$$\bar{\sigma} = \mu \dot{\bar{\epsilon}} \qquad (26)$$

Combining equations (25) and (26) gives

$$\nabla_1^4 \phi = 0 \qquad (27)$$

The solution of (27) for the compression of a circular layer of viscous fluid, by parallel plates moving with constant velocity, is presented in Reference (g). This reference indicates that the pressure is greatest at the center of the specimen; a result which is consistent with the results of this report. An equivalent solution could be obtained from (23), providing that the ratio of the effective stress and strain remains constant. This is the requirement for an elastic material, which is not of interest here. The prospect of obtaining an exact solution of (23) is improbable at this point, and a numerical solution would likewise be difficult by virtue of the mixed boundary conditions. An alternate approach, and the one to be used here, is to select an approximate displacement function ψ that will yield a prescribed displacement pattern which is consistent with the observed shape of the loaded wafer.