

DEPARTMENT OF CHEMICAL ENGINEERING  
INDIAN INSTITUTE OF TECHNOLOGY, KANPUR  
KANPUR, UP 208016, INDIA



**Siddhartha Panda**  
Associate Professor

Tel: +91(512)259-6146  
Fax: +91(512)259-0104  
E-mail: spanda@iitk.ac.in  
www.iitk.ac.in/che/spanda.htm

---

Dec. 28, 2011.

Quotations are invited for a “Field Emission Scanning Electron Microscope (FE-SEM)” having the following specifications and service/support features.

**Specifications:**

1. Topological imaging – SE detector with solid state scintillator
2. Compositional imaging – Retractable Back Scatter Electron Detector
3. Capability to adjust probe current continuously upto 100 nA
4. Minimum resolutions - 1 nm at 30 KV, and 2 nm at 3 KV
5. Stage movement – X axis: 70 mm or higher, Y axis: 60 mm or higher, Z axis: 45 mm or higher
6. Tilt and rotation – Tilt: -10 to +90 degree, Rotation: 360 degree continuous
7. Capability to image magnetic samples
8. Multi sample holder with 5 or more stubs
9. Capability to rotate individual samples in multistage holder
10. Active vibration isolation system for chamber and column separation
11. 3-D and AVI imaging capability
12. Automatic Turbo Molecular Pump (TMP)/Rotary Pump (RP)/Ion Getter Pump (IGP) based differential vacuum system
13. Oil free rotary pump with silencer box
14. Battery back-up to operate IGP for up to 30 days without external power
15. UPS with minimum 30 min backup for regular operations
16. IR-CCD camera for chamber viewing
17. Online fault diagnosis and networking
18. Acoustic touch alarm
19. Image operation, processing and measurement software
20. Specimen handling tools and stage tools
21. Ports/facilities for addition of modules (e.g. EDX etc.) later

**Services and support.**

1. Warranty – minimum of two years
  2. AMC – provide the amount and the terms
- Note that those providing better after sales service and support with written evidence will be given preference

Mention the compliance status for each of the items above in a tabular form.

**DEPARTMENT OF CHEMICAL ENGINEERING  
INDIAN INSTITUTE OF TECHNOLOGY, KANPUR  
KANPUR, UP 208016, INDIA**

Please send competitive quotations (minimum validity of 60 days), mentioning the FOB rates, in sealed envelopes to the address provided below by January 12, 2012.

Dr. Siddhartha Panda  
Department of Chemical Engineering  
IIT Kanpur, Kanpur 208016.