

Heat Exchanger Specification Sheet

1	Altogas		15 MMSCFD				
2	15 MMSCFD Gas Plant						
3	E-101 Gas Chiller						
4	:						
5	Date:	Rev No.:	Job No.:				
6	Size	13--240	in	Type BEM	hor	Connected in 1 parallel 1 series	
7	Surf/unit (eff.)	471	ft ²	Shells/unit 1	Surf/shell (eff.)	471 ft ²	
8	PERFORMANCE OF ONE UNIT						
9	Fluid allocation			Shell Side		Tube Side	
10	Fluid name			Propane		Wet Gas	
11	Fluid quantity, Total	lb/h	5756		33740		
12	Vapor (In/Out)	lb/h	1931	5755	31756	30781	
13	Liquid	lb/h	3825	1	1984	2959	
14	Noncondensable	lb/h					
15							
16	Temperature (In/Out)	°F	-6.66	-4.62	31.04	2.21	
17	Dew / Bubble point	°F	-4.62	-6.66	31.04		
18	Density	lb/ft ³	35.02	0.297	2.215	37.6	
19	Viscosity	cp	0.164	0.007	0.011	6.32	
20	Molecular wt, Vap		43.53	43.96	19.28	18.88	
21	Molecular wt, NC						
22	Specific heat	BTU/(lb F)	0.5515	0.3655	0.5639	0.588	
23	Thermal conductivity	BTU/(ft h F)	0.071	0.008	0.018	0.059	
24	Latent heat	BTU/lb	173.2	172.6	117.4	112.4	
25	Pressure	psi	34.48		509.7		
26	Velocity	ft/s	8.08		18.03		
27	Pressure drop, allow./calc.	psi	0.1	1.012	10	1.436	
28	Fouling resist. (min)	ft ² h F/BTU	0.001		0.001		
29	Heat exchanged	667075	BTU/h	MTD corrected		19.04 °F	
30	Transfer rate, Service	74.45	Dirty	90.43	Clean	113.98 BTU/(h ft ² F)	
31	CONSTRUCTION OF ONE SHELL					Sketch	
32		Shell Side		Tube Side			
33	Design/Test pressure	psi	300/	/Code	1415/		/Code
34	Design temperature	°F	150		150		
35	Number passes per shell		1		1		
36	Corrosion allowance	in	0.0625		0.0625		
37	Connections	In	4/ 300 ANSI		6/600 ANSI		
38	Size/rating	Out	8/ 300 ANSI		6/600 ANSI		
39		in/	/ 300 ANSI		1/600 ANSI		
39		Intermediate					
40	Tube No. 122	OD 0.75	Tks-avg 0.083	in	Length 20	ft Pitch 0.9375 in	
41	Tube type Plain	Material CS			Tube pattern	30	
42	Shell CS	ID	OD 14	in	Shell cover		
43	Channel or bonnet CS				Channel cover		
44	Tubesheet-stationary CS				Tubesheet-floating		
45	Floating head cover				Impingement protection None		
46	Baffle-crossing CS	Type	single seg	Cut(%d)	43	vert Spacing: c/c 30 in	
47	Baffle-long	Seal type			Inlet	10.8125 in	
48	Supports-tube	U-bend			Type		
49	Bypass seal	Tube-tubesheet joint			groove/expand		
50	Expansion joint	Type					
51	RhoV2-Inlet nozzle	113	Bundle entrance	4	Bundle exit	39 lb/(ft s ²)	
52	Gaskets - Shell side	Tube Side					
53	Floating head						
54	Code requirements	ASME Code Sec VIII Div 1			TEMA class C		
55	Weight/Shell	4270.7	Filled with water	5421.7	Bundle	2222.2 lb	
56	Remarks						
57							
58							