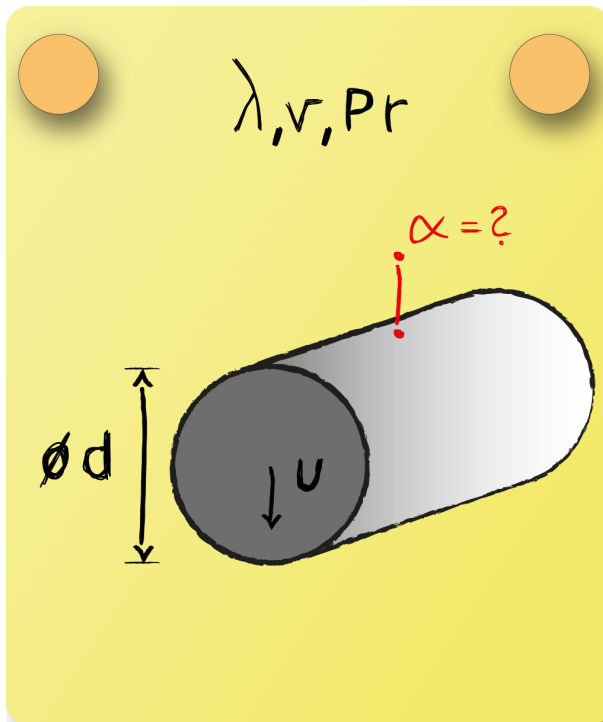




# Heat Transfer Correlation: Task 5



The image describes a cylinder of diameter  $d$  which falls with velocity  $u$  in a non-moving fluid.

1



HTC.7:  $\overline{Nu_d} = \frac{\overline{\alpha}d}{\lambda} = C \cdot Re_d^m Pr^{0.4}$  with  $Re_d = \frac{ud}{\nu}$

2



$Re_d = 5.1:66666.7 | 5.2:3333.3 | 5.3:29411.8 | 5.4:5.6 | 5.5:0.8$

3



$\overline{Nu_L} = 5.1:177.27 | 5.2:28.95 | 5.3:242.74 | 5.4:6.389 | 5.5:0.781$

4



$\overline{\alpha} = 5.1:23.04 | 5.2:156.31 | 5.3:1237.98 | 5.4:70.28 | 5.5:15.77$