APPLICATION SPOTLIGHT–Manufacturing

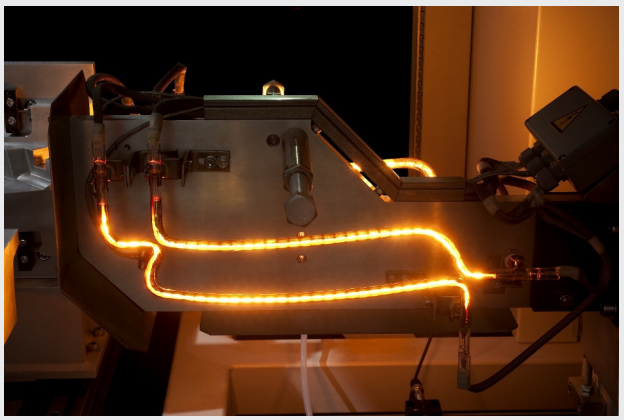
Increase Efficiency | Reduce Costs | Improve Quality

PLASTIC IR WELDING QUALITY CONTROL

ENSURE QUALITY OF PLASTIC AUTOMOTIVE PARTS WITH THERMAL IMAGING

THE CUSTOMER'S CHALLENGE

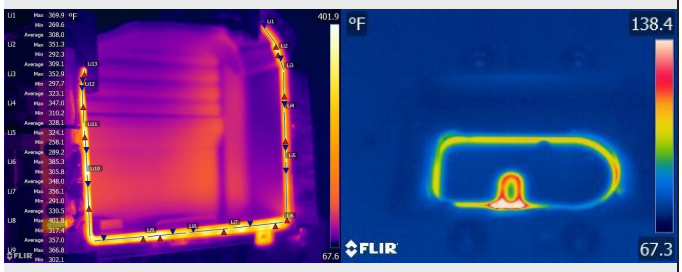
After an infrared weld is complete, the typical way to determine the quality is through a visual check after the welding machine's heat cycle. The visual check requires quality control and quality assurance personnel to stop the production flow and pull the welded plastic parts apart. This interrupts and delays the welding process, and there is no guarantee for 100 percent product quality.



Visually checking an infrared weld requires personnel to stop production flow and pull the welded plastic parts apart, delaying the welding process.

A SOLUTION

Thermal imaging technology can be used to conveniently test and evaluate infrared (IR) welds non-destructively. A thermal camera or imaging sensor, such as the FLIR A315, can highlight subsurface defects or anomalies that can't be seen with the naked eye. It allows manufacturers to continuously monitor plastic parts during the heat cycle without stopping the machine or interrupting the welding process. These cameras and sensors trigger an alarm when a temperature threshold is exceeded. With advanced analytics software, personnel can differentiate between a good and a bad weld pattern.



FLIR thermal imaging cameras allow operators to continually monitor the IR weld quality without stopping the machine.

THE RESULTS

Thermal imaging sensors allow operators to continuously monitor the IR weld quality without interrupting the welding process, even when the IR welding machine is left unattended. Quality control and assurance personnel no longer must take welded plastic components apart, which has resulted in a significant reduction of scrap. This enables personnel to catch possible issues before they happen, improve quality of finished products, reduce unexpected process issues, increase response time from maintenance personnel, reduce scrap rates, and reduce the number of parts that must be manually disassembled to check weld integrity.

For more information about FLIR in manufacturing or to schedule a product demonstration visit: www.flir.com/quality-assurance

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