

Fit Freely !

Can conduct ultrasonic inspection on various shapes (curved/uneven/gap/rough surface).

Simply Place It !

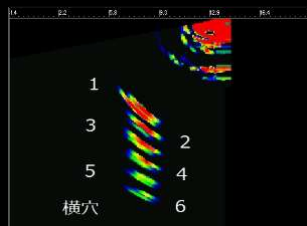
Can inspect with direct contact, and provide excellent cost performance.

Inspect Surface Layer Defect !

Enabling inspection of surface and close defect even in high attenuated materials such as CFRP, GFRP, aluminum diecast and weld.



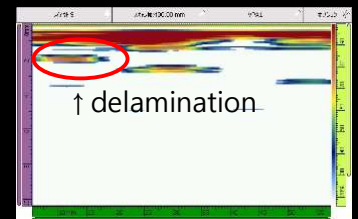
Waveform of "KYOKUTAN"



Example of close defect (φ1mm side drill hole at 0.1mm interval)



Example of a defect of φ1mm side drill hole 1.5mm surface in steel



Example of a delamination 2mm under surface in CFRP

Broadband High-sensitive Ultrasonic Flexible Linear Array Transducer

KYOKUTAN

As this transducer is flexible, it will enable to inspect on various shapes. This structure realizes broadband and high sensitivity. This transducer enables to inspect a surface layer defect on materials that has high attenuation such as composite material, aluminum diecast and welds. It can be utilized for various inspections of aerospace, automobile, consumer electronics, plant, road, bridge, medical field and more.

We accept your samples for test, free of charge, and devices are available to rent !

Search "Japan Probe" and visit website for solution videos.

Flexible Array Transducer Enable to Detect Surface Layer Defect

KYOKUTAN

'KYOKUTAN' is a flexible array transducer to enable detection of a surface layer defect on various shape specimen. This transducer makes it possible to detect a surface layer in dead zone.

It detects curved surface, concave and convex parts, gap, even and rough faces in various types of objects.

It is available to detect near the surface defects, proximity defects, CFRP (Carbon Fiber Reinforced Plastics), GFRP (Glass fiber reinforced plastics), aluminum alloy for die castings, welding zone, etc.

Application Field

- Aerospace
- Automobile
- Consumer electronics
- Plant
- Road, Bridge
- Medical field, etc.

Target

- Composite materials (CFRP, GFRP, etc.)
- Metal
- Resin, etc.

Standard Specifications (Customizable)

- Frequency : 5MHz
- Flexibility : Resin→R5mm、Metal→R8mm
- Connector : IPEX, Hypertronics, TYCO, and ITT Canon can be provided according to the phased array device.
- Cable : Multi-core coaxial cable (16~128 CH)
- Element arrangement : Linear / 64 elements
- Operating Temperature : Room temperature

※For information on the matrix arrangement, please feel free to contact us.



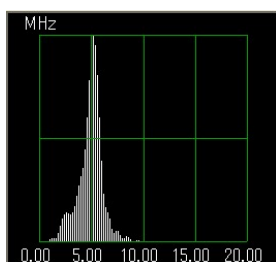
Inspection of Iron castings



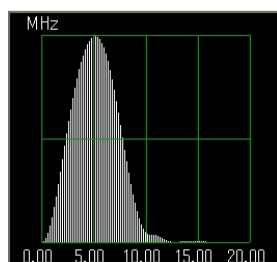
Inspection of Gaps



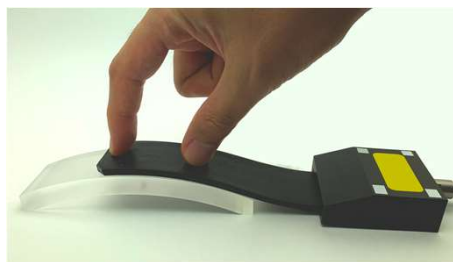
Inspection of Cylindrical pipe shapes



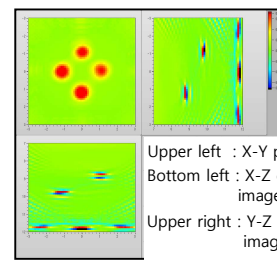
(a) Conventional type
Bandwidth 42%



(b) "KYOKUTAN"
Bandwidth 119%



Defect detection in curved acrylic test piece



Upper left : X-Y plane image
Bottom left : X-Z cross-section image
Upper right : Y-Z cross-section image

Detection result
Defect dimensions: $\Phi 0.7 \times d2$ & $d3$

Comparison of ultrasonic frequency band

Support 2D matrix-shaped element arrangement

※ We offer customized products based on customers' needs. Please visit 'contact us' by WEB site below.

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