Guide to Using the Two Phase Property Tables

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1. Look up the properties you have available (two properties identify the state) on the saturated table. In most cases the saturated table is arranged with p as an independent variable and as T as an independent variable, i.e., there are often times two saturated tables for a pure substance.

2. Determine if the state lies in the compressed liquid region, the mixture region, or the superheated region.

3. Go to the appropriate table to determine the dependent properties. Hint: If quality, x, is one of the independent variables, then it is obviously a mixture.

4. Remember $x = (a - a_v)/(a_g - a_v)$, $a = a_v + x(a_g - a_v)$ where a is a thermodynamic property other than T or p.

Complete the following table for water as the pure substance.

	T	p	x	v	U	H	s	phase
1	100 C	50 kPa						
2	100 C	101 kPa	0.5					
3	120 C	100 kPa						
4		250 kPa	0.7					
5		200 kPa		0.75 m^3/kg				
6	200 C				2000 kJ/kg			
7	50 C	100 kPa						
8	200 C			2.17 m^3/kg				
9		50 kPa		0.001 m^3/kg				
10	450 C						6.14 kJ/kgK	

See http://www.steamtablesonline.com/steam97web.aspx or use your calculator for computed values.