THE LASER UT® SYSTEM

The Laser UT allows for contact-free inspection of composite parts. Magellan Aerospace, Winnipeg owns one of only four systems in the world, and the only one outside of the United States.

NON-DESTRUCTIVE • FAST • DATA AUTOMATICALLY ARCHIVED • RESULTS IN REAL TIME
ABOUT THE LASER UT

- The Laser UT is a non-destructive ultrasonic inspection test unit for composite materials
- A piece that would take 8 hours to scan using conventional methods may take as little as 1 hour with the Laser UT
- All data is automatically archived digitally, making it easy to go back to previously scanned parts for trend analysis and reassessment
- Results are displayed in real time, and with two computers one part can be scanned while another is being analyzed
- Laser UT uses laser beams to generate and detect ultrasound in composite parts
- Can scan complex shapes at high speeds without the need for: contour following, custom tooling, and couplant
- Size: $X = 180\,\text{"} \quad Y = 204\,\text{"} \quad Z = 120\,\text{"
- Manufacturer: PaR Systems

THE RESULTS

A-Scan: A one dimensional scan, where higher spikes show the reflection of the ultrasonic pulse caused by a defect or part surface.

B-Scan: A two-dimensional cross section of the object, where lines show the ultrasonic pulse reflections and depth of a defect.

C-Scan: Shows the plan view of the scanned surface and can show the area and position of a defect. Several viewing options are available, including depth and amplitude.

A-Scan

B-Scan

C-Scan

Porosity: Unwanted space or air between layers of composite materials

Delamination: The separation of layers in the material, resulting in loss of strength

Inclusions: Impurities in the material or resin of the composite

ABOUT MAGELLAN AEROSPACE

Magellan Aerospace is a global aerospace company that provides complex assemblies and systems solutions to aircraft and engine manufacturers, and defence and space agencies worldwide. Magellan designs and manufactures aeroengine and aerostructure assemblies and components for aerospace markets, advanced proprietary products for military and space markets, and provides engine and component repair and overhaul services worldwide. Magellan is a public company whose shares trade on the Toronto Stock Exchange (TSX: MAL), with operating units throughout North America, Europe, and India.