

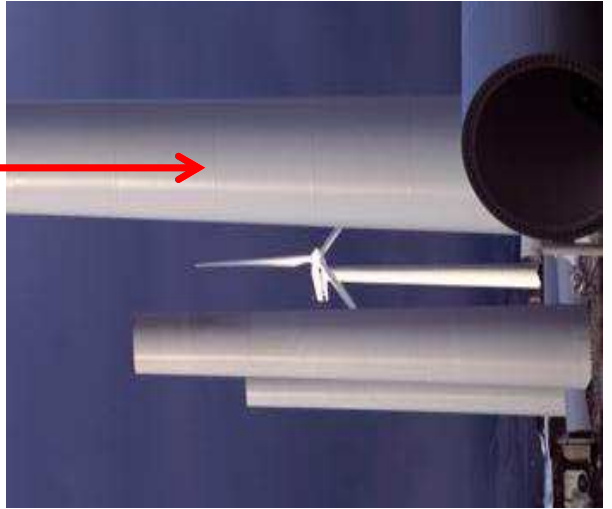
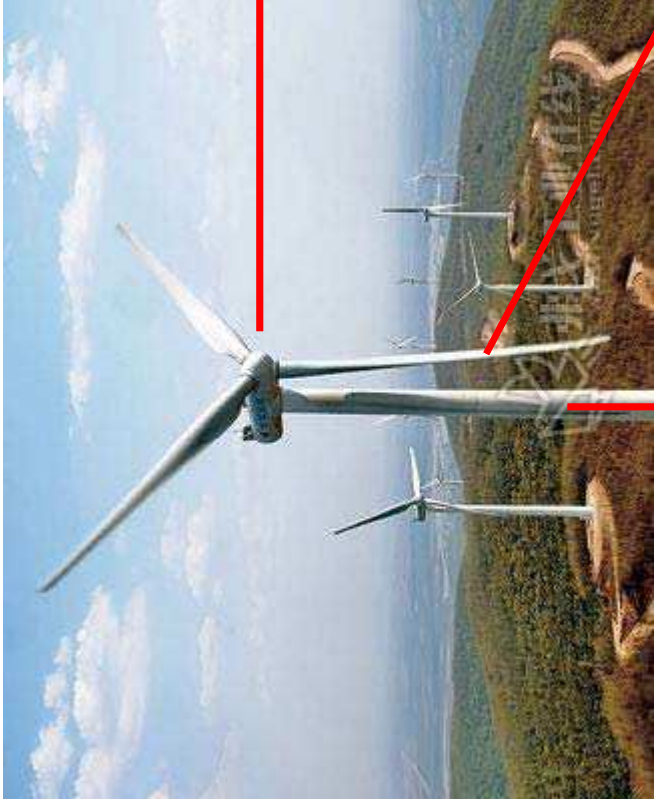
# OLYMPUS



Your Vision, Our Future

## Contrôles ultrasons et courants de Foucault dans le secteur éolien

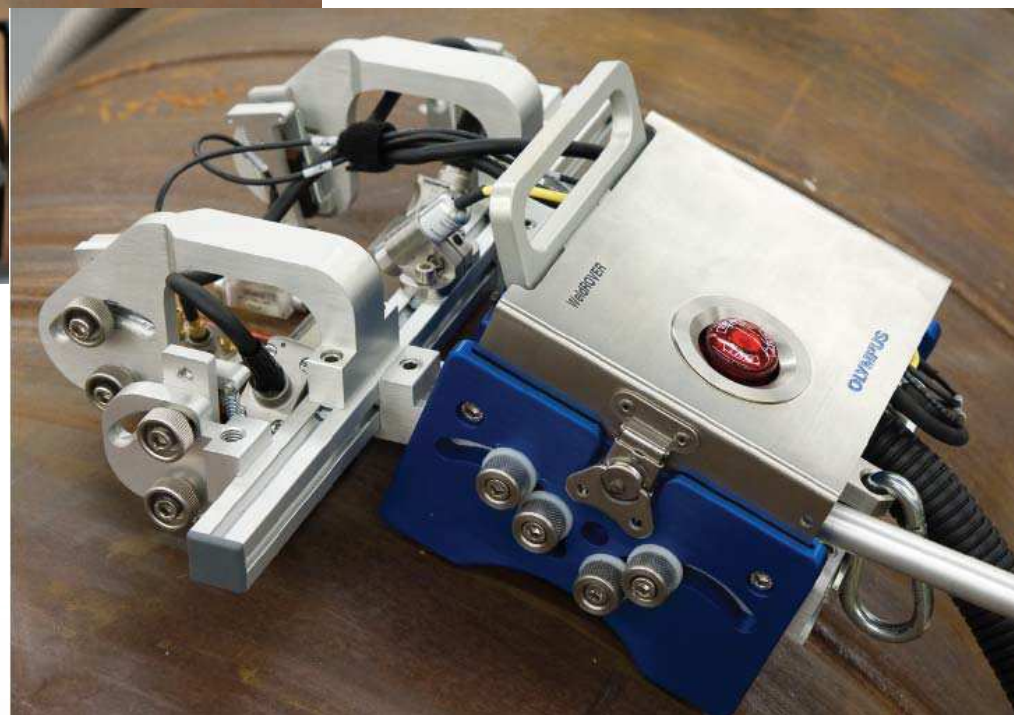
François Vicat



# Contrôle soudure

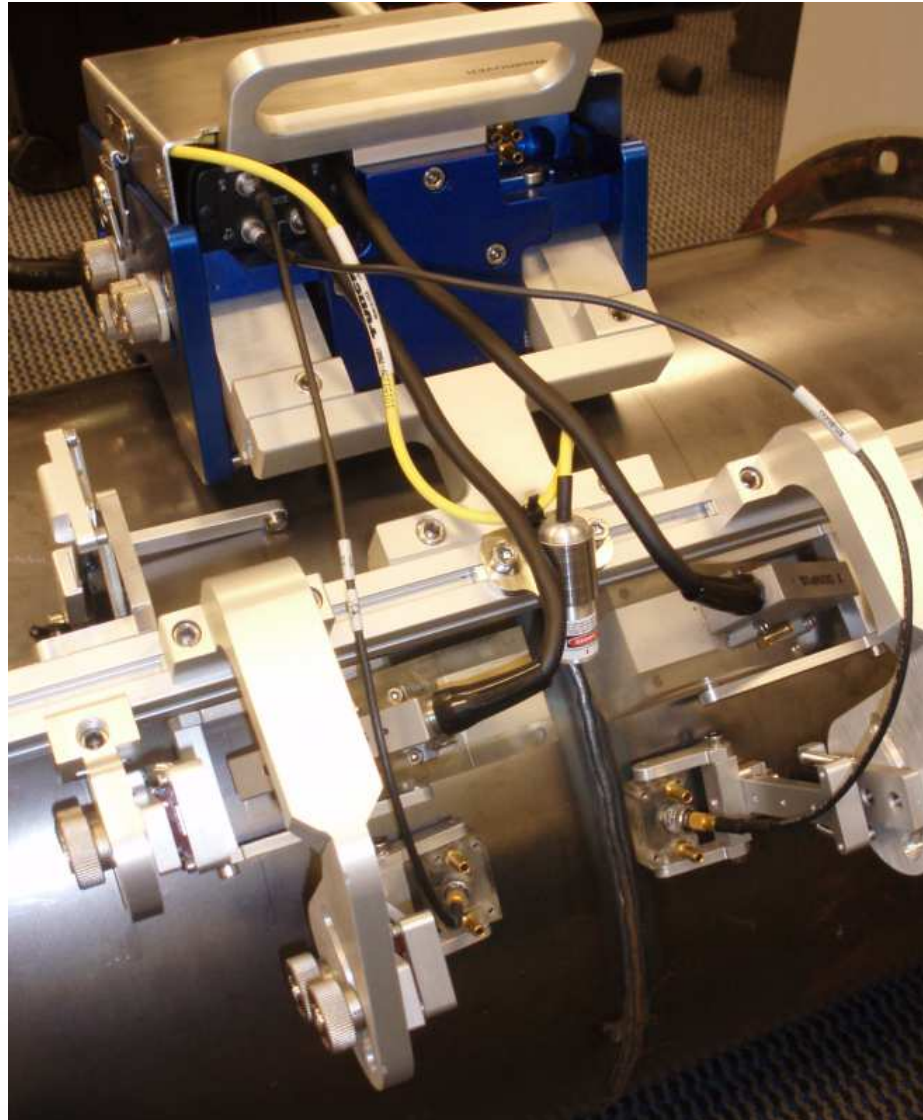


Diamètre mini 100mm en  
circonférentiel  
Diamètre minimum 760mm  
en longitudinal



# Contrôle soudure

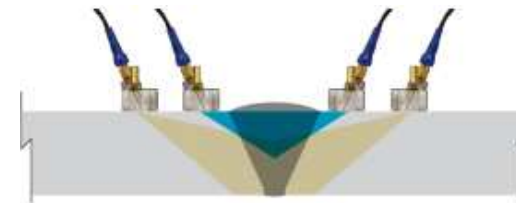
Jusqu'à 6 palpeurs.



