TEMA Sheet

Heat Exchanger Specification Sheet

1	Company: SIMACRO	Chemical						
2	Location: ME							
3	Service of Unit: 1 Our Reference: 864-E-1101A/B							
4	Item No.: HE101 Your Reference: 864-E-1101A/B							
5	Date: Rev No.: 001 Job No.: 001							
6	Size: 1270 - 5250	mm Ty	Horizontal	orizontal Connected in: 1 parallel 1 series				
7	Surf/unit(eff.) 687.2 m ² Shells/unit 1 Surf/shell(eff.) 687.2 m ²							
8	PERFORMANCE OF ONE UNIT							
9	Fluid allocation			Shell	Side	Tube Side		
10	Fluid name							
11	Fluid quantity, Total kg/h			387489		491788		
12	Vapor (In/Out) kg/h			7		0	0	61933
13	· · · · · · · · · · · · · · · · · · ·			387483		387489	491788	429855
14	Noncondensable kg/h			0		0	0	0
15		171.15						
-	Temperature (In/Out) °C					116.63 173.5 / 314.59	79.87 81.54 / 350.07	113.62 80.93 / 348.55
17	Bubble / Dew point °C							
-	7 1 1					/ 673.79	/ 659.99	14.12 / 652.95
19	Viscosity			/ 0.3695	/ 0.344	0.0102 / 0.3073		
20	Molecular wt, Vap	79.3	3			57.74		
21 22	Molecular wt, NC Specific heat	2.409 /	2 72F	/ 2.507	/ 2.423	2.177 / 2.523		
23	Thermal conductivity		kJ/(kg-K) W/(m-K)	0.0283 / 0		/ 0.1024	/ 2.423	0.0255 / 0.093
24	Latent heat		kJ/kg	243.		245.9	299.8	280.3
-				703.6		694.476	721.192	713.567
_	` '			0.56 / 0.68			0.93	
27	Pressure drop, allow./o	calc.	kPa	13.79 9.221		20.684	7.625	
-	Fouling resistance (min		m²-K/W	0.00018			00023 Ao based	
-	Heat exchanged	16282.8	kW			MTD (cor	rrected) 48.01	°C
30	Transfer rate, Service 493.5 Dirty 409.3 Clean 490 W/(m²-							\\//m2 I/\
		493.3		Dirty	100.0	O I C	Zaii +30	۷۷/(۱۱۱ ⁻ -۱۲)
31	, , , , , , , , , , , , , , , , , , , ,		CTION OF ONE S	,	100.0			etch
31 32		CONSTRU	Shell Si	SHELL de		Tube Side		` '
31 32 33	Design/Vacuum/test pr	constru ressure:g kPa	Shell Si	SHELL	800	Tube Side		` '
31 32 33 34	Design/Vacuum/test pr Design temperature / N	ressure:g kPa	Shell Si 800 / 210 /	SHELL de		Tube Side		` '
31 32 33 34 35	Design/Vacuum/test pr Design temperature / Number passes per sh	ressure:g kPa	Shell Si 800 / 210 / 1	SHELL de	800	Tube Side / / / 1		` '
31 32 33 34 35 36	Design/Vacuum/test pr Design temperature / Number passes per sh Corrosion allowance	ressure:g kPa MDMT °C nell mm	Shell Si 800 / 210 / 1 3.18	de /	800 150	Tube Side / / / / 1 1 3.18		` '
31 32 33 34 35 36 37	Design/Vacuum/test properties of the Design temperature / Number passes per shour Corrosion allowance Connections	ressure:g kPa MDMT °C nell mm In mm	Shell Si 800 / 210 / 1 3.18 1 488.95 /	SHELL de	800 150	Tube Side / / / 1 3.18 887.35 / -		` '
31 32 33 34 35 36 37 38	Design/Vacuum/test properties of the Design temperature / Number passes per shour Corrosion allowance Connections Size/Rating	ressure:g kPa MDMT °C nell mm	Shell Si 800 / 210 / 1 3.18	SHELL de	800 150	Tube Side / / / 1 3.18 887.35 / -		` '
31 32 33 34 35 36 37 38 39	Design/Vacuum/test properties of the properties	ressure:g kPa MDMT °C nell mm In mm Out	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 /	de /	800 150 1 3 1 4	Tube Side / / / 1 3.18 887.35 / - /88.95 / -		` ′
31 32 33 34 35 36 37 38 39 40	Design/Vacuum/test properties of the properties	ressure:g kPa MDMT °C nell mm In mm Out Intermediate OD: 19.05 Tks. Ave	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 /	de /	800 150 1 3 1 4	Tube Side /	Ske	Tube pattern:30
