

A low-angle shot of an Airbus aircraft wing against a bright blue sky with scattered white clouds. The wing is sleek and metallic, with several small, dark, rectangular features visible along its upper surface. The perspective is from below, looking up at the wing as it extends towards the top right of the frame.

Non-destructive testing for airframes repairs

SASS Singapore – March 28th, 2018

Steven Crummack
HO Testia Asia Pacific
Testing Training & Services

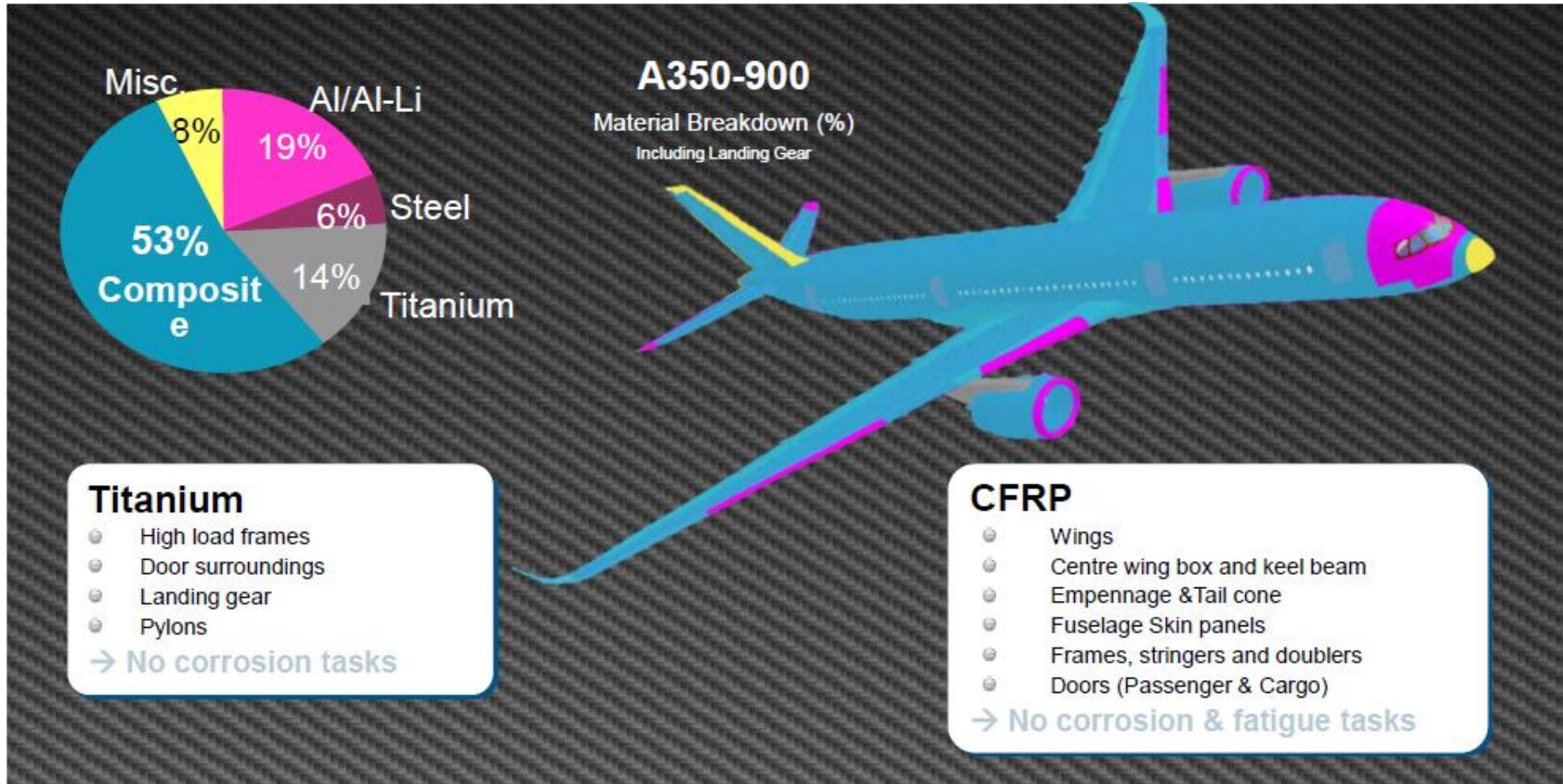
AIRBUS

Agenda

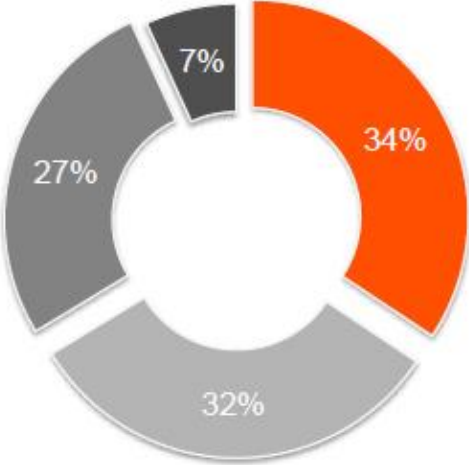
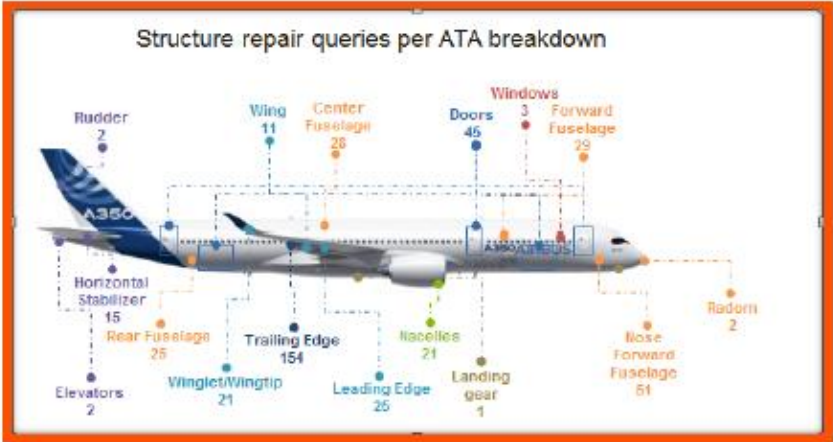
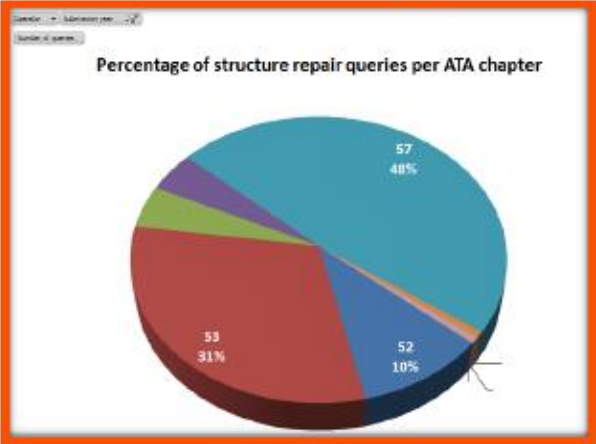
- ❑ A350 Materials
- ❑ Go No Go / Traffic Light
- ❑ NDT Specialist Composite Inspection
- ❑ The NDT of the Future
- ❑ Smart Structure and Repairs

