$$m_s = \frac{x\, V_w\, \rho_s}{100\rho_s - x(\rho_s - 1) - x}$$

$$m_s = \frac{\rho_s\, V_p\, (\rho_p - 1)}{\rho_s - 1}$$

$$\rho_p = \frac{100\rho_s}{100\rho_s - x(\rho_s - 1)}$$

$$m_s = \frac{x\, V_p\, \rho_s}{100\rho_s - x(\rho_s - 1)}$$

$$V_w = \frac{V_p\{100\rho_s - x(\rho_s - 1) - x\}}{\{100\rho_s - x(\rho_s - 1)\}}$$

where m_s = mass of solids

x = pulp density

V_w = volume of water

ρ_s = SG of dry solids