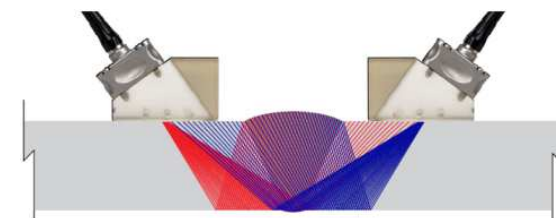
# Inspection de soudure



UT Conventionnels

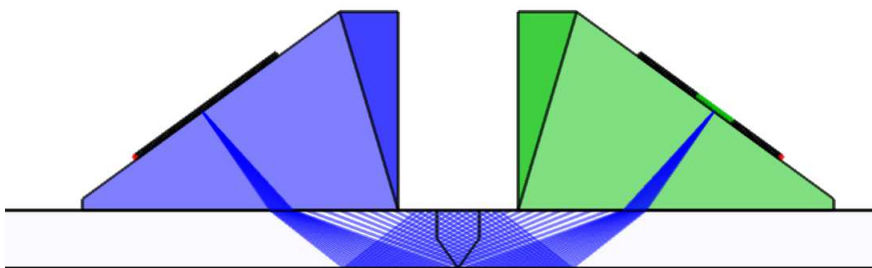


TOFD

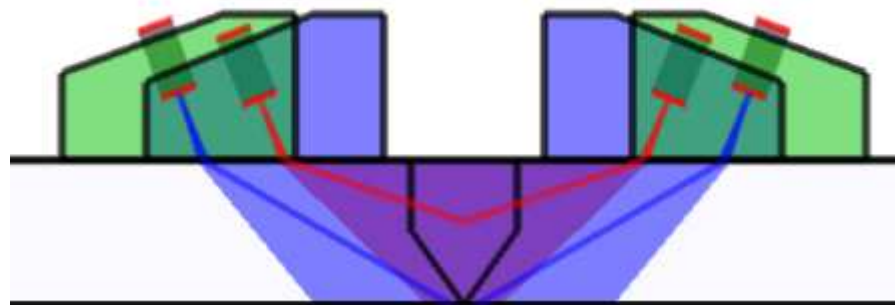


Phased Array

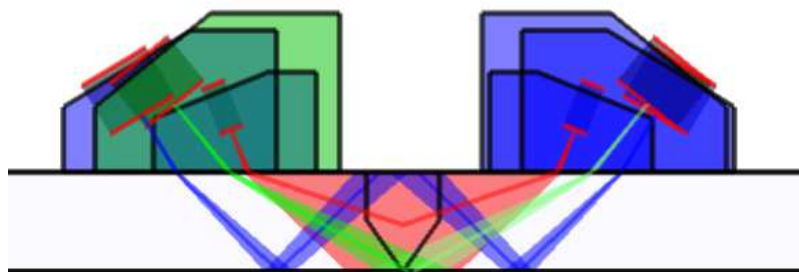
# Exemples de techniques de contrôle



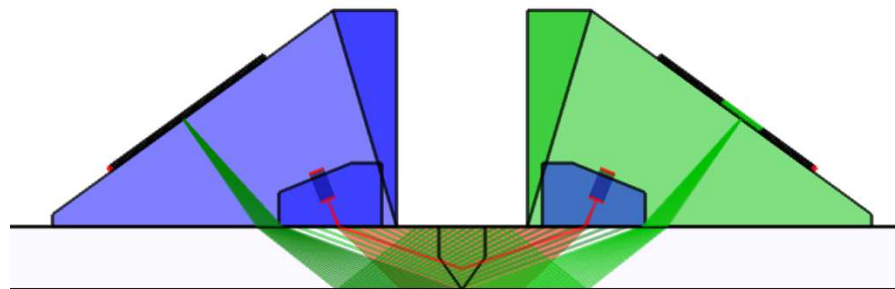
Phased Array



Multi-zone TOFD

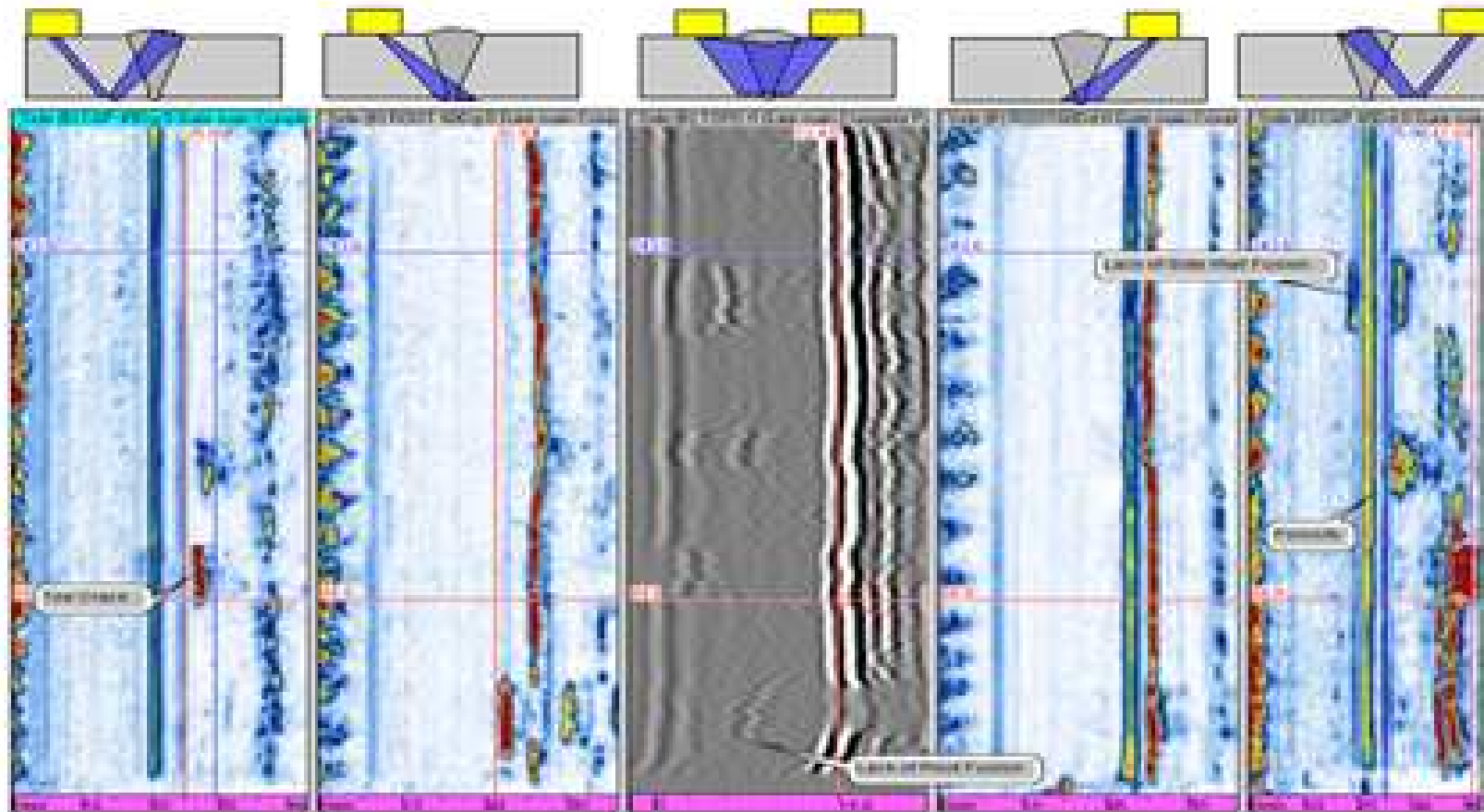


Pulse Echo et TOFD

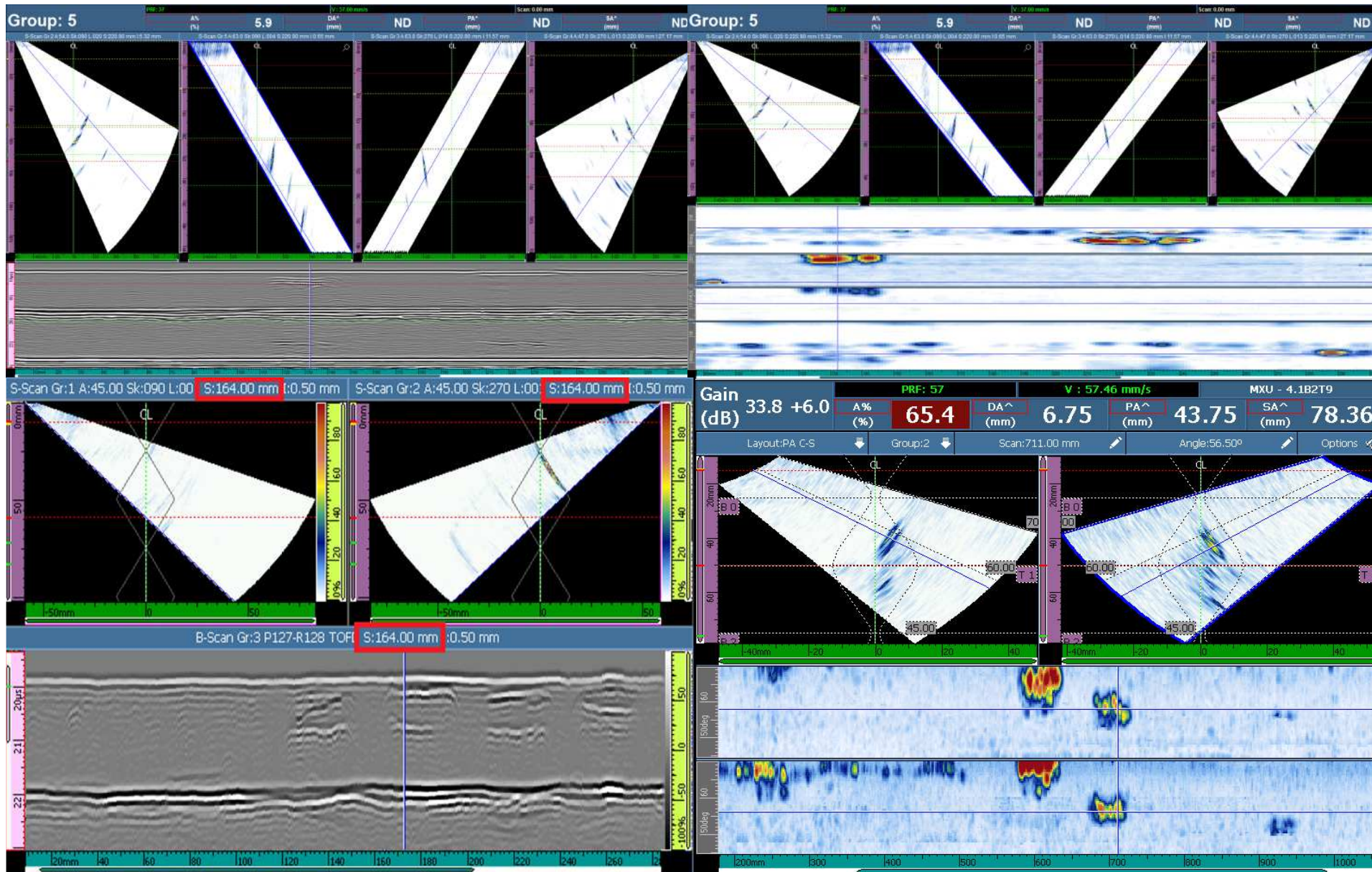


Phased Array et TOFD

# Exemple de configuration



# Contrôle multi-groupes de la soudure

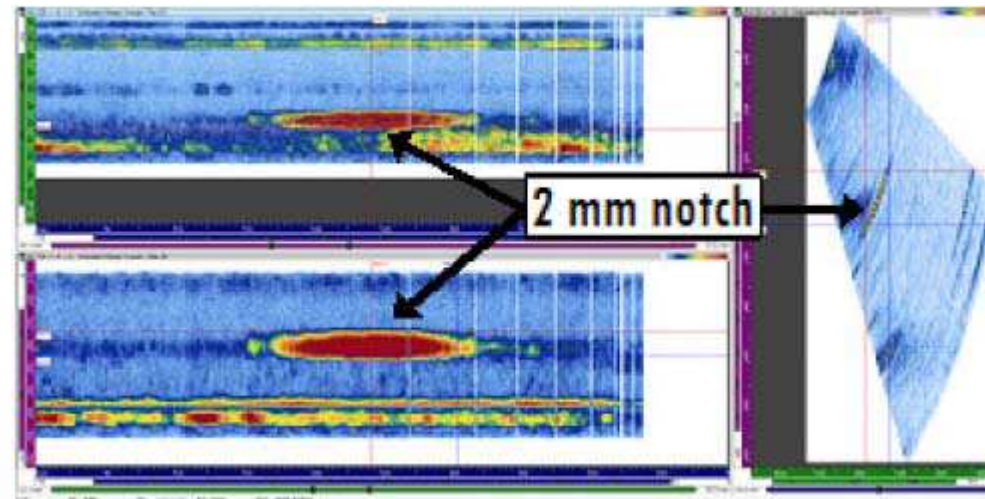
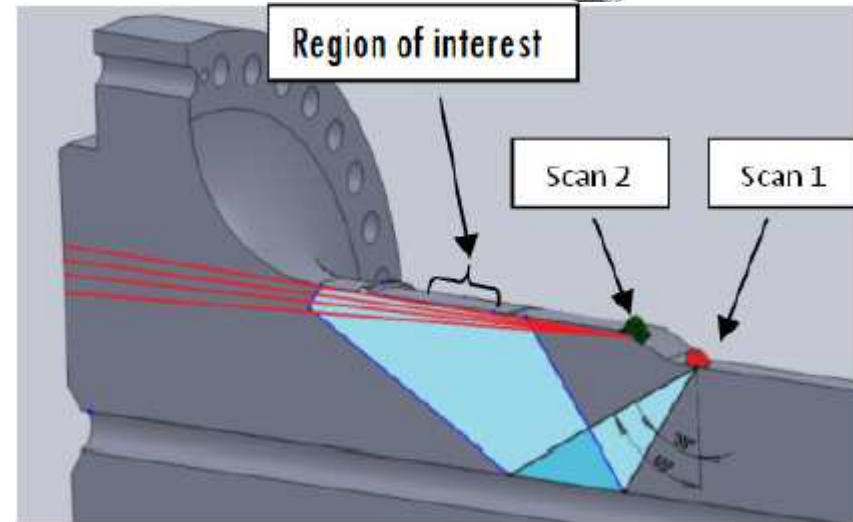