A350 Materials

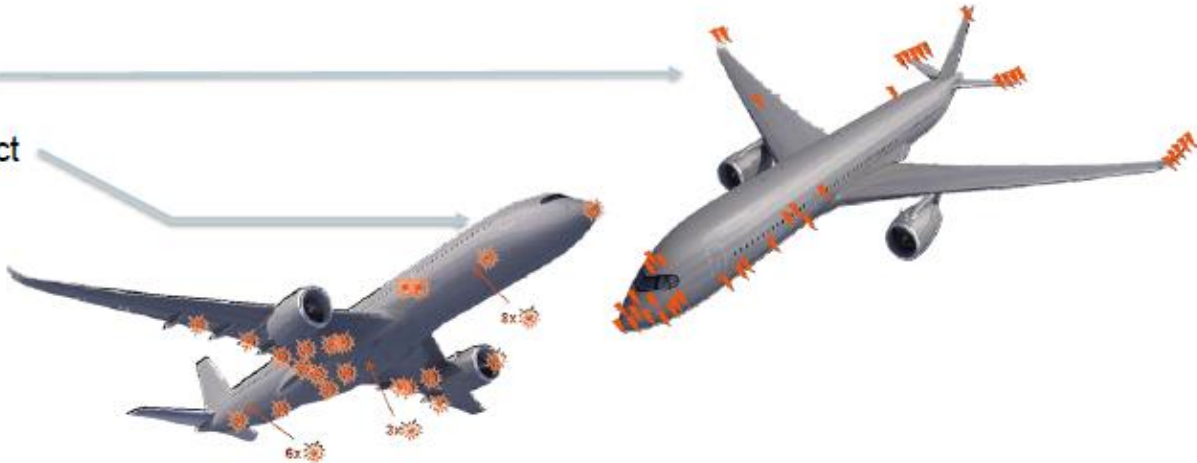
Structural Composites in A350 Aircraft



In-Service Damage



- Lightning strike
- Mechanical impact
- Other
- Bird strike



Go No Go / Traffic light

NDT inspection by non-specialist

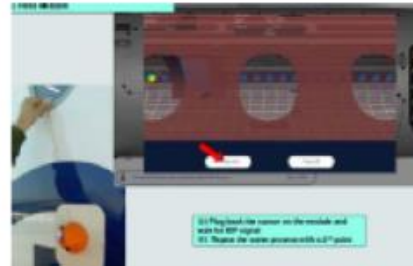
LineTOOL: go/no go composite delamination assessment tool

- Prevent flight delay and cancellation due to lack of Non Destructive Testing expert personnel availability
- Provide quick and reliable statement
- Already available and used by several Operators



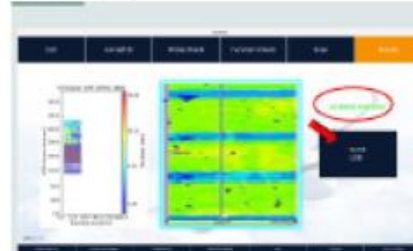
LineMAP: Damage Localisation

- Accurate location of damage on A/C fuselage, automatic integration in A/C DMU (Digital Mock-Up)
- Damage location tracking and report generation
- Already available and used by several operators



LineSIZING: Damage sizing and reporting

- Easy to use device, enable B1 or equivalent mechanics to perform damage sizing on A350 monolithic CFRP.
- Ultrasonic C-scan , automatic damage size measurement.
- Enhanced damage tracking and automatic report creation.

