



Toase-ehe Park Sanati Gohar Ofogh  
Petrochemical Co.  
**CONCEPTUAL, BASIC and DETAIL DESIGN  
ENGINEERING OF STYRENE PARK OFFSITE**



Document Title: Process Flow Diagram (PFD)

Document No.: EI027-HSE-VD – PR– PFD– 001-R2

Rev. R2

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## STYRENE PARK OFFSITE

**Document Title:**  
**Process Flow Diagram (PFD)**

Rev.	Issued Date	DESCRIPTION	PREPARED	CHECKED	APPROVED
R2	21-07-2024	FI	F.SH	M.O	A.M
R1	15-06-2024	IFA	F.SH	M.O	A.M
R0	28-04-2024	IFA	F.SH	M.O	A.M



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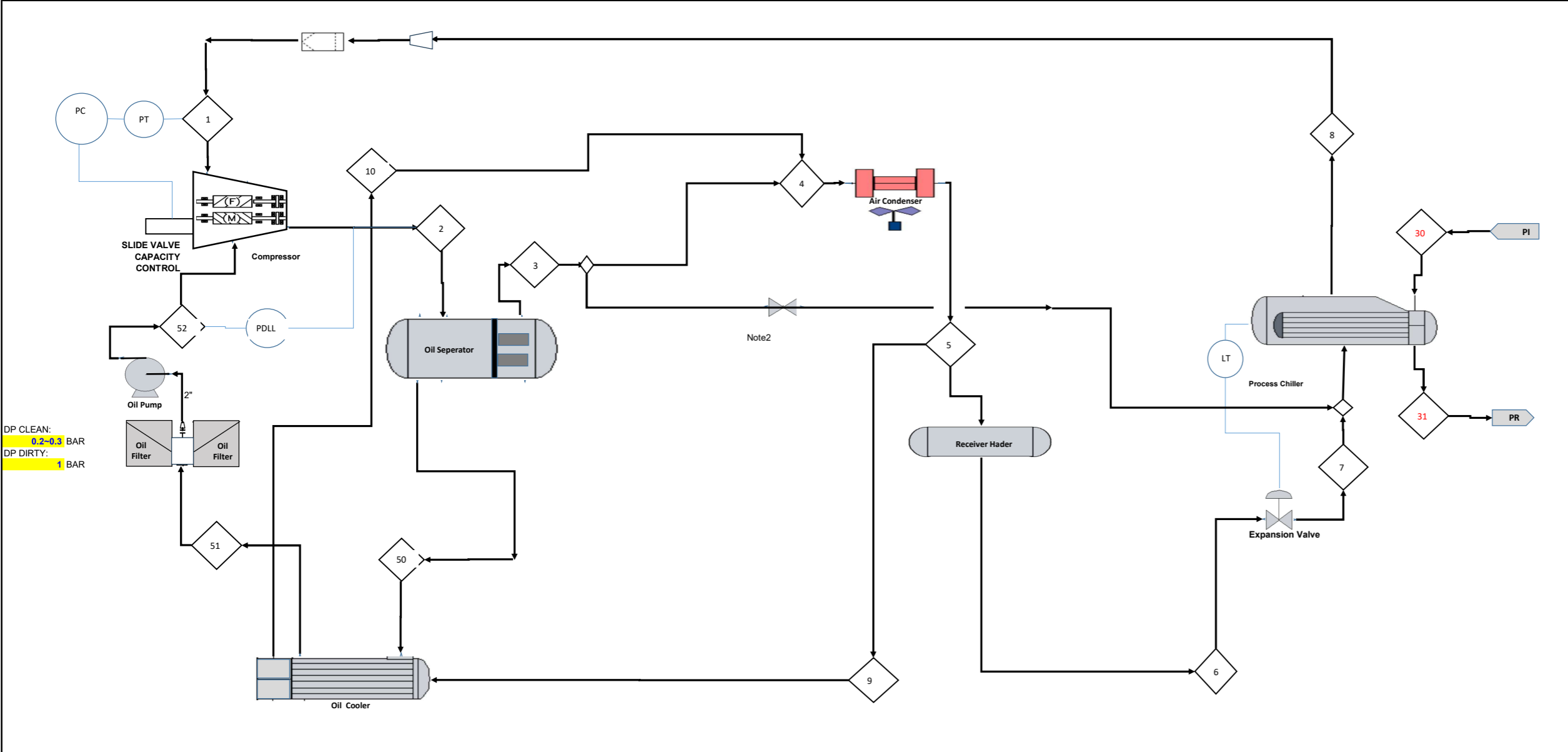
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**REVISION RECORD SHEET**

