EES Ver. 10.835: #1867: For use by students and faculty, College of Engineering, University of Oklahoma, Stillwater, OK

{Question 4.007}

P_1=10[bar] T_1=20[C] P 2=3.0[bar]

h_1=enthalpy(Ammonia, P=P_1*convert(bar, kPa), T=T_1) h_2=h_1

T_2=temperature(Ammonia, P=P_2*convert(bar, kPa), h=h_2) {Temperature: T_2 = -9.231C} x_2=quality(Ammonia, P=P_2*convert(bar, kPa), h=h_2) {Quality: x_2 = 10.54 %}

SOLUTION

Unit Settings: SI C kPa kJ mass deg

 $h_1 = 293.9 \text{ [kJ/kg]}$ $h_2 = 293.9 \text{ [kJ/kg]}$ $P_1 = 10 \text{ [bar]}$ $P_2 = 3 \text{ [bar]}$ $T_1 = 20 \text{ [C]}$ $T_2 = -9.231 \text{ [C]}$

No unit problems were detected.

EES suggested units (shown in purple) for h 2.