# Contrôle soudure



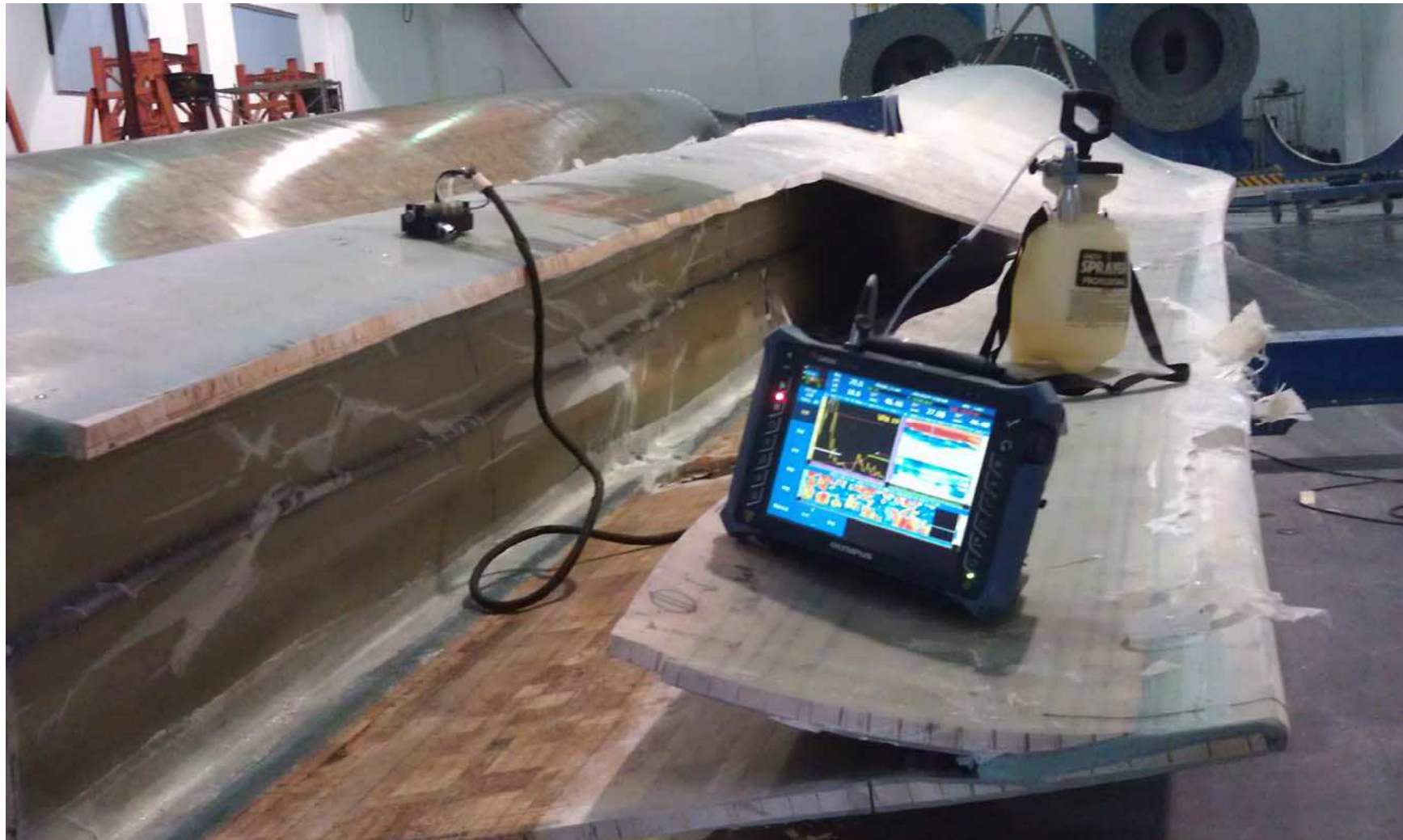
# Contrôle d'arbre



# Contrôle de pale



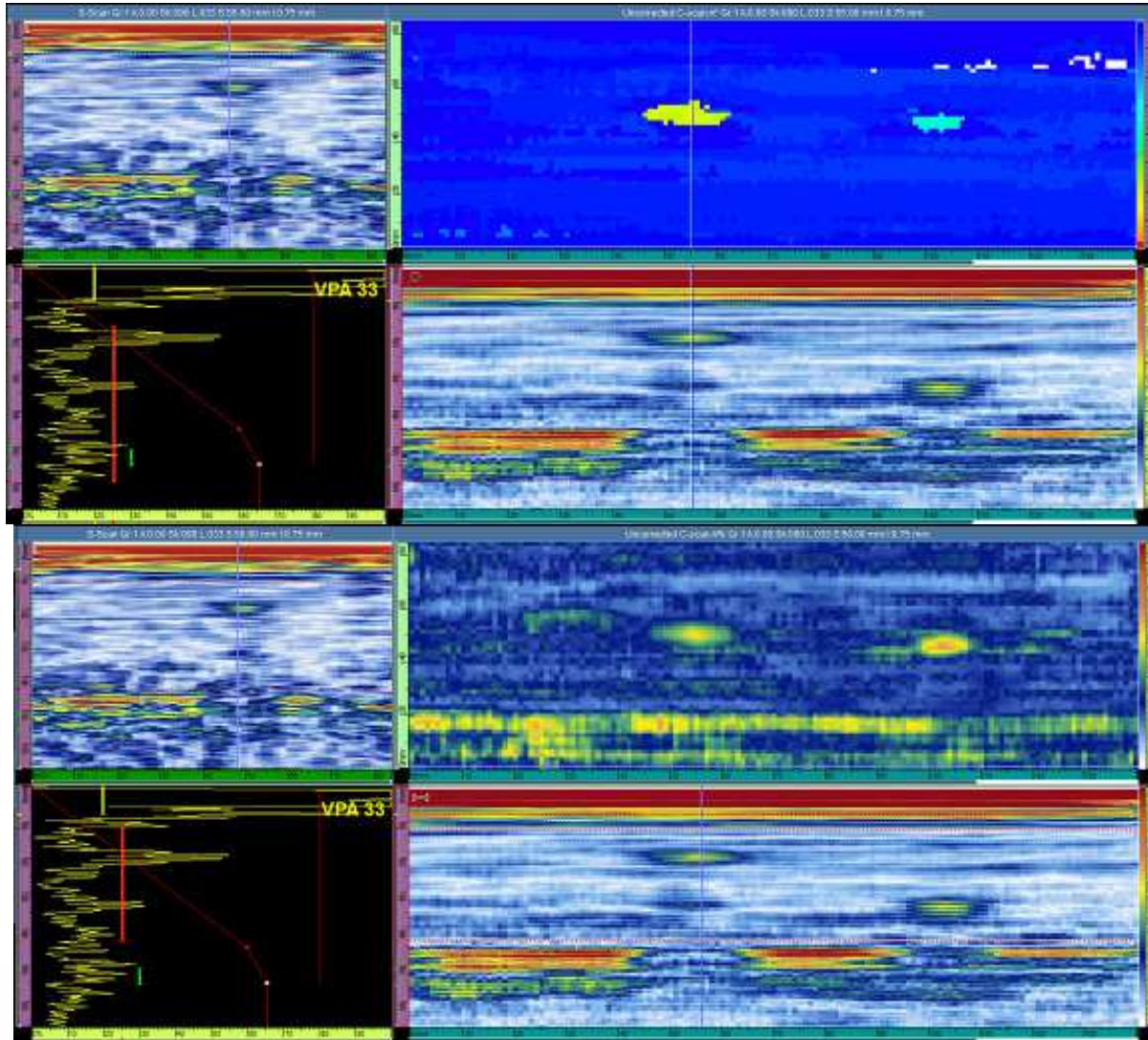
# Contrôle de pale



# Contrôle de pale



# Contrôle pale

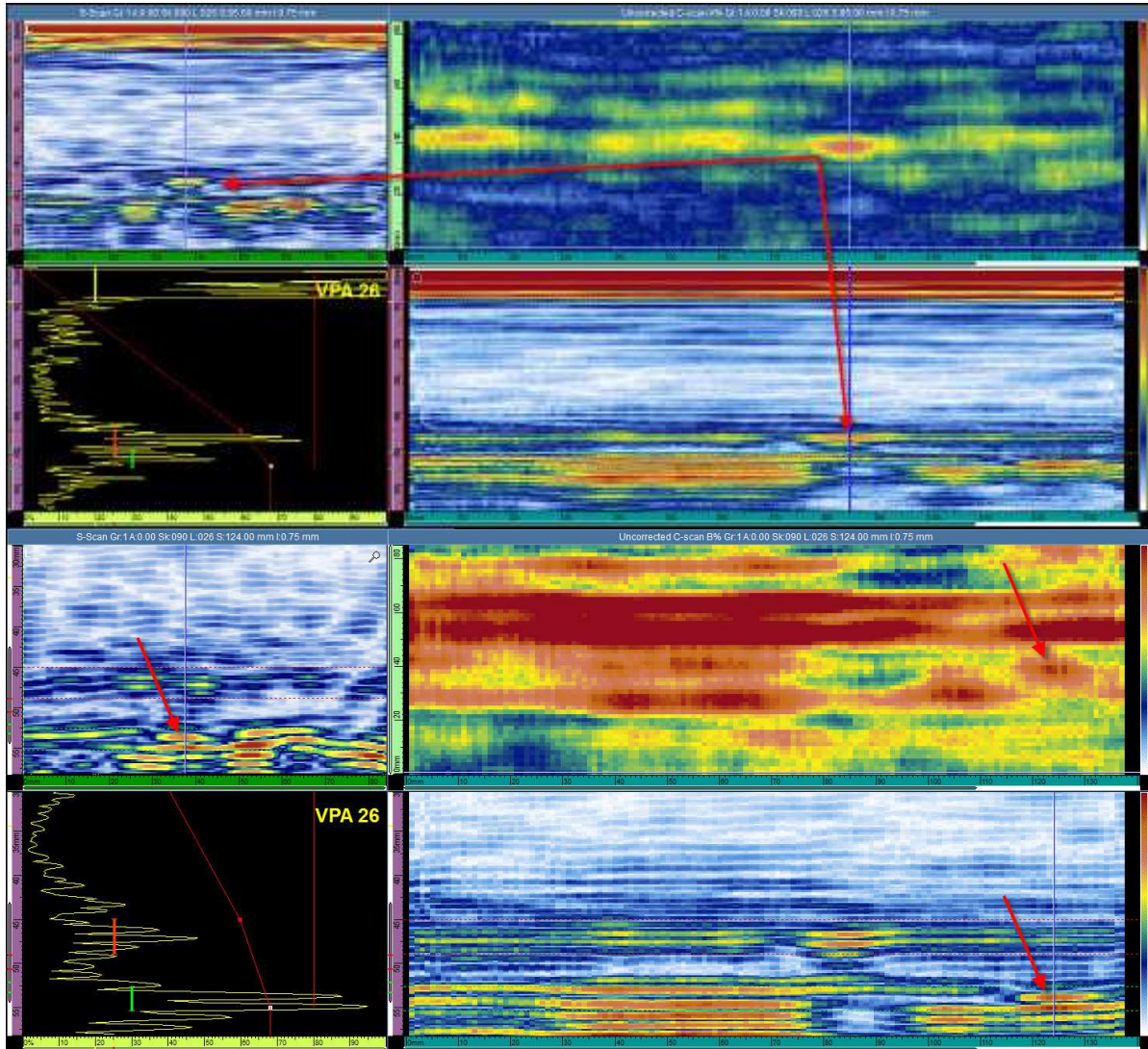


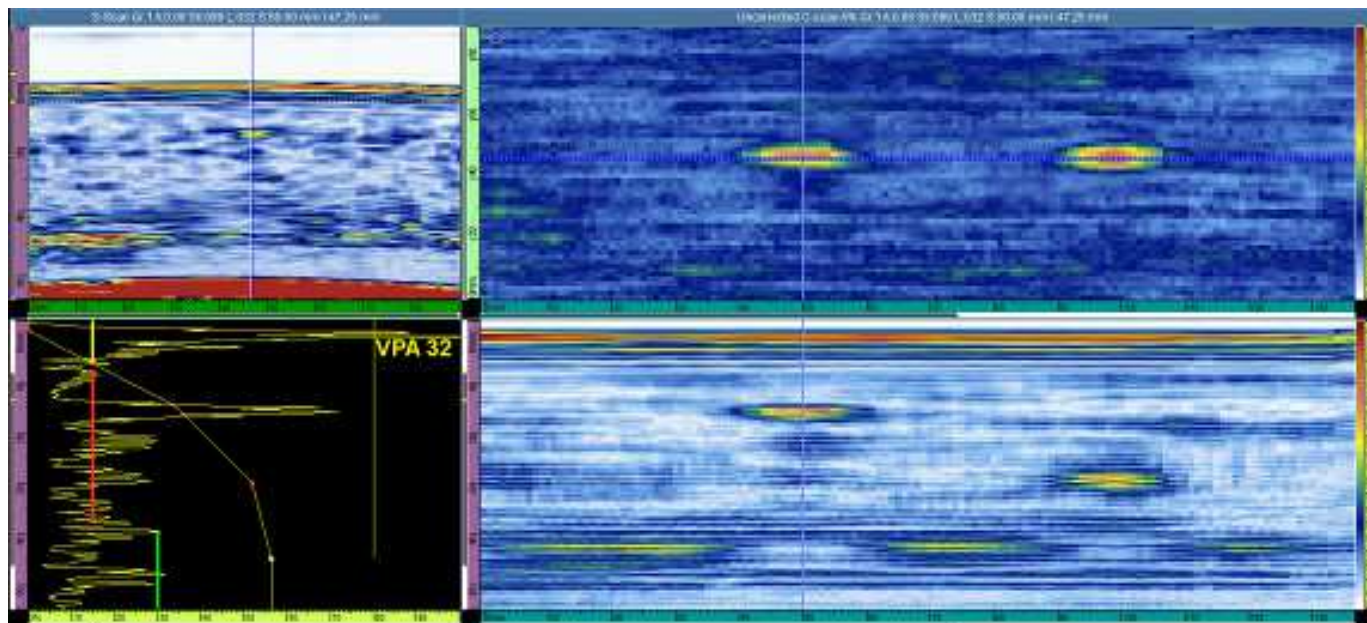
Palpeur 1MHz avec lame  
d'eau  
TFP 12,5mm a 1/3 et 2/3  
épaisseur cale stratifiée



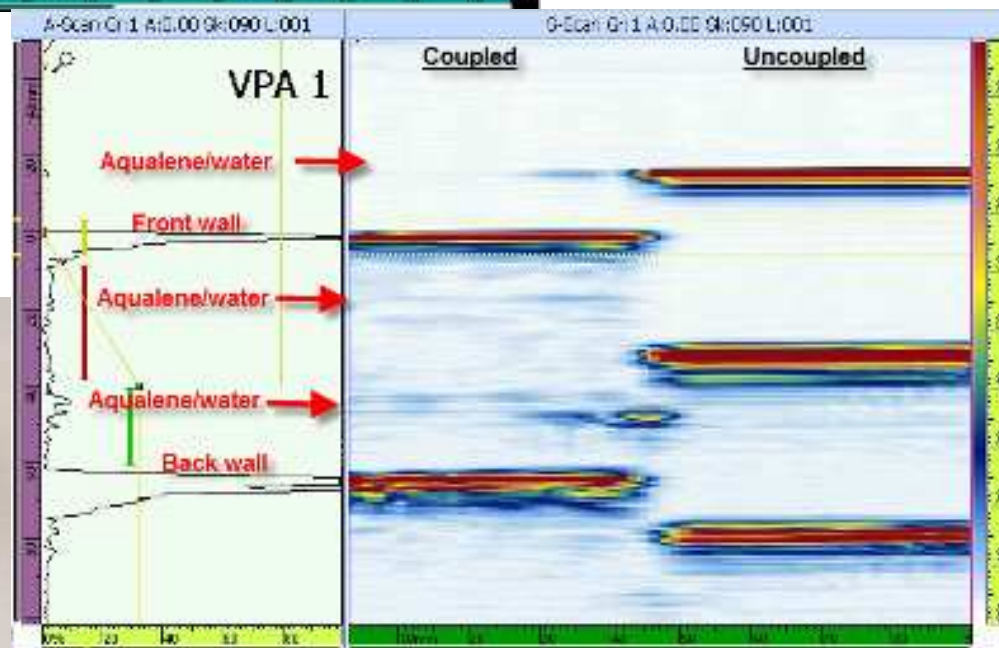
# Contrôle pale

Palpeur 1MHz avec lame d'eau  
TFP 12,5mm a l'interface entre stratifié et raidisseur. Avant et après la couche de colle



