

~~Ex 2~~ Throttling Calorimeter

Pressure MN/m^2	Specific Enthalpy (kJ/kg)	
	h_f	h_{fg}
0.70	697.1	2064.9
0.75	709.3	2055.5
Diff: 0.05	12.2	-9.4
$F_2: 0.03$	$\frac{0.03}{0.05} \times 12.2 = 7.32$	$\frac{0.03}{0.05} \times (-9.4) = -5.64$
Add: 0.73	704.42	2064.9

$$h_2 = h_{f1} + x_2 h_{fg} = 704.42 + x_2 (2064.9)$$

$$P_1 = 5.3 \text{ kN/m}^2$$

$$h_f = \left(\frac{0.3}{0.5} \times (131.8 - 1300) \right) + 130 = 134.68$$

$$h_{fg} = \left(\frac{0.3}{0.5} \times (2423.8 - 2428.2) \right) + 2428.2$$

$$= 2425.56$$

$$h_1 = 134.68 + x (2425.56) = 2237.64$$

↓

$$= h_2$$

$$h_1 = h_2 = 2237.64$$

$$x_2 = \frac{1533.22}{2064.9} = \frac{h_2 - h_{f1}}{h_{fg}} = 0.75$$

$$x_2 = 0.75$$