

Report Date: Thursday, October 25, 2007
 Project Information: PROCESS EXAMPLE NO.2
 Altitude: 0 (Feet)
 Barometric Pressure: 29.921 (in.Hg)
 Atmospheric Pressure: 14.696 (psia)

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1. OA

STATE POINT DATA

Air Flow (Standard) (cfm)	Dry Bulb (°F)	Wet Bulb (°F)	Relative Humidity (%)	Humidity Ratio (lb/lb)	Specific Volume (cu.ft./lb)	Enthalpy (Btu/lb)	Dew Point (°F)	Density (lb/cu.ft.)	Vapor Pressure (in.Hg)	Absolute Humidity (gr/cu.ft.)
7,000	90.000	80.000	65.1	0.01996	14.296	43.577	76.690	0.0699	0.9263	9.774

2. RA

STATE POINT DATA

Air Flow (Standard) (cfm)	Dry Bulb (°F)	Wet Bulb (°F)	Relative Humidity (%)	Humidity Ratio (lb/lb)	Specific Volume (cu.ft./lb)	Enthalpy (Btu/lb)	Dew Point (°F)	Density (lb/cu.ft.)	Vapor Pressure (in.Hg)	Absolute Humidity (gr/cu.ft.)
8,000	75.000	63.940	55.0	0.01022	13.695	29.181	57.750	0.0729	0.4815	5.222

Process: Connect States

Start Point Name	Total Energy (Btu/hr)	Sensible Energy (Btu/hr)	Latent Energy (Btu/hr)	Moisture Difference (lb/hr)	Sensible Heat Ratio	Enthalpy/ Humidity Ratio (Btu/lb / lb/lb)
SC	718,814	247,593	471,221	433.3	0.344	N/A

3. MIX1

STATE POINT DATA

Air Flow (Standard) (cfm)	Dry Bulb (°F)	Wet Bulb (°F)	Relative Humidity (%)	Humidity Ratio (lb/lb)	Specific Volume (cu.ft./lb)	Enthalpy (Btu/lb)	Dew Point (°F)	Density (lb/cu.ft.)	Vapor Pressure (in.Hg)	Absolute Humidity (gr/cu.ft.)
15,000	82.000	72.162	62.7	0.01476	13.974	35.883	68.010	0.0715	0.6909	7.396

Process: Air Mixing

State Point No. 1 Name	Air Flow Standard (cfm)	Dry Bulb (°F)	Humidity Ratio (lb/lb)	State Point No. 2 Name	Air Flow Standard (cfm)	Dry Bulb (°F)	Humidity Ratio (lb/lb)
OA	7,000	90.0	0.01996	RA	8,000	75.0	0.01022

4. CC

STATE POINT DATA

Air Flow (Standard) (cfm)	Dry Bulb (°F)	Wet Bulb (°F)	Relative Humidity (%)	Humidity Ratio (lb/lb)	Specific Volume (cu.ft./lb)	Enthalpy (Btu/lb)	Dew Point (°F)	Density (lb/cu.ft.)	Vapor Pressure (in.Hg)	Absolute Humidity (gr/cu.ft.)
15,000	50.000	49.699	98.0	0.00751	12.999	20.130	49.450	0.0768	0.3553	4.042

Process: Cooling Coil

Start Point Name	Total Cooling (tons)	Total Energy (Btu/hr)	Sensible Energy (Btu/hr)	Latent Energy (Btu/hr)	Dehumidification (lb/hr)	Sensible Heat Ratio	Enthalpy/ Humidity Ratio (Btu/lb / lb/lb)
MIX1	-88.6	-1,063,331	-525,598	-537,733	-490.0	0.494	2,170

5. DD

STATE POINT DATA

Air Flow (Standard) (cfm)	Dry Bulb (°F)	Wet Bulb (°F)	Relative Humidity (%)	Humidity Ratio (lb/lb)	Specific Volume (cu.ft./lb)	Enthalpy (Btu/lb)	Dew Point (°F)	Density (lb/cu.ft.)	Vapor Pressure (in.Hg)	Absolute Humidity (gr/cu.ft.)
9,000	85.000	53.000	5.2	0.00133	13.755	21.859	10.180	0.0726	0.0635	0.676

Process: Desiccant Dehumidification

Start Point Name	Total Energy (Btu/hr)	Sensible Energy (Btu/hr)	Latent Energy (Btu/hr)	Dehumidification (lb/hr)	Sensible Heat Ratio	Enthalpy/ Humidity Ratio (Btu/lb / lb/lb)	Sensible Energy Per Dehumidification (Btu/lb)
CC	116,713	568,392	-451,679	-417.0	4.870	-280	-1,363.1

6. Bypass

STATE POINT DATA

Air Flow (Standard) (cfm)	Dry Bulb (°F)	Wet Bulb (°F)	Relative Humidity (%)	Humidity Ratio (lb/lb)	Specific Volume (cu.ft./lb)	Enthalpy (Btu/lb)	Dew Point (°F)	Density (lb/cu.ft.)	Vapor Pressure (in.Hg)	Absolute Humidity (gr/cu.ft.)
6,000	50.000	49.699	98.0	0.00751	12.999	20.130	49.450	0.0768	0.3553	4.042

7. MIX2

Air Flow (Standard) (cfm)	Dry Bulb (°F)	Wet Bulb (°F)	Relative Humidity (%)	Humidity Ratio (lb/lb)	Specific Volume (cu.ft./lb)	Enthalpy (Btu/lb)	Dew Point (°F)	Density (lb/cu.ft.)	Vapor Pressure (in.Hg)	Absolute Humidity (gr/cu.ft.)
15,000	71.000	51.732	23.6	0.00380	13.455	21.190	32.060	0.0742	0.1809	1.976

Process: Air Mixing

State Point No. 1 Name	Air Flow Standard (cfm)	Dry Bulb (°F)	Humidity Ratio (lb/lb)	State Point No. 2 Name	Air Flow Standard (cfm)	Dry Bulb (°F)	Humidity Ratio (lb/lb)
Bypass	6,000	50.0	0.00751	DD	9,000	85.0	0.00133

8. SC

STATE POINT DATA

Air Flow (Standard) (cfm)	Dry Bulb (°F)	Wet Bulb (°F)	Relative Humidity (%)	Humidity Ratio (lb/lb)	Specific Volume (cu.ft./lb)	Enthalpy (Btu/lb)	Dew Point (°F)	Density (lb/cu.ft.)	Vapor Pressure (in.Hg)	Absolute Humidity (gr/cu.ft.)
15,000	60.000	46.807	34.7	0.00380	13.176	18.532	32.060	0.0758	0.1809	2.018

Process: Sensible Cooling

Start Point Name	Total Cooling (tons)	Total Energy (Btu/hr)	Sensible Energy (Btu/hr)	Latent Energy (Btu/hr)	Moisture Difference (lb/hr)	Sensible Heat Ratio	Enthalpy/ Humidity Ratio (Btu/lb / lb/lb)
MIX2	-15.0	-179,453	-179,453	0	0.0	1.000	N/A