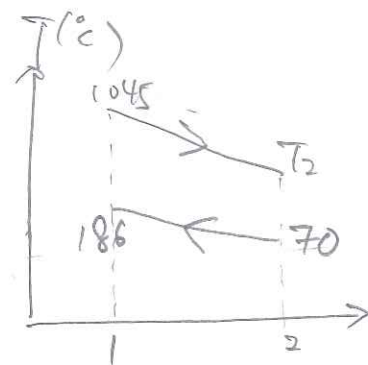


$$Q_{\text{gas}} = M_g \cdot C_g \cdot (T_1 - T_2)$$

$$Q_{\text{water}} = M_w \cdot C_w \cdot (t_2 - t_1)$$

Counter flow



$$M_g = 2409 \text{ kg/hr}$$

$$C_g = 1.133 \text{ kJ/kg}\cdot\text{K}$$

$$M_w = 2056 \text{ kg/hr}$$

$$C_w = 4.31 \text{ kJ/kg}\cdot\text{K}$$

Conservation of Energy:

$$Q_{\text{gas}} = Q_{\text{water}}$$

$$(2409)(1.133)(1045 - T_2) = (2056)(4.31)(186 - 70)$$

$$T_2 = \underline{668^\circ\text{C}}$$

~~✗~~