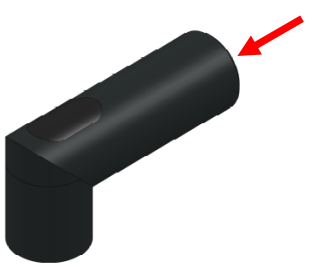
EThER NDE

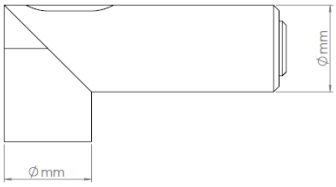
Ether NDE Application Note: AP006

LOW FREQUENCY SUB-SURFACE INSPECTION

Reflection sub surface probes - for general purpose inspection of sub-surface corrosion and flaws. This probe has excellent depth penetration making it ideal for multi-layer inspections.

PROBE SELECTION





Specification:

- Broad frequency ranges
- Excellent low frequency performance
- Integrated 4-way Lemo connector
- Built in balance coils
- Right angled probes are intrinsically balanced

Notes:
The lower the frequency the deeper the depth of penetration.

ID PROBE CODING SYSTEM

PUR11

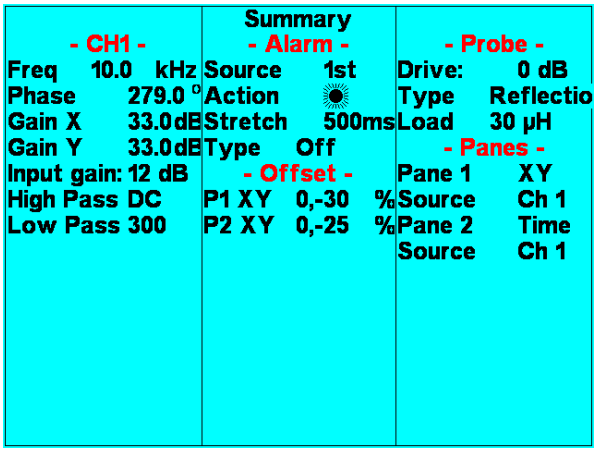
P Probe
U Surface
R Right Angled
11 Diameter (mm)

TEST PROCEDURE

Equipment Required:
Probes = 300Hz – 100kHz Reflection Probe – PUR16
Cable = Lead, Lemo 12-Way to Lemo 4-Way, Reflection Type – ALL12-L04-015R
Test Piece = Aluminium Thin Plate – ATB001

Setup:

1. Connect probe to cable and connect to the instrument.
2. Switch instrument on.
3. Use the cursors to scroll the menu until Load & Save is highlighted, press Enter key. Use the up down cursor to select PUR16 REF, select the load icon and press Enter.
4. The main Operating screen will appear as soon as the setup has been recalled.
5. Place the probe on the Reference Standard with the flat-bottomed holes facing downwards.
6. Then carry out Balance/Lift off function setting Auto Phase under advanced at 0 degrees and radius 50%. Then assign the other soft key.
7. Scan the probe over the defects and note signal response.
8. If more or less sensitivity is required, use the Gain (dB key) or Quick-Menu to increase or decrease signal amplitude as required.
9. Adjust the phase to set the lift off horizontal by either using the Probe Phase Item or the Quick-Menu
10. Carry out scan of component.



Notes:

1. Use your finger as a guide along the edge of the test piece. This will help maintain the same probe to edge distance.
2. Always try and keep the probe normal (90°) to the surface of inspection.

Results: