



dolphitech



Multimaterial Inspections

Reliable - Flexible - Simple



Dolphitech

- Company established in 2009
- Administration, R&D, and production in Raufoss, NORWAY
- Distribution in 21 countries
- NS-EN ISO 9001:2015 Certified





What we do

- Unique 2D matrix ultrasound technology
- High performance ultrasound cameras
- High resolution images

- NDT solutions for multimaterial inspections
- NDT solutions for Non-experts
- NDT solutions for Teams





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Main sectors

Aerospace

- Impact induced delaminations
- Drilled Hole inspection
- Core to laminate debonding
- Laminate to laminate debonding



Automotive

- Impact damages
- Debonding
- Spot-welding (to come)



Marine

- Impact damages
- Debonding
- Laminate to laminate debonding



Energy (wind turbine blades)

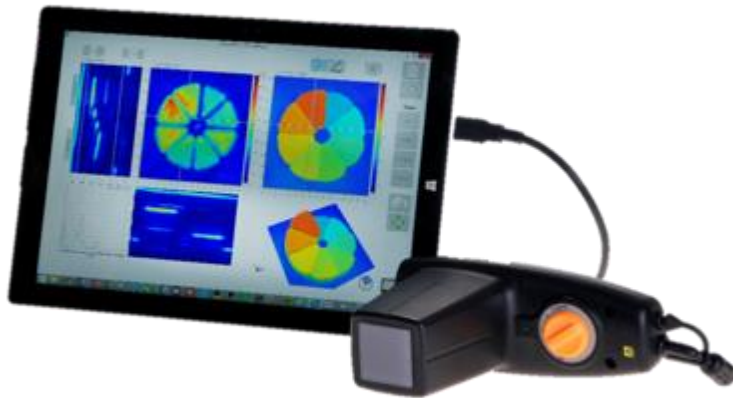
- Impact damages
- Laminate to laminate debonding
- Debonding





Product Line

Dolphicam



Dolphicam2



Dolhicom



- Handheld, mobile ultrasound inspection camera for CFRP.
- Extremely high resolution: ~15.576 elements over a 31 x 31 mm dry coupling transducer.
- Easy to operate, mobile
- Runs on standard PC/tablet
- Typical uses; aerospace and automotive
- Approved by Boeing for the 787 «Dreamliner» and Airbus A350 inspections (NTM 55-00-20 / NTM 51-94-45)

Dolphicam2



- New ultrasound imaging platform
- Extremely high resolution: ~16.384 elements over a 32 x 32 mm multiple coupling transducer.
- Range of 0.5 – 15 MHz transducer modules
- Frame rate up to 100 fps
- Open, flexible architecture
 - Connectivity (Ethernet, Bluetooth, WIFI, etc.)
 - Encoder support
- Cutting edge performance
 - Processing power and high-speed communication
 - Full matrix dataset live streaming of 10-15 sets/sec
- Support for remote NDT
- Customized applications



DOLPHICAM

VS

INSPECTION:

GO/NO GO

MATERIALS:

