

Air-Cooled Heat Exchanger Specification Sheet

1	Client: Aggreko										
2	Location:										
3	Service of Unit: Cooling Lean Amine										
4	Item No.: 230911										
5	Date: 4/24/2024										
6	Size & Type	42	/	15	ft	Type	Forced	Number of Bays	1		
7	Surf/Unit-Finned Tube			91,528	ft²	Bare area/bundle	4,267	ft²	Ratio (Total	21.45	
8	Heat exchanged			11202070	BTU/h	MTD, Eff		40.88	°F		
9	Transfer rate	3.36			Bare, Service	64.22	Clean	86.2	BTU/(h-ft²-F)		
10	PERFORMANCE DATA - TUBE SIDE										
11	Fluid Circulated	Lean Amine				In/Out					
12	Total Fluid Entering	lb/h		238,000		Density, Liq	lb/ft³	60.44	/	63.208	
13						Density, Vap	lb/ft³	0	/	0	
14	Temperature	°F	202	/	124	Specific Heat, Liq	BTU/(lb-F)	0.6296	/	0.577	
15	Liquid	lb/h	238000	/	238000	Specific Heat, Vap	BTU/(lb-F)	0	/	0	
16	Vapor	lb/h	0	/	0	Therm. Cond, Liq	BTU/(ft-h-F)	0.119	/	0.12	
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	109.7			
22	Viscosity, Liq	cp	0.5042	/	1.1416	Pres Drop, Allow/Calc	psi	20	/	2.26	
23	Viscosity, Vap	cp	0.0000	/	0.0000	Fouling resistance	ft²-h-F/BTU	0.001			
24	PERFORMANCE DATA - AIR SIDE										
25	Air Quantity, Total	1,251,000	lb/h			Altitude		3,642	ft		
26	Air Quantity/Fan	170,490	ft³/min			Temperature In		100	°F		
27	Static Pressure	0.68	inH2O			Temperature Out		136	°F		
28	Face Velocity	10.48	ft/s	Bundle velocity	2,307	lb/h/ft²	Design Ambient	100	°F		
29	DESIGN-MATERIALS-CONSTRUCTION										
30	Design/Vac./Test Pres	510	/	0	/	0	psi	Design temperature	400	°F	
31	TUBE BUNDLE			Header			Tube				
32	Size	42	ft	Type	Box	Material	Carbon Steel				
33	Number/bay	1		Material	Carbon Steel	Specifications					
34	Tube Rows	6		Passes	3	OD	1	Min Thk.	0.11	in	
35	Arrangement			Plug Mat.		No./Bun	423	Lng	40	ft	
36	Bundles	1	par	Gasket Mat.		Pitch	2.375	/	2.057	30 deg	
37	Bays	1	par	Corr. Allow.	0	in	Fin				
38	Bundle frame			Inlet Nozzle	2	8 in	Type	L-finned			
39	MISCELLANEOUS			Outlet nozzle	2	8 in	Material	Aluminum 1060			
40	Struct. Mount.			Special Nozzles		OD	2.25	Tks	0.011	in	
41	Surf. Prep			Rating	300	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.	12	ft	Blade(s)	No./Bay	No./Bay					
48	Pitch			Angle	RPM	Rating					
49	Blade(s)			Hub	Enclosure	Ratio					
50	hp/Fan	30	hp	MinAmb	V/Phase/Hz	Support					
51	Control Action on Air Failure-									Louvers	
52	Degree Control of Outlet Process Temperature										
53	Recirculation								Steam Coll	No	
54	Plot Area	0	ft²	Drawing No.	Wt. Bundle	43,591	Wt. Unit	43,591	lb		
55	Notes:										
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