




Sub-Vendor:  Piramoone System Qeshm	Vendor:	<b>ARIAN METHANOL PLANT</b>		Contractor:  Petrochemical Industries Design & Eng. Company (PIDEC)	Owner/Purchaser:  DI POLYMER ARIAN COMPANY  Di Polymer Arian Company (DPAC))
	Schematic Tubing and Instrumentation Diagram (P&ID)				
	Vendor's Doc. No.: VD-1217-603-PID-009	PIDEC Doc. No.: VD-1217-603-PID-009	Rev. :04		

PIDEC REQ. No. : 1217-DE-00-IN-REQ-603




ITEM NO. :

ITEM DESCRIPTION :

TOTAL PAGES : 50 (Excluding Attachments)

<input type="checkbox"/> <b>NO COMMENT.</b>		
<input type="checkbox"/> <b>Comment As Marked:</b> Manufacturing May Proceed.		
<input type="checkbox"/> <b>Major Comment As Marked:</b> Manufacturing Shall Be Hold For The Next Revision.		
<input type="checkbox"/> <b>Rejected:</b> New Document With The Same Revision No. Shall Be Issued.		
<input type="checkbox"/> <b>For Information.</b>		
Name :	Req. No.:	Seq. No.:
Signature :		
Date:		
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DE		EXT		IFA		
Eng. Phase		Purpose Of Distribution (POD)		Purpose Of Issue (POI)		
04	14.03.2021	ISSUED FOR APPROVAL	HR.R, M.K	N.K	R.R	M.A
03	06.10.2020	ISSUED FOR APPROVAL	HR.R, M.K	N.K	R.R	M.A
02	11.08.2020	ISSUED FOR APPROVAL	HR.R, M.K	N.K	R.R	M.A
01	24.06.2020	ISSUED FOR APPROVAL	HR.R, M.K	N.K	R.R	M.A
00	06.05.2020	ISSUED FOR APPROVAL	HR.R, M.K	N.K	R.R	M.A
Rev.	Date	Description	Prepared by	Checked by	Approved by	Authorized by

Sub-Vendor:	Vendor:	<b>ARIAN METHANOL PLANT</b>		Contractor:	Owner/Purchaser:
		<b>Schematic Tubing and Instrumentation Diagram (P&amp;ID)</b>			
		Vendor's Doc. No.: VD-1217-603-PID-009		Rev. :04	
		PIDEC Doc. No.: VD-1217-603-PID-009			Petrochemical Industries Design & Eng. Company (PIDEC)

Page No.	Internal Issue	Change Index During Formal Issues						Reason of Latest Change
		First Issue	Second Issue	Third Issue	Fourth Issue	Fifth Issue	Sixth Issue	
		Rev.00	Rev.01	Rev.02	Rev.03	Rev.04	Rev.05	
1		x	x	x	x	x		
2		x	x	x	x	x		
3		x	x	x	x	x		
4		x	x	x	x	x		
5		x	x	x	x	x		
6		x	x	x	x	x		
7		x	x	x	x	x		
8		x	x	x	x	x		
9		x	x	x	x	x		
10		x	x	x	x	x		
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50		x	x	x	x	x		

VALVE SYMBOLS	EQUIPMENT SYMBOLS(CONT.)	PIPING AND FITTING SYMBOLS(CO.)	ABBREVIATION
Ball Valve Needle Valve 3-way Valve Pressure Safety Valve Valve Normally Close Solenoid Valve Normally Open Pneumatic Actuator On Valve Angle Valve Check Valve Pressure Regulator + Inlet & Outlet Indicator Pressure Regulator + Pressure Indicator & Filter Electrically Heated Pressure Regulator Thermal Shut Off Valve	Electrical Heater Auto Liquid Drain Electrical Diaphragm Compressor Shell & Tube Heat Exchanger Variable area flowmeter with integral manual adjusting valve. Sintered Filter Disposal Filter Sensor Flow Chamber Measurement symbols secondary instruments <p>[*]: Letter</p>	Chilled Water Supply Chilled Water Return Pneumatic Signal Instrument Air Supply H2 Line N2 Line Electrical Signal Communication link and system bus DOWNWARD SLOPE UPWARD SLOPE DISCONNECTED CONNECTED ANSI Flange Connection REDUCER/INCREASER Bulkhead CONNECTION	<p>AFR AIR FILTER REGULATOR                      AD AUTO DRAIN                      AV ACTUATOR PNEUMATIC VALVE                      FS PHASE SEPARATOR                      SP SAMPLE PROBE                      FO FAIL TO OPEN                      FC FAIL TO CLOSE</p>
<b>EQUIPMENT SYMBOLS</b>		<b>PIPING AND FITTING SYMBOLS</b>	
Gas Cylinder Sample Probe Electrical Cooler + Peristaltic Pump	Process Line Sample Line Insulated Line Electrically Heated Line Electrically Heat Traced Line Steam Heat Traced Line Cooling Water Supply Cooling Water Return	<b>INSTRUMENTS AND CONTROL</b>	
		Located in field. Located in or on front of central or main panel or console. Console matrix point.	
		<b>TERMINAL POINT</b>	
		Client	

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01	24.06.2020	ISSUED FOR APPROVAL	H.R.R, M.K	N.K	R.R	M.A

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY

OWNER: DI POLYMER ARIAN COMPANY (DPAC)  
 PROJECT: ARIAN METHANOL PLANT  
 EPC CONTRACTOR: PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)  
 VENDOR: PIRAMOON SYSTEM QESHIM  
 TITLE: Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: 1/XXX	OWNER PROJ. NO.: 21	PIDEC DWG. NO.: VD-1217-603-PID-009	REV: 04
SHEET: 3 OF 50	PIDEC PROJ. NO.: 1217	VENDOR DWG. NO. VD-1217-603-PID-009	SIZE: A3

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A

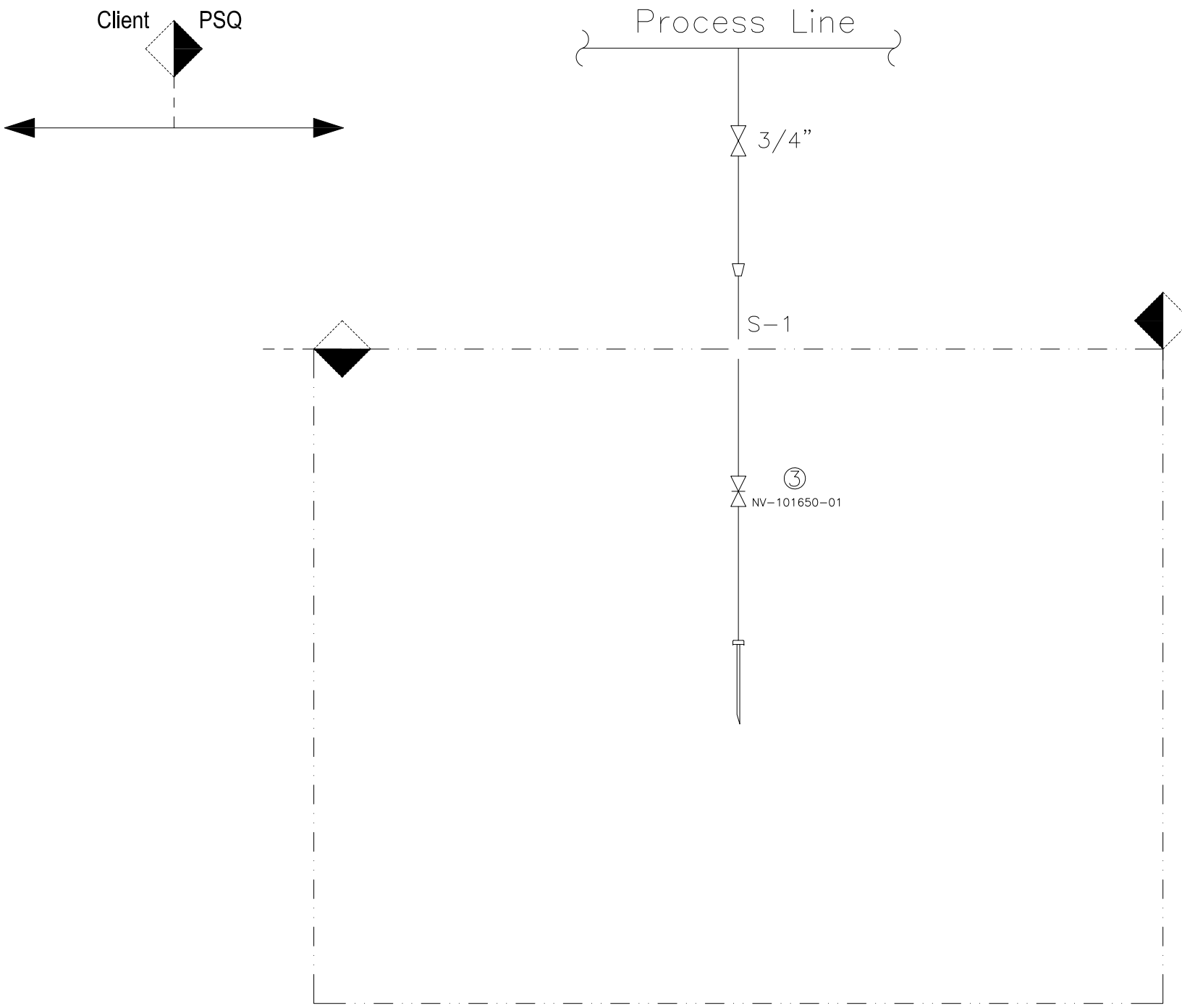
B

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E

F



TYPE "A"

GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/4"	-
3	Needle Valve, 1/2"	1
4	Needle Valve, 1/4"	-
5	Check Valve, 1/2"	-
6	Gate Valve, 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	-
11	Sample Cooler	-
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-

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02	11.08.2020	ISSUED FOR APPROVAL
01	24.06.2020	ISSUED FOR APPROVAL

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
04	14.03.2021	ISSUED FOR APPROVAL	H.R.R	N.K	R.R	M.A
03	06.10.2020	ISSUED FOR APPROVAL	H.R.R	N.K	R.R	M.A
02	11.08.2020	ISSUED FOR APPROVAL	H.R.R	N.K	R.R	M.A
01	24.06.2020	ISSUED FOR APPROVAL	H.R.R	N.K	R.R	M.A

OWNER: DI POLYMER ARIAN COMPANY (DPAC)

PROJECT: ARIAN METHANOL PLANT

EPs CONTRACTOR: PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: PIRAMOON SYSTEM QESHM

TITLE:

Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: 1/XXX	OWNER PROJ. NO.: 21	PIDEC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: 4 OF 50	PIDEC PROJ. NO.: 1217	VENDOR DWG. NO.: VD-1217-603-PID-009	SIZE: A3

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-101650	3/4"-CJW-1016001-AA2	-	-	40	ATM.	-	10AP650

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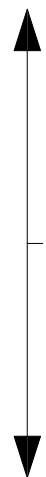
GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"

Client PSQ

Process Line



S-1

NV-300561-01

③

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve - 1/2"	-
2	Ball Valve - 1/2"	-
3	Needle Valve - 1/2"	-
4	Needle Valve - 1/4"	-
5	Check Valve - 1/2"	-
6	Gate Valve - 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	-
11	Sample Cooler	-
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-

TYPE "A"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-300561	3/4"-CWR-3005006-AA2	-	-	40	2.5	-	30AP561

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DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
04	14.03.2021	ISSUED FOR APPROVAL	HRR	NK	RR	MA
03	06.10.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
02	11.08.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
01	24.06.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
of POLYMER ARIAN COMPANY  
PROJECT: **ARIAN METHANOL PLANT**

EPC CONTRACTOR: **PIRAMOON SYSTEMS**  
**PIRAMOON PIRAMOON SYSTEM QESHM & ENGINEERING COMPANY (PIDEC)**

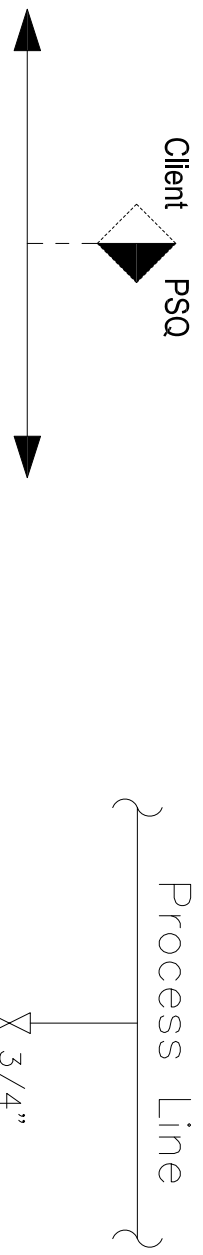
VENDOR: **PIRAMOON PIRAMOON SYSTEM QESHM**

TITLE: **Schematic Tubing and Instrumentation Diagram (P&ID)**

SCALE: OWNER PROJ. NO.: \_\_\_\_\_  
1/XXX SHEET: 21 PDEC DWG. NO.: **VD-1217-603-PID-009**

6 OF 50 SHEET: 1217 VENDOR DWG. NO.: **VD-1217-603-PID-009**

REV. **04** SIZE: **A3**



TYPE "A"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-700101	3/4" - FLG-7003001-AA3	-	-	40	1	-	70AP101

GENERAL NOTES

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve - 1/2"	-
2	Ball Valve - 1/2"	-
3	Needle Valve - 1/2"	-
4	Needle Valve - 1/4"	-
5	Check Valve - 1/2"	-
6	Gate Valve - 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	-
11	Sample Cooler	-
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-

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DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
04	14.03.2021	ISSUED FOR APPROVAL	HRR	NK	RR	MA
03	06.10.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
02	11.08.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
01	24.06.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 of Poly.Mer.Arian Company

PROJECT: **ARIAN METHANOL PLANT**

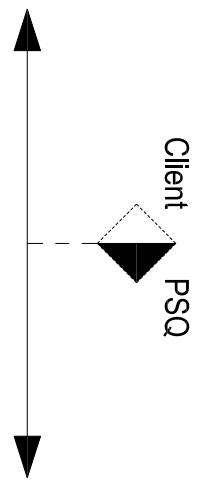
EPC CONTRACTOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS**  
 PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS**  
 PIRAMOON SYSTEM QESHM

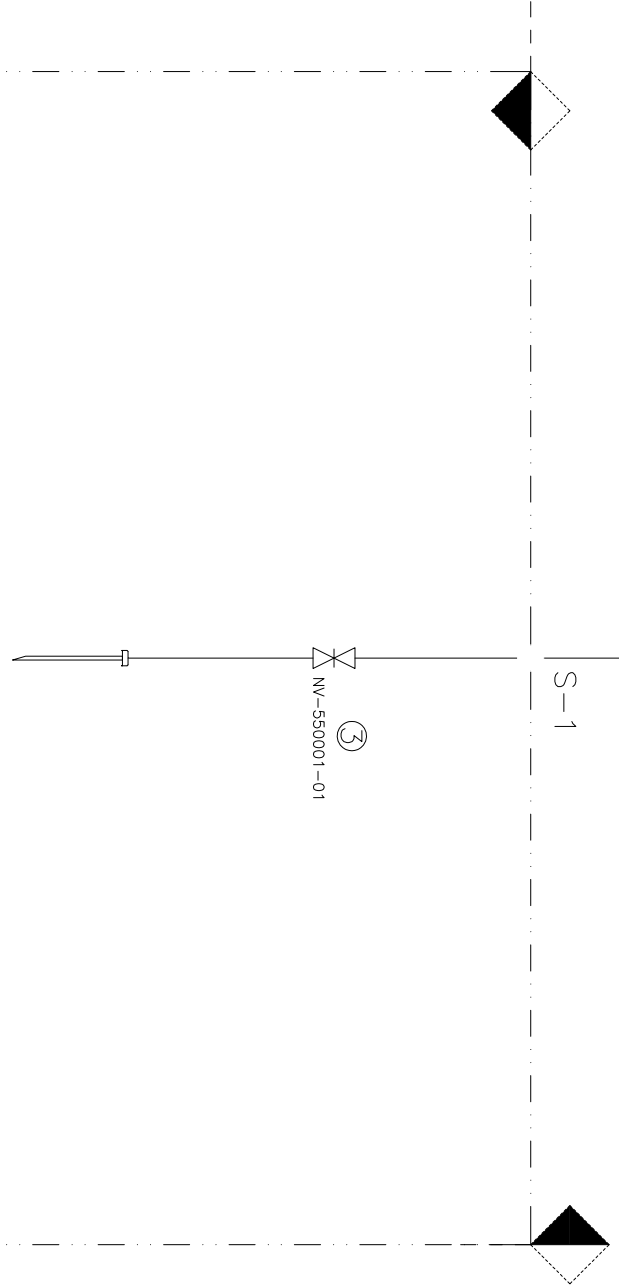
Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: OWNER PROJ. NO.: 1/XXX	PIDEC PROJ. NO.: 1217	VENDOR DWG. NO.: VD-1217-603-PIID-009	REV. 04
SHEET: 7 OF 50			SIZE: A3

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Process Line



GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/2"	-
3	Needle Valve, 1/2"	-
4	Needle Valve, 1/4"	-
5	Check Valve, 1/2"	-
6	Gate Valve, 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	-
11	Sample Cooler	-
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-

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DE	EXT	IFA				
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

OWNER: DI POLYMER ARIAN COMPANY (DPAC)

PROJECT: ARIAN METHANOL PLANT

EPC CONTRACTOR: PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: PIRAMOONT SYSTEM QESHM

Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: OWNER PROJ. NO.:	PIDEC DWG. NO.:	REV.
1 / XXX	VD-1217-603-PID-009	04
SHEET: PIDEC PROJ. NO.:	VENDOR DWG. NO.:	SIZE:
8 OF 50	VD-1217-603-PID-009	A3

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-550001	2" - OCW-5501004-AA2-N	-	-	60	7.3	-	?

