

Air-Cooled Heat Exchanger Specification Sheet

1	Client: Aethon									
2	Location: North Louisiana / East Texas									
3	Service of Unit: Cooling Wet Natural Gas & Produced Water									
4	Item No.: 82100									
5	Date: 4/12/2018									
6	Size & Type	18	/	9	ft	Type	Forced	Number of Bays	1	
7	Surf/Unit-Finned Tube	7,444		ft ²	Bare area/bundle	462	ft ²	Ratio (Total/	16.1	
8	Heat exchanged	3094044		BTU/h	MTD, Eff	55.36	°F			
9	Transfer rate	7.51	Bare, Service	120.88	Clean	166.39	BTU/(h-ft ² -F)			
10	PERFORMANCE DATA - TUBE SIDE									
11	Fluid Circulated	Wet Natural Gas				In/Out				
12	Total Fluid Entering	lb/h	34,275		Density, Liq	lb/ft ³	/		58.965	
13		MM SCFD	18		Density, Vap	lb/ft ³	2.305		/ 2.823	
14	Temperature	°F	225	/	114	Specific Heat, Liq	BTU/(lb-F)		/ 1.1463	
15	Liquid	lb/h	0	/	764	Specific Heat, Vap	BTU/(lb-F)		0.6184 / 0.6145	
16	Vapor	lb/h	843	/	79	Therm. Cond, Liq	BTU/(ft-h-F)		/ 0.786	
17	Noncondensable	lb/h	33,432	/	33,432	Therm. Cond, Vap	BTU/(ft-h-F)		0.031 / 0.026	
18	Steam	lb/h	/		Freeze Point	°F				
19	Water	lb/h	/		Bubble / Dew point	°F		-357.78 /		217.4
20	Molecular wt, Vap	16.94		/	16.94	Latent heat	BTU/lb			
21	Molecular wt, NC					Inlet pressure (abs)	psi	964.7		
22	Viscosity, Liq	cp	/		0.6065	Pres Drop, Allow/Calc	psi	20	/	18.81
23	Viscosity, Vap	cp	0.0147		/	0.0133	Fouling resistance	ft ² -h-F/BTU		0.001
24	PERFORMANCE DATA - AIR SIDE									
25	Air Quantity, Total	792,500	lb/h			Altitude	500	ft		
26	Air Quantity/Fan	95,599	ft ³ /min			Temperature In	95	°F		
27	Static Pressure	0.92	inH2O			Temperature Out	111	°F		
28	Face Velocity	24.78	ft/s	Bundle velocity	6,164	lb/h/ft ²	Design Ambient	95	°F	
29	DESIGN-MATERIALS-CONSTRUCTION									
30	Design/Vac./Test Pres	3,450	/	/	psi	Design temperature	250	°F		
31	TUBE BUNDLE		Header			Tube				
32	Size	18	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	188	Lng	16	ft
36	Bundles	1	par	Gasket Mat.		Pitch	1.625	/	1.4073	30 deg
37	Bays	1	par	Corr. Allow.	in	Fin				
38	Bundle frame	Inlet Nozzle			1	4 in	Type	L-finned		
39	MISCELLANEOUS			Outlet nozzle			1	4 in	Material	Aluminum 1060
40	Struct. Mount.	Special Nozzles			OD	1.5	Tks	0.016	in	
41	Surf.Pre	Rating			1500	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	2	RPM	Mfr.	Mfr.&Model					
47	Dia.	6.75	ft	Blade(s)	No./Bay	No./Bay				
48	Pitch	Angle			RPM	Rating				
49	Blade(s)	Hub			Enclosure	Ratio				
50	hp/Fan	22.5	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	11,273	Wt. Unit	11,273	lb		
55	Notes:									
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