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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.: D1

DOCUMENT TITLE:

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

PURCHASER'S COMMENT/APPROVAL STATUS					Purchaser: NARGAN
1	AP: Approved (Released for Manufacturing)				Requisition No.: DPIC98-12-001-000-ME-MR-4150-0001-D1
2	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:		Signature:			
					
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	4200 mm	MOUNTIN	HORIZONTAL		TYPE	BKU
3	NO. OF UNIT	1		SURFACE PER UNIT	478.25	m ²	IN PARALLEL	1
4	SHELLS PER UNIT	1		SURFACE PER SHELL	478.25	m ²	IN SERIES	1
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	kg/h			19500		748000	
10				IN		OUT	IN	OUT
11	VAPOUR	kg/h		4680		19500	-	-
12	LIQUID	kg/h		14820		0.0	748000	748000
13	NON CONDENSABLES	kg/h		-		-	-	-
14	TEMPERATURE	°C		-23.98		-23.98	-16	-19.99
15	DENSITY at T and P (Vap./Liq.)	kg/m ³		5.78 / 578.8		5.78	703.25	706.94
16	VISCOSITY at T and P (Vap./Liq.)	cP		0.0073 / 0.1408		0.0073	0.4872	0.5147
17	MOLECULAR WEIGHT, Vap			42.08		42.08	-	-
18	SPECIFIC HEAT (Vap./Liq.)	kJ/kg.C		1.405 / 2.214		1.4050	1.906	1.8875
19	THERMAL CONDUCTIVITY (Vap./Liq.)	W/m.K		0.0127 / 0.1275		0.0127	0.1309	0.1324
20								
21	INLET PRESSURE (abs)	bar		2.620		6.914		
22	VELOCITY (Mean/Max)	m/s			/	0.37		/ 2.36
23	PRESSURE DROP (Allowable/Calculated)	bar		0.1		0.005441	0.50	0.438
24	FOULING RESISTANCE (Min)	m ² ·K/W		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	kW		1688		MTD (CORRECTED)	5.6	°C
27	TRANSFER RATE:	SERVICE:	647.45	CALCULATED:	707.61	CLEAN:	895.96	W/m ² ·K
28	CONSTRUCTION							
29	DESIGN PRESSURE	barg		23		23		
30	VACUUM PRESSURE	barg		-1.01				
31	TEST PRESSURE	barg		29.9		29.9		
32	DESIGN TEMPERATURE	°C		125		125		
33	MIN. DESIGN METAL TEMPERATURE	°C		-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	1240,1692 mm	BAFFLE TYPE	FULL SUPORT
3	TUBE OD: 19.05 mm	SHELL 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	820.2 mm
8	<input type="checkbox"/> 30° <input type="checkbox"/> 60°	<input checked="" type="checkbox"/> WELD <input checked="" type="checkbox"/> EXPAND <input 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	-21.29	-	-	-
32	MINIMUM TUBE METAL TEMPERATURE °C	-21.72	-	-	-
33	MAXIMUM TUBE METAL TEMPERATURE °C	-20.84	-	-	-
34	WEIGHT	EMPTY: 18953 kg		HYDROTEST: 32350 kg	

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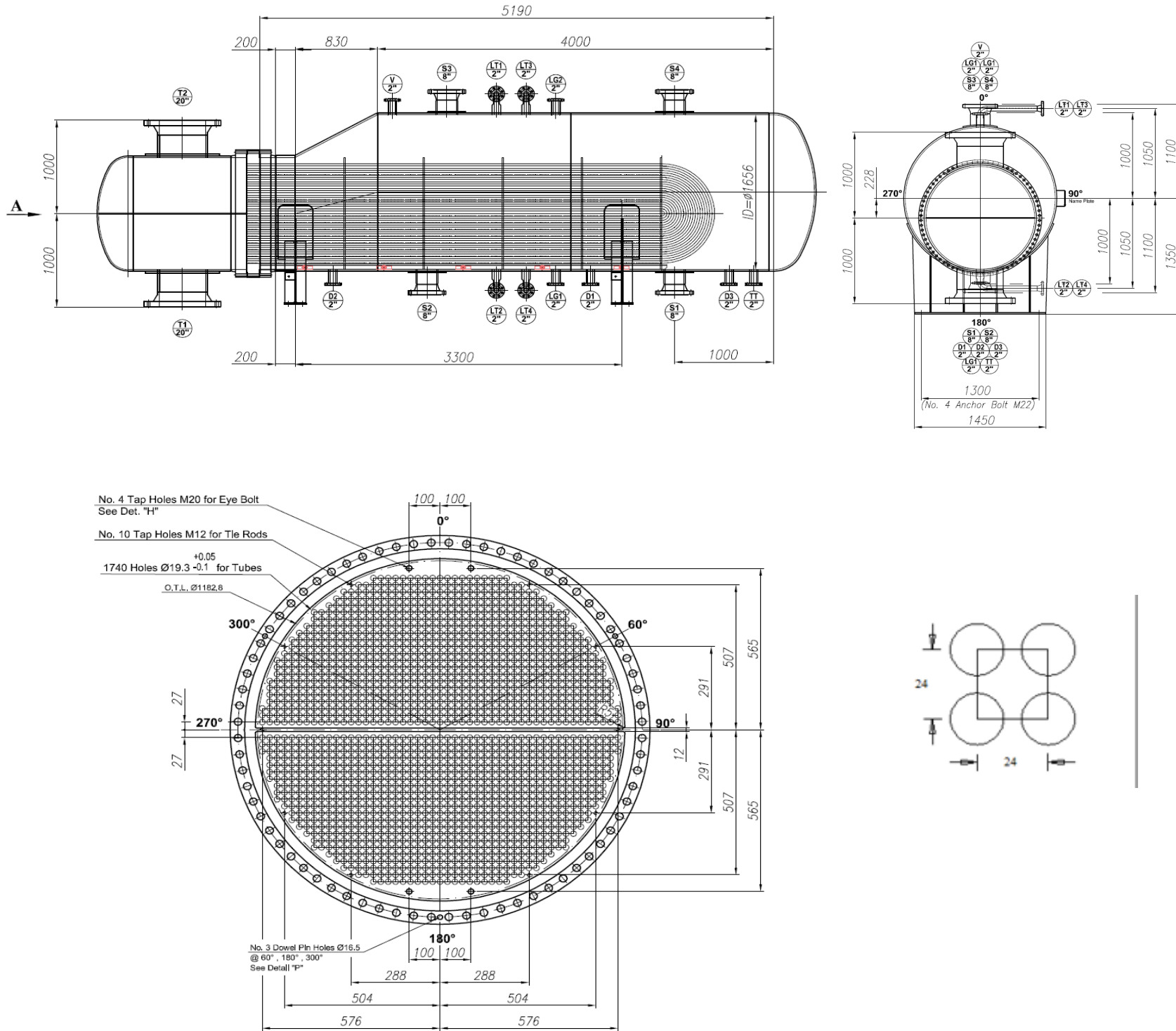
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D1~3	3	DRAIN	2"	300#	RF	200
LG1,2	2	LEVEL GAUGE	2"	300#	RF	200
LT1~4	4	LEVEL TRANSMITTER	2"	300#	RF	200
S1,2	2	PROPYLENE IN	8"	300#	RF	200
S3,4	2	PROPYLENE OUT	8"	300#	RF	200
T2	1	HEX.OUT	20"	300#	RF	200
T1	1	HEX. IN	20"	300#	RF	200
TT	1	TEMPERATURE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