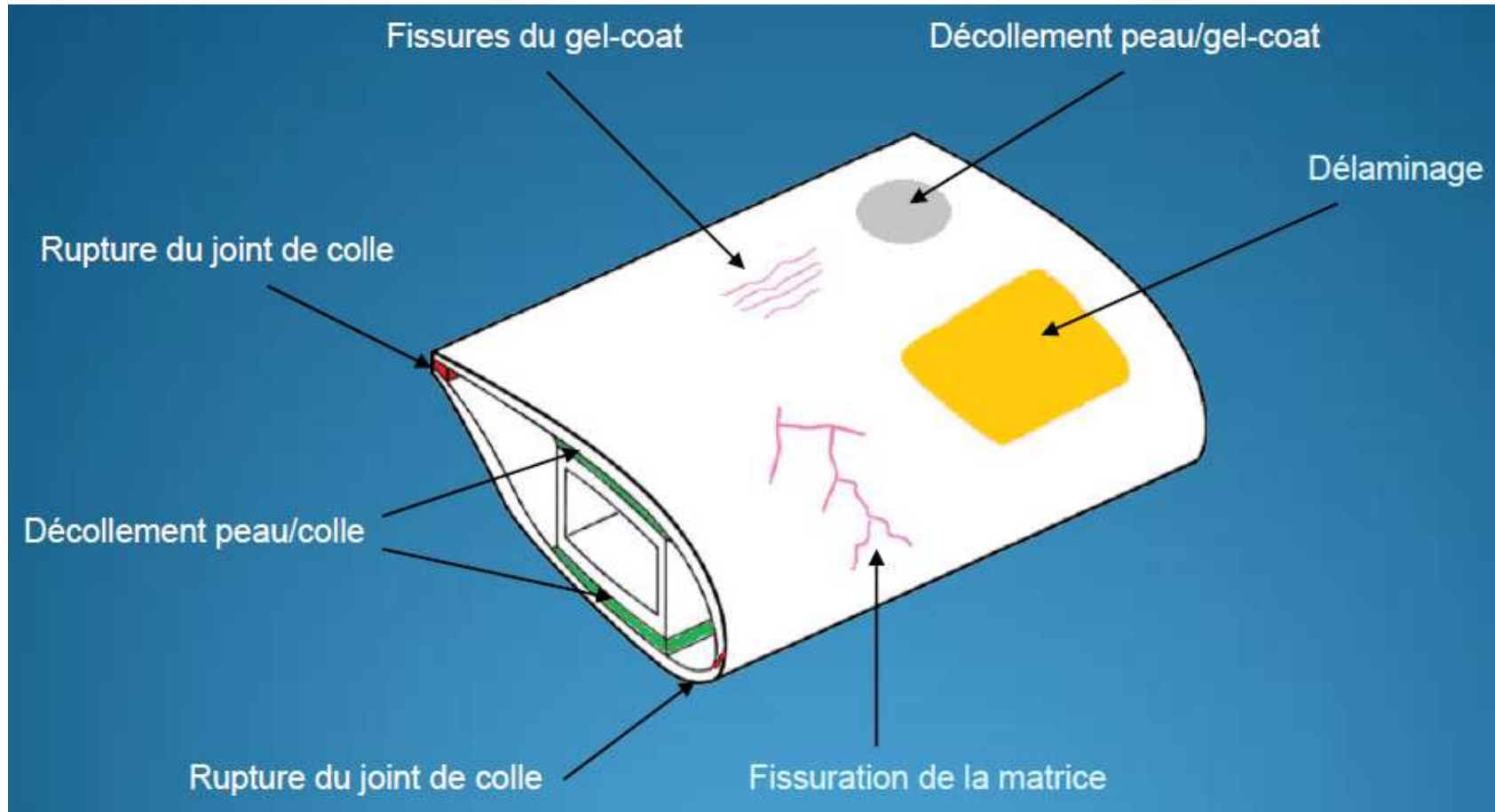


Palpeur 1MHz avec  
relai aqualène  
TFP 12,5mm a 1/3 et  
2/3 épaisseur cale  
stratifiée

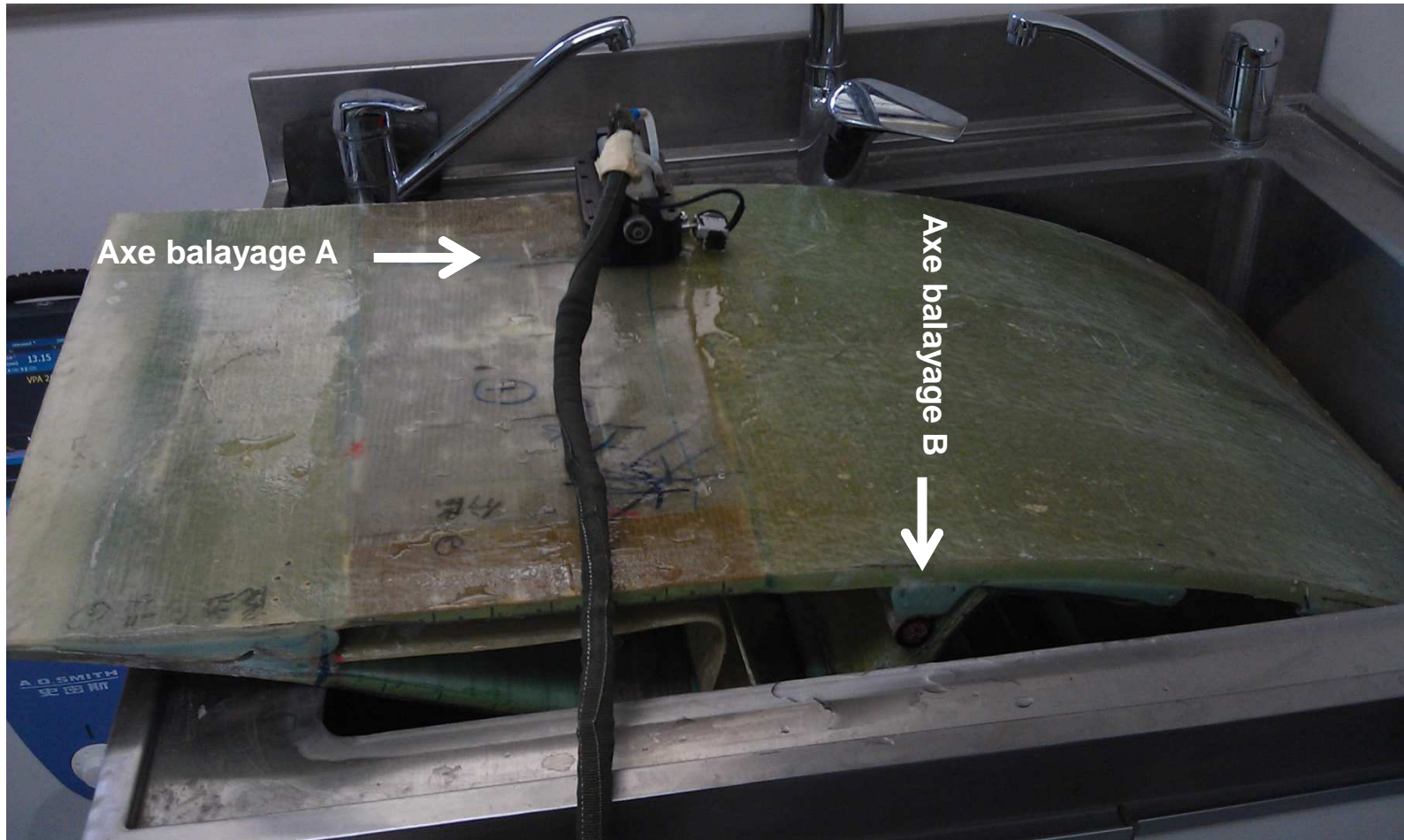


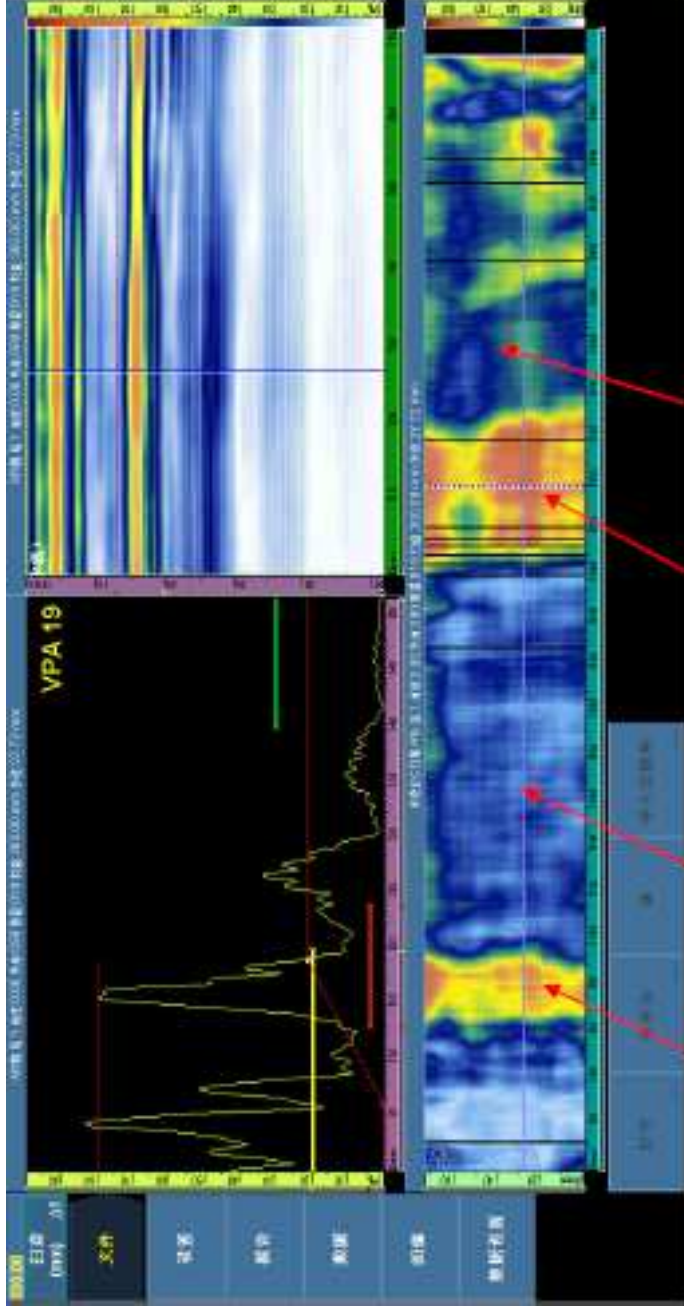


# Contrôle de pale



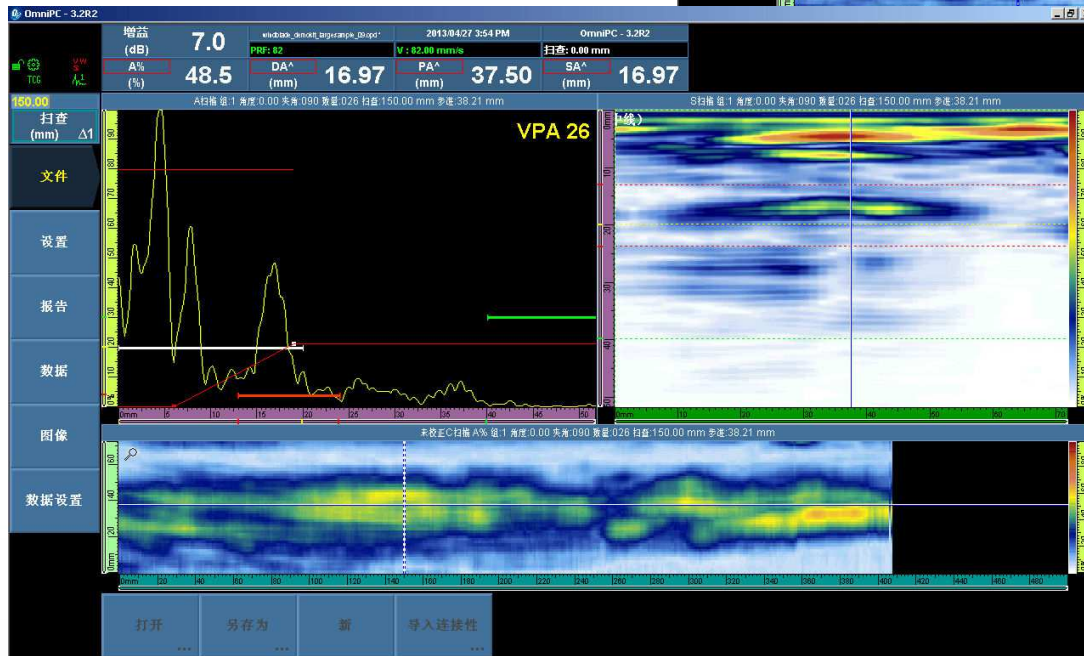
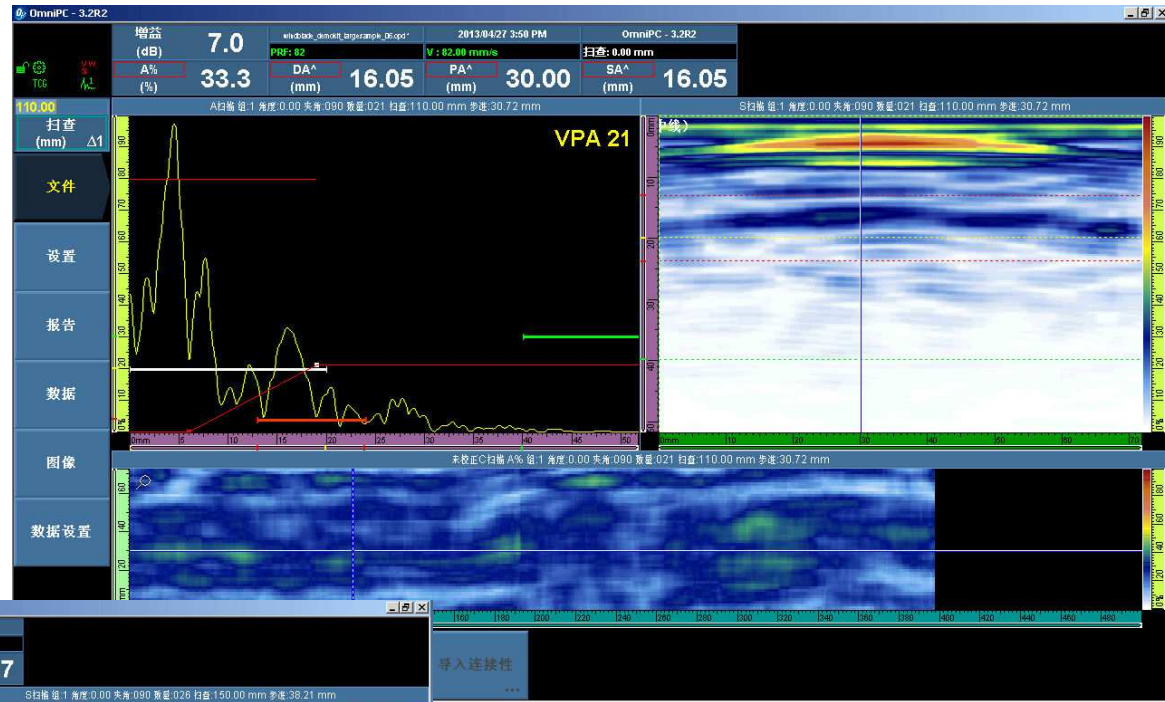
# Contrôle d'un échantillon réel





