

# Theory of the Snoek Effect in Ternary B.C.C. Alloys : III Hydrostatic Relaxation

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## Theory of the Snoek Effect in Ternary B.C.C. Alloys

## III. Hydrostatic Relaxation\*

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Interstitial atoms in ternary b.c.c. alloys exhibit hydrostatic relaxation, if an applied stress has a dilatational stress component. The effect is absent in binary alloys. Hydrostatic relaxation, in contrast to orientation relaxation effect, involves long-range diffusion; in order to understand various aspects of the process, calculations are made for imaginary lattices.

Internal friction curves are computed for different solute concentrations in a real three-dimensional lattice. The height and the temperature of the peak are compared for hydrostatic relaxation and orientation relaxation.

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\* The 1582th report of the Research Institute for Iron, Steel and Other Metals. Published in the Philosophical Magazine, **24** (1971), 539.

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