$E = \frac{\sigma}{\epsilon}$	$G = \frac{\tau}{\gamma}$	$\epsilon_x = \frac{1}{E}(\sigma_x - \nu(\sigma_y - \sigma_z))$
$\epsilon = \frac{\Delta L}{L}$	$\gamma = \frac{\pi}{2} - \theta'$	$\epsilon_y = \frac{1}{E}(\sigma_y - \nu(\sigma_x - \sigma_z))$
$\sigma = \frac{F}{A}$	$\tau = \frac{V}{A}$	$\epsilon_z = \frac{1}{E}(\sigma_z - \nu(\sigma_x - \sigma_y))$
$\tau_{allow} = \frac{\tau_{fail}}{SF}$	$G = \frac{E}{2(1+\nu)}$	$\tau = \frac{Tc}{J}$
$\delta = \sum \frac{PL}{AE}$	$\nu = -\frac{\epsilon_{lateral}}{\epsilon_{longtudenal}}$	$J_{circle} = \frac{\pi}{2}c^4$
$\delta_T = \alpha L \Delta T$	$\sigma_{max} = \frac{Mc}{I}$	$J_{ring} = \frac{\pi}{2}(c_{out}^4 - c_{in}^4)$
$n = \frac{E_1}{E_2}$	$\sigma = -\frac{M\bar{y}}{I}$	$\phi = \sum \frac{TL}{JG}$
$\sigma = n\sigma'$	$\sigma = \frac{M_z\bar{y}}{I_z} + \frac{M_y\bar{z}}{I_y}$	$tan\alpha = \frac{I_z}{I_y}tan\theta$
$b_1' = nb_1$	$\tau = \frac{VQ}{It}$	$Q_{rictangle} = \frac{1}{2}\left(\frac{h^2}{4} - y^2\right)b$
$q = \frac{VQ}{I}$	$\tau_{rictangle\,max} = 1.5\frac{V}{A}$	$\tau_{rictangle} = \frac{6V}{bh^3}\left(\frac{h^2}{4} - y^2\right)$
$q = \tau \times t$	$q_T = \frac{Vt}{2I}(bd + \frac{d^2}{4} - y^2)$	$\sigma_{x'} = \frac{\sigma_x + \sigma_y}{2} + \frac{\sigma_x - \sigma_y}{2}cos2\theta + \tau_{xy}sin2\theta$
$tan2\theta_p = \frac{2\tau_{xy}}{\sigma_x - \sigma_y}$	$\sigma_{1,2} = \sigma_{avg} \pm \tau_{max}$	$\sigma_{y'} = \frac{\sigma_x + \sigma_y}{2} - \frac{\sigma_x - \sigma_y}{2}cos2\theta - \tau_{xy}sin2\theta$
$tan2\theta_s = -\frac{\sigma_x - \sigma_y}{2\tau_{xy}}$	$\sigma_{avg} = \frac{\sigma_x + \sigma_y}{2}$	$\tau_{x'y'} = -\frac{\sigma_x - \sigma_y}{2}sin2\theta + \tau_{xy}cos2\theta$
$R = \sqrt{\left(\frac{\sigma_x - \sigma_y}{2}\right)^2 + \tau_{xy}^2}$	$\tau_{max} = \sqrt{\left(\frac{\sigma_x - \sigma_y}{2}\right)^2 + \tau_{xy}^2}$	$R^2 = \left(\sigma_{x'} - \sigma_{avg}\right)^2 + \tau_{x'y'}$