

?

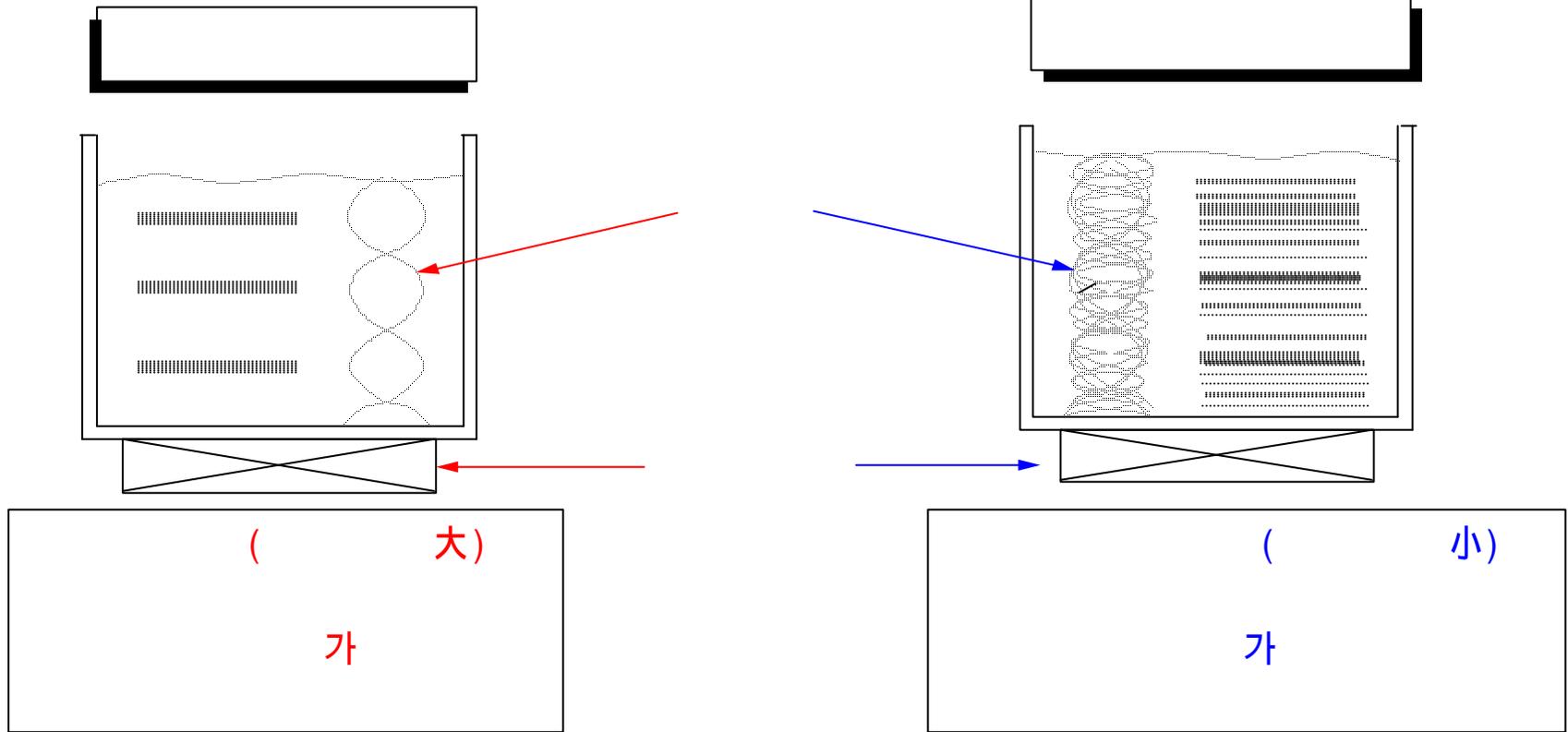
4.1

	(KHz)	
	20 ~ 90	,
	100 ~ 400	damage가 (LCD, Wafer)
	1MHz	Submicron (Wafer, LCD, PDP)

	28KHz	40KHz	(40 ~ 90KHz)	(1MHz)
				가
가	1500G	2500G	2500 ~ 5000G	100000G
()				
가	3 μm	2 μm	1.5 μm	0.1 μm

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4.2



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4.3

가?

가 가

(DEAD ZONE)

가

가

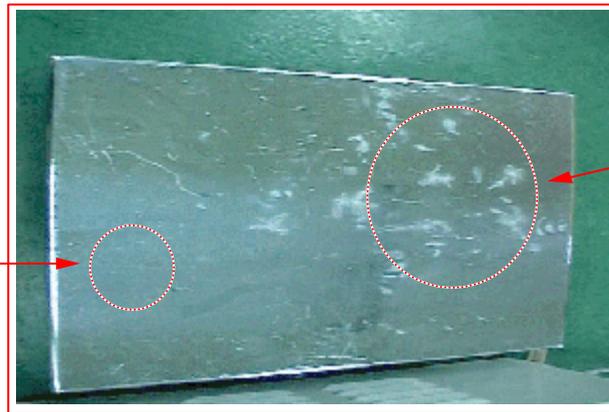
(erosion :)

(erosion :)

-
-

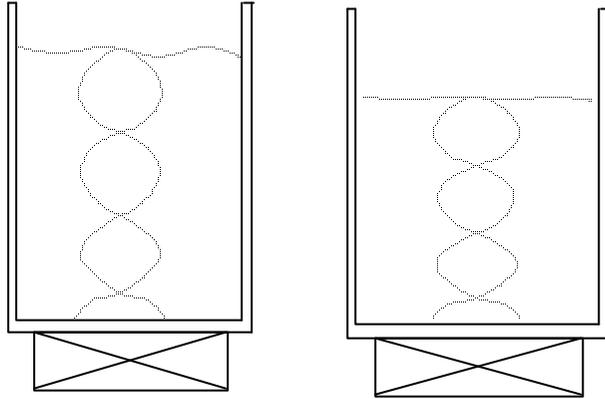
, Particle Short .

.....

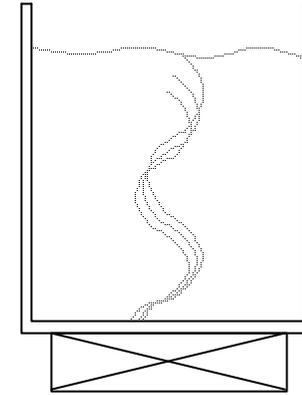


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4.4 Techniques



Auto Tuning



Sweep

1. Auto - tuning

-
-
-

2. Sweep

-

1 ~ 3Hz

가

- Impact

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4.5

가?

2

40~90KHz

Horn

40KHz

Horn

28KHz

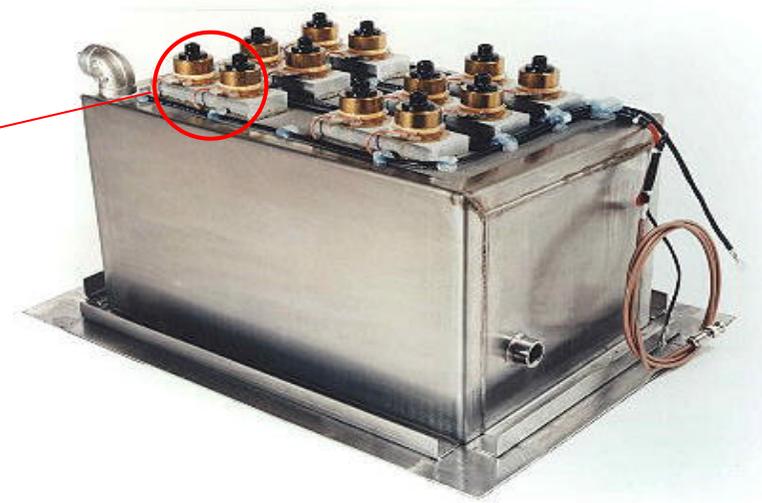
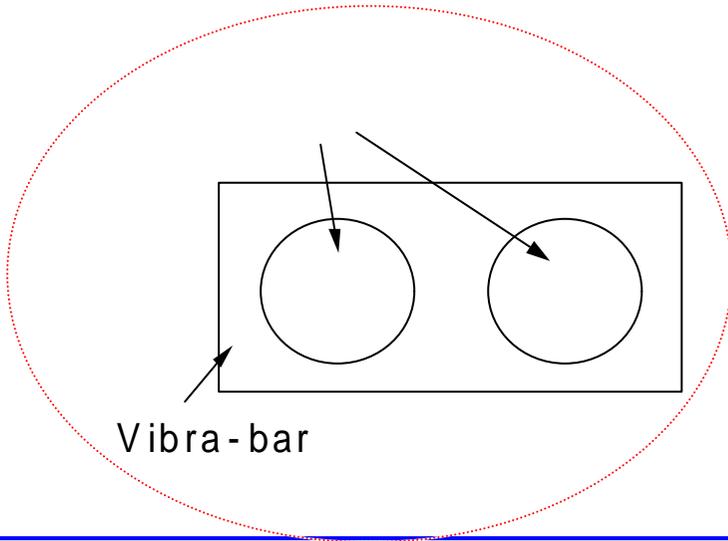
40KHz

가

가

가

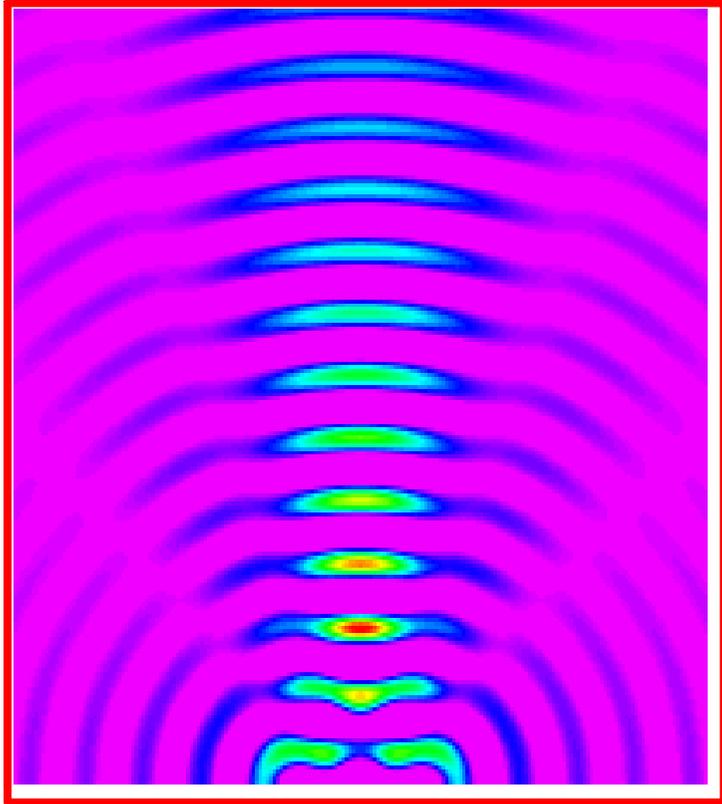
가



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4.6

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Overflow

Cavitation 가

Tray

가