

Output Summary

Page 1

Released to the following HTRI Member Company:

BUET

Anas

Xist E Ver. 6.00 12/18/2020 7:04 SN: Vals100+

SI Units

Design - Vertical Multipass Flow TEMA CEU Shell With Rod baffles Baffles

See Data Check Messages Report for Warning Messages.

See Runtime Message Report for Warning Messages.

Process Conditions			Cold Shellside		Hot Tubeside	
Fluid name			Water		Water	
Flow rate (kg/s)			78.0004		649.972	
Inlet/Outlet Y (Wt. frac vap.)			0.000	1.000	0.000	0.000
Inlet/Outlet T (Deg C)			200.00	285.00	337.00	300.00
Inlet P/Avg (kPa)			6900.10	6888.06	15000.2	14990.1
dP/Allow. (kPa)			24.080	0.000	20.194	0.000
Fouling (m2-K/W)			0.000090		0.000090	
Exchanger Performance						
Shell h (W/m2-K)			8425.18	Actual U (W/m2-K)	2115.29	
Tube h (W/m2-K)			12507.8	Required U (W/m2-K)	2106.49	
Hot regime (--)			Sens. Liquid	Duty (MegaWatts)	150.304	
Cold regime (--)			Flow	Area (m2)	1995.76	
EMTD (Deg C)			35.7	Overdesign (%)	0.42	
Shell Geometry				Baffle Geometry		
TEMA type (--)			CEU	Baffle type (--)	RODBaffle	
Shell ID (mm)			2310.00	Baffle cut (Pct Dia.)		
Series (--)			1	Baffle orientation (--)		
Parallel (--)			1	Central spacing (mm)	152.400	
Orientation (deg)			90.00	Crosspasses (--)	33	
Tube Geometry				Nozzles		
Tube type (--)			Plain	Shell inlet (mm)	258.877	
Tube OD (mm)			19.050	Shell outlet (mm)	336.551	
Length (m)			5.500	Inlet height (mm)	177.122	
Pitch ratio (--)			1.3333	Outlet height (mm)	2310.00	
Layout (deg)			90	Tube inlet (mm)	641.351	
Tubecount (--)			5638	Tube outlet (mm)	641.351	
Tube Pass (--)			2			
Thermal Resistance, %			Velocities, m/s		Flow Fractions	
Shell 25.11		Shellside	0.40	A		
Tube 19.45		Tubeside	1.55	B		
Fouling 40.94		Crossflow	0.00	C		
Metal 14.50		Window	0.40	E		
				F		