



LASERGUIDE Automatic Ply Verification (APV)

In-process quality verification at the lowest cost

APV Benefits

- Prove that every ply of every part is build correctly
- Errors detected and resolved at the lowest cost
- Minimum change to manufacturing process
- Traceable, quantitative documentation
- Human factors (error, subjectivity, repeatability) are no longer a component of the inspection process
- Having the operator perform the inspection eliminates the wait for the inspector
- All quality decisions are directly tied to manufacturing data
- Inspection results are more accurate and detailed than traditional methods



APV Process

- Operator places material in location displayed by LASERGUIDE
- At completion of ply lay-up, LASERGUIDE displays the approximate location for the operator to place the HAMPI (High Accuracy Manually Positioned Inspector)
- The HAMPI automatically illuminates, captures, calibrates and analyzes a digital image of the inspection region
- The location for the next ply is automatically displayed by LASERGUIDE if the process was completed correctly. If there is a problem detected with the most recent ply, the incorrect condition is reported to the operator.
- A report is created and all results are automatically archived for reference



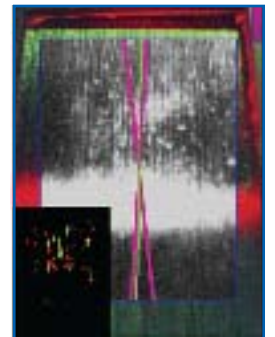
Edge failed



Edge passed



Woven orientation



Unidirectional orientation