



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



Document Title: Piping And Instrumentation Diagram (P&ID)

Document No.: EI027-HSE-VD – PR– PID– 002-A0

Rev. A0

Page 1 of 14

## STYRENE PARK OFFSITE

**Document Title:**

**Piping And Instrumentation Diagram (P&ID)**

A0	09-02-2025	AS	F.SH	M.O	A.M
R2	07-11-2024	IFA	F.SH	M.O	A.M
R1	27-08-2024	IFA	F.SH	M.O	A.M
R0	30-06-2024	IFA	F.SH	M.O	A.M
<b>Rev.</b>	<b>Issued Date</b>	<b>DESCRIPTION</b>	<b>PREPARED</b>	<b>CHECKED</b>	<b>APPROVED</b>



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Page 2 of 14

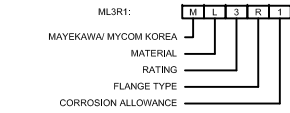
**REVISION RECORD SHEET**

Page Page	Revisions							Page	Revisions						
	R0	R1	R2	A0	R4	R5	R6		R0	R1	R2	R3	R4	R5	R6
1	X	X	X	X				41							
2	X	X	X	X				42							
3	X	X	X	X				43							
4	X	X	X	X				44							
5	X	X	X	X				45							
6	X	X	X	X				46							
7	X	X	X	X				47							
8	X	X	X	X				48							
9	X	X	X	X				49							
10				X				50							
11				X				51							
12				X				52							
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**INSTRUMENT NUMBERING**  
EACH INSTRUMENT HAS BEEN NAMED AS SHOWN BELOW IN THE DOCUMENTATION:  
TAG-RU0001X-AA  
WHERE:  
X : ONE DIGITS, WHICH IDENTIFY THE REFRIGERANT PACKAGE TRAIN (A OR B)  
TAG : INSTRUMENT TAG (ATTACHMENT: P&ID SYMBOLS)  
AA : TWO DIGITS, WHICH IS THE PROGRESSIVE ITEM NUMBER IN THE UNIT FROM 01 TO 99.

**MOTOR INSTRUMENT NUMBERING**  
IF AN INSTRUMENT OR A FUNCTION IS INSTALLED ON A ELECTRIC DRIVER OF A MACHINERY WHICH NAME IS TAG-RU0001X-AA, THE INSTRUMENT NAME IS: TAG-RU0001X-AA

**PIPE LINE NUMBERING**  
DN-AMP-RU0001YXXMLR1-C  
WHERE:  
DN : NOMINAL DIAMETER IN INCH  
MP : FLUID CODE  
RU0001 : PACKAGE NAME  
Y : PACKAGE TRAIN (A OR B)  
X : LETTER WHICH IDENTIFIES THE LINE NUMBER



**Rating:**  
1=1500 CLASS  
3=300 CLASS  
6=6000 CLASS  
9=9000 CLASS  
15=15000 CLASS

**MATERIAL:**  
C: CARBON STEEL  
L: LOW TEMPERATURE CARBON STEEL  
S: STAINLESS STEEL  
I: INSTRUMENT AIR STAINLESS STEEL

**FLANGE TYPE:**  
R = RAISED FACE  
F = FLAT FACE  
R = RING TYPE JOINT  
J = LARGE MALE/FEMALE  
S = SMALL L TONGUE/GROOVE

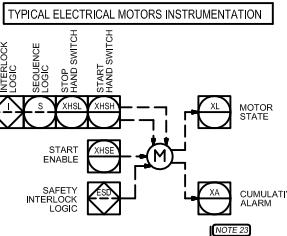
**CORROSION ALLOWANCE:**  
0 = 0 mm  
1 = 1.5 mm  
2 = 3.0 mm

FLUID CODE:	DESCRIPTION
AV	Atmospheric Vent
CWS	Cooling Water Supply
CWR	Cooling Water Return
FWG	Flare/Vent gas
IA	Instrument Air
OI	Hydraulic Oil
ST	Styrene
PR	Propane

Instrument line and function symbols			
HARDWARE		SOFTWARE	
Symbol	Denomination	Symbol	Denomination
	Locally mounted		Field mounted, shared display, shared control
	Mounted on back panel		Function normally inaccessible to operator and installed in main control room
	Mounted in main control room		Function normally accessible to operator and installed in main control room
	Mounted on back panel in auxiliary control room or on local panel		Function normally inaccessible to operator and installed in auxiliary control room or on local panel
	Mounted on panel in auxiliary control room or on local panel		Function normally accessible to operator and installed in auxiliary control room or on local panel
	Filed relay		Software interface logic: normally inaccessible to operator and installed in main control room
	Back panel relay in auxiliary control room or on local panel		Sequential logic functions
	Mounted on back panel		Safety interlock logic
	Star indicated that the instrument is supplied by package manufacturer		Package Control System PLC
	SIGNAL LIGHT		Summing function
	Foundation Fieldbus		Difference function
	Differential between two value + Upper Value - Lower value		Proportional function
			Multiplying function
			Dividing function
			High selecting function
			Low selecting function

**INSULATION AND TRACING CODES**

A : ACOUSTIC INSULATION  
H : HOT INSULATION  
C : COLD INSULATION  
P : PERSONNEL PROTECTION (FROM 60°C AND ABOVE)  
FS : FIRE SAFE PROTECTION  
T : STEAM TRACING  
TW : HOT OIL TRACING  
TC : HOT WATER TRACING  
E : ELECTRICAL TRACING  
JT : TOTAL JACKETED LINE  
JR : REDUCED JACKETED LINE  
JP : PARTIAL JACKETED LINE  
F : ANTI FREEZING  
D : DUAL INSULATION  
B : SOLAR PROTECTION  
K : ANTI CONDENSATION  
AC : COLD AND ACOUSTIC INSULATION  
AH : HOT AND ACOUSTIC INSULATION  
N : NOT INSULATED  
W : TAPE WRAPPED (UNDERGROUND LINES)



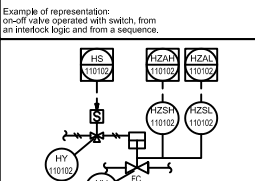
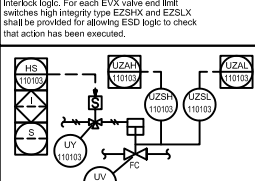
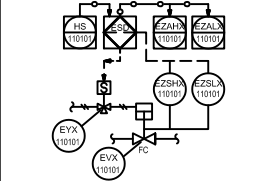
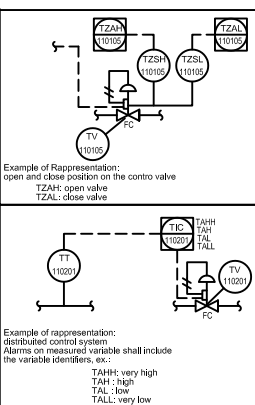
Piping and relevant components			
Symbol	Denomination	Symbol	Denomination
	Main process		Female Connection
	Secondary process		Male Connection
	Utility		Flange Connection
	Jacket		Manhole
	Electrical Heat Tracing/Insulated		Female nitrogen service
	Hydraulic System Tubing (1/2" SS)		Male nitrogen service
	Electrical Heat Tracing Tubing (Insulated)		Cone Type strainer
	Blind flange		Temporary strainer
	Cap (butt weld)		Y-Strainer
	Reducer (Top flat)		Ring spade
	Reducer (Concentric)		Spectacle blind - normally closed
	Sample connection		Spectacle blind - normally open
	Sample Point		Ring spacer
	Gate or generic valve		
	Check Valve		
	Stop Check Valve		
	Globe or disc Valve		
	Ball Valve (FULL BORE)		
	Ball Valve (REDUCED BORE)		
	Three-way Valve		
	Spring Valve		
	Locked Close Valve		
	Locked Open Valve		
	Normally open valve		
	Normally closed valve		
	Car seal open valve		
	Car seal closed valve		
	Tight Shut Off Valve		
	Sight glass		
	Pipe line class change		

Instrument identification	
Symbol	Denomination
	Instrument tap on line
	Pressure tap with manifold valve
	Pressure tap with generic valves
	Pressure tap diaphragm type
	Fixed restriction orifice
	Primary flow element with transmitter
	Automatic regulator with integral flow indication
	Handwired for automatic valves (valve with actuators)
	Diaphragm, spring-opposed
	spring-opposed single-acting
	Cylinder, spring-opposed double-acting
	Rotary motor
	Solenoid
	Solenoid valve with manual reset
	Hand actuator
	Butterfly Valve
	Pressure relief or safety valve
	Temperature relief or safety valve
	Two-Way Valve Fail Open
	Two-Way Valve Fail Close
	Two-way valve fail indeterminate
	three-way valve fail open to path A-C
	MAGNETIC LEVEL GAUGE
	LEVEL TRANSMITTER WITH DIAPHRAGM SEPARATOR WITH EXTENSION
	Open
	Close

