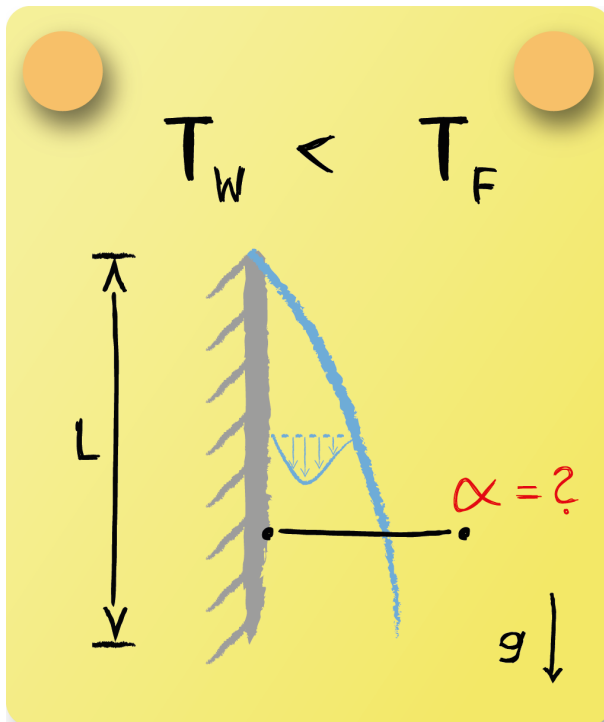




Heat Transfer Correlation: Task 14



The image describes a vertical plate with length L and a constant temperature T_W standing in non-moving water dampf (as ideal gas) of a temperature T_F .

1



HTC.17: $\overline{Nu}_L = C(Gr_L Pr)^{1/4}$ with $C = 0.535$ and $\beta = \frac{1}{T_\infty} = \frac{1}{T_F}$ (ideal gas)

2



Results: $Gr_L = 1.52 \cdot 10^8$ $\overline{Nu}_L = 59.4$ $\alpha = 2.98$

3



Important: Use temperatures in Kelvin!