HEAT EXCHANGER RATING DATA SHEET

SI Units

Service of Unit		Item No.	
Type CEU	Orientation Vertical	Connected In 1 Parallel 1 Series	
Surf/Unit (Gross/Eff) 2107.99 / 1995.76 m2	Shell/Unit 1	Surf/Shell (Gross/Eff) 2107.99 / 1995.76 m2	

PERFORMANCE OF ONE UNIT

Fluid Allocation		Shell Side		Tube Side	
Fluid Name		Water		Water	
Fluid Quantity, Total	kg/s	78.0004		649.972	
Vapor (In/Out)	wt%	0.0	100.0	0.0	0.0
Liquid	wt%	100.0	0.0	100.0	100.0
Temperature (In/Out)	C	200.00	285.00	337.00	300.00
Density	kg/m3	868.67	35.720	625.14	725.53
Viscosity	mN-s/m2	0.1356	0.0189	0.0724	0.0883
Specific Heat	kJ/kg-C	4.4639	5.2484	7.5810	5.4764
Thermal Conductivity	W/m-C	0.6682	0.0637	0.4727	0.5588
Critical Pressure	kPa				
Inlet Pressure	kPa	6900.10		15000.2	
Velocity	m/s	0.40	0.40	2.00	1.55
Pressure Drop, Allow/Calc	kPa		24.080		20.194
Average Film Coefficient	W/m2-K	8425.18		12507.8	
Fouling Resistance (min)	m2-K/W	0.000090		0.000090	

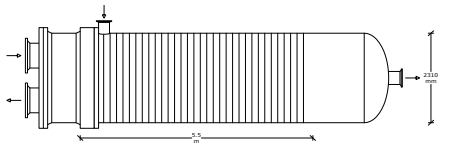
Heat Exchanged 150.304 MegaWatts MTD (Corrected) 35.7 C Overdesign 0.42 %

Transfer Rate, Service 2106.49 W/m2-K Calculated 2115.29 W/m2-K Clean 3581.43 W/m2-K

CONSTRUCTION OF ONE SHELL

Sketch (Bundle/Nozzle Orientation)

			Shell Side	Tube Side
Design Pressure		kPaG	6798.78	14898.9
Design Temperature		C	337.00	337.00
No Passes per Shell			1	2
Flow Direction			Upward	
Connections Size & Rating	In	mm	1 @ 258.877	1 @ 641.351
	Out	mm	1 @ 336.551	1 @ 641.351
	Liq. Out	mm	@	@



Tube No. 5638 OD 19.050 mm Thk(Avg) 1.245 mm Length 5.500 m Pitch 25.399 mm Layout 90

Tube Type Plain	Material INCONEL (76 NI, 16 CR, 8 FE)	Pairs seal strips	1
Shell ID 2310.00 mm	Kettle ID mm	Passlane Seal Rod No.	0
Cross Baffle Type RODBAFFLE	%Cut (Diam)	Impingement Plate	None
Spacing(c/c) 152.400 mm	Inlet mm	No. of Crosspasses	33
Rho-V2-Inlet Nozzle 2527.99 kg/m-s2	Shell Entrance	Shell Exit	kg/m-s2
	Bundle Entrance	Bundle Exit	kg/m-s2
Weight/Shell 68263.9	Filled with Water 106265	Bundle 32156.6 kg	

Notes:	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