

### Air-Cooled Heat Exchanger Specification Sheet

1	Client:											
2	Location:											
3	Service of Unit: Cooling Lube Oil											
4	Item No.: 200180											
5	Date: 4/4/2024											
6	Size & Type	30	/	13	ft	Type	Forced	Number of Bays	1			
7	Surf/Unit-Finned Tube	37,407			ft <sup>2</sup>	Bare area/bundle	1,739	ft <sup>2</sup>	Ratio (Total	21.51		
8	Heat exchanged	1475599			BTU/h	MTD, Eff	140.84		°F			
9	Transfer rate	0.31	Bare, Service			6.03	Clean	6.66	BTU/(h-ft <sup>2</sup> -F)			
10	<b>PERFORMANCE DATA - TUBE SIDE</b>											
11	Fluid Circulated	Lube Oil					In/Out					
12	Total Fluid Entering	lb/h	7,000			Density, Liq	lb/ft <sup>3</sup>	50.503	/	54.69		
13						Density, Vap	lb/ft <sup>3</sup>	0	/	0		
14	Temperature	°F	500	/	120	Specific Heat, Liq	BTU/(lb-F)	0.5811	/	0.472		
15	Liquid	lb/h	7000	/	7000	Specific Heat, Vap	BTU/(lb-F)	0	/	0		
16	Vapor	lb/h	0	/	0	Therm. Cond, Liq	BTU/(ft-h-F)	0.074	/	0.079		
17	Noncondensable	lb/h	0	/	0	Therm. Cond, Vap	BTU/(ft-h-F)	0	/	0		
18	Steam	lb/h	/			Freeze Point	°F	0				
19	Water	lb/h	/			Bubble / Dew point	°F	0	/	0		
20	Molecular wt, Vap	/			Latent heat	BTU/lb	0					
21	Molecular wt, NC						Inlet pressure (abs)	psi	114.7			
22	Viscosity, Liq	cp	0.1288	/	88.4726	Pres Drop, Allow/Calc	psi	20	/	0.17		
23	Viscosity, Vap	cp	0.0000	/	0.0000	Fouling resistance	ft <sup>2</sup> -h-F/BTU	0.001				
24	<b>PERFORMANCE DATA - AIR SIDE</b>											
25	Air Quantity, Total	1,019,000	lb/h	Altitude			2,500	ft				
26	Air Quantity/Fan	131,619	ft <sup>3</sup> /min	Temperature In			95	°F				
27	Static Pressure	0.58	inH2O	Temperature Out			101	°F				
28	Face Velocity	13.22	ft/s	Bundle velocity	3,070	lb/h/ft <sup>2</sup>	Design Ambient	95	°F			
29	<b>DESIGN-MATERIALS-CONSTRUCTION</b>											
30	Design/Vac./Test Pres	150	/	0	/	0	psi	Design temperature	600	°F		
31	<b>TUBE BUNDLE</b>		<b>Header</b>				<b>Tube</b>					
32	Size	30 ft			Type	Box	Material	Carbon Steel				
33	Number/bay	1			Material	Carbon Steel	Specifications					
34	Tube Rows	4			Passes	2	OD	1	Min Thk.	0.065 in		
35	Arrangement	Plug Mat.					No./Bun	246	Lng	28 ft		
36	Bundles	1 par			Gasket Mat.	Pitch		2.375	/	2.057	30 deg	
37	Bays	1 par			Corr. Allow.	0	in	<b>Fin</b>				
38	Bundle frame	Inlet Nozzle			1	2 in	Type	L-finned				
39	<b>MISCELLANEOUS</b>		Outlet nozzle			1	2 in	Material	Aluminum 1060			
40	Struct. Mount.	Special Nozzles					OD	2.25	Tks	0.016 in		
41	Surf.Prepare	Rating			300	ANSI	No.	10	#/in	DesTemp	0 °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	2	RPM	Mfr.			Mfr. & Model					
47	Dia.	9	ft	Blade(s)	No./Bay			No./Bay				
48	Pitch	Angle			RPM			Rating				
49	Blade(s)	Hub			Enclosure			Ratio				
50	hp/Fan	20	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	0	ft <sup>2</sup>	Drawing No.	Wt.Bundle		17,152	Wt. Unit	17,152 lb			
55	Notes:											
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