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	DEHDASHT PETROCHEMICAL INDUSTRY COMPANY DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT	
	DOCUMENT TITLE: Condenser Data Sheet	POI: IFA
Contract No.: DPIC/98-12	DOCUMENT NUMBER: DPIC9812-000-VD-1002-ME-DS-0075	Rev. No.: D1

DOCUMENT TITLE:

**Condenser Data Sheet
(E-PK6101-2)**

PURCHASER'S COMMENT/APPROVAL STATUS					Purchaser: NARGAN
1	AP: Approved (Released for Manufacturing)				Requisition No.: DPIC98-12-001-000-ME-MR-4150-0001-D1
<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-0075-D1
Date:		15.01.2022	Signature:		
					
D1	25.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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		DEHDASHT PETROCHEMICAL DEHDASHT HIGH DENSITY PO			
		DOCUMENT TITLE: Condenser Data Sheet		POI: IFA	
Contract No.: DPIC/98-12		DOCUMENT NUMBER: DPIC9812-000-VD-1002-ME-DS-0075		AREA IS OK D1	
1	SERVICE	CONDENSER		ITEM	E-PK6101-2
2	DIAM. X LENGTH	1180 X 5000 mm	MOUNTIN	HORIZONTAL	TYPE BEM
3	NO. OF UNIT	1	SURFACE PER UNIT	539.22 m ²	IN PARALLEL 1
4	SHELLS PER UNIT	1	SURFACE PER SHELL	539.22 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		JACKETED WATER	
9	FLUID QUANTITY, TOTAL	27623 kg/h		289043 kg/h	
10		IN	OUT	IN	OUT
11	VAPOUR	27623 kg/h	-	-	-
12	LIQUID	-	27623 kg/h	289043 kg/h	289043 kg/h
13	NON CONDENSABLES	-	-	-	-
14	TEMPERATURE	80.3 °C	48.33 °C	37 °C	45 °C
15	DENSITY at T and P (Vap./Liq.)	35.806 kg/m ³	467.05 kg/m ³	993.59 kg/m ³	990.48 kg/m ³
16	VISCOSITY at T and P (vap./liq.)	0.0112 cP	0.0668 cP	0.6914 cP	0.596 cP
17	MOLECULAR WEIGHT				
18	SPECIFIC HEAT (Vap./Liq.)	2.2660 kJ/kg.C	/	/	3.2592 kJ/kg.C
19	THERMAL CONDUCTIVITY	0.0267 W/m.K	/	/	0.0902 W/m.K
20					
21	INLET PRESSURE (abs)	19.937 bar		6.914 bar	
22	VELOCITY (Mean/Max)	/	0.63 m/s	/	1.01 m/s
23	PRESSURE DROP (Allowable/Calculated)	0.1 bar	0.017 bar	0.1 bar	0.267 bar
24	FOULING RESISTANCE (Min)	0.0002 m ² -K/W		0.0002 m ² -K/W	
25	TYPE OF CLEANING METHOD	<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	2682 kW	MTD (CORRECTED)		9.8 °C
27	TRANSFER RATE:	SERVICE: 525.1 W/m ² -K	CALCULATED: 664.93 W/m ² -K	CLEAN: 955.33 W/m ² -K	
28		-45/135 RUCTION			
29	DESIGN PRESSURE	23 barg		23 barg	
30	VACUUM PRESSURE	-1.03 barg		-	
31	TEST PRESSURE	29.9 barg		29.9 barg	
32	DESIGN TEMPERATURE	125 °C		190 °C	
33	MIN. DESIGN METAL TEMPERATURE	-		-	
34	NUMBER PASSES PER SHELL	1		4	
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			

This surface is under design
Please send the thermal file for checking or increase the surface.

AREA IS OK

CORRECTED

Propylene fouling factor in E-6101 and E-6101-3 is considered 0.0017w/m2k Please clarify.

CORRECTED



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CORRECTED

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Discrepancy with thermal data sheet.

Discrepancy with DWG.

1		CONSTRUCTION OF ONE				
2	TUBE TYPE : <input checked="" type="checkbox"/> PLAIN <input type="checkbox"/> FINNED	SHELL OD	1210	mm	BAFFLE TYPE	SINGLE SEG.
3	TUBE OD: 19.05 mm	SHELL ID	1180	mm	ORIENTATION	VERTICAL
4	TUBE THK (avg): 2.11 mm	IMPINGEMENT PROTECTION	YES		BAFFLE NO.	9 #
5	TUBE LENGTH: 5000 mm	OUTER TUBE LIMIT	1161.3	mm	BAFFLE THK.	10 mm
6	TUBE NO: 1802 #	TUBESHEET THK	75	mm	BAFFLE CUT	35 %
7	PITCH: 24 mm	TUBE TO TUBESHEET JOINT			C/C SPACING	550 mm
8	<input type="checkbox"/> 30° <input checked="" type="checkbox"/> 60°	<input checked="" type="checkbox"/> WELD <input checked="" type="checkbox"/> EXPAND <input checked="" type="checkbox"/> GROOVES			INLET SPACING	853 mm
9	<input 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	0.39 mm
11		<input type="checkbox"/> PARTIAL STRENGTH				
12						

