$$\sigma_r = \frac{\sigma_0}{3\sqrt{\alpha_1}} (2a_1 - 3a_2) \, Ln\left\{ \frac{2\alpha_1 r^2 + \beta_1 + 2\sqrt{\alpha_1}\left[\alpha_1 r^4 + \beta_1 r^2 + \gamma_1\right]^{1/2}}{2\alpha_1 R^2 + \beta_1 + 2\sqrt{\alpha_1}\left[\alpha_1 R^4 + \beta_1 R^2 + \gamma_1\right]^{1/2}} \right\}$$

$$+ \frac{\sigma_0 z \, (3a_2 - 4a_1)}{3(\beta_1^2 - 4\alpha_1 \gamma_1)} \left\{ \frac{(\beta_1 \beta_1' - 2\alpha_1 \gamma_1') r^2 - (\beta_1 \gamma_1' - 2\gamma_1 \beta_1')}{\left[\alpha_1 r^4 + \beta_1 r^2 + \gamma_1\right]^{1/2}} \right. \qquad (38)$$

$$\left. - \frac{(\beta_1 \beta_1' - 2\alpha_1 \gamma') R^2 - (\beta_1 \gamma_1' - 2\gamma_1 \beta_1')}{\left[\alpha_1 R^4 + \beta_1 R^2 + \gamma_1\right]^{1/2}} \right\} + \frac{b}{3} (2a_1 - 3a_2)(r^2 - R^2) - P_1$$

$$\tau_{rz} = \frac{2}{3} b (3a_2 - 4a_1) rz + \frac{2}{3} \sigma_0 (3a_2 - 4a_1) \left\{ \frac{rz}{\left[\alpha_1 r^4 + \beta_1 r^2 + \gamma_1\right]^{1/2}} \right\} \qquad (41)$$