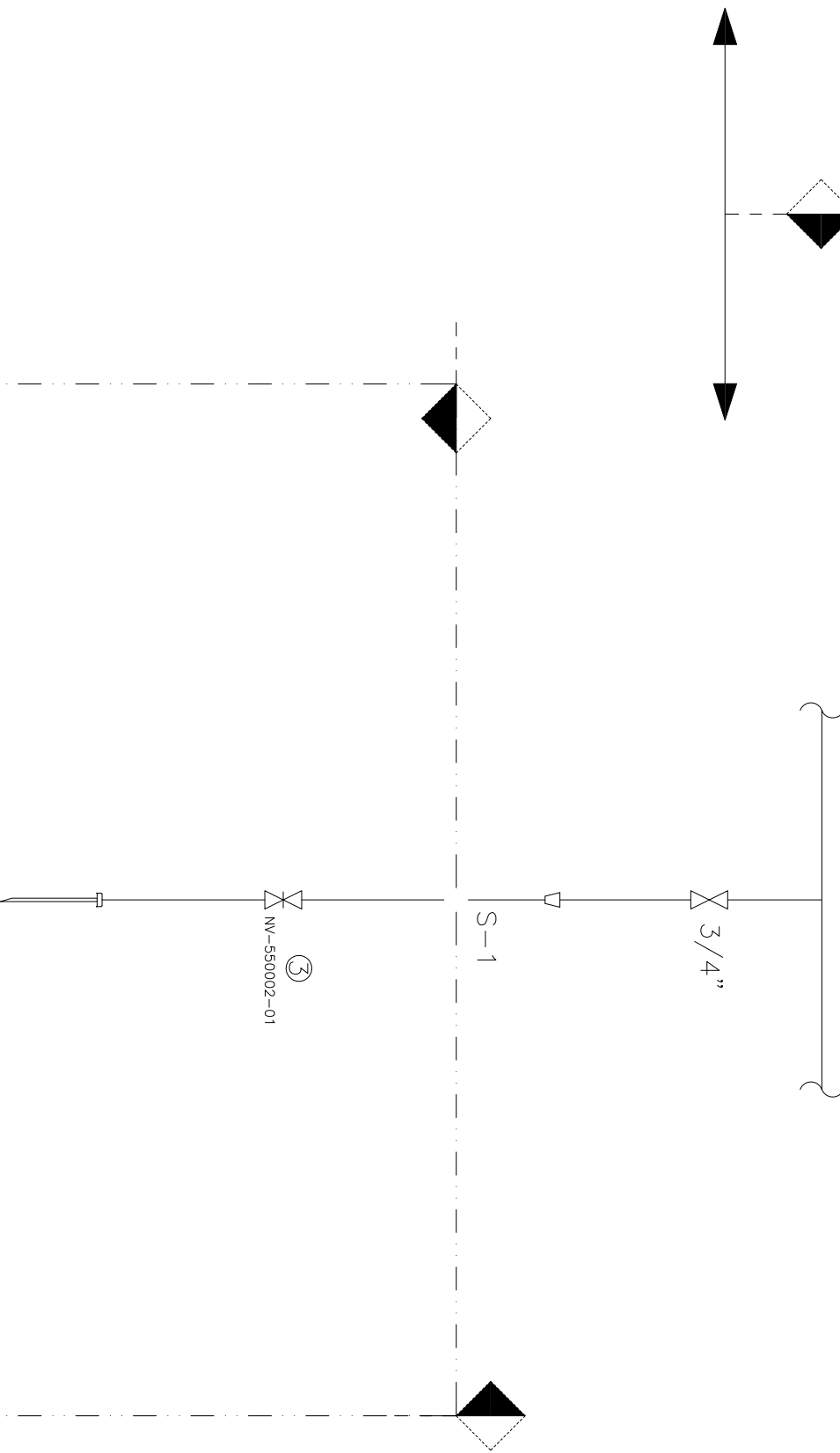
TYPE "A"



GENERAL NOTES

Client  
PSQ

Process Line



TYPE "A"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-550002	2" - OCW-5501006-AA2-N	-	-	Amb.	5.4	-	?

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/2"	-
3	Needle Valve, 1/2"	-
4	Needle Valve, 1/4"	-
5	Check Valve, 1/2"	-
6	Gate Valve, 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	-
11	Sample Cooler	-
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-

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Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	HRR	NK	RR	MA
03	06.10.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
02	11.08.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
01	24.06.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA

OWNER: DI POLYMER ARIAN COMPANY (DPAC)

PROJECT: ARIAN METHANOL PLANT

EPC CONTRACTOR: PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: PIRAMOONT SYSTEM QESHM

Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: OWNER PROJ. NO.: 1/XXX	PIDEC PROJ. NO.: 21	PIDEC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: 9 OF 50	VENDOR PROJ. NO.: 1217	VENDOR DWG. NO.: VD-1217-603-PID-009	SIZE: A3

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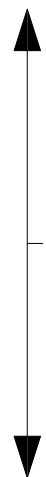
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GENERAL NOTES

Process Line

Client PSQ



S-1

3/4"

NV-550003-01



TYPE "A"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-550003	2"-SD-5501002-AA2-N	-	-	Amb.	7.55	-	?

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve - 1/2"	-
2	Ball Valve - 1/2"	-
3	Needle Valve - 1/2"	-
4	Needle Valve - 1/4"	-
5	Check Valve - 1/2"	-
6	Gate Valve - 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	-
11	Sample Cooler	-
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-

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03	06.10.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
02	11.08.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
01	24.06.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA

OWNER: DI POLYMER ARIAN COMPANY (DPAC)  
 of Poly.Methanol Company

PROJECT: ARIAN METHANOL PLANT

EPC CONTRACTOR: PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: PIRAMOON SYSTEM QESHM

Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: OWNER PROJ. NO.:	PIDEC DWG. NO.:	REV.
1/XXX	VD-1217-603-PID-009	04
SHEET: PIDEC PROJ. NO.:	VENDOR DWG. NO.:	SIZE:
10 OF 50	VD-1217-603-PID-009	A3

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TYPE "A"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-550004	2" - CWW-5501002-AA2-UW	-	-	Amb.	3.2	-	?

GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/2"	-
3	Needle Valve, 1/2"	-
4	Needle Valve, 1/4"	-
5	Check Valve, 1/2"	-
6	Gate Valve, 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	-
11	Sample Cooler	-
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-

- NO COMMENT.
- COMMENTS AS MARKED: Manufacturing May Proceed.
- Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
- REJECTED : New Document With The Same Revision Shall Be Issued.
- FOR INFORMATION.

Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

PIDEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA				
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	HRR	NK	RR	MA
03	06.10.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
02	11.08.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
01	24.06.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 PROJECT: **ARIAN METHANOL PLANT**

ESR CONTRACTOR: **PIRAMOON SYSTEMS**  
**PIRAMOON PIRAMOON SYSTEM QESHM**  
 & ENGINEERING COMPANY (PIDEC)

VENDOR: **PIRAMOON PIRAMOON SYSTEM QESHM**

Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: OWNER PROJ. NO.:	PIDEC DWG. NO.:	REV.
1/XXX	VD-1217-603-PID-009	04
SHEET: PIDEC PROJ. NO.:	VENDOR DWG. NO.:	SIZE:
11 OF 50	VD-1217-603-PID-009	A3

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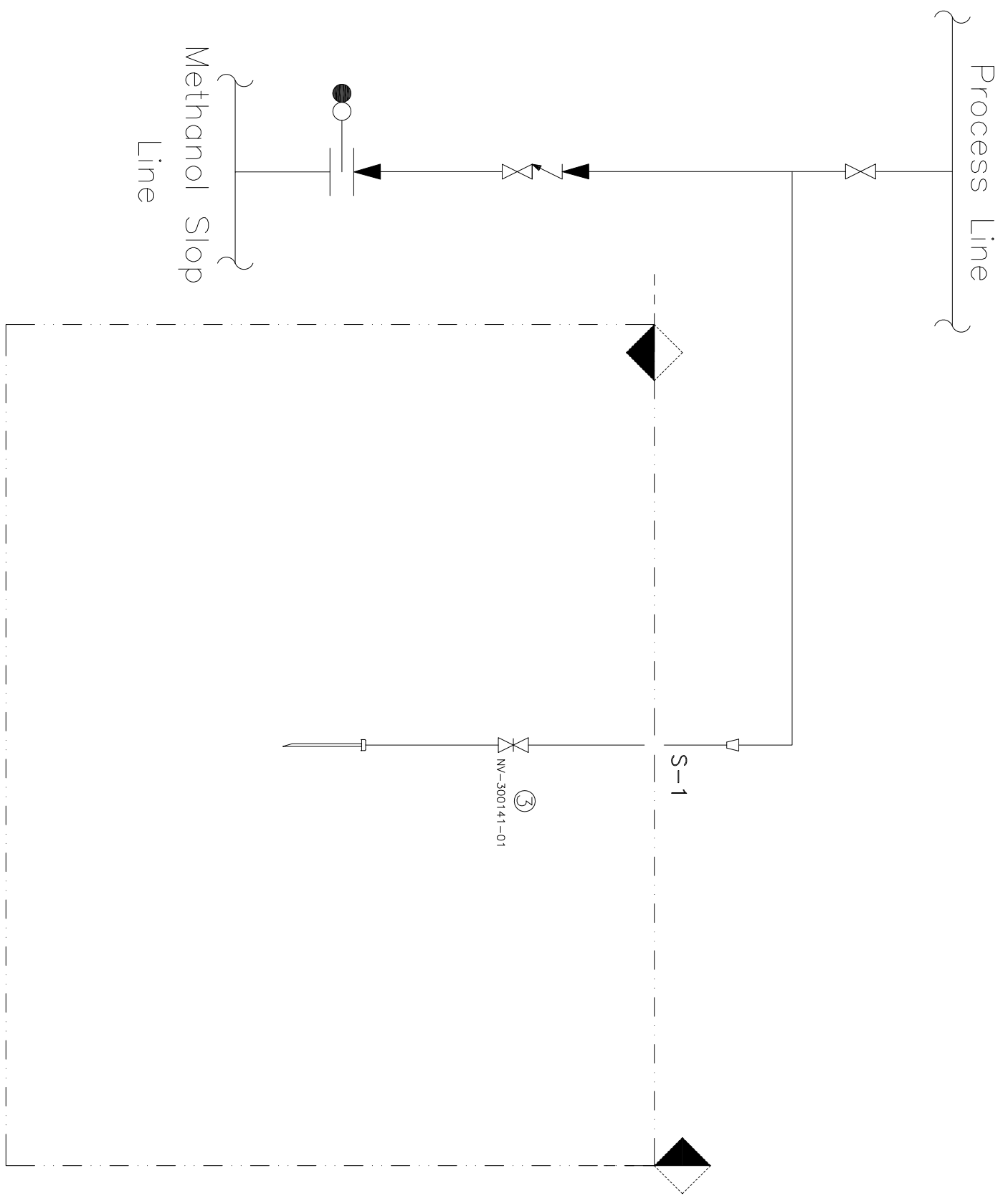
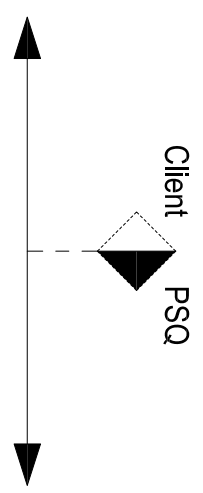
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GENERAL NOTES

TIE-IN CONNECTIONS	
TAG	DESCRIPTION
S1	Sample Inlet
	Male NPT Connector, 1/2"



TYPE "C"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-300141	3/4" - PMC-3001001-AA1	-	3/4" - PML-3001001-AA1	40	4.5	-	30AP141

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/2"	-
3	Needle Valve, 1/2"	-
4	Needle Valve, 1/4"	-
5	Check Valve, 1/2"	-
6	Gate Valve, 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	-
11	Sample Cooler	-
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-

- NO COMMENT.
- COMMENTS AS MARKED: Manufacturing May Proceed.
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Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

PIDEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)
04	14.03.2021	ISSUED FOR APPROVAL
03	06.10.2020	ISSUED FOR APPROVAL
02	11.08.2020	ISSUED FOR APPROVAL
01	24.06.2020	ISSUED FOR APPROVAL

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 of Poly.Mer.Arian Company

PROJECT: **ARIAN METHANOL PLANT**

ES: CONTRACTOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS**  
 PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS**  
 PIRAMOON SYSTEM QESHM

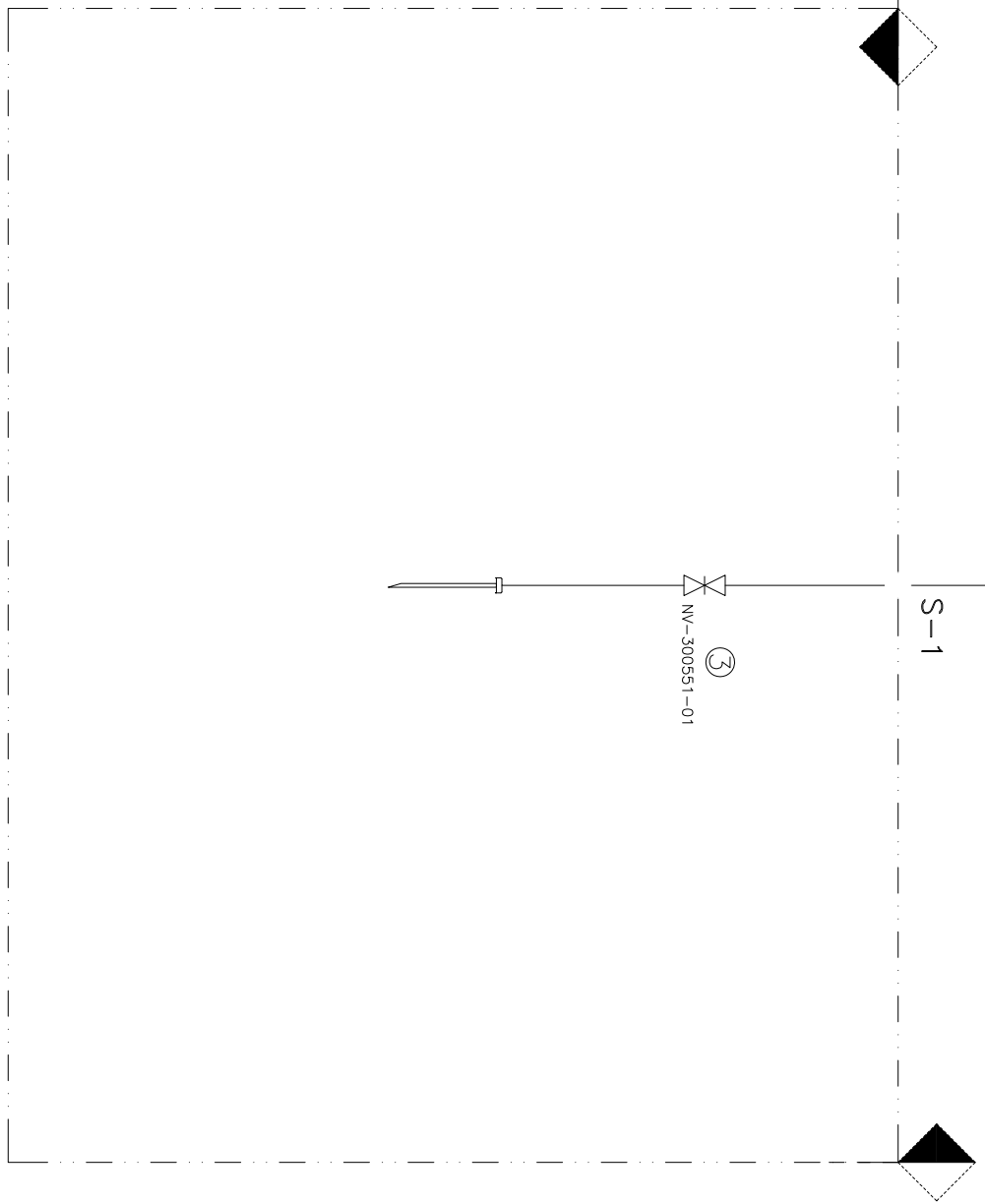
Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: OWNER PROJ. NO.: 1/XXX 21	PIDEC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: PIDEC PROJ. NO.: 12 OF 50 1217	VENDOR DWG. NO.: VD-1217-603-PID-009	SIZE: A3

Process Line

Methanol Stop Line

Client PSQ



TYPE "C"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-300551	3/4" - PMP-3005004-AA1	-	3/4" - PML-3005030-AA1	40	5.5	-	30APP551

GENERAL NOTES

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/2"	-
3	Needle Valve, 1/2"	-
4	Needle Valve, 1/4"	-
5	Check Valve, 1/2"	-
6	Gate Valve, 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	-
11	Sample Cooler	-
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-

- NO COMMENT.
- COMMENTS AS MARKED: Manufacturing May Proceed.
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- FOR INFORMATION.

Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
04	14.03.2021	ISSUED FOR APPROVAL	HRR	NK	RR	MA
03	06.10.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
02	11.08.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
01	24.06.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 of Poly.Mer.Arian Company

PROJECT: **ARIAN METHANOL PLANT**

EPC CONTRACTOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS**  
 PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS**  
 PIRAMOON SYSTEM QESHM

TITLE: **Schematic Tubing and Instrumentation Diagram (P&ID)**

SCALE: OWNER PROJ. NO.: 21  
 SHEET: 1/XXX  
 PIDECPROJ. NO.: 1317  
 PIDECDWG. NO.: VD-1217-603-PID-009  
 VENDOR DWG. NO.: VD-1217-603-PID-009

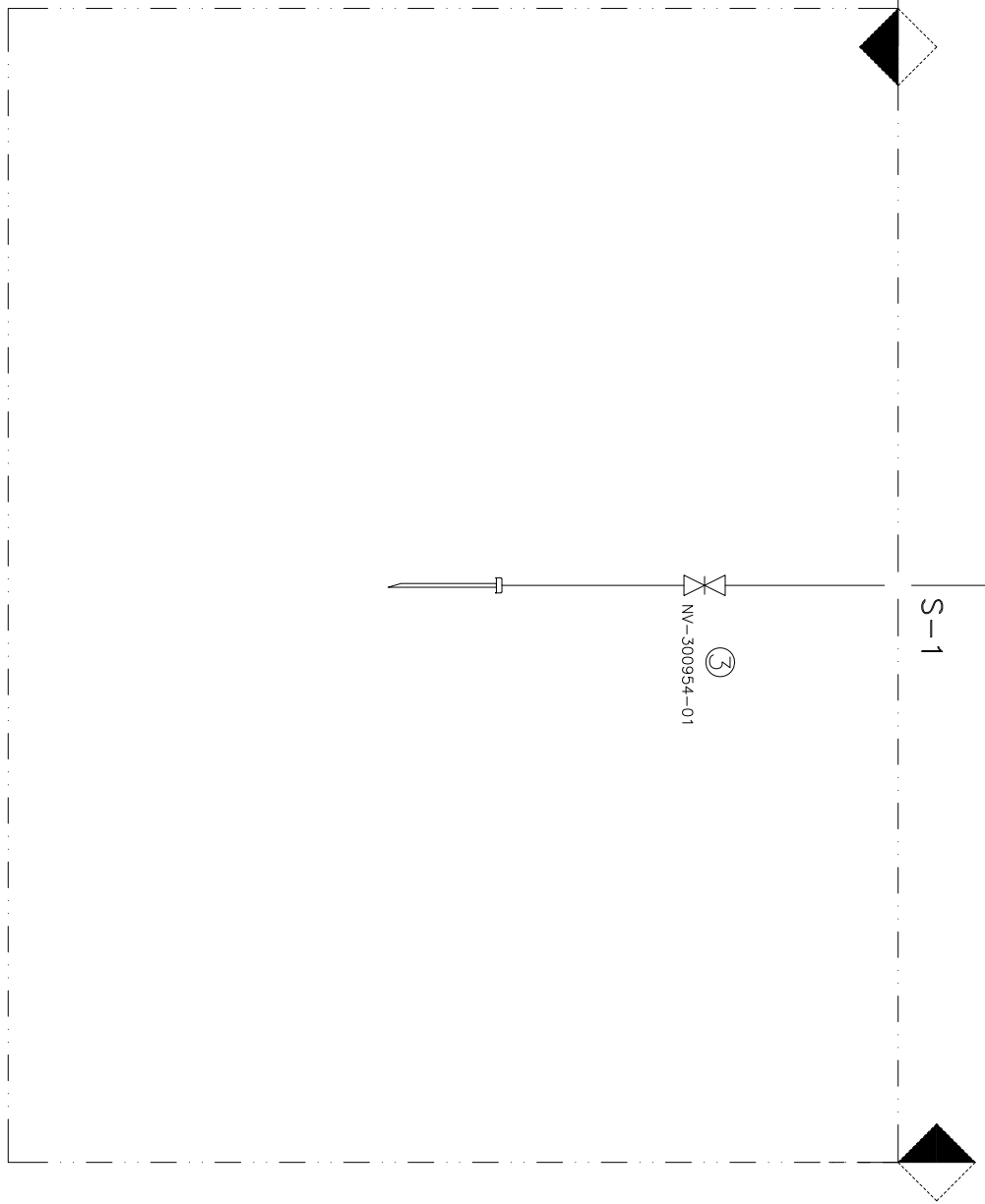
REV. 04  
 SIZE: A3

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Process Line

Methanol Stop Line

Client PSQ



TYPE "C"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-300954	3/4" - PMP-3009015-AA1	-	3/4" - PML-3009069-AA1	40	ATM.	-	30AP954

GENERAL NOTES

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/2"	-
3	Needle Valve, 1/2"	-
4	Needle Valve, 1/4"	-
5	Check Valve, 1/2"	-
6	Gate Valve, 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	-
11	Sample Cooler	-
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-

- NO COMMENT.
- COMMENTS AS MARKED: Manufacturing May Proceed.
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DE	EXT	IFA				
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**

PROJECT: **ARIAN METHANOL PLANT**

EPC CONTRACTOR: **PIRAMOON SYSTEMS PVT. LTD.**  
**PIRAMOON SYSTEMS PVT. LTD.**  
**PIRAMOON SYSTEMS PVT. LTD.**  
**PIRAMOON SYSTEMS PVT. LTD.**

VENDOR: **PIRAMOON SYSTEMS PVT. LTD.**  
**PIRAMOON SYSTEMS PVT. LTD.**  
**PIRAMOON SYSTEMS PVT. LTD.**

Schematic Tubing and Instrumentation Diagram (P&ID)

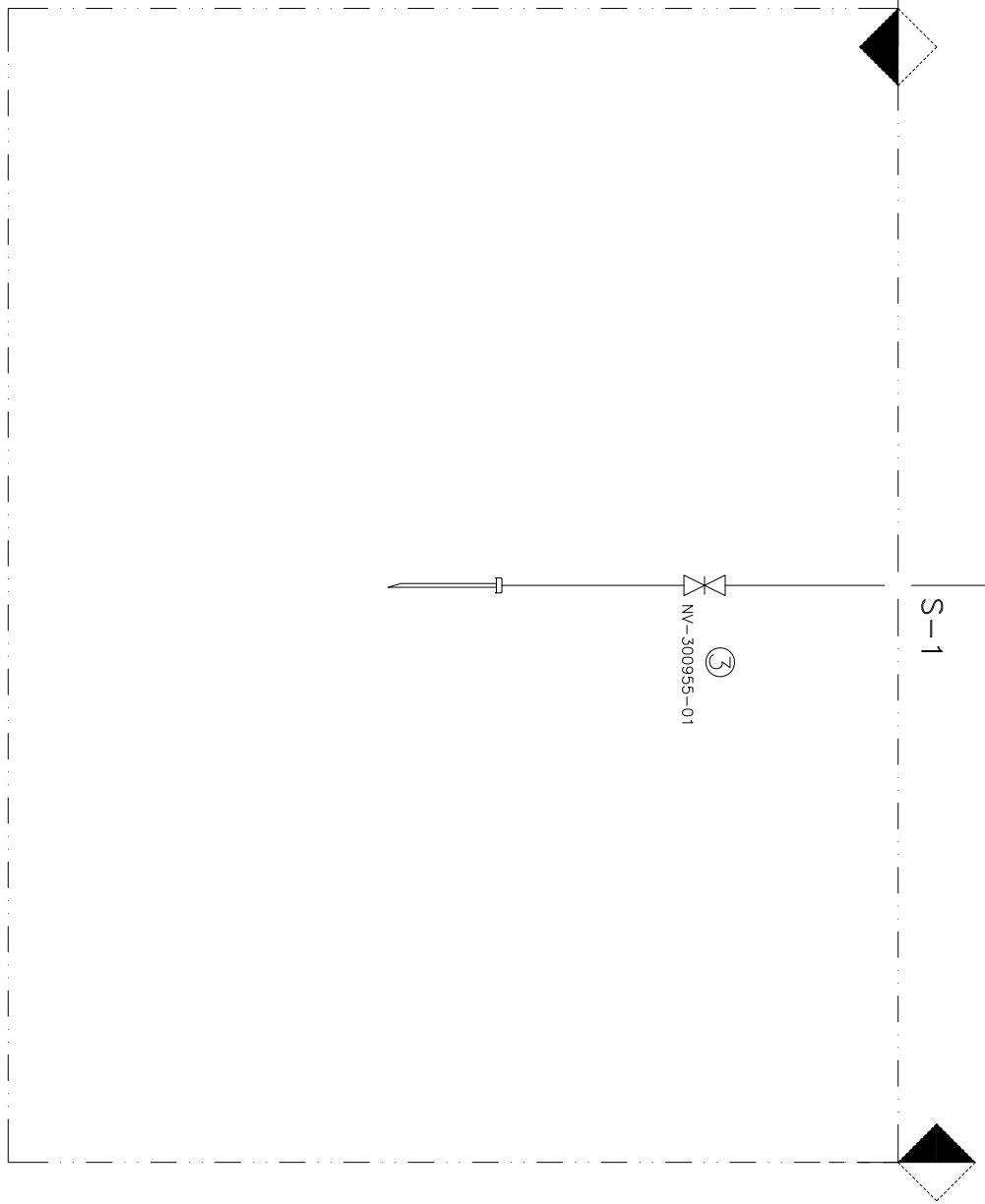
SCALE: OWNER PROJ. NO.: 1/XXX	PIDEC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: PIDEC PROJ. NO.: 14 OF 50	VENDOR DWG. NO.: VD-1217-603-PID-009	SIZE: A3

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Process Line

Methanol Stop Line

Client PSQ



TYPE "C"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-300955	3/4" - PMP-3009017-AA1	-	3/4" - PML-3009064-AA1	40	4	-	30AP955

GENERAL NOTES

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/2"	-
3	Needle Valve, 1/2"	-
4	Needle Valve, 1/4"	-
5	Check Valve, 1/2"	-
6	Gate Valve, 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	-
11	Sample Cooler	-
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-

- NO COMMENT.
- COMMENTS AS MARKED: Manufacturing May Proceed.
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DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
04	14.03.2021	ISSUED FOR APPROVAL	HRR	NK	RR	MA
03	06.10.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
02	11.08.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
01	24.06.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**

PROJECT: **ARIAN METHANOL PLANT**

EPC CONTRACTOR: **PIRAMOON SYSTEMS PVT. LTD.**  
**PIRAMOON SYSTEMS PVT. LTD.**  
**PIRAMOON SYSTEMS PVT. LTD.**

VENDOR: **PIRAMOON SYSTEMS PVT. LTD.**  
**PIRAMOON SYSTEMS PVT. LTD.**  
**PIRAMOON SYSTEMS PVT. LTD.**

Schematic Tubing and Instrumentation Diagram (P&ID)

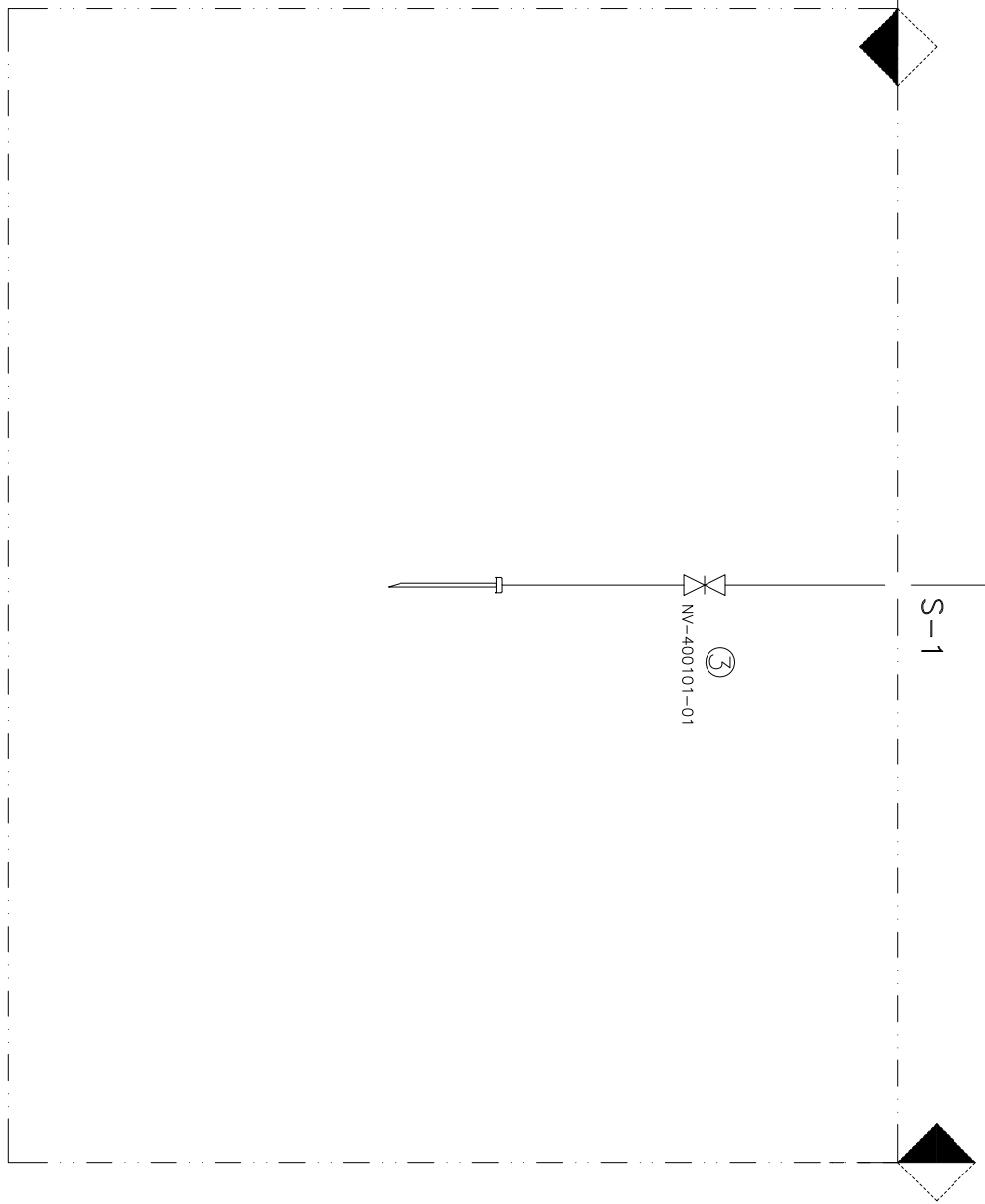
SCALE: OWNER PROJ. NO.: 1/XXX	PIDEC PROJ. NO.: 1217	VENDOR DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: 15 OF 50			SIZE: A3

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Process Line

Methanol Stop Line

Client PSQ



TYPE "C"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-400101	3/4" - PMC-4001001-AA1	-	3/4" - PML-4001018-AA1	40	0.001	-	40AP101

GENERAL NOTES

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/2"	-
3	Needle Valve, 1/2"	-
4	Needle Valve, 1/4"	-
5	Check Valve, 1/2"	-
6	Gate Valve, 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	-
11	Sample Cooler	-
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-

- NO COMMENT.
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 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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DE	EXT	IFA				
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	HRR	NK	RR	MA
03	06.10.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
02	11.08.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
01	24.06.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 of Poly.Mer.Arian Company

PROJECT: **ARIAN METHANOL PLANT**

EPC CONTRACTOR: **PIRAMOON SYSTEMS**  
**PIRAMOON PIRAMOON SYSTEM QESHM & ENGINEERING COMPANY (PIDEC)**

VENDOR: **PIRAMOON SYSTEMS**  
**PIRAMOON PIRAMOON SYSTEM QESHM**

Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: OWNER PROJ. NO.: 1/XXX	PIDEC PROJ. NO.: 1217	VENDOR DWG. NO.: VD-1217-603-PID-009	REV. 04
TITLE: Schematic Tubing and Instrumentation Diagram (P&ID)			SIZE: A3

