

Air-Cooled Heat Exchanger Specification Sheet

1	Client: Prairie									
2	Location:									
3	Service of Unit: Cooling Oil									
4	Item No.: 250460									
5	Date: 4/15/2026									
6	Size & Type	8	/	7	ft	Type	Forced	Number of Bays	1	
7	Surf/Unit-Finned Tube			4,091	ft²	Bare area/bundle	191	ft²	Ratio (Total	21.45
8	Heat exchanged			394057	BTU/h	MTD, Eff		54.88	°F	
9	Transfer rate	2.69			Bare, Service	37.65	Clean	65.96	BTU/(h-ft²-F)	
10	PERFORMANCE DATA - TUBE SIDE									
11	Fluid Circulated	Oil				In/Out				
12	Total Fluid Entering	lb/h		37,431		Density, Liq	lb/ft³	47.327	/	47.84
13		BPD		3,200		Density, Vap	lb/ft³	0	/	0
14	Temperature	°F	170	/	150	Specific Heat, Liq	BTU/(lb-F)	0.5318	/	0.5205
15	Liquid	lb/h	37431	/	37431	Specific Heat, Vap	BTU/(lb-F)	0	/	0
16	Vapor	lb/h	0	/	0	Therm. Cond, Liq	BTU/(ft-h-F)	0.081	/	0.081
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	44.7		
22	Viscosity, Liq	cp	0.7647	/	0.8750	Pres Drop, Allow/Calc	psi	20	/	0.31
23	Viscosity, Vap	cp	0.0000	/	0.0000	Fouling resistance	ft²-h-F/BTU	0.001		
24	PERFORMANCE DATA - AIR SIDE									
25	Air Quantity, Total	164,000	lb/h			Altitude	2,000	ft		
26	Air Quantity/Fan	41,484	ft³/min			Temperature In	100	°F		
27	Static Pressure	0.9	inH2O			Temperature Out	110	°F		
28	Face Velocity	18.84	ft/s	Bundle velocity	4,469	lb/h/ft²	Design Ambient	100	°F	
29	DESIGN-MATERIALS-CONSTRUCTION									
30	Design/Vac./Test Pres	550	/	0	/	0	psi	Design temperature	600	°F
31	TUBE BUNDLE		Header			Tube				
32	Size	8	ft	Type	Box	Material	Carbon Steel			
33	Number/bay	1		Material	Carbon Steel	Specifications				
34	Tube Rows	4		Passes	4	OD	1	Min Thk.	0.065	in
35	Arrangement			Plug Mat.		No./Bun	130	Lng	6	ft
36	Bundles	1	par	Gasket Mat.		Pitch	2.375	/	2.057	30 deg
37	Bays	1	par	Corr. Allow.	0	in	Fin			
38	Bundle frame			Inlet Nozzle	2	3 in	Type	L-finned		
39	MISCELLANEOUS			Outlet nozzle	2	3 in	Material	Aluminum 1060		
40	Struct. Mount.			Special Nozzles		OD	2.25	Tks	0.011	in
41	Surf.Pre			Rating	300	ANSI	No.	10	#/in	DesTemp
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	1	RPM	Mfr.		Mfr.&Model				
47	Dia.	5	ft	Blade(s)	No./Bay	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				
54	Plot Area	0	ft²	Drawing No.	Wt.Bundle	6,477	Wt. Unit	6,477	lb	
55	Notes:									
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