13		MATERIALS				
14	TUBES SA-334 GR 6 SEAMLESS	SELL SIDE :			BODY FLANGE :	
15	SHELL SA-516 GR70N	NOZZLES:	SA-333 GR6		SHELL:	SA-350 LF2
16	CHANNEL SA-516 GR70	FLANGES:	SA-350 LF2		CHANNEL:	SA-350 LF2
17	SHELL COVER SA-516 GR70	TUBE SIDE :			BOLTS	SA-320 L7
18	TUBE SHEET SA-350 LF2	NOZZLES:	SA-333 GR6		NUTS	SA 194 Gr. 4
19	CROSS BAFFLES SA-516 GR70N	FLANGES:	SA-350 LF2		GASKET	JACKETED METAL
20	SADDEL/LEG SA-283GR.C					
21						

22		INSULATION AND PAINTING				
23		SHELL SIDE			CHANNEL SIDE	
24	INSULATION (TYPE / THK)		-			-
25	PAINTING					
26	PRIMER		ZINCETHYL SILICATE (1X70µm)			
27	MID COATING					
28	TOP COATING					

29 MECHANICAL DESIGN DATA

30 EXPANSION JOINT: YES NO BY MFR. MATERIAL:

31		SHELL 1	SHELL 2	TUBE SHEET	LIFE CYCLES NO
32	MEAN SHELL METAL TEMPERATURE °C	53.80	-	-	-
33	MEAN TUBE METAL TEMPERATURE °C	44.62	-	-	-
34	MINIMUM TUBE METAL TEMPERATURE °C	42.50	-	-	-
35	MAXIMUM TUBE METAL TEMPERATURE °C	46.74	-	-	-