CFRP 18mm

Fast and Easy to Use

**COMPETITIVE
ADVANTAGE:**

**Interesting technology but
limited**

**MARKET
REACTION:**



FULL NDT INSPECTION

**CFRP, GFRP, METALS, MULTI
MATERIALS, GLARE up to 60mm**

Faster, easy to use and immersive

**Complete platform, with exceptional
future potential**





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Dolpicam





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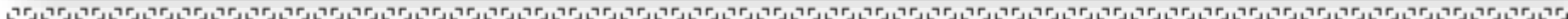
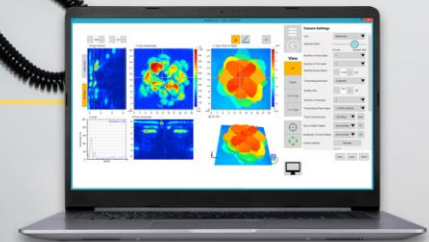
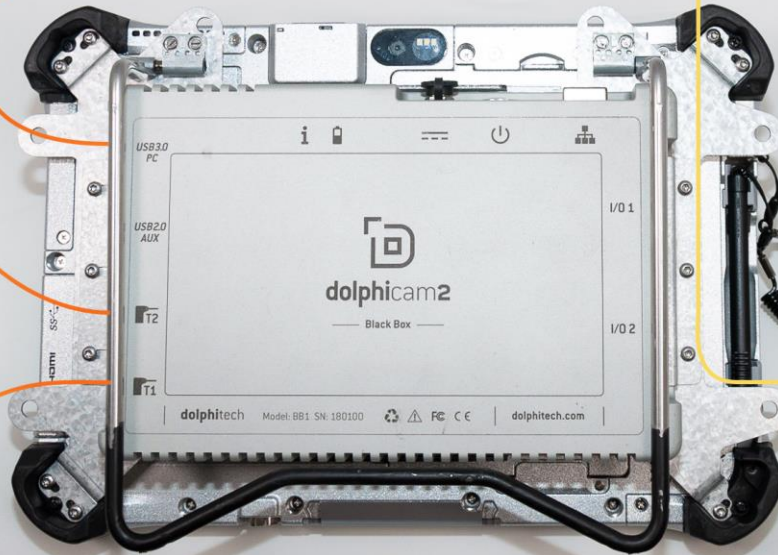
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4 MHz



10 MHz





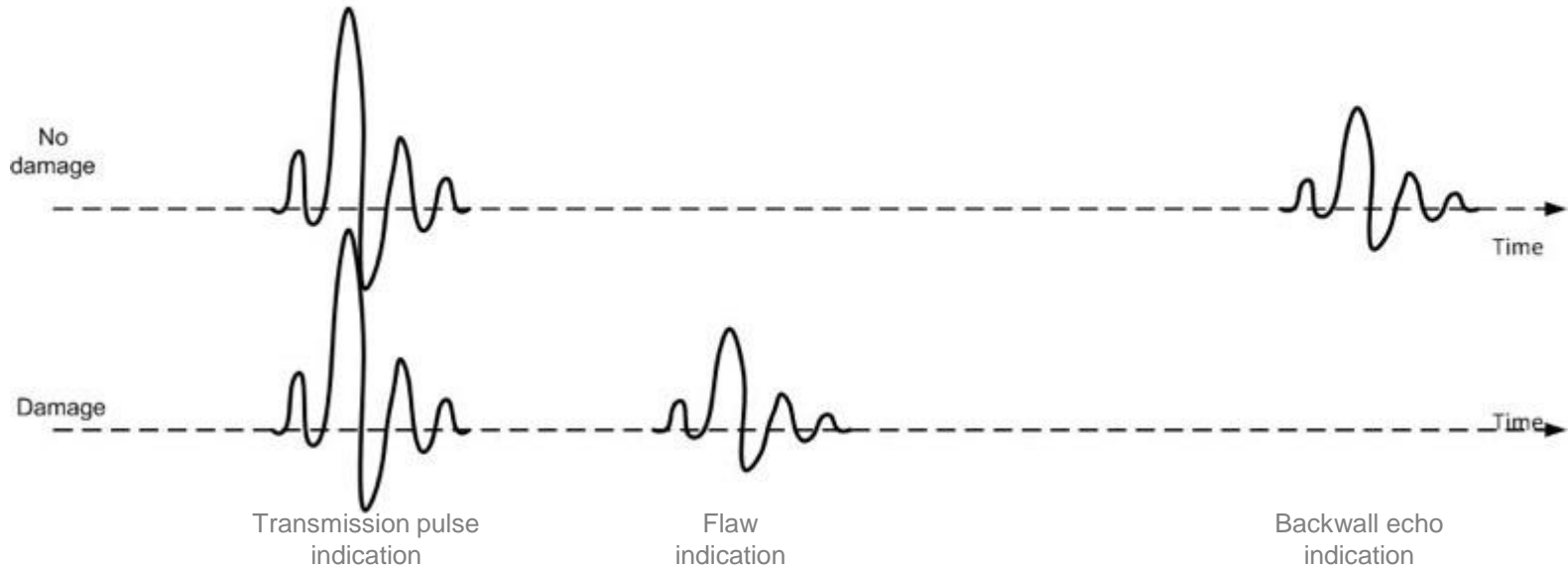
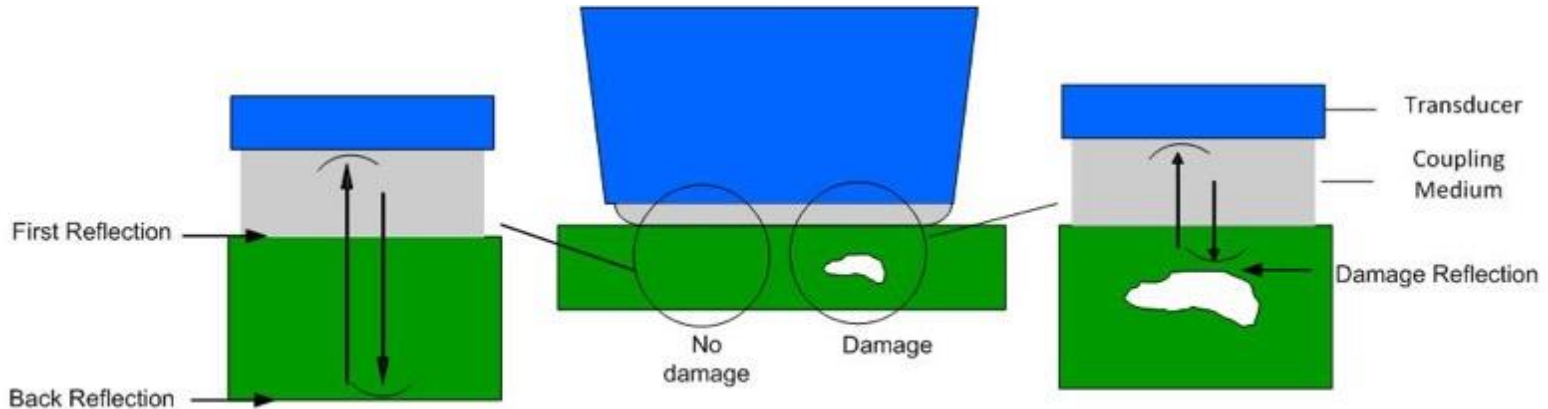
Product roadmap overview

