

Air-Cooled Heat Exchanger Specification Sheet

1	Client: Aggreko											
2	Location:											
3	Service of Unit: Cooling Ethylene Glycol											
4	Item No.: 180642											
5	Date: 10/6/2023											
6	Size & Type	10	/	6	ft	Type	Forced	Number of Bays	1			
7	Surf/Unit-Finned Tube	3,840 ft ²			Bare area/bundle	239	ft ²	Ratio (Total	16.1			
8	Heat exchanged	564326 BTU/h			MTD, Eff	36.86 °F						
9	Transfer rate	5.59	Bare, Service	64.19		Clean	113.03		BTU/(h-ft ² -F)			
10	PERFORMANCE DATA - TUBE SIDE											
11	Fluid Circulated	Ethylene Glycol					In/Out					
12	Total Fluid Entering	lb/h	16,626			Density, Liq	lb/ft ³	64.164		/ 65.132		
13		GPM	30			Density, Vap	lb/ft ³	0		/ 0		
14	Temperature	°F	170	/	130	Specific Heat, Liq	BTU/(lb-F)	0.8597		/ 0.8365		
15	Liquid	lb/h	16626 / 16626			Specific Heat, Vap	BTU/(lb-F)	0		/ 0		
16	Vapor	lb/h	0 / 0			Therm. Cond, Liq	BTU/(ft-h-F)	0.234		/ 0.238		
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	64.7					
22	Viscosity, Liq	cp	0.9221	/	1.4115	Pres Drop, Allow/Calc	psi	5		/ 0.68		
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	175,000	lb/h	Altitude			500	ft				
26	Air Quantity/Fan	42,911	ft ³ /min	Temperature In			105	°F				
27	Static Pressure	0.93	inH2O	Temperature Out			118	°F				
28	Face Velocity	17.88	ft/s	Bundle velocity	4,376	lb/h/ft ²	Design Ambient	105		°F		
29	DESIGN-MATERIALS-CONSTRUCTION											
30	Design/Vac./Test Pres	1,200	/	0	/	0	psi	Design temperature	300		°F	
31	TUBE BUNDLE			Header			Tube					
32	Size	10 ft		Type	Box		Material	Carbon Steel				
33	Number/bay	1		Material	Carbon Steel		Specifications					
34	Tube Rows	5		Passes	5		OD	0.625	Min Thk.	0.065 in		
35	Arrangement			Plug Mat.			No./Bun	193	Lng	8 ft		
36	Bundles	1 par		Gasket Mat.			Pitch	1.625	/	1.407	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	1.5	Tks	0.016 in		
41	Surf.Prepare			Rating	600 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	1	RPM	0	Mfr.			Mfr.&Model				
47	Dia.	4.5	ft	Blade(s)			No./Bay					
48	Pitch			Angle			RPM					
49	Blade(s)	0	Hub	0	Enclosure			Ratio				
50	hp/Fan	10	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	6,508	Wt. Unit	6,508 lb		
55	Notes:											
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