

## Fit Freely !

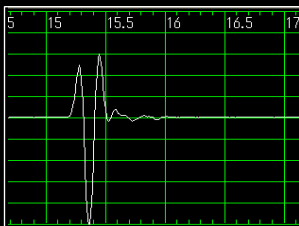
Can conduct ultrasonic inspection on various shapes  
(curved/uneven/gap).

## Simply Place It !

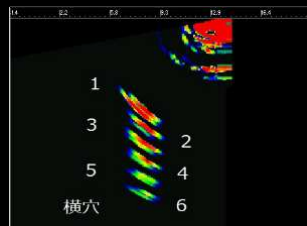
Can inspect with direct contact, and provide  
excellent cost performance.

## 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  
( $\phi$ 1mm side drill hole  
at 0.1mm interval)



Example of a defect of  
 $\phi$ 1mm side drill hole  
1.5mm surface in steel



Example of a delamination  
2mm under surface of  
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.

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# 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.



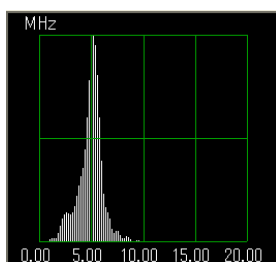
Inspection of Iron castings



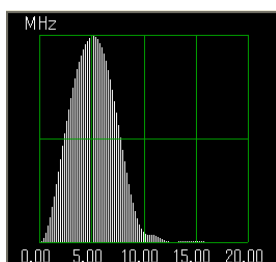
Inspection of Gaps



Inspection of Cylindrical pipe shapes



(a) Conventional type  
Bandwidth 42%



(b) "KYOKUTAN"  
Bandwidth 119%

Comparison of ultrasonic frequency band



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