1. $\frac{d(m\_{R}cp\_{R}T\_{R}+m\_{ins}cp\_{ins}T\_{R})}{dt}=(UA)\_{jacket}\left[T\_{f}-T\_{R}\right]+(UA)\_{cov}\left[T\_{a}-T\_{R}\right]+\frac{d(m\_{dos}cp\_{dos}T\_{dos})}{dt}+\frac{dq\_{R}}{dt}$
2. $\frac{d(m\_{R}cp\_{R}T\_{R})}{dt}=\overbar{cp}\_{R}\left[m\_{R}\left(\frac{dT\_{R}}{dt}\right)+T\_{R}(\frac{dm\_{R}}{dt})\right]$
3. $(UA)\_{cov}(T\_{a} - T\_{R})$
4. $(UA)\_{cov}\left(T\_{a} - T\_{R}\right)=(UA)\_{cov}$
5. $d(m\_{dos}cp\_{dos}T\_{dos})/dt = (dm\_{dos}/dt)cp\_{dos}T\_{dos}T\_{dos}$
6. $(∆H\_{2}= ∆H\_{3})$
7. $(∆H\_{4}= ∆H\_{5}= ∆H\_{6})$
8. $(Q\_{mod}=\frac{dq\_{R}^{cal}}{dt}$)