	Q4 2018	Q1 19	Q2 19	Q3/4 19	Q1/2 20
Product	Product launch with 4 TRMs Core functionality				Application Offering
Materials	CFRP 50mm METALS +60mm GFRP 25mm GLARE		GFRP 50mm		
Applications		FMC - Full Matrix Capture TFM - Total Focusing Method Beta	Spot weld Beta	Weld pitch-catch beta	
Functionality			Corrosion/Thickness gage Beta		
Signal Processing	Impact, Delamination, Adhesive Joints, Friction weld, GO – NO Go,	Multiple gates/gain			
Transducer	2,5MHz -12MHz		0.5 Hz – 20 MHz		
Range	Flexible transducer design: Coupling material and shape				



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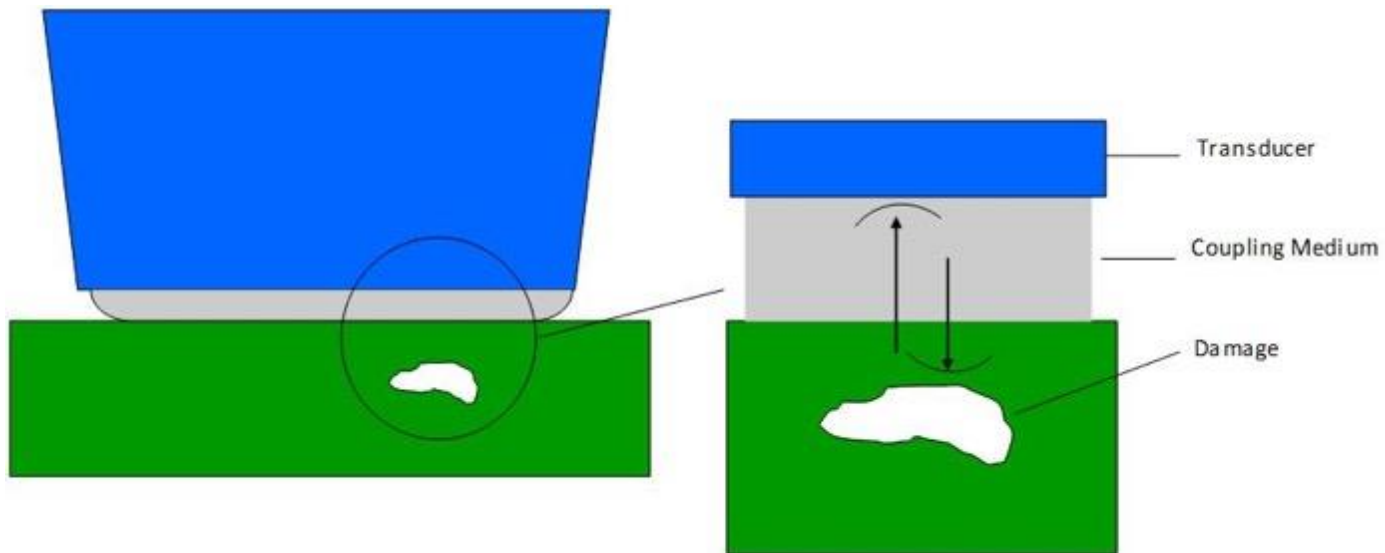
Ultrasound reflections





Technology

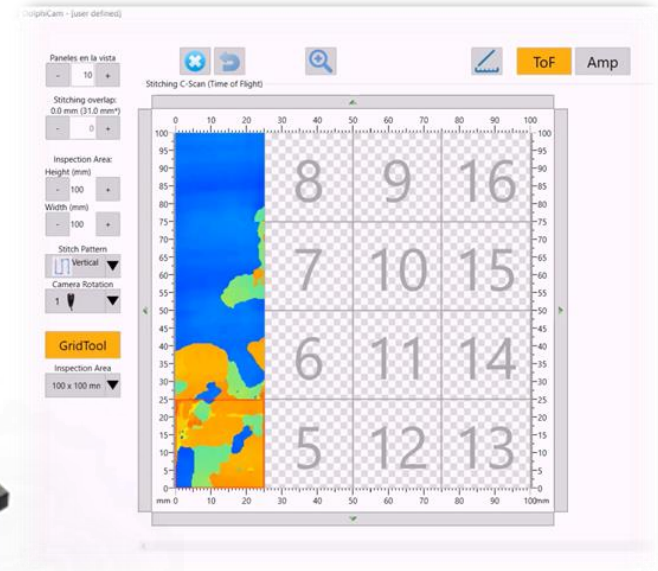
- The transducer is our core technology
- Transducer works as a speaker and a microphone
- High voltage electric pulses are transformed into acoustic waves.
- Acoustic wave is reflected and transformed into small electric pulse



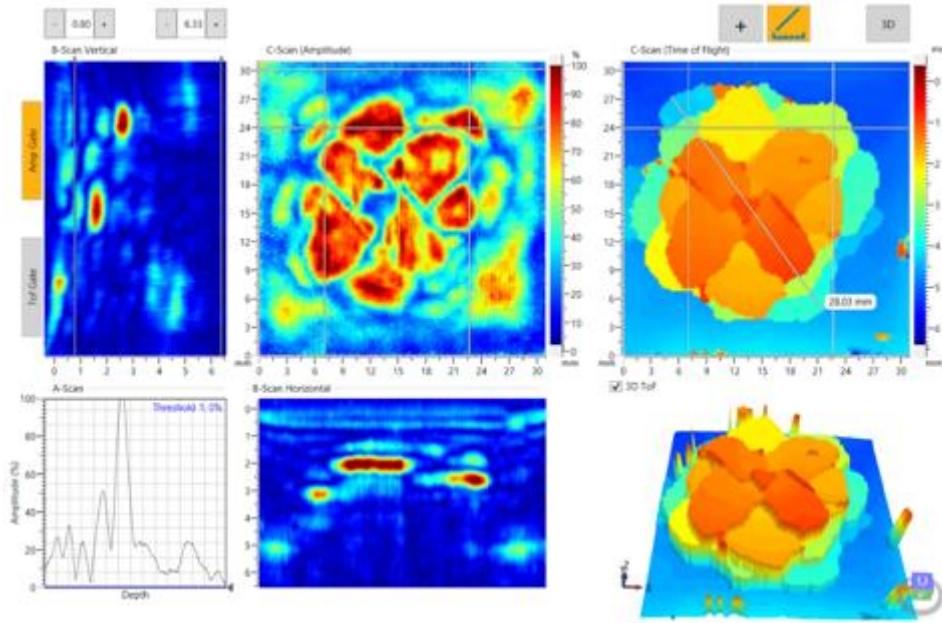
Application: Stitching (Large Area Scanning)