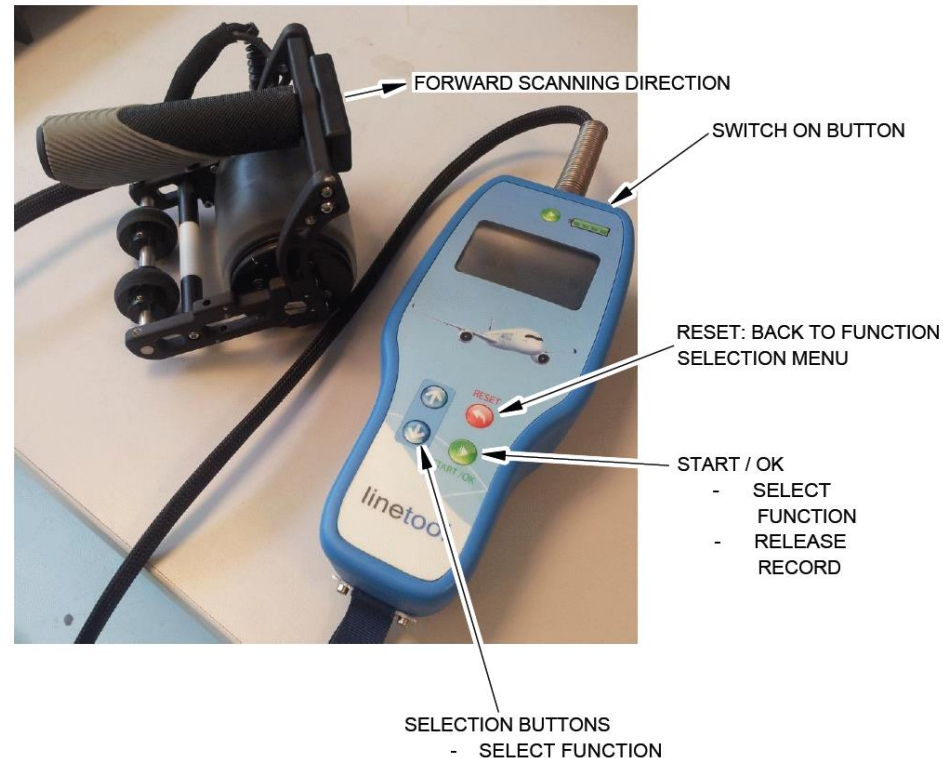


Go No Go / Traffic Light

LineTool is developed for automatic detection of delamination after impact on A350 fuselage by non-certified personnel à sold by AIRBUS GSE only

D-LamTool

Equivalent to LineTool but for other customers than Airbus' (armies, helicopters, others A/C manufacturers...) sold by TESTIA