31 32 33 34 35 36 37 38 39 40 41 42	Design/Vacuum/test properties of the properties	ressure:g kPa MDMT °C nell mm In mm Out Intermediate OD: 19.05 Tks. Ave	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 / / rage 2.11	SHELL de / mm Len	800 150 1 3 1 4 gth: 52	Tube Side / / 1 3.18 887.35 / - 88.95 / - / - 250 mm Pitc #/m Shell cover	Ske	Tube pattern:30
31 32 33 34 35 36 37 38 39 40 41 42 43	Design/Vacuum/test properties of the properties	ressure:g kPa MDMT °C nell In mm Out Intermediate OD: 19.05 Tks. Ave Inser ID 1270 Carbon Steel	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 / rrage 2.11 t:None	SHELL de / mm Len	800 150 1 3 1 4 gth: 52 Fin#:	Tube Side / / / 1 3.18 387.35 / - 88.95 / - / - 250 mm Pitc #/m Shell cover Channel cover	h: 23.81 mm Material:Carbon	Tube pattern:30
31 32 33 34 35 36 37 38 39 40 41 42 43 44	Design/Vacuum/test properties of the properties	ressure:g kPa MDMT °C nell mm In mm Out Intermediate OD: 19.05 Tks. Ave	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 / rrage 2.11 t:None	SHELL de / mm Len	800 150 1 3 1 4 gth: 52 Fin#:	Tube Side /	h: 23.81 mm Material:Carbon	Tube pattern:30
31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	Design/Vacuum/test properties of the properties	ressure:g kPa MDMT °C nell In mm Out Intermediate OD: 19.05 Tks. Ave Inser ID 1270 Carbon Steel Carbon Steel	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 / / rrage 2.11 t:None OD 1320	SHELL de / mm Len	800 150 1 3 1 4 gth: 52 Fin#:	Tube Side /	h: 23.81 mm Material:Carbon	Tube pattern:30 Steel
31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	Design/Vacuum/test properties of the properties	ressure:g kPa MDMT °C nell In mm Out Intermediate OD: 19.05 Tks. Ave Inser ID 1270 Carbon Steel Carbon Steel	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 / / rage 2.11 t:None OD 1320 e Single segm	SHELL de / mm Len	800 150 1 3 1 4 gth: 52 Fin#:	Tube Side /	h: 23.81 mm Material:Carbon tection None priiSpacing: c/c 585	Tube pattern:30 Steel
31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	Design/Vacuum/test properties of the properties of the provided HTML Properties of the properties of t	ressure:g kPa MDMT °C nell mm In mm Out Intermediate OD: 19.05 Tks. Ave Inser ID 1270 Carbon Steel Carbon Steel - Steel Typ	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 / rrage 2.11 t:None OD 1320 - e Single segm Seal Type	SHELL de / mm Len	800 150 1 3 1 4 gth: 52 Fin#:	Tube Side /	h: 23.81 mm Material:Carbon	Tube pattern:30 Steel
31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	Design/Vacuum/test pr Design temperature / N Number passes per sh Corrosion allowance Connections Size/Rating ID Tube #: 2245 Tube type: Plain Shell Carbon Steel Channel or bonnet Tubesheet-stationary Floating head cover Baffle-cross Carbon S Baffle-long - Supports-tube	ressure:g kPa MDMT °C nell In mm Out Intermediate OD: 19.05 Tks. Ave Inser ID 1270 Carbon Steel Carbon Steel	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 / prage 2.11 t:None OD 1320 - e Single segm Seal Type 0	check de / / / / / / / / / / / / / / / / / /	800 150 1 3 1 4 gth: 52 Fin#: mn	Tube Side /	h: 23.81 mm Material:Carbon	Tube pattern:30 Steel mm 97 mm
