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	DEHDASHT PETROCHEMICAL INDUSTRY COMPANY DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT	
	DOCUMENT TITLE: Evaporator Data Sheet	POI: IFA
Contract No.: DPIC/98-12	DOCUMENT NUMBER: DPIC9812-000-VD-1002-ME-DS-0044	Rev. No.: D2


Regarding last meeting with vendor, please revise calculation as per thermal calculation comment for considering 1.1x748000 for flowrate and duty of 1750 kw and please size all equipment inside package for mentioned design duty of chiller

Previous comment as per agreement shall be implemented

DOCUMENT TITLE:

**Evaporator Data Sheet
(E-6101)**

Tube and shell detail data which will be affected based on revised thermal calculation will be checked in next revision and discrepancies with data sheet and DWG will be checked in next revision

PURCHASER'S COMMENT/APPROVAL STATUS					Purchaser: NARGAN
1	AP: Approved (Released for Manufacturing)				Requisition No.: DPIC98-12-001-000-ME-MR-4150-0001-D2
<input checked="" type="checkbox"/>	AN: Approved With Minor Comments (Fabrication may Proceed)				
3	NF: Approved With Comments (Fabrication not Proceed)				Item No. (Tag No.): PK-6101
4	RJ: Rejected				
5	NR: Not be Returned				Vendor Doc. No.: DPIC9812-000-VD-1002-ME-DS-0044-D1
Date:		06.03.2022	Signature: A.AB		
					
D2	23.Jan.22	A.VOSOUGH	DR.A.NEJATI	DR.A.NEJATI	
D1	26.Dec.21	A.VOSOUGH	DR.A.NEJATI	DR.A.NEJATI	
D0	30.Oct.21	A.VOSOUGH	DR.A.NEJATI	DR.A.NEJATI	
REV	DATE ISSUE	PREPARED	CHECKED	APPROVED	



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1	SERVICE	HEXANE CHILLER			ITEM	E-6101	
2	DIAM. X LENGTH	1200-1656 X	5240	mm	MOUNTIN	HORIZONTAL	
3	NO. OF UNIT	1			SURFACE PER UNIT	467.96	m ²
4	SHELLS PER UNIT	1			SURFACE PER SHELL	467.96	m ²
5	TEMA CLASS	R			REQUIRED OVERDESIGN	CODE TEMA. 9TH ED.	
6	PERFORMANCE						
7		SHELL SIDE			TUBE SIDE		
8	FLUID CIRCULATED	PROPYLENE			HEXANE		
9	FLUID QUANTITY, TOTAL	19500			748000		
10		IN	OUT		IN	OUT	
11	VAPOUR	4680	19500	kg/h	-	-	
12	LIQUID	14820	0.0	kg/h	748000	748000	
13	NON CONDENSABLES	-	-	kg/h	-	-	
14	TEMPERATURE	-23.98	-23.98	°C	-16	-20.27	
15	DENSITY at T and P (Vap./Liq.)	5.78	578.8	kg/m ³	5.78	703.25	706.94
16	VISCOSITY at T and P (Vap./Liq.)	0.0073	0.1408	cP	0.0073	0.4872	0.5147
17	MOLECULAR WEIGHT, Vap						
18	SPECIFIC HEAT (Vap./Liq.)	1.405	2.214	kJ/kg.C	1.4050	1.906	1.8875
19	THERMAL CONDUCTIVITY (Vap./Liq.)	0.0127	0.1276	W/m.K	0.0127	0.131	0.1325
20							
21	INLET PRESSURE (abs)	2.620			6.914		
22	VELOCITY (Mean/Max)	/ 0.37			/ 2.36		
23	PRESSURE DROP (Allowable/Calculated)	0.1	0.005441	bar	0.50	0.438	
24	FOULING RESISTANCE (Min)	0.00017			0.00009		
25	TYPE OF CLEANING MAINTENANCE	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> MECH. <input type="checkbox"/> CHEM.			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> MECH. <input type="checkbox"/> CHEM.		
26	HEAT EXCHANGED	1688		kw	MTD (CORRECTED)	5.6	°C
27	TRANSFER RATE:	SERVICE: 647.45	CALCULATED: 707.73		CLEAN: 896.16		W/m ² .K
28	CONSTRUCTION						
29	DESIGN PRESSURE	23			23		
30	VACUUM PRESSURE	-1.01			-1.01		
31	TEST PRESSURE	29.9			29.9		
32	DESIGN TEMPERATURE	135			135		
33	MIN. DESIGN METAL TEMPERATURE	-45			-45		
34	NUMBER PASSES PER SHELL	1			2		
35	CORROSION ALLOWANCE	3			3		
36	PARTICULAR SERVICE	-			-		
37	PROVIDE X-RAY	FULL			FULL		
38	PROVIDE STRESS RELIEVING	<input type="checkbox"/> CHANNEL <input type="checkbox"/> BUNDLE			<input type="checkbox"/> SHELL		

