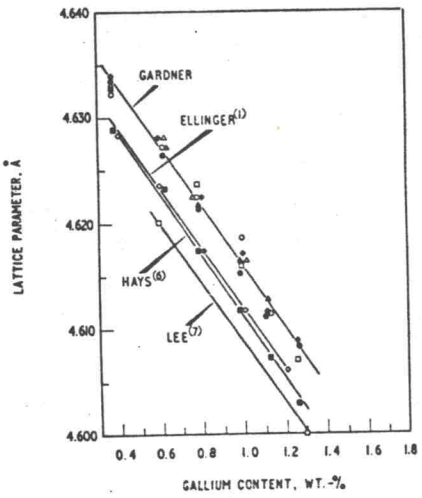
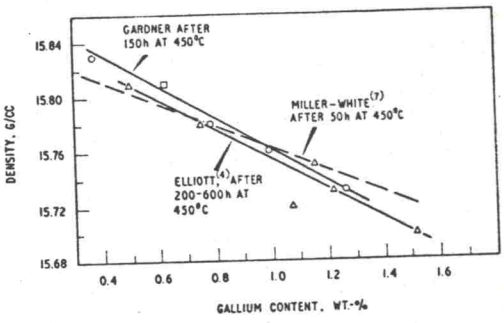
condition as illustrated in Table 6-II and Fig 6-D. In the homogenized alloys, the linear increase in hardness with gallium content was caused by solid solution strengthening.



6-B



6-C

Fig 6-B Effect of Gallium Content on Lattice Parameter

Fig 6-C Effect of Gallium Content on Density

Wt.-% Ga(1)	As Cast		After Anneal(2)		After Anneal(2) & Compression(3)	
	Density g/c.c.	DPH(4)	Density g/c.c.	DPH(4)	Density g/c.c.	% Alpha
0.37	16.12	53	15.83	32	18.11	62.0
0.62	15.95	42	15.81	36	17.08	35.0
0.78	15.83	48	15.78	38	16.40	17.0
0.99	15.79	46	15.76	40	15.92	4.5
1.12	-	49	-	44	15.75	-
1.26	15.71	49	15.73	46	15.78	1.0

(1) By analysis (3) 150,000 lb/in^2

(2) 150h at 450°C (4) 2 kg load

Table 6-II Effect of Gallium Content on Density, Hardness and Pressure Metastability