

Air-Cooled Heat Exchanger Specification Sheet

1	Client: Aggreko										
2	Location:										
3	Service of Unit: Cooling Wet Natural Gas										
4	Item No.: 160653										
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. Prep	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 Coll	No					
54	Plot Area	ft ²	Drawing No.	Wt. Bundle	3,716	Wt. Unit	3,716 lb				
55	Notes:										
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