

Air-Cooled Heat Exchanger Specification Sheet

1	Client: Aggreko										
2	Location:										
3	Service of Unit: Cooling Wet Natural Gas										
4	Item No.: 220505-7										
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			666183	BTU/h	MTD, Eff			42.16	°F	
9	Transfer rate	6.51			Bare, Service	95.6	Clean	144.64	BTU/(h-ft ² -F)		
10	PERFORMANCE DATA - TUBE SIDE										
11	Fluid Circulated	Wet Natural Gas					In/Out				
12	Total Fluid Entering	lb/h			9,650	Density, Liq	lb/ft ³			58.686	
13		MM SCFD			2.8	Density, Vap	lb/ft ³	0.271	/ 0.256		
14	Temperature	°F	185	/	120	Specific Heat, Liq	BTU/(lb-F)			1.1489	
15	Liquid	lb/h	0	/	341	Specific Heat, Vap	BTU/(lb-F)	0.4873	/ 0.4578		
16	Vapor	lb/h	470	/	128	Therm. Cond, Liq	BTU/(ft-h-F)			0.776	
17	Noncondensable	lb/h	9180	/	9180	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			-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			/	0.5706	Pres Drop, Allow/Calc	psi	15	/	11.26
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	142,000			lb/h	Altitude			2,500	ft	
26	Air Quantity/Fan	36,684			ft ³ /min	Temperature In			95	°F	
27	Static Pressure	0.8			inH2O	Temperature Out			114	°F	
28	Face Velocity	13.29	ft/s	Bundle velocity	3,087	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	2	3 in	Type	L-finned			
39	MISCELLANEOUS			Outlet nozzle	2	3 in	Material	Aluminum 1060			
40	Struct. Mount.						Special Nozzles	OD	1.5	Tks	0.0625 in
41	Surf. Prep						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	5,859	Wt. Unit	5,859 lb				
55	Notes:										
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