Balayage suivant axe B

Zone 1 = bonne adhérence



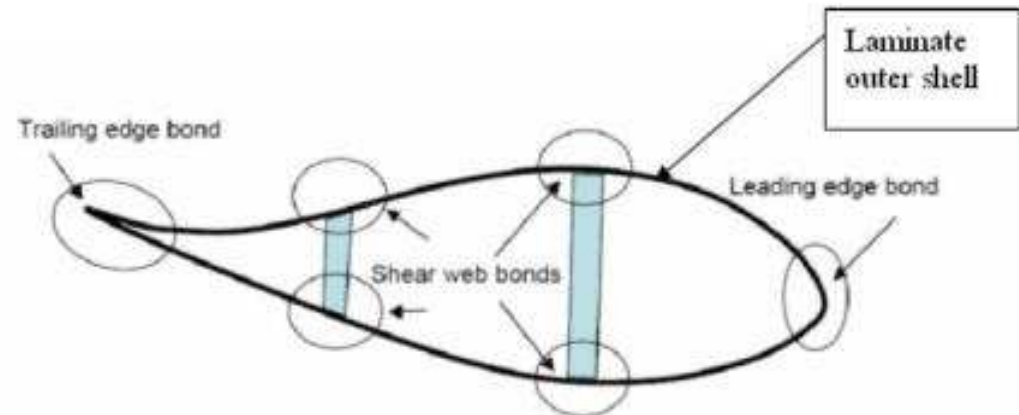
Zone 2 = mauvaise adhérence a certain endroits

# RollerFORM

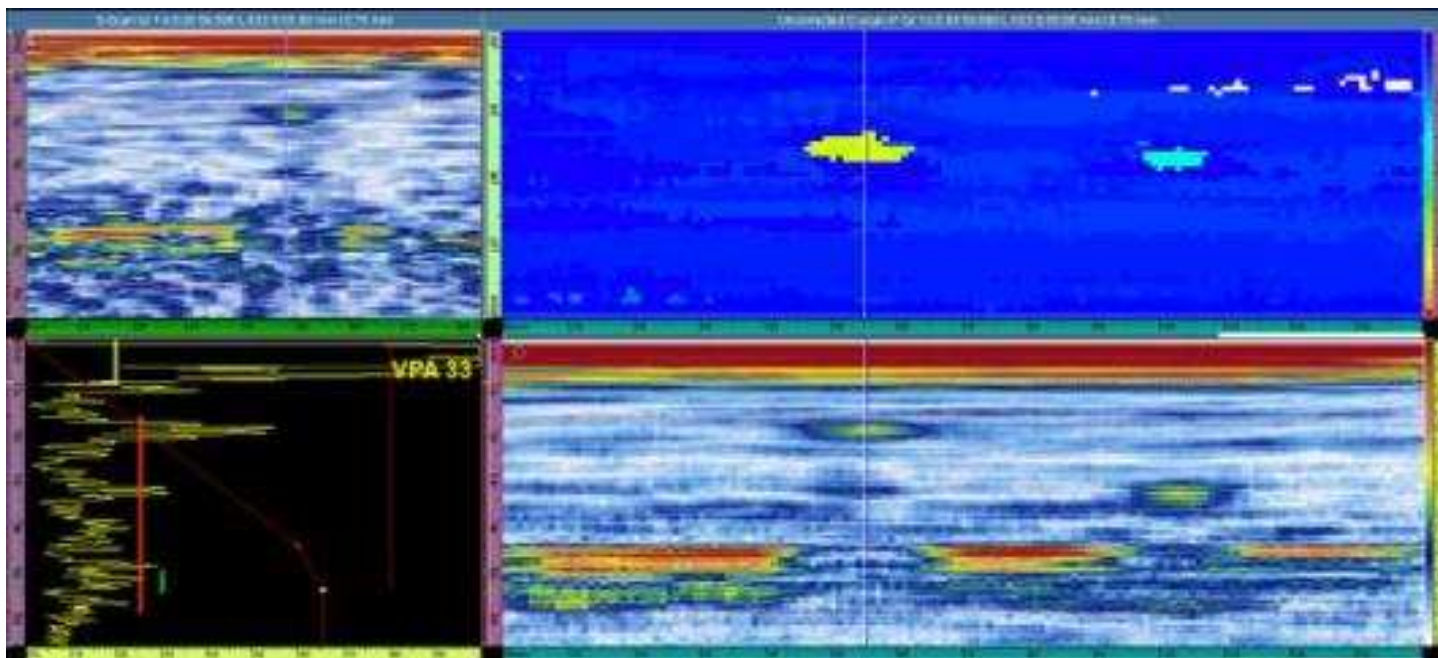


# RollerFORM

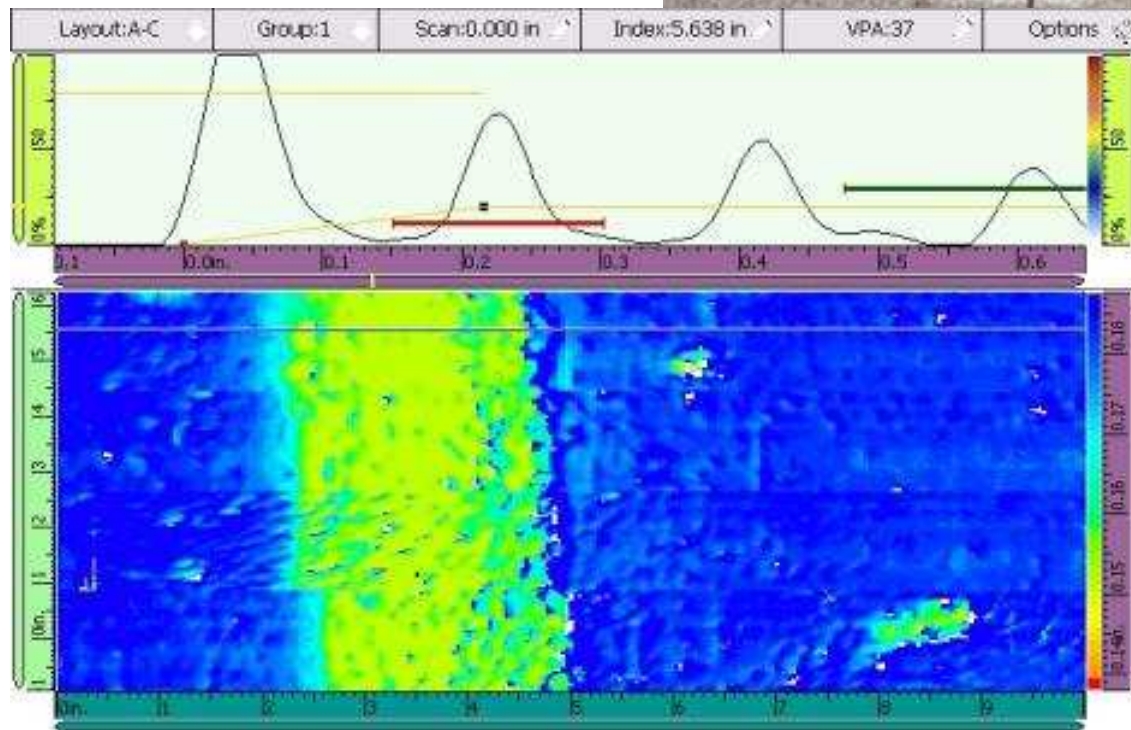
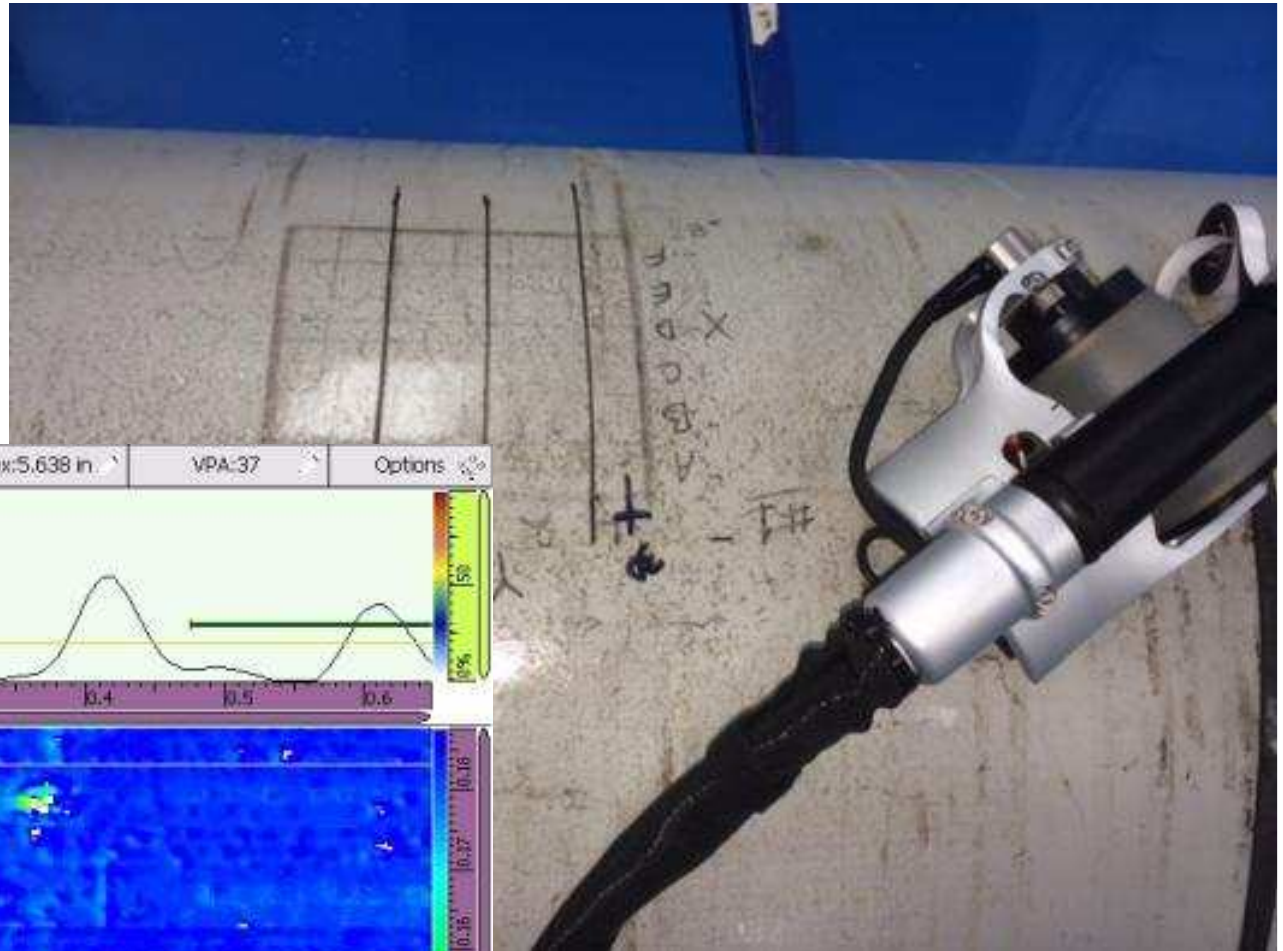
- Inspection des pales d'éolienne



