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LEC-37.
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$$St_{min} = \frac{Sh_x}{Re_x Sc} = \frac{\frac{g \beta x^3}{\rho \alpha \nu}}{\frac{\rho U_{\infty} x}{\mu} \cdot \frac{\nu}{\alpha}}$$

$$= \frac{g \beta x^3}{\rho \alpha U_{\infty}}$$

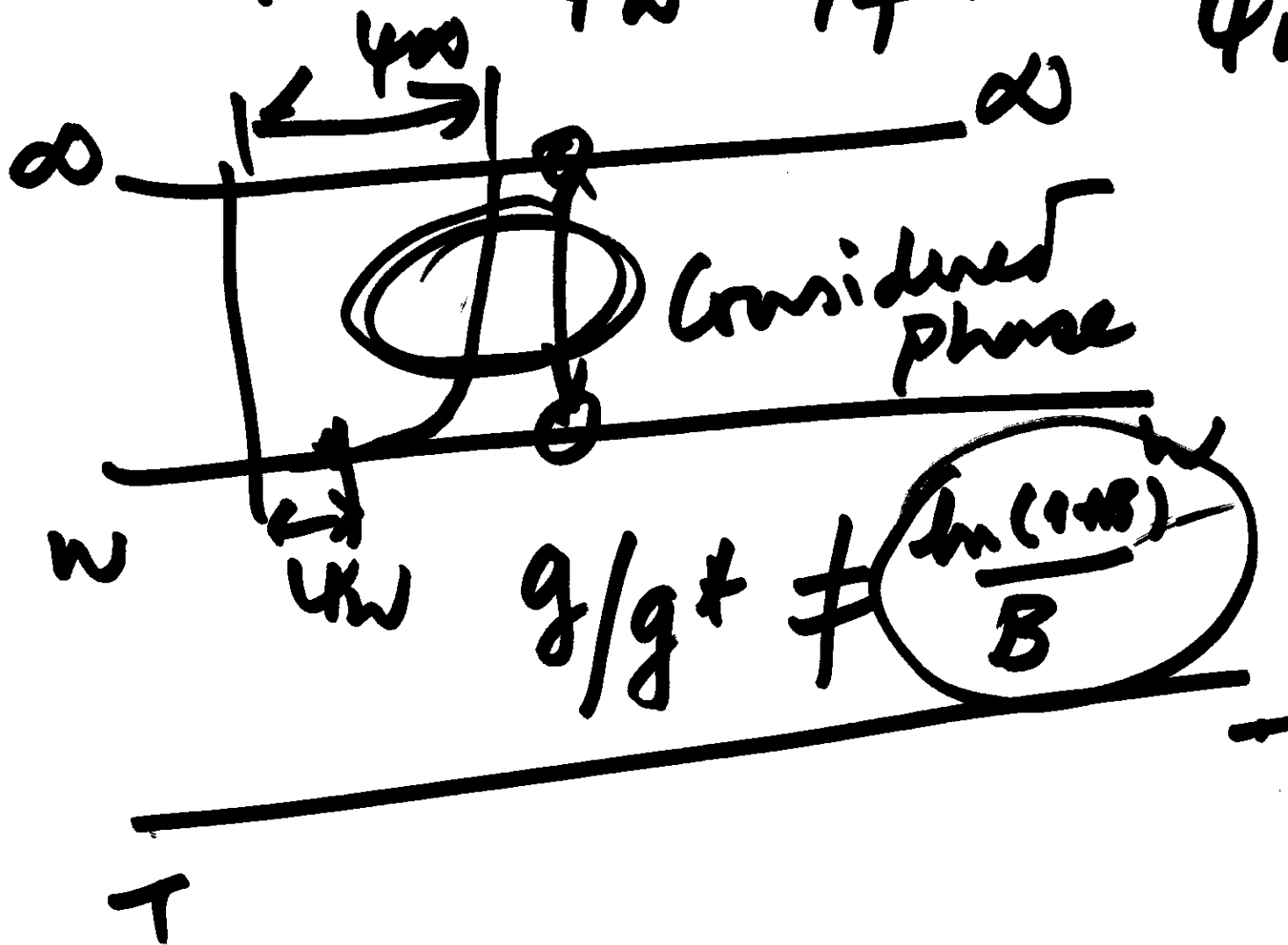
$$\begin{array}{l} \Gamma_{eff} = \Gamma_L + \Gamma_E \quad | \quad \Gamma_E \gg \Gamma_L \\ \mu_{eff} = \mu_L + \mu_E \quad | \quad \mu_E \gg \mu_L \end{array}$$

$B\psi$

$$= \frac{\psi_0 - \psi_N}{\psi_N - \psi_T}$$

Internal flows

$$\beta = \frac{\psi_0 - \psi_N}{\psi_N - \psi_T}$$



$$\frac{D_{ab}(T, P)}{D_{ab}(298, 1 \text{ atm})} = \left(\frac{T}{298}\right)^{\cancel{1.5}^{3/2}} \cdot \left(\frac{1}{P_{\text{atm}}}\right)$$