appropriate equation for calculating the maximum shear strength with the Bridgman device is,

$$\tau_{max} = \frac{3M}{2\pi r^3},$$

where M is the torsional moment and r is the radius of the specimen at its periphery. The equation applicable to the Abey-Stromberg apparatus is,

$$\tau_{max} = \frac{2M}{\pi r^3}.$$

The latter equation has been used to calculate the experimental results given in graphical form in Figures 2 and 3. The data have been corrected for the frictional and shearing losses dynamically expended on the indium bearing surfaces between the tapered pistons and cylinder bores

Insufficient data are available to apply a correction for the changing value of the specimen radius as a function of pressure. Compression calls for a shortening of the radius. The design of the apparatus and residual strain measurements, however, indicate that radial elongation occurs. The confining stress is not completely homogeneous. The changes that do occur tend to cancel; therefore, it has been assumed that the radius remains relatively constant to 70 kilobars.