31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	Design/Vacuum/test pr Design temperature / N Number passes per sh Corrosion allowance Connections Size/Rating ID Tube #: 2245 Tube type: Plain Shell Carbon Steel Channel or bonnet Tubesheet-stationary Floating head cover Baffle-cross Carbon S Baffle-long - Supports-tube Bypass seal	ressure:g kPa MDMT °C nell mm In mm Out Intermediate OD: 19.05 Tks. Ave Inser ID 1270 Carbon Steel Carbon Steel - Steel Typ	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 / prage 2.11 t:None OD 1320 - e Single segm Seal Type 0	sHELL de / mm Len .8	800 150 1 3 1 4 gth: 52 Fin#: mn	Tube Side / / 1 3.18 887.35 / - 88.95 / - 7 250 mm Pitc #/m Shell cover Channel cover Tubesheet-floatir Impingement pro 35.39 Ho	h: 23.81 mm Material:Carbon tection None priiSpacing: c/c 585	Tube pattern:30 Steel mm 97 mm
31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	Design/Vacuum/test properties of the properties	ressure:g kPa MDMT °C nell mm In mm Out Intermediate OD: 19.05 Tks. Ave Inser ID 1270 Carbon Steel Carbon Steel - Steel Typ U-bend	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 / prage 2.11 t:None OD 1320 - e Single segm Seal Type 0	sHELL de / mm Len .8 ental C	800 150 1 3 1 4 gth: 52 Fin#: mn	Tube Side / / 1 3.18 887.35 / - 88.95 / - 7 250 mm Pitc #/m Shell cover Channel cover Tubesheet-floatir Impingement pro 35.39 Ho	h: 23.81 mm Material:Carbon - ng - tection None prizSpacing: c/c 585 Inlet 1094.1	Tube pattern:30 Steel mm 97 mm
31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	Design/Vacuum/test properties of the properties	ressure:g kPa MDMT °C nell mm In mm Out Intermediate OD: 19.05 Tks. Ave Inser ID 1270 Carbon Steel Carbon Steel - Steel Typ U-bend	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 / rage 2.11 t:None OD 1320 e Single segm Seal Type 0	sHELL de / mm Len .8 ental C	800 150 1 3 1 4 gth: 52 Fin#: mn	Tube Side /	h: 23.81 mm Material:Carbon - ng - tection None prizSpacing: c/c 585 Inlet 1094.1	Tube pattern:30 Steel mm 97 mm
31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	Design/Vacuum/test properties of the properties of the provided HTML Properties of the properties of t	ressure:g kPa MDMT °C nell In mm Out Intermediate OD: 19.05 Tks. Ave Inser ID 1270 Carbon Steel Carbon Steel - Steel Typ U-bend - 533	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 / rage 2.11 t:None OD 1320 e Single segm Seal Type 0	sHELL de / mm Len .8 ental C Tube-tubeshe Typ ance 396	800 150 1 3 1 4 gth: 52 Fin#: mn	Tube Side /	h: 23.81 mm Material:Carbon	Tube pattern:30 Steel mm 97 mm
31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54	Design/Vacuum/test propersion temperature / Number passes per shour Corrosion allowance Connections Size/Rating ID Tube #: 2245 Tube type: Plain Shell Carbon Steel Channel or bonnet Tubesheet-stationary Floating head cover Baffle-cross Carbon Steel Baffle-long - Supports-tube Bypass seal Expansion joint RhoV2-Inlet nozzle Gaskets - Shell side Floating head Code requirements	ressure:g kPa MDMT °C nell In mm Out Intermediate OD: 19.05 Tks. Ave Inser ID 1270 Carbon Steel Carbon Steel - Steel Typ U-bend - 533 - d - ASME Code Sec	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 / / rage 2.11 t:None OD 1320 e Single segm Seal Type 0 T Bundle entra	sHELL de / mm Len .8 ental C jube-tubeshe Typ nnce 396 Tube side	800 150 1 3 1 4 gth: 52 Fin#: mn	Tube Side / / / 1 3.18 887.35 / - 88.95 / - /50 mm Pitc #/m Shell cover Channel cover Tubesheet-floatin Impingement pro 35.39 Ho Type Expanded only ne Bundle exit Flat Me	h: 23.81 mm Material:Carbon - tection None DrizSpacing: c/c 585 Inlet 1094.1 / (2 grooves)(App.A ' 138 etal Jacket Fibe	Tube pattern:30 Steel mm 97 mm