❑ NDT Specialist Composite Inspection

Thickness measurements after blending corrosion in the wing skin

NTM 51-10-04



Currently: 5 hours

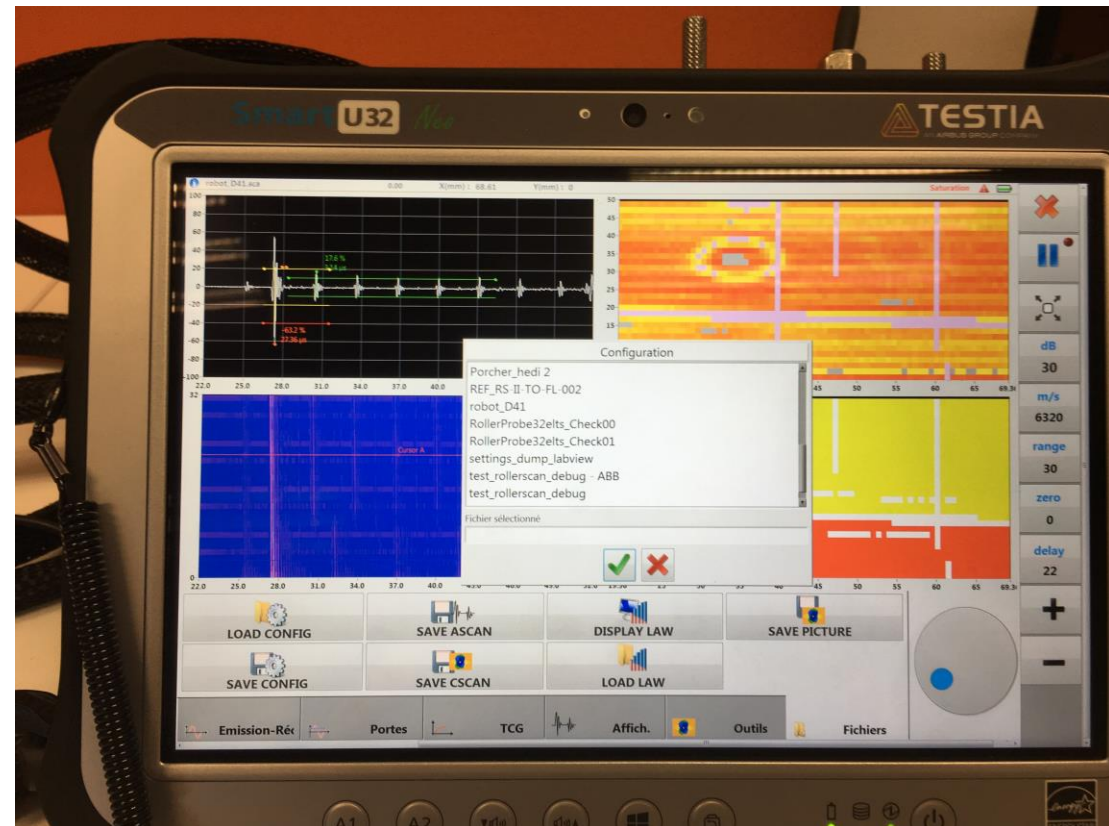


Alternative: 10 min

- ThicknessTool is developed for automatic thickness measurement of large plane or slightly curved areas (basically for A320 wing skin thickness measurement after corrosion blend out)

□ NDT Specialist Composite Inspection

Smart U32



❑ NDT Specialist Composite Inspection

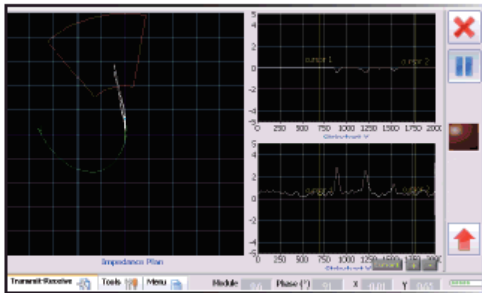
Smart UE1

SmartUE1®
The Ultrasonic and Eddy current instrument

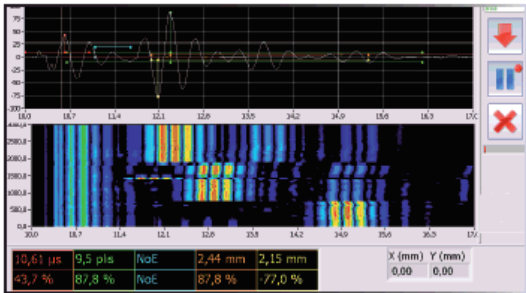
- X Compatible with any transducers, EC sensor & resonant probes
- X Available adaptators for connectors



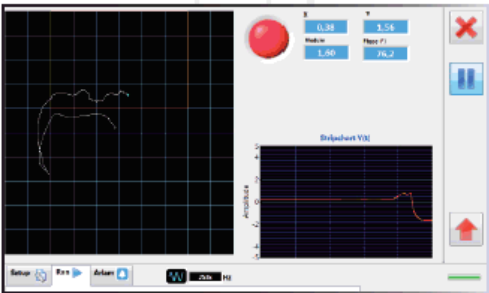
Standard ET



Standard UT



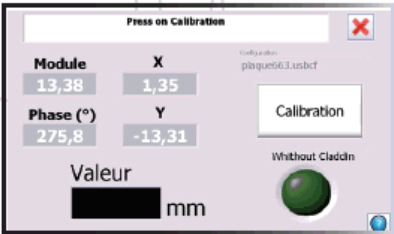
Standard resonance



UT thickness gauge



ET lack of cladding

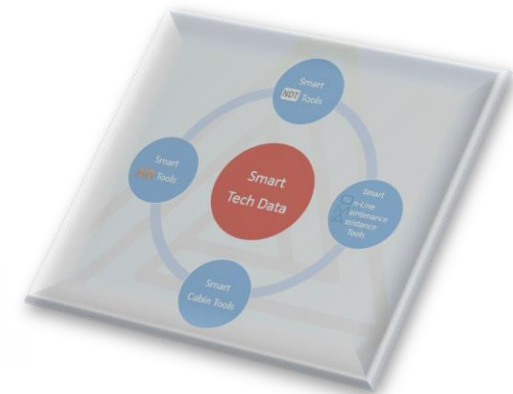


ET galvanometer



The NDT of the Future :

- **Tablet (plug & play) providing**
 - **The exact task location**
 - **Current Documentation**
 - **Real time direct Expert support**
 - **Real time Expert Intervention**
 - **Modifications as they are defined.**
 - **Direct reporting from location**
 - **Clears task at location**
 - **Verification of time place and completion**



Thank you
