AUTOMATIC DEFECT RECOGNITION SOFTWARE FOR TBR X-RAY MACHINES

ABOUT RELIMETRICS

At Relimetrics, we are changing the paradigm of inflexible, hard to use & reconfigure quality automation (QA) systems with flexible, easy to use & configure QA.

Relimetrics enables manufacturers to digitize quality assurance and manufacturing processes with guaranteed detection accuracy and shop floor availability.

Bridgestone Corporation is a global tire manufacturer. Quality inspection in the tire manufacturing processes is required to verify that the products have no damage and/or defects.

Accuracy in product quality control can effectively protect tire manufacturers and their customers from the consequences of defective tires.

Challenge

Quality inspections are becoming increasingly more complex in aircraft manufacturing given today's accelerated production schedules and the proliferation of options and extras.

Tire defects cannot be taken for granted on aircrafts, since damages can lead to deadly consequences. Proper aircraft quality inspection can prevent major aircraft accidents that happen on the runway during takeoff or landing due to tire failure.

Currently, tire inspection is carried out by human visual inspection which is time consuming and prone to error. What is more, due to fatigue, is inefficient and inaccurate. Lowering the need for human intervention in visual inspections, has the potential of increasing the efficiency and accuracy of the QA process significantly.

To overcome these problems, **Bridgestone** seeks to improve the efficiency of their quality assurance (QA) process by leveraging advancements in computer vision and AI.

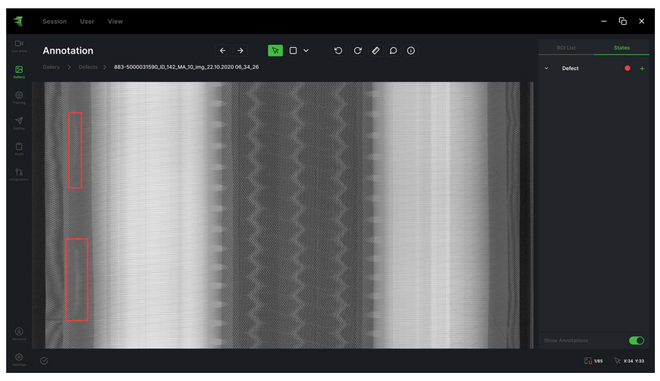
Solution

Relimetrics solution digitizes quality inspection of tires using **Reli**Vision and provides a full overview of quality before the products leave the shop floor, automatically detecting defects on X-Ray images of the tires.

The system can be used to inspect a variety of **HIGH RISK** defects in the manufactured tires, including Wild Wire, Wrinkles, Crossed Cords, Distorted Wires, Tread Plies, Open Splices, Missing Materials, Stretched Materials, Low Body Ply Turn Up, Low Chafer Turn Up, Distance Between Chords, Air Bubbles, Bent Bead and Wrong Angle in Plies.

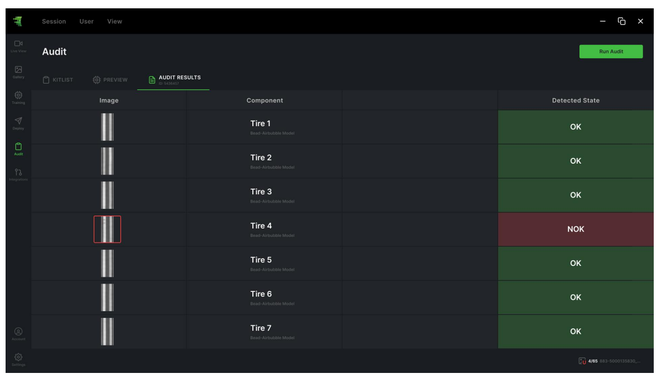
With **Reli**Vision, customers can rapidly implement AI-based machine vision algorithms on their shop floor without writing a single line of code. They can share trained models across inspection points and leverage existing camera hardware irrespective of image modality.

Annotation



Training

Audit



Our solution enables customers to define their specific requirements and train algorithms with well defined deep learning recipes.