

PROSCAN DDMS

Automatic Defect Detection and
Measurement System



HIGH PERFORMANCE MEASUREMENT

Proscan DDMS (Defect Detection and Measurement System) represents a fully automated, machine-learning approach to identification and measurement of scratches, pits, pinholes and surface deformations to μm levels.

From scanning to reporting of data, each step is automated and repeatable. A cutting-edge vision system scans the surface with intelligent lighting, to identify the locations of the defects. These can be classified for severity based on operational parameters, whilst excluding 'false flags' from dust or swarf.

Each defect is then measured for depth, width and volume with a high resolution sensor. Roughness and other surface parameters can also be measured in key areas, with real-time inspection possible while results are acquired. Based on the results and pass-fail criteria, the part is then sentenced based on the observed defects.

We work hand-in-hand with the customer to develop a software protocol specific to their sample and defect type.

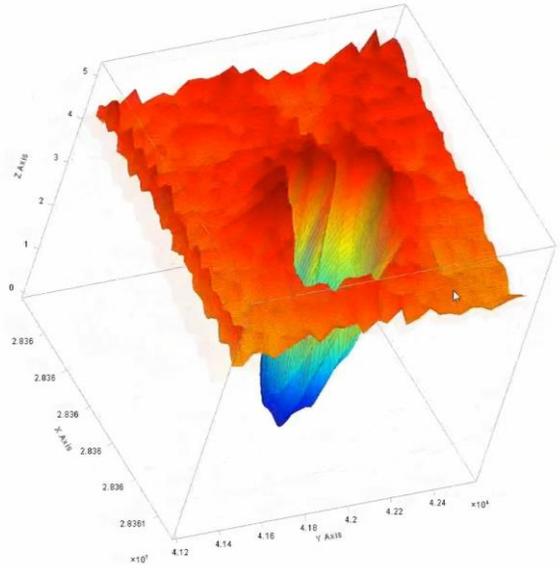


Image of detected and measured pitting defect



DDMS installation

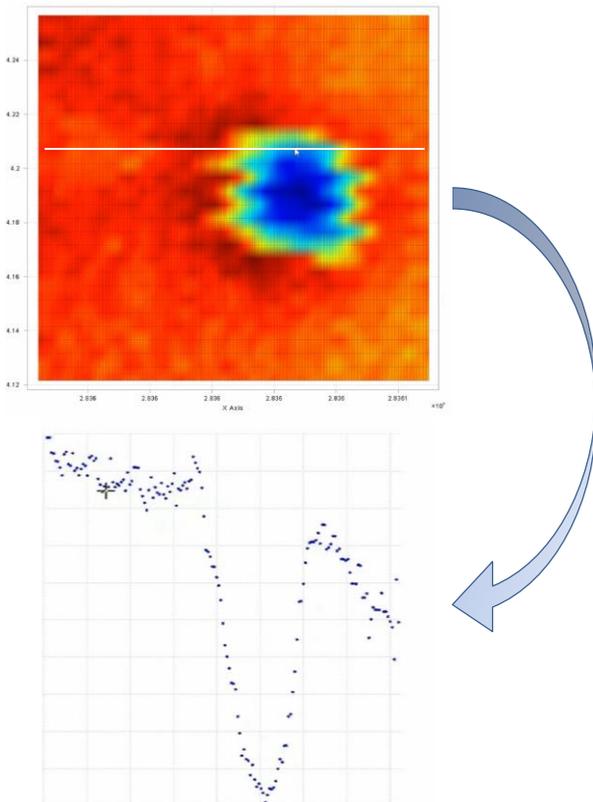
VERSATILITY

The Proscan DDMS system allows for measurement of:

- Scratch/dig
- Pinholes
- Pitting
- Other defects
- Roughness
- Shape
- Flatness
- Thickness

HIGH SPEED MEASUREMENT

Using line measurement technology, we can obtain hundreds of thousands of data points per second, allowing for 100% measurement of defects or surface quality many times more reliably and faster than a visual inspection. This ensures rapid return on investment and a step change in quality control capabilities.



Real-time measurement as data is being acquired

FACTORY-READY

The extreme precision of the system can resist industrial environments, with air-bearings, granite tables and footings, full enclosures and acoustic dampeners all possible solutions to environmental disturbances.

The intelligent defect location software also helps to eliminate false flags resulting from airborne contamination.

Factory acceptance data has demonstrated perfect reproducibility with defect detection, and repeatability far below 1 μm in dimensional measurements.

QUANTITATIVE INSPECTION

In many fields, visual inspection and comparison need to be carried out. This job can be dull and difficult with potential for user error.

We eliminate the subjectivity by physically measuring and automatically grading defects to give operators the same answer time after time.

We work with operators and quality engineers to tune the defect detection algorithm. This allows for the correct sensitivity to determine whether defects are considered in or out of tolerance.

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