

MIPS_Tune

Image Processing Unit for Automatic X-ray Inspection

The **MIPS_Tune** Image Processing System is a MatriX proprietary software unit for off-line test program generation in automatic x-ray inspection of electronic devices and parts. The software uses an inspection model library for test strategy definition. A pin and fragment related assignment of one or more inspection strategies is supported to achieve optimum test coverage for all assemblies.

MIPS_Tune supports the automatic generation of CAD compiled inspection lists with automatic CAD import, but also based on simple pick and place like data, on component centre data or without data. After tuning of the parameters, test simulations generate measurement values needed for the generation of rules. An integrated classifier serves for manual or automatic generation of rules.

MIPS_Tune is one module of the MatriX Inspection Process Software MIPS that covers the whole inspection process. It offers links to all other MIPS modules as e.g. the verification unit MIPS_Verify for in-line or off-line verification and MIPS_Web SPC Tool. Both modules provide important information needed for fine tuning of the inspection parameters.

Features and Benefits

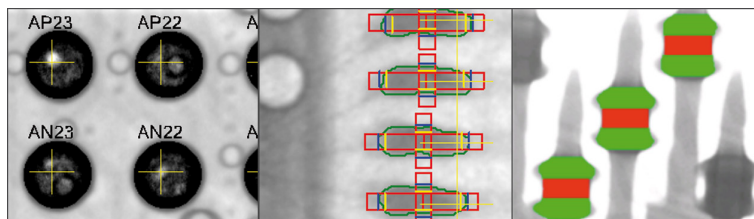
- Off-line programming with CAD compiler statistic display & automatic inspection list generation
- Advanced Algorithm Inspection Library for solder joint and component inspection (transmission and off-axis)
- Slice-Filter-Technique™ (SFT) for double-sided boards
- Automatic-Tree-Classification (ATC) for auto-rule-generation
- Automatic-Tree-Classification (ATC) for automatic generation of classification rules.
- MIPS Tune support the generation of transmission as well as 3D inspection lists as well as the combination of both technologies.
- Smart Rules feature for generation of reliable rules based on even a small number of test boards.

MIPS Hardware

- PC-Station with multi-core processor setup
- Windows 7 / 10 platform

Verification & Process Control

- MIPS_Verify link with closed-loop repair
- MIPS_Process with real-time SPC

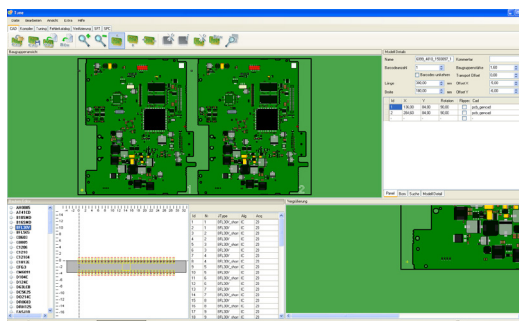


CAD

- Import of CAD Data (with model check)
- CAD processing functions for easy generation of MIPS compatible CAD data without CAD data import or based on pick and place data or component centre data.
- CAD and BOM data conversion to MIPS data format .mcadx and .mbomx
- Clear, graphical and layout oriented device presentation
- Editor for processing of joints and packages
- Pin and fragment related assignment of test strategy (Algorithms)

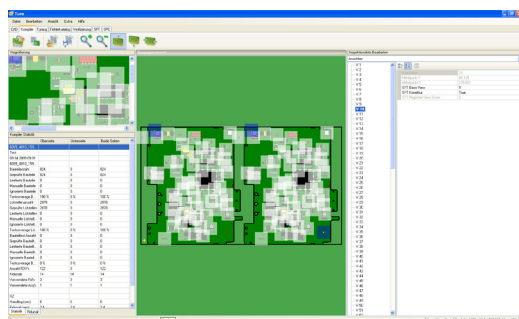
Compiler

- Automatic generation of inspection lists
- Display and processing of views and test sequence
- Inspection list editor
- Output of test program (.mil)
- Compiler Statistic



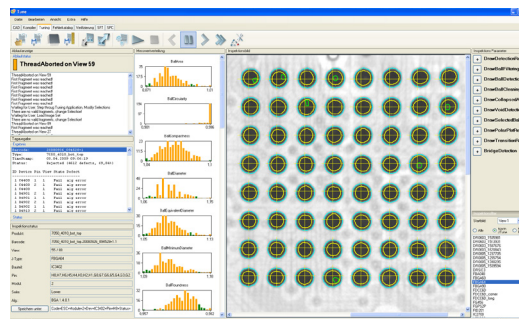
Tuning

- Algorithm parameter tuning for each single joint of the current test program in transmission or 3D slice images.
- Display of test images with test fragment and test conditions
- Inspection filter for selection of joints or devices
- Test simulation and generation of measurement values
- Display of measurement distribution per measurement value
- Generation of AutoRules
- Integrated defect catalogue



3D

- Optimizing the Reconstruction Settings
- Z-Locator for detection of the optimum top and bottom slice in the volume image



For more information, speak with your MatriX representative.

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