*Typical cross-section of a wind turbine blade*



# RollerFORM pour corrosion

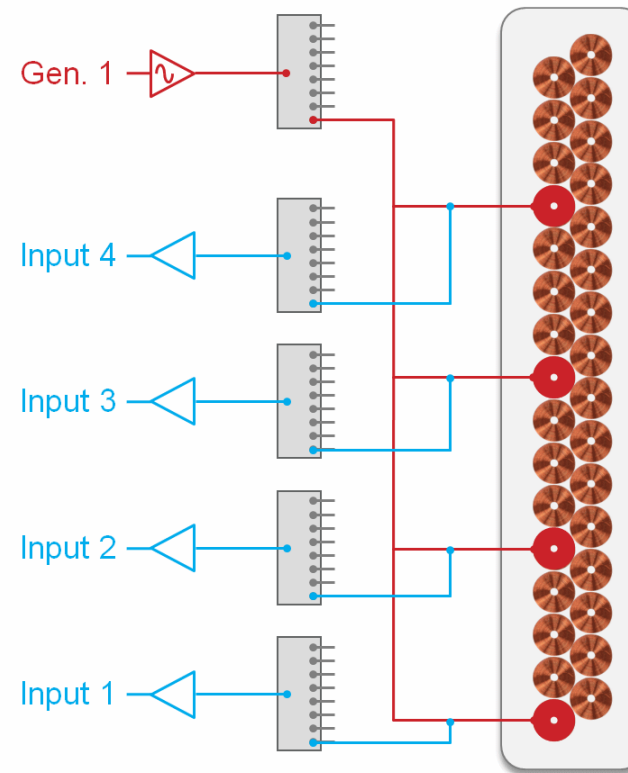


# Courants de Foucault Multi-éléments



## OMNI-P-ECA4-32

- 4 canaux
- 32 canaux multiplexés





## Sonde flexible multi-éléments

**Flex probe FBB-051-500-032**  
**Fréquence 50KHz à 4MHz**

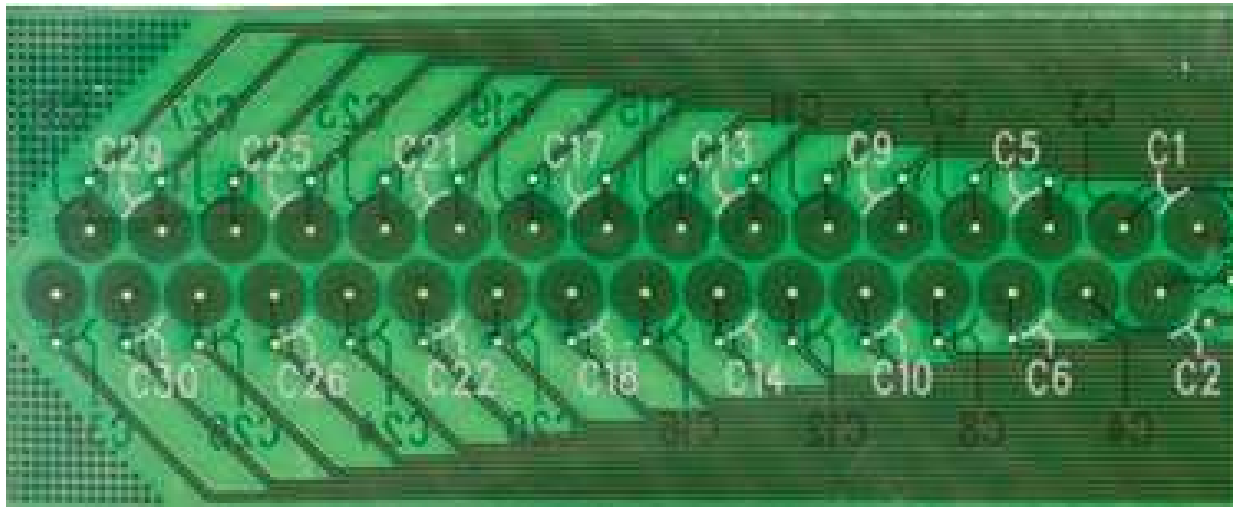
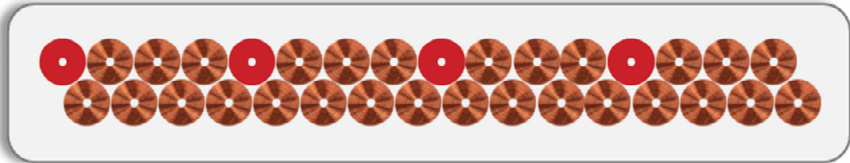


# Sonde flexible multi-éléments

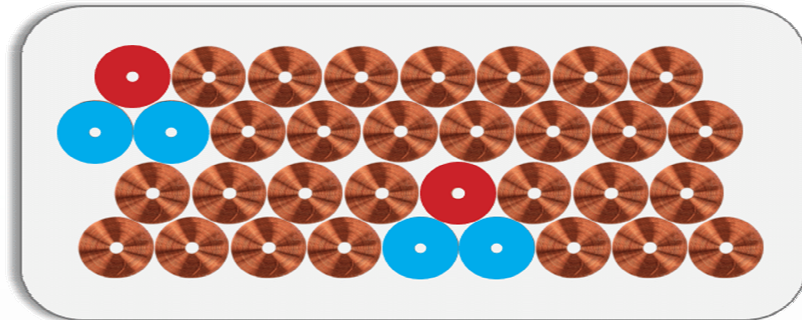
## ➤ Deux modes

**Absolu**

**Besoin d'un encodeur**



**Reflexion**



# Courants de Foucault Multi-éléments

Two scans are required to cover each profile (see Figure 4). Make sure the probe is making a good contact with the rail's radius before and during every scan. There should always be three carbides in contact with the rail on each side of the probe.

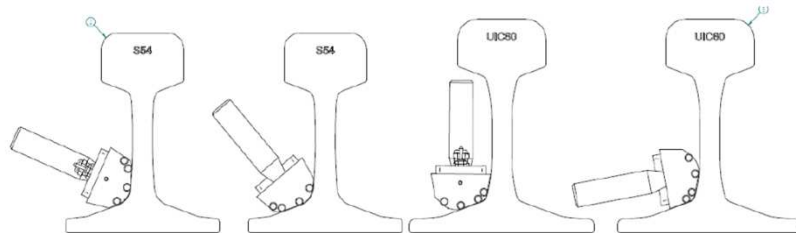
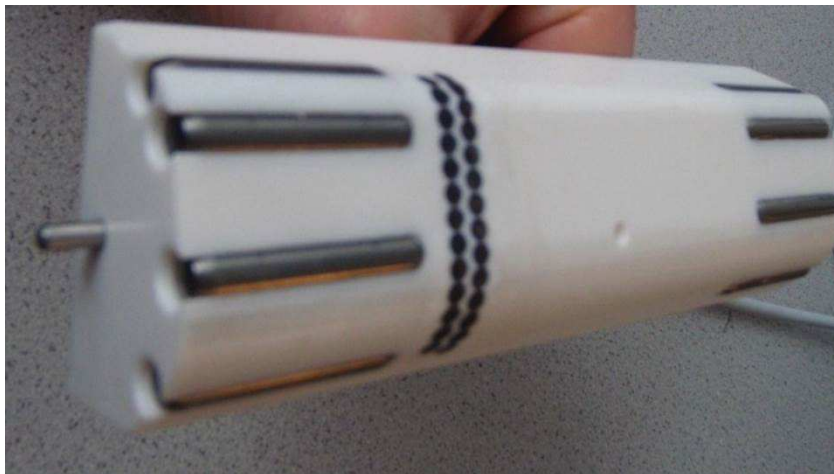
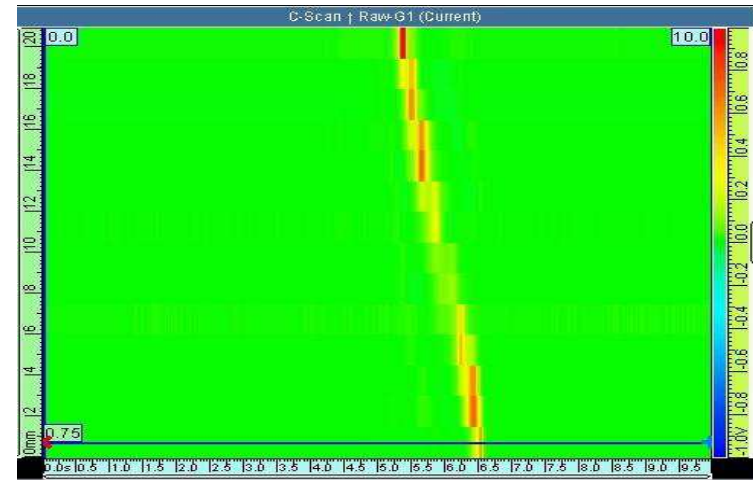
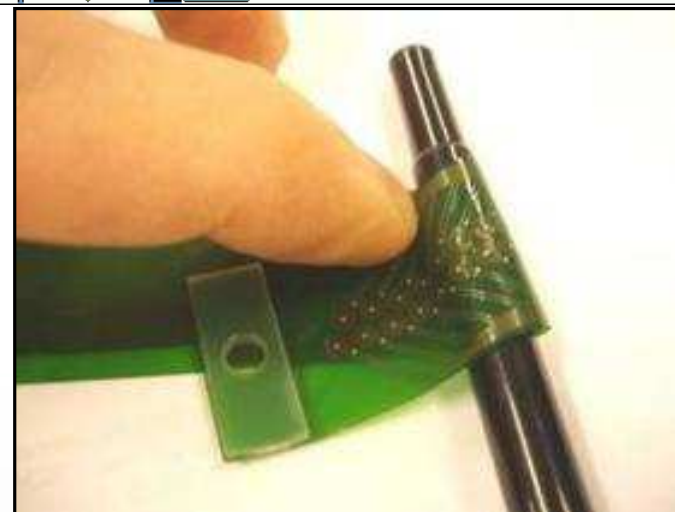
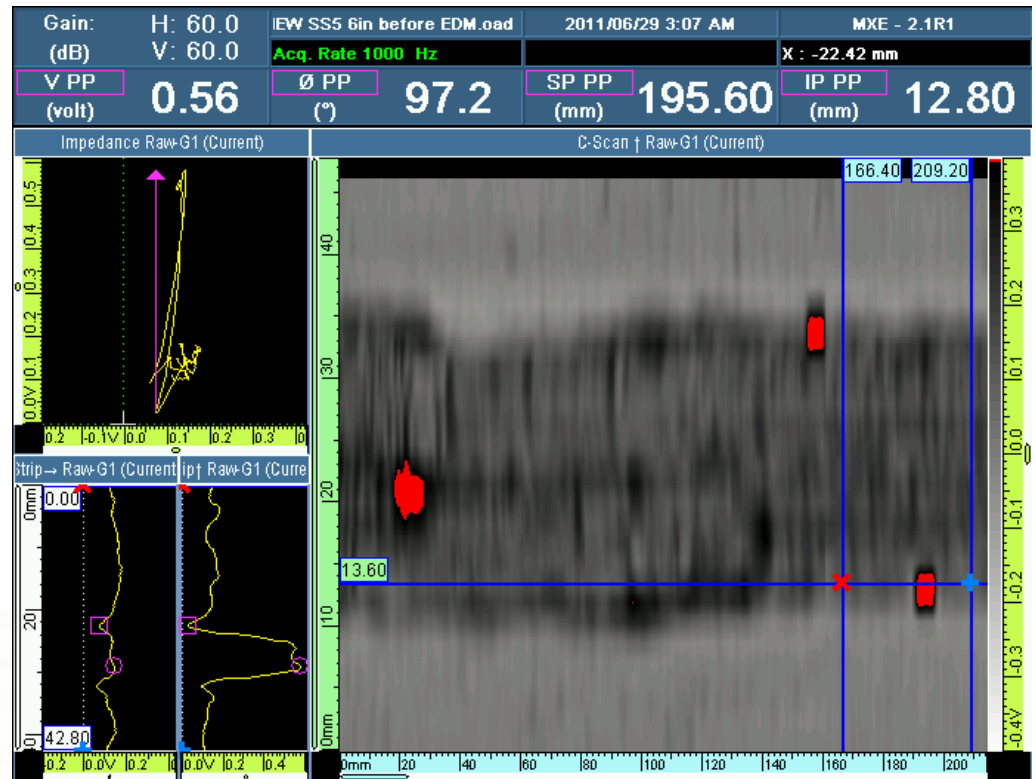
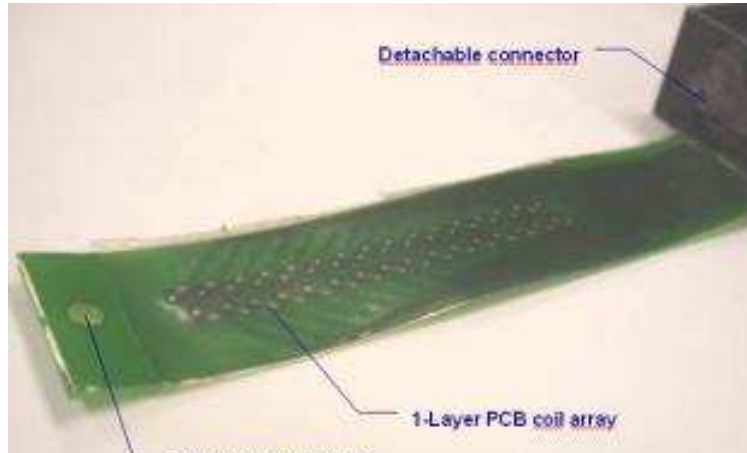