Page Page	Revisions							Page	Revisions						
	R0	R1	R2	R3	R4	R5	R6		R0	R1	R2	R3	R4	R5	R6
1	X	X	X					41							
2	X	X	X					42							
3	X	X	X					43							
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DP CLEAN: 0.2-0.3 BAR  
 DP DIRTY: 1 BAR

- NOTES:**
- 1 Pump assembly supplied by MAYEKAWA includes the regulator
  - 2 Manual valve shall be used during startup. During operation valve shall be closed.
  - 3 For operation P and T, refer to Table

Comp. Oil Flow: 53.2 Lpm  
 14.1 GPM

STREAM	Unit	50	51	52
Vapour Fraction		0.00	0.00	0.00
Temperature	C	73.50	60.00	60.00
Pressure	bara	20.20	19.70	22.50
Mass Flow	kg/h	53.20	53.20	53.20
Volume	lpm	624.48	600.17	600.17
Heat Flow	kW	0	0	0
Component(s)		OIL	OIL	OIL
MW	kg/kgmol	500	500	500
Cp		-	-	-
Z Factor		-	-	-
Density	kg/m3	1005.00	1005.00	1005.00
Viscosity	cp	12.00	12.00	12.00

STREAM	Unit	1	2	3	4	5	6	7	8	9	10	30	31
Vapour Fraction		1.00	1.00	1.0000	1.0000	0.0000	0.0000	0.4294	1.0000	0.0000	1	0.0000	0.0000
Temperature	C	-0.17	73.50	73.50	73.50	56.32	56.32	0.88	-0.07	56.32	73.39	15.20	5.00
Pressure	bara	4.65	20.20	19.80	19.80	19.70	19.70	4.86	4.70	19.70	19.774	5.50	5.30
Mass Flow	kg/h	2,847.00	6,049.20	2,847.00	3,015.50	2,847.00	2,847.00	2,847.00	2,847.00	168.50	168.5	36,929.76	36,929.76
Heat Flow	kW	-1,920.00	-1,848.00	-1,848.00	-1,848.00	-2,213.50	-2,089.00	-2,089.00	-1,920.00	-123.71	-109.34	-	-
Component(s)		PROPANE	PROPANE & OIL	PROPANE	PROPANE	PROPANE	PROPANE	PROPANE	PROPANE	PROPANE	PROPANE	STYRENE IN	STYRENE OUT
MW	kg/kgmol	44.096	-	44.096	44.096	44.096	44.096	44.096	44.096	44.096	44.096	-	-
Cp/Cv		1.2189	-	1.3340	1.3340	-	-	-	-	-	1.3309	-	-
Z Factor		0.8951	-	0.7475	0.7475	-	-	-	-	-	0.7489	-	-
Density	kg/m3	10.11	-	43.38	43.38	436.90	436.90	-	10.22	436.90	40.5	909.60	918.00
Viscosity	cp	0.0078	-	0.0106	0.0106	0.0690	0.0590	-	0.0078	0.0690	0.01066	0.82	0.96

Client: [Redacted]  
 P. O. No.: [Redacted]  
 Project: REFRIGERATION PACKAGE  
 Location: [Redacted]  
 Job No.: [Redacted]  
 Unit Item Number: [Redacted]  
 Compressor Model: 160V  
 Refrigerant: PROPANE

REVISION	DATE	DESCRIPTION

BY: Vendor 2  
 APP: Vendor 1  
 DATE: [Redacted] DWG: [Redacted] REV: [Redacted]