- NOTES :**
- AN ADDITIONAL "X" AFTER THE INSTRUMENT CODE MEANS THAT INSTRUMENT BELONGS TO ESD SYSTEM.
  - FOR TEMPERATURE MEASURING INSTRUMENTS WHOSE SIGNAL HAS TO BE ROUTED TO A REMOTE SYSTEM (DCS, PLC), THE TRANSMITTER HAS BEEN ALWAYS INDICATED EVEN IF IT IS STRICTLY REQUIRED ONLY FOR CONTROL LOOPS, PROCESS INTERLOCKS AND SAFETY INTERLOCKS, IN CASE OF TEMPERATURE INDICATOR.
  - IN ALL THE P&ID, PACKAGES ARE REPRESENTED IN A SIMPLIFIED WAY, IN GENERAL, WHAT IS REPRESENTED IS LICENSOR MINIMUM REQUIREMENT. THE CHARACTERISTICS OF EACH PACKAGE ARE DESCRIBED IN THE RELEVANT DATA SHEET. IN ANY CASE, PACKAGES VENDORS SHALL SUPPLY FINAL P&ID.
  - FOR PIPES CARRYING THE FOLLOWING FLUIDS :  
- EB (ETHYLENIZENE)  
- AN (ACRYLONITRILE)  
- CD (ORGANIC LIQUID CONDENSATE)  
- ST (STYRENE)  
- BD (BUTADIENE)  
THE NUMBER OF FLANGES SHALL BE MINIMIZED.
  - INSTALL DRAINS ON THE PIPING CIRCUITS (OR SINGLE LINES) LOWEST POINTS AND VENTS IN THE PIPING CIRCUITS (OR SINGLE LINES) HIGHEST POINTS.
  - MINIMIZE FLANGED COUPLINGS ON HOT/THERMAL OIL (HO) MAIN DISTRIBUTION HEADER LINES. FOR THERMAL OIL (HO, CO) LINES INSTALLED ON PIPE RACKS, FLANGED COUPLINGS SHALL BE EQUIPPED WITH SAFE-RING OR EQUIVALENT FLANGES JOINTS SPRAY PROTECTION.
  - WHEN AN INTERLOCK OR A SEQUENCE REQUIRES TO PERFORM AN ACTION, THE INTERLOCK OR SEQUENCE ITSELF SHALL VERIFY IF THE ACTION HAS BEEN DONE. THIS HAS TO BE CONSIDERED AS STANDARD INSTALLATION AND IS NOT REPRESENTED ON P&ID.
  - IN GENERAL ON P&IDs SEQUENCES CHECK PHASE IS NOT REPRESENTED EXCEPT FOR: - RUBBER PLANT; RUBBER DISSOLUTION SECTION - RUBBER PLANT; REACTION SECTION
  - THE SIZE OF CONTROL VALVES BY-PASS VALVES WILL BE DEFINED / CONFIRMED ACCORDING TO THE FINAL SIZE OF CONTROL VALVES.
  - IN CASE DRIP RING IS INDICATED ON P&ID, IT SHALL BE SUPPLIED BY PIPING VENDOR. FOR DRIP RING TYPICAL SEE DOC. J-80/85/88-IN-STD-1500-0001 "DRIP RING FOR DIAPHRAGM INSTRUMENT TYPICAL".
  - THE INSTALLATION OF ALL PI-TI-TI REPRESENTED ON P&ID IS INDICATED IN THE TYPICAL.
  - ALL SIGNALS FROM PLC TO ESD SHALL BE HARD-WIRED (NON-DATALINK)
  - ALL SIGNALS FROM UNIT 88 INSTRUMENTS SHALL BE CONNECTED TO DCS /FCS /ESD OF RUBBER PLANT.
  - ALL VALVES ON PSV INLET /OUTLET LINES SHALL BE FULL BORE TYPE. GATE VALVE ON FLARE LINE TO BE INSTALLED WITH STEM IN HORIZONTAL POSITION.
  - FOR SPECIAL PIPING ITEMS LIST REFER TO DOC. J-85-PI-LSC-8501.
  - ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
  - ELEVATION SHOWN ARE ABOVE THE HIGHEST POINT OF PAVING.
  - ALL VALVES ARE LINE SIZE UNLESS OTHERWISE SHOWN.
  - THIS FLOW DIAGRAM IS DIAGRAMMATIC ONLY. DESIGN OF PIPE LINE MUST BE INVESTIGATED FOR VENTING OF GAS AND VAPOR POCKETS IN PIPING AND EQUIPMENT, LOW POINTS IN PIPING, PUMPS AND EQUIPMENT FOR DRAINING AND ACCESSIBILITY OF ALL VALVES, FLANGES AND INSTRUMENTS INCLUDING THERMOCOUPLES ETC.
  - ALL ELECTRONIC INSTRUMENTATION SHALL BE INSTALLED AWAY FROM STEAM LINES AND HIGH TEMPERATURE HEAT SOURCE.
  - SAMPLE TAPING FOR GAS SAMPLES SHALL BE FROM THE TOP OF THE MAIN LINE. FOR LIQUID SAMPLES TAPPING SHALL BE DONE FROM THE SIDE.
  - EXCEPT FOR PROCESS REASONS, LOW POINT DRAINS AND HIGH POINT VENT ARE NOT SHOWN.
  - CABLING BETWEEN DCS REMOTE I/O CARDS IN MCC CUBICLE CABINET AND MAIN CONTROL ROOM WILL BE VIA SOFT LINK EXCEPT FOR ESD SIGNALS TO MCC THAT WOULD BE HARD WIRED.
  - ESDL MEANS EARTHING SWITCH LINK.
  - SIGNALS OF CURRENT TRANSMITTERS ARE TAKEN FROM MCC.
  - WHILE PURGING THE EQUIPMENTS, VENTS SHALL BE PROPERLY KEPT OPEN IN ORDER TO AVOID EQUIPMENT PRESSURIZATION ABOVE EQUIPMENT DESIGN/PSV SET PRESSURE BY MAINTAINING PROPER ADMINISTRATIVE CONTROL. PRESSURE SAFETY VALVES AND RUPTURE DISCS ARE NOT DESIGNED FOR THE MAXIMUM PURGING CONDITION MENTIONED IN THE LICENSOR PDP DATA.

**FLOW INSTRUMENTS**

	SIGHT FLOW GLASS		FLOW TURBINE TYPE
	ORIFICE PLATE WITH TRANSMITTER		METER RUN
	ROTAMETER		INTEGRAL FLOW ORIFICE ASSEMBLY
	VENTURI		FLOW POSITIVE DISPLACEMENT TYPE
	FLOW NOZZLE		PITOT OR ANUBAR WITH TRANSMITTER
	TYPICAL FOR MAGNETIC DRIVEN PUMP		FLOW RESTRICTION ORIFICE
	REMOVABLE SPOOL PIECE		TRANSMITTER
	INSULATION KIT		MAGNETIC
	Steam trap		VORTEX
	FREE DRAINING		CORIOLIS
	Jacketed lines: they are marked with a double identification, one regarding the jacketed line and the other are regarding the jacket.		ULTRASONIC
	Supply battery limit		THERMAL FLOWMETER
	Tie In Point		THERMAL FLOWMETER
	INDICATED ON P&ID		THERMAL FLOWMETER
	ACTUAL		THERMAL FLOWMETER



Symbol	Denomination	Abbreviation
	CARTRIDGE Filter	FT
	Basket Filter	FT
	Surge Element	TST
	Coalescer	D
	Decanter	D
	Compressor Screw	C
	Vertical Shell & Tube Exchanger	E
	Pump Reciprocating	P
	Ejector	EJ
	Absorber	AE

**HOLDEE:**

**EQUIPMENT LIST:**

REV.	ISSUE DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
03	FEB-2025	AS BUILT	A.K	F.SH	A.M
02	OCT-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
01	AUG-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
00	JUL-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M