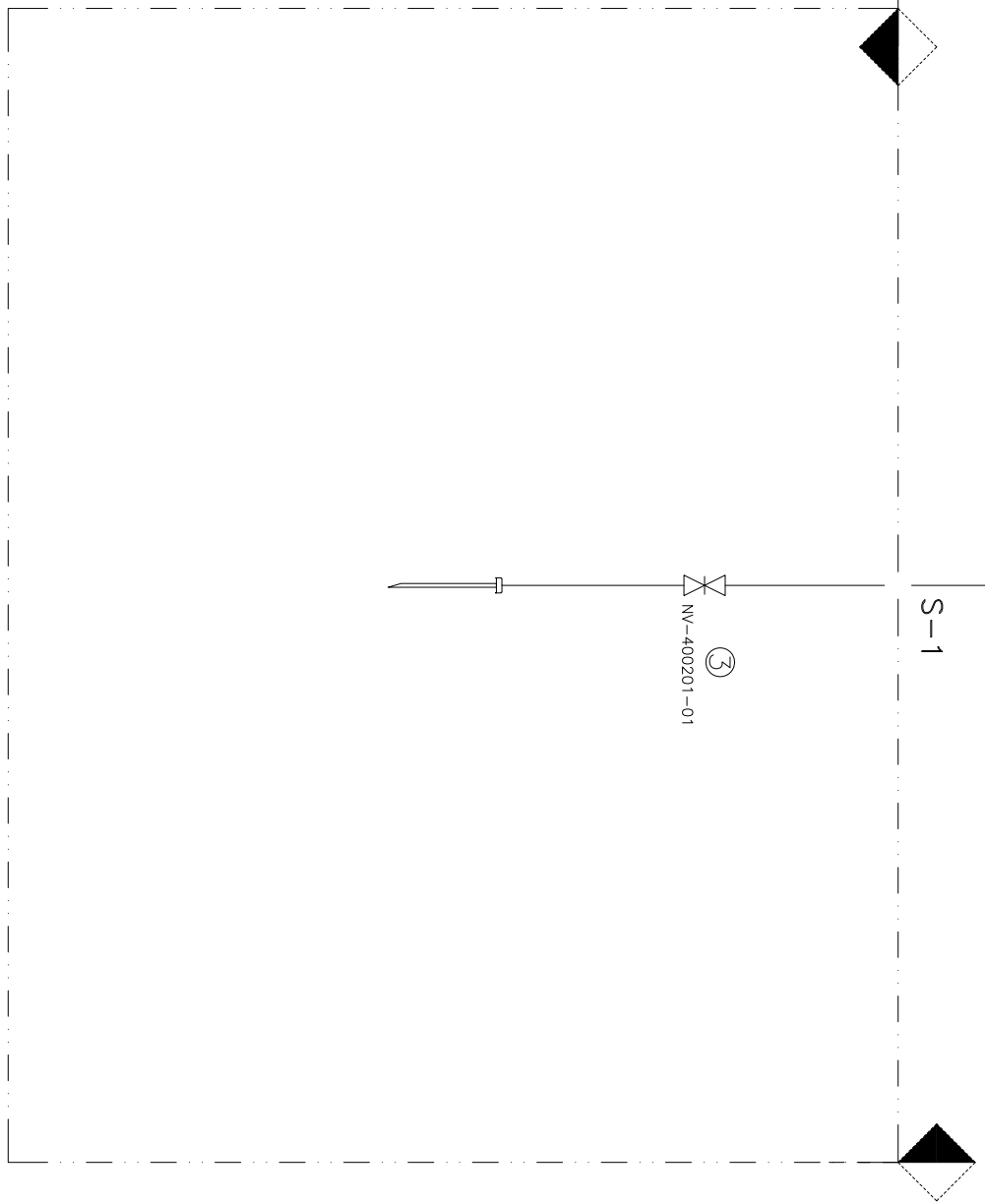
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Process Line

Methanol Stop Line

Client PSQ



TYPE "C"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-400201	3/4" - PMP-4002004-AA1	-	3/4" - PML-4002007-AA1	40	0.001	-	40AP201

GENERAL NOTES

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/2"	-
3	Needle Valve, 1/2"	-
4	Needle Valve, 1/4"	-
5	Check Valve, 1/2"	-
6	Gate Valve, 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	-
11	Sample Cooler	-
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-

- NO COMMENT.
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Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
04	14.03.2021	ISSUED FOR APPROVAL	HRR	NK	RR	MA
03	06.10.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
02	11.08.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
01	24.06.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 of Poly.Mer.Arian Company

PROJECT: **ARIAN METHANOL PLANT**

EPC CONTRACTOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS QESHM**  
 PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS QESHM**

Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: OWNER PROJ. NO.: 1/XXX	PIDEC PROJ. NO.: 17 OF 50	PIDEC DWG. NO.: VD-1217-603-PID-009	VENDOR DWG. NO.: VD-1217-603-PID-009	REV. 04	SIZE: A3
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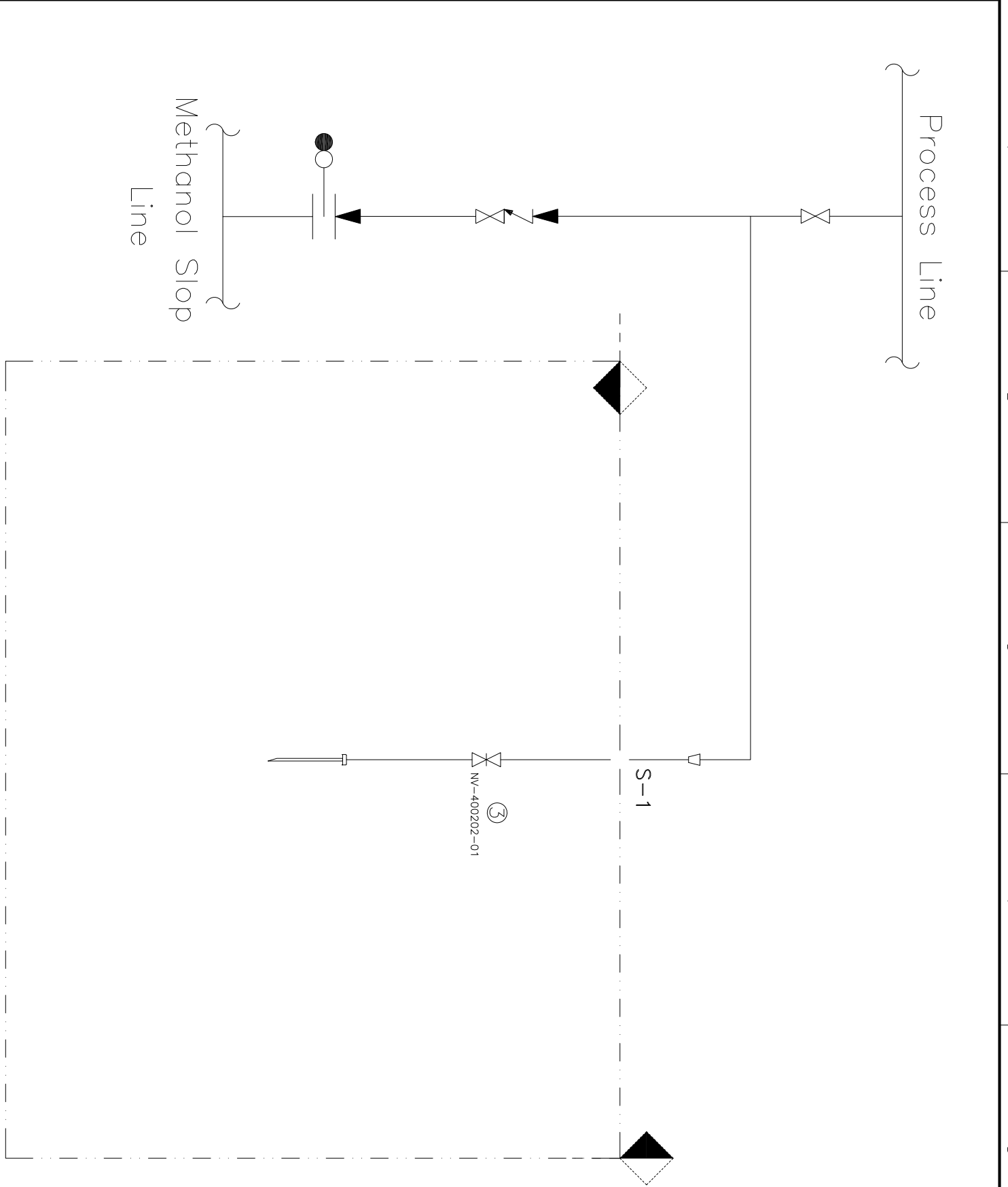
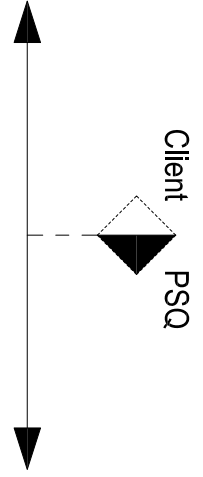
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GENERAL NOTES

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"



TYPE "C"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-400202	3/4" - PMP-4002016-AA1	-	3/4" - PML-4002015-AA1	40	0.001	-	40AP202

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/2"	-
3	Needle Valve, 1/2"	-
4	Needle Valve, 1/4"	-
5	Check Valve, 1/2"	-
6	Gate Valve, 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	-
11	Sample Cooler	-
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-

NO COMMENT.

COMMENTS AS MARKED: Manufacturing May Proceed.

Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.

REJECTED : New Document With The Same Revision Shall Be Issued.

FOR INFORMATION.

Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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DE	EXT	IFA				
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

OWNER: DI POLYMER ARIAN COMPANY (DPAC)

PROJECT: ARIAN METHANOL PLANT

EPC CONTRACTOR: PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: PIRAMOON SYSTEM QESHM

TITLE: Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: OWNER PROJ. NO.: 21  
PIDEC DWG. NO.: VD-1217-603-PID-009

SHEET: PIDEC PROJ. NO.: 1217  
VENDOR DWG. NO.: VD-1217-603-PID-009

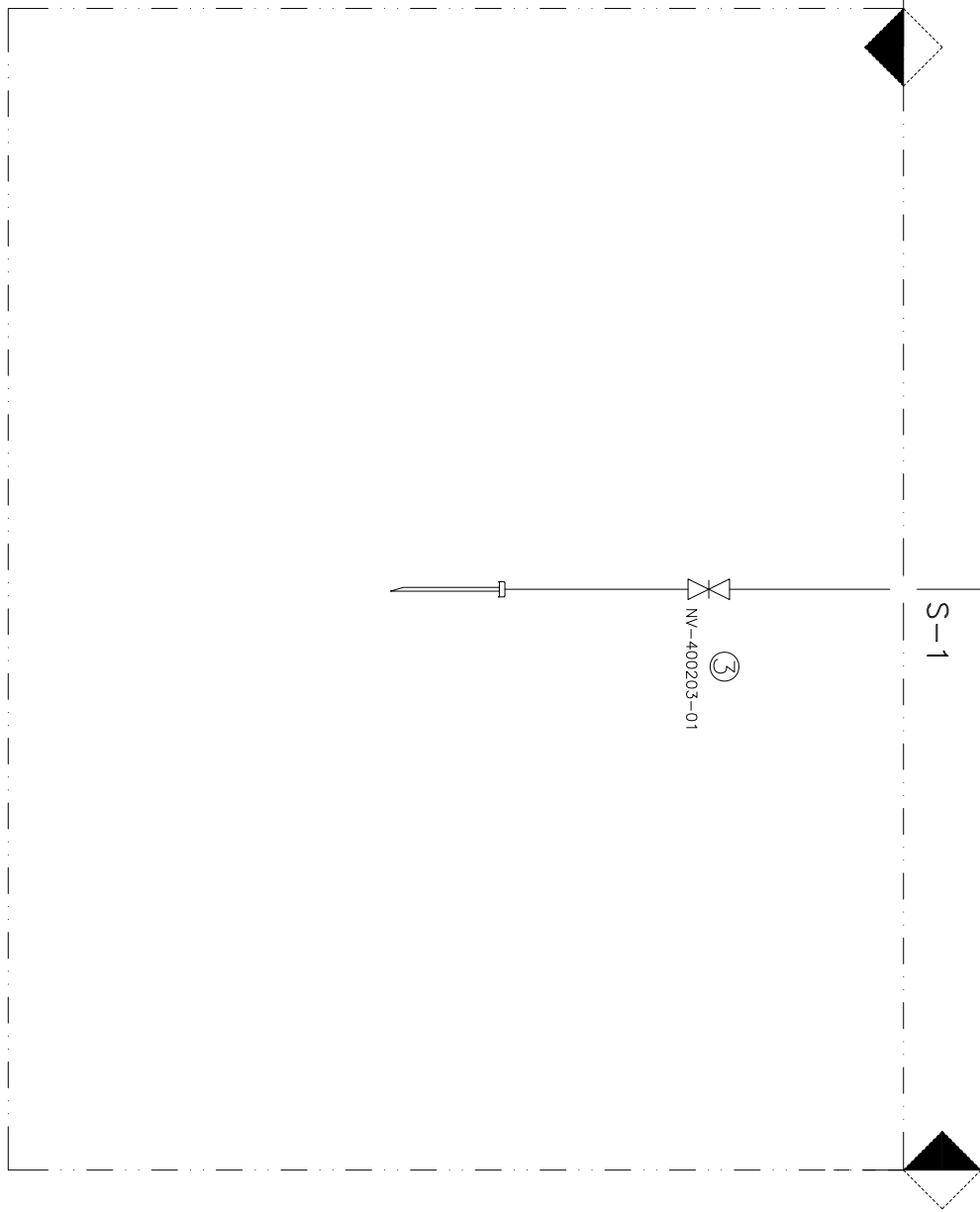
REV. 04  
SIZE: A3

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Process Line

Methanol Stop Line

Client PSQ



TYPE "C"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-400203	3/4" - PMP-4002017-AA1	-	3/4" - PML-40002002-AA1	40	0.001	-	40AP203

GENERAL NOTES

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/2"	-
3	Needle Valve, 1/2"	-
4	Needle Valve, 1/4"	-
5	Check Valve, 1/2"	-
6	Gate Valve, 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	-
11	Sample Cooler	-
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-

- NO COMMENT.
- COMMENTS AS MARKED: Manufacturing May Proceed.
- Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
- REJECTED : New Document With The Same Revision Shall Be Issued.
- FOR INFORMATION.

PIDEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
04	14.03.2021	ISSUED FOR APPROVAL	HRR	NK	RR	MA
03	06.10.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
02	11.08.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
01	24.06.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**

PROJECT: **ARIAN METHANOL PLANT**

EPC CONTRACTOR: **PIRAMOON SYSTEMS PVT. LTD.**  
**PIRAMOON SYSTEMS PVT. LTD.**  
**PIRAMOON SYSTEMS PVT. LTD.**  
**PIRAMOON SYSTEMS PVT. LTD.**

VENDOR: **PIRAMOON SYSTEMS PVT. LTD.**  
**PIRAMOON SYSTEMS PVT. LTD.**  
**PIRAMOON SYSTEMS PVT. LTD.**

Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: OWNER PROJ. NO.: 1/XXX	PIDEC PROJ. NO.: 1217	VENDOR DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: 19 OF 50	PIDEC PROJ. NO.: 1217	VENDOR DWG. NO.: VD-1217-603-PID-009	SIZE: A3

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GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Cooling Water Supply	Flange 3/4" 150# RF, 316L
S3	Cooling Water Return	Flange 3/4" 150# RF, 316L

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	1
2	Ball Valve, 1/2"	2
3	Needle Valve, 1/2"	2
4	Needle Valve, 1/4"	1
5	Check Valve, 1/2"	1
6	Gate Valve, 1/2"	1
7	Gate Valve with Indicator	1
8	Globe Valve	1
9	Temperature Indicator	1
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	1
15	Flow Restrictor	1

- NO COMMENT.
- COMMENTS AS MARKED: Manufacturing May Proceed.
- Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
- REJECTED : New Document With The Same Revision Shall Be Issued.
- FOR INFORMATION.

Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

PIDEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)
04	14.03.2021	ISSUED FOR APPROVAL
03	06.10.2020	ISSUED FOR APPROVAL
02	11.08.2020	ISSUED FOR APPROVAL
01	24.06.2020	ISSUED FOR APPROVAL

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 of Poly.Mer.Arian Company

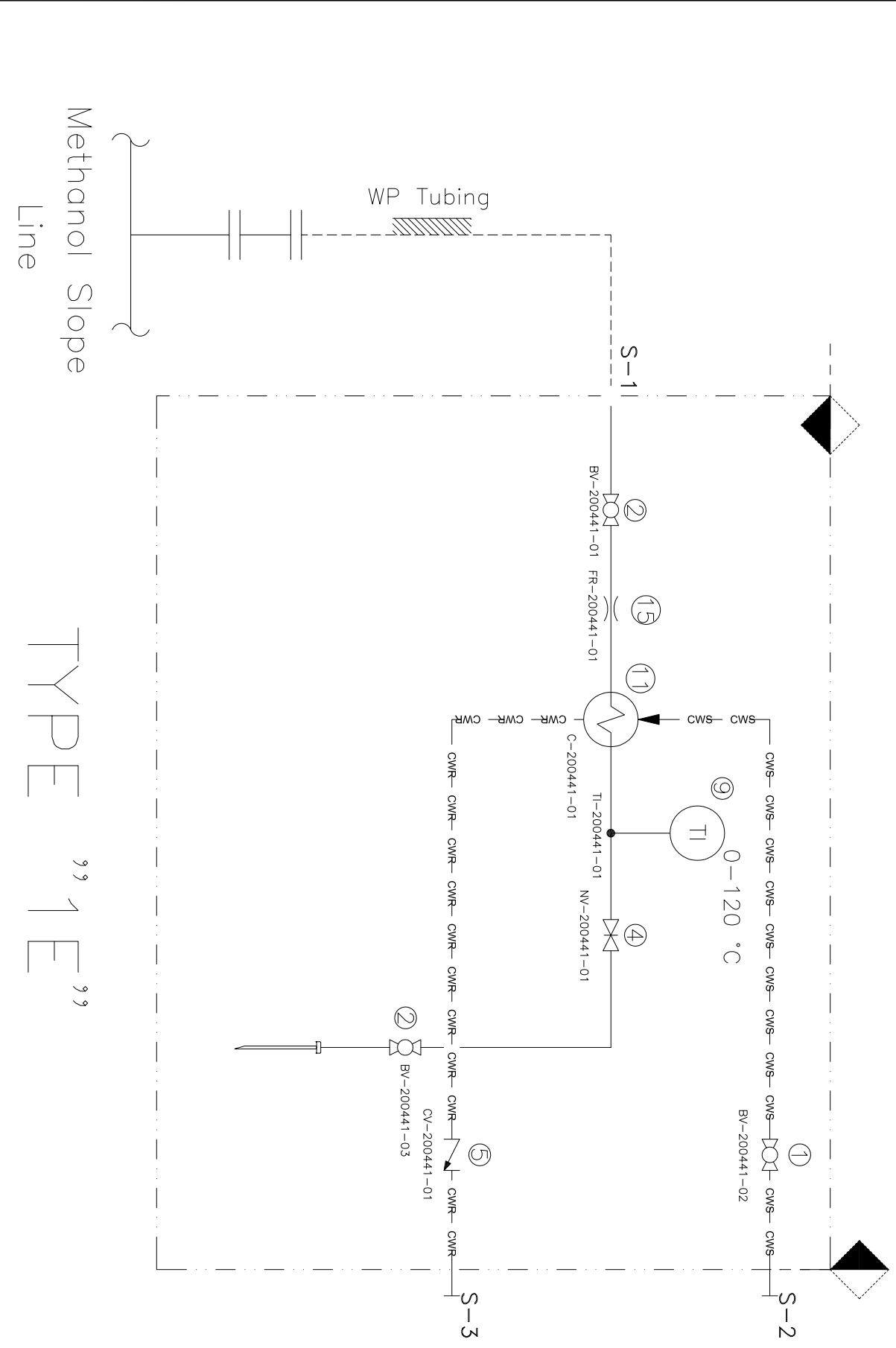
PROJECT: **ARIAN METHANOL PLANT**

EPC CONTRACTOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS**  
 PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS**

TITLE: **Schematic Tubing and Instrumentation Diagram (P&ID)**

SCALE	OWNER PROJ. NO.:	PIDEC DWG. NO.:	REV.
1/XXX	21	VD-1217-603-PID-009	04
SHEET : 20 OF 50	PIDEC PROJ. NO.:	VENDOR DWG. NO.:	SIZE :
	1217	VD-1217-603-PID-009	A3



Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-200441	3/4"-BD-2004004-BD1	3/4"-CWS/R-2004005/8-AA2	-	100	47	TI-201701	20AP441

GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Cooling Water Supply	Flange 3/4" 150# RF, 316L
S3	Cooling Water Return	Flange 3/4" 150# RF, 316L

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	1
2	Ball Valve, 1/2"	2
3	Needle Valve, 1/2"	2
4	Needle Valve, 1/4"	1
5	Check Valve, 1/2"	1
6	Gate Valve, 1/2"	1
7	Gate Valve with Indicator	1
8	Globe Valve	1
9	Temperature Indicator	1
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	1
15	Flow Restrictor	1

- NO COMMENT.
  - COMMENTS AS MARKED: Manufacturing May Proceed.
  - Major Comment As Marked : Manufacturing Shall Be Held For Next Revision.
  - REJECTED : New Document With The Same Revision Shall Be Issued.
  - FOR INFORMATION.
- PIDEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 PROJECT: **ARIAN METHANOL PLANT**

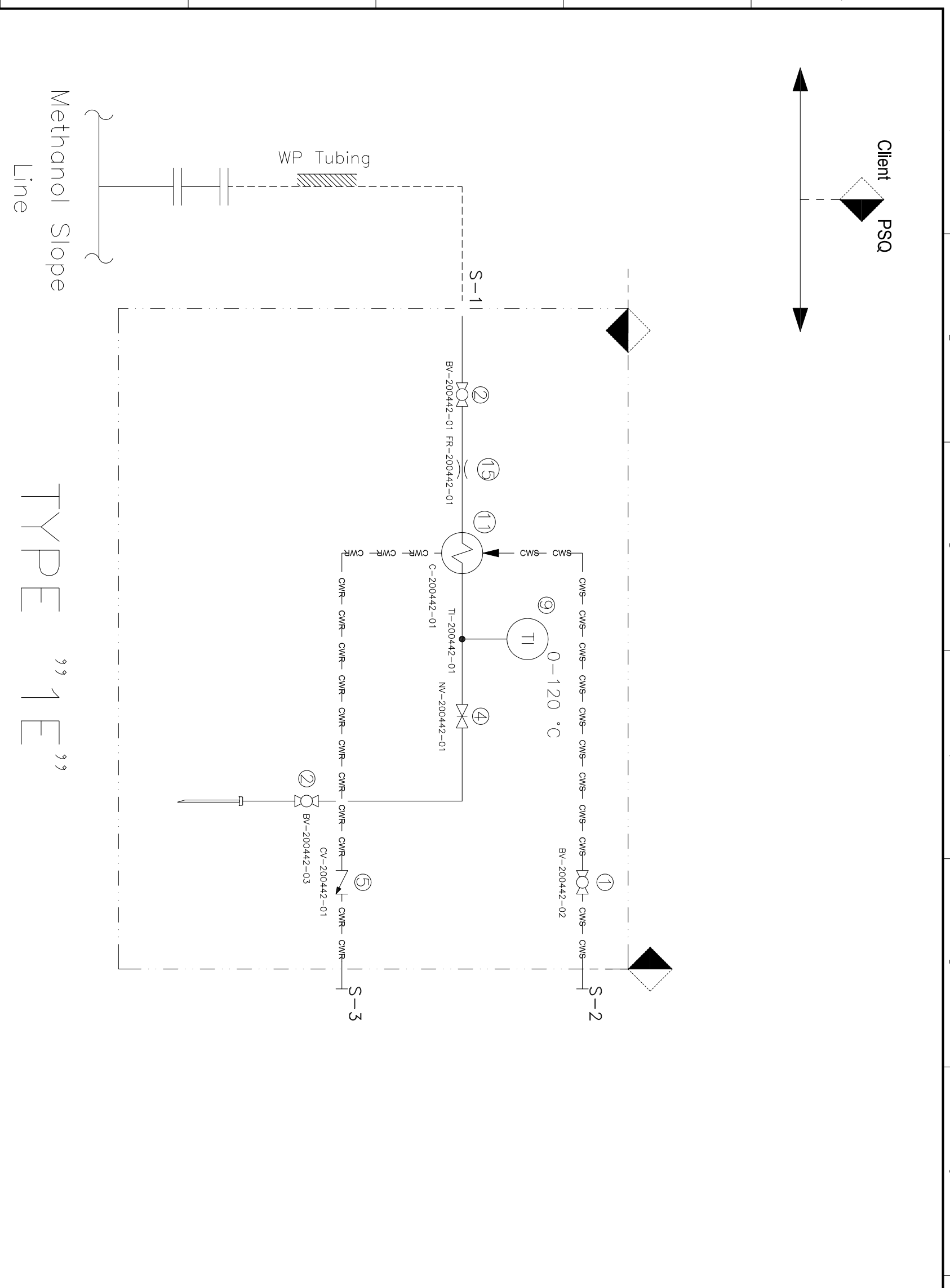
EPC CONTRACTOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS**  
 PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: **PIRAMOON SYSTEMS**

**Schematic Tubing and Instrumentation Diagram (P&ID)**

SCALE: OWNER PROJ. NO.: 21  
 SHEET: PIDEC PROJ. NO.: 1217  
 PIDEC DWG. NO.: VD-1217-603-PID-009  
 VENDOR DWG. NO.: VD-1217-603-PID-009

REV. 04  
 SIZE: A3



TYPE "1E"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-200442	3/4" - MPS-2004001 - BD1	3/4" - CWS/R-2004004/7-AA2	-	100	46	TI-201702	20AP442

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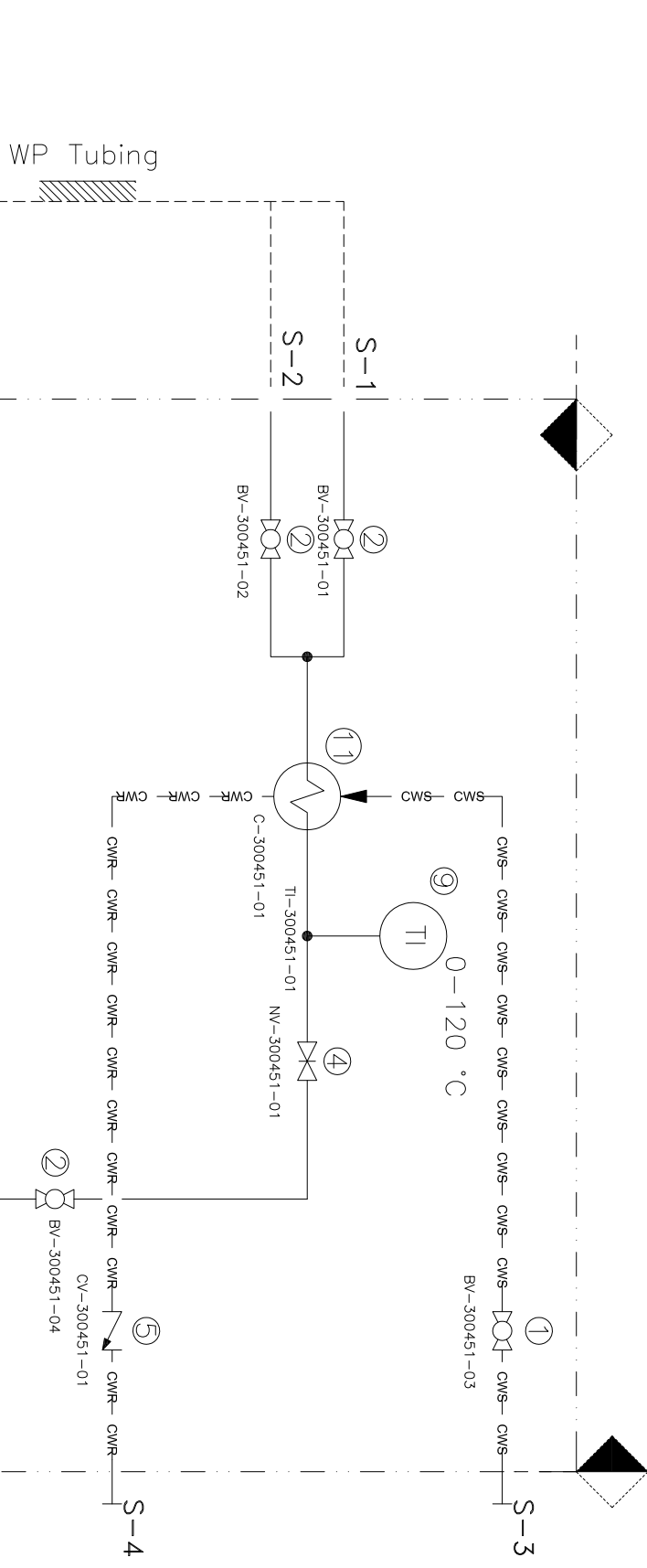
GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Sample Inlet	Male NPT Connector, 1/2"
S3	Cooling Water Supply	Flange 3/4" 150# RF, 316L
S4	Cooling Water Return	Flange 3/4" 150# RF, 316L

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	1
2	Ball Valve, 1/2"	3
3	Needle Valve, 1/2"	1
4	Needle Valve, 1/4"	1
5	Check Valve, 1/2"	1
6	Gate Valve, 1/2"	1
7	Gate Valve with Indicator	1
8	Globe Valve	1
9	Temperature Indicator	1
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	1



Methanol Slope Line

TYPE "1E"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-300451	3/4" - LPC-3004-002/00 3-AA2	3/4" - CWS/R-3004015/25-AA 2	-	100	4	TI-301701	30AP451

- NO COMMENT.
  - COMMENTS AS MARKED: Manufacturing May Proceed.
  - Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
  - REJECTED : New Document With The Same Revision Shall Be Issued.
  - FOR INFORMATION.
- PIDEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
04	14.03.2021	ISSUED FOR APPROVAL	HRR	NK	RR	MA
03	06.10.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
02	11.08.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
01	24.06.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
of Poly.Mer.Arian Company

PROJECT: **ARIAN METHANOL PLANT**

EPC CONTRACTOR: **PIDEC**  
**PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)**

VENDOR: **PIRAMOON SYSTEMS QESHM**

TITLE: **Schematic Tubing and Instrumentation Diagram (P&ID)**

SCALE: OWNER PROJ. NO.: 21  
 1/XXX  
 SHEET: PIDEC PROJ. NO.: 1217  
 22 OF 50

VENDOR DWG. NO.: VD-1217-603-PID-009  
 1217

REV. **04**  
 SIZE: **A3**

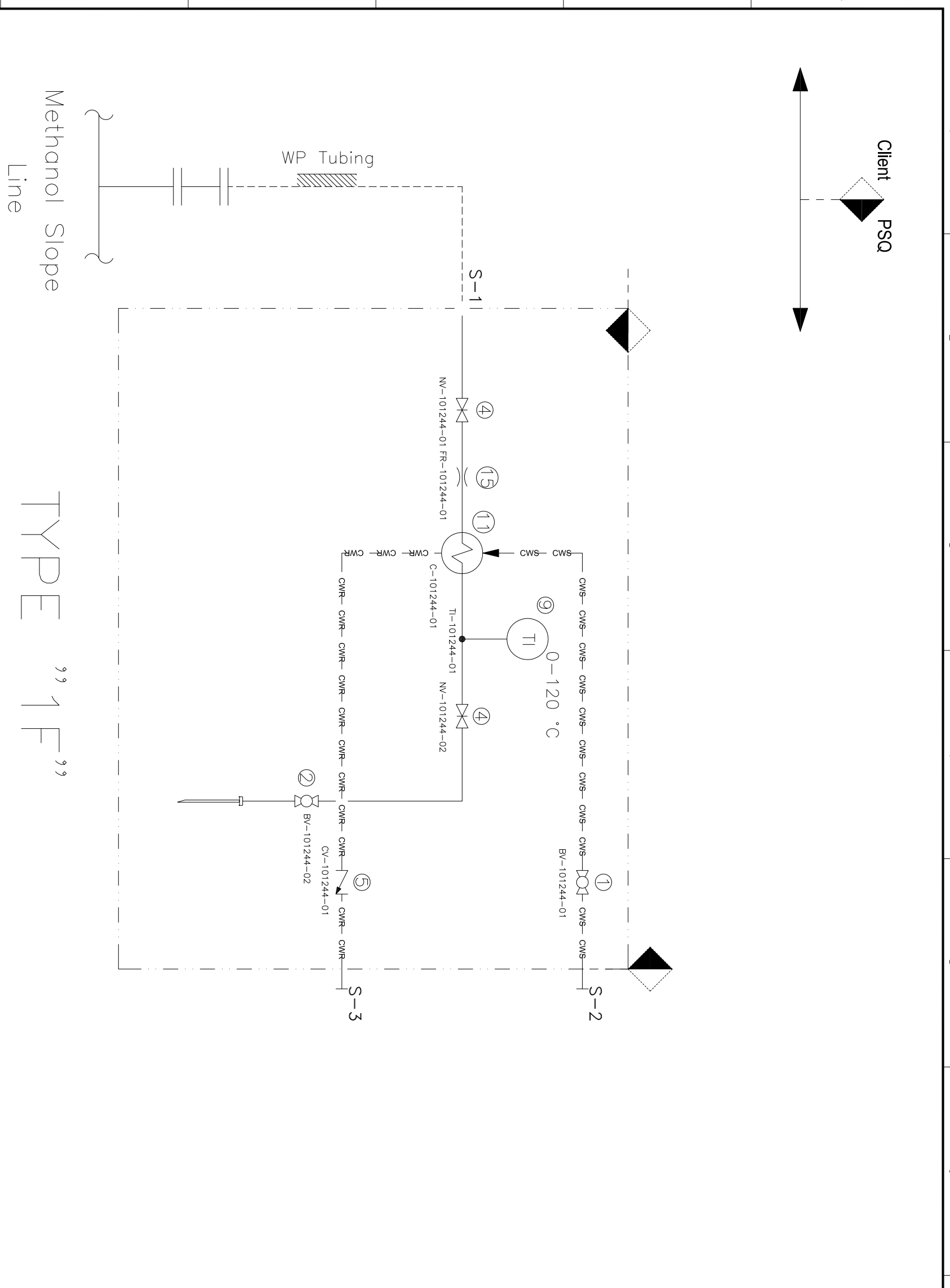
GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Cooling Water Supply	Flange 3/4" 150# RF, 316L
S3	Cooling Water Return	Flange 3/4" 150# RF, 316L

