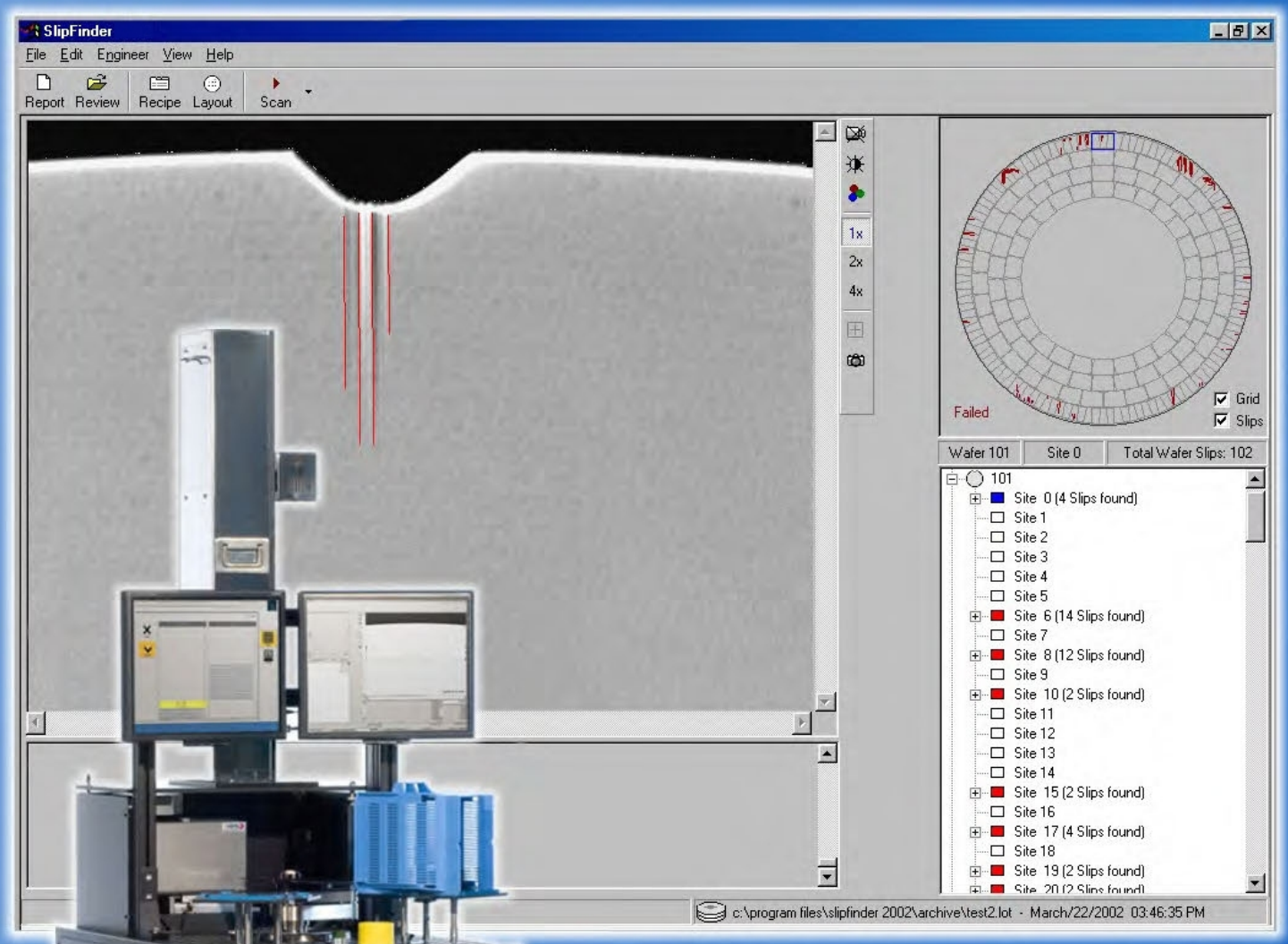
YIS-200HM SlipFinder

Slip Line Detection System



Fully Automatic
200 mm Wafer Inspection
Sub-micron Defect Detection
High Speed Optical Metrology

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YIS/SF Series SlipFinder Metrology Systems

DESCRIPTION

The YIS and SF Series metrology systems are designed for optical detection of wafer defects such as crystal dislocations, slip and other defects. The YIS-300HM (for 300 mm wafers) and YIS-200HM (for 200 mm wafers) utilize Makyoh optics technology (Magic Mirror) and an integrated robotic wafer handler.

The SF300M and SF300N systems offer a low cost functionally equivalent alternative to the YIS series. They are designed for inspection of single 300/200mm wafers without the robotic wafer handling. The flexible SF Series also offers a choice of either Olympus/ Nikon Nomarski microscope with a single wafer precision R-Theta-Z stage.

APPLICATIONS

The SlipFinder is capable of detecting crystal dislocations that occur during many types of wafer processes:

- Epitaxy
- Oxidation, Diffusion
- Post Implant Annealing
- SOI
- Polishing
- Strained Silicon
- Many other Semiconductor Applications

Specifications

SYSTEM SPECIFICATIONS (Summary)

- Fully Automated Defect Detection
- Full or Partial Wafer Inspection
- Adjustable Inspection Recipes
- Sub-micron Depth Detection Sensitivity
- Optical Field of View: 15mm X 11mm
- Throughput: Approx 10 – 60 WPH
- Dual FOUPs or Dual SMIF or Dual Open Cassette
- Optical Non-Contact Notch Finding
- Optional class M1 Mini-Environment
- Windows Software Environment
- SECS-GEM via RS232 or HSMS
- Full Factory Automation
- Sorter Capabilities – Optional OCR
- Non-contact Notch, Flat-Finding and Centering Technology
- Software: Hologenix SlipFinder Advanced Metrology Suite under Windows
- Platform:
  YIS Series: Hologenix YIS300/200
  SF Series: R-Theta-Z Stage
- Magic Mirror™ Optics (YIS series & SF300M):
  Field of View: 15mm X 11mm for speed
  Slip Detection Sensitivity < 0.05 microns depth
- Nomarski (DIC) Optics (SF300N only):
  Micro Field of View (< 3 mm)
  Standard microscope options

SOFTWARE FEATURES

- Automated detection of Slip Lines
- Detect, Count, Locate and Measure (Length)
- Windows Interface
- Adjustable Detection Sensitivity
- Adjustable Edge Exclusion
- Graphic display of wafer with highlighted Slip Sites
- Wafer Accept/Reject recipes
- Lot file Reports, Image Archiving and Printing
- Automated, Semi-Automated and Engineering Mode
- Inspection locations are completely configurable via a Layout/Grid tool.
- All Slip Lines are reported in mm using Wafer Coordinates
- System outputs Wafer Maps showing actual orientation and length of Slip Lines
- Stitching - Sections of Slip Lines from different fields of view can be automatically combined and reported as one long Slip Line
- System can be configured to stop the Inspection upon failure to improve throughput
- SOI Edge Exclusion measurement capability