kSA In-Line Metrology

Product Solutions

Dimensional Measurement

A leading manufacturer of building products needed to measure thickness of their cement board.

Challenge:

The manufacturer had existing height sensors and a scanner. They required a software solution that would work with their new IT infrastructure and an interface that was effective in a production environment that generated significant dust.

Solution:

An operator friendly interface was developed along with custom metrology software and a database to store data for future analysis. This metrology solution satisfied all of the required features using the pre-purchased sensors, and also provided real-time acquisition and analysis of in-line board thickness data. k-Space's custom software and database solution, as well as their on-site installation and training, provided a seamless transition from concept to use.

Results:

- Software compatible with their new IT infrastructure
- Capability to do statistical analysis on long term data
- Capability to move to automated process control

Components:

- Software integration
- Database development
- Factory integration with existing equipment

Dimensional Measurement and Surface Characterization

An auto part supplier needed to measure delamination, scratches, pits, and part length (accurate and resolvable to +/- 0.002") of its brake pistons.

Challenge:

They needed to take existing technology and implement an automated version prior to polishing. The existing version had a sensor, real-time controller, and LED lighting. The automated version allowed for less manpower and more accurate results satisfying one of their customer's requirements.
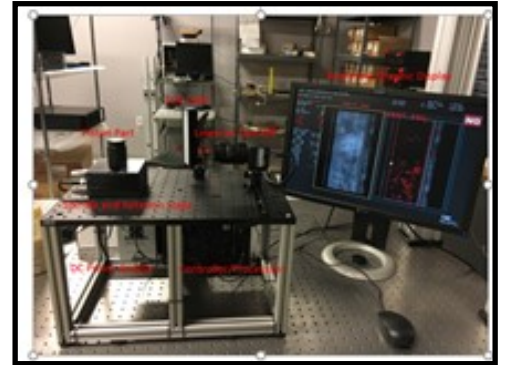
Solution:

k-Space provided a complete auto load/unload metrology tool with a new conveyor unit using the existing imaging hardware from the manual unit. Full image acquisition and processing software was provided along with the automated tool.

Results:

The custom metrology solution met the measurement and automation requirements and the customer gained a desirable contract with one of their customers in part due to this automated system.

Components:

- Acquisition software
- Processing software
- Existing inspection vision components
- Conveyor system with robot and rejected parts bin

Industry Examples

- Automotive
- Solar
- Glass
- Building products
- Open to all industries

Non-Contact Measurement Examples

- Dimensional tolerance
- Uniformity
- Thickness
- Surface characteristics
- Physical properties
- Optical properties