

# EMBEDDED NON-DESTRUCTIVE TESTING



## CONTACT

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## **DETECT DEFECTS BEFORE THEY BECOME SEVERE STRUCTURAL DAMAGE**

### **EMBEDDED EARLYSTAGE DEFECT DETECTION**

*PYTHEAS Technology's embedded non-destructive testing (eNDT) solutions give you information about your equipment's structural state and the appearance of defects. eNDT allows you to monitor remote devices such as wind turbines or satellites. This monitoring is autonomous and reliable without necessitating any human intervention. This active damage detection includes:*

- *Periodic active diagnostic*
- *Damage localization and evaluation*

### **A KEY ELEMENT FOR YOUR TESTING PROCESS**

*ENDT systems use ultrasonic waves to detect small defects both on the surface and inside the volume. This active damage detection enables continuous monitoring while removing blind areas.*

### **FROM DESIGN TO ON-SITE MAINTENANCE**

- *eNDT system's design*
- *Serial production of transducers and combined electronics*
- *Signal processing*
- *Remote monitoring*
- *Optional:*
  - *Autonomous systems thanks to energy harvesting*
  - *Passive Structural Health Monitoring (SHM)*

### **KEY SPECIFICATIONS :**

- *Detection, localization and evaluation of defects*
- *Adapted to all types of materials, from metal to composite*
- *Adapted to all shapes of pieces or equipment*
- *Surface and volume monitoring*
- *Defects detection starting at a few millimetres*

### **ADVANTAGES**

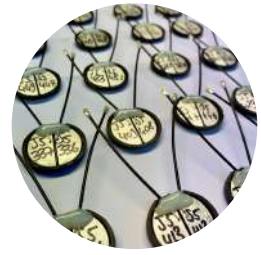
- *Reliable and robust*
- *Embedded and remote-controlled*
- *Reduction of maintenance cost*
- *Unrivalled data for digital twin*

### **FIELDS OF APPLICATION**

- *Air & Space*
- *Transports*
- *Industry 4.0*
- *Naval*
- *Renewable energy*

## PIEZOELECTRICITY EXPERT

*PYTHEAS Technology is a French company specialized in the design and manufacturing of piezoelectric devices and based in La Ciotat. The company is mainly known for its piezoelectric generator adapted to renewable energy sources. PYTHEAS Technology uses its expertise for other applications such as Vibration Damping, Ultrasonic devices or Structural Health Monitoring. Its technology is used in several fields: Air&Space, renewable energy and biomedical solutions for example.*



## RESEARCH AND INNOVATION

*Research and innovation are at the heart of PYTHEAS Technology's work. Using its skills in piezoelectricity and its associated electronics, the company develops technologies for its own R&D projects and creates solutions with its clients.*

## DESIGN OFFICE

*From Proof Of Concept to industrialization, PYTHEAS Technology co-develops solutions for its clients.*

## PRODUCTION

*The company manufactures piezoelectric devices in its facility. From prototypes to serial production, PYTHEAS Technology can produce the solution you need.*

## OUR TECHNOLOGIES



Sonar  
Ultrasound systems



SHM/NDT  
Energy harvesting  
Vibrations



Power generation  
Actuation

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