

Air-Cooled Heat Exchanger Specification Sheet

1	Client:										
2	Location:										
3	Service of Unit: Cooling Water										
4	Item No.: 171260										
5	Date: 3/8/2018										
6	Size & Type	42	/	14	ft	Type	Forced	Number of Bays	1		
7	Surf/Unit-Finned Tube	71,101			ft ²	Bare area/bundle	1,653	ft ²	Ratio (Total/	21.51	
8	Heat exchanged	6626218			BTU/h	MTD, Eff	21.04		°F		
9	Transfer rate	4.43	Bare, Service		95.27	Clean	120.52		BTU/(h-ft ² -F)		
10	PERFORMANCE DATA - TUBE SIDE										
11	Fluid Circulated	Water				In/Out					
12	Total Fluid Entering	lb/h	367,284			Density, Liq	lb/ft ³	61.948	/	62.168	
13		GPM	740			Density, Vap	lb/ft ³	/			
14	Temperature	°F	105	/	87	Specific Heat, Liq	BTU/(lb-F)	0.9964	/	0.9964	
15	Liquid	lb/h	367,284	/	367,284	Specific Heat, Vap	BTU/(lb-F)	/			
16	Vapor	lb/h	0	/	0	Therm. Cond, Liq	BTU/(ft-h-F)	0.365	/	0.356	
17	Noncondensable	lb/h	0	/	0	Therm. Cond, Vap	BTU/(ft-h-F)	/			
18	Steam	lb/h	/			Freeze Point	°F				
19	Water	lb/h	/			Bubble / Dew point	°F				
20	Molecular wt, Vap	/			Latent heat	BTU/lb					
21	Molecular wt, NC	/			Inlet pressure (abs)	psi	59.7				
22	Viscosity, Liq	cp	0.6465	/	0.7894	Pres Drop, Allow/Calc	psi	10	/	0.31	
23	Viscosity, Vap	cp	/			Fouling resistance	ft ² -h-F/BTU	0.001			
24	PERFORMANCE DATA - AIR SIDE										
25	Air Quantity, Total	1,636,000	lb/h	Altitude			1,000	ft			
26	Air Quantity/Fan	187,795	ft ³ /min	Temperature In			65	°F			
27	Static Pressure	0.83	inH2O	Temperature Out			82	°F			
28	Face Velocity	12.36	ft/s	Bundle velocity	3,230	lb/h/ft ²	Design Ambient	65	°F		
29	DESIGN-MATERIALS-CONSTRUCTION										
30	Design/Vac./Test Pres	1,350	/	/	psi	Design temperature	200 °F				
31	TUBE BUNDLE			Header			Tube				
32	Size	42	ft	Type	Box	Material	Carbon Steel				
33	Number/bay	2	Material			Carbon Steel	Specifications				
34	Tube Rows	5	Passes		1	OD	1	Min Thk.	0.083	in	
35	Arrangement	Plug Mat.			No./Bun	168	Lng	40	ft		
36	Bundles	2	par	Gasket Mat.		Pitch	2.375	/	2.0568	30 deg	
37	Bays	1	par	Corr. Allow.		in	Fin				
38	Bundle frame	Inlet Nozzle		1	8 in	Type	L-finned				
39	MISCELLANEOUS			Outlet nozzle		1	8 in	Material	Aluminum 1060		
40	Struct. Mount.	Special Nozzles			OD	2.25	Tks	0.016	in		
41	Surf.Prepare	Rating		900	ANSI	No.	10	#/in	DesTemp °F		
42	Louvers	TI		PI		Code	ASME Code Sec VIII Div 1				
43	Vibration Switches	Chem Cleaning			Stamp	Yes	Specs				
44	MECHANICAL EQUIPMENT										
45	Fan,Mfr., Model	Driver, Type			V-belt	Speed Reducer, Type					
46	No./Bay	2	RPM	Mfr.		Mfr.&Model					
47	Dia.	13	ft	Blade(s)		No./Bay	No./Bay				
48	Pitch	Angle		RPM		Rating					
49	Blade(s)	Hub		Enclosure		Ratio					
50	hp/Fan	40	hp	MinAmb		V/Phase/Hz		Support			
51	Control Action on Air Failure-						Louvers				
52	Degree Control of Outlet Process Temperature										
53	Recirculation						Steam Coil		No		
54	Plot Area	ft ²	Drawing No.		Wt.Bundle	21,867	Wt. Unit	43,734	lb		
55	Notes:										
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