

## **IISER Mohali is inviting quotes for stylus profiler.**

Please send the envelope to:

Asst Registrar Purchase Section,

**Address: IISER Mohali, Knowledge city,**

**Sector 81, SAS Nagar, Manauli PO 140306**

**Telefax : 2240266, 2240124**

All quotes must reach by specified date and time as mentioned in the document provided by Stores and Purchase section. Certain couriers do not deliver at our site. We will not be held responsible for any courier or postal delays.

All quotes must reach by specified date and time as mentioned in the document provided by Stores and Purchase section. Certain couriers like **Professional Courier** do not deliver at our site. We will not be held responsible for any courier or postal delays. Please follow three part bid system

- 1) Part A technical bid sealed in an envelope
- 2) Part B finance Bid sealed in an envelope
- 3) EMD Rs 50,000 in favour of Registrar IISER Mohali.
- 4) All three envelopes sealed in one large envelope.

### **Given below are general specifications/ requirements.**

Please provide a compliance sheet and other data requested. Please provide factual data. Simply signing the sheet as complied may result in disqualification.

1. Step height repeatability : <math> < 5 \text{ \AA} </math> for up-to 1um
2. Type of sensor: Low mass, low inertia type sensor in case of other sensors like laser interferometer specify details of stability over long scans and provide description of usage. i.e, any calibration or focusing etc the end user has to perform
3. Vertical resolution: 1  $\text{\AA}$
4. Vertical range: Up-to 0.8mm
5. Scan drive: Please mention type of scan drive and stability. Baseline stability of <math> < 1000 \text{ \AA} </math> on 50mm scan or better
6. Video microscope: 2.5Mega pixel or better and digital zoom from 1- 4mm field of view selectable(Sample viewing and system optics). Live image must be available while loading samples as well as scanning.
7. Stylus size: Small tip around 2um or 2.5um and large tip around 12 or 12.5um
8. Scan length range: 50um – 50mm
9. Scan direction: Forward and Reverse directions must be available
10. Stylus force: 0.04mg – 15mg. If lower force range is not standard quote them as an option ( option will be included in price comparison)
11. Stylus replacement fixture: Quick change type assembly type
12. Sample stage: 150 x 150 mm or more ;circular with vacuum chuck (vacuum pump also)
13. XY sample positioning: 100x100 mm X- Y translation; motorized/piezo  
Having 1 micron XY repeatability
14. Stage rotation: 360degree motorized/manual
15. Sample thickness: 30mm or more.
16. Scan speed: 2um/sec to 150um/sec (Variable speed)
17. Scan method: Stage scanning
18. Data point per scan: 100,000 or more

19. Accesories: Provide one calibration standard of around 250nm or 500nm

20. Software requirements:

- a) Easy creation of customized reports and automatic processing of data
- b) Leveling of profile trace on command
- c) Trace analysis: To automatically measure height and width on non uniform steps
- d) Step detection: To automatically level the trace and measures the step hieght
- c) Analysis parameters: Skew, Ra, Rq, Rp, Rv, Rt, Rz, max. Ra, max. deviation, Wa, Wq, Wp, Wv, Wt, avg. step height, max. peak, max. valley, peak to valley, high spot count, peak count, bearing ratio, depth, flatness, radius of curvature,, surface area, slope, roughness, volume analysis
- d) Calculating multiple step measurements
- e) Multiple scan function
- f) Multiple markers indicating the level
- f) Automatically be able to compare analytical results from multiple scans, calculate the mean, standard deviation, max. and min.
- g) Appropriate data filters: Gaussian Regression, Fourier, Histogram, and statistical filters etc.

21. Around 24" viewsonic or phillips LED monitor panel with adjustable stand

22. Windows 7, preferably 64 bit i7 processor

23. Optional accessories:

- a) 2D Stress analysis: To measure tensile and compressive thin film stress in Mpa with suitable vacuum chuck.
- b) Vibration isolation table
- c) 3D mapping collection and imaging analysis capability

**Qualification criteria:**

1. One week after the bid opening we may ask for presentation.

2. The bidder should have servicing experience in the similar equipments of atleast 3-5 years.

3. No. of trained service engineers/service offices in India.

4. Customer references with contact details for atleast ten customers from Research institutes like IITs, IISERs and other major national labs. (provide atleast 8-10 references for similar models)

5. Please provide 10 customer references with contact details in USA or Europe also from your principals.

6. 5. The specifications/qualification criteria are general guidelines. The technical committee reserves the right to accept minor changes in specs or accessories if any vendor complies on keys specs that meet the end users performance requirements. The committee may call vendors for a presentation to qualify as well as to clarify any technical queries.

**Financial Terms:**

1. Preferably no pre-payment will be made.

2. Line of sight draft will be preferred over L/C expenses

3. Quote Shipping and Insurance till IISER Mohali.

4. Customs exempt certificate will be provided

5. An EMD of Rs 50,000/- as DD in favour of "The Registrar, IISER Mohali"