

Correction

Questions de cours : (8 points) :

Exo1 : (12 points) :

1. Le flux de chaleur 4.965×10^6 W (0.5 points), la formule (0.25 points),
2. La température de sortie : $74.99 \approx 75$ °C (0.5 points), la formule (0.25 points),
3. Le tracé des températures (1 point),
4. $\Delta T_{LM} = 255.53$ °C (0.25, 0.25, 0.5, 0.5 points),
5. $h_i = Nu \cdot k/d$ (0.25 points), $Re = 6098.17$ (0.5 points), la formule (0.25 points), $m' = 2.98 \times 10^{-3}$ kg/s (0.5 points), $Pr = 0.697$ (0.5 points), $Nu = 21.24$ (0.5 points), $h_i = 21.26$ W/m²°C (0.5 points), $K_G = 21.26$ W/m²°C (0.5 points), $S = 0.2167$ m² (0.5 points), $L = 2.293 \approx 2.3$ m (0.5 points),
6. $K_G = 20.68$ W/m²°C (0.5 points), $S = 0.2237$ m² (0.5 points), $L = 2.375 \approx 2.4$ m (0.5 points), % $\Delta L = 4.34\%$ (0.5 points),
7. $K_G = 21.276$ W/m²°C (0.5 points), $S = 0.2174$ m² (0.5 points), $L = 2.31 \approx 2.3$ m (0.5 points),