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	1
2	Ball Valve, 1/2"	1
3	Needle Valve, 1/2"	1
4	Needle Valve, 1/4"	2
5	Check Valve, 1/2"	1
6	Gate Valve, 1/2"	1
7	Gate Valve with Indicator	1
8	Globe Valve	1
9	Temperature Indicator	1
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	1
15	Flow Restrictor	1



Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-101244	3/4"-BD-1012012-BF2	3/4"-CWS/R-1012006-AA2	-	100	122	TI-101701	10AP244

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**OWNER:**  
 DI POLYMER ARIAN COMPANY (DPAC)  
 of Poly. Meth. Arian Company

**PROJECT:**  
 ARIAN METHANOL PLANT

**EPC CONTRACTOR:**  
 PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

**VENDOR:**  
 PIRAMOONT SYSTEM QESHM

**Scale:** 1/XXX  
**Sheet:** 21 of 50

**Scale:** OWNER PROJ. NO.: VD-1217-603-PID-009  
 PIDEC PROJ. NO.: VD-1217-603-PID-009  
 Vendor DWG. No.: VD-1217-603-PID-009

**REV.:** 04  
**SIZE:** A3

DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

NO COMMENT.  
 COMMENTS AS MARKED: Manufacturing May Proceed.  
 Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.  
 REJECTED : New Document With The Same Revision Shall Be Issued.  
 FOR INFORMATION.

**Name:** \_\_\_\_\_ **Req. No.:** \_\_\_\_\_ **Seq. No.:** \_\_\_\_\_  
**Signature:** \_\_\_\_\_  
**Date:** \_\_\_\_\_

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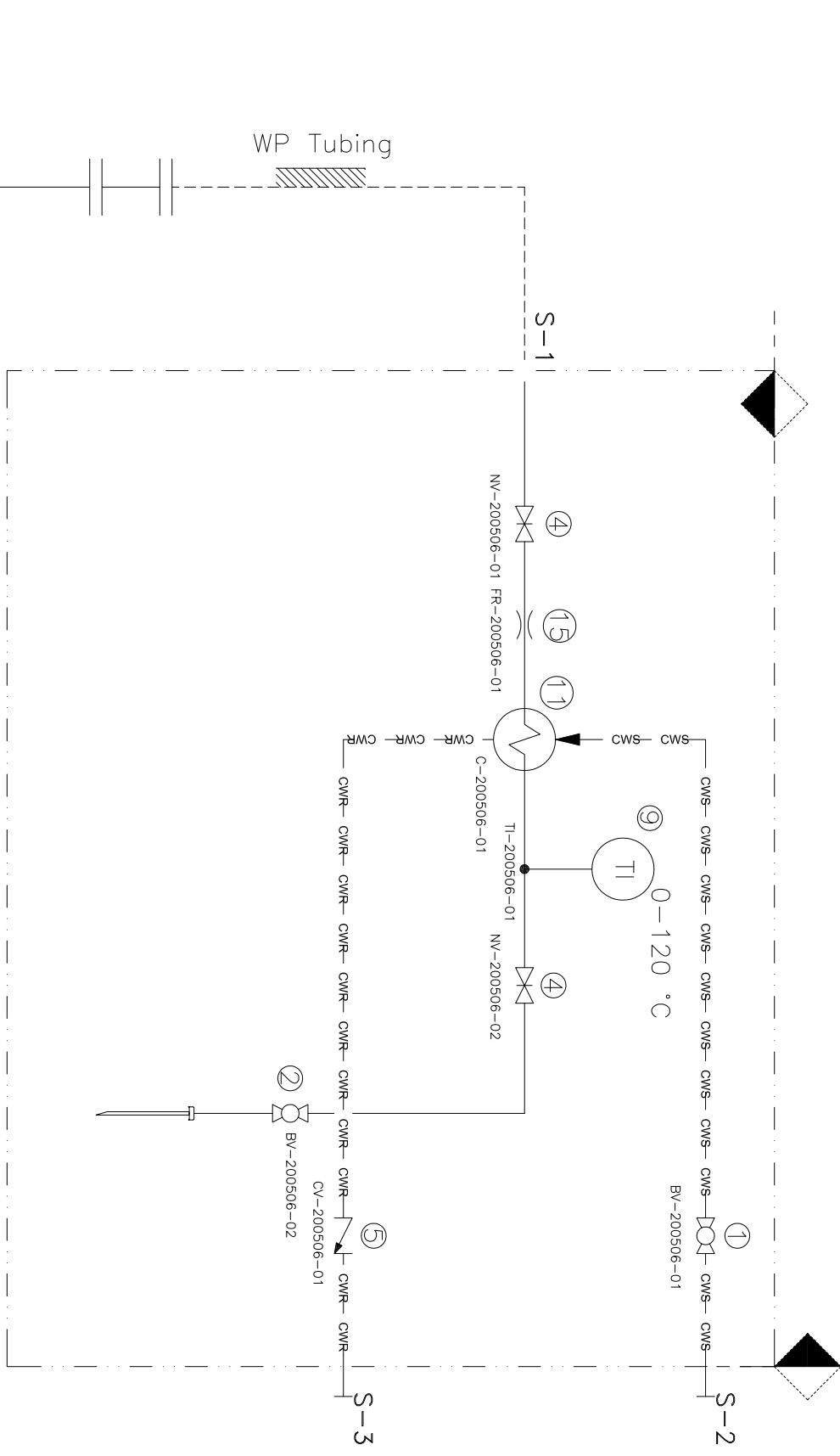
GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Cooling Water Supply	Flange 3/4" 150# RF, 316L
S3	Cooling Water Return	Flange 3/4" 150# RF, 316L

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	1
2	Ball Valve, 1/2"	1
3	Needle Valve, 1/2"	1
4	Needle Valve, 1/2"	2
5	Check Valve, 1/2"	1
6	Gate Valve, 1/2"	1
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	1
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-
15	Flow Restrictor	1



Methanol Slope Line  
TYPE "1F"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-200506	3/4" - HBW-2005001 - BF1	3/4" - CWS/R-2005011 - AA2	-	100	123	TI-101703	20AP506

- NO COMMENT.
  - COMMENTS AS MARKED: Manufacturing May Proceed.
  - Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
  - REJECTED : New Document With The Same Revision Shall Be Issued.
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DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 PROJECT: **ARIAN METHANOL PLANT**

EPC CONTRACTOR: **PIRAMOON SYSTEMS**  
**PIRAMOON PIRAMOON SYSTEM QESHM & ENGINEERING COMPANY (PIDEC)**

VENDOR: **PIRAMOON PIRAMOON SYSTEM QESHM**

TITLE: **Schematic Tubing and Instrumentation Diagram (P&ID)**

SCALE: OWNER PROJ. NO.: 21  
 PIDEC PROJ. NO.: VD-1217-603-PID-009  
 SHEET: PIDEC DWG. NO.: 1217  
 24 OF 50

VENDOR DWG. NO.: VD-1217-603-PID-009

REV. **04**  
 SIZE: **A3**

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TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Cooling Water Supply	Flange 3/4" 150# RF, 316L
S3	Cooling Water Return	Flange 3/4" 150# RF, 316L

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/2"	-
3	Needle Valve, 1/2"	-
4	Needle Valve, 1/2"	-
5	Check Valve, 1/2"	1
6	Gate Valve, 1/2"	1
7	Gate Valve with Indicator	1
8	Globe Valve	1
9	Temperature Indicator	1
10	Pressure Indicator	-
11	Sample Cooler	1
12	Gas Bomb	-
13	Pressure Safety Valve	-
14	Pressure Control Valve	-
15	Flow Restrictor	1

- NO COMMENT.
  - COMMENTS AS MARKED: Manufacturing May Proceed.
  - Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
  - REJECTED : New Document With The Same Revision Shall Be Issued.
  - FOR INFORMATION.
- Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

PI&EC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA				
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 of Poly.Mer.Arian Company

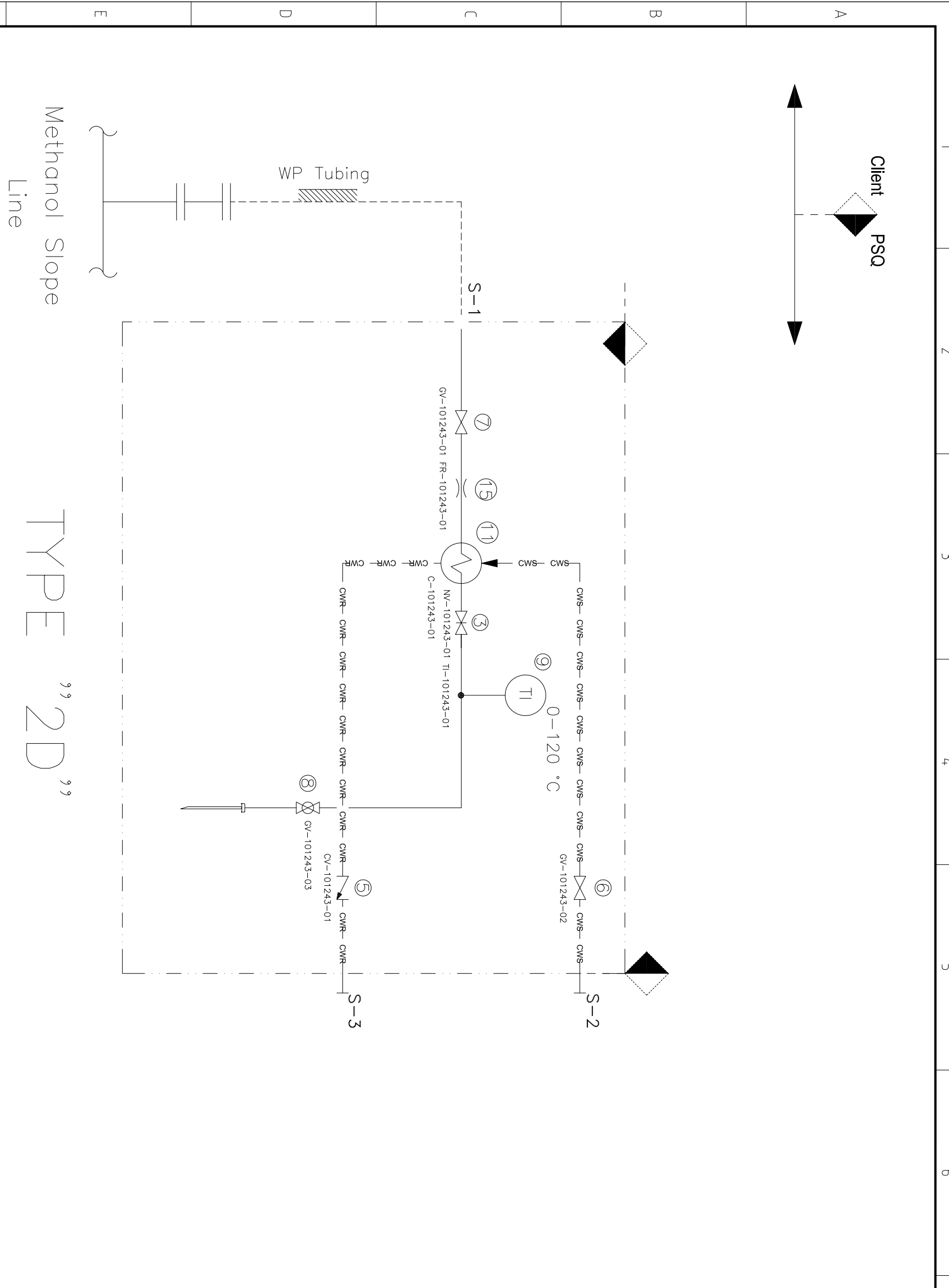
PROJECT: **ARIAN METHANOL PLANT**

E&S CONTRACTOR: **PI&EC**  
**PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)**

VENDOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS QESHM**

TITLE: **Schematic Tubing and Instrumentation Diagram (P&ID)**

SCALE: OWNER PROJ. NO.: \_\_\_\_\_ PI&EC DWG. NO.: **VD-1217-603-PID-009** REV. **04**  
 SHEET: PI&EC PROJ. NO.: \_\_\_\_\_ VENDOR DWG. NO.: **VD-1217-603-PID-009** SIZE: **A3**  
 25 OF 50



Methanol Slope Line

TYPE "2D"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-101243	3/4"-HPS-1012002-BF2	3/4"-CWS/R-1012005-AA2	-	326	122	TI-101702	10AP243

GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Cooling Water Supply	Flange 3/4" 150# RF, 316L
S3	Cooling Water Return	Flange 3/4" 150# RF, 316L

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	2
2	Ball Valve, 1/2"	2
3	Needle Valve, 1/2"	1
4	Needle Valve, 1/4"	1
5	Check Valve, 1/2"	1
6	Gate Valve, 1/2"	1
7	Gate Valve with Indicator	1
8	Globe Valve	1
9	Temperature Indicator	1
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	1

- NO COMMENT.
  - COMMENTS AS MARKED: Manufacturing May Proceed.
  - Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
  - REJECTED : New Document With The Same Revision Shall Be Issued.
  - FOR INFORMATION.
- Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

PI&EC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA				
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 of Poly.Mer.Arian Company

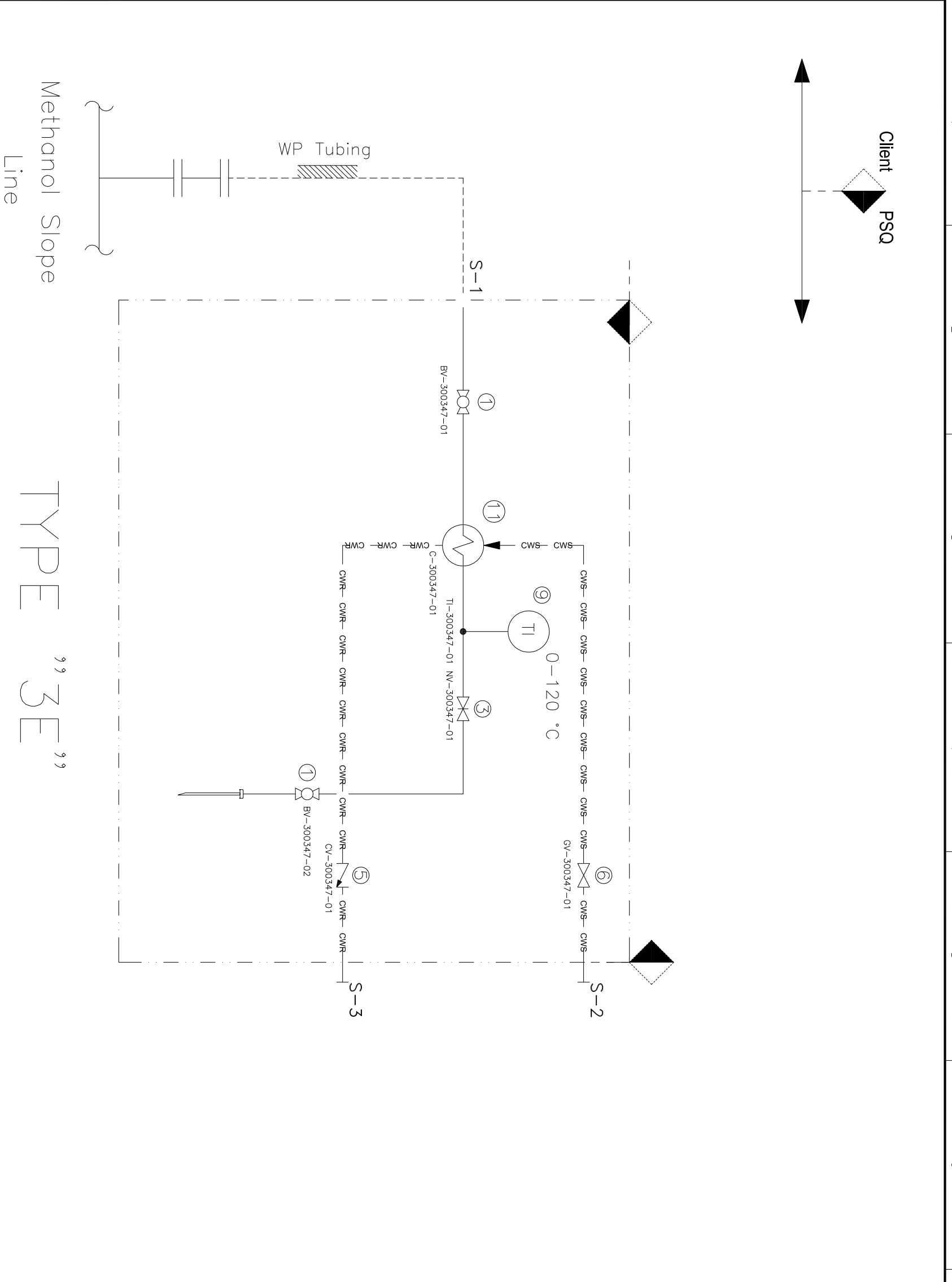
PROJECT: **ARIAN METHANOL PLANT**

EPC CONTRACTOR: **PI&EC**  
**PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PI&EC)**

VENDOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS QESHM**

Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: OWNER PROJ. NO.:	PI&EC PROJ. NO.:	REV.:
1/XXX	VD-1217-603-PID-009	04
SHEET: PI&EC PROJ. NO.:	VENDOR DWG. NO.:	SIZE:
26 OF 50	VD-1217-603-PID-009	A3



Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-300347	3/4" - PMR-3003004-AA1	3/4" - CWS/R-3003001/2-AA2	PML-3001001	64	1	TI-301702	3OAP347

GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Cooling Water Supply	Flange 3/4" 150# RF, 316L
S3	Cooling Water Return	Flange 3/4" 150# RF, 316L

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	2
2	Ball Valve, 1/2"	2
3	Needle Valve, 1/2"	1
4	Needle Valve, 1/4"	1
5	Check Valve, 1/2"	1
6	Gate Valve, 1/2"	1
7	Gate Valve with Indicator	1
8	Globe Valve	1
9	Temperature Indicator	1
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	1

- NO COMMENT.
- COMMENTS AS MARKED: Manufacturing May Proceed.
- Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
- REJECTED : New Document With The Same Revision Shall Be Issued.
- FOR INFORMATION.

Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

PIDEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA				
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 of Poly.Mer.Arian Company

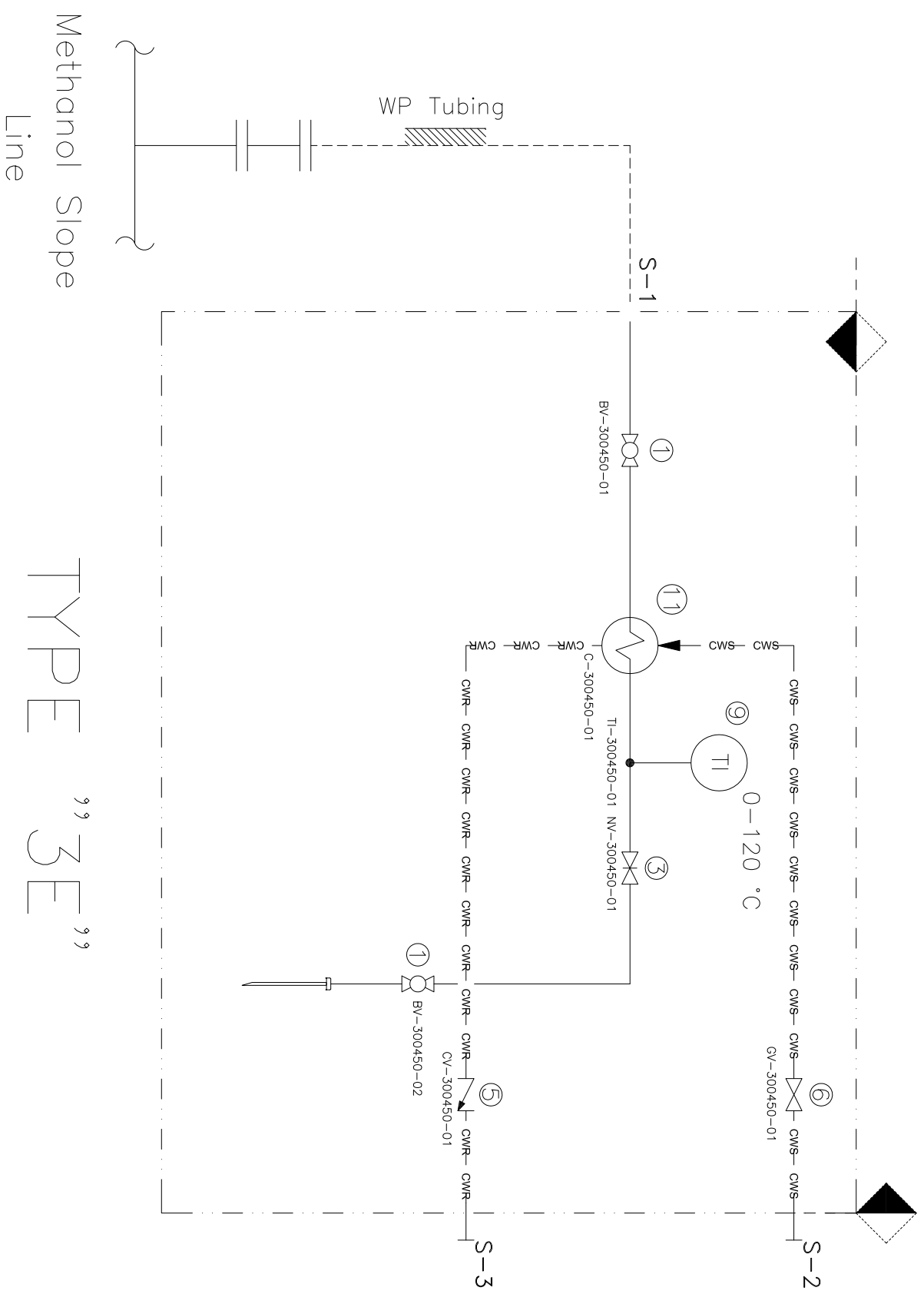
PROJECT: **ARIAN METHANOL PLANT**

E/S CONTRACTOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS**  
 PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS**

Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: OWNER PROJ. NO.: 1/XXX	PIDEC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: PIDEC PROJ. NO.: 27 OF 50	VENDOR DWG. NO.: VD-1217-603-PID-009	SIZE: A3



TYPE "ZE"

Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-300450	3/4"-PMS-3004014-AA1	3/4"-CWS/R-3004004/5-AA2	PML-3010071	137	7.6	TI-301703	30AP450

GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Cooling Water Supply	Flange 3/4" 150# RF, 316L
S3	Cooling Water Return	Flange 3/4" 150# RF, 316L

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	2
2	Ball Valve, 1/2"	2
3	Needle Valve, 1/2"	1
4	Needle Valve, 1/2"	1
5	Check Valve, 1/2"	1
6	Gate Valve, 1/2"	1
7	Gate Valve with Indicator	1
8	Globe Valve	1
9	Temperature Indicator	1
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	1

- NO COMMENT.
  - COMMENTS AS MARKED: Manufacturing May Proceed.
  - Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
  - REJECTED : New Document With The Same Revision Shall Be Issued.
  - FOR INFORMATION.
- Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

PIDEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA				
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

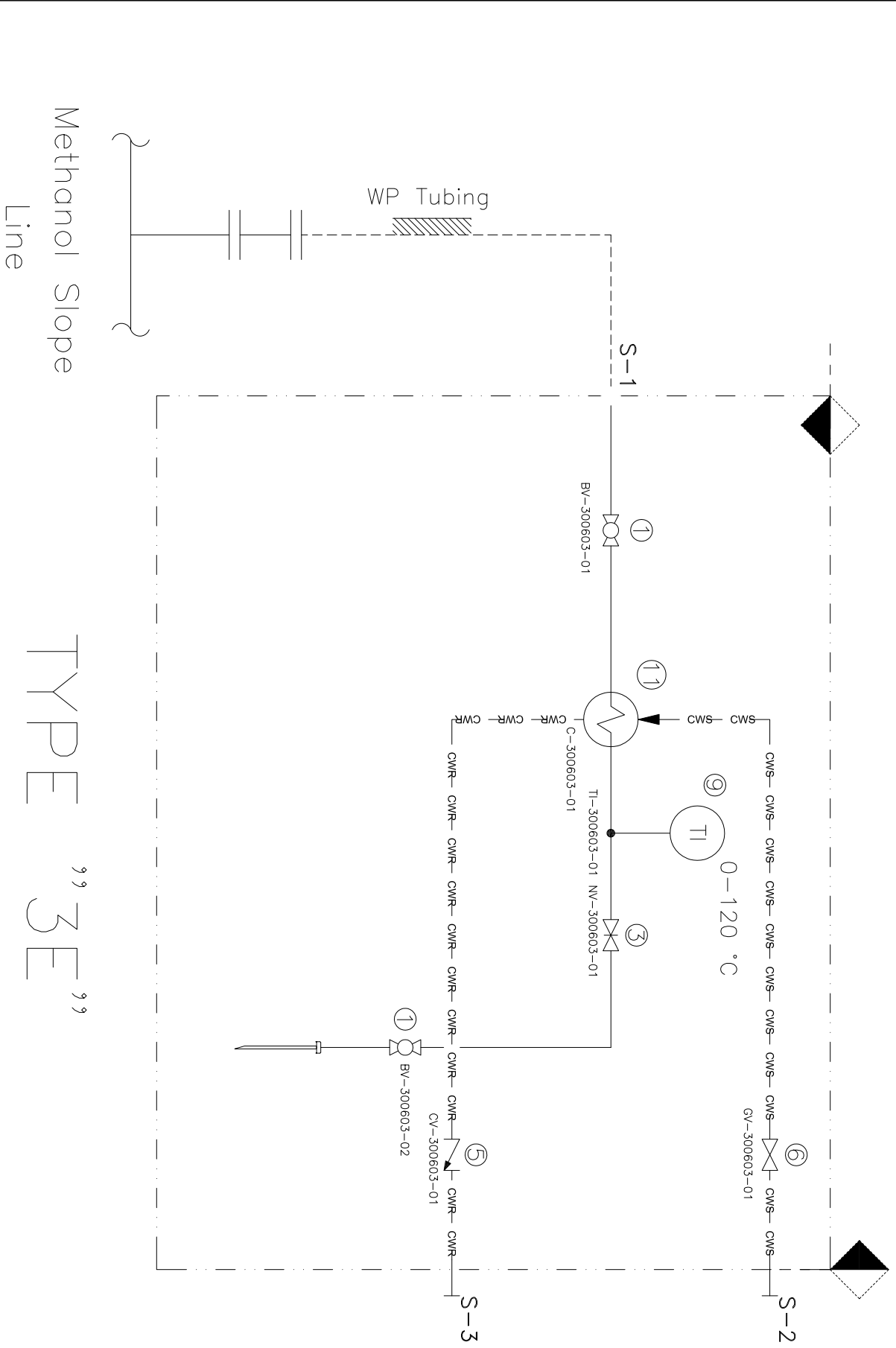
OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 PROJECT: **ARIAN METHANOL PLANT**

ENGINEER: **PIRAMOON SYSTEMS**  
 PROJECT: **ARIAN METHANOL PLANT**

ENGINEER: **PIRAMOON SYSTEMS**  
 PROJECT: **ARIAN METHANOL PLANT**

ENGINEER: **PIRAMOON SYSTEMS**  
 PROJECT: **ARIAN METHANOL PLANT**

ENGINEER: **PIRAMOON SYSTEMS**  
 PROJECT: **ARIAN METHANOL PLANT**



Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-300603	3/4" - SDR-3006005-AA1	3/4" - CWS/R-3006008/010-AA2	PML-3006042	117	0.8	TI-301704	30AP603

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SCALE: OWNER PROJ. NO.: \_\_\_\_\_ PDEC DWG. NO.: VD-1217-603-PID-009 REV. 04  
 SHEET: 21 PDEC PROJ. NO.: \_\_\_\_\_ VENDOR DWG. NO.: VD-1217-603-PID-009 SIZE: A3  
 28 OF 50

GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Cooling Water Supply	Flange 3/4" 150# RF, 316L
S3	Cooling Water Return	Flange 3/4" 150# RF, 316L

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	2
2	Ball Valve, 1/2"	2
3	Needle Valve, 1/2"	1
4	Needle Valve, 1/2"	1
5	Check Valve, 1/2"	1
6	Gate Valve, 1/2"	1
7	Gate Valve with Indicator	1
8	Globe Valve	1
9	Temperature Indicator	1
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	1

- NO COMMENT.
  - COMMENTS AS MARKED: Manufacturing May Proceed.
  - Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
  - REJECTED : New Document With The Same Revision Shall Be Issued.
  - FOR INFORMATION.
- Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

PI&EC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA				
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

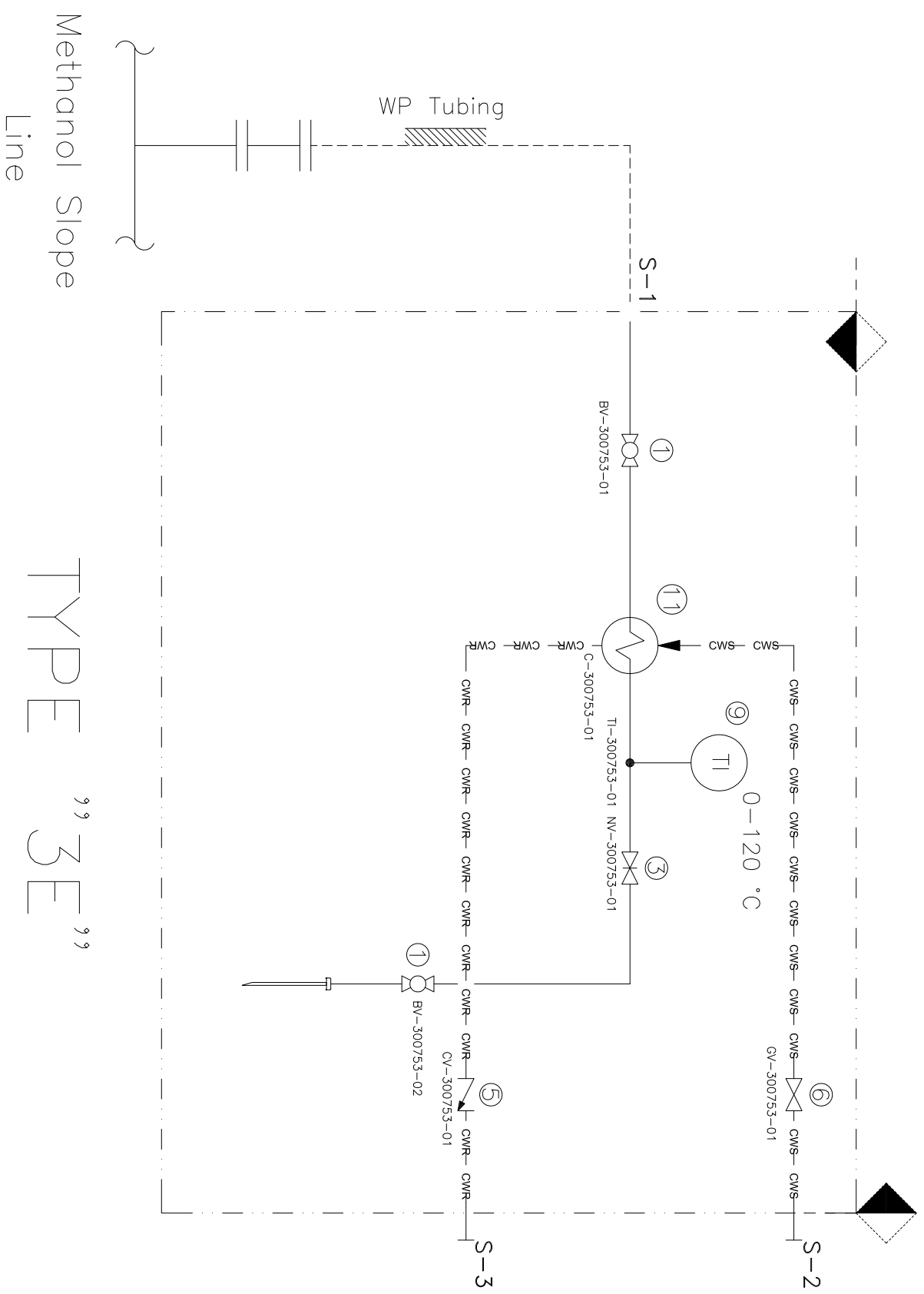
OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 PROJECT: **ARIAN METHANOL PLANT**

ENGINEER: **PIRAMOON SYSTEMS**  
 PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: **PIRAMOON SYSTEMS**  
 PIRAMOON SYSTEMS QESHM

Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: OWNER PROJ. NO.: 1/XXX	PIDEC PROJ. NO.: 21	PIDEC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: 29 OF 50	1217	VENDOR DWG. NO.: VD-1217-603-PID-009	SIZE: A3



Process Data

Tag No.	Process Line	CWS/CWR	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-300753	3/4"-PW-3006001-AA1	3/4"-CWS/R-3007010/015-AA2	PML-3006042	117	0.8	TI-301705	3OAP753

GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Sample to Flare	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve - 1/2"	-
2	Ball Valve - 1/2"	3
3	Needle Valve - 1/2"	2
4	Needle Valve - 1/4"	2
5	Check Valve - 1/2"	-
6	Gate Valve - 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	-

- NO COMMENT.
- COMMENTS AS MARKED: Manufacturing May Proceed.
- Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
- REJECTED : New Document With The Same Revision Shall Be Issued.
- FOR INFORMATION.

Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 P&IDC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)
04	14.03.2021	ISSUED FOR APPROVAL
03	06.10.2020	ISSUED FOR APPROVAL
02	11.08.2020	ISSUED FOR APPROVAL
01	24.06.2020	ISSUED FOR APPROVAL

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
04	14.03.2021	ISSUED FOR APPROVAL	HRR	NK	RR	MA
03	06.10.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
02	11.08.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
01	24.06.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA

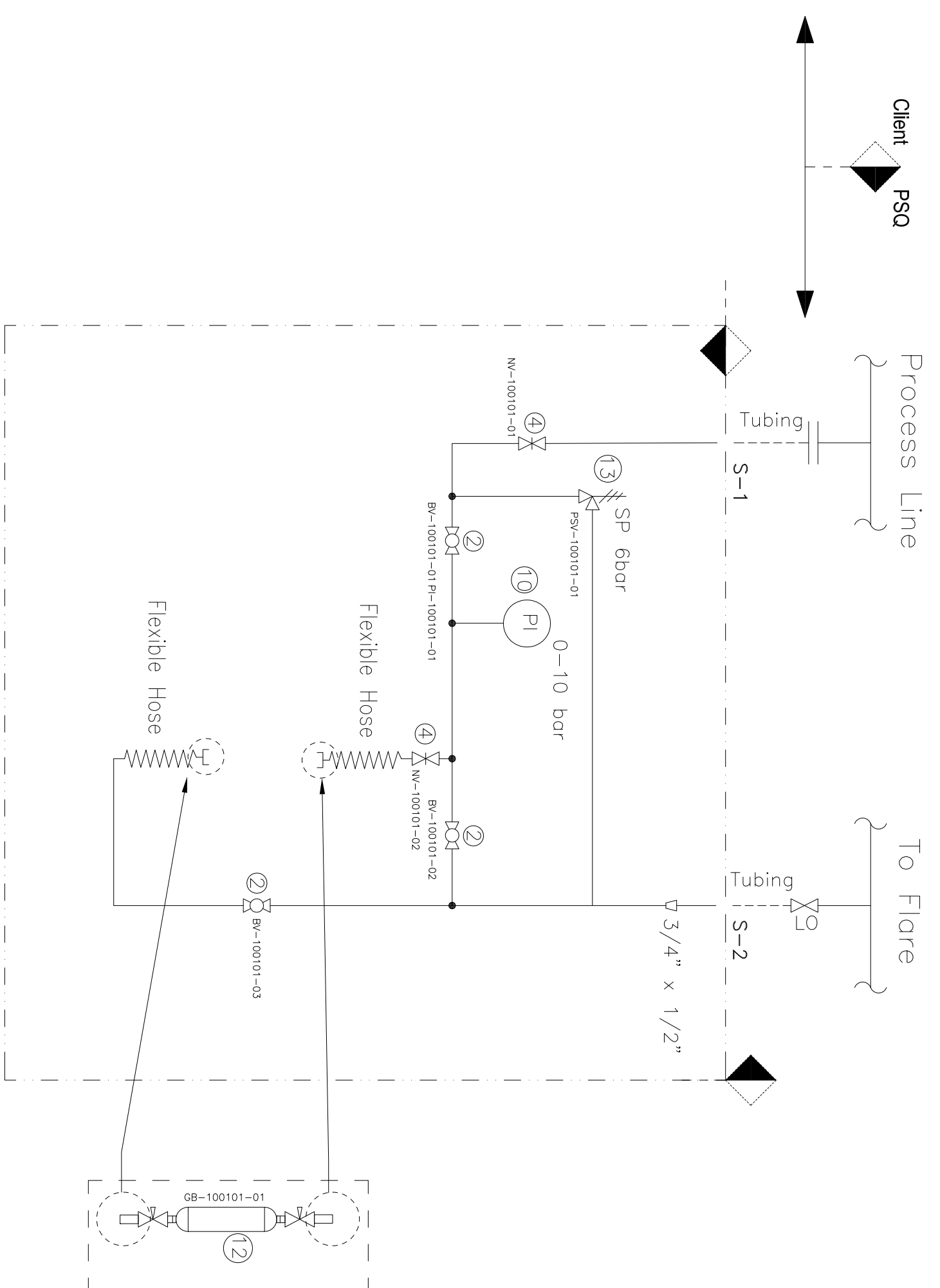
OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 PROJECT: **ARIAN METHANOL PLANT**

E&S CONTRACTOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS**  
 PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS**

Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: 1/XXX	OWNER PROJ. NO.: 21	PIDEC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: 30 OF 50	PIDEC PROJ. NO.: 1217	VENDOR DWG. NO.: VD-1217-603-PID-009	SIZE: A3



TYPE "4E"

Process Data

Tag No.	Process Line	Flare	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-100101	3/4"-NG-1001001-BD1	3/4"-FLG-1001021-AA3	-	40	54	PSV-101701 PI-101701	10AP101

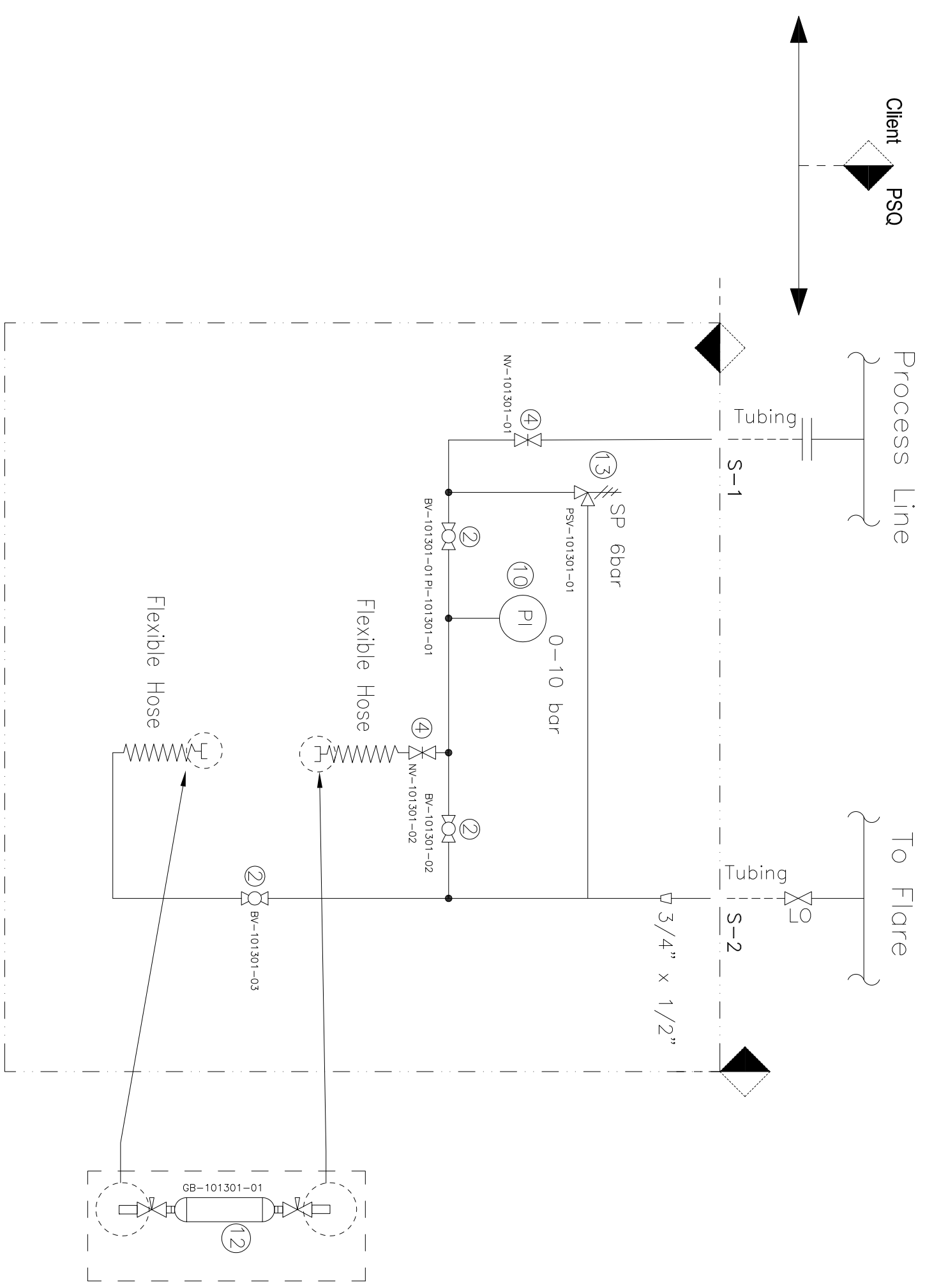
GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Sample to Flare	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve - 1/2"	-
2	Ball Valve - 1/2"	3
3	Needle Valve - 1/2"	2
4	Needle Valve - 1/4"	2
5	Check Valve - 1/2"	-
6	Gate Valve - 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	-



TYPE "4E"

Process Data

Tag No.	Process Line	Flare	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-101301	3/4"-RFG-1013010-NB1	3/4"-FLG-7002005-AA3	-	70	31.8	PSV-101702 PI-101702	10AP301

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OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
PROJECT: **ARIAN METHANOL PLANT**

ENGINEER: **PIRAMOON SYSTEMS**  
PIRAMOON SYSTEMS QESHM & ENGINEERING COMPANY (PIDEC)

SCALE: OWNER PROJ. NO.: 21  
PIDEC PROJ. NO.: VD-1217-603-PID-009  
SHEET: 1/XXX  
31 OF 50

REVISIONS:

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

DE: EXT IFA  
Eng. Phase: Purpose of Distribution (POD) Purpose of Issue (POI)

Comments:  
 NO COMMENT.  
 COMMENTS AS MARKED: Manufacturing May Proceed.  
 Major Comment As Marked: Manufacturing Shall Be Hold For Next Revision.  
 REJECTED: New Document With The Same Revision Shall Be Issued.  
 FOR INFORMATION.

Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

PIDEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

Schematic Tubing and Instrumentation Diagram (P&ID)

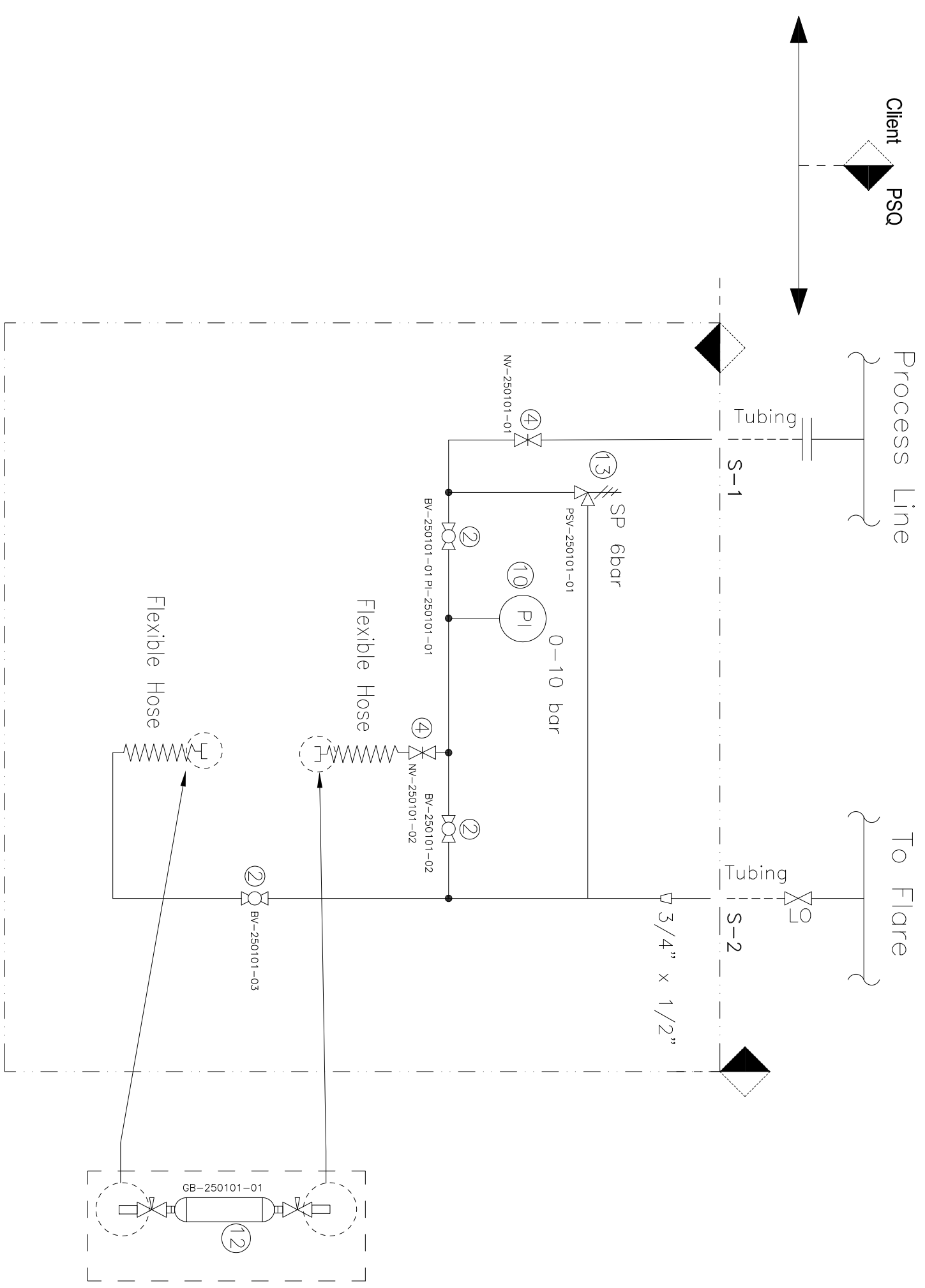
GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Sample to Flare	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/2"	3
3	Needle Valve, 1/2"	2
4	Needle Valve, 1/4"	2
5	Check Valve, 1/2"	-
6	Gate Valve, 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	-



Process Data

Tag No.	Process Line	Flare	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-250101	3/4"-HG-2501003-AB1	3/4"-FLG-2501011-AA3	-	80	40	PSV-251701 PI-251701	25AP101

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**OWNER:**  
DI POLYMER ARIAN COMPANY  
ARIAN METHANOL PLANT

**PROJECT:**  
PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

**ENGINEER:**  
PIRAMOON SYSTEMS QESHM

**SCALE:** 1/XXX  
**SHEET:** 21  
**PIDEC PROJ. NO.:** VD-1217-603-PID-009  
**VENDOR DWG. NO.:** VD-1217-603-PID-009

**REV.:** 04  
**SIZE:** A3

DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

NO COMMENT.  
 COMMENTS AS MARKED: Manufacturing May Proceed.  
 Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.  
 REJECTED : New Document With The Same Revision Shall Be Issued.  
 FOR INFORMATION.

**Name:** \_\_\_\_\_ **Req. No.:** \_\_\_\_\_ **Seq. No.:** \_\_\_\_\_  
**Signature:** \_\_\_\_\_  
**Date:** \_\_\_\_\_

PIDEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.



GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Sample to Flare	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/2"	3
3	Needle Valve, 1/2"	2
4	Needle Valve, 1/4"	2
5	Check Valve, 1/2"	-
6	Gate Valve, 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	-

NO COMMENT.

- COMMENTS AS MARKED: Manufacturing May Proceed.
- Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
- REJECTED : New Document With The Same Revision Shall Be Issued.
- FOR INFORMATION.

Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 P/DEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

