stress existing on the wafer-anvil interface is directly proportional to the magnitude of the normal stress acting on this same surface. (Coulomb law of friction). The coefficients of friction for various materials, under a pressure of 25 Kb, have been documented in Reference (m). The manner is which these experiments were conducted requires that the integrated effects of the normal and shear stresses be related as follows.

$$\int_0^{R_t} (\tau_{rz})_{z=hc} r\,dr = f \int_0^{R_t} (\sigma_z)_{z=hc} r\,dr \qquad (51)$$

where R_t is the external radius, evaluated at the top surface of the loaded wafer. If the shear stress τ_{rz} exceeds the shear strength τ_o of the wafer material, then equation (51) must be written in the form

$$\int_0^{R_a} (\tau_{rz})_{z=hc} r\,dr + \int_{R_a}^{R_t} \tau_o r\,dr = f \int_0^{R_t} (\sigma_z)_{z=hc} r\,dr \qquad (52)$$