

管道裝置的靜壓損失與揚程損失係數

$$k = \text{揚程損失係數} = \text{損失為動壓的倍數} = \frac{\text{靜壓損失}(pa)}{\text{動壓}(pa)}$$

$$\text{靜壓損失}(pa) = \rho(kg/m^3) \times g(m/sec^2) \times \Delta H(m)$$

$$\text{動壓}(pa) = \frac{1}{2} \times \rho \left(\frac{kg}{m^3} \right) \times V(m/sec)^2 = (pa)$$

$$k = \frac{\Delta P(pa)}{\frac{1}{2} \times \rho \times V^2(pa)} = \frac{\rho \times g \times \Delta H}{\frac{1}{2} \times \rho \times V^2} = \frac{2 \times g \times \Delta H}{V^2}$$

$$\Delta H = \text{損失揚程} = K \times \frac{V^2}{2 \times g}$$

$$\text{動揚程}(m) = \frac{V(m/sec)^2}{2 \times g(m/sec^2)} \quad (m)$$