described above (however, as in the tests above the talc dehydration temperature, it again appears that the venting is relatively ineffective since also at these lower temperatures airdried specimens gave substantially the same strengths when vented as when sealed, although venting does seem to reduce the tendency to fail on a single shear plane). If we assume that the venting is ineffective and that there is still 1.5 percent pore volume under the test conditions (as measured at 4 kb and room temperature, Edmond and Paterson, 1971 a), 0.4 percent water would give rise to pore pressures of 0.1, 1.2, 2.4 and 3.5 kb at temperatures of 300, 400, 500 and 600° C, respectively, thus beginning to reduce significantly the effective pressure and hence the strength at temperatures around 400–500° C. However, these figures are very sensitive to the exact pore volume assumed and can be taken only to indicate qualitatively that the adsorbed water may be a significant factor in the observed behaviour of the talc.

(b) *Other Talc.* The stress-strain curves in Fig. 5 are from duplicate tests at 6 kb confining pressure and room temperature on cores from blocks C and E. These, together with the 6 kb curve in Fig. 1, indicate the wide range of strength that even fairly pure talc may have, depending on its origin and any preferred orientation of its crystals. The curves for block E also show how important the specimen orientation may be when there is a marked preferred orientation of grains. In this case, the grains in the stronger specimen ($E_{\perp}$) were preferentially oriented with their basal planes perpendicular to the axis of loading, while in the other specimen ($E_{\parallel}$) more of the grains had their basal planes oriented parallel to the axis of loading.

2. Pyrophyllite

The stress-strain curves are shown in Fig. 6. The change from falling to rising curves with increase in pressure again corresponded to the transition from brittle to ductile behaviour. However, the strength of the pyrophyllite was much higher and more pressure sensitive than talc (Table).

3. Silver Chloride

This was the weakest of the materials tested. The stress-strain curves (Fig. 7) showed a small but continual workhardening at all pressures and the specimens deformed uniformly except for some barrelling. There was a measurable increase in strength with confining pressure, which was quite appreciable relative to the actual stresses although in absolute terms the effect was very small (Table) and it may partly be associated with elimination of porosity during straining.

4. Sodium Chloride

At all pressures, the specimens were ductile and showed appreciable work hardening. However, within the scatter of results, no systematic effect of confining pressure on the stress-strain curve (Fig. 8) was detected; duplicate tests at 0.25, 0,5, 1, 2, 6 and 8 kb all gave curves falling within the scatter band shown.

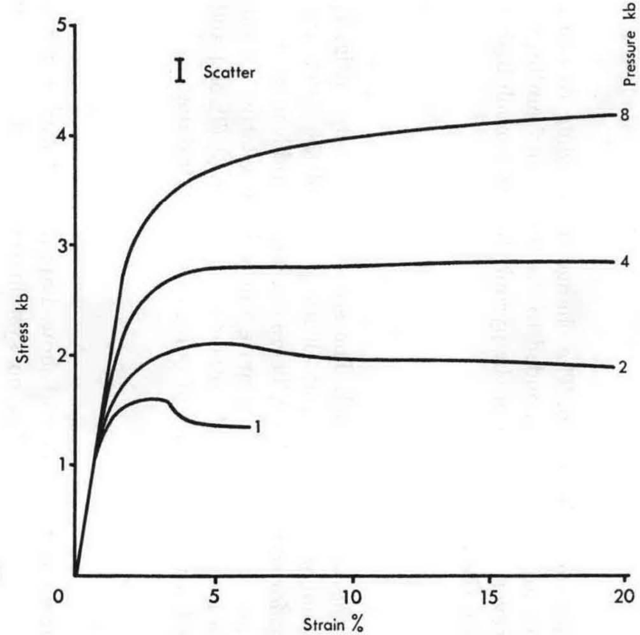

Fig. 6

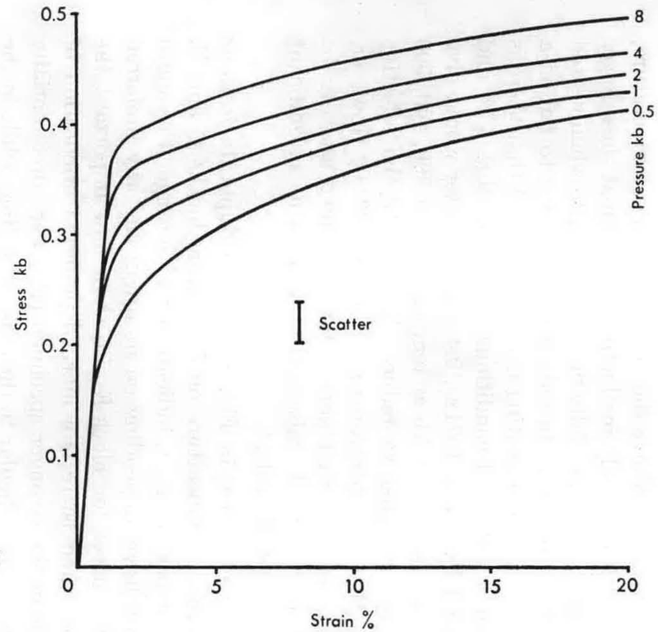

Fig. 7

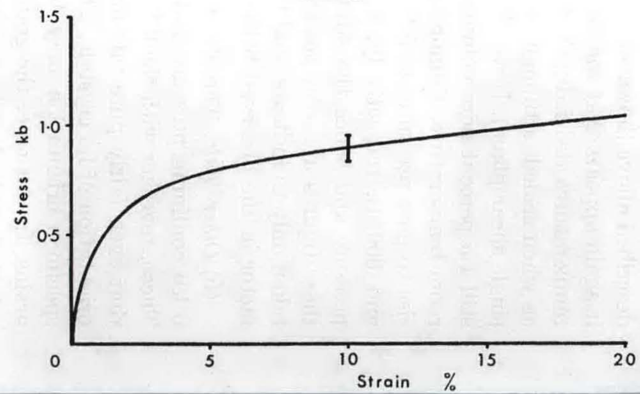

Fig. 8

Fig. 6. Stress-strain curves for pyrophyllite at room temperature and confining pressures shown

Fig. 7. Stress-strain curves for silver chloride at room temperature and confining pressures shown

Fig. 8. Stress-strain curves for sodium chloride at room temperature and confining pressures up to 8 kb (all curves fell within the scatter band indicated and no definite trend with pressure was established)