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UK NANDTB 18

NDT METHOD OR TECHNIQUE -TRAINING AND CERTIFICATION GUIDANCE

Background: BS EN4179:2017 defines the minimum training and certification requirements for personnel working in the European aerospace sector.

- BS EN 4179:2017 Paragraph 1.3 details the common NDT methods controlled under the standard.
- BS EN 4179:2017 Paragraph 1.3.1 defines “other methods” which may be controlled by the standard when invoked by, engineering, quality, the cognisant engineering organisation or prime contractors.

On occasions organisations are faced with training and certification decisions such as the addition of specific specialised techniques within a method, or the use of NDT methods for other than discontinuity detection such as quality control, condition monitoring and metrology applications. The question arises as to the need or otherwise to formalise such requirements under BS EN 4179:2017.

Guidance The UK NANDTB has prepared the attached guide to assist the NDT Level 3 make such decisions.

The document is designed as a guide and is not intended to conflict with prime contractor or contractual client requirements which will always take precedence.

The listed methods and additional techniques are not intended to be exhaustive and are included as an initial list only. It is envisaged the document will continue to grow as additional methods and techniques are submitted to the Board for consideration.

NDT method or technique	Training, Qualification & Approval shall conform to EN4179	Supplementary Training & Examination required	Training, Qualification & Approval shall conform to EN4179	Formal documented training, qualification and approval in the " <u>spirit</u> " of EN4179	Formal documented training and competency assessment	Formal documented training and competency assessment
	Major NDT methods as defined in EN4179	Specific Techniques e.g. UT Phased Array, Filmless Radiography etc.	Application of major NDT methods resulting in Limited approval	NDT technology used for material evaluation purposes	Techniques that use direct readout instruments	Other than direct readout instruments
Eddy Current	✓	✓*	✓			
Magnetic Particle	✓	✓*	✓			
Penetrant	✓	✓*	✓			
Radiographic	✓	✓*	✓			
Shearography	✓	✓*	✓			
Thermography	✓	✓*	✓			
Ultrasonic	✓	✓*	✓			
Anodic Flaw Detection of Aluminium				✓		
Barkhausen Noise Inspection				✓		
Conductivity			-	✓		
Etch Inspection				✓		
Hardness				✓		
Visual				✓***		✓***

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Ultrasonic Thickness Measurement (Corrosion) incorporating A Scan Display				✓		
Ultrasonic Thickness Measurement incorporating A Scan Display						✓
Bond Testing Techniques (Instrument based)				✓		
Coating Thickness Measurement					✓**	
Ultrasonic Thickness Measurements (Direct Readout)					✓**	
Elasticity Laminate Checker (ELCH) Testing (Bondtest)					✓	

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TAP Testing (Mechanical & Manual)						✓
<u>Unique Equipment/Applications</u>						
Magneto Optic Imaging (MOI)						✓
Single Crystal Orientation SCORPIO						✓
Transient Acoustic Propagation (TAP) Test Fan Blades)						✓
X Ray Diffraction						✓

KEY: * = Pre requisite of holding appropriate NDT Method Qualification ** = Training course offered locally or by Equipment manufacturer
 *** = Depending on complexity of task and/or equipment

Change History:

Issue	Summary of Change	Date
1		
1 rev A		
1 rev B		
1 rev C	Removing BS from standards	08/09/2015
1 rev D	Updating wording and amending standards and adding in contact details	21/11/2017