

$$dS = \frac{\delta Q_{ig}}{T} \quad \left. \vphantom{\frac{\delta Q_{ig}}{T}} \right\} dS = \frac{dU - \delta W}{T}$$

aukseta

- aldasparik $(T, p); (T, V); (p, V)$ sistema hidentafikatsion konnau, itäia (2 aukatsion-gradu)
- $(T, X); (T, Y); (Y, X)$ bette edreini inteneru konnau (2 aukatsion-gradu)

maierua hauruats jassera } → aldaspari independenten sata aukatsion amariuats jassera

- inteneru bauruats informatsia:
 - gabra-efinatsionak : - termika
 - mekaniaka (beten)
- koefitsiende eksperimentak :- (C_p, C_v, α, K_T)
 - demak et dora independentiak : $C_p - C_v = \frac{TV\alpha^2}{K_T}$

- (T, V)	$\delta Q = C_v dT + \frac{C_p - C_v}{V\alpha} dV$	\Rightarrow	$dS = \frac{\delta Q}{T} = \frac{C_v}{T} dT + \frac{C_p - C_v}{TV\alpha} dV$	$\Rightarrow S = S(T, V) \Rightarrow$	$\left\{ \begin{aligned} \left(\frac{\partial S}{\partial T} \right)_V &= \frac{C_v}{T} \\ \left(\frac{\partial S}{\partial V} \right)_T &= \frac{C_p - C_v}{TV\alpha} \end{aligned} \right.$
- (p, V)	$\delta Q = \frac{C_p}{V\alpha} dV + \frac{K_T}{\alpha} C_v dp$	\Rightarrow	$dS = \frac{\delta Q}{T} = \frac{C_p}{TV\alpha} dV + \frac{K_T}{\alpha} \frac{C_v}{T} dp$	$\Rightarrow S = S(C_v, p) \Rightarrow$	$\left\{ \begin{aligned} \left(\frac{\partial S}{\partial V} \right)_p &= \frac{C_p}{TV\alpha} \\ \left(\frac{\partial S}{\partial p} \right)_V &= \frac{K_T}{\alpha} \frac{C_v}{T} \end{aligned} \right.$
- (p, T)	$\delta Q = C_p dT + \frac{K_T}{\alpha} (C_v - C_p) dp$	\Rightarrow	$dS = \frac{\delta Q}{T} = \frac{C_p}{T} dT + \frac{K_T}{T\alpha} (C_v - C_p) dp$	$\Rightarrow S = S(T, p) \Rightarrow$	$\left\{ \begin{aligned} \left(\frac{\partial S}{\partial T} \right)_p &= \frac{C_p}{T} \\ \left(\frac{\partial S}{\partial p} \right)_T &= \frac{K_T}{\alpha} \frac{C_v - C_p}{T} \end{aligned} \right.$