

Chart Cooler Service Company

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AIR COOLED HEAT EXCHANGER
SPECIFICATION SHEET

190484

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1				Date:	3/8/2016	Rev. 2
2	Customer	Venloch XTL Oklahoma City, LLC		Item No.	AE-801	
3	Plant Location	Oklahoma City, OK	Ref. No.	GTL Project(004084)	Job. No.	45214
4	Service	LFTL Distillate Condenser		P.O. No.	4777010-14-03105	
5	Size and Type	Model: H72	FORCED	No. Bays	1	
6	Surface/Unit - Finned Tube	4237 02		Bare Tube	187.47 02	
7	Heat Exchanged	585,100 Btu/h		MTD, Eff.	60.7 °F	
8	Transfer Rate-Finned Tube	2,185	Bare Tube, Service	47.09	Clean	58.69 Btu/h.°F
PERFORMANCE DATA - TUBE SIDE						
10	Fluid Name	Regen Gas		Vapor Ref. Temp.	°F 234.05 / 109.88	
11	Total Fluid In	lb/h	2138	Specific Heat	Btu/lb.F 0.4844 / 0.3308	
12	Vapor	lb/h	2138	Viscosity	cP 0.0088 / 0.0120	
13	Liquid	lb/h	0	Conductivity	Btu/h.F 0.0118 / 0.0122	
14	Noncond	lb/h		Molecular Weight		
15	Steam	lb/h		Liquid Ref. Temp.	°F 234.05 / 109.88	
16	Water	lb/h		Specific Heat	Btu/lb.F 0.6252 / 0.5785	
17	Fluid Cond./Vapzd.	lb/h	2110 / 28.0	Viscosity	cP 0.2130 / 0.3308	
18	Temperature In/Out	°F	234.05 / 109.88	Conductivity	Btu/h.F 0.0597 / 0.0851	
19	Pressure	psia	29.888	Density	lb/l3 38.881 / 42.828	
20	Velocity In/Out	f/s	14.85 / 14.85			
21	Press. Drop Allow/C	psi	3.000 / 0.438	Fouling resistance	h.2.F/Btu 0.003	
PERFORMANCE DATA - AIR SIDE (Air)						
23	Air Quantity, Total	lb/h	105401.59	Altitude above Sea Level	ft 1155	
24	Air Quantity/Fan	acfm	25845	Temperature In (Dry Bulb)	°F 100	
25	Actual Static Press	in H2O	0.508	Temperature Out	°F 122.38	
26	Face Velocity	fpm	802	Min. Design Ambient	°F 0	
27	Max Mass Velocity	lb/h.ft2	8572.8	Fan Air Temperature	°F 100	
DESIGN - MATERIALS - CONSTRUCTION						
29	Design Pressure	75.000 psig	Test Pressure	87.5	Design Temperature	300.00 °F / -20
30	TUBE BUNDLE	HEADER, Type Plug Box		TUBE, Material	SA-249 TP304L	
31	Size	4.297 X 9.000	Material	SA-240 304L	Wld	
32	No./Bay 1	No./Rows 4	No. Passes 4	OD	1 Thick	0.083 in
33	Arrangement	Stops	0.3125	In/ft	No./Bundle	88
34	Bundles	Parallel	Plug Material	SA-162 F304L	Length	9 ft
35	Bays	Parallel	Gasket Material	SS	Pitch	2.3125 in
36	MISCELLANEOUS	Corrosion Allow.		0.0825 in	Fln, Type	TWF
37	Struct. Mount	Grade c/c	No. Size In Nozz.	2 - 2" 160# RF-WN	Material	Aluminum 1100-annealed
38	Surf Prep	SSPC-2	No. Size Out Nozz.	2 - 2" 160# RF-WN	OD	2.26 Thk 0.0115 in
39	Surf Finish	Galvanize	Vent and Drain	1" 8000#	No./In	10 Fin Design Temp
40	Hull Guards	None	TI	PI	Code -	Stamp Yes
41	Lozines / Actuators	Manual	Header Prep	None	X-RAY	API Spot PWHT No
42	Vibration Switches	Matrix 6550-121-021	Header Finish	None	SPECS.	AP7-881 Yes
MECHANICAL EQUIPMENT						
44	Fan Mfg	Driver		Speed Reducer		
45	Model Class 10000 Series 18 SC	Type		NEMA-1,16SF-Premium ER.	Type	V-Belt
46	No./ Bay 1	Rev/Min 658	Mfg.	Baldor or Equal	Mfg.	Gates
47	Dia. ft 6	No. Blades 4	No/Bay 1	Frame 215T	Model	373VX750 QD2/3V14.00
48	Pitch 18.75	Manual	hp /Driver	10	No/Bay	1 QD2/3V4.50
49	Matl:Blade	AL	Hub AL	Rev/Min	1750	AGMA Rating, hp 1.4
50	hp/Fan, Design	6.85	Enclosure	TEFC Ins F TR B	Ratio	3.138
51	hp/Fan, Min Amb	7.12	Volt:Phase/Cycle	480/3/60	Support	Structure
52	Plot Area	8 x 7.0828	ft2	Total Weight (per bay)	6600	Dry [Cn] Vol 38 Gal
53	Walkways	Width	Type	Recirculation	Wind Load	30 PSF
54	Inlet				Setsmic Zone	0
55	Outlet					
56	Drive					
57	Design includes 30% margin on flow and duty					
58	The AE-801 Air Cooler shares the same structure and fan with AE-802					
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