



# **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		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

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