

Field Inspection and & Repair QC



Federal Aviation
Administration

Repair facilities – Company owned, company
authorized and independent

Topics of Discussion

- Company specific certification and licenses for NDI inspectors
 - part of the type certification for GA;
- Knowledge of hardware
 - Company specific licensing
- Qualification standards
 - NDI inspectors
 - Visual inspectors
 - Reference standards qualification
- Equipment introduction/familiarity with process, equip., etc...
- Standardization on in-house re-training
 - Govt. regulated
 - Company regulated
 - Third party regulated

Field Inspection and & Repair QC

- NDI procedures
 - Executing methods and making flaw calls
- Documentations
 - SRM
 - Maintenance planning document (MPD) (driver), MRB and/or other Instruction for Continued Airworthiness (ICA)
 - What needs to be done differently or enhanced?



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- Maintenance culture
 - Training
 - Reporting incidents
 - Not always airline employees; airport personnel
 - No-blame culture
 - Safety before airline operation
 - Every incident will be reported
- Eliminating masks to damage detection
 - Remove padding on equipment, etc...
 - Quantifying magnitude of impact
- NDI inspection after incident
 - Remote station/equip/personnel availability
 - Ferry flight/flight to inspect



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- Wide-area rapid inspections
 - Tooling unavailable
 - indicator paints (bruising apparent in paint)
 - hallow-fibers with dye that leaches out when damaged
 - Preventable; will discourage use of composites
 - Structure health monitoring (Health and usage monitoring systems (HUMS))
 - Engineering controls to prevent damage
- Cost of maintenance vs. efficiency



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- What do airlines want to see in terms of inspection?
 - Special treatment for composite airplanes?
- Maximize incident reporting
- Need for database and trends assessment
 - Pre-approved terminology
- Repair QC
 - who is responsible? Mechanic, lead?
 - In process quality control?
 - Inspect at each interval of repair; time spent/cost
 - Structure documentation so that it drives the repair process – actual reporting of attributes
 - Airlines or any company must do risk assessment; review of internal procedures; they are required now.



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- Hanger environment
 - Clean up area; human contact with airplane
 - Goes back to training for all who come in contact and also management understanding of the need (even from the marketing side)
- Specific training on bonding
- Need a formalize technology transfer process to enable results from research to be rapidly transferred and used by industry

