



Date	12/18/01	Rev.		By	lb
Proposal	21724LB	Item No.	A		
Job No.	R-3989	Item No.	1		

**GEA Rainey Corporation**

1	Customer	ExxonMobil Global Services Company	Cust. PO No.	4501066852
2	Address	HOUSTON, TX	Plant Location	THEODORE, AL

3	Service	WELLSTREAM COOLER				Wt/Bay	
4	1 Model	1-1134T120	Forced Draft	No. of Bays	1	No. of Fan Cells / Bay	2
5	Dimensions	L 35' 0"	W 11' 0"	H 23' 1"	Grade Mounted	Shop Assembled Unit(s)	

**PERFORMANCE**

7	Customer Item	HAL-201				
8	Fluid Circulated	SOUR NATURAL GAS & PRODUCED LIQUIDS				
9	Heat Exchanged	Btu/hr	14,780,000.0			
10	U External - Bare	Btu/hr-ft <sup>2</sup> -°F	4.817 - 111.9			
11	CLMTD	°F	72.91			
12	External Surface	ft <sup>2</sup>	42,086.0			
13	Bare Tube Surface	ft <sup>2</sup>	1,812.0			

**TUBE SIDE**

15	Total Flow	lbs/hr	104,143.0			
16			<b>IN</b>		<b>OUT</b>	
17	Vapor	"	101,964.0		98,434.0	
18	Liquid	"	2,179.0		5,709.0	
19	Steam	"	0.0		0.0	
20	Non-Condensable	"	0.0		0.0	
21	Temperature	°F	285.0		120.0	
22	Pressure	psig	2,000.0		1,985.8	
23	Pressure Drop	psi	Allowed:	50.0	Calculated:	14.2
24	Density	L/V lbs/ft <sup>3</sup>	59.7 (AVG) / 4.7700			
25	Viscosity	L/V cP	0.147 / 0.0180		0.593 / 0.0170	
26	Vapor Molecular Weight		17.9		17.9	
27	Specific Heat	L/V Btu/lb-°F	1.046 (Avg) / 0.675 (Avg)			
28	Thermal Conductivity	L/V Btu/hr-ft-°F	0.3845 (Avg) / 0.0315 (Avg)			
29	Fouling Resistance	IS hr-ft <sup>2</sup> -°F/Btu	0.00200			

**AIR SIDE**

31	Temperature In - Out	°F	95.0 - 150.1		( Min. Amb. = 20.0 )	
32	Elev 50 ft	Air Quantity	lbs/hr	1,118,000.0		

**CONSTRUCTION**

34	Design Press.	psig - Temp. °F	3585 - 350		( MDMT = )	
35	Codes	ASME VIII/1, API 4th Ed.				
36	No. Bundles - Tubes / Bundle	1 - 208				
37	No. Rows - Passes / Bundle	4 - 4				
38	Header Type - Corrosion Allowance	PLUG BOX-0				
39	Header Material	SB-424 Alloy 825 - 100%XR				
40	Shoulder Plug /Gasket Material	Alloy 825 / Alloy 825				
41	Nozzles In - Out - Series / Bundle	4"(2) - 4"(2) - 1500# WNRTJ				
42	Tube Material	SB-163 Alloy 825				
43	Tube O.D. - BWG - Length	1" - 0.075" MIN - 34'				
44	Fin Material - Bond Type	ALUMINUM - L-FOOTED				
45	Fin Height - No. Fins / Inch	Tri	Pitch	5/8" - 11.0 - 2-3/8"		

**FAN MECHANICAL EQUIPMENT MISCELLANEOUS**

48	Mfr. MOORE	SPEED REDUCER		DRIVER		1) Auto Louvers
49	Model 5000-40VT MAN ADJ	Type	V-BELT	Type	ELECTRIC MOTOR	2) Guards: Fan, Belt
50	hp/fan 22.50	No. of Fans	2	Mfr.	Reliance	3) Vibration Switch/fan
51	Dia. 10	No. of Blades	8	Model No.	hp/Driver 30.0	4) Struc Prep: Galvanize
52	RPM 311	Pitch	11.1°	Ratio	5.63::1	Enclosure TEFC (Hi Effic)
53	Tip Speed	9,770 ft/min		Service Factor	1.40	Service Factor
54	ACFM/Fan	130,400.0		No. of Belts	6	RPM 1,750
55	Blade Material	ALUMINUM		Support:	Suspended	
56	Static Pressure	0.614 inH <sub>2</sub> O				
57	SPL/Fan @ 3 ft	= 85.0 dBA				