



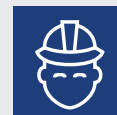
APPLICATION SPOTLIGHT—Manufacturing



Improve
Efficiency



Reduce
Costs



Improve
Safety

WELDING INSPECTION

NON-DESTRUCTIVE INSPECTION OF WELD SEAMS FOR PROPER JOINT AND HEALTHY CONNECTION

THE CUSTOMER'S CHALLENGE

Although welding devices and processes are highly developed today, there is still a need for random process-inspection and quality control. Welds are crucial to an automobile's safety and quality, as any error might result in instability of the chassis in the event of a crash or benefit corrosion. The challenge is avoiding destructive testing – which costs more and is only feasible for a small part of the weld – while still gaining confirmation and meaningful insight into the welding processes and their results.

A SOLUTION

Active thermography provides a two-dimensional visualization of the weld seam quality. With a thermal imaging solution such as the FLIR A8300, missing joints, false friends, and other failure patterns can be detected autonomously in lab or in-line inspection units. This process requires an excitation source (e.g. inductive, laser, or halogen lamp), a thermal camera, and software specially designed for active thermography applications. All can be integrated into the manufacturing process for greater efficiency.

THE RESULTS

Other methods like ultrasound only give comparably crude information about the weld seam. Active thermography provides an image, composed based on the heat flux from and through the material. Based on that, the software can even distinguish failure categories and do spatial measurements of weld length and diameter (depending on weld type). Thermal imaging can help manufacturing professionals avoid costs associated with destructive testing; it can help stay 100% in control and in line; it can improve efficiency, providing meaningful process insight for process optimization and minimal failure; and it can improve customer safety by allowing manufacturers to ensure welding strength on the chassis, resulting in a reduced risk of fatalities or injuries.

For more information about FLIR in manufacturing or to schedule a product demonstration visit:

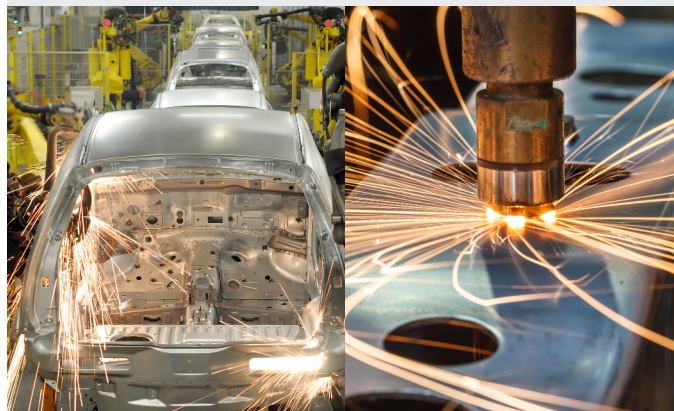
www.flir.com/manufacturing/process-monitoring

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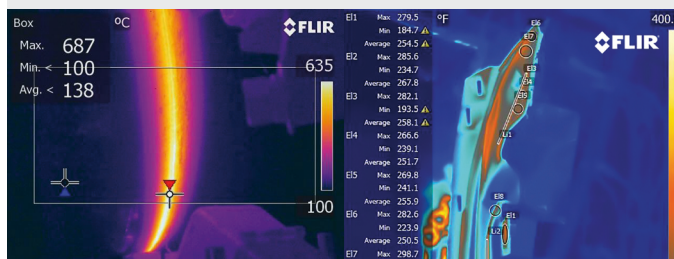
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Missing joints, false friends, and other failure patterns can be detected using thermal imaging.



Thermal imaging can help you reduce costs, improve efficiency, and improve customer safety.



FLIR A8300sc

