

## C.02.01.A1 – Modelo de Mistura Reativa Ideal

### Aplicação em FTAF – Finite Time Air-Fuel Otto Engine Model

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<https://github.com/CNThermSci/AplThermSci>

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## Padrões nos Cálculos:

$$\tilde{c}_p(T) = a_1 + a_2 T + a_3 T^2 + a_4 T^3, \quad T_{min} \leq T \leq T_{max} \quad \rightarrow$$

$$\tilde{c}_v(T) = b_1 + b_2 T + b_3 T^2 + b_4 T^3, \quad T_{min} \leq T \leq T_{max} \quad \rightarrow$$

$$\tilde{u}(T) = \left( b_1 T + \frac{b_2 T^2}{2} + \frac{b_3 T^3}{3} + \frac{b_4 T^4}{4} \right)_{T_{ref}}^T, \quad T_{min} \leq T \leq T_{max} \quad \rightarrow$$

$$\tilde{h}(T) = \left( a_1 T + \frac{a_2 T^2}{2} + \frac{a_3 T^3}{3} + \frac{a_4 T^4}{4} \right)_{T_{ref}}^T + \bar{R} T_{ref}, \quad T_{min} \leq T \leq T_{max} \quad \rightarrow$$

$$\tilde{s}^\circ(T) = \left( a_1 \ln(T) + a_2 T + \frac{a_3 T^2}{2} + \frac{a_4 T^3}{3} \right)_{T_{ref}}^T + \bar{s}_{ref}^\circ, \quad T_{min} \leq T \leq T_{max} \quad \therefore$$

- Verificação de limites;
- Coef./func. próprios; e
- Produtos matriciais.

