

# Air-Cooled Heat Exchanger Specification Sheet

1	Client: Aggreko										
2	Location:										
3	Service of Unit: Cooling Wet Natural Gas										
4	Item No.: 201150										
5	Date: 7/7/2022										
6	Size & Type	9	/	11	ft	Type	Forced	Number of Bays	1		
7	Surf/Unit-Finned Tube	5,570			ft <sup>2</sup>	Bare area/bundle	333	ft <sup>2</sup>	Ratio (Total)	16.75	
8	Heat exchanged	666210			BTU/h	MTD, Eff	43.93 °F				
9	Transfer rate	5.58	Bare, Service		45.6	Clean	118.64 BTU/(h-ft <sup>2</sup> -F)				
10	<b>PERFORMANCE DATA - TUBE SIDE</b>										
11	Fluid Circulated	Wet Natural Gas					In/Out				
12	Total Fluid Entering	lb/h	9,650			Density, Liq	lb/ft <sup>3</sup>	/ 58.686			
13		MM SCFD	2.8			Density, Vap	lb/ft <sup>3</sup>	0.271 / 0.218			
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	°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	/ 0.5706			Pres Drop, Allow/Calc	psi	20 / 19.23			
23	Viscosity, Vap	cp	0.0117 / 0.0108			Fouling resistance	ft <sup>2</sup> -h-F/BTU		0.001		
24	<b>PERFORMANCE DATA - AIR SIDE</b>										
25	Air Quantity, Total	180,000	lb/h			Altitude	2,500		ft		
26	Air Quantity/Fan	46,500	ft <sup>3</sup> /min			Temperature In	95		°F		
27	Static Pressure	0.84	inH2O			Temperature Out	110		°F		
28	Face Velocity	11.16	ft/s		Bundle velocity	2,594	lb/h/ft <sup>2</sup>	Design Ambient	95 °F		
29	<b>DESIGN-MATERIALS-CONSTRUCTION</b>										
30	Design/Vac./Test Pres	200	/ /			psi	Design temperature	300 °F			
31	<b>TUBE BUNDLE</b>		<b>Header</b>			<b>Tube</b>					
32	Size	9 ft		Type	Box		Material	SS 304			
33	Number/bay	1		Material	Carbon Steel		Specifications				
34	Tube Rows	4		Passes	5		OD	0.625	Min Thk.	0.065 in	
35	Arrangement	Plug Mat.					No./Bun	302	Lng	7 ft	
36	Bundles	1 par		Gasket Mat.			Pitch	1.625 / 1.407	30 deg		
37	Bays	1 par		Corr. Allow.	in		<b>Fin</b>				
38	Bundle frame	Inlet Nozzle			1	4 in	Type	L-finned			
39	<b>MISCELLANEOUS</b>			Outlet nozzle			1	4 in	Material	Aluminum 1060	
40	Struct. Mount.	Special Nozzles					OD	1.5	Tks	0.0625 in	
41	Surf. Prep	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	<b>MECHANICAL EQUIPMENT</b>										
45	Fan, Mfr., Model	Driver, Type			V-belt		Speed Reducer, Type				
46	No./Bay	1	RPM		Mfr.		Mfr. & Model				
47	Dia.	8	ft		Blade(s)		No./Bay				
48	Pitch	Angle			RPM		Rating				
49	Blade(s)	Hub			Enclosure		Ratio				
50	hp/Fan	10	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 <sup>2</sup>	Drawing No.		Wt. Bundle		7,743	Wt. Unit	7,743 lb		
55	Notes:										
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