**KEY PLAN :**

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**CLIENT**

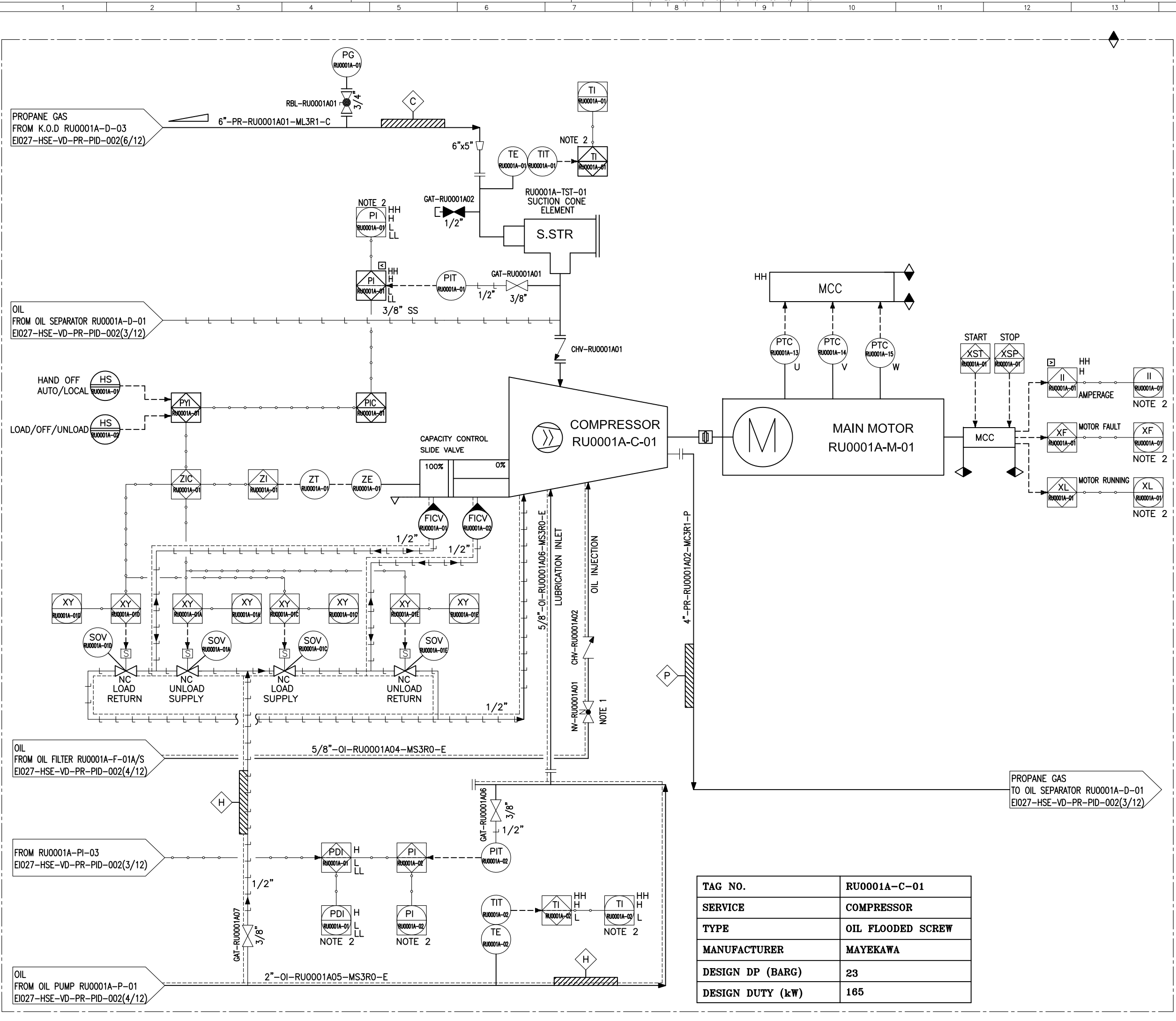
پتروشیمی توسهه پارک  
صنعتی گوهر افق

**CONSULTING ENGINEER**

**PROJECT:** STYRENE PARK OFFSITE

**DRAWING TITLE:** PROCESS & INSTRUMENTATION DIAGRAM (P&ID)-RU SYMBOL, ABBREVIATION AND GENERAL NOTES

DRAWING NO.	REV.	SIZE	SCALE	SHEET
EI027-HSB-YD-PR-PID-002	03	A3	NTC	1 of 12



REFERENCE DRAWING: 15, 16

DWG NO.: , REV.:

NOTES :

- 1- OPENING DEGREE TO BE SET DURING COMMISSIONING AND LOGGED.
- 2- SIGNALS ROUT TO DCS.
- 3- MAINTAIN TEMPERATURE FOR ELECTRICAL INSULATIONS IS 30°C.

LEGEND:

VENDOR CUSTOMER

HOLDE:

EQUIPMENT LIST:

KEY PLAN :

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CLIENT:

CONSULTING ENGINEER:

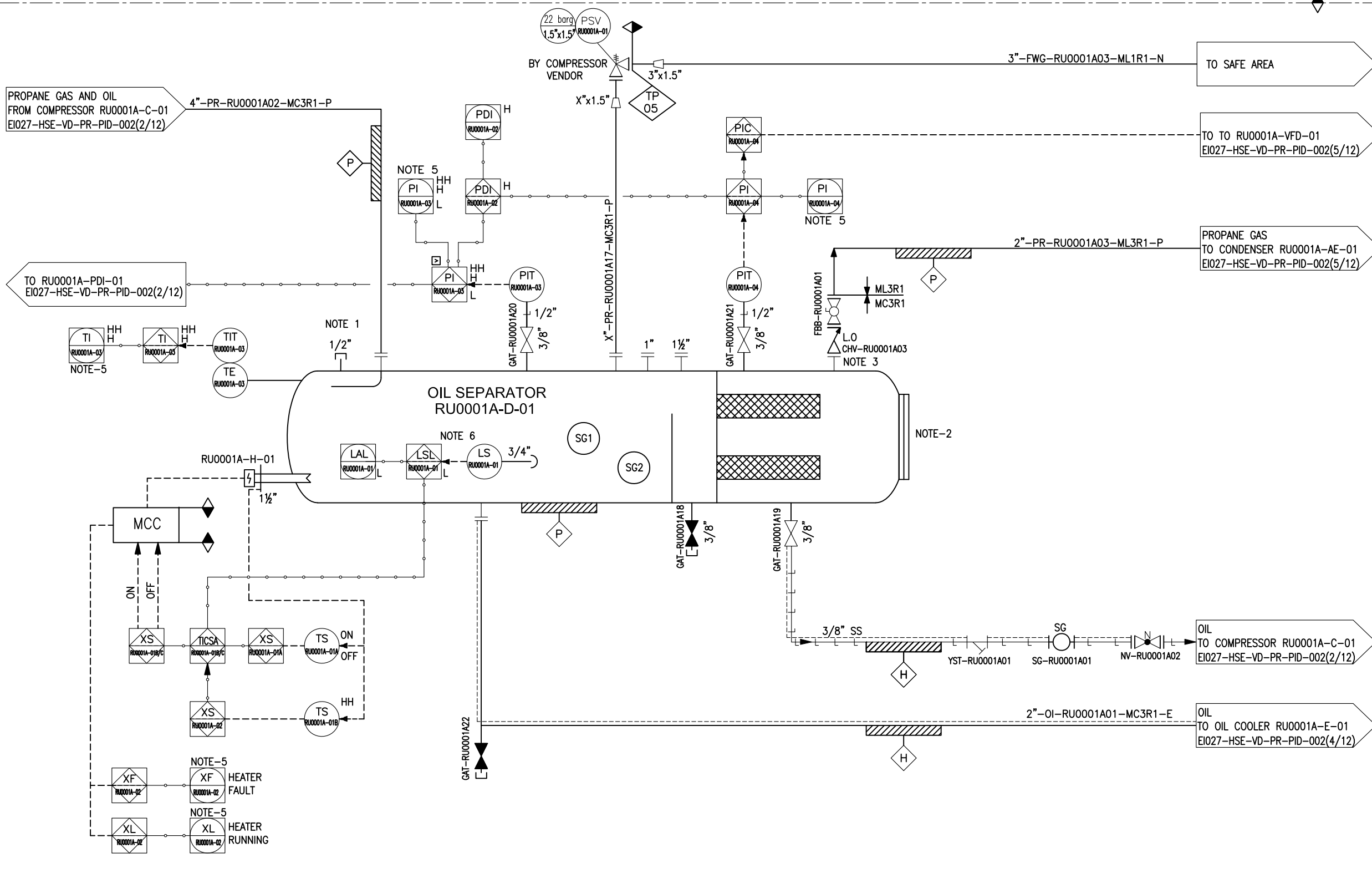
PROJECT: **STYRENE PARK OFFSITE**


DRAWING TITLE: **PROCESS & INSTRUMENTATION DIAGRAM (P&ID)-RU**

DRAWING NO.	REV.	SIZE	SCALE	SHEET
E1027-HSE-VD-PR-PID-002	03	A3	NTC	2 of 12

<b>TAG NO.</b>	<b>RU0001A-C-01</b>
<b>SERVICE</b>	<b>COMPRESSOR</b>
<b>TYPE</b>	<b>OIL FLOODED SCREW</b>
<b>MANUFACTURER</b>	<b>MAYEKAWA</b>
<b>DESIGN DP (BARG)</b>	<b>23</b>
<b>DESIGN DUTY (kW)</b>	<b>165</b>

TAG NO.	RU0001A-D-01
SERVICE	OIL SEPARATOR
DESIGN PRESS. (BARG)	22
DESIGN TEMP. (°C)	-29/100
ID x L (mm)	590 x 2250



REFERENCE DRAWING	DWG NO.	REV.			
NOTES :					
1- OIL TOP UP & VACUUM CONNECTION.					
2- INSPECTION HOLE.					
3- STOP CHECK VALVE FOR PREVENT SPIN BACK.					
4- DELETED.					
5- SIGNAL ROUT TO DCS.					
6- IN CASE OF LOW LEVEL, THE OIL HEATER TO BE TRIPPED.					
7- MAINTAIN TEMPERATURE FOR ELECTRICAL INSULATIONS IS 30°C.					
LEGEND:					
VENDOR	CUSTOMER				
HOLDE:					
EQUIPMENT LIST:					
KEY PLAN :					
REV.	ISSUE DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
03	FEB-2025	AS BUILT	A.K	F.SH	A.M
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CLIENT					
 پتروشیمی توسعه پارک صنعتی گوهر افق					
CONSULTING ENGINEER					
PROJECT: STYRENE PARK OFFSITE					
DRAWING TITLE: PROCESS & INSTRUMENTATION DIAGRAM (P&ID)-RU					
DRAWING NO.	REV.	SIZE	SCALE	SHEET	
EI027-HSE-VD-PR-PID-002	03	A3	NTC	3 of 12	

TAG NO.	RU0001A-E-01
SERVICE	OIL COOLER
DESIGN PRESS. (BARG)	S: 30, T:30
DESIGN TEMP. (°C)	S:5/100, T:-45/100
DESIGN DUTY (kW)	24.7
ID x L (mm)	139.7 x 2200
TYPE	AEH

TAG NO.	RU0001A-P-01
SERVICE	OIL PUMP
TYPE	SCREW PUMP
DESIGN PRESS. (BARG)	26
DESIGN TEMP. (°C)	5 / 100
RATED POWER (kW)	2.5

TAG NO.	RU0001A-F-01A/S
SERVICE	OIL FILTER
DESIGN PRESS. (BARG)	23
DESIGN TEMP. (°C)	5/100
ID x L (mm)	MAYEKAWA

14	15	16
REFERENCE DRAWING	DWG NO.	REV.

NOTES :

- ONE OPERATING / ONE STAND-BY.
- DP=3 BAR.
- SIGNAL ROUT TO DCS.
- HEAT TRACING TO BE TURNED OFF DURING COMPRESSOR START.
- MAINTAIN TEMPERATURE FOR ELECTRICAL INSULATIONS IS 30°C.

