

## Differential of enthalpy 2

The total differential of the enthalpy as a function of entropy and pressure,  $h(s,P)$  is given as:  $dh(s,P) = \left(\frac{\partial h}{\partial s}\right)_P ds + \left(\frac{\partial h}{\partial P}\right)_s dP$ . What are the partial derivatives equal to?

The total differential of the enthalpy as a function of entropy and pressure,  $h(s,P)$  is given as:  $dh(s,P) = \left(\frac{\partial h}{\partial s}\right)_P ds + \left(\frac{\partial h}{\partial P}\right)_s dP$ . Compared this to the second Gibbs equation  $dh = Tds + vdP$  results in  $\left(\frac{\partial h}{\partial s}\right)_P = T$  and  $\left(\frac{\partial h}{\partial P}\right)_s = v$ .