

### Linearity of Amplification

GAIN	DELY	RNG	RJ	G1ST	G1WD	T1	G2ST	G2WD	T2	Ang
	0	100-500	10	-	-	-	-	-	-	0

Energy - Min. From Calibration menu, Select CH and go to EDIT window.

The Gain shall be reset to obtain n<sup>th</sup> echo at half the previous scale height. The linearity shall be assessed by checking if the following echo (n+1) is also reduced by 50%

$$\text{Deviation} = (h_1 - 2h_2) / h_1 \times 100\%$$

$h_1$  = The height of (n+1)<sup>th</sup> echo previously,  $h_2$  = The height of (n+1)<sup>th</sup> echo after reset

The linearity shall be within  $\pm 3\%$

### Linearity of Time Base

GAIN	DELY	RNG	RJ	G1ST	G1WD	T1	G2ST	G2WD	T2	Ang
	0	100-500	10	-	-	-	-	-	-	0

Energy - Min. From Calibration menu, Select CH and go to EDIT window.

Set Gain to get the echos more than half screen to full screen.

$$\text{Assesment: Deviation} = (a_{\max} / 0.8 \times b) \times 100\%$$

$a_{\max}$  = Max deviation among the deviations of the leading edges of each echo.

$b$  = Full scale time base

The variation shall be within  $\pm 1.25\%$

### Dead Zone

GAIN	DELY	RNG	RJ	G1ST	G1WD	T1	G2ST	G2WD	T2	Ang
	0	100	10	-	-	-	-	-	-	0

Energy - Max. From Calibration menu, Select CH and go to EDIT window.

Place the Probe on Step Gauge and the echo of the corresponding depth is observed on the screen.

The Dead Zone shall be less than 7mm for (S/C probe) and 3mm for (D/C probe)

### Resolution

GAIN	DELY	RNG	RJ	G1ST	G1WD	T1	G2ST	G2WD	T2	Ang
	0	100	10	-	-	-	-	-	-	0

Energy - Min.

Make the same height of 85mm and 91mm echos. Then increase the gain to make the echos height 100%. At this position the onset (the combined part of close echos should be below 50%

### Penetration

GAIN	DELY	RNG	RJ	G1ST	G1WD	T1	G2ST	G2WD	T2	Ang
	0	500	5	-	-	-	-	-	-	0

Energy - Max. From Calibration menu, Select CH and go to EDIT window.

Place the CP on Perspex.

Increase Gain to get 5 full echos and 6th appearing on 23 mm perspex of IIW block