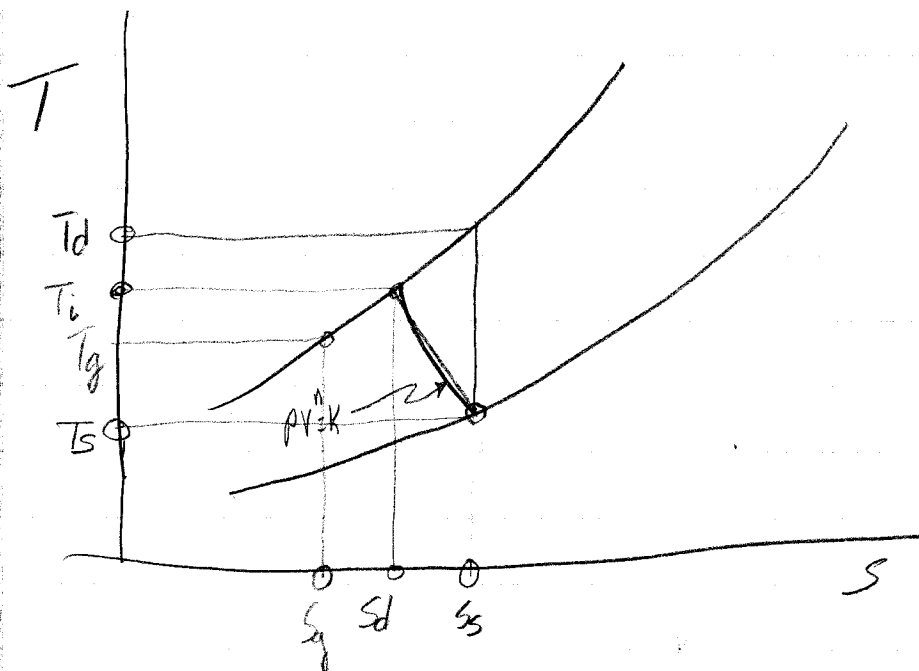
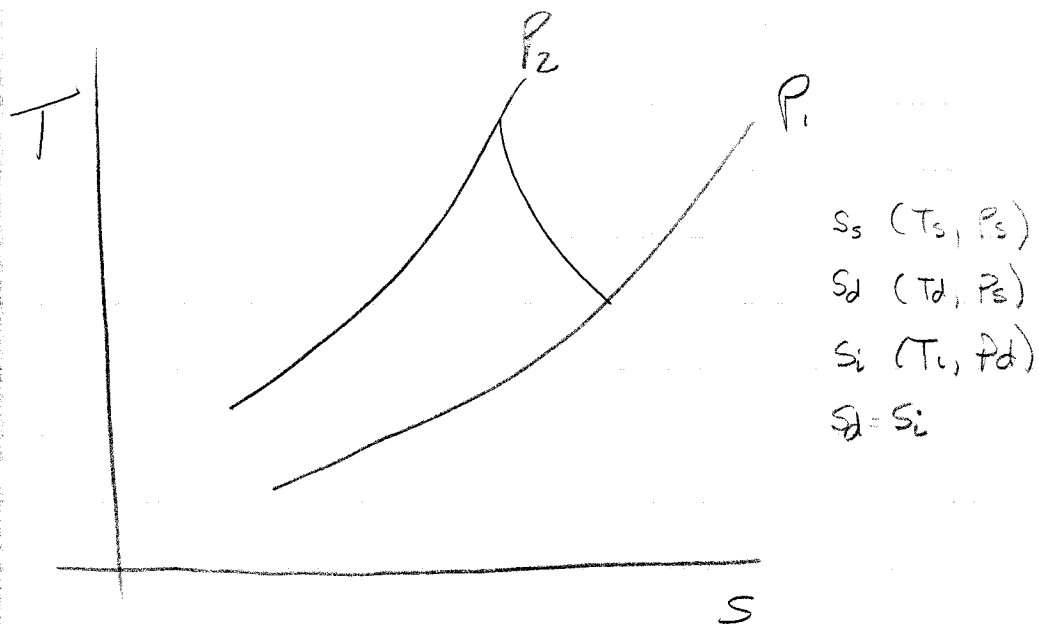




Input $T_{avg} = (T_s + T_d)/2$, P_d

Compute density & entropy then compute new T_i

Use new T_i & compute density & entropy

Continue Calcs until $S_i \approx S_d$ based on new T_i

$$S_1 = S_s - S_d$$

$$T_1 = \text{~~calc~~ } T_d$$

$$T_{calc} = (T_s + T_d) / 2 \quad \text{compute density \& entropy} \leftarrow$$

$$S_2 = S_s - S_{calc}$$

$$\text{slope} = (S_2 - S_1) / (T_{calc} - T_1)$$

$$C = S_2 - \text{slope} / T_{calc}$$

$$T_1 = T_{calc}$$

$$S_1 = S_2$$

$$T_{calc} = -C / \text{slope}$$

Goto

$$\text{Entr} = \text{Entrd}$$

$$T_1 = T_d$$

$$\text{Entr}_2 = \text{Entr}_s - \text{Entr}$$

$$T = (T_s + T_d)/2$$

$$\text{Entr}_1 = \text{Entr}_s - \text{Entrd}$$

$$S_2 = S_s - S_d$$

$$\text{slope} = (\text{Entr}_2 - \text{Entr}_1) / (T - T_1)$$

$$\text{slope} = \{(S_s - S_d) - (S_s - S_d)\} / (T - T_1)$$

$$C = (S_s - S_d) - \text{slope} * T$$

$$S_s = S_r$$

$$S_d = S_r$$

$$S_1 = S_s - S_d$$

$$T_1 = T$$

$$T = (T_s + T_d)/2$$

$$S_2 = S_s - S_d$$

$$\text{slope} = S_2 - S_1 / (T - T_1)$$

$$T_i = T_d$$

$$T_{calc} (\text{Initial } T_i \text{ guess}) = (T_s + T_d) / 2 \quad (T_{avg})$$

Compute Density & Entropy @ T_{avg} .

If $S_s - S_{calc} \sim 0$ the $T_{avg} = T_i$ else continue

$$S_2 = S_s - S_{calc}$$

$$\text{slope} = \frac{(S_s - S_{calc}) - (S_s - S_d)}{(T_{calc} - T_i)}$$

$$C = (S_s - S_{calc}) - \text{slope} (T_{calc})$$

$$T_i = T$$

$$\text{At } T_i \quad S_i = S_s - S_{calc}$$

$$T = -C / \text{slope}$$