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: 152 - 1828.8 mm	Type: BEM Horizontal		Connected in: 1 parallel 1 series		
7	Surf/unit(eff.) 3.4 m²	Shells/unit 1		Surf/shell(eff.) 3.4 m²		
8	**PERFORMANCE OF ONE UNIT**					
9	Fluid allocation	Shell Side		Tube Side		
10	Fluid name					
11	Fluid quantity, Total kg/s	0.347		1.9762		
12	Vapor (In/Out) kg/s	0	0	0	0	
13	Liquid kg/s	0.347	0.347	1.9762	1.9762	
14	Noncondensable kg/s	0	0	0	0	
15						
16	Temperature (In/Out) °C	78.82	42.43	25	30.12	
17	Bubble / Dew point °C	/	/	/	/	
18	Density Vapor/Liquid kg/m³	/ 742.87	/ 748.86	/ 993.96	/ 990.49	
19	Viscosity mPa-s	/ 0.4247	/ 0.471	/ 0.9125	/ 0.8459	
20	Molecular wt, Vap					
21	Molecular wt, NC					
22	Specific heat kJ/(kg-K)	/ 3.297	/ 3.242	/ 4.12	/ 4.133	
23	Thermal conductivity W/(m-K)	/ 0.1582	/ 0.1595	/ 0.6063	/ 0.5502	
24	Latent heat kJ/kg					
25	Pressure (abs) bar	1.04	1.02626	1	0.92188	
26	Velocity (Mean/Max) m/s	0.05 / 0.06		0.87 / 0.87		
27	Pressure drop, allow./calc. bar	0.1104	0.01374	0.20684	0.07812	
28	Fouling resistance (min) m²-K/W	0		0	0 Ao based	
29	Heat exchanged 42.7 kW			MTD (corrected) 29.53 °C		
30	Transfer rate, Service 423.2	Dirty 524.9		Clean 524.9 W/(m²-K)		
31	**CONSTRUCTION OF ONE SHELL**			**Sketch**		
32		Shell Side		Tube Side		
33	Design/Vacuum/test pressure bar	3.44738 / /		3.44738 / /		
34	Design temperature °C	115.56		65.56		
35	Number passes per shell	1		2		
36	Corrosion allowance mm	0		0		
37	Connections In mm	1 19.05 / -		1 31.75 / -		
38	Size/Rating Out	1 19.05 / -		1 31.75 / -		
39	Nominal Intermediate	1 / -		1 / -		
40	Tube #: 44 OD: 14 Tks. Average 1.24 mm	Length: 1828.8 mm	Pitch: 18 mm	Tube pattern:30		
41	Tube type: Plain	Insert:None	Fin#: #/m	Material:SS 304		
42	Shell SS 304 ID 162.74 OD 168.28 mm		Shell cover -			
43	Channel or bonnet SS 304		Channel cover -			
44	Tubesheet-stationary SS 304 -		Tubesheet-floating -			
45	Floating head cover -		Impingement protection None			
46	Baffle-cross SS 304 Type Single segmental	Cut(%d) 41.8	Horiz	Spacing: c/c 146.05 mm		
47	Baffle-long - Seal Type		Inlet 225.42 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 1369	Bundle entrance 1	Bundle exit 1 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 144.8 Filled with water 180.7		Bundle 50.2 kg			
56	Remarks					
57						
58