MEP 451 Refrigeration and Air Conditioning

Space Air Conditioning

Feb. 2011

Dutline Auterials covered in MEP 361 (Thermo. II) Auterials covered in MEP 361 (Thermo. II) Autoriation of the definitions Use of Psychrometric chart Autoriation of atmospheric pressure with altitude Autoriation o

Materials covered in Thermo II

• Definition of dry air, moist air, and ideal gas mixture of dry air and water vapor

• Definition of dry bulb temperature (t) , wet bulb temperature (t*), dew point temperature (t_d), humidity ratio (W), enthalpy (h), relative humidity, (ϕ), Specific volume (v)

Adiabatic saturation

• Thermodynamic analysis of processes such as sensible heating, sensible cooling, cooling and dehumidification, humidification, adiabatic mixing, etc

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Idea of cooling towers

Humidity Parameters:

- Dry bulb temperature t_{db} or t
- Wet bulb temperature t_{wb} or t^*
- Humidity Ratio W
- Relative Humidity ϕ
- Degree of Saturation $\mu = W/W_s$
- Specific Enthalpy,h and Volume,v
- Dew Point temperature t_d.







	Variation	of pressure	with eleva	ation
P = a + bH				
	H<=4000 ft		H>4000 ft	
	Or 1220 m		Or 1220	
	IP	SI	IP	SI
а	29.92	101.325	29.42	99.436
b	-0.001025	-0.01153	-0.0009	-0.010
	in Hg	kPa	in Hg	kPa
	1	1	1	1









































