

Air-Cooled Heat Exchanger Specification Sheet

1	Client: Aggreko										
2	Location:										
3	Service of Unit: Cooling Wet Natural Gas										
4	Item No.: 220504,6,8										
5	Date: 7/7/2022										
6	Size & Type	9	/	7	ft	Type	Forced	Number of Bays	1		
7	Surf/Unit-Finned Tube	2,769 ft ²			Bare area/bundle	165	ft ²	Ratio (Total	16.75		
8	Heat exchanged	333011 BTU/h			MTD, Eff	46.11 °F					
9	Transfer rate	5.07	Bare, Service			43.69	Clean	105.19 BTU/(h-ft ² -F)			
10	PERFORMANCE DATA - TUBE SIDE										
11	Fluid Circulated	Wet Natural Gas					In/Out				
12	Total Fluid Entering	lb/h	4,825			Density, Liq	lb/ft ³	/		58.685	
13		MM SCFD	1.4			Density, Vap	lb/ft ³	0.271	/ 0.293		
14	Temperature	°F	185	/	120	Specific Heat, Liq	BTU/(lb-F)		/ 1.1489		
15	Liquid	lb/h	0	/	171	Specific Heat, Vap	BTU/(lb-F)		0.4873	/ 0.4578	
16	Vapor	lb/h	235	/	64	Therm. Cond, Liq	BTU/(ft-h-F)		/ 0.776		
17	Noncondensable	lb/h	4590	/	4590	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	/ 0.5705			Pres Drop, Allow/Calc	psi	15	/ 3.65		
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	143,000	lb/h				Altitude	2,500	ft		
26	Air Quantity/Fan	36,942	ft ³ /min				Temperature In	95	°F		
27	Static Pressure	0.79	inH ₂ O				Temperature Out	105	°F		
28	Face Velocity	13.38	ft/s	Bundle velocity	3,109	lb/h/ft ²	Design Ambient	95	°F		
29	DESIGN-MATERIALS-CONSTRUCTION										
30	Design/Vac./Test Pres	1,287	/	/			psi	Design temperature	300	°F	
31	TUBE BUNDLE		Header				Tube				
32	Size	9 ft		Type	Box		Material	Carbon Steel			
33	Number/bay	1		Material	Carbon Steel		Specifications				
34	Tube Rows	3		Passes	3		OD	0.625	Min Thk.	0.065	in
35	Arrangement					Plug Mat.	No./Bun	152	Lng	7	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	600	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.	5	ft	Blade(s)	No./Bay			No./Bay			
48	Pitch	Angle			RPM			Rating			
49	Blade(s)	Hub			Enclosure			Ratio			
50	hp/Fan	7.5	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	5,820	Wt. Unit	5,820	lb			
55	Notes:										
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