



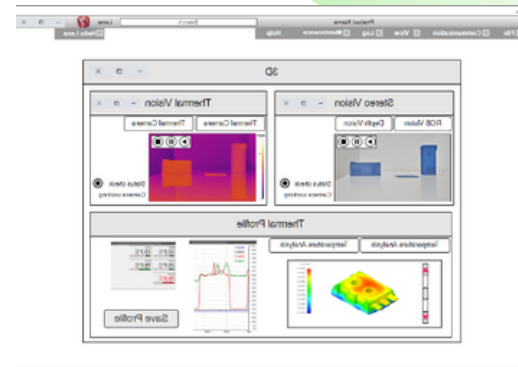
IR THERMAL INSPECTION

Real-time thermal imaging to monitor the thermoforming and heat-sealing processes in the production line

SOLUTION DESCRIPTION

IR Thermal Imaging Inspection solution has two different applications, **one is the thermoforming solution** that monitors thermal images of heated and formed plastic sheets during thermoforming process, edge based solution and closed-loop communication control with Digital Twin. The other is **heat sealing process solution**, that monitors the filling & sealing process of 100% products through non-intrusive inline inspection and gives real-time data in 4D and control every step of heat-sealing process.

2D and 3D Thermal profile information of the produced parts will be generated. By analysis the thermal profile of the heat-sealing and heated and formed plastic parts in thermoforming process will be automatically detected in real-time and throw alert message. The real-time QA appears on a monitor, and available online WEB system. The data is collected from thermal cameras in the production line and has a real-time decision about the quality and defects on the produced products to minimize the plastic materials waste and to improve the production efficiency.



Thermal Profile Analysis Page



Main screen of IRTI for Heat-sealing

MAIN BENEFITS

- ▶ Allow preventive maintenance for good process sequence.
- ▶ Edge based solution for thermal imaging and anomaly detection.
- ▶ Indicating in real-time about bad process trend
- ▶ Accurate, detecting defects in thermal imaging, which is not clear by visual to reduce the thickness, scrap, and production cost.

PRODUCT OWNERS



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