LEGEND:

VENDOR  CUSTOMER


HOLDE:

EQUIPMENT LIST:

KEY PLAN :

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CLIENT



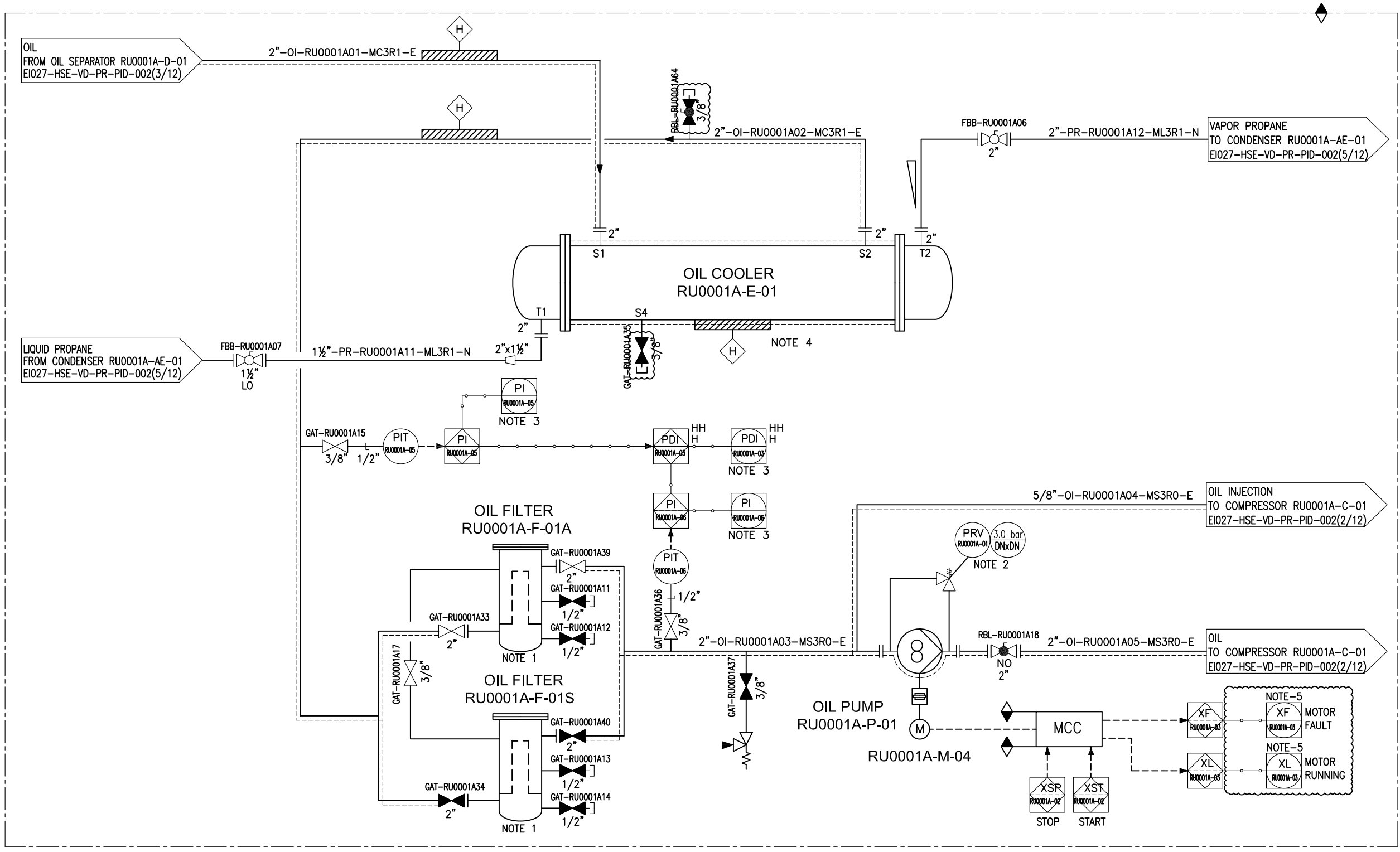
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CONSULTING ENGINEER

PROJECT: **STYRENE PARK OFFSITE**

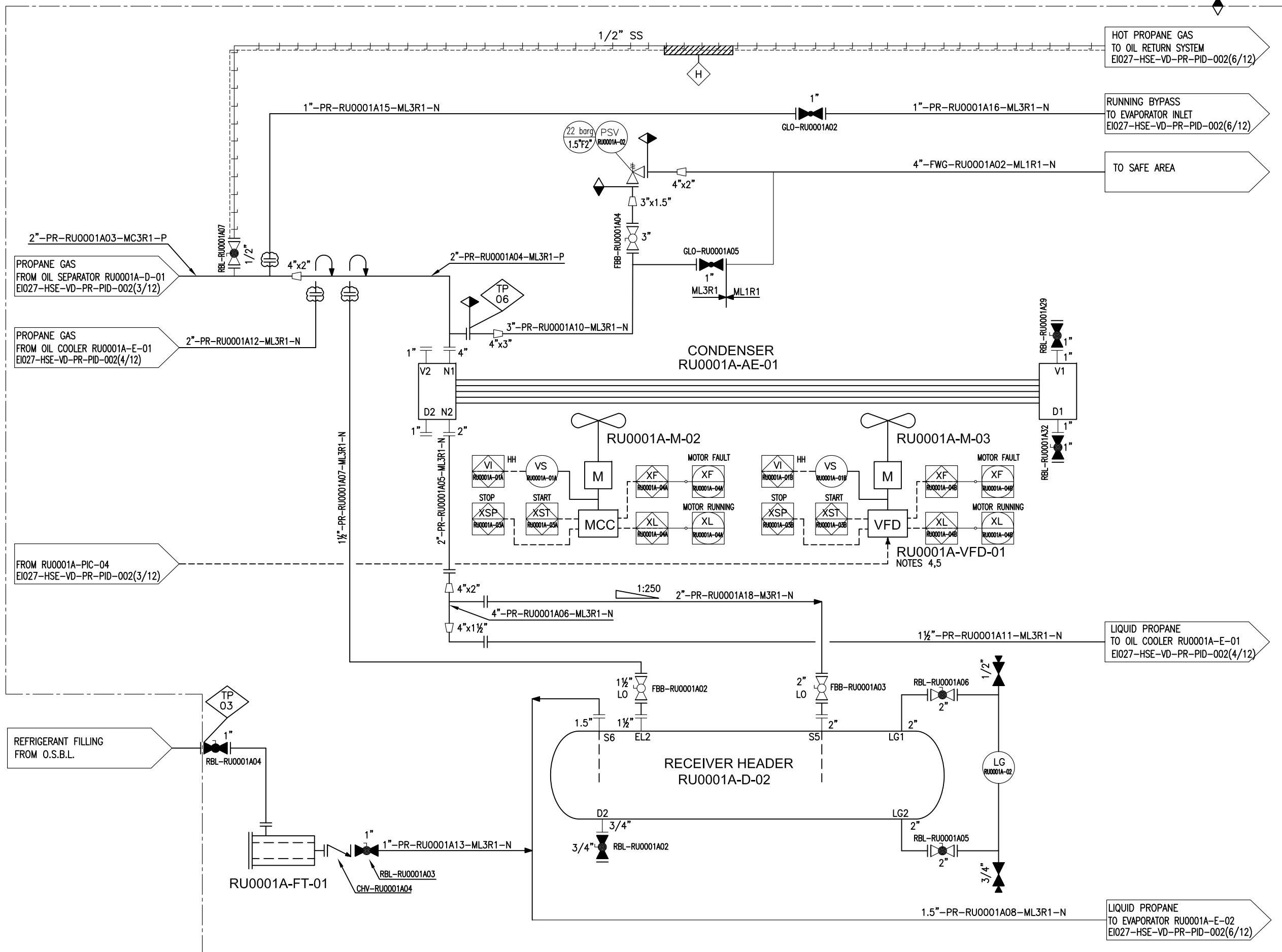
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EI027-HSE-VD-PR-PID-002	03	A3	NTC	4 of 12



