



Nomenclature

$A_i \rightarrow$ Air volumes

$W_i \rightarrow$ Water volumes

$\theta_i \rightarrow$ Average water temp. in W_i

$T_i =$ Average water temp. in A_i

$T_e =$ Ext. Temp.

$T_r =$ Room Temp.

Cons. of energy applied to:

W_1 : $\dot{m}_w C_{pw} (\theta_1 - \theta_0) = h_{wa} (T_1 - \theta_1)$

A_1 : $\dot{m}_a C_{pa} (T_1 - T_0) = h_{wa} (\theta_1 - T_1) + h_e (T_e - T_1) + h_r (T_r - T_1)$

W_2 : $\dot{m}_w C_{pw} (\theta_2 - \theta_1) = Q_w$

A_2 : $\dot{m}_a C_{pa} (T_2 - T_1) = Q_a$

Notes

- ① Can repeat above up to $i=5$
- ② When the wall in the interior is removed, we have to change h_r . (increase it).
- ③