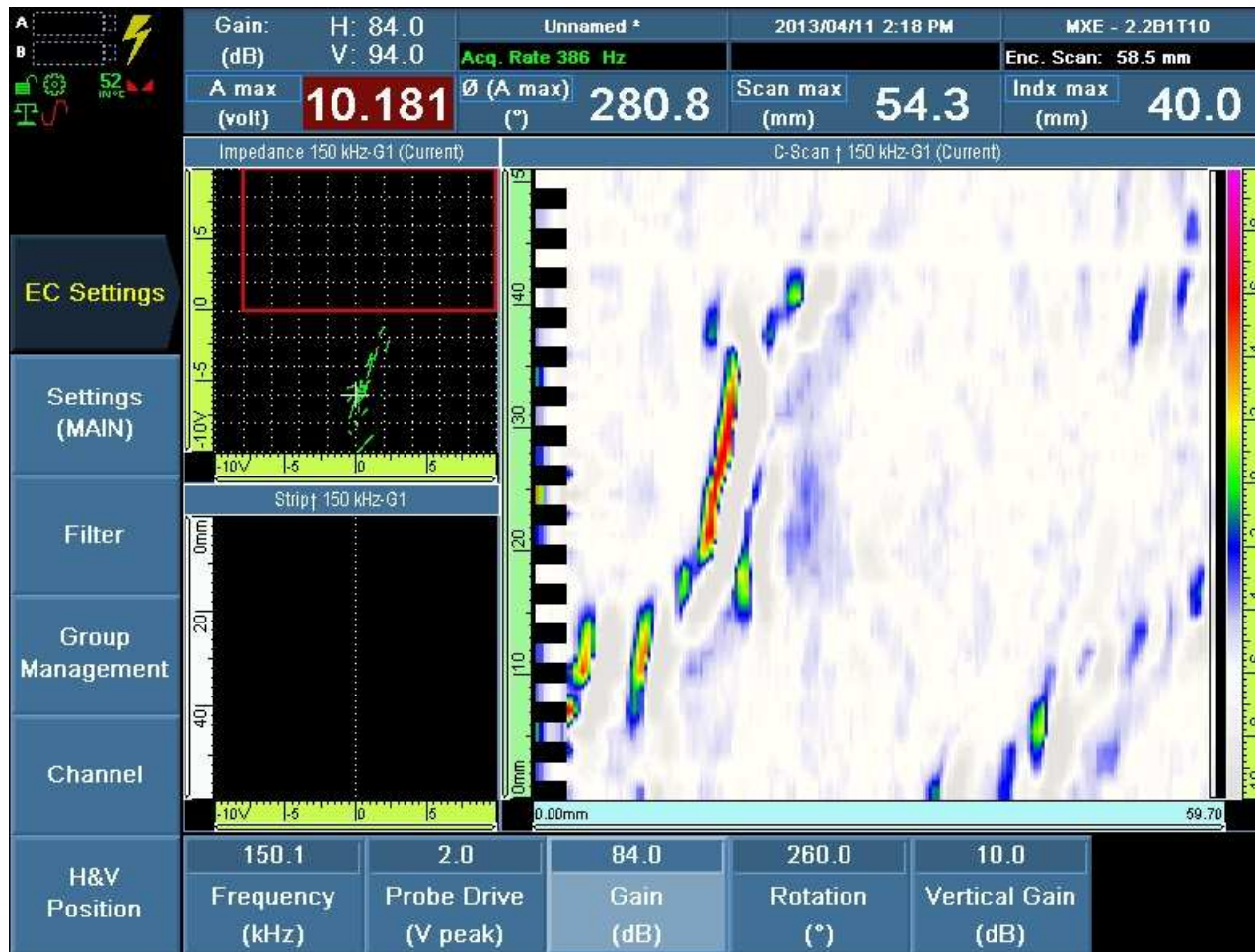
Figure 4 : The E400006 on S54 and UIC60 profiles



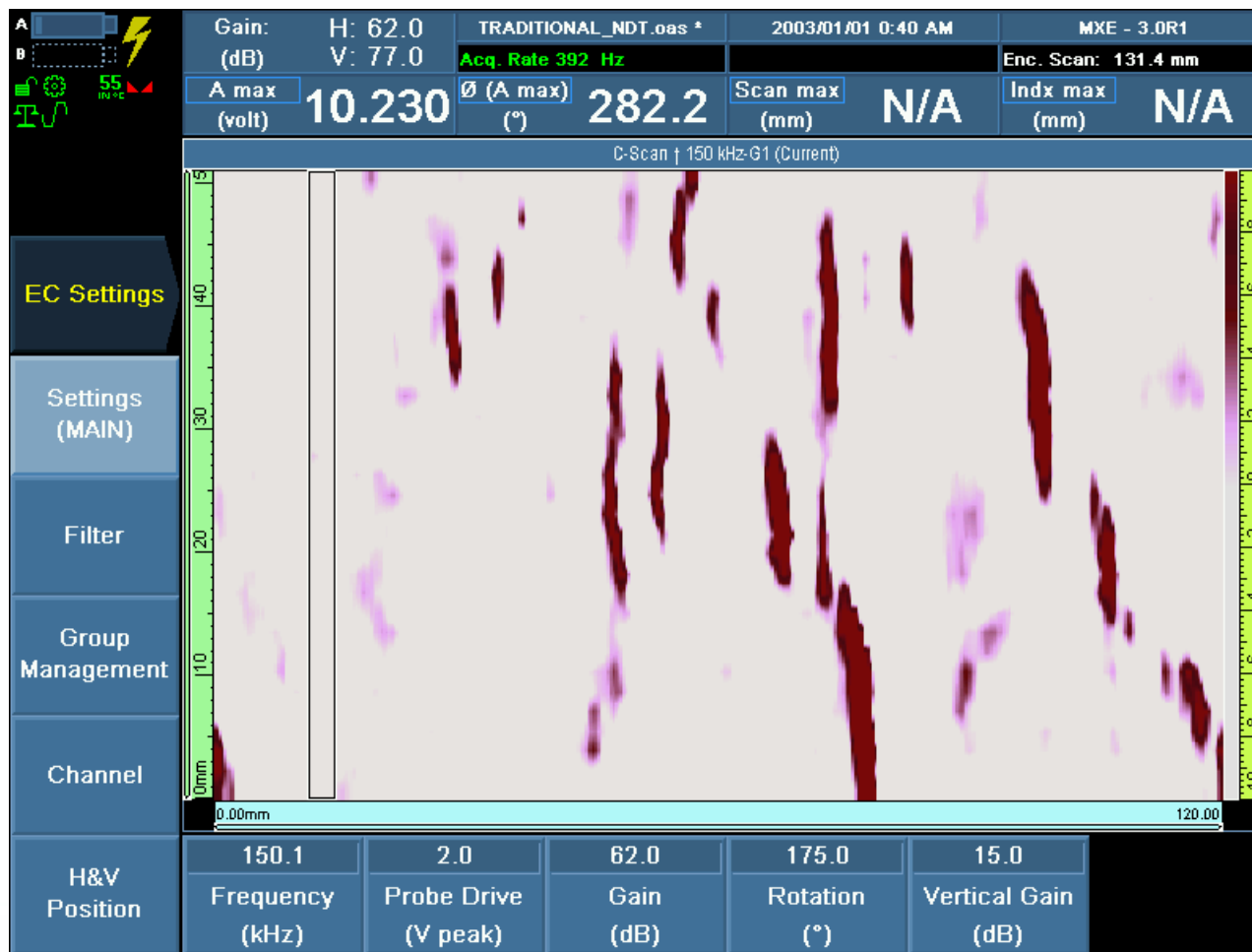
# Sondes flexibles



# Cartographie couleur



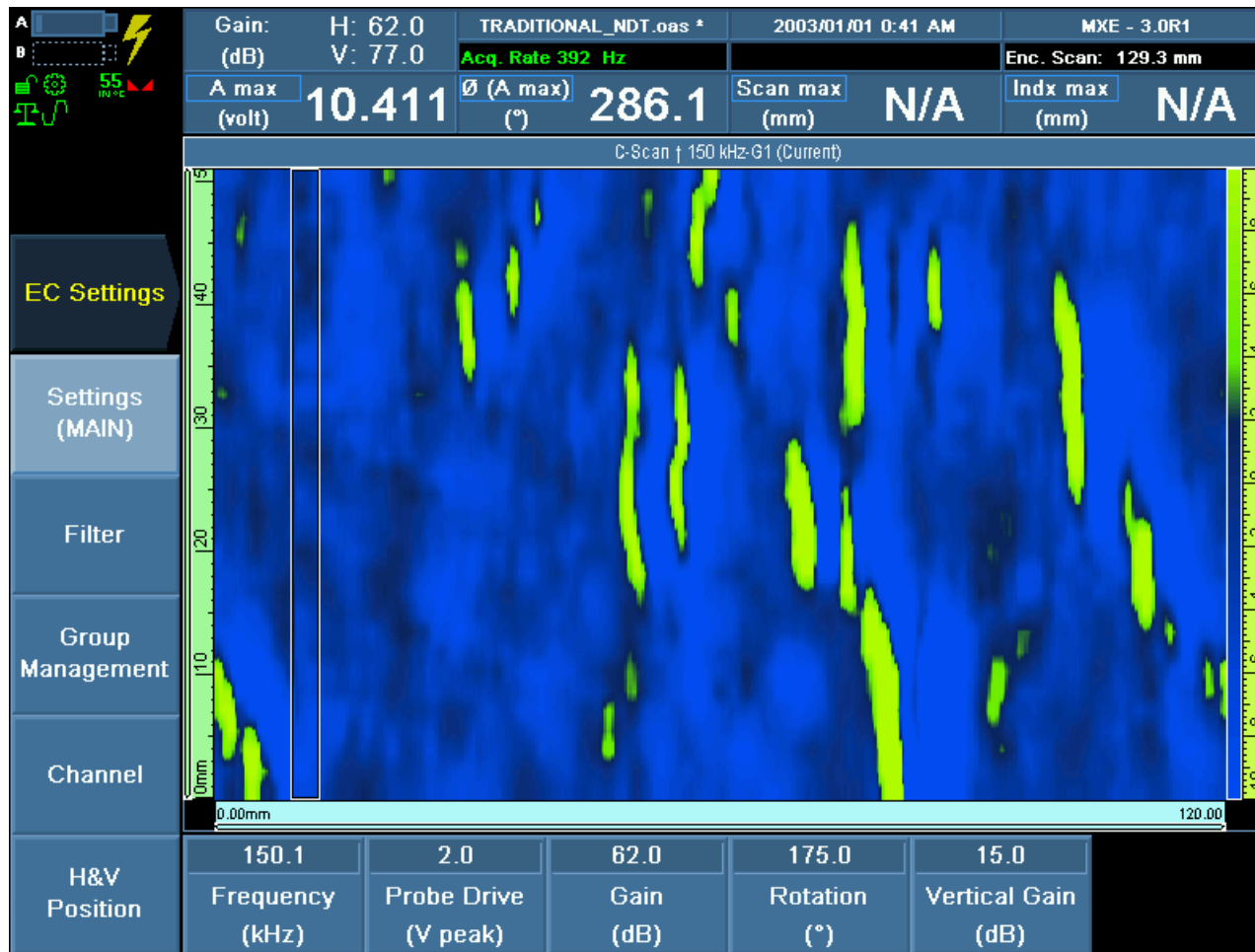
# Palette ressuage



**Go/No-Go, replacement for penetrant testing**

Patent rights protection by, but not limited to the following, US D668,564; 13/967,690; CN201130084342.30

