

How can the partial derivative $\left(\frac{\partial P}{\partial g}\right)_T$ be rewritten to an expression with only measurable quantities?

$$\left(\frac{\partial P}{\partial g}\right)_T = \left(\frac{\partial g}{\partial P}\right)_T^{-1} = ??$$

$$dg = -sdT + vdP = \left(\frac{\partial g}{\partial T}\right)_P dT + \left(\frac{\partial g}{\partial P}\right)_T dP$$

$$\left(\frac{\partial g}{\partial P}\right)_T = v \rightarrow \left(\frac{\partial g}{\partial P}\right)_T^{-1} = \frac{1}{v}$$