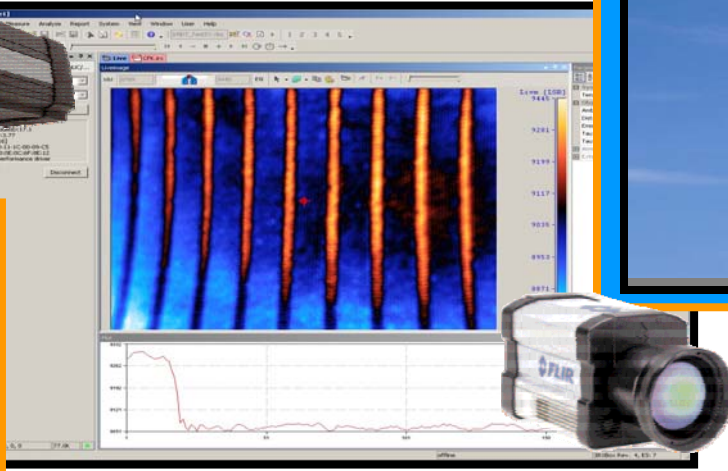


Modular State-of-the-Art Thermography System for NDT

Multiple
Camera Support



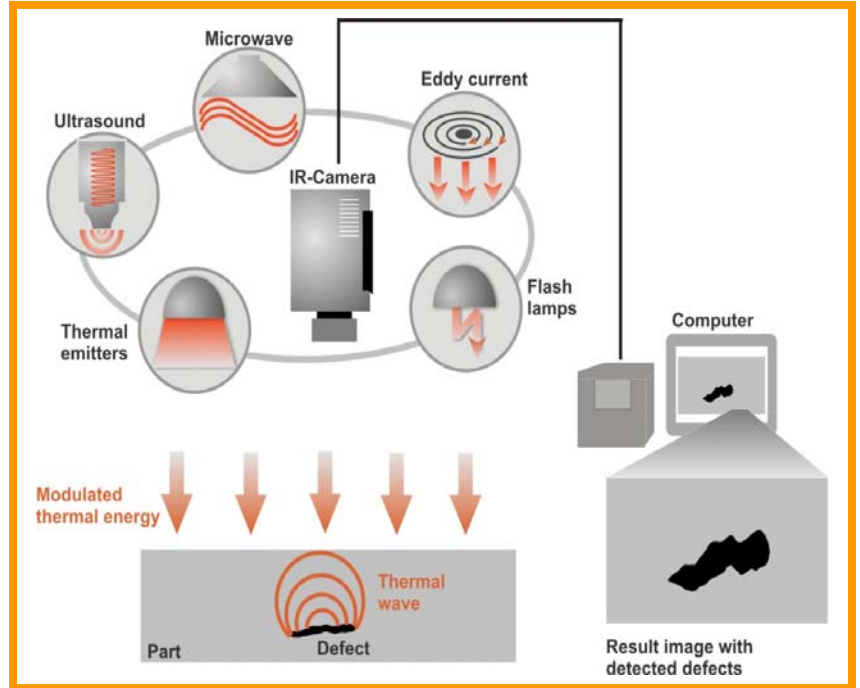
Modular
Easy to Use
Portable

Basics of Infrared Imaging NDT

➔ Thermal stimulation of the measuring object with a modulated heat source, e.g.

- Thermal emitters
 - ➔ Halogen Lamps
 - ➔ Electric Resistant Heaters
- High power flash lamps
- Ultrasound
- Microwave
- Hot air
- Eddy current

- ➔ Recording of the thermal response at the surface of the measuring object as a function of time with an infrared camera
- ➔ Analysis of the temperature signal
- ➔ Non-contact, large-area scans, fast



For Additional Information Contact:



