Fig. 6 - Stress-strain curve calculated from Fig. 5

Figure 7

$$\frac{c_c^2}{c_p^2} = 3\,\frac{(1-r)}{(1+r)}$$

we obtain what may be regarded as an upper limit for Poisson's ratio of 0.42: the small stress value is 0.30 [10]. An expression for the fall in elastic stress is

$$2Y_s\,\frac{(1-r)}{(1-2r)}$$

where Y_s is the yield stress, assumed to be equal in tension and compression. Substitution of 16 Kbs for the elastic stress release, and the above values of Poisson's ratio gives yield strengths of 2.2 or 4.6 Kbs respectively; the results therefore suggest an increase in yield strength with stress above the static value of 1 Kb.

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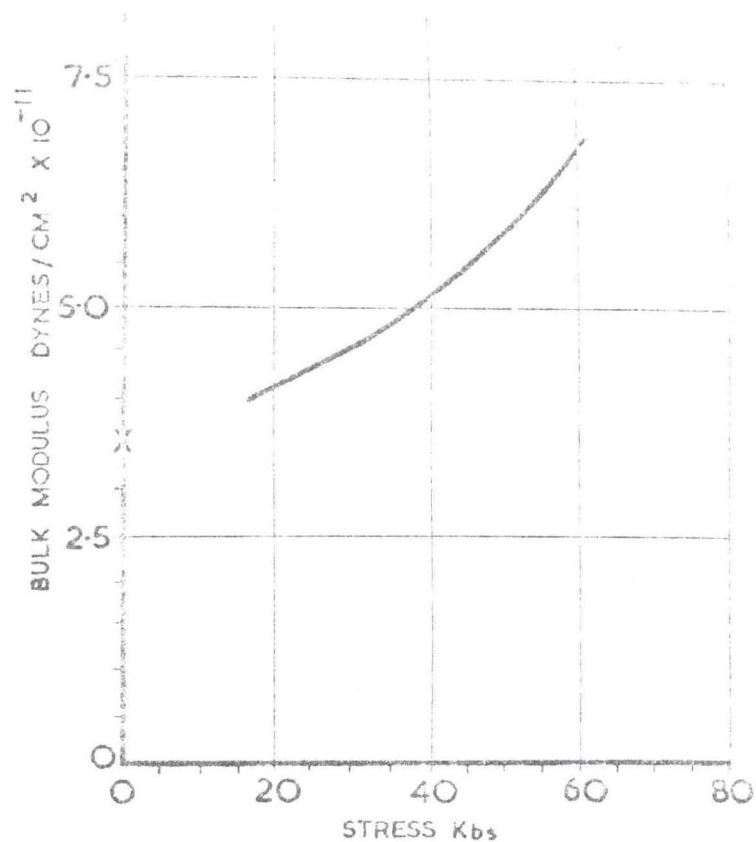
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