EThER NDE

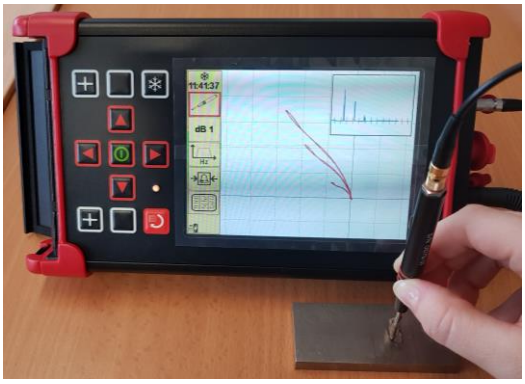
Ether NDE Application Note: AP005

HIGH FREQUENCY SURFACE INSPECTION

Absolute pencil probes are for general purpose inspection of surface breaking defects and metallurgy variations.

TEST PROCEDURE

10MHz Absolute – using the Lemo 00



Equipment required:

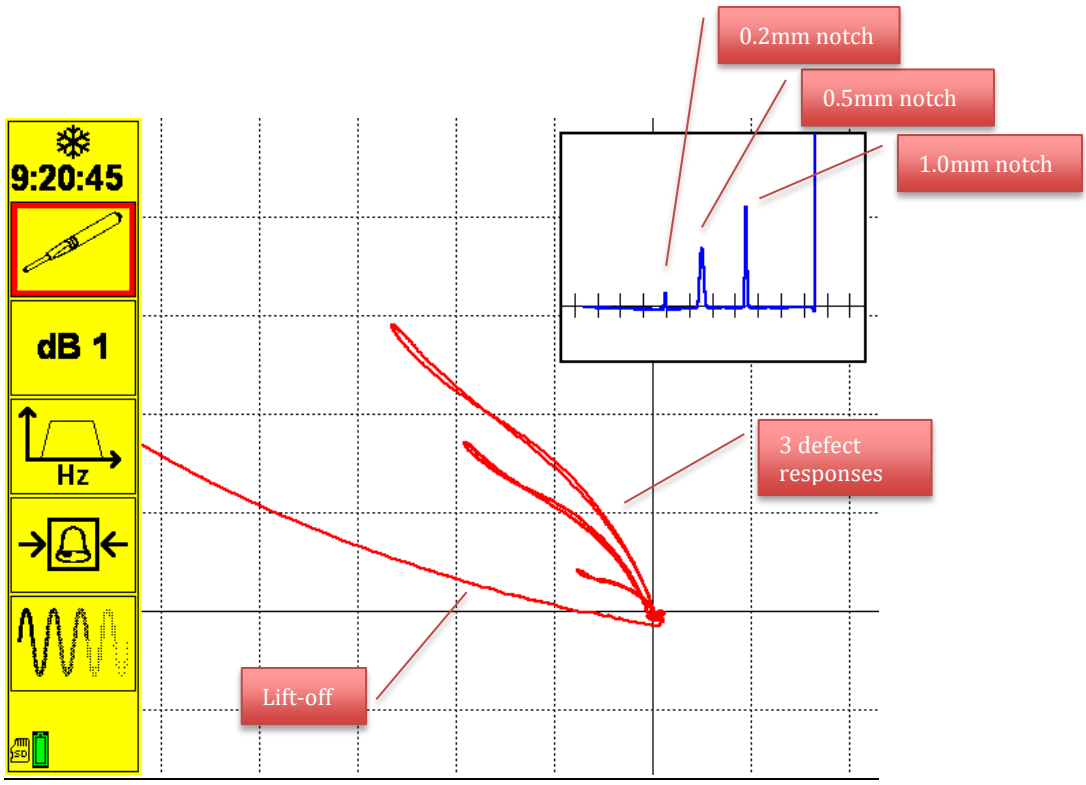
Probe: 6MHz Absolute – PS006PS028-114N and Lead, Lemo 00 to Microdot - ALLCX-M02-015A
Titanium test block with 3 slots: 0.2, 0.5, 1.0mm – ATBT

Setup:

1. Connect probe to cable and connect to the instrument.
2. Switch instrument on.
3. Press Menu.
4. Use the cursors to scroll the menu until Load & Save is highlighted, press Enter key. Use the up down cursor to select Required Setup, select the load icon and press Enter.
5. The main Operating screen will appear as soon as the setup has been recalled.
6. Place the probe on the Reference Standard (away from EDM notches) normal (90°) to the surface
7. First set the load using the Auto Load Option in the Probe Menu and assign one of the soft keys.
8. Then carry out Balance/Lift off function setting Auto Phase under advanced at 0 degrees and radius 50%. Then assign the other soft key to Auto Phase.
9. Scan the probe over the 0.5 mm EDM notch and note signal response.
10. If more or less sensitivity is required, use the Gain (dB key) or Quick-Menu to increase or decrease signal amplitude as required.
11. Adjust the phase to set the lift off horizontal by either using the Auto Phase Key (assigned above) or Probe Phase Item or the Quick-Menu Phase Item.
12. Carry out scan of the component

- CH1 -		Summary		- Probe -	
		- Alarm -			
Freq	10.0 MHz	Source	1st	Drive:	6 dB
Phase	145.0 °	Action		Type	Absolute
Gain X	33.0 dB	Stretch	500ms	Load	Auto
Gain Y	41.0 dB	Type	Off	- Panes -	
Input gain:	12 dB	- Offset -		Pane 1	XY
High Pass	DC	P1 XY	30,-25 %	Source	Ch 1
Low Pass	300	P2 XY	0,-25 %	Pane 2	Time
				Source	Ch 1

Results:


0.2mm notch
0.5mm notch
1.0mm notch
9:20:45
dB 1
Hz
3 defect responses
Lift-off