

Air-Cooled Heat Exchanger Specification Sheet

1	Client: TransTex										
2	Location:										
3	Service of Unit: Cooling Water										
4	Item No.: 190431 and 190432										
5	Date: 2/1/2023										
6	Size & Type	34	/	10	ft	Type	Forced	Number of Bays	1		
7	Surf/Unit-Finned Tube			43,904	ft ²	Bare area/bundle	2,041	ft ²	Ratio (Total)	21.51	
8	Heat exchanged			6361416	BTU/h	MTD, Eff		27.75	°F		
9	Transfer rate	5.67			Bare, Service	112.34	Clean	165.49	BTU/(h-ft ² -F)		
10	PERFORMANCE DATA - TUBE SIDE										
11	Fluid Circulated	Water				In/Out					
12	Total Fluid Entering	lb/h		254,528		Density, Liq	lb/ft ³	61.131	/	61.623	
13		BPD		16,000		Density, Vap	lb/ft ³	0	/	0	
14	Temperature	°F		160	/	135	Specific Heat, Liq	BTU/(lb-F)	0.9998	/	0.9997
15	Liquid	lb/h		254528	/	254528	Specific Heat, Vap	BTU/(lb-F)	0	/	0
16	Vapor	lb/h		0	/	0	Therm. Cond, Liq	BTU/(ft-h-F)	0.378	/	0.37
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	164.7		
22	Viscosity, Liq	cp		0.4042	/	0.4940	Pres Drop, Allow/Calc	psi	20	/	3.74
23	Viscosity, Vap	cp		0.0000	/	0.0000	Fouling resistance	ft ² -h-F/BTU	0.001		
24	PERFORMANCE DATA - AIR SIDE										
25	Air Quantity, Total	904,000	lb/h			Altitude	2,755	ft			
26	Air Quantity/Fan	120,505	ft ³ /min			Temperature In	105	°F			
27	Static Pressure	0.99	inH2O			Temperature Out	134	°F			
28	Face Velocity	13.6	ft/s	Bundle velocity	3,060	lb/h/ft ²	Design Ambient	105	°F		
29	DESIGN-MATERIALS-CONSTRUCTION										
30	Design/Vac./Test Pres	300	/	0	/	0	psi	Design temperature	250	°F	
31	TUBE BUNDLE		Header				Tube				
32	Size	34	ft	Type	Box	Material	Carbon Steel				
33	Number/bay	1		Material	Carbon Steel	Specifications					
34	Tube Rows	5		Passes	3	OD	1	Min Thk.	0.065	in	
35	Arrangement			Plug Mat.		No./Bun	253	Lng	32	ft	
36	Bundles	1	par	Gasket Mat.		Pitch	2.25	/	1.949	30 deg	
37	Bays	1	par	Corr. Allow.	0	in	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. Prep			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	MECHANICAL EQUIPMENT										
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	30	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 ²	Drawing No.	Wt. Bundle	18,034	Wt. Unit	18,034 lb			
55	Notes:										
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