

Wrinkles
Disbonds
Delaminations
Cracks
Crushed core
Kissing bonds
Fluid ingress
Cracked cores
Porosity
Repair defects
Voids
Foreign objects
Impact damage (BVID's)

NDT using Shearography

Seeing the invisible -
Fast and efficiently



NEW
FlawExplorer



Solution

Non-destructive testing of
composites based on Laser
Shearography



Results

Instant, full-field defect
detection on wrinkles,
delaminations and more



Benefits

Fast, easy to handle, and
cost-efficient Quality Control

Seeing the invisible

– fast & efficiently in very high quality

Laser Shearography is an optical measurement technique that efficiently finds flaws where other NDT techniques don't. It's a non-contact method which can easily be used to evaluate quickly and cost-efficiently the structural integrity of test objects, largely independent of their material composition and geometries.

The Shearography principle consists of comparing shearing images of a test object in two states, a neutral and a loaded state. Advanced software algorithms perform live image processing to identify variations in out-of-plane deformations between both states, which in turn reveals surface or sub-surface discontinuities or anomalies.

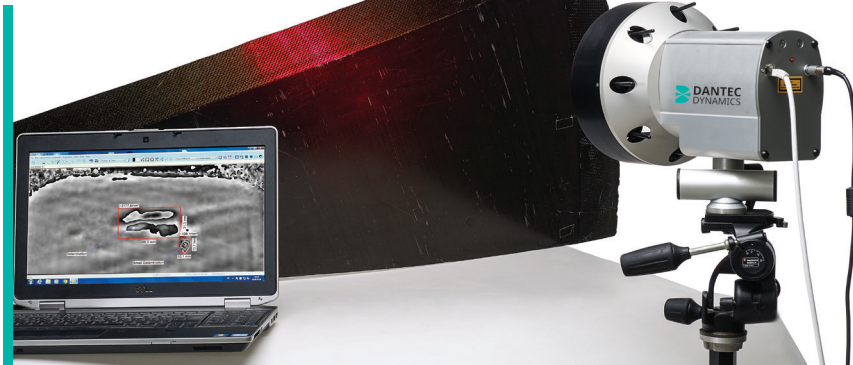
A 1 m² (10 ft²) area can be inspected in less than 30 sec. Laser Shearography is the perfect solution for time-sensitive, large scale industrial NDT and maintenance applications. The method is standardized under the framework of NAS410/EN4179.

Speed up inspection automation – Cut inspection cost

Its capabilities of non-contact large area inspection makes Shearography the ideal technique for a solution in combination with an automated robotic inspection in a production environment.



FlawExplorer



Takes NDT & Quality Control to a new level

Dantec Dynamics is proud to present its new FlawExplorer, the latest portable, compact and rugged Shearography system that takes NDT & Quality Control to a new level. The FlawExplorer is available in versions with 2, 4 or 8 laser diodes supporting inspection of areas from 10 x 10 cm (0.1 ft²) up to 2 m² (20 ft²) in one shot, saving the time and money on any given inspection.

- Highly portable, easy to set-up and ready to operate within seconds
- Compact and robust design featuring Class 3R laser diodes for use in-field and on robotic inspection systems
- Efficient inspection of large areas with quick location and characterization of defects
- Visualization of composite structural information – like ply drops, bulkheads, overlaps, splicers, stringers, ribs etc.
- Enhanced stability with advanced image filtering produces clear and unambiguous results
- Advanced customizable reporting functionalities
- Can be configured to support your specific defect detection challenge
- Optional modules: Thermal, vacuum or vibration loading

For inspection of composite honey-comb, rubber, composite overwrapped pressure vessels (COPV), ceramics, glass-fiber & fiber-metal laminates, bi-metals, foam-cores, leather, metal-metal bonds a.o.

For NDT, QA & maintenance control processes within Aerospace, Automotive, Wind Power, Marine, Aviation, Textile and similar composite related industries