Thermodynamics

1st Law of Thermodynamics	$du = dq - dw$
TDS Equation 1	$Tds = du + pdv$
TDS Equation 2	$Tds = dh - vdp$
Enthalpy	$h = u + pv$

Ideal Gas

Ideal Gas Equation	$pv = RT$
Constant Volume	$c_v = (\partial u/\partial T)_v$
	$du = c_v(T)dT$
Constant Pressure	$c_p = (\partial h/\partial T)_p$
	$dh = c_p(T)dT$
Thermal coefficients	$c_p = c_v - R$
	$\gamma = k = \frac{c_p}{c_v}$
Specific Enthalpy of Gases	$h = u + pv = u(T) + RT = h(T)$
	$\Rightarrow$ does not depend on pressure