude setting capability.</p> <p>(4) Arbitrary waveform generation for RF pulse shaping.</p> <p>(5) Expandability of RF channel</p> <p>(6) 19F detection capability</p> <p>(7) 1H/19F variable temperature (100-400 K) broadband inverse probe with 3-gradient coil system and necessary gradient hardware</p> <p>(8) CP/MAS unit with VT capability, including broadband probehead and 4 mm rotor system and necessary gradient hardware.</p> <p>(9) State-of-the-art computer system for spectrometer control, data acquisition, processing, display, analysis, output and networking, a modern LaserJet colour printer.</p> <p>(10) Software tools including NMR library, structure identification, simulation and analysis packages, in addition to standard spectrometer software.</p> <p>(11) Suitable standard speced, heavy duty and noise free air compressor and catalytic air driers for solution state and solid state work</p>			
6	FE 05018 – 03/08/2005	<p>Potentiostat/ Galvanostat/FRA Model:PARSTAT 2273-SYS With PowerSTEP, PowerCV, Power CORR, PowerPULSE, PowerSINE &amp; Zsimpwin 2A current maximum (20 A boosted) 100 V compliance 1.2 fA current resolution &gt;10P13. input impedance &lt;5 pF of capacitance 10 □Hz to 1 MHz built in analyzer for impedance</p>	US\$ 28,250	14,00,000	M/s.Advanced Measurement Technology, Inc 801, South Illinois Avenue, Oak Ridge, TN 37830 USA
7	FE 05035 – 17/11/2005	<p>Potentiostat/ Galvanostat/FRA Model:PARSTAT 2273 2A current maximum (20 A boosted)</p>	US\$ 23,250	12,00,000	M/s.Advanced Measurement Technology, Inc 801, South Illinois Avenue,

		<p>100 V compliance  1.2 fA current resolution  &gt;10P13. input impedance  &lt;5 pF of capacitance  10 □Hz to 1 MHz built in analyzer for impedance</p>			<p>Oak Ridge,  TN 37830  USA</p>
8	FE 05047 – 17/01/2006	<p><b>PORTABLE ELECTROCHEMICAL CORROSION ANALYSER</b>  Model “ Field Machine”  Consists of : Potentiostat, Galvanostat, Frequency Response Analyser and corrosion software and Portable PC.  <b>Hardware:</b>  Compliance Voltage: +/- 12 Volts  Sweep : +/- 3 Volt  Current Output: 500 mA  Potential Measurement: 21 Bit A/D  Maximum Potential Resolution: 1 µV  Frequency Range: 10µHz to 30 KHz  Universal 6 Pin Amphenol type corrosion probe adapter, 12 V car adapter, 12V battery terminal clips, mains cable, RS 232 lead for connection to a PC.  Instrument can be operated either by AC or DC with inbuilt battery and AC to DC converter, All necessary hardware are incorporated for both laboratory and field applications.  Software: Sequencer, Core Running, AC Impedance, Cyclic Sweeps, current &amp; voltage noise, long term, harmonic analysis, galvanodynamic sweeps, IR Compensation and Analysis.  Computer: Portable Pentium Laptop computer with standard configuration for measurement and analysis is included.  Guard ring probe for concrete corrosion:  Guard Ring Module and Probe: This is a hand he1d probe to measure concrete corrosion. The Guard ring electronics will be installed on the main instruments.  2 – meter cable is provided in the probe.</p>	GBP 18,240	16,00,000	<p>M/S. Acm Instruments,  125, Station Road,  Cark, Grange-Over-Sands  La117ny,  <u>England</u></p>

