RELIMETRICS

AUTOMATED QA AND PROCESS CONTROL FOR PLASTIC MOLDING

ABOUT RELIMETRICS

Relimetrics is part of the Industry 4.0 movement, helping companies to digitally transform. Relimetrics is a platform solution applicable to numerous industries, including automotive, manufacturing, electronics and construction. Our software uses computer vision and machine learning to automate inspections and perform predictive maintenance. This increases productivity, cuts costs and helps companies to innovate at a more rapid rate.

OUR CUSTOMER

Our customer provides automotive OEMs with high performance components with plastic parts, such as manifolds, ducts and cylinder head covers. As an early adopter of Industry 4.0 technology, it set out on a robust digitization journey in an effort to increase manufacturing efficiency and decrease costs.

Figure shows Relimetrics user interface analyzing dimensions and surface defects of a blow molded plastic part.

CHALLENGE

Customer uses blow molding process to manufacture automotive filter components. Produced parts have to meet stringent customer quality demands and standards to avoid costly recalls.

Today, quality inspections are done manually by operators. Defective parts are either recycled or discarded. Recycling can lead to contamination, and discarding is costly and wasteful.

Process control is the main challenge. Currently, blow molding technicians adjust machine parameters to optimize production efficiency within quality specifications. Yet, quality drifts may go unnoticed for days.

With increasing quality demands, customer sought to make automated quality audit and process control an integral part of the production process.

SOLUTION

Relimetrics deployed a fully-integrated system that digitized visual inspections of manufactured components. The system:

- Inspects the dimensions and surface of every manufactured part and assures quali-ty is within specifications
- Correlates digitized quality data with machine and process data to optimize blow molding process
- Identifies quality drifts in real-time and provides recommendations on how to adjust process parameters for optimized production, increasing productivity and throughput of a production line

IMPACT

>99.9%
Probability of detection

50%
Cost decrease related to quality audit

Closes the Loop
Real-time process control feedback

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