

Shearography



The Shearography technique allows non-destructive optical inspection of composite materials and detection of structural defects using dynamic or thermal strain of the structure surface.

Features

- Adjustment of the shearing is flexible, accurate and reproducible
- Shear and phase shifting with an electronic SLM (Liquid-Blaze-Technic)
- Very fast shear and phases settings
- Manipulation of the light field with a light modulator
- No mechanical mobile components for the shear adjustment
- Contactless & full field
- No micromechanical components
- Delivers quantitative values of defects in real-time investigation
- Fast & easy inspection method
- Best suited for maintenance & production

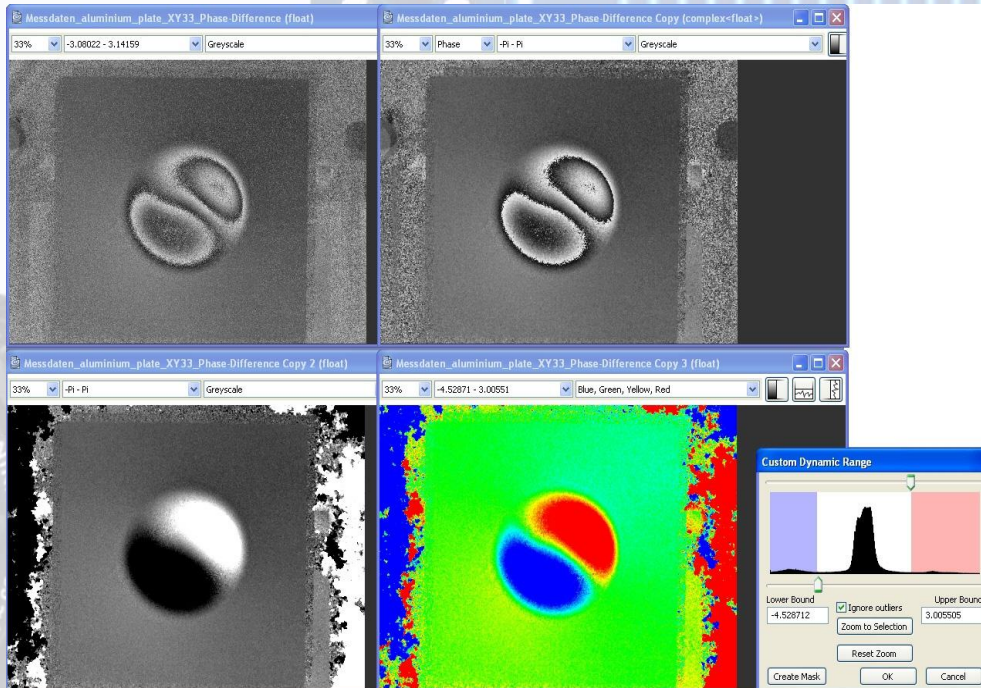
Applications

The use of Shearograph allows Non-Destructive-Inspection of:



- Disbondings**
- Delaminations**
- Dents**
- Impacts**
- Cracks**
- Water & air inclusions**

Example



| Thermal stimulation of an aluminum plate

Technical Specifications

CCD Resolution	1392 x 1040 Pixels
Lenses	Standard C-Mount, Zoom, Microscope adapter
Shear angle	Software controlled
Shear direction	XY 360°
Measuring area	10x10 mm ² up to 1000x1000 mm ² depend on laser and lens
Shear angle	0 to 600 pixel
Sensor head dimensions	20x15x8cm
Sensor head weight	4,8 kg
Different Laser-heads	500 to 900 nm 50mW up to 7W depend on Measuring Area or external laser

Excitation-Measurement Methods

Static	Heat, Vacuum, Mechanical, etc.
Dynamic	Vibration excitation by shaker
Static - LPS	<u>L</u> ive <u>P</u> hase <u>S</u> hifting Method - enables direct failure evolving view

Contact

E-Mail: info@limess.com
 Phone: +49 2151 365 28 00