9	FE 05068-15/03/2006	Potentiostat/Galvanostat with facilities for Electrochemical Impedance with Basic Electrochemical cell set up total 12 Nos.	Euro 31,250	20,00,000	M/s.Eco Chemie BV Kanaalweg, 29G, 3526 KM Utrecht, The Netherlands
10	FE 05070 – 14/03/2006	<b><u>BT2000 BATTERY TESTING SYSTEM</u></b> 1) Model: BT2000 Basic Charge Description: BT2000 Basic Charge. Includes charges for hardware/software engineering, calibration, configuration, final tests and warranty. Also, includes Arbin hardware/software interface card, chassis, wiring and electrical and electronic hardware. 2) Model: BT2000-LNR-(-6)V-6V-0.1A Description: BT2000 System Configuration with 3 current ranges; Minimum Voltage:-6V; maximum Voltage:6V; Max Charge/Discharge Current; 0.1A current ranges:0.1A/0.0001A/0.00001A; Maximum Channel Power:0.6W Total Channel Number:32ch 3) Model special requirements: Description: It requires extra room to potentially add a few temperature, voltage, or Ph boards to this system. 4) Model Cable_1/V-10A-4C-4p TB plug-4gt Description: 10A cable of 4 conductors with 4p TB plug on one end and alligator on the other end. Cable length is 6ft. 5) Model: MITS Pro Testing Software Description: Arbin MITS Pro battery testing software: Provides comprehensive tools for testing batteries, super-capacitors, electro-chemical cells and others. 6) Model: 121822_bh-coin-24mm Description: Battery holder for max.24 mm coin cell, with phoenix receptacle	US\$ 31,000	15,50,000	M/s. ARBIN Instruments, 762, Peach Creek Cut off Road, College Station, TX 77845. <u>U.S.A.</u>

11	FE 05073 – 18/03/2006	<b>Computer Controlled Simultaneous TGS-DSC-DTA Thermal Analyser</b> i) Part No.961000.901 Q600 SDT Simultaneous DSC-TGA – 1 No. ii) Part No.924500.602 Kit Ethernet Switch – 1 No. iii) Part No.920069.240 240 V Conversion Kit – 1 No. iv) Part No.926100.901 Advantage Speciality Software Library – 1 No. v) Part No.960149.901 Platinum Sample Cups (110 microliter) (Quantity of 3) – 1 No. vi) Part No. 960070.901 3 Alumina Sample Cups (90 microliter) (Quantity of 3) – 5 Nos. vii) Part No.960017.901 Kit Dual Beam Thermo Couple SDT Q600/2960 – 1 No.	US\$ 32,100	28,60,000	M/s. WATERS GES.M.B.H., HIETZINGER HAUPTSTRASSE 145 A-1130, VIENNA, <u>AUSTRIA</u>
12	FE 05083 – 28/03/2006	1) Elemental Analyser Vario EL III – for Simultaneous C, H, N, S Analysis – 1 Unit 2) Micro-balance – 1 No. 3) Sample Preparation accessory for liquid samples – 1 No.	US\$ 36,866	18,00,000	M/s.Elemental Analysensysteme GmbH, Donaustrasse 7 63452 Hanau Germany.
13	FE 06003 - 24/04/2006	<u>Product No.4294A</u> Precision Impedance Analyser - 1 No. <u>Product No.R-50C-011-3</u> Agilent Calibration Upfront Support Plan - 1 No., <u>Product No.42941A</u> - Impedance Probe Kit for 4294A - 1 No., <u>Product No.42942A</u> -Terminal Adapter kit for 4294A 1No.	US\$ 41,661-04	23,60,000	M/s.Agilent Technologies Singapore (Sales) Pte. Ltd., Co.No. 199904761K No.1 Yishun Avenue 7, Singapore

