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	<b>DEHDASHT PETROCHEMICAL INDUSTRY COMPANY</b>  <b>DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT</b>	
	DOCUMENT TITLE: Oil Cooler Data Sheet	POI: IFA
Contract No.: DPIC/98-12	DOCUMENT NUMBER: DPIC9812-000-VD-1002-ME-DS-0078	Rev. No.: D2

**DOCUMENT TITLE:**

**Oil Cooler Data Sheet  
(E-PK6101-1A/B)**

<b>PURCHASER'S COMMENT/APPROVAL STATUS</b>		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-0078-D2
Date: XX.XX.XX      Signature:		

D2	26.Jan.22	A.VOSOUGH	DR.A.NEJATI	DR.A.NEJATI
D1	01.Jan.22	A.VOSOUGH	DR.A.NEJATI	DR.A.NEJATI
D0	30.Oct.21	A.VOSOUGH	DR.A.NEJATI	DR.A.NEJATI
<b>REV</b>	<b>DATE ISSUE</b>	<b>PREPARED</b>	<b>CHECKED</b>	<b>APPROVED</b>





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1	SERVICE	<b>OIL COOLER</b>				ITEM	<b>E-PK6101-1A/B</b>				
2	ID. X LENGTH	<b>381</b>	X	<b>3000</b>	mm	MOUNTIN	<b>HORIZONTAL</b>				
3	NO. OF UNIT	<b>1</b>				SURFACE PER UNIT	<b>29.24</b>	m <sup>2</sup>	IN PARALLEL	<b>1</b>	
4	SHELLS PER UNIT	<b>1</b>				SURFACE PER SHELL	<b>29.24</b>	m <sup>2</sup>	IN SERIES	<b>1</b>	
5	TEMA CLASS	<b>R</b>				REQUIRED OVERDESIGN					
6	<b>PERFORMANCE</b>										
7						SHELL SIDE			TUBE SIDE		
8	FLUID CIRCULATED						<b>OIL</b>			<b>JACKETE WATER</b>	
9	FLUID QUANTITY, TOTAL						<b>12586</b>			<b>22395.6</b>	
10						IN	OUT	IN	OUT		
11	VAPOUR						-	-	-	-	
12	LIQUID						<b>12586</b>	<b>12586</b>	<b>22395.6</b>	<b>22395.6</b>	
13	NON CONDENSABLES						-	-	-	-	
14	TEMPERATURE						<b>80.3</b>	<b>50</b>	<b>37</b>	<b>45</b>	
15	DENSITY at T and P (Vap./Liq.)						<b>873.29</b>	<b>886.0</b>	<b>993.59</b>	<b>990.48</b>	
16	VISCOSITY at T and P (Vap./Liq.)						<b>1.6365</b>	<b>2.1900</b>	<b>0.6914</b>	<b>0.5960</b>	
17	MOLECULAR WEIGHT,Vap										
18	SPECIFIC HEAT (Vap./Liq.)						<b>2.0871</b>	<b>1.8530</b>	<b>4.1773</b>	<b>4.1774</b>	
19	THERMAL CONDUCTIVITY (Vap./Liq.)						<b>0.150</b>	<b>0.1500</b>	<b>0.6252</b>	<b>0.6352</b>	
20											
21	INLET PRESSURE (abs)						<b>19.900</b>			<b>6.914</b>	
22	VELOCITY (Mean/Max)						/ <b>0.18</b>			/ <b>0.79</b>	
23	PRESSURE DROP (Allowable/Calculated)						<b>0.200</b>	<b>0.024</b>	<b>1.000</b>	<b>0.144</b>	
24	FOULING RESISTANCE (Min)						<b>0.00017</b>			<b>0.000200</b>	
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	<b>208</b>					kW MTD (CORRECTED)			<b>20.1</b> °C	
27	TRANSFER RATE: SERVICE:	<b>353.96</b>					CALCULATED:	<b>419.4</b>			CLEAN: <b>510.93</b> W/m <sup>2</sup> -K
28	<b>CONSTRUCTION</b>										
29	DESIGN PRESSURE						<b>25</b>			<b>25</b>	
30	VACUUM PRESSURE										
31	TEST PRESSURE						<b>32.5</b>			<b>32.5</b>	
32	DESIGN TEMPERATURE						<b>120</b>			<b>190</b>	
33	MIN. DESIGN METAL TEMPERATURE						<b>-10</b>			<b>-10</b>	
34	NUMBER PASSES PER SHELL						<b>1</b>			<b>4</b>	
35	CORROSION ALLOWANCE						<b>3</b>			<b>3</b>	
36	PARTICULAR SERVICE						<b>-</b>			<b>-</b>	
37	PROVIDE X-RAY						<b>FULL</b>			<b>FULL</b>	
38	PROVIDE STRESS RELIEVING						<input type="checkbox"/> CHANNEL <input type="checkbox"/> BUNDLE <input type="checkbox"/> SHELL				

