

The Thermo-Chem model: Soon to be updated.

Assumptions:

Thermo-Chem model equations:

General state equations: (Applies to any substance)

$$m = \rho V; \rho = \frac{1}{v}; ke = \frac{V^2}{2000}; pe = \frac{gz}{1000}; e \equiv u + ke + pe; j \equiv h + ke + pe; h \equiv u + pv \quad (4)$$

$$E = me; S = ms; KE = m(ke); PE = m(pe) \quad (5)$$

$$\dot{m} = \rho AV; \dot{V} = AV; \dot{E} = \dot{m}e; \dot{S} = \dot{m}s \quad (6)$$

Reference: Chapter 13 and 14 cover thermo-chem models.