Statics Equations

Bernoulli and Navier Stokes Equations | Control Volume Equations | Dimensional Analysis Equations | Equations | Flocculation Equations
Flow Measurement Equations | Open Channel Flow Equations | Pipe Flow Equations | Process Controller equations | Sedimentation Equations
Statics Equations | Using Confluence - Tips and Tricks

$$z = \frac{T_0}{\beta}\left[1 - \left(\frac{p}{p_0}\right)^{\frac{\beta R}{M_{gas} g}}\right]$$ elevation in constant temperature gradient

$$p_2 = p_1\, e^{\left[-\frac{M_{gas} g}{RT}(z_2 - z_1)\right]}$$ pressure in isothermal gas

$$p = p_0\left(1 - \frac{\beta z}{T_0}\right)^{\frac{M_{gas} g}{\beta R}}$$ pressure of gas constant temperature gradient

$$x_R = -\frac{\rho g \cos\theta}{p_c}\frac{I_{xyc}}{A}$$ statics line of action x

$$y_R = -\frac{\rho g}{p_c}\frac{I_{xc}}{A}\cos\theta$$ statics line of action y

$$F_R = p_c A$$ statics resultant magnitude

$$\Delta p = \frac{2\sigma}{R}$$ surface tension pressure drop

$$Pressure = \frac{\rho g h}{2}$$ water pressure (function of density, g, h)