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1	CONSTRUCTION OF ONE SHELL				
2	TUBE TYPE : <input checked="" type="checkbox"/> PLAIN <input type="checkbox"/> FINNED	SHELL OD/KETTL OD	1236/1692 mm	BAFFLE TYPE	FULL SUPORT
3	TUBE OD: 19.05 mm	SHELL ID/KETTL ID	1200/1656 mm	ORIENTATION	
4	TUBE THK (avg): 2.77 mm	IMPINGEMENT PROTECTION	NO	BAFFLE NO.	5 #
5	TUBE LENGTH: 4200 mm	OUTER TUBE LIMIT	1182.8 mm	BAFFLE THK.	15 mm
6	TUBE NO: 870U #	TUBESHEET THK	140 mm	BAFFLE CUT	%
7	PITCH: 24 mm	TUBE TO TUBESHEET JOINT		C/C SPACING	800 mm
8	<input type="checkbox"/> 30° <input type="checkbox"/> 60°	<input checked="" type="checkbox"/> WELD <input type="checkbox"/> EXPAND <input checked="" type="checkbox"/> GROOVES		INLET SPACING	mm
9	<input checked="" type="checkbox"/> 90° <input type="checkbox"/> 45°	TUBE TO TUBESHEET WELD TYPE		CLEARANCE TO SHELL	6.35 mm
10		<input type="checkbox"/> SEAL <input checked="" type="checkbox"/> FULL STRENGTH		CLEARANCE TO TUBE	0.7938 mm
11		<input type="checkbox"/> PARTIAL STRENGTH			
12	MATERIALS				
13	TUBES SA-334 GR 6 SEAMLESS	SELL SIDE :		BODY FLANGE :	
14	SHELL SA-516 GR70N	NOZZLES:	SA-333 GR6	SHELL:	SA-350 LF2
15	CHANNEL SA-516 GR70N	FLANGES:	SA-350 LF2	CHANNEL:	SA-350 LF2
16	SHELL COVER SA-516 GR70N	TUBE SIDE :		BOLTS	SA320 L7
17	TUBE SHEET SA-350 LF2	NOZZLES:	SA-333 GR6	NUTS	SA 194 Gr. 4
18	CROSS BAFFLES SA-516 GR70N	FLANGES:	SA-350 LF2	GASKET	JACKETED METAL
19	SADDEL/LEG SA-283GR.C				
20	INSULATION AND PAINTING				
21		SHELL SIDE		CHANNEL SIDE	
22	INSULATION (TYPE / THK)	COLD/ 100 mm		-	
23	PAINTING				
24	PRIMER	ZINCETHYL SILICATE (70µm)			
25	MID COATING				
26	TOP COATING				
27	MECHANICAL DESIGN DATA				
28	EXPANSION JOINT: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> BY MFR.	MATERIAL:			
29		SHELL 1	SHELL 2	TUBE SHEET	LIFE CYCLES NO
30	MEAN SHELL METAL TEMPERATURE °C	-23.98	-	-	-
31	MEAN TUBE METAL TEMPERATURE °C	-21.24	-	-	-
32	MINIMUM TUBE METAL TEMPERATURE °C	-21.74	-	-	-
33	MAXIMUM TUBE METAL TEMPERATURE °C	-20.74	-	-	-
34	WEIGHT	EMPTY: 18953 kg		HYDROTEST: 32350 kg	