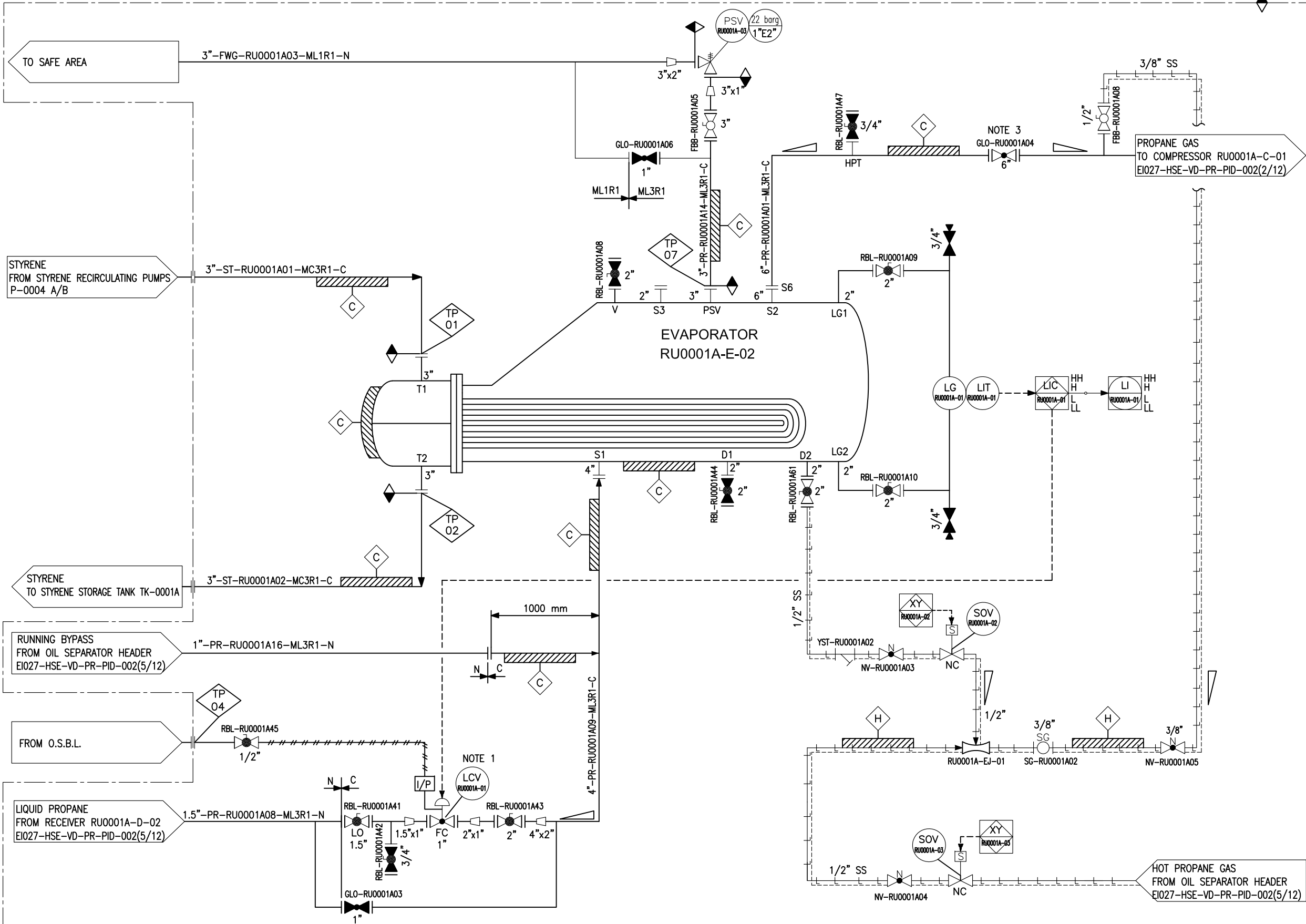
TAG NO.	RU0001A-AE-01
SERVICE	CONDENSER
DESIGN PRESS. (BARG)	22.0+FV
DESIGN TEMP. (°C)	-45/120
DESIGN DUTY (kW)	257


TAG NO.	RU0001A-D-02
SERVICE	RECEIVER HEADER
DESIGN PRESS. (BARG)	22.0+FV
DESIGN TEMP. (°C)	-45/120
ID x L (mm)	437 x 4000

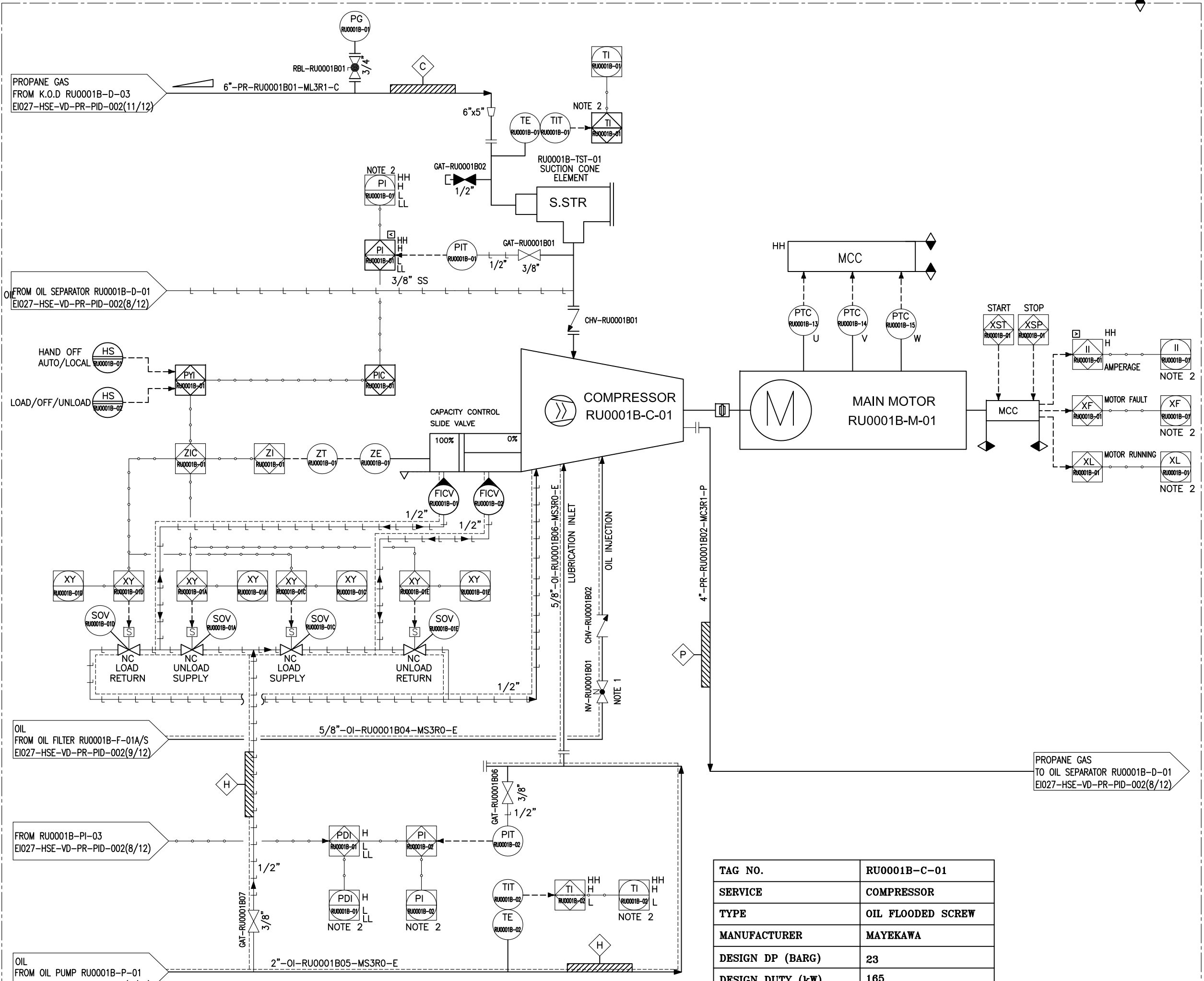


REFERENCE DRAWING	DWG NO.	REV.			
NOTES :					
1- DELETED.					
2- MANUAL FAN PITCH HAS BEEN CONSIDERED FOR EACH FAN.					
3- MAINTAIN TEMPERATURE FOR ELECTRICAL INSULATIONS IS 30°C.					
4- VARIABLE FREQUENCY DRIVE IS INSTALLED IN MOTOR CONTROL CENTER.					
5- MOTOR HARDWIRE CONNECTED TO VARIABLE FREQUENCY DRIVE.					
LEGEND:					
VENDOR	CUSTOMER				
HOLDE:					
EQUIPMENT LIST:					
KEY PLAN :					
REV.	ISSUE DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
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00	JUL-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
CLIENT					
 پتروشیمی توسعه پارک صنعتی گوهر افق					
CONSULTING ENGINEER					
PROJECT: STYRENE PARK OFFSITE					
DRAWING TITLE: PROCESS & INSTRUMENTATION DIAGRAM (P&ID)-RU					
DRAWING NO.	REV.	SIZE	SCALE	SHEET	
EIO27-HSE-VD-PR-PID-002	03	A3	NTC	5 of 12	

TAG NO.	RU0001A-E-02
SERVICE	EVAPORATOR
DESIGN PRESS. (barg)	S: 22.0+FV, T: 6.8+FV
DESIGN TEMP. (°C)	S: -45/120, T: 85
DESIGN DUTY (kW)	166.6
SHELL ID x TUBE L (mm)	600-925 x 2300
TEMA TYPE	BKU



REFERENCE DRAWING	DWG NO.	REV.			
NOTES :					
1- TRAVEL DOWN BLOCK TO BE SET AND LOCKED AT MINIMUM OPENING DURING COMMISSIONING (2 ~ 5%).					
2- DELETED.					
3- AT STAND STILL CONDITION, VALVE NEEDS TO BE CLOSED COMPLETELY. DURING START-UP VALVE TO BE OPENED SMOOTHLY.					
4- MAINTAIN TEMPERATURE FOR ELECTRICAL INSULATIONS IS 30°C.					
LEGEND:					
VENDOR	CUSTOMER				
HOLDE:					
EQUIPMENT LIST:					
KEY PLAN :					
03	FEB-2025	AS BUILT	A.K	F.SH	A.M
02	OCT-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
01	AUG-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
00	JUL-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
REV.	ISSUE DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
CLIENT					
 پتروشیمی توسعه پارک صنعتی گوهر افق					
CONSULTING ENGINEER					
PROJECT: STYRENE PARK OFFSITE					
DRAWING TITLE: PROCESS & INSTRUMENTATION DIAGRAM (P&ID)-RU					
DRAWING NO.	REV.	SIZE	SCALE	SHEET	
EI027-HSE-VD-PR-PID-002	03	A3	NTC	6 of 12	



14	15	16
REFERENCE DRAWING	DWG NO.	REV.

NOTES :

- 1- OPENING DEGREE TO BE SET DURING COMMISSIONING AND LOGGED.
- 2- SIGNALS ROUT TO DCS.
- 3- MAINTAIN TEMPERATURE FOR ELECTRICAL INSULATIONS IS 30°C.