36 WEIGHT EMPTY: 14695 kg HYDROTEST: 20783 kg

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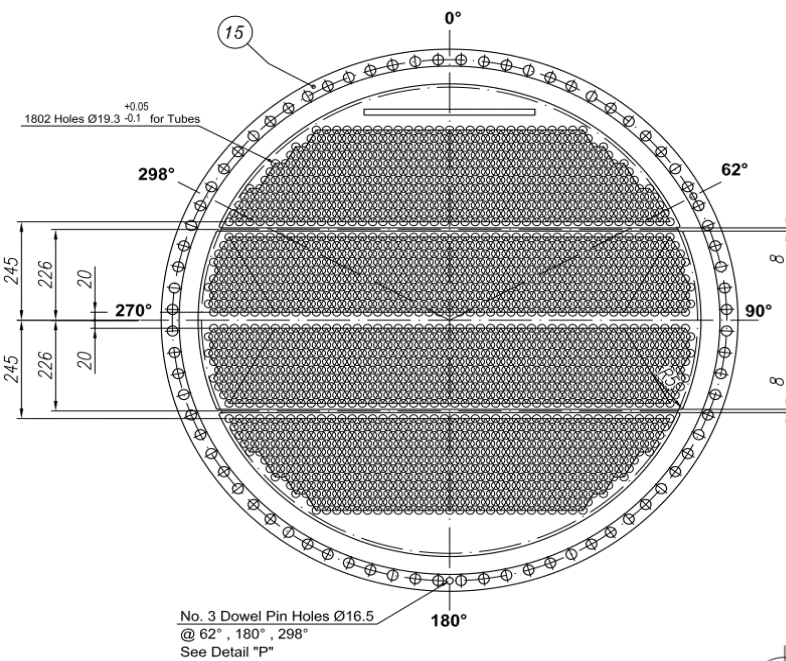
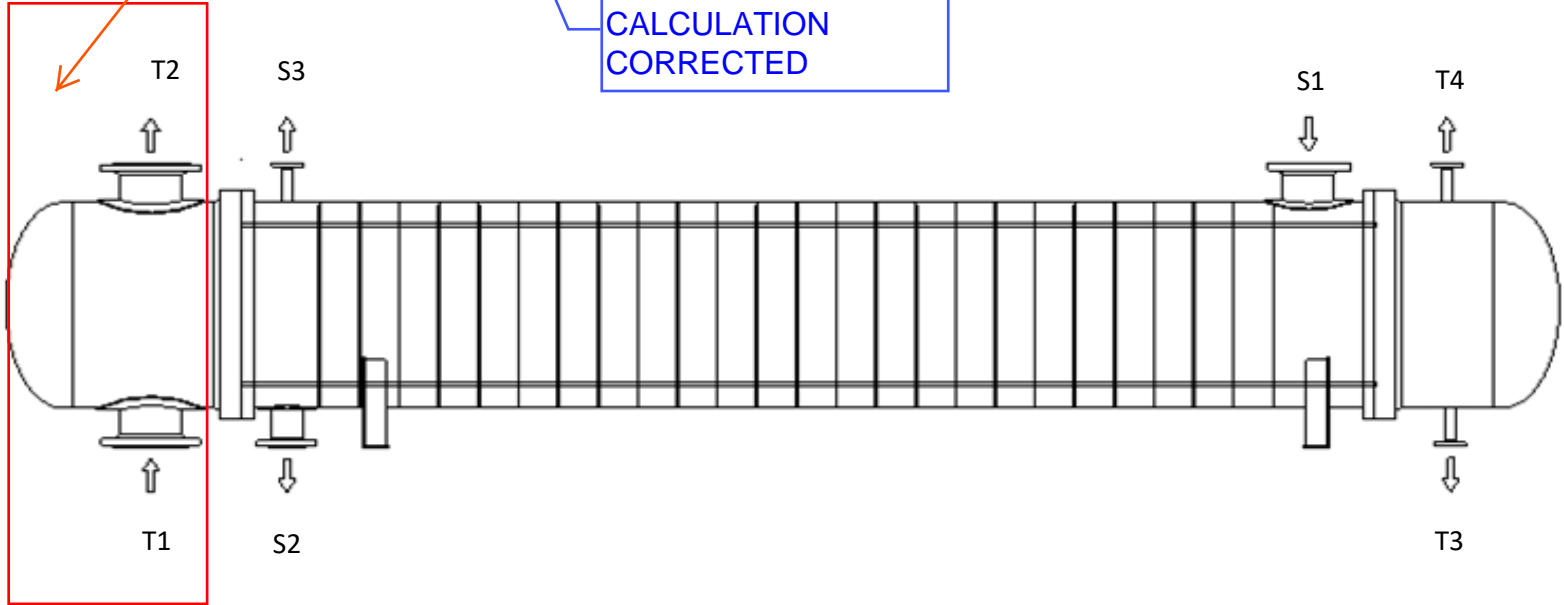
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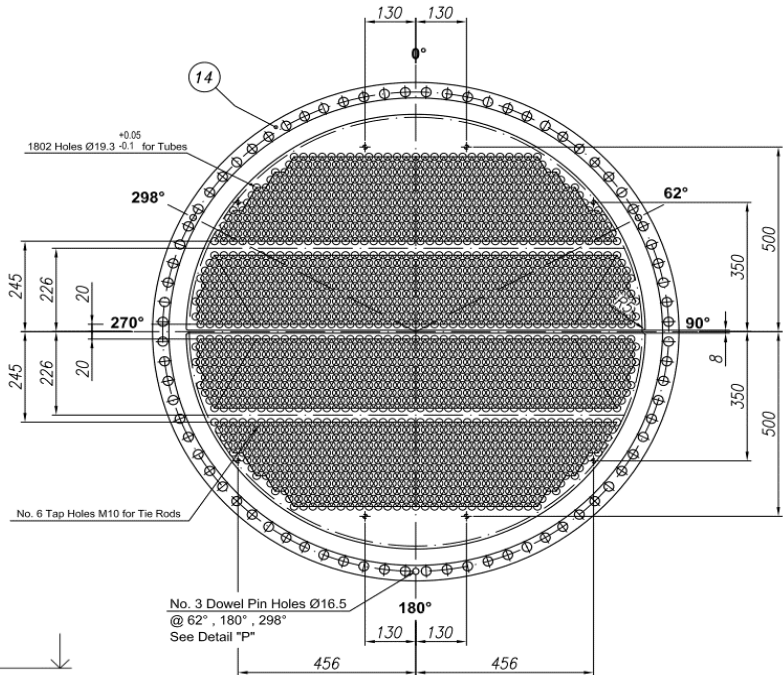
Rev. No.: D1

Discrepancy with thermal data sheet.

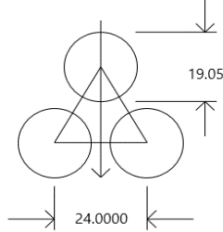
THERMAL CALCULATION CORRECTED



View "N" (1:10)
Rear Tube Sheet



View "M" (1:10)
Front Tube Sheet



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S3	1	EQUILIZE LINE	2"	300#	RF	200
S2	1	PROPYLENE OUTLET	8"	300#	RF	200
S1	1	PROPYLENE INLET	12"	300#	RF	200
T4	1	VENT	3/4"	300#	RF	200
T3	1	DRAIN	1"	300#	RF	200
T2	1	COOLING WATER OUT	12"	300#	RF	200
T1	1	COOLING WATER IN	12"	300#	RF	200
Tag.	No.	Description	Size	Rating	Facing	PROJECTION (mm)