NOMENCLATURE (Continued)

R_c . . . . . mid-meridian wafer radius in two-dimensional analysis, in

R_t . . . . . wafer radius at anvil-wafer interface, in

R_a . . . . . radius at which surface shear stress exceeds wafer material shear strength, in

s' . . . . . deviator stress tensor, psi

u,w . . . . . radial and axial displacements, in

$\dot{u},\dot{w}$ . . . . . radial and axial velocities, in/sec

γ_{rz} . . . . . shearing strain, in/in

τ_{rz} . . . . . shearing stress, psi

$\sigma_r, \sigma_\theta, \sigma_z$ . . radial, circumferential, and axial normal stress, psi

τ_o . . . . . wafer material shear strength, psi

σ_o . . . . . yield stress of wafer material, psi

$\bar{\sigma}$ . . . . . effective wafer material stress during plastic strain, psi

$\epsilon_r, \epsilon_\theta, \epsilon_z$ . . radial, circumferential, and axial normal strain, in/in

$\bar{\epsilon}$ . . . . . effective wafer material strain during plastic deformation, sec^{-1}

$\dot{\bar{\epsilon}}$ . . . . . effective wafer material strain rate during plastic deformation, sec^{-1}

$\epsilon_{\theta c}$ . . . . . circumferential strain recorded at outer periphery of containing ring, in/in

Δ . . . . . wafer centerline deflection, in

δ . . . . . deformation occurring at inside diameter of wafer containing ring, in

μ . . . . . coefficient of viscosity, $lb\text{-}sec/in^2$

λ . . . . . scalar factor appearing in flow law equation, lb-sec/in