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1	<b>CONSTRUCTION OF ONE SHELL</b>					
2	TUBE TYPE : <input checked="" type="checkbox"/> PLAIN <input type="checkbox"/> FINNED	SHELL OD	406.40	mm	BAFFLE TYPE	Single segmental
3	TUBE OD: 19.05 mm	SHELL ID	381	mm	ORIENTATION	Horizontal
4	TUBE THK (avg): 2.11 mm	IMPINGEMENT PROTECTION	NO		BAFFLE NO.	12 #
5	TUBE LENGTH: 3000 mm	OUTER TUBE LIMIT	366.609	mm	BAFFLE THK.	6.0 mm
6	TUBE NO: 166 #	TUBESHEET THK	46	mm	BAFFLE CUT	30 %
7	PITCH: 24 mm	TUBE TO TUBESHEET JOINT			C/C SPACING	200 mm
8	<input checked="" type="checkbox"/> 30° <input type="checkbox"/> 60°	<input checked="" type="checkbox"/> WELD <input checked="" type="checkbox"/> EXPAND <input type="checkbox"/> GROOVES			INLET SPACING	325 mm
9	<input type="checkbox"/> 90° <input type="checkbox"/> 45°	TUBE TO TUBESHEET WELD TYPE			CLEARANCE TO SHELL	3.1750 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	<b>MATERIALS</b>					
13	TUBES SA-179	SELL SIDE :			BODY FLANGE :	
14	SHELL SA-106 GRB	NOZZLES:	SA-106 GRB		SHELL:	SA-266-2
15	CHANNEL SA-106 GRB	FLANGES:	SA-105		CHANNEL:	SA-266-2
16	SHELL COVER SA-516 GR70	TUBE SIDE :			BOLTS	SA 193 Gr. B7
17	TUBE SHEET SA-266-2	NOZZLES:	SA-106 GRB		NUTS	SA 194 Gr. 2H
18	CROSS BAFFLES SA-516 GR70	FLANGES:	SA-105		GASKET	JACKETED METAL
19	SADDEL/LEG SA-283GR.C					
20	<b>INSULATION AND PAINTING</b>					
21		SHELL SIDE			CHANNEL SIDE	
22	INSULATION (TYPE / THK)	PERSONAL PROTECTION / 100 mm			-	
23	PAINTING					
24	PRIMER	ZINCETHYL SILICATE (1X70µm)				
25	MID COATING					
26	TOP COATING					
27	<b>MECHANICAL DESIGN DATA</b>					
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	61.84	-	-	-	
31	MEAN TUBE METAL TEMPERATURE °C	45.66	-	-	-	
32	MINIMUM TUBE METAL TEMPERATURE °C	42.96	-	-	-	
33	MAXIMUM TUBE METAL TEMPERATURE °C	48.36	-	-	-	
34	WEIGHT	EMPTY: 1439 kg		HYDROTEST: 1840 kg		