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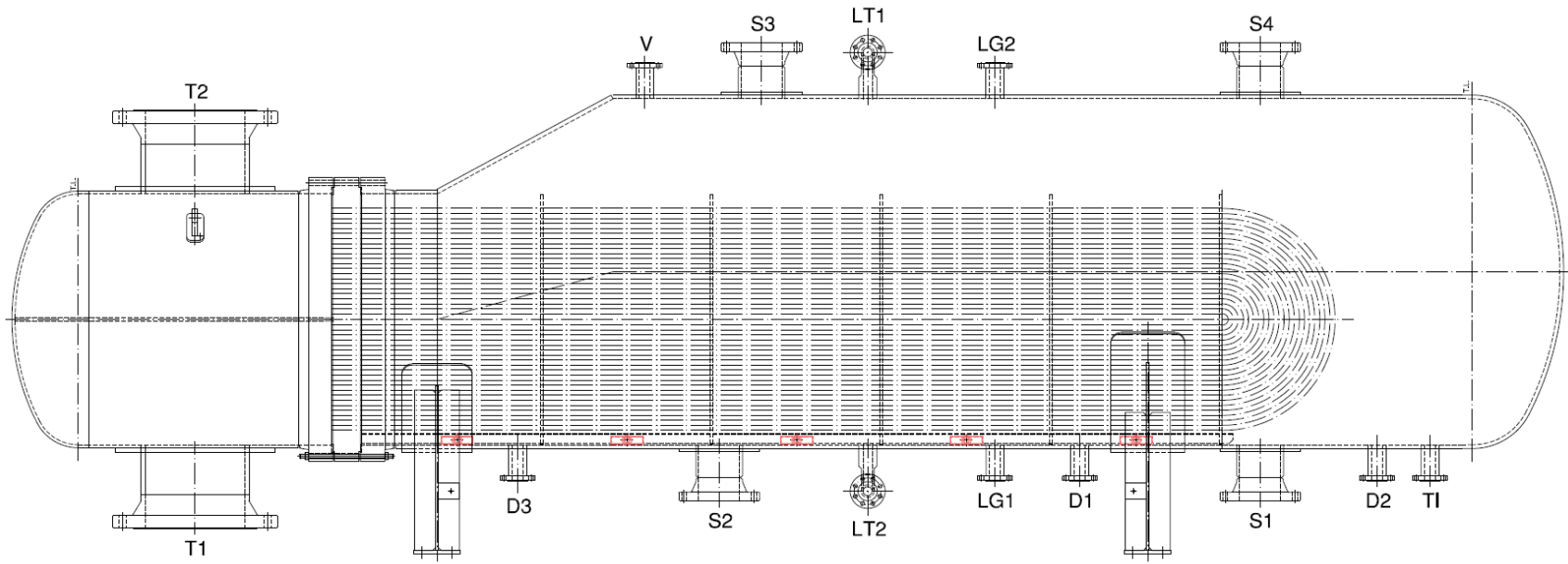
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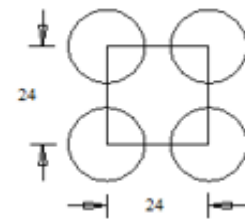
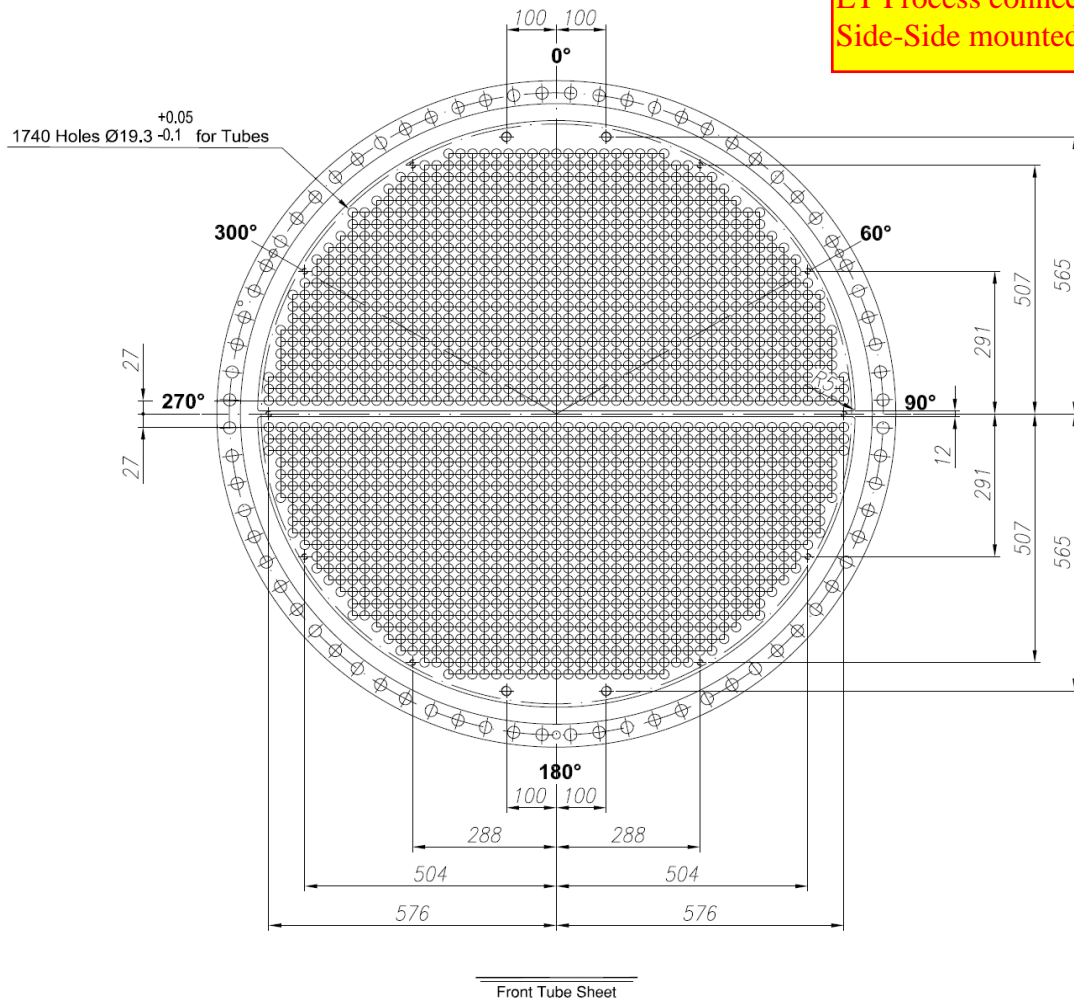
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LT Process connections shall in general be Side-Side mounted.



D1~3	3	DRAIN	2"	300#	RF	200
LG1,2	2	LEVEL GAUGE	2"	300#	RF	200
LT1,2	2	LEVEL TRANSMITTER	2"	300#	RF	200
S1,2	2	PROPYLENE IN	8"	300#	RF	200
S3,4	2	PROPYLENE OUT	8"	300#	RF	200
T2	1	HEX.OUT	20"	300#	RF	200
T1	1	HEX. IN	20"	300#	RF	200
TI	1	TEMPERATURE GAUGE	1 1/2"	300#	RF	200
V	1	VENT	2"	300#	RF	200
Tag.	No.	Description	Size	Rating	Facing	PROJECTION (mm)

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