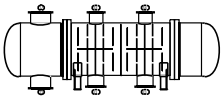
TEMA Sheet

Heat Exchanger Specification Sheet

1	Company:					
2	Location:					
3	Service of Unit:	Our Reference:				
4	Item No.:	Your Reference:				
5	Date:	Rev No.:	Job No.:			
6	Size: 1092 - 2184.4 mm	Type: BHM Horizontal		Connected in: 1 parallel 1 series		
7	Surf/unit(eff.) 198.3 m²	Shells/unit 1		Surf/shell(eff.) 198.3 m²		
8	**PERFORMANCE OF ONE UNIT**					
9	Fluid allocation		Shell Side		Tube Side	
10	Fluid name		Chilled Water		Process Gas	
11	Fluid quantity, Total kg/h		565822		92154	
12	Vapor (In/Out) kg/h		0	0	528	93
13	Liquid kg/h		565822	565822	1323	1758
14	Noncondensable kg/h		0	0	90303	90303
15						
16	Temperature (In/Out) °C		7	11.21	46	16.79
17	Bubble / Dew point °C		/	/	-227.07 / 71.51	-227.1 / 71.38
18	Density Vapor/Liquid kg/m³		/ 1000.12	/ 999.8	10.22 / 990.88	11.15 / 976.2
19	Viscosity cp		/ 1.4267	/ 1.2618	0.0113 / 0.5834	0.0105 / 0.8303
20	Molecular wt, Vap				8.9	8.88
21	Molecular wt, NC				8.88	8.88
22	Specific heat kJ/(kg-K)		/ 4.2	/ 4.193	3.269 / 4.801	3.273 / 4.707
23	Thermal conductivity W/(m-K)		/ 0.5725	/ 0.5814	0.112 / 0.6387	0.1043 / 0.5947
24	Latent heat kJ/kg				2492.7	2587.2
25	Pressure (abs) bar		3.5	3.43781	31.01325	30.81992
26	Velocity (Mean/Max) m/s		0.49 / 0.73		16.45 / 16.85	
27	Pressure drop, allow./calc. bar		0.25	0.06219	0.2	0.19333
28	Fouling resistance (min) m²-K/W		9E-05		0.00017	0.00022 Ao based
29	Heat exchanged 2.384 Mkcal/h			MTD (corrected) 19.83 °C		
30	Transfer rate, Service 705.2	Dirty 705.3		Clean 899.9 W/(m²-K)		

31	**CONSTRUCTION OF ONE SHELL**						**Sketch**	
32			Shell Side		Tube Side			
33	Design/Vacuum/test pressure:g kPa		413.686 / /		3447.38 / /			
34	Design temperature / MDMT °C		82.22 /		82.22 /			
35	Number passes per shell		2		2			
36	Corrosion allowance mm		3.18		3.18			
37	Connections	In mm	2 304.8 / -		1 387.35 / -			
38	Size/Rating	Out	2 254.51 / -		1 387.35 / -			
39	ID	Intermediate	/ -		/ -			



40	Tube #: 1659	OD: 19.05	Tks. Average 2.11 mm	Length: 2184.4 mm	Pitch: 23.81 mm	Tube pattern:30
41	Tube type: Plain	Insert:None		Fin#: #/m	Material:Carbon Steel	
42	Shell Carbon Steel	ID 1092.2	OD 1117.6 mm	Shell cover -		
43	Channel or bonnet Carbon Steel			Channel cover -		
44	Tubesheet-stationary Carbon Steel	-		Tubesheet-floating -		
45	Floating head cover -			Impingement protection None		
46	Baffle-cross Carbon Steel	Type Double segmental	Cut(%d) 14.13	Horiz.Spacing: c/c 196.85 mm		
47	Baffle-long Carbon Steel	Seal Type		Inlet 157.48 mm		
48	Supports-tube U-bend	0		Type		
49	Bypass seal		Tube-tubesheet joint	Expanded only (2 grooves)(App.A 'i')		
50	Expansion joint -		Type None			
51	RhoV2-Inlet nozzle 1160	Bundle entrance 2220		Bundle exit 3006 kg/(m-s²)		
52	Gaskets - Shell side -		Tube side	Flat Metal Jacket Fibe		
53	Floating head -					
54	Code requirements	ASME Code Sec VIII Div 1		TEMA class R - refinery service		
55	Weight/Shell 8587	Filled with water 11665.1		Bundle 4674 kg		
56	Remarks					
57						
58						