LEGEND:

VENDOR	CUSTOMER
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HOLDE:

II	RU0001B-01	NOTE 2
XF	RU0001B-01	NOTE 2
XL	RU0001B-01	NOTE 2

EQUIPMENT LIST:

COMPRESSOR	RU0001B-C-01
MAIN MOTOR	RU0001B-M-01

KEY PLAN :

03	FEB-2025	AS BUILT	A.K	F.SH	A.M
02	OCT-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
01	AUG-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
00	JUL-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M

REV.	ISSUE DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
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CONSULTING ENGINEER

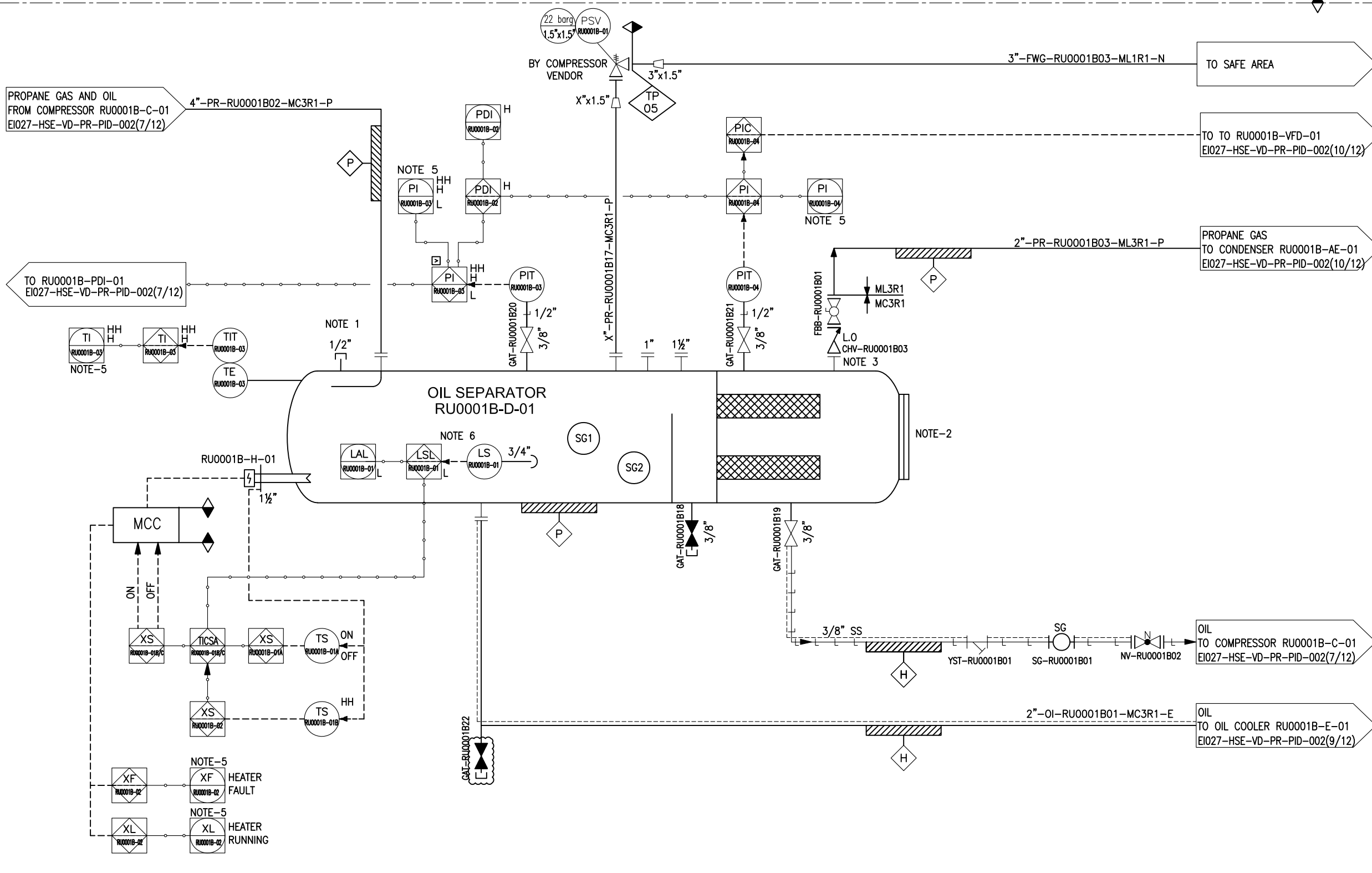
PROJECT: **STYRENE PARK OFFSITE**

DRAWING TITLE: **PROCESS & INSTRUMENTATION DIAGRAM (P&ID)-RU**

TAG NO.	RU0001B-C-01
SERVICE	COMPRESSOR
TYPE	OIL FLOODED SCREW
MANUFACTURER	MAYEKAWA
DESIGN DP (BARG)	23
DESIGN DUTY (kW)	165

DRAWING NO.	REV.	SIZE	SCALE	SHEET
EI027-HSE-VD-PR-PID-002	03	A3	NTC	7 of 12

TAG NO.	RU0001B-D-01
SERVICE	OIL SEPARATOR
DESIGN PRESS. (BARG)	22
DESIGN TEMP. (°C)	-29/100
ID x L (mm)	590 x 2250



REFERENCE DRAWING	DWG NO.	REV.

- NOTES :
- 1- OIL TOP UP & VACUUM CONNECTION.
  - 2- INSPECTION HOLE.
  - 3- STOP CHECK VALVE FOR PREVENT SPIN BACK.
  - 4- DELETED.
  - 5- SIGNAL ROUT TO DCS.
  - 6- IN CASE OF LOW LEVEL, THE OIL HEATER TO BE TRIPPED.
  - 7- MAINTAIN TEMPERATURE FOR ELECTRICAL INSULATIONS IS 30°C.

LEGEND:

VENDOR	CUSTOMER
--------	----------


HOLDE:

EQUIPMENT LIST:

KEY PLAN :

REV.	ISSUE DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
03	FEB-2025	AS BUILT	A.K	F.SH	A.M
02	OCT-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
01	AUG-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
00	JUL-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M

CLIENT



پتروشیمی توسعه پارک  
صنعتی گوهر افق

CONSULTING ENGINEER

PROJECT: **STYRENE PARK OFFSITE**




DRAWING TITLE: **PROCESS & INSTRUMENTATION DIAGRAM (P&ID)-RU**

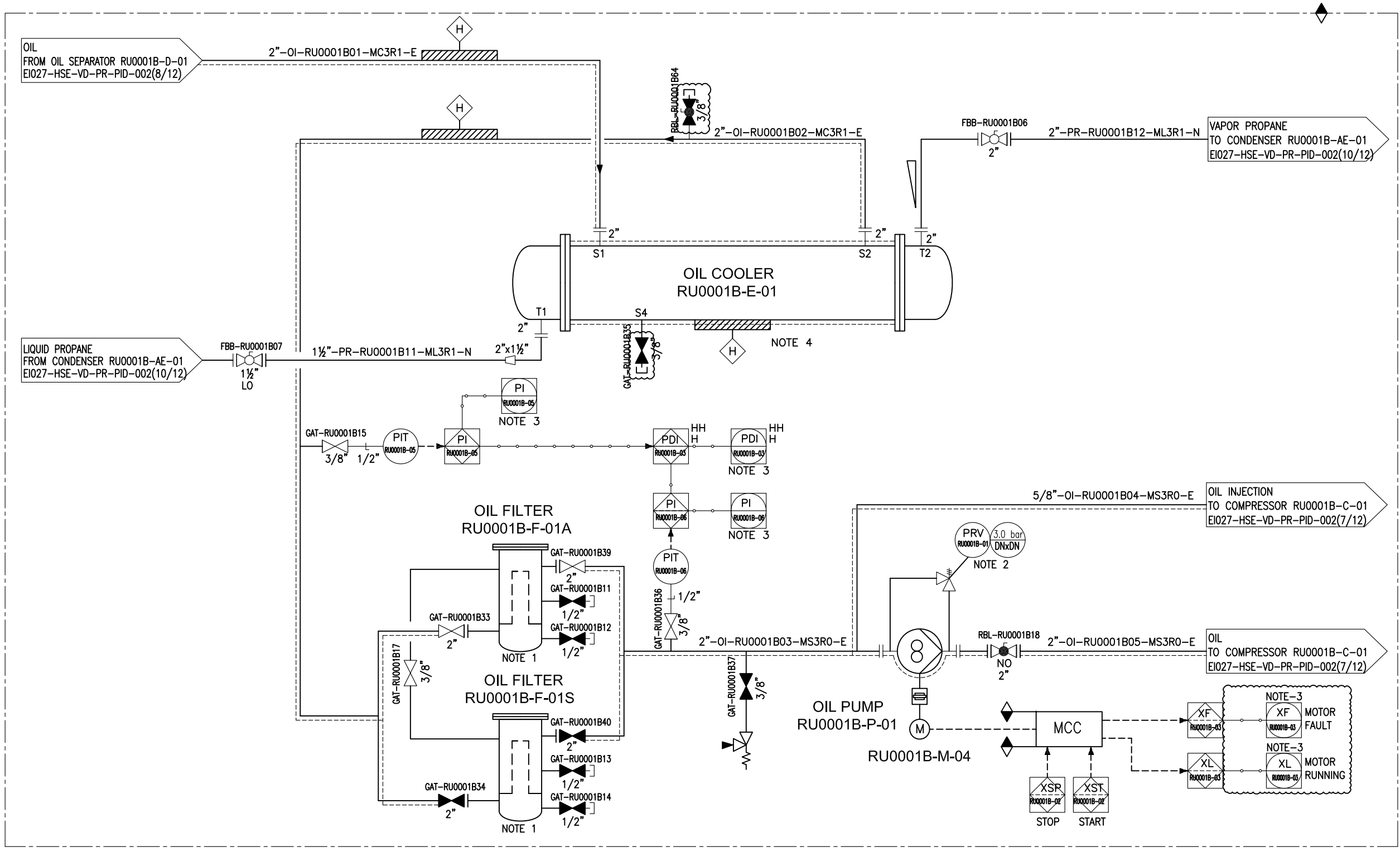
DRAWING NO.	REV.	SIZE	SCALE	SHEET
EI027-HSE-VD-PR-PID-002	03	A3	NTC	8 of 12

