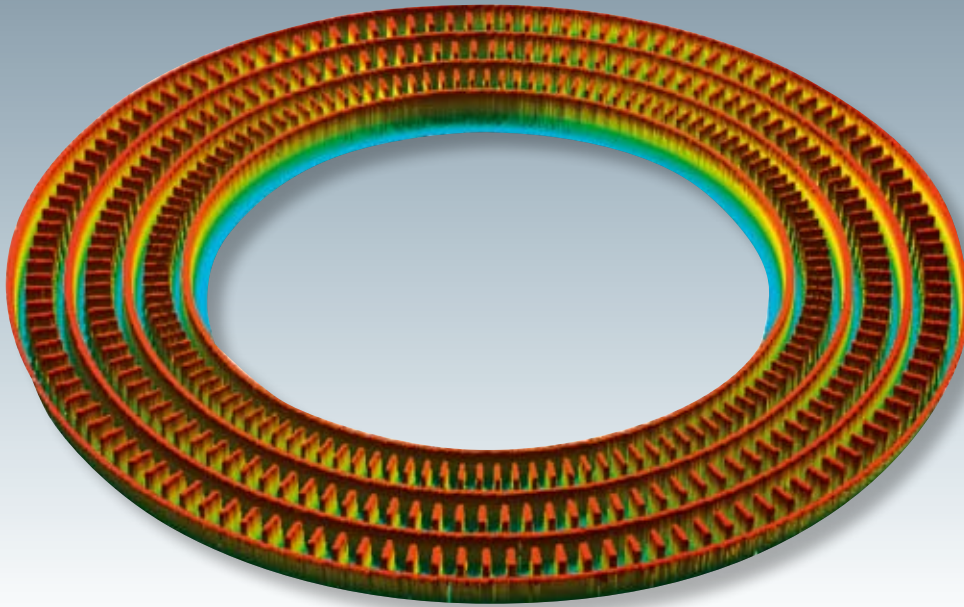


Micro-geometry



The miniaturisation of manufactured products requires that development, process control and quality control be carried out on size scales that are smaller than ever.

Quantification of feature height, spacing, angle and countless other geometric parameters can be performed within a few seconds using pre-programmed analysis templates.

Volume of pores, craters and bumps can be calculated repeatably using precise analysis algorithms.

Research & Development

NF systems help with the realisation of tinier space-saving components allowing customers to maintain a leading edge.

Process Control

New materials and tighter specifications result in ever more complex production processes. Customers use NanoFocus technology at critical process points to correct deviations promptly avoiding costly waste and lost time.

Quality control

Control of incoming materials from suppliers is a necessity for defect free and successful products. NanoFocus systems are used to ensure receipt of quality materials from their suppliers as well as delivery of quality product to customers. This capability avoids costly returns and strengthens the relationship between vendor and consumer.

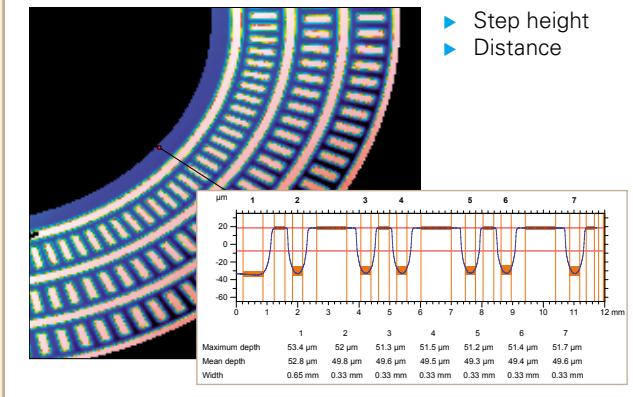
- ▶ Diverse Geometry Analysis
- ▶ Height and Width
- ▶ Area and Volume
- ▶ Angle, etc.
- ▶ Grain size Analysis
- ▶ Motif Analysis
- ▶ Surface Binarization



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Micro-geometry Applications

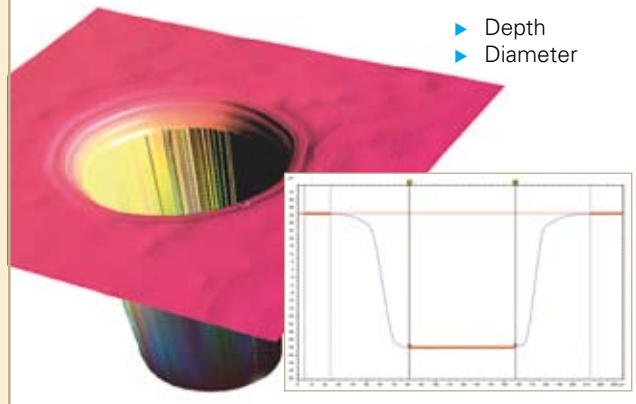
Research & Development



Industry demands measurement techniques that are ever more precise. To that end researchers are working with vernier discs to develop angle and distance measurement systems with previously unavailable levels of precision.

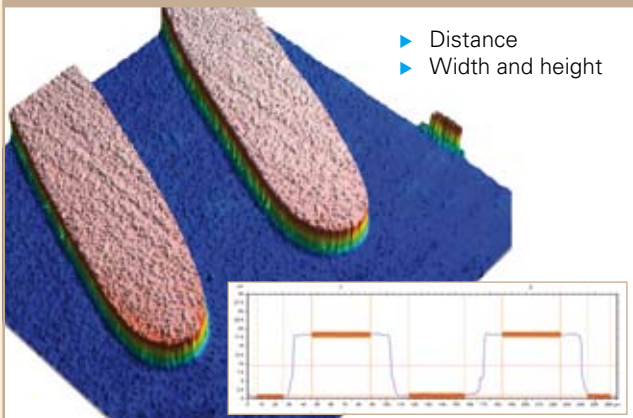
In order to accomplish this task, the structure of the vernier discs must be measured with extremely high resolution. NanoFocus technology is at work here providing researchers with the tools necessary to refine and optimise production of these new gauges.

Process Control



The tight tolerances on micro via production ensure the proper function of multilayer circuit boards. With μ surf technology circuit boards can be tested without sectioning – as required by destructive test methodologies. The μ surf has the ability to measure micro vias ($d < 100 \mu\text{m}$) quickly and with high reliability in spite of small geometry and sharp angles. This capability helps NanoFocus' customers to reduce costs by identifying faulty circuit boards early in the production process.

Quality Control



In electronic component assemblies the position, size and height of contacts have tight tolerances to prevent defects resulting from short or open circuits. Non-contact μ surf technology is used to measure the critical coordinates of these contacts and ensure that the minimum required separation between them is maintained. Faulty parts are identified and removed from the production process before they can cause failures of more complex and costly products.

Further Applications

- ▶ **Electronics:**
Step height of freshly printed circuits
- ▶ **Medical:**
Step height of micro fluid components, front and back radius on contact lenses, thickness measurement on thin films
- ▶ **Micro Systems:**
Micro lens geometry, pressure sensor measurement, Fresnel lens geometry
- ▶ **Tools:**
Blade thickness and angle measurements, wear of cutting tool tips

Are you interested in other application areas or products and want some advice?
Call us or send an e-mail to: sales@nanofocus.de

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