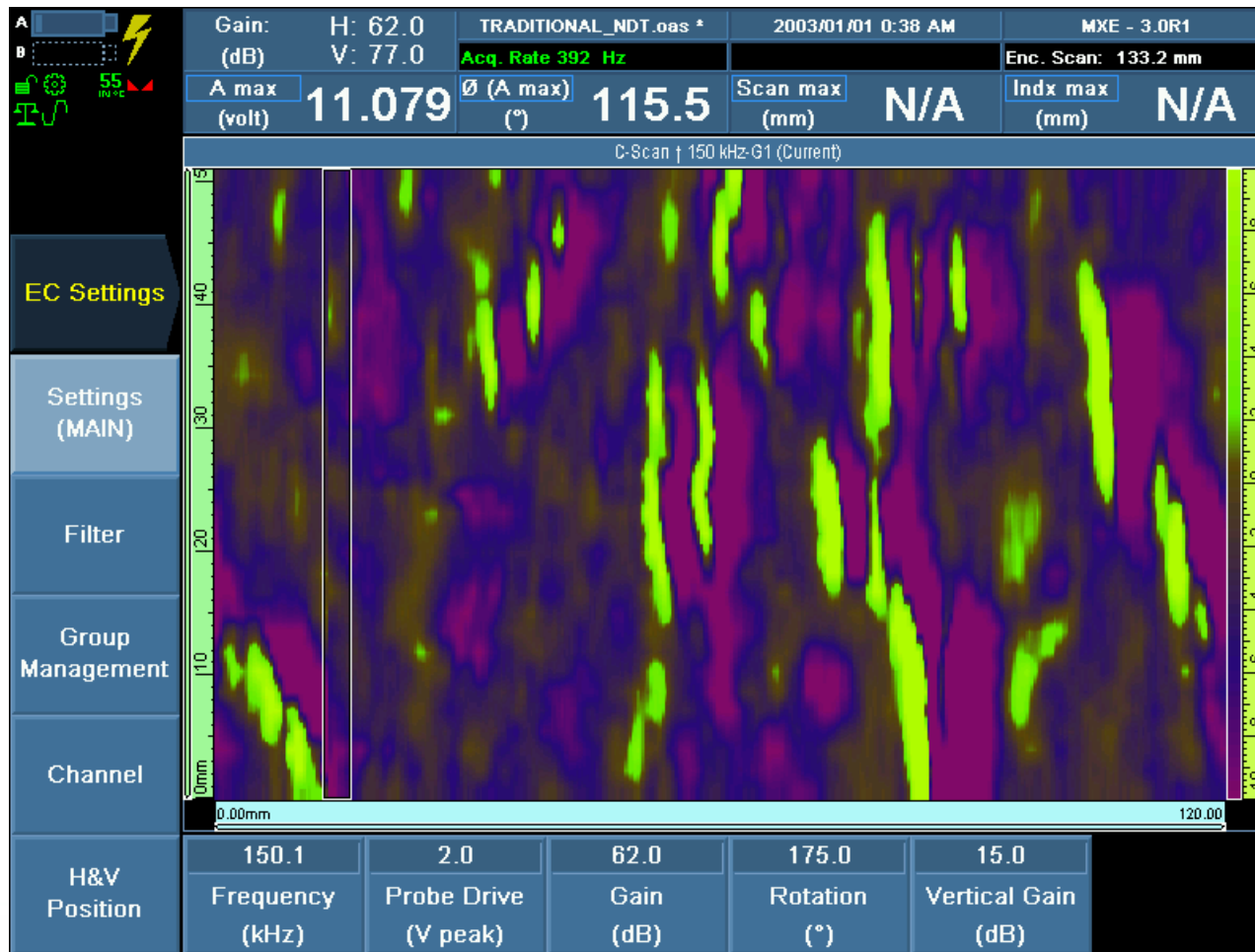
# Palette ressuage FLUO.



**Go/No-Go, replacement for penetrant testing (fluorescent)**

Patent rights protection by, but not limited to the following, US D668,564; 13/967,690; CN201130084342.30

# Palette magnétoscopie FLUO.

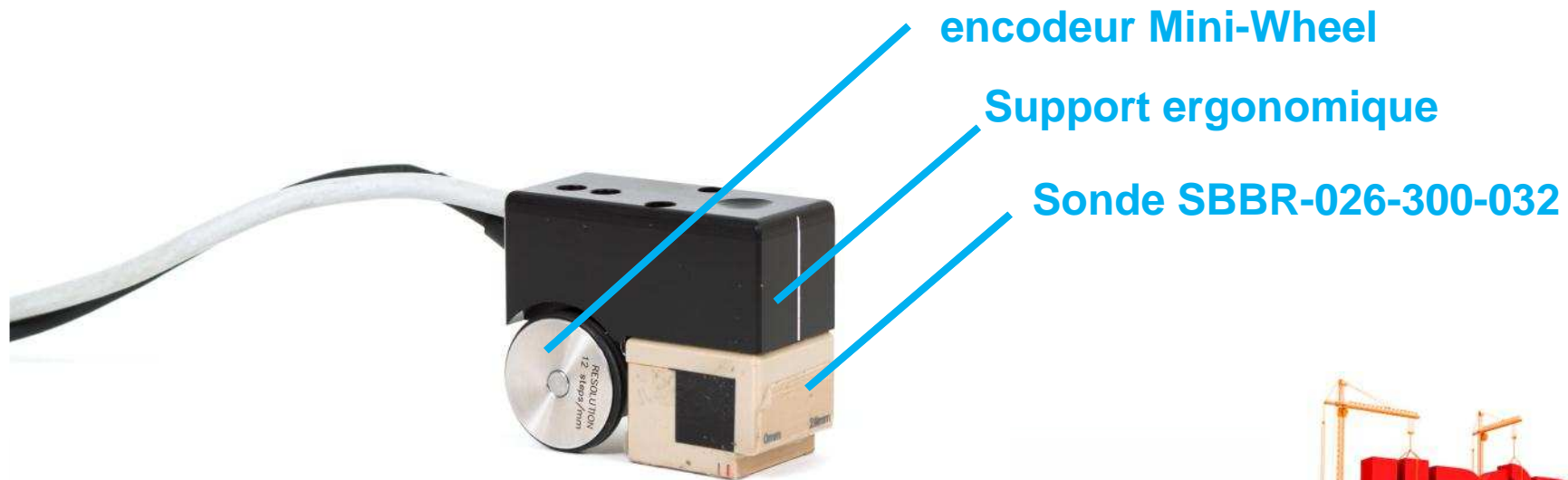


**Go/No-Go, replacement for magnetic particle (fluorescent)**

Patent rights protection by, but not limited to the following, US D668,564; 13/967,690; CN201130084342.30

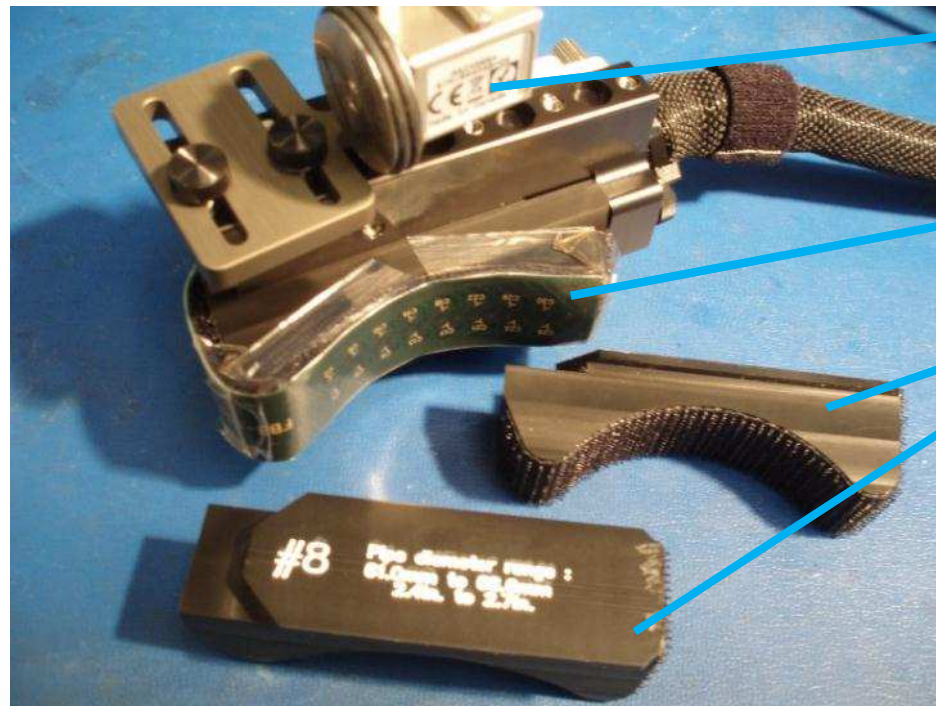


# Défauts de surface (ECA)



# Kit défauts de surface

- Sonde flexible FlexArray
- Semelles interchangeableables
- Kit de 15 diametres de 32mm à plat

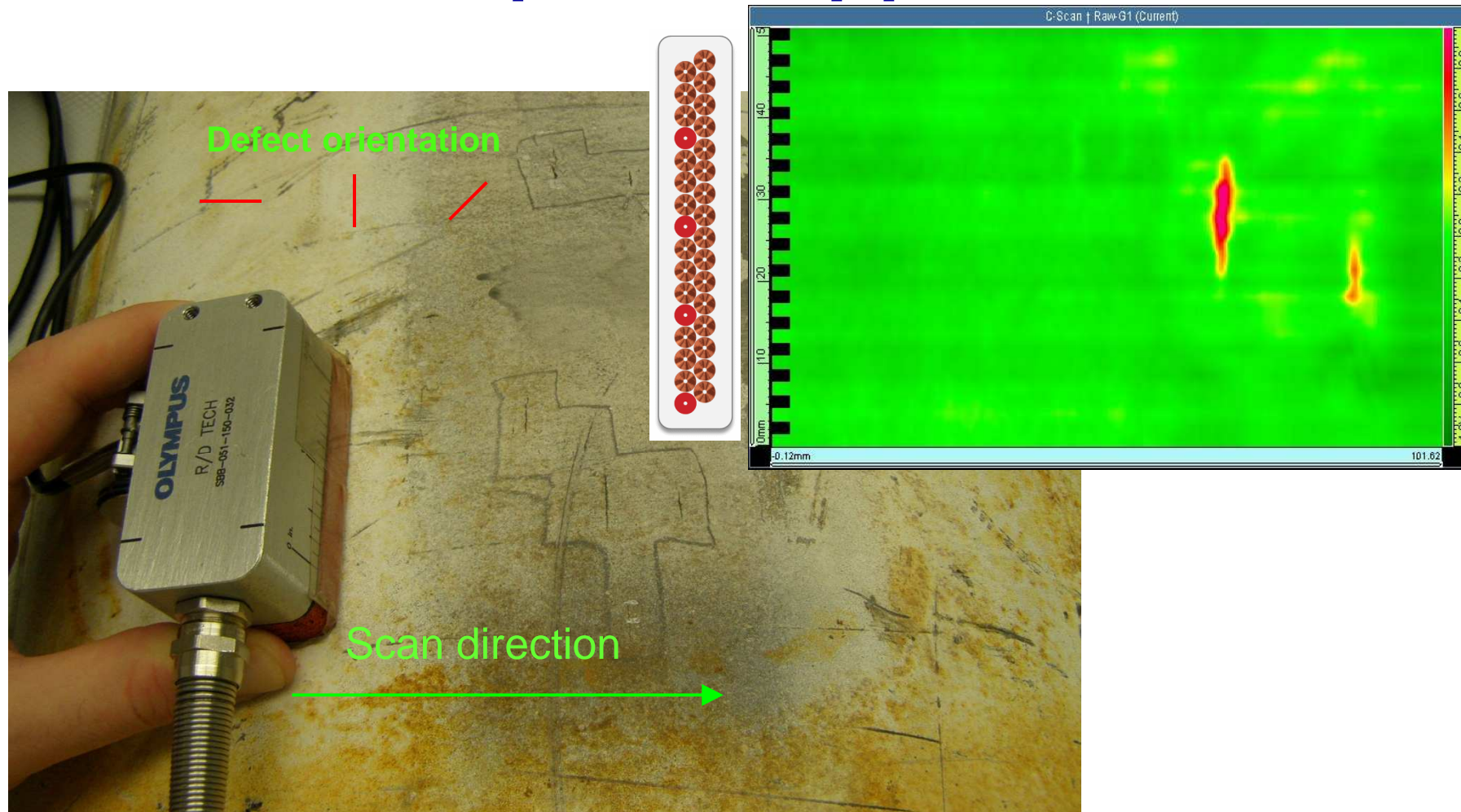


Encodeur Mini-Wheel

Sonde FlexArray

Semelles  
interchangeables

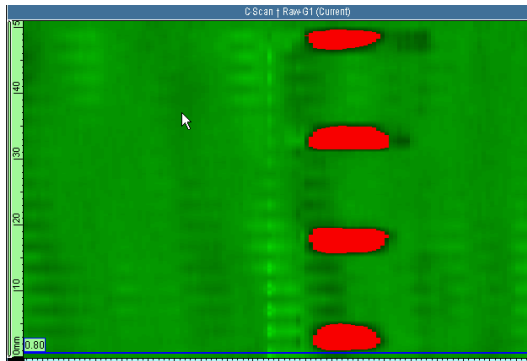
# ECA – Inspection de pipes



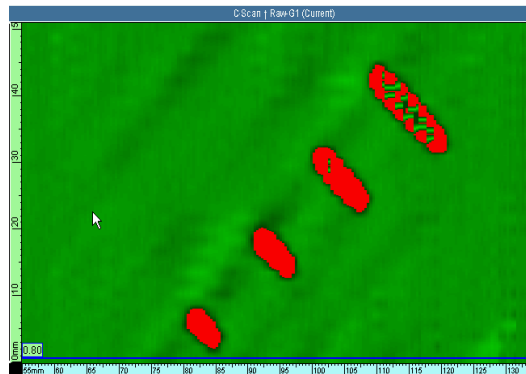
# ECA – Pipe inspection

## Result on standard

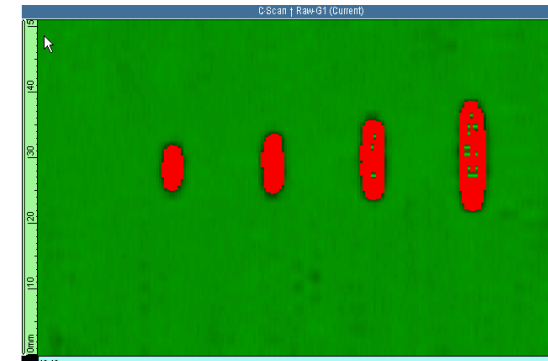
Horizontal



45 degree



vertical



Good area