TAG NO.	RU0001B-E-01
SERVICE	OIL COOLER
DESIGN PRESS. (BARG)	S: 30, T:30
DESIGN TEMP. (°C)	S:5/100, T:-45/100
DESIGN DUTY (kW)	24.7
ID x L (mm)	139.7 x 2200
TYPE	AEH

TAG NO.	RU0001B-P-01
SERVICE	OIL PUMP
TYPE	SCREW PUMP
DESIGN PRESS. (BARG)	26
DESIGN TEMP. (°C)	5 / 100
RATED POWER (kW)	2.5

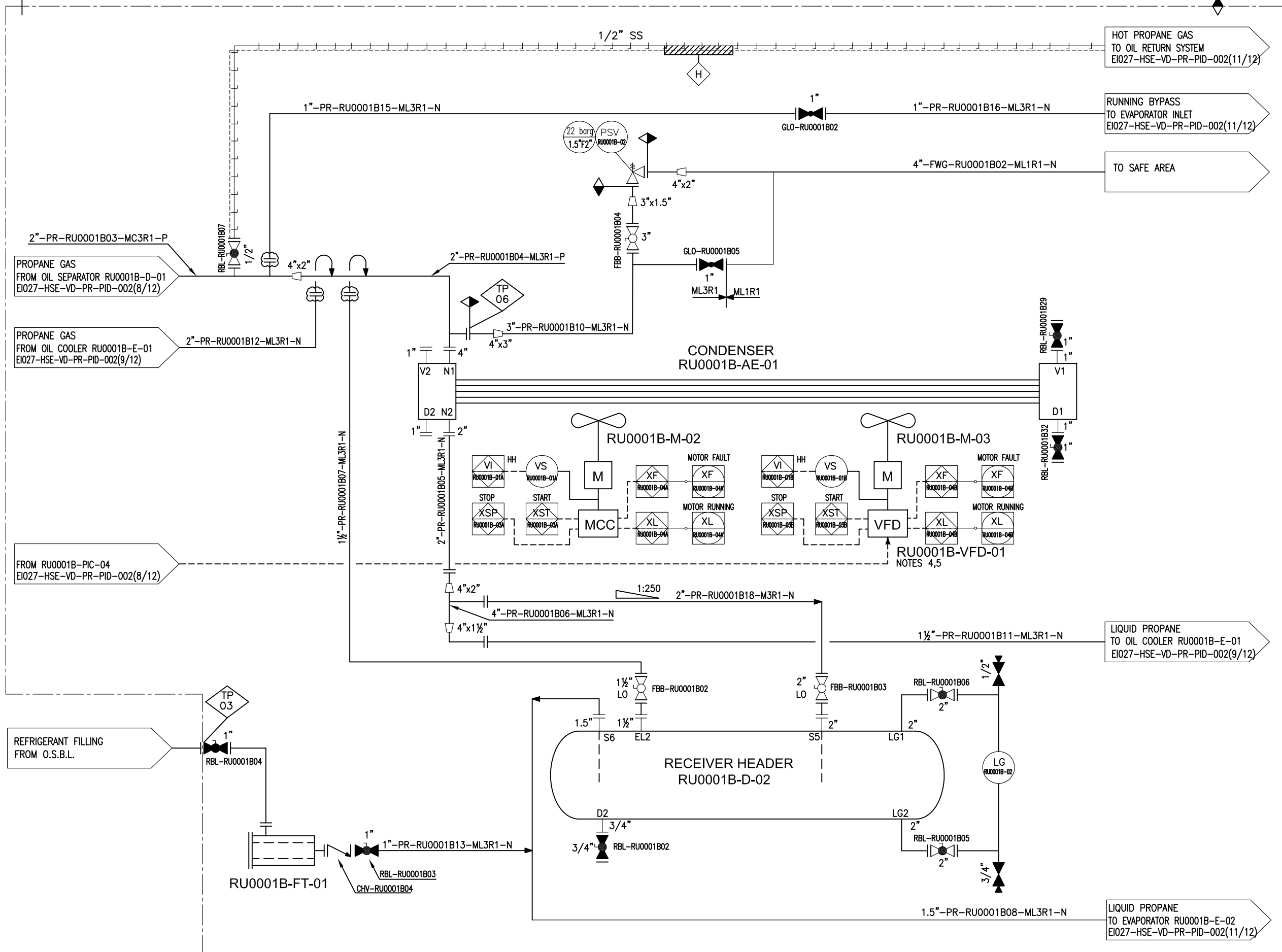
TAG NO.	RU0001B-F-01A/S
SERVICE	OIL FILTER
DESIGN PRESS. (BARG)	23
DESIGN TEMP. (°C)	5/100
ID x L (mm)	MAYEKAWA


14	15	16			
REFERENCE DRAWING	DWG NO.	REV.			
NOTES :					
1- ONE OPERATING / ONE STAND-BY.					
2- DP=3 BAR.					
3- SIGNAL ROUT TO DCS.					
4- HEAT TRACING TO BE TURNED OFF DURING COMPRESSOR START.					
5- MAINTAIN TEMPERATURE FOR ELECTRICAL INSULATIONS IS 30°C.					
LEGEND:					
VENDOR  CUSTOMER 					
HOLDE:					
EQUIPMENT LIST:					
KEY PLAN :					
03	FEB-2025	AS BUILT	A.K	F.SH	A.M
02	OCT-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
01	AUG-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
00	JUL-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
REV.	ISSUE DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
CLIENT					
					
CONSULTING ENGINEER					
PROJECT: STYRENE PARK OFFSITE					
DRAWING TITLE: PROCESS & INSTRUMENTATION DIAGRAM (P&ID)-RU					
DRAWING NO.		REV.	SIZE	SCALE	SHEET
EI027-HSE-VD-PR-PID-002		03	A3	NTC	9 of 12



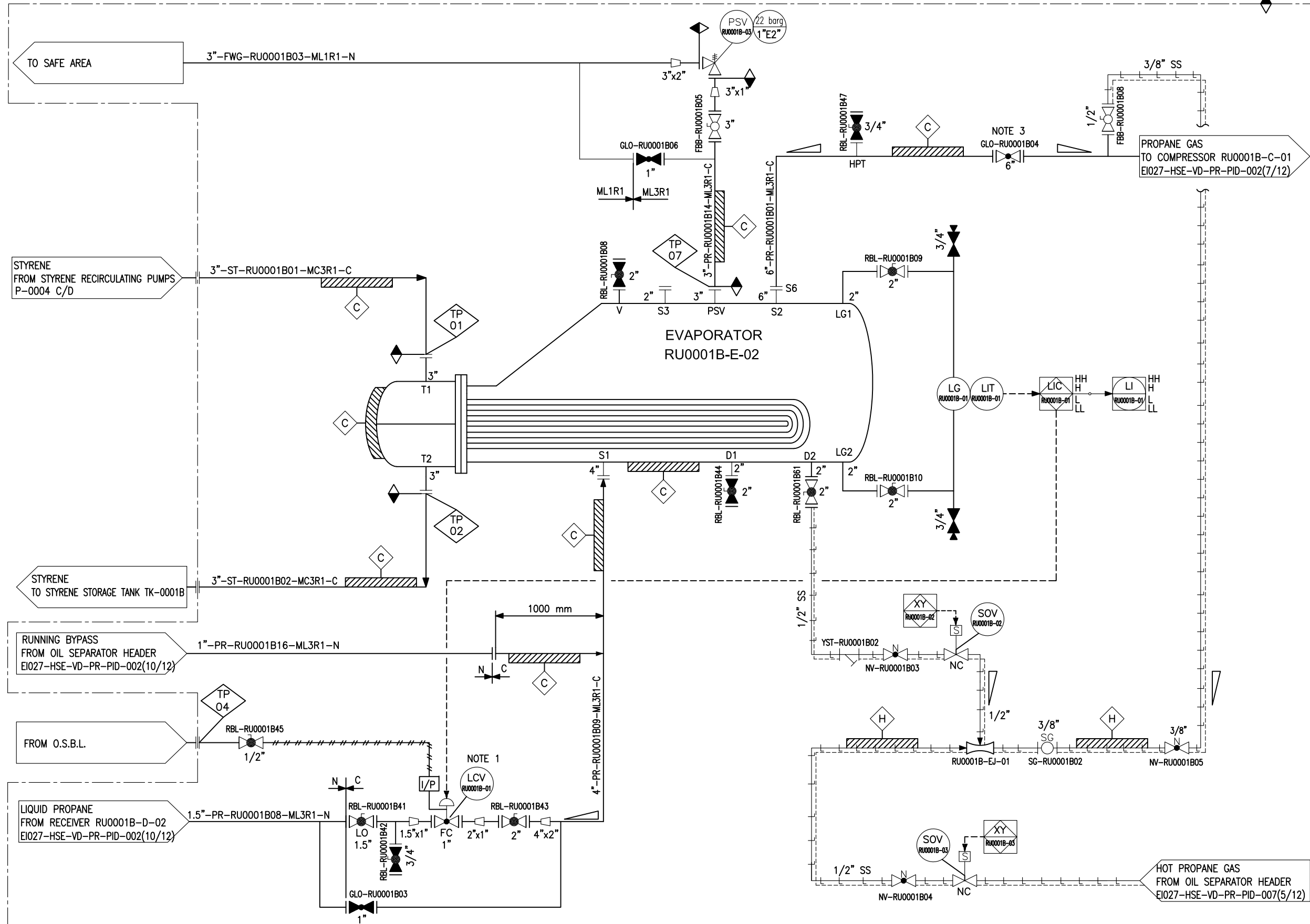
TAG NO.	RU0001B-AE-01
SERVICE	CONDENSER
DESIGN PRESS. (BARG)	22.0+FV
DESIGN TEMP. (°C)	-45/120
DESIGN DUTY (kW)	257

