

Air-Cooled Heat Exchanger Specification Sheet

1	Client: Aggreko										
2	Location:										
3	Service of Unit: Cooling Wet Natural Gas										
4	Item No.: 170850										
5	Date: 4/14/2022										
6	Size & Type	8	/	5	ft	Type	Forced	Number of Bays	1		
7	Surf/Unit-Finned Tube			2,155	ft ²	Bare area/bundle	129	ft ²	Ratio (Total	16.75	
8	Heat exchanged			351947	BTU/h	MTD, Eff		42.65	°F		
9	Transfer rate	5.91			Bare, Service	64.14	Clean	127.67	BTU/(h-ft ² -F)		
10	PERFORMANCE DATA - TUBE SIDE										
11	Fluid Circulated	Wet Natural Gas					In/Out				
12	Total Fluid Entering	lb/h		5,100		Density, Liq	lb/ft ³	/	58.685		
13		MM SCFD		1.5		Density, Vap	lb/ft ³	0.271	/	0.269	
14	Temperature	°F		185	/	120	Specific Heat, Liq	BTU/(lb-F)	/	1.1489	
15	Liquid	lb/h		0	/	180	Specific Heat, Vap	BTU/(lb-F)	0.4873	/	0.4578
16	Vapor	lb/h		248	/	68	Therm. Cond, Liq	BTU/(ft-h-F)	/	0.776	
17	Noncondensable	lb/h		4852	/	4852	Therm. Cond, Vap	BTU/(ft-h-F)	0.019	/	0.016
18	Steam	lb/h		/			Freeze Point	°F			
19	Water	lb/h		/			Bubble / Dew point	°F	-391.68	/	166.41
20	Molecular wt, Vap			28.53	/	28.53	Latent heat	BTU/lb			
21	Molecular wt, NC						Inlet pressure (abs)	psi	64.7		
22	Viscosity, Liq	cp		/	0.5704		Pres Drop, Allow/Calc	psi	15	/	8.66
23	Viscosity, Vap	cp		0.0117	/	0.0108	Fouling resistance	ft ² -h-F/BTU	0.001		
24	PERFORMANCE DATA - AIR SIDE										
25	Air Quantity, Total	78,000	lb/h			Altitude	2,500	ft			
26	Air Quantity/Fan	20,150	ft ³ /min			Temperature In	95	°F			
27	Static Pressure	0.96	inH2O			Temperature Out	113	°F			
28	Face Velocity	12.4	ft/s	Bundle velocity	2,881	lb/h/ft ²	Design Ambient	95	°F		
29	DESIGN-MATERIALS-CONSTRUCTION										
30	Design/Vac./Test Pres	400	/	/	psi	Design temperature	300	°F			
31	TUBE BUNDLE		Header			Tube					
32	Size	8	ft	Type	Box	Material	Carbon Steel				
33	Number/bay	1		Material	Carbon Steel	Specifications					
34	Tube Rows	4		Passes	4	OD	0.625	Min Thk.	0.065	in	
35	Arrangement	Plug Mat.				No./Bun	138	Lng	6	ft	
36	Bundles	1	par	Gasket Mat.		Pitch	1.625	/	1.407	30 deg	
37	Bays	1	par	Corr. Allow.	in	Fin					
38	Bundle frame	Inlet Nozzle		1	3 in	Type	L-finned				
39	MISCELLANEOUS		Outlet nozzle		1	3 in	Material	Aluminum 1060			
40	Struct. Mount.	Special Nozzles				OD	1.5	Tks	0.0625	in	
41	Surf.Prepare	Rating		300	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	1	RPM	Mfr.		Mfr.&Model					
47	Dia.	3.5	ft	Blade(s)	No./Bay	No./Bay					
48	Pitch	Angle			RPM	Rating					
49	Blade(s)	Hub			Enclosure		Ratio				
50	hp/Fan	5	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	3,716	Wt. Unit	3,716 lb				
55	Notes:										
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