

NLR C-scan facilities



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"SCANNING OF COMPLEX 3D COMPONENTS"

Automatic ultrasonic inspection (C-scan) is an effective NDT technique for composite components and other lightweight aircraft structures. In the development stage of components the C-scan test results are a significant input for adjusting production parameters to improve the overall quality. Further, the C-scan inspections guarantee a consistent quality during the production stage.

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Catia Model

Component

C-scan test results



3D C-scan facility specification:

- Scan window of X 4.0m \times Y 2.5m \times Z 2.5m
- Immersion and squirter inspection mode
- Scanning of complex geometry components (double curved) in both pulse-echo and through transmission mode (simultaneously)
- Complex scan profiles generated from CATIA or by Teach and Learn
- Turntable to inspect 3D circular components (max. diameter 1.9m)
- Advanced 3D data acquisition and analysis system
- Integrated ultrasonic equipment with full wave signal capture
- Linear Scanning Array (LSA), cost effective scanning of large surfaces









"PHASED ARRAY TECHNOLOGY"

2D C-scan facility specification:

- Scan window of X 1.8m × Y 0.9m
- Immersion inspection mode
- Scanning of flat components in pulse-echo mode
- TomoView advanced acquisition and analysis system
- TomoScan Focus LT ultrasonic equipment with full wave signal capture
- Linear Scanning Array (LSA), cost effective scanning of large flat surfaces



LSA scanning with a 128 element phased array transducer allowing large index steps



Expertise

- Basic research
- CIVA modelling
- Procedure development
- Inspection solution at high TRL levels
- Commercial scanning
- Material qualification programs
- Qualified inspectors level 2 and level 3
- Quality support (e.g. audits)



C-scan of impact damage in a composite laminate



Additional capabilities

- Portable ultrasonic (conventional and phased array)
- Fokker Bondtester
- Eddy current inspection
- Penetrant inspections
- Magnetic particle inspection
- Acoustic emission
- Comparative Vacuum Monitoring
- Avizo analysis and modelling software for CT-scan data



Please contact us for more information

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