31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55	Design/Vacuum/test propersion temperature / Number passes per shour Corrosion allowance Connections Size/Rating ID Tube #: 2245 Tube type: Plain Shell Carbon Steel Channel or bonnet Tubesheet-stationary Floating head cover Baffle-cross Carbon Steel Baffle-long - Supports-tube Bypass seal Expansion joint RhoV2-Inlet nozzle Gaskets - Shell side Floating head Code requirements Weight/Shell	ressure:g kPa MDMT °C nell In mm Out Intermediate OD: 19.05 Tks. Ave Inser ID 1270 Carbon Steel Carbon Steel - Steel Typ U-bend - 533 - d - ASME Code Sec	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 / / rage 2.11 t:None OD 1320 e Single segm Seal Type 0 T Bundle entra	sHELL de / mm Len .8 ental C jube-tubeshe Typ nnce 396 Tube side	800 150 1 3 1 4 gth: 52 Fin#: mn	Tube Side / / / 1 3.18 887.35 / - 888.95 / - / - 250 mm Pitci #/m Shell cover Channel cover Tubesheet-floatin Impingement pro 35.39 Ho Type Expanded only ne Bundle exit Flat Me	h: 23.81 mm Material:Carbon - ng - tection None prizSpacing: c/c 585 Inlet 1094.9 y (2 grooves)(App.A'	Tube pattern:30 Steel mm 97 mm
31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56	Design/Vacuum/test propersion temperature / Number passes per shour Corrosion allowance Connections Size/Rating ID Tube #: 2245 Tube type: Plain Shell Carbon Steel Channel or bonnet Tubesheet-stationary Floating head cover Baffle-cross Carbon Steel Baffle-long - Supports-tube Bypass seal Expansion joint RhoV2-Inlet nozzle Gaskets - Shell side Floating head Code requirements	ressure:g kPa MDMT °C nell In mm Out Intermediate OD: 19.05 Tks. Ave Inser ID 1270 Carbon Steel Carbon Steel - Steel Typ U-bend - 533 - d - ASME Code Sec	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 / / rage 2.11 t:None OD 1320 e Single segm Seal Type 0 T Bundle entra	sHELL de / mm Len .8 ental C jube-tubeshe Typ nnce 396 Tube side	800 150 1 3 1 4 gth: 52 Fin#: mn	Tube Side / / / 1 3.18 887.35 / - 88.95 / - /50 mm Pitc #/m Shell cover Channel cover Tubesheet-floatin Impingement pro 35.39 Ho Type Expanded only ne Bundle exit Flat Me	h: 23.81 mm Material:Carbon - tection None DrizSpacing: c/c 585 Inlet 1094.1 / (2 grooves)(App.A ' 138 etal Jacket Fibe	Tube pattern:30 Steel mm 97 mm
31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55	Design/Vacuum/test propersion temperature / Number passes per shour Corrosion allowance Connections Size/Rating ID Tube #: 2245 Tube type: Plain Shell Carbon Steel Channel or bonnet Tubesheet-stationary Floating head cover Baffle-cross Carbon Steel Baffle-long - Supports-tube Bypass seal Expansion joint RhoV2-Inlet nozzle Gaskets - Shell side Floating head Code requirements Weight/Shell	ressure:g kPa MDMT °C nell In mm Out Intermediate OD: 19.05 Tks. Ave Inser ID 1270 Carbon Steel Carbon Steel - Steel Typ U-bend - 533 - d - ASME Code Sec	Shell Si 800 / 210 / 1 3.18 1 488.95 / 1 387.35 / / rage 2.11 t:None OD 1320 e Single segm Seal Type 0 T Bundle entra	sHELL de / mm Len .8 ental C jube-tubeshe Typ nnce 396 Tube side	800 150 1 3 1 4 gth: 52 Fin#: mn	Tube Side / / / 1 3.18 887.35 / - 88.95 / - /50 mm Pitc #/m Shell cover Channel cover Tubesheet-floatin Impingement pro 35.39 Ho Type Expanded only ne Bundle exit Flat Me	h: 23.81 mm Material:Carbon - tection None DrizSpacing: c/c 585 Inlet 1094.1 / (2 grooves)(App.A ' 138 etal Jacket Fibe	Tube pattern:30 Steel mm 97 mm