Grid Tool

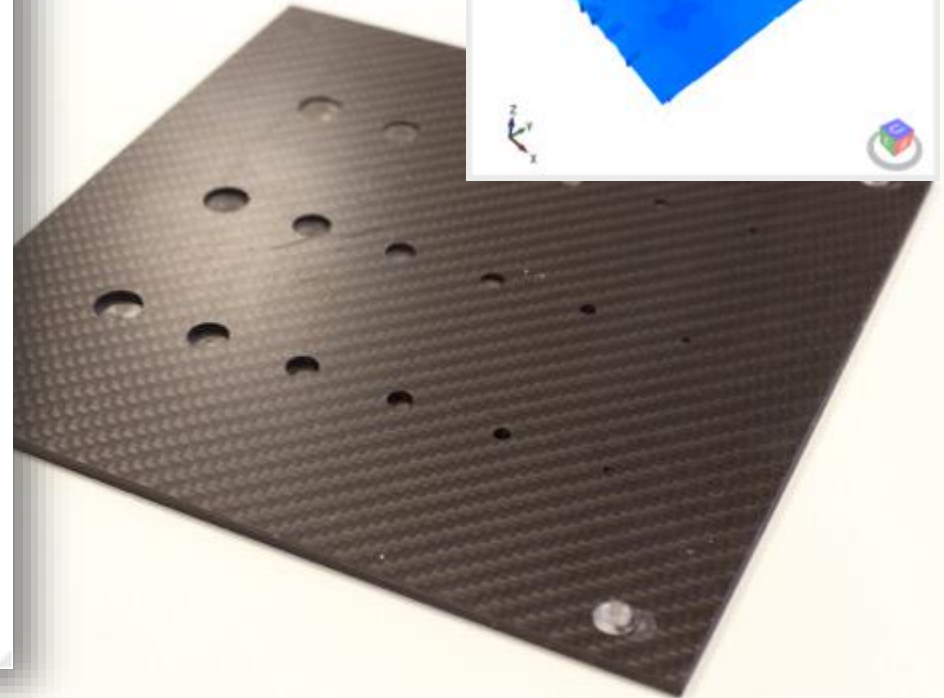
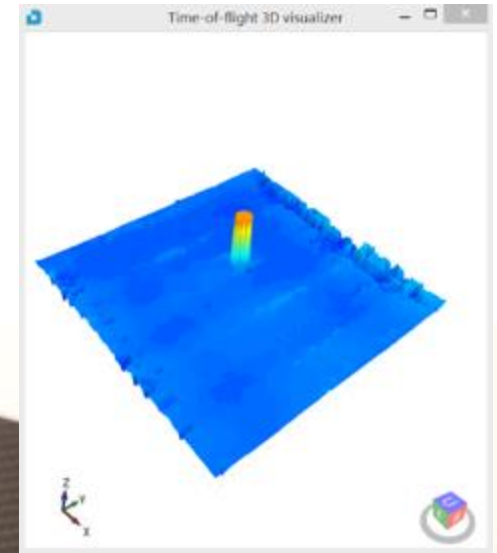
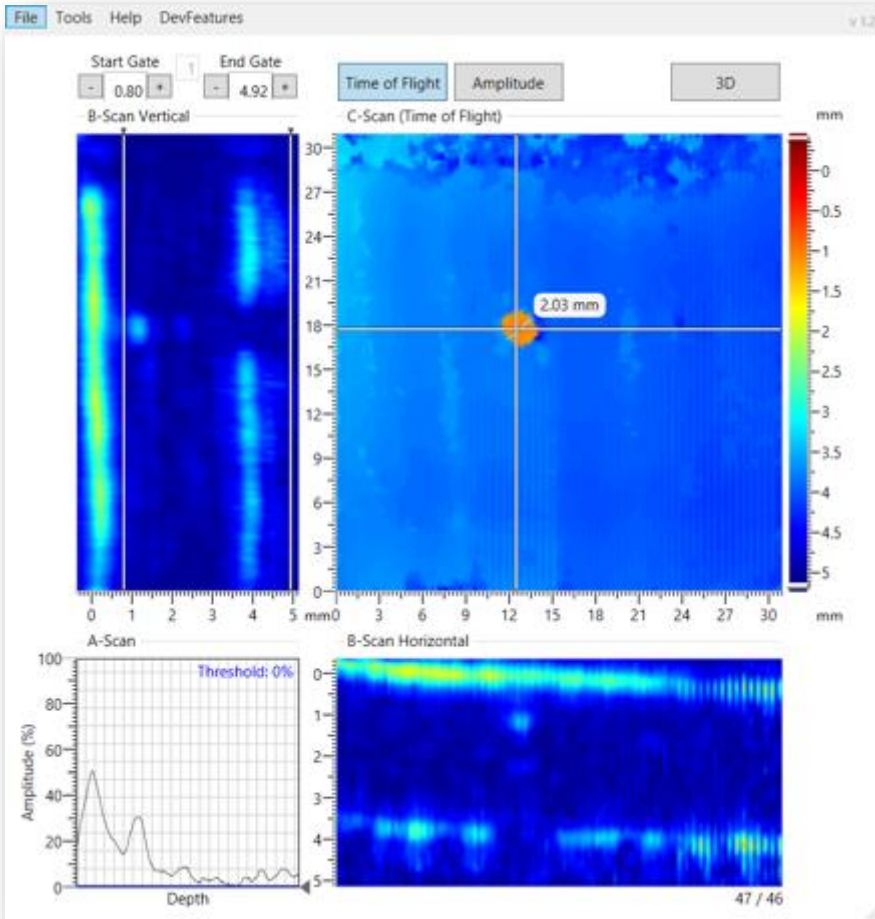
- 500 x 500 mm area
- Set-up < 3 minutes
- Adapt to curved surfaces
- Vertical, upside down...
- Affordable and quick!



