

Air-Cooled Heat Exchanger Specification Sheet

1	Client: Aggreko											
2	Location:											
3	Service of Unit: Cooling Propylene Glycol											
4	Item No.: 141063											
5	Date: 5/22/2024											
6	Size & Type	35	/	14	ft	Type	Forced	Number of Bays	1			
7	Surf/Unit-Finned Tube	60,200 ft ²			Bare area/bundle	1,399	ft ²	Ratio (Total	21.51			
8	Heat exchanged	6310210 BTU/h			MTD, Eff	27.79 °F						
9	Transfer rate	5.34	Bare, Service		81.14	Clean	155.71		BTU/(h-ft ² -F)			
10	PERFORMANCE DATA - TUBE SIDE											
11	Fluid Circulated	Propylene Glycol					In/Out					
12	Total Fluid Entering	lb/h	511,140			Density, Liq	lb/ft ³	62.12	/	62.475		
13		GPM	1,000			Density, Vap	lb/ft ³	0	/	0		
14	Temperature	°F	145	/	130	Specific Heat, Liq	BTU/(lb-F)	0.8258	/	0.8202		
15	Liquid	lb/h	511140	/	511140	Specific Heat, Vap	BTU/(lb-F)	0	/	0		
16	Vapor	lb/h	0	/	0	Therm. Cond, Liq	BTU/(ft-h-F)	0.244	/	0.242		
17	Noncondensable	lb/h	0	/	0	Therm. Cond, Vap	BTU/(ft-h-F)	0	/	0		
18	Steam	lb/h	/			Freeze Point	°F	0				
19	Water	lb/h	/			Bubble / Dew point	°F	0	/	0		
20	Molecular wt, Vap	/			Latent heat	BTU/lb	0					
21	Molecular wt, NC						Inlet pressure (abs)	psi	114.7			
22	Viscosity, Liq	cp	0.7891	/	0.9204	Pres Drop, Allow/Calc	psi	30	/	31.06		
23	Viscosity, Vap	cp	0.0000	/	0.0000	Fouling resistance	ft ² -h-F/BTU	0.001				
24	PERFORMANCE DATA - AIR SIDE											
25	Air Quantity, Total	1,345,000	lb/h				Altitude	500	ft			
26	Air Quantity/Fan	163,106	ft ³ /min				Temperature In	100	°F			
27	Static Pressure	0.95	inH2O				Temperature Out	119	°F			
28	Face Velocity	12.67	ft/s	Bundle velocity	3,135	lb/h/ft ²	Design Ambient	100	°F			
29	DESIGN-MATERIALS-CONSTRUCTION											
30	Design/Vac./Test Pres	245	/	0	/	0	psi	Design temperature	250	°F		
31	TUBE BUNDLE		Header				Tube					
32	Size	35 ft			Type	Box	Material	Carbon Steel				
33	Number/bay	2			Material	Carbon Steel	Specifications					
34	Tube Rows	5			Passes	4	OD	1	Min Thk.	0.109	in	
35	Arrangement						Plug Mat.	No./Bun	168	Lng	33 ft	
36	Bundles	2 par			Gasket Mat.			Pitch	2.375	/	2.057 30 deg	
37	Bays	1 par			Corr. Allow.	0	in	Fin				
38	Bundle frame				Inlet Nozzle	1	6 in	Type	L-finned			
39	MISCELLANEOUS						Outlet nozzle	1	6 in	Material	Aluminum 1060	
40	Struct. Mount.						Special Nozzles	OD	2.25	Tks	0.016 in	
41	Surf.Preop						Rating	150	ANSI	No. 10	#/in DesTemp 0 °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.	10	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	0	ft ²	Drawing No.				Wt.Bundle	15,671	Wt. Unit	31,341 lb	
55	Notes:											
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