

REV 1

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**AIR COOLED EXCHANGER
SPECIFICATION SHEET**

Date Tue*10:54 am*22-FEB-11

Proposal/Job No. 2011B-062-01

Reference 34402

Item No. AC-360

1	Customer	AMERESCO WOODLAND MEADOWS			
2	Plant Location	WAYNE, MI			
3	Service	AMBIENT COOLER			
4	Model	1 F10-080-1	Type	FORCED	No. of Bays 1
5	Surface per Unit-Finned Tube	14,050	Ft ²	Bare Tubes	717.2 Ft ²
6	Heat Exchanged	459,400	BTU/Hr	MTD (Eff.)	35.1 (Counter Flow) °F
7	Transfer Rate-Finned Tube	0.93	Bare Tube, Service	18.25	BTU/Hr. Ft ² °F

PERFORMANCE DATA-TUBE SIDE

9	Fluid Name	LANDFILL GAS		Lethal Service	Yes ☐ No ☒	IN	OUT
10	Total Fluid Entering	Lb/Hr	36,000	Density	Lb/Ft ³	.120	.128
11		IN	OUT	Specific Heat (Liq/Vap)	BTU/Lb°F	/ .319	/ .319
12	Temperature	°F	170.0	Cond. avg (Liq/Vap)	BTU/HrFt°F		.0200
13	Liquid	Lb/Hr		Pour/Freeze Point	°F		
14	Vapor	Lb/Hr (MW)	36,000 (28.5)	Bubble Point	°F		
15	Nocond	Lb/Hr (MW)		Latent Heat	BTU/Lb		
16	Steam	Lb/Hr		Pressure	Psia	28.50	
17	Water	Lb/Hr		Pressure Drop Allow/Calc	Psi	0.30 / 0.32	
18	Viscosity (Liq/Vap)	Cp	/ .013	Fouling resist, Inside	ft ² hr °F/ BTU	0.00100	

PERFORMANCE DATA-AIR SIDE

20	Air Quantity	SCFM	36,860	Lb/Hr	165,900	Altitude	Ft	750
21	Air Quantity/Fan	ACFM	40,230			Temperature In	°F	105.0
22						Temperature Out	°F	116.5
23								

DESIGN - MATERIAL - CONSTRUCTION

25	Design Pressure	50	Psig	Test Pressure	65	Psig	Design Temperature	300 / MDMT -20	°F
26	TUBE BUNDLE			HEADER, Type PLUG BOX			TUBE Material SA-249 T304		
27	Size	7.9 x 10.0		Material	SA-240 304				
28	No. 1	No. Tube Rows	6	No. Passes	1	Slope	0.0000	In/Ft	OD 1.250 In Avg. Thick 0.0490 In
29	Bays	1	In Parallel	In Series	Plug	3042220	No./Bundle	219	Length 10.0 Ft
30	Bundles	1	In Parallel	In Series	Gasket	316L2213	Pitch	2.5625	In Δ
31	Pass Arrangement (Top to Bottom)			Corrosion Allowance	0.0000	In	FIN Type	L-TENSION	
32	Rows / Pass	6 / 1		Size In Nozzle (1)	14.00	SCH XS SA-312TP304n	Material	ALUM	
33	Turbulators	NO		Size Out Nozzle (1)	14.00	SCH XS SA-312TP304n	OD	2.500 In	Stock Thick 0.015 In
34	Steam Coil	NO		Rating & Facing	150 -RF	SA-182F304	No./In	10	Support Chan. / Staple
35	Hailscreens	YES		Vent (2)	3/4-3000	Drain (2)	3/4-3000	Code-ASME VIII, Div 1	YES
36	Louvers	ALUM (1)	DURASTROKE 1500	TI	PI		Radiograph	N	Heat Treat N
37	Frame Finish	HTC 1	Coat Galvanize	Header Finish			Tube Hole Grooving	YES	

MECHANICAL EQUIPMENT

39	FAN Mfg & Model	MOORE 27 5000 VT Tips	DRIVER Type	ELECTRIC MOTOR	SPEED REDUCER Type	V-BELT
40	No./Bay	1	RPM	413	S.F.	1.15
41	Dia.	6.0 Ft.	No. Blades	4	Insul/TR	CLASS F / B
42	Pitch	ADJUSTABLE	Angle°	11.	No./Bay	1
43	Matl, Blade	ALUMINUM	Hub	EXT ALUM	Frame	213T HP 7.5
44	HP/Fan, Des.	4.5	DBA	65 @ 30'	RPM (1)	1750
					Duty	CHEM
					Enclosure	TEFC (H.E.) V & D V&D
					V/P/C	460/3/60
					Space Heater	NO
					Vibration Switch	MURPHY VS-2EX

STRUCTURE**WALKWAYS**

45	Mounting	GRADE	Inlet Header	in. None
46	Windload - PSF	30.0	Seismic	2
47	Finish	HTC 1	Snowload	30.0
			Outlet/Return	in. None
			Drive Access	in. None

NOTES

48	Coil Volume (ft ³):	34.
49	Assembled Drive, Structure & Bundles (Within Shipping Restrictions)	
50		
51		
52		
53		
54		
55	Plot Area	8.0 x 10.0 ft
	Weight Bundle	6,038
	Lbs	Total Shipping
		10,110
		Lbs