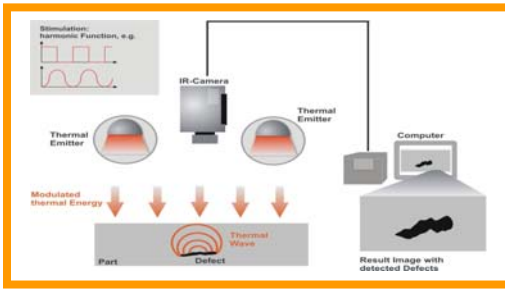
NDT Solutions Inc.
150 West First Street
New Richmond, WI, 54017-1742

Phone (715) 246-0433
Fax (715) 246-0466
Email Sales@ndts.com
Web www.ndts.com

IR-NDT: All-in-One

- IR-NDT is a modular system consisting of software and hardware
- Supports all known thermographic NDT measuring techniques

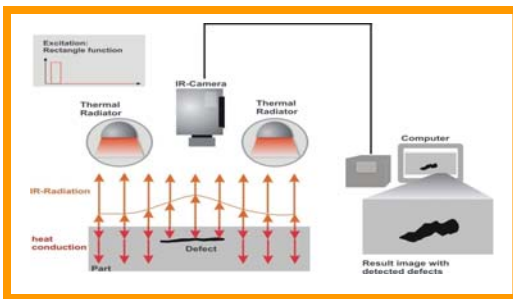
Lockin-Thermography



- Stimulation of the component with modulated thermal energy
- Measurement of the thermal response as a function of time with an infrared camera
- Signal analysis

Main Advantages: Applicable for large area measurements. Affordable heat source (e.g. halogen lamps). Easy setup. Low thermal load to the inspected component.

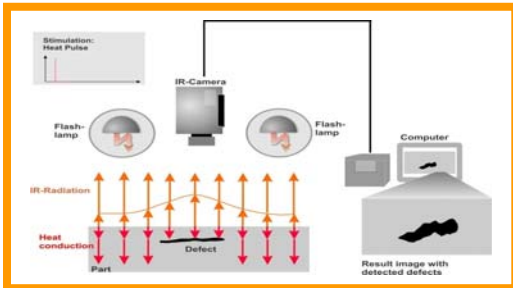
Transient-Thermography



- Transient thermal stimulation of the component
- Measurement of the thermal response as a function of time with an infrared camera
- Signal analysis

Main Advantages: Applicable for large area measurements. Short measuring times. Affordable heat source (e.g. halogen lamps). Easy setup. Low thermal load to the inspected component. Ability to perform depth resolved inspections.

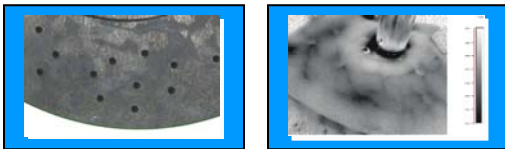
Pulse-Thermography



- Thermal stimulation of the component with a short heat pulse
- Measurement of the thermal response as a function of time with an infrared camera
- Signal analysis

Main Advantages: Very short measuring times. Ability to perform depth resolved inspections. Excellent performance for inspection thin layers and for the detection of near-surface defects.

Vibro Thermography

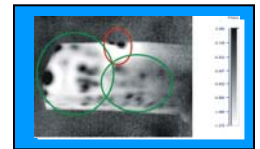
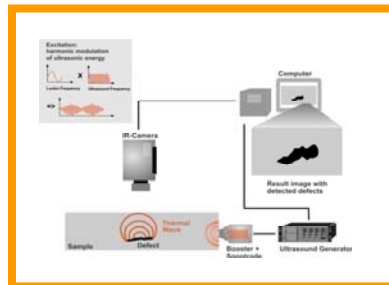


Inspection of Parts from CFRC

Component from Carbonfibre Reinforced Ceramic (CFRC)

Left: Visible image

Right: Result image. Fine cracks originating from the drilled holes are clearly displayed.



Left - Result image: Indications from surface cracks are marked red.

All other indications are caused by hidden cracks or by clusters of micro-cracks.

Right – Turbine Blade: Surface Cracks are Marked