

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_0	. . . . .	wafer material shear strength, psi
σ_0	. . . . .	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-sec/in ²
λ	. . . . .	scalar factor appearing in flow law equation, lb-sec/in