

Air-Cooled Heat Exchanger Specifications Sheet

1	Client: Aggreko									
2	Location: Wyoming									
3	Service of Unit: Cooling Sour Water									
4	Item No.: 190601									
5	Date: 3/11/2021									
6	Size & Type	34	/	14	ft	Type	Forced	Number of Bays	1	
7	Surf/Unit-Finned Tube	35,223 ft ²			Bare area/bundle	2,439	ft ²	Ratio (Total)	14.44	
8	Heat exchanged	2929988 BTU/h			MTD, Eff	36.32 °F				
9	Transfer rate	2.57		Bare, Service	33.07	Clean	40.29	BTU/(h-ft ² -F)		
10	PERFORMANCE DATA - TUBE SIDE									
11	Fluid Circulated	Sour Water				In/Out				
12	Total Fluid Entering	lb/h	32,611			Density, Liq	lb/ft ³	60.363	/ 62.017	
13		GPM	60			Density, Vap	lb/ft ³	/		
14	Temperature	°F	190	/	100	Specific Heat, Liq	BTU/(lb-F)	1.002	/ 0.9963	
15	Liquid	lb/h	32611	/	32611	Specific Heat, Vap	BTU/(lb-F)	/		
16	Vapor	lb/h	0	/	0	Therm. Cond, Liq	BTU/(ft-h-F)	0.389	/ 0.362	
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	76.7			
22	Viscosity, Liq	cp	0.3227	/	0.6815	Pres Drop, Allow/Calc	psi	20	/ 0	
23	Viscosity, Vap	cp	/			Fouling resistance	ft ² -h-F/BTU	0.001		
24	PERFORMANCE DATA - AIR SIDE									
25	Air Quantity, Total	1,381,000	lb/h				Altitude	2,500	ft	
26	Air Quantity/Fan	176,475	ft ³ /min				Temperature In	90	°F	
27	Static Pressure	0.89	inH2O				Temperature Out	99	°F	
28	Face Velocity	14.97	ft/s	Bundle velocity	3,515	lb/h/ft ²	Design Ambient	90	°F	
29	DESIGN-MATERIALS-CONSTRUCTION									
30	Design/Vac./Test Pres	100	/	/	psi	Design temperature	310	°F		
31	TUBE BUNDLE		Header			Tube				
32	Size	34	ft	Type	Box	Material	Carbon Steel			
33	Number/bay	1		Material	Carbon Steel	Specifications				
34	Tube Rows	4		Passes	2	OD	1.5	Min Thk.	0.075 in	
35	Arrangement				Plug Mat.	No./Bun	202	Lng	32 ft	
36	Bundles	1	par	Gasket Mat.				Pitch	3 / 2.598 30 deg	
37	Bays	1	par	Corr. Allow.	in			Ftn		
38	Bundle frame				Inlet Nozzle	2	10 in	Type	L-finned	
39	MISCELLANEOUS					Outlet nozzle	2	10 in	Material	Aluminum 1060
40	Struct. Mount.				Special Nozzles	OD	2.5	Tks	0.016 in	
41	Surf.Prepare				Rating	150	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.	12	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	22,144	Wt. Unit	22,144	lb		
55	Notes:									
56										
57										
58										