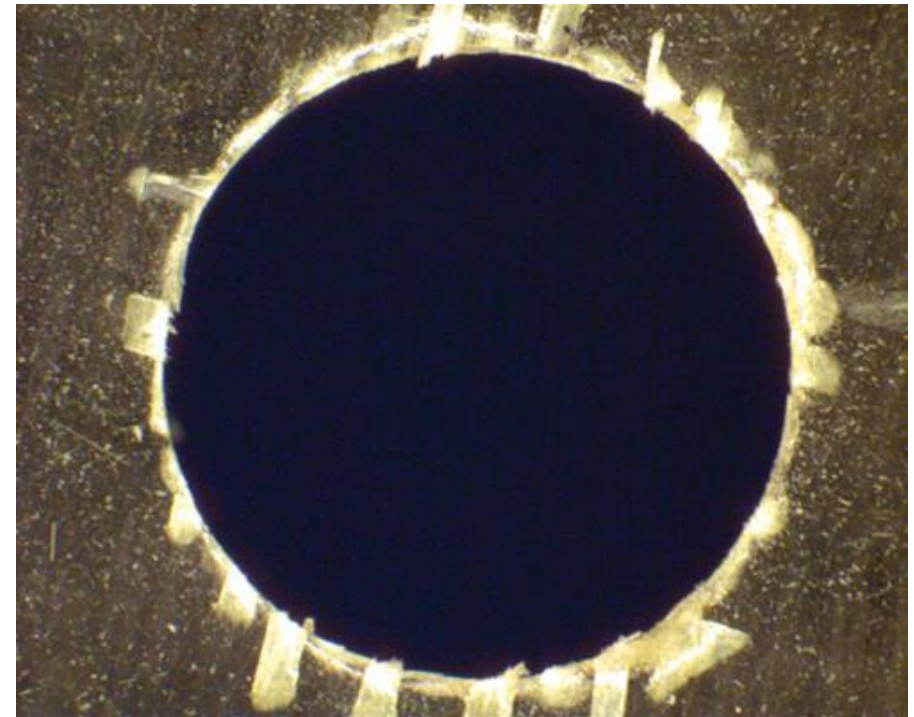
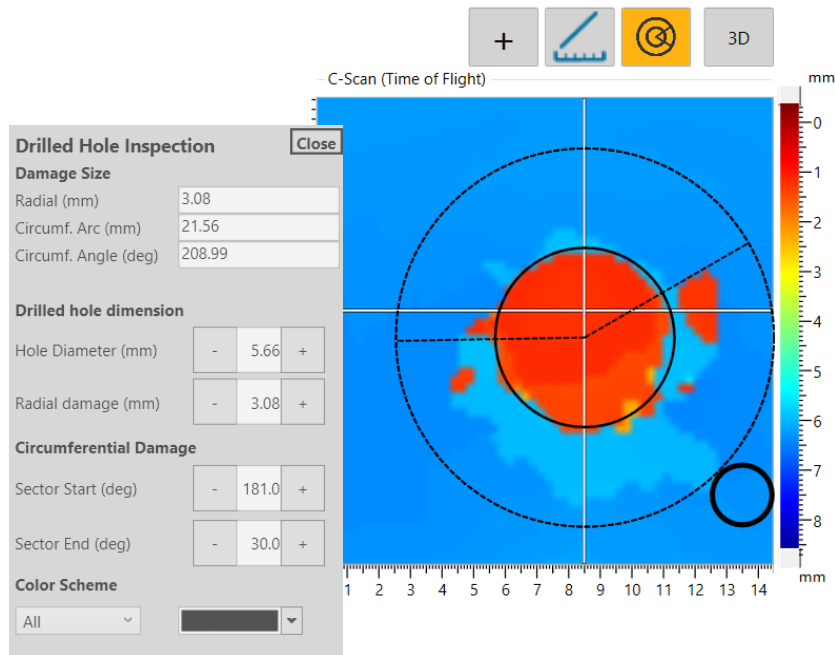
Application: Accidental Damage



