

**INDIAN INSTITUTE OF TECHNOLOGY ROPAR
DEPARTMENT OF MECHANICAL ENGINEERING**

Dated: 30-09-2009

SUBJECT: N.I.Q. for purchase of laboratory equipments

Sealed quotations are invited for the purchase of the following items. The equipments are to be installed at IIT Ropar (Roopnagar) Punjab. Delivery of the equipments shall be required within 1-2 months of placement of the purchase orders. The quotations should reach in the office of Dr. Harpreet Singh (Room No. 208, Mechanical Engineering Department) latest by 3:00 PM on November 20, 2009. The firms are requested to send offers for Technical and Commercial bids separately

Sr. No.	Name of Equipment and Brief Specifications	Quantity
1.	<p>INDUCTION MELTING FURNACE: Nominal furnace [Steel Melting] capacity: 5Kg Maximum Melt Temperature: 1600-1650°C Alloy to be melted: Iron/Steel Power System with Circuit Breaker Protection and Complete Closed Water Cooling System including crucible lifting mechanism (lifting mechanism may be manual or automatic) Or Equivalent</p>	1
2.	<p>UNIVERSAL TESTING MACHINE: 50 kN capacity, Twin column model, Position measuring accuracy: ± 0.02 mm or 0.05% of displacement (whichever is minimum), Position control resolution: ≤ 0.063 μm, Maximum speed at full load: 250-500 mm/min, Return speed: 500mm/min, Crosshead speed accuracy (Zero or constant load): $\pm 0.1\%$ of set speed, Load measurement accuracy: $\pm 0.4\%$ of reading down to 1/100 of load cell capacity, $\pm 0.5\%$ of reading down to 1/250 of load cell capacity, Strain measuring accuracy: $\pm 0.5\%$ of reading down to 1/100 of full range with ASTM E83 class B or ISO 9513 class 0.5 extensometer, Single phase power supply (preferably), Load weighing and strain measuring systems should be as per ASTM standards, The machine should be fitted with both computer as well as manual controls Or equivalent</p>	1
3.	<p>Computerized Microstructure Image Capturing System along with Image Analysis Software and Inverted Microscope: High quality inverted microscope, High resolution color CCD camera, Digitizer / Video Grabber card, Software to interface CCD Camera with PC, Enhanced Image Processing, Routine</p>	1

	Filters and Special Filters, Edge Detection and Morphometry, User defined Measurement Count and Classification, Should be able to provide all the standard analyses as per ASTM Standards such as Phase Analysis, Porosity, Coating Thickness, Decarburisation Depth, Grain Size, Inclusion, alongwith measurement tools: For Calibration, Length, Angle, Perimeter, Width, Area and Radius, Report: Direct print out and Export to MS Office or Excel Or Equivalent	
4.	Abrasive Cutter: For metallographic specimen preparation, Should be of high quality , 10” diameter wheel	1
5.	High Quality Grinding and Polishing Set up for Metallographic preparations	1
6.	High Quality Belt Grinder	1
7.	High Quality Specimen Mounting Machine	1
8.	High Quality Low Speed Diamond Cutter	1
9.	Electrochemical Corrosion Test Rig	1

Terms and Conditions:

1. The equipments should be supplied and installed at IIT Ropar (ROOPNAGAR) Punjab.
2. The prices quoted should be inclusive of all taxes and CIF IIT Ropar.
3. The quotation received after due date will not be considered.
4. The Institute reserves the right to reject any quotation without assigning any reasons.
5. The warranty of the equipments should be for minimum 2 years from the date of installation.
6. The payment terms should be specified in the quotation clearly

(Dr Harpreet Singh)

