

Air-Cooled Heat Exchanger Specification Sheet

1	Client: Oasis										
2	Location: North Dakota										
3	Service of Unit: Cooling Oil & Produced Water										
4	Item No.: 160822 & 160823										
5	Date: 8/24/2016				Rev No.:						
6	Size & Type	42.2	/	13.1	ft	Type	Forced	Number of Bays	1		
7	Surf/Unit-Finned Tube			75,641	ft ²	Bare area/bundle	1,758	ft ²	Area ratio	21.51	
8	Heat exchanged			9.38	MBTU/h	MTD, Eff		29.64	F		
9	Transfer rate	4.38			Bare, Service	90.05	Clean	119.82	BTU/(h*ft ² *F)		
10	PERFORMANCE DATA - TUBE SIDE										
11	Fluid Circulated	Oil & Produced Water				In/Out					
12	Total Fluid Entering	lb/h		104,463		Density, Liq	lb/ft ³	60.364	/	62.018	
13		BPSD		7,200		Density, Vap	lb/ft ³		/		
14	Temperature	F		190	/	100	Specific Heat, Liq	BTU/(lb*F)	1.002	/	0.9963
15	Liquid	lb/h		104,463	/	104,463	Specific Heat, Vap	BTU/(lb*F)		/	
16	Vapor	lb/h		0	/	0	Therm. Cond, Liq	BTU/(ft*h*F)	0.387	/	0.36
17	Noncondensable	lb/h		0	/	0	Therm. Cond, Vap	BTU/(ft*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	/	0.7003	Pres Drop, Allow/Calc	psi	5	/	2.06
23	Viscosity, Vap	cp			/		Fouling resistance	ft ² *h*F/BTU	0.001	/	
24	PERFORMANCE DATA - AIR SIDE										
25	Air Quantity, Total	1,224,000	lb/h			Altitude	2,500	ft			
26	Air Quantity/Fan	157,517	ft ³ /min			Temperature In	90	F			
27	Static Pressure	0.75	inH ₂ O			Temperature Out	121	F			
28	Face Velocity	11.05	ft/s			Bundle velocity	2,576	lb/h/ft ²	Design Ambient	90	F
29	DESIGN-MATERIALS-CONSTRUCTION										
30	Design/Vac./Test Pres	250	/		/	psi		Design temperature	200	F	
31	TUBE BUNDLE		Header			Tube					
32	Size	42.2	ft	Type	Box	Material	Carbon Steel				
33	Number/bay	2		Material	Carbon Steel	Specifications					
34	Tube Rows	6		Passes	4	OD	1	Min Thk.	0.109	in	
35	Arrangement			Plug Mat.		No./Bun	171	Lng	40	ft	
36	Bundles	2	par	Gasket Mat.		Pitch	2.5	/	2.165	30	deg
37	Bays	1	par	Corr. Allow.	in	Fin					
38	Bundle frame			Inlet Nozzle	2	3.826	in	Type	L-finned		
39	MISCELLANEOUS			Outlet nozzle	2	3.826	in	Material	Aluminum 1060		
40	Struct. Mount.			Special Nozzles		OD	2.25	Tks	0.016	in	
41	Surf.Prepare			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	MECHANICAL EQUIPMENT										
45	Fan, Mfr., Model			Driver, Type	V-belt	Speed Reducer, Type					
46	No./Bay	2	RPM	Mfr.		Mfr.&Model					
47	Dia.	12	ft	Blade(s)		No./Bay					
48	Pitch		Angle	RPM		Rating					
49	Blade(s)		Hub	Enclosure		Ratio					
50	hp/Fan	30	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	18,506	Wt. Unit	37,012	lb			
55	Notes:										
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