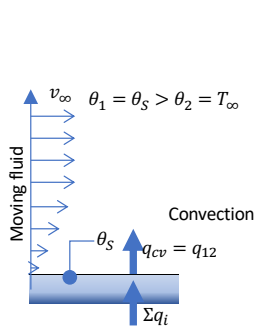


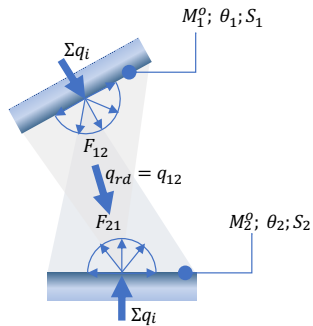
$$q_{12} = \frac{\kappa}{w} S (\theta_1 - \theta_2)$$

(a)



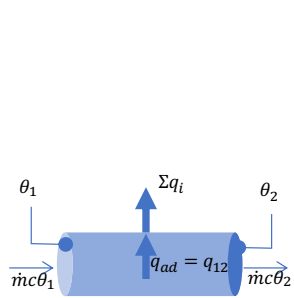
$$q_{12} = hS(\theta_1 - \theta_2)$$

(b)



$$\begin{aligned} q_{12} &= \sigma 4T^3 F_{12} S_1 (\theta_1 - \theta_2) \\ &= \sigma 4T^3 F_{21} S_2 (\theta_1 - \theta_2) \end{aligned}$$

(c)



$$q_{12} = \dot{m}c(\theta_1 - \theta_2)$$

(d)