14	FE 06007 - 02/06/2006	<b><u>Mode FTN2-300-24</u></b> Deep Cycle Life Tester featuring computer control via the Model VisualCN software and control computer. Two circuits, in a roll around cabinet, each capable of cycling a battery of 0 to 24 volts capacity. Allows control of each circuit via cycles, current, voltage, wattage, amp hours, watt hours, temperature or time - 1 No. Network Adaptor & VisualCN Software - 1 No. Thermocouple to measure temperature range – 50 C to + 200 C (device to be mentioned depending on the application - 2 Nos. Cell Voltage Monitoring input to record, display and perform a limit condition action for each circuit of the Model FTN. 12 channels per circuit with a voltage range of 0 – 8.000 +/- 0.001 V. Impedance value is > 66 k . Includes 20 ft.(6M) voltage sense leads for each cell with alligator clip termination	US\$ 53921	28,00,000	M/s. Bitrode Corporation., 1642 Manufacturers Drive Fenton, Missouri 63026 <b><u>USA</u></b>
15	FE 06008 - 05/06/2006	Electrochemical Workstation (Potentiostat/ Galvanostat) with Frequency Response Analyser - One Complete Unit	Euro 17200	11,00,000	M/s.Eco Chemie BV Kanaalweg, 29/G, 3526 KM Utrecht, <b>THE NETHERLANDS</b>
16	FE 06022 - 20/09/2006	Varian Cary 5000 UV-VIS-NIR Spectrophotometer (Double Beam) System With Accessories - 1 No. 6x6 Peliter multi cell holder - 1 No. Temperature controller - 1 No. Sample transport accessory - 1 No. Extended sample compartment - 1 No.	US\$ 44200	26,00,000	M/s. Varian BV, P.O. Box 8033 4330 EA Middleburg, Herculesweg8 4338 PL Middleburg The_Netherlands.
17	NC05240 - 20/03/2006	PMT ML Make Slant Bed CNC Lathe Model TNS-25*600 ABC features and Accessories with Fanuc Oi-Mate TC CNC System. High-speed spindle supported on precision bearings A2-5 (Ø75) nose. Dynamically balanced, variable speed HS free from vibration AC spindle drive, infinitely variable speed via poly V belt and pulley 5.5/7.5kw X-axis, direct driven by AC Servo FF-pre-stretched mounted ballscrew with integral hardened and		20,52,784	M/s PMT MACHINES LIMITED, POST BOX No.1102, PIMPRI PF., PUNE - 411 018 <b>MAHARASHTRA STATE</b>

	<p> <b>precision ground guideways</b>  <b>True slant 35 deg Z-axis, direct driven by AC Servo</b>  <b>Fixed Fixed –pre-stretched mounted ballscrew with</b>  <b>integral hardened and precision ground guideways.</b>  <b>EM turret of 8 stations with wedge type tool disc with</b>  <b>8 wedge clamps for turning tools (BTP-80 Make :</b>  <b>Pragati) Turning Tool shank : 25 X 25 mm</b>  <b>Rigid CI base and slant bed designed for easy chip &amp;</b>  <b>coolant flow</b>  <b>Manual pulse generator – Electronic hand-wheel.</b>  <b>Sliding wing cover left and right side set protection for</b>  <b>Z ways</b>  <b>Total enclosed machine enclosure with single sliding</b>  <b>door and Easily Removable Panel, machine lamp and</b>  <b>single station pato light</b>  <b>Rear machine mounted control panel with built in AC</b>  <b>unit</b>  <b>Chip tray with coolant tank.</b>  <b>Set of standard service tool kit</b>  <b>Hydraulic power pack for work holding and Tailstock</b>  <b>function.</b>  <b>Centralised Automatic lubrication system Machine</b>  <b>mounted</b>  <b>Coolant system with pump mounted on chip tray.</b>  <b>One set of operation, installation, and spare parts,</b>  <b>wiring diagram, parameter list control system</b>  <b>manuals.</b>  <b>Set of machine nameplates for identification,</b>  <b>instruction, and safety waming</b>  <b>Machine painted in two tone colors RAL white and</b>  <b>blue</b>  <b>Set of shipping clamps levelling screws and pads.</b>  <b>Fanuc CNC Control system (LCD 7.2” monochrome</b>  <b>display unit)</b> </p> <p> <b>Clamping Device</b>  <b>Hydraulic 3 Jaw Self Centering Hollow Chuck Ø 200</b>  <b>mm., Make-GMT</b>  <b>Hard &amp; Soft Jaws with mounting elements</b> </p>			
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	<p><b>Hollow cylinder to suit above chuck along with its attaching parts, Make-GMT</b></p> <p><b>Compulsory Accessories</b>  <b>Combined unit of Voltage stabilizer &amp; Isolation transformer (20KVA)</b>  <b>Isolation transformer (20KVA)</b>  <b>Set of toll holders consisting of :</b>              <b>Boring bar holders (bore size Ø 40)</b>              <b>Reduction sleeves (Ø8, Ø10, Ø12, Ø16, Ø20, Ø25, Ø32 &amp; Ø40/MT-1):</b>              <b>1 No. Each</b></p> <p><b>Spares &amp; Toolings</b>  <b>Spares for normal running of the machine for 2 years</b></p>			
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