

Air-Cooled Heat Exchanger Specification Sheet

1	Client: EOG										
2	Location: Wyoming										
3	Service of Unit: Cooling Water										
4	Item No.: 190609										
5	Date: 2/3/2022										
6	Size & Type	50	/	15	ft	Type	Forced	Number of Bays	1		
7	Surf/Unit-Finned Tube	69,662 ft ²			Bare area/bundle	3,238	ft ²	Ratio (Total	21.51		
8	Heat exchanged	12798925 BTU/h			MTD, Eff	41.76 °F					
9	Transfer rate	5.22		Bare, Service	94.64	Clean	148.72 BTU/(h-ft ² -F)				
10	PERFORMANCE DATA - TUBE SIDE										
11	Fluid Circulated	Water					In/Out				
12	Total Fluid Entering	lb/h	160,000			Density, Liq	lb/ft ³	60.372	/	61.891	
13		BPD	10,000			Density, Vap	lb/ft ³	/			
14	Temperature	°F	190	/	110	Specific Heat, Liq	BTU/(lb-F)	1.0033	/	0.9976	
15	Liquid	lb/h	160000 / 160000			Specific Heat, Vap	BTU/(lb-F)	/			
16	Vapor	lb/h	0 / 0			Therm. Cond, Liq	BTU/(ft-h-F)	0.389	/	0.367	
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	124.7		
22	Viscosity, Liq	cp	0.3228	/	0.6146	Pres Drop, Allow/Calc	psi	10	/	4.01	
23	Viscosity, Vap	cp	/			Fouling resistance	ft ² -h-F/BTU	0.001			
24	PERFORMANCE DATA - AIR SIDE										
25	Air Quantity, Total	2,225,000	lb/h				Altitude	5,121	ft		
26	Air Quantity/Fan	313,679	ft ³ /min				Temperature In	90	°F		
27	Static Pressure	0.96	inH2O				Temperature Out	114	°F		
28	Face Velocity	15.31	ft/s	Bundle velocity	3,258	lb/h/ft ²	Design Ambient	90	°F		
29	DESIGN-MATERIALS-CONSTRUCTION										
30	Design/Vac./Test Pres	260	/	/	psi	Design temperature	200	°F			
31	TUBE BUNDLE		Header			Tube					
32	Size	50	ft	Type	Box	Material	Carbon Steel				
33	Number/bay	1		Material	Carbon Steel	Specifications					
34	Tube Rows	4		Passes	4	OD	1	Min Thk.	0.075	in	
35	Arrangement				Plug Mat.	No./Bun	266	Lng	48	ft	
36	Bundles	1	par	Gasket Mat.				Pitch	2.625 / 2.273	30 deg	
37	Bays	1	par	Corr. Allow.				Fin			
38	Bundle frame				Inlet Nozzle	2	6 in	Type	L-finned		
39	MISCELLANEOUS			Outlet nozzle	2	6 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	147.5	Mfr.	Mfr.&Model					
47	Dia.	14	ft	Blade(s)	9	No./Bay	No./Bay				
48	Pitch	Angle			RPM	Rating					
49	Blade(s)	Hub			4.083	Enclosure	Ratio				
50	hp/Fan	50	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	32,347	Wt. Unit	32,347			lb	
55	Notes:										
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