Kentucky College Air Handling Unit

Lexington, Kentucky

Project Summary

High-pressure adiabatic system that provides humidification for 4 air handlers during humidification season, as well as evaporative cooling for the exhaust air for 4 heat recovery units during cooling season. Redundant pumps provided for critical humidification zones.

Mee Industries' scope of work included the supply of reverse osmosis system, fog pump skid, staging valves, nozzle manifolds, and mist eliminators. Mee also supervised the installation and startup.

Humidification System Design

- Entering air conditions: 86db/50wb
- Leaving air conditions: 55db/50wb
- MeeFog nozzle count: 224
- Humidification capacity: 3584 lbs/hr
- Total Horsepower: 1 x 7.5 HP

Exhaust Cooling System Design

- Entering air conditions: 78db/66wb
- Leaving air conditions: 66db/66wb
- MeeFog nozzle count: 281
- Cooling capacity: 12° F
- Total Horsepower: 1 x 7.5 hp + 1 x 5 hp

MeeFog Systems

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Humidification Equipment Schedule

AHU TAG	Capacity						PUMP MODEL	NO. OF NOZZLES	NO. OF ZONE VALVES
	CFM	GROSS (#/HR)	EVAP EFF.(%)	NET (#/HR)	EAT db/wb	LAT db/wb			
AHU-5	25,000	880	84%	739	85.8/50.2	55/50.2	(2) MFP 3600	55	4
AHU-6	25,000	880	84%	739	85.8/50.2	55/50.2		55	4
AHU-7	25,000	864	84%	726	85.8/50.2	55/50.2		54	4
AHU-8	25,000	960	84%	806	85.8/50.2	55/50.2		60	4
Totals (Humidification)		**3,584**		**3,011**				**224**	
HRU-1	62,000	1,296	57%	739	78/66	66/66	(1) MFP 3600 (1) MFP 2500	81	5
HRU-2	62,000	1,296	57%	739	78/66	66/66		81	5
HRU-3	62,000	1,296	57%	739	78/66	66/66		81	5
HRU-4	32,000	608	64%	389	78/66	66/66		38	4
Totals (Evaporative cooling)		**4,496**		**2,605**				**281**	
Grand Totals		**8,080**		**5,616**				**505**	