



# Laser Technology Inc.

Advanced NDT Systems

## Model LTI-5100HD

For the Ultimate in High Definition Shearography NDT



The LTI-5100HD  
Installed on a  
Model 9200  
Gantry Scanner  
For Spacecraft  
Component NDT.

### System Features

- Remote Control of all Camera functions
- Ultra High Definition Shearography Imaging
- Continuous Real-Time Phase Map Mode
- Digital, Phase Step and Phase Reversal Real-time Subtraction Modes
- User macro routines
- Use on Base, Tripod Lift or Scan Gantry
- Powerful image Processing Suite
- Laser Spot Projector for Precision Remote Calibration to Requirements of ASTM 2581-07
- Portable or Gantry Mount
- 2 Models
  - 5100-HD 150 mw Laser
  - 5100-HDe External Laser to 10 Watts



LTI-5100HD Image Processing Computer and Interface Console. Optional Laptop Work Station Available

### Benefits

- Large Area Inspection
- Ultra High Through-put
- Real-Time Imaging of:
  - Delaminations
  - Disbonds
  - Damage
- Large increase in Aerospace manufacturing productivity



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## Model LTI-5100 HD Digital All Mode Shearography Camera System

### Technical Description:

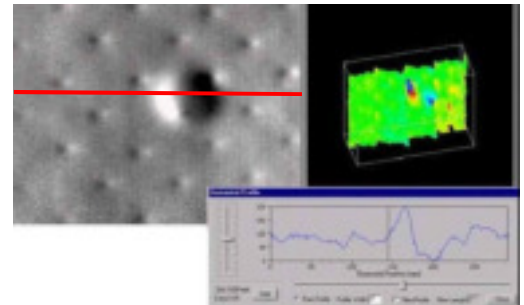
The LTI-5100HD offers the ultimate in shearography NDT performance. The 5100HD operates in all modes, including continuous real-time phase maps, real time subtraction, Phase Stepping and Phase Reversal. The 5100HD has built in laser spot projection for fast precision calibration of shearography data. In addition, the 5100HD provides complete remote control of all camera functions including camera pan, tilt, zoom, iris, focus, shear vector as well as laser beam X/Y steering and Beam expansion. The LTI-5100HD consists of the SC-5100HD Digital Shearography Camera with built-in or external laser, Interface Console, and the IP-5100HD Image Processing Computer (Laptop style work station or desk-top work station), all interconnecting cables, 2 Manuals and a One Year Warranty.

### Optional Equipment:

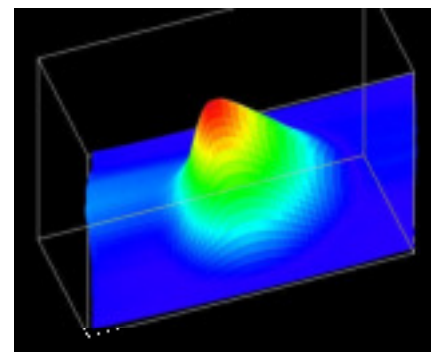
- Tripod and Adapter Plate • MECAD- 100, 200 Vibration Stress Units
- ACAD-100, 200 Acoustic Stress Units • TS-100 Thermal Stress Unit
- Vacuum Windows • LTI-9000 Vacuum Test Chambers
- Gantry and Mobile Lift Systems • Robotic Inspection Systems

### Training:

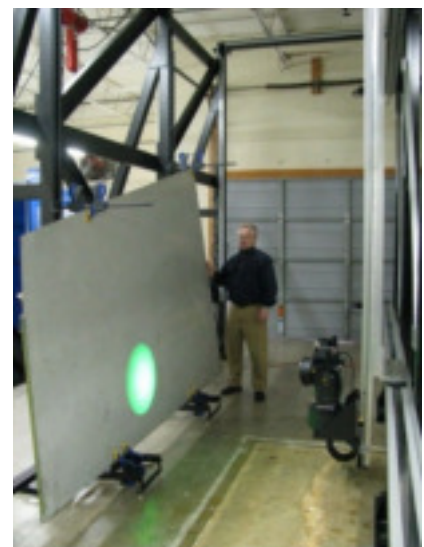
LTI offers Shearography Certification Courses to ASNT SNT-TC1A. Please check our website for the latest schedule.



LTI-5100 has Powerful Image Analysis tools for precision defect measurements.



3-D Quantitative Deformation Analysis



LTI-5100HD in optional 12x24 ft. Gantry inspecting wing panel for a Boeing 747.

Shear Camera	Digital Phase Stepping Shearography Camera, real time mode
Stress Methods	All Mode
Laser	Built in 150mW @532nm (Green) Laser Class IIIa (Safe for operator), External Laser to 10 Watts with Fiberoptic Laser Beam Delivery System Class IIIB
CCD Resolution	1350 x 1040 or 1392x1200 pixels, Plus 12 Bit CCD Sensor
Lens Zoom	F1.0, 8-48 mm w/2x Converter (effective performance F4, 16)
Shear Optic Placement	Shear Optics located in front of imaging lens, which gives the absolute best image quality with no distortion to the shearography image
Shear Angle	Continuously adjustable 0° - 5°
Shear Direction	Continuously adjustable 0° - 360°
Field of View	1250x920 mm; up to 3x3 m <sup>2</sup> (with external laser)
Measuring Sensitivity	0.02 μm/shear distance
Remote Control Features	Camera Lens: Iris, Focus, Zoom, Shear Vector: X/Y Shear 0-5°, 0-360° Laser: X/Y Steer, Beam Expansion Motion: (Pan350°, Tilt 120°) Laser Spot Projector for Precision Image Calibration
Manual Adjustments:	Laser Shutter on/off

The LTI-5100HD is manufactured in the USA under US and foreign patents. 6,717,681;  
5,257,088; 5,094,528 Additional patents applied and Pending. Specifications are subject to  
change without notice. 1/08



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