TAG NO.	RU0001B-D-02
SERVICE	RECEIVER HEADER
DESIGN PRESS. (BARG)	22.0+FV
DESIGN TEMP. (°C)	-45/120
ID x L (mm)	437 x 4000

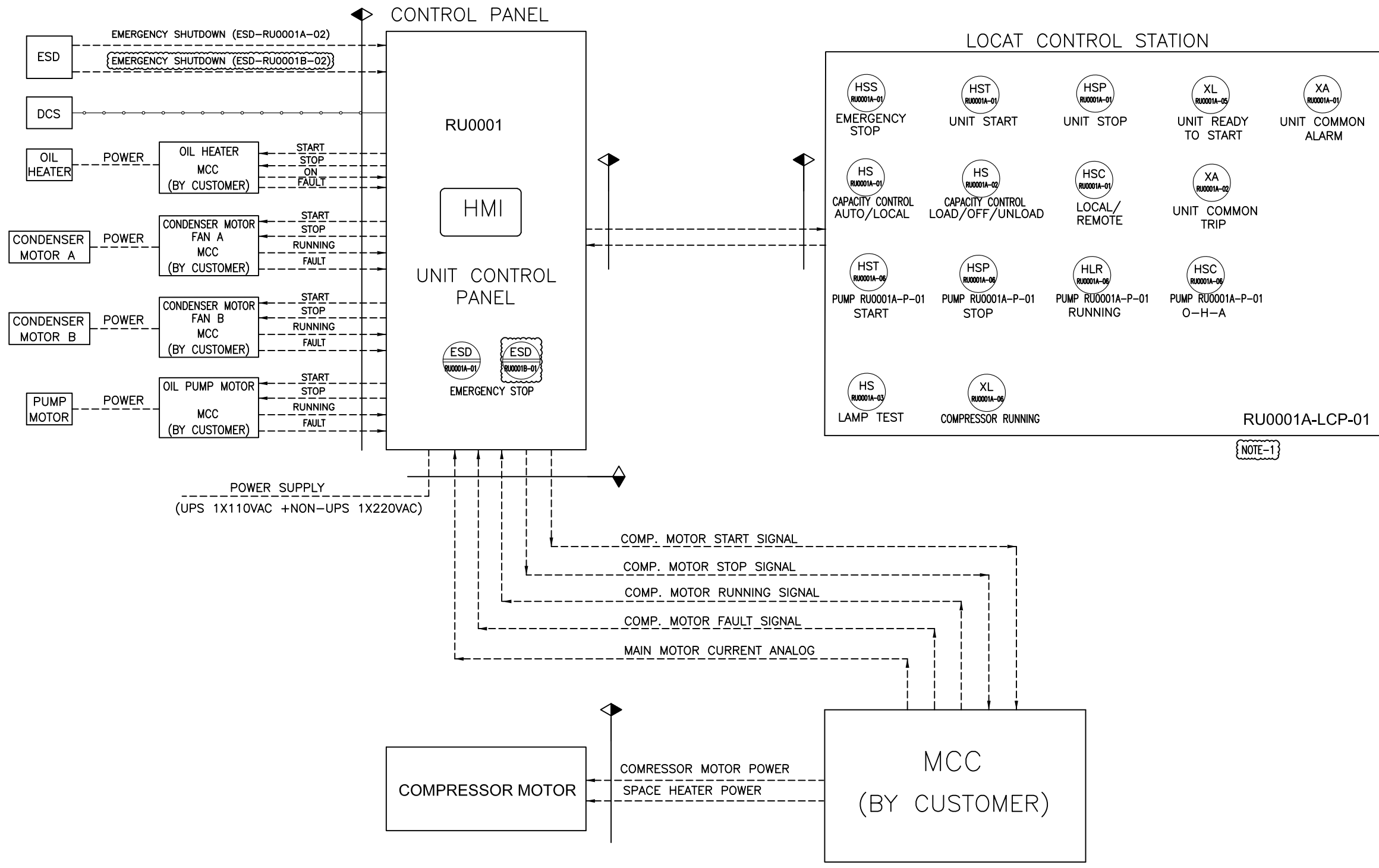


REFERENCE DRAWING	DWG NO.	REV.			
NOTES :					
1- DELETED.					
2- MANUAL FAN PITCH HAS BEEN CONSIDERED FOR EACH FAN.					
3- MAINTAIN TEMPERATURE FOR ELECTRICAL INSULATIONS IS 30°C.					
4- VARIABLE FREQUENCY DRIVE IS INSTALLED IN MOTOR CONTROL CENTER.					
5- MOTOR HARDWIRE CONNECTED TO VARIABLE FREQUENCY DRIVE.					
LEGEND:					
VENDOR	CUSTOMER				
HOLDE:					
EQUIPMENT LIST:					
KEY PLAN :					
REV.	ISSUE DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
03	FEB-2025	AS BUILT	A.K	F.SH	A.M
02	OCT-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
01	AUG-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
00	JUL-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
CLIENT					
 پتروشیمی توسعه پارک صنعتی گوهر افق					
CONSULTING ENGINEER					
PROJECT: STYRENE PARK OFFSITE					
DRAWING TITLE: PROCESS & INSTRUMENTATION DIAGRAM (P&ID)-RU					
DRAWING NO.	REV.	SIZE	SCALE	SHEET	
EI027-HSE-VD-PR-PID-002	03	A3	NTC	10 of 12	

TAG NO.	RU0001B-E-02
SERVICE	EVAPORATOR
DESIGN PRESS. (barg)	S: 22.0+FV, T: 6.8+FV
DESIGN TEMP. (°C)	S: -45/120, T: 85
DESIGN DUTY (kW)	166.6
SHELL ID x TUBE L (mm)	600-925 x 2300
TEMA TYPE	BKU



REFERENCE DRAWING	DWG NO.	REV.			
NOTES :					
1- TRAVEL DOWN BLOCK TO BE SET AND LOCKED AT MINIMUM OPENING DURING COMMISSIONING (2 ~ 5%).					
2- DELETED.					
3- AT STAND STILL CONDITION, VALVE NEEDS TO BE CLOSED COMPLETELY. DURING START-UP VALVE TO BE OPENED SMOOTHLY.					
4- MAINTAIN TEMPERATURE FOR ELECTRICAL INSULATIONS IS 30°C.					
LEGEND:					
HOLDE:					
EQUIPMENT LIST:					
KEY PLAN :					
REV.	ISSUE DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
0.3	FEB-2025	AS BUILT	A.K	F.SH	A.M
0.2	OCT-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
0.1	AUG-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
0.0	JUL-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
CLIENT					
CONSULTING ENGINEER					
PROJECT: STYRENE PARK OFFSITE					
DRAWING TITLE: PROCESS & INSTRUMENTATION DIAGRAM (P&ID)-RU					
DRAWING NO.	REV.	SIZE	SCALE	SHEET	
EIO27-HSE-VD-PR-PID-002	03	A3	NTC	11 of 12	



14	15	16
REFERENCE DRAWING	DWG NO.	REV.

NOTES :

1- FOR RU-0001B-LCP-01, ALL TAG NUMBERS RU0001A IN LCP ARE CHANGED TO RU0001B

LEGEND:

VENDOR CUSTOMER


HOLDE:

EQUIPMENT LIST:

KEY PLAN :

REV.	ISSUE DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
03	FEB-2025	AS BUILT	A.K	F.SH	A.M
02	OCT-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
01	AUG-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M
00	JUL-2024	ISSUED FOR APPROVAL (IFA)	A.K	F.SH	A.M

CLIENT



CONSULTING ENGINEER

PROJECT: **STYRENE PARK OFFSITE**

DRAWING TITLE: **PROCESS & INSTRUMENTATION DIAGRAM (P&ID)-RU**

DRAWING NO.	REV.	SIZE	SCALE	SHEET
EI027-HSB-YD-PR-PID-002	03	A3	NTC	12 of 12

NO.	LOCATION	DESCRIPTION	SIZE
TP-01	PACKAGE	CHILLER INLET	3"-300 ANSI RF
TP-02	PACKAGE	CHILLER OUTLET	3"-300 ANSI RF
TP-03	PACKAGE	FILTER DRYER PROPYLENE INLET	1"-300 ANSI RF
TP-04	PACKAGE	INSTRUMENT AIR SUPPLY	1/2"-150 ANSI RF
TP-05	PACKAGE	OIL SEPARATOR PRESSURE SAFETY	1.5"-300 ANSI RF
TP-06	PACKAGE	CONDENSER PRESSURE SAFETY	3"-300 ANSI RF
TP-07	PACKAGE	EVAPORATOR PRESSURE SAFETY	3"-300 ANSI RF