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CONVE & AVS Inc.
Specification sheet for: PLATE HEAT EXCHANGER

Project: CARISAL
Location: TRINIDAD, W. INDIES

P& ID Number: TTK-3831-P-041

Data Sheet For: Chlorine Cooler

TAG: 1-E-4101 A/B,
2-E-4101 A/B

Quantity Units: 4
Specification: TTK-3831-M-E4101
File Name: TTK-3831-M-E-4101-REV 1.doc
Sheet: Page 1 of 2

Plate Heat Exchanger Data Sheet

Ref.: JJE70566/1 (C)



CHLORINE COOLER			
Duty:			
Company:	CONVE & AVS INC.		
Project:	CARISAL	Item No:	1&2-E-4101 A/B
PHE Type:	SR9	Engineer:	JJE
Quotation No:	JELI-73NR8J	Date:	2007.Jun.12

Process Data	Hot	Cold
Fluid	WATER, CL2	WATER
Mass Flow Rate kg/h	3239	44407
Volume Flow Rate m3/h		44.7
Mass Flow Rate Dry Gas kg/h	2647	
Mass Flow Rate Water, Vapor (In / Out) kg/h	473 / 58	
Mass Flow Rate Water, Condensed kg/h	554	
Inlet Temperature °C	87.0	32.0
Outlet Temperature, Duty °C	40.0	40.0
Inlet Pressure (abs) bar	1.167	
Pressure Drop, calculated bar	0.020	0.012
Heat Exchange Rate, Duty kW	407.3	
Log Mean Temp Difference, Duty °C	101.124	
Design (Duty) HTC W / (°K m ²)	673.7	
Clean HTC W / (°K m ²)	700.1	
% Difference in HTC	3.9%	
Fluid Volume in PHE liter	98.5	98.5

Fluid Properties	Hot Vapor	Cold	Hot Liquid
Density kg / m3	0.38	994	982
Specific Heat Capacity kcal/ kg°C	0.506	0.779	1.011
Latent Heat of Evaporation kcal/ kg	547.70		
Thermal Conductivity W / (m °K)	0.024	0.623	0.656
Inlet Viscosity cP	0.01	0.77	0.23
Outlet Viscosity cP	0.01	0.69	0.28

Plate Heat Exchanger Specifications

PHE Type	SR9
Frame Type / Size	M-12/1. Painted Floor Mount Tie:CS, Carry:CS, max. 69 plates
Dimensions (H*W*L) in	85x32x60

1	13 .SEP.07	For PURCHASE	VC	HM
0	14 .MAY.07	For QUOTATION	VC	HM
REV	DATE	DESCRIPTION	REVISED	APPROVED

FO-AC-020-2



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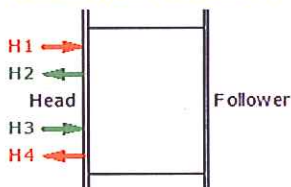
Quantity Units: 4
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Sheet: Page 2 of 2

Total Number of Plates		41
Total Active Area	m ²	31.5
Hot Side Flow Arrangement		1*20
Cold Side Flow Arrangement		1*20
Plate Material		0.6 mm Ti Gr1 SB265
Gasket Material		EPDM RC (Paratemp) Paraclip
Hot Side Connection - Inlet	H1	NPS 8.0 Flange (Studded) Titanium Class 150 (Mates With) ANSI B16.5
Hot Side Connection - Outlet	H4	NPS 8.0 Flange (Studded) Titanium Class 150 (Mates With) ANSI B16.5
Cold Side Connection - Inlet	H3	NPS 8.0 Flange (Studded) Titanium Class 150 (Mates With) ANSI B16.5
Cold Side Connection - Outlet	H2	NPS 8.0 Flange (Studded) Titanium Class 150 (Mates With) ANSI B16.5
Design Code		A.S.M.E. VIII Div. 1
Certificate		A.S.M.E.
Design Temperature	°C	Max. 160 Min. -29
Design Pressure	bar	6.5
Test Pressure	bar	Balanced 8.5 Differential 8.5
Mass	kg	Flooded 2075 Empty 1881
Approx. Shipping Mass & Volume	kg	Std Packing 1972

Accessories

AutoCAD Drawing w/ Frame Dimensions (1); Standard Paint APV Blue (APV3196) (1); ASME Inspection and U Stamp (1); Spray Deflector (1)

Connection Placement



Remarks

1	13 .SEP.07	For PURCHASE	VC	HM
0	14 .MAY.07	For QUOTATION	VC	HM
REV	DATE	DESCRIPTION	REVISED	APPROVED