

Air-Cooled Heat Exchanger Specification Sheet

1	Client: Oasis										
2	Location: North Dakota										
3	Service of Unit: Cooling Oil & Produced Water										
4	Item No.: 160830										
5	Date: 8/11/2016				Rev No.:						
6	Size & Type	62.0	/	16.3	ft	Type	Forced	Number of Bays	1		
7	Surf/Unit-Finned Tube			129,933	ft ²	Bare area/bundle	5,514	ft ²	Area ratio	23.56	
8	Heat exchanged			19.55	MBTU/h	MTD, Eff		31.35	F		
9	Transfer rate	4.9			Bare, Service	113.1	Clean	154.93	BTU/(h*ft ² *F)		
10	PERFORMANCE DATA - TUBE SIDE										
11	Fluid Circulated	Oil & Produced Water					In/Out				
12	Total Fluid Entering	lb/h		217,632		Density, Liq	lb/ft ³	60.364	/	62.019	
13		BPSD		15,000		Density, Vap	lb/ft ³		/		
14	Temperature	F		190	/	100	Specific Heat, Liq	BTU/(lb*F)	1.002	/	0.9963
15	Liquid	lb/h		217,632	/	217,632	Specific Heat, Vap	BTU/(lb*F)		/	
16	Vapor	lb/h		0	/	0	Therm. Cond, Liq	BTU/(ft ² *h*F)	0.387	/	0.36
17	Noncondensable	lb/h		0	/	0	Therm. Cond, Vap	BTU/(ft ² *h*F)		/	
18	Steam	lb/h		/			Freeze Point	F			
19	Water	lb/h		/			Bubble / Dew point	F		/	
20	Molecular wt, Vap			/			Latent heat	BTU/lb			
21	Molecular wt, NC						Inlet pressure (abs)	psi			85
22	Viscosity, Liq	cp		0.322	/	0.7004	Pres Drop, Allow/Calc	psi	10	/	7.02
23	Viscosity, Vap	cp		/			Fouling resistance	ft ² *h*F/BTU			0.001
24	PERFORMANCE DATA - AIR SIDE										
25	Air Quantity, Total	3,080,000	lb/h			Altitude	2,500	ft			
26	Air Quantity/Fan	264,245	ft ³ /min			Temperature In	90	F			
27	Static Pressure	0.74	inH ₂ O			Temperature Out	116	F			
28	Face Velocity	14.23	ft/s	Bundle velocity	3,318	lb/h/ft ²	Design Ambient	90	F		
29	DESIGN-MATERIALS-CONSTRUCTION										
30	Design/Vac./Test Pres	381	/	/		psi	Design temperature	200	F		
31	TUBE BUNDLE			Header			Tube				
32	Size	62.0	ft	Type	Box	Material	Carbon Steel				
33	Number/bay	1		Material	Carbon Steel	Specifications					
34	Tube Rows	5		Passes	4	OD	1	Min Thk.	0.083	in	
35	Arrangement			Plug Mat.		No./Bun	358	Lng	60	ft	
36	Bundles	1	par	Gasket Mat.		Pitch	2.625	/	2.273	30	deg
37	Bays	1	par	Corr. Allow.		in	Fin				
38	Bundle frame			Inlet Nozzle	4	3.826	in	Type	L-finned		
39	MISCELLANEOUS			Outlet nozzle	4	3.826	in	Material	Aluminum 1060		
40	Struct. Mount.			Special Nozzles		OD	2.25	Tks	0.016	in	
41	Surf.Preop			Rating	300	ANSI	No.	11	#/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	3	RPM	Mfr.	Mfr.&Model						
47	Dia.	13	ft	Blade(s)	No./Bay	No./Bay					
48	Pitch		Angle	RPM	Rating						
49	Blade(s)		Hub	Enclosure	Ratio						
50	hp/Fan	50	hp	MinAmb	V/Phase/Hz						
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	54,080	Wt. Unit	54,080 lb				
55	Notes:										
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