

Air-Cooled Heat Exchanger Specifics Sheet

1	Client: EOG										
2	Location: Wyoming										
3	Service of Unit: Cooling Water										
4	Item No.: 190607										
5	Date: 8/3/2021										
6	Size & Type	49.97	/	15.16	ft	Type	Forced	Number of Bays	1		
7	Surf/Unit-Finned Tube	70,161			ft ²	Bare area/bundle	3,261	ft ²	Ratio (Total)	21.51	
8	Heat exchanged	6,378,152			BTU/h	MTD, Eff	20.05		°F		
9	Transfer rate	4.91	Bare, Service		97.55	Clean	136.49		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	61.413		/	62.034
13		BPD	10,000			Density, Vap	lb/ft ³	/			
14	Temperature	°F	140	/	100	Specific Heat, Liq	BTU/(lb-F)	0.9973		/	0.9959
15	Liquid	lb/h	160,000			Specific Heat, Vap	BTU/(lb-F)	/			
16	Vapor	lb/h	0			Therm. Cond, Liq	BTU/(ft-h-F)	0.378		/	0.363
17	Noncondensable	lb/h	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	164.7		
22	Viscosity, Liq	cp	0.4668	/	0.6816	Pres Drop, Allow/Calc	psi	10		/	4.58
23	Viscosity, Vap	cp	/			Fouling resistance	ft ² -h-F/BTU	0.001			
24	PERFORMANCE DATA - AIR SIDE										
25	Air Quantity, Total	1,855,000	lb/h				Altitude	5121	ft		
26	Air Quantity/Fan	261,517	ft ³ /min				Temperature In	90 °F			
27	Static Pressure	0.67	inH2O				Temperature Out	104 °F			
28	Face Velocity	12.68	ft/s	Bundle velocity	2698.4	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.	0.065 in	
35	Arrangement			Plug Mat.			No./Bun	266	Lng	48 ft	
36	Bundles	1 par		Gasket Mat.			Pitch	2.625	/	2.27	30 deg
37	Bays	1 par		Corr. Allow.	in		Fin				
38	Bundle frame			Inlet Nozzle	2	6 in	Type	L-finned			
39	MISCELLANEOUS				Outlet nozzle	2	3 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.	14	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		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	30,522	Wt. Unit	30,522			lb
55	Notes:										
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