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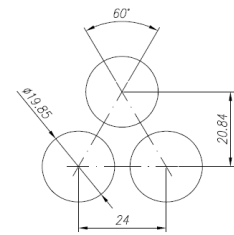
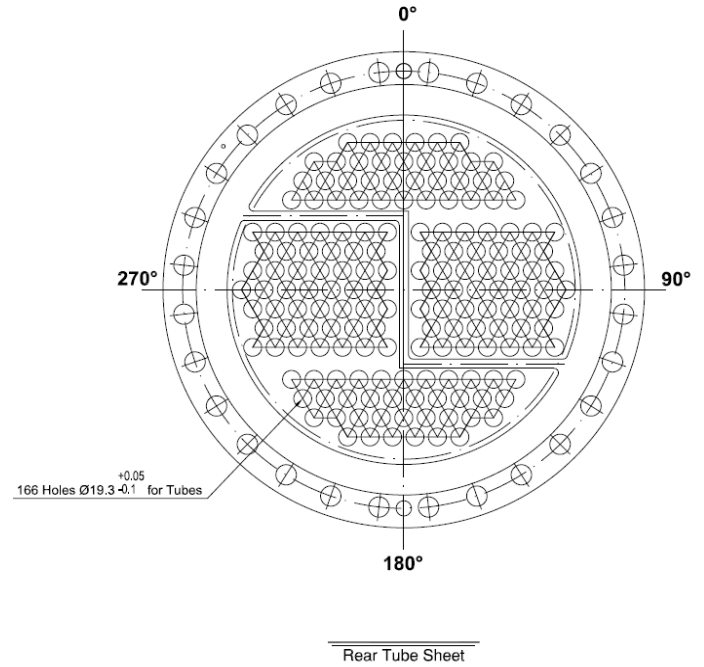
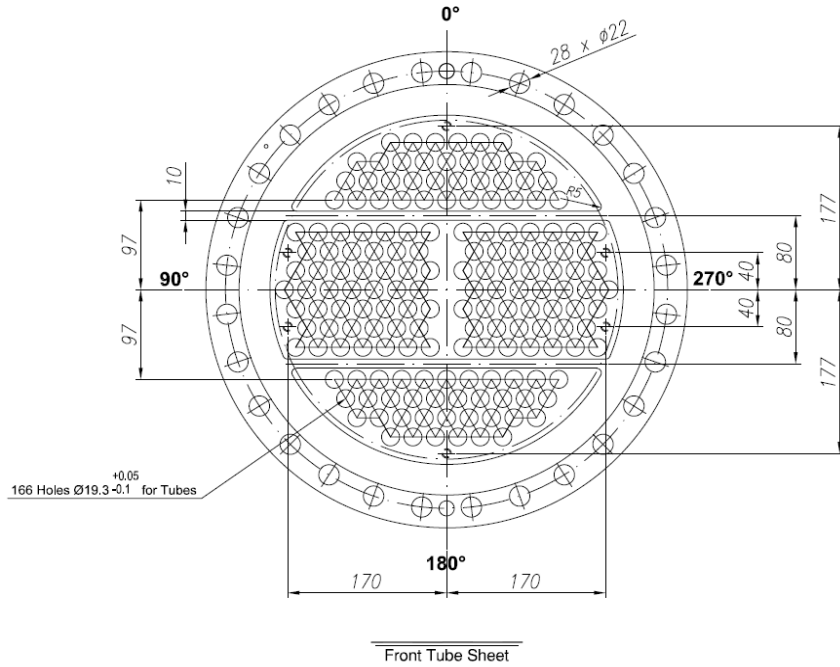
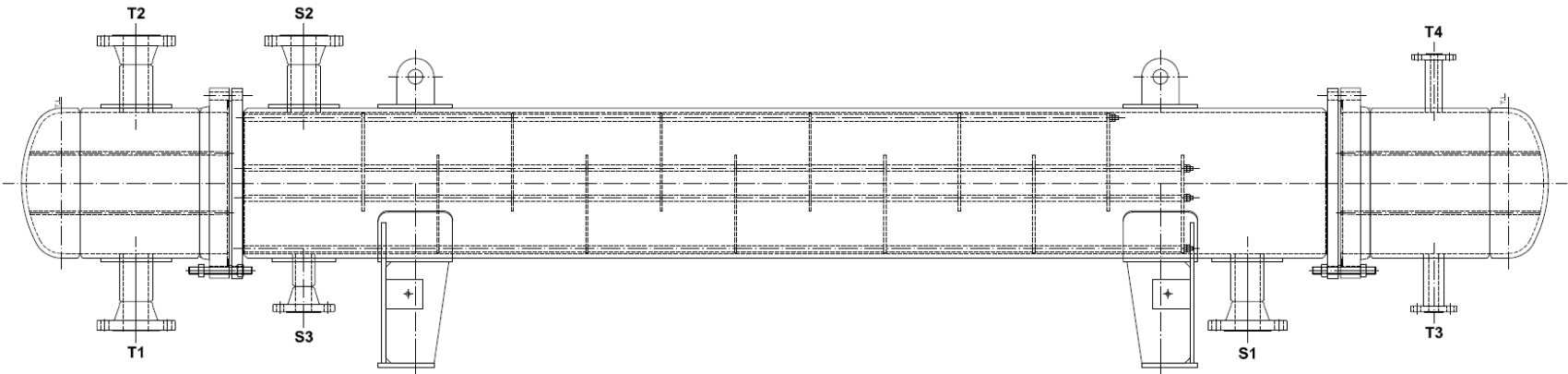
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S3	1	DRAIN	2"	300#	RF	200
S2	1	OIL OUTLET	3"	300#	RF	200
S1	1	OIL INLET	3"	300#	RF	200
T4	1	VENT	3/4"	300#	RF	200
T3	1	DRAIN	1"	300#	RF	200
T2	1	JACKETED WATER OUTLET	3"	300#	RF	200
T1	1	JACKETED WATER INLET	3"	300#	RF	200
Tag.	No.	Description	Size	Rating	Facing	PROJECTION (mm)