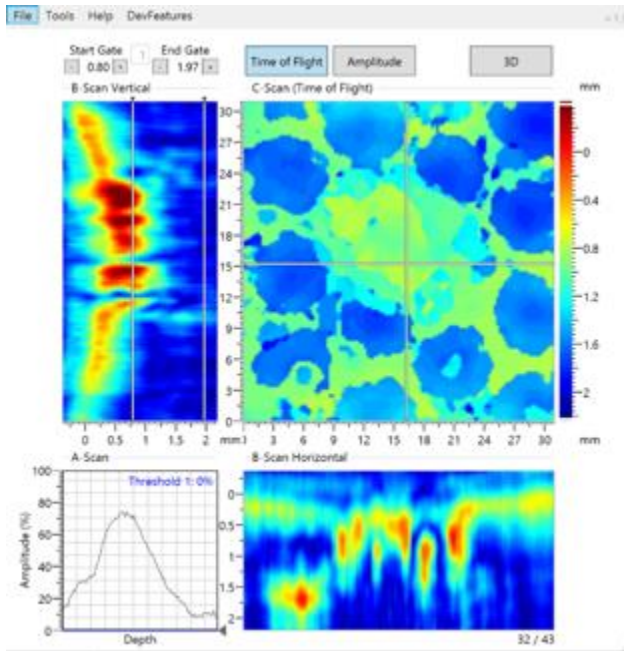
Application: Small defects



Application: Drilled Hole Inspection



Application: Laminate/core disbonds





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