

Syllabus

Elasticity Laminate Checker (ELCH)

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Elasticity Laminate Checker - Theory		
Definition of the related documentation (0,5h)	Overview of linked documents	Service Bulletin Structural Repair Manual Non-Destructive Testing Manual Maintenance Plan Document
Device overview (1,0h)	Description of the single parts	ELCH handheld Air supply Functional Standard FS1
	Maintenance of the ELCH	Rubber replacement Yearly Check / Calibration
	General Conditions	Climate conditions Cleanliness of the workplace
	Operating Principle	Differentiation to other techniques
	Adjustment	Pressure Adjustment Measurement Adjustment
Area of application (1,0h)	Parts of the Aircraft	Qualified parts for ELCH inspection Specific NTMs
	Honeycomb	Types of Honeycomb Rudder Structure Configurations Structural Limits for ELCH measurements
	Honeycomb Damages	Internal disbonding External disbonding Vertical Core tearing Horizontal Core tearing
Inspection (1,5h)	Preparation	Limitations of the ELCH Geographical limitations Pre-check of the honeycomb
	Inspection	Measurement Grid Sizes: Introduction of three different sizes Distance to fasteners, dents, honeycomb joints, edges... Introduction of yellow and red values Basic Inspection Procedure Detailed Inspection of Areas with warnings and errors Final inspection for differentiation of errors to irregularities in thickness Damage Mapping

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Elasticity Laminate Checker - Practice		
ELCH Description (0,5h)	ELCH handheld	Suction cup Distance measuring system Measurement Tip Release Key Vacuum Gauge
	ELCH check-up	Functional Check Functional Standard Pressure regulation
Maintenance (0,5h)	Rubber replacement	Replacement of the rubber Sensitization for mistakes
Complete Inspection (2,5h)	Set-Up	Set-up for maintenance usage
	Inspection of a special test specimen	Basic inspection procedure Detailed inspection procedure for indicated warnings Final inspection of given damages Mapping of damage
Mapping of different damages (0,5h)	Mapping of different damage scenarios	Mapping on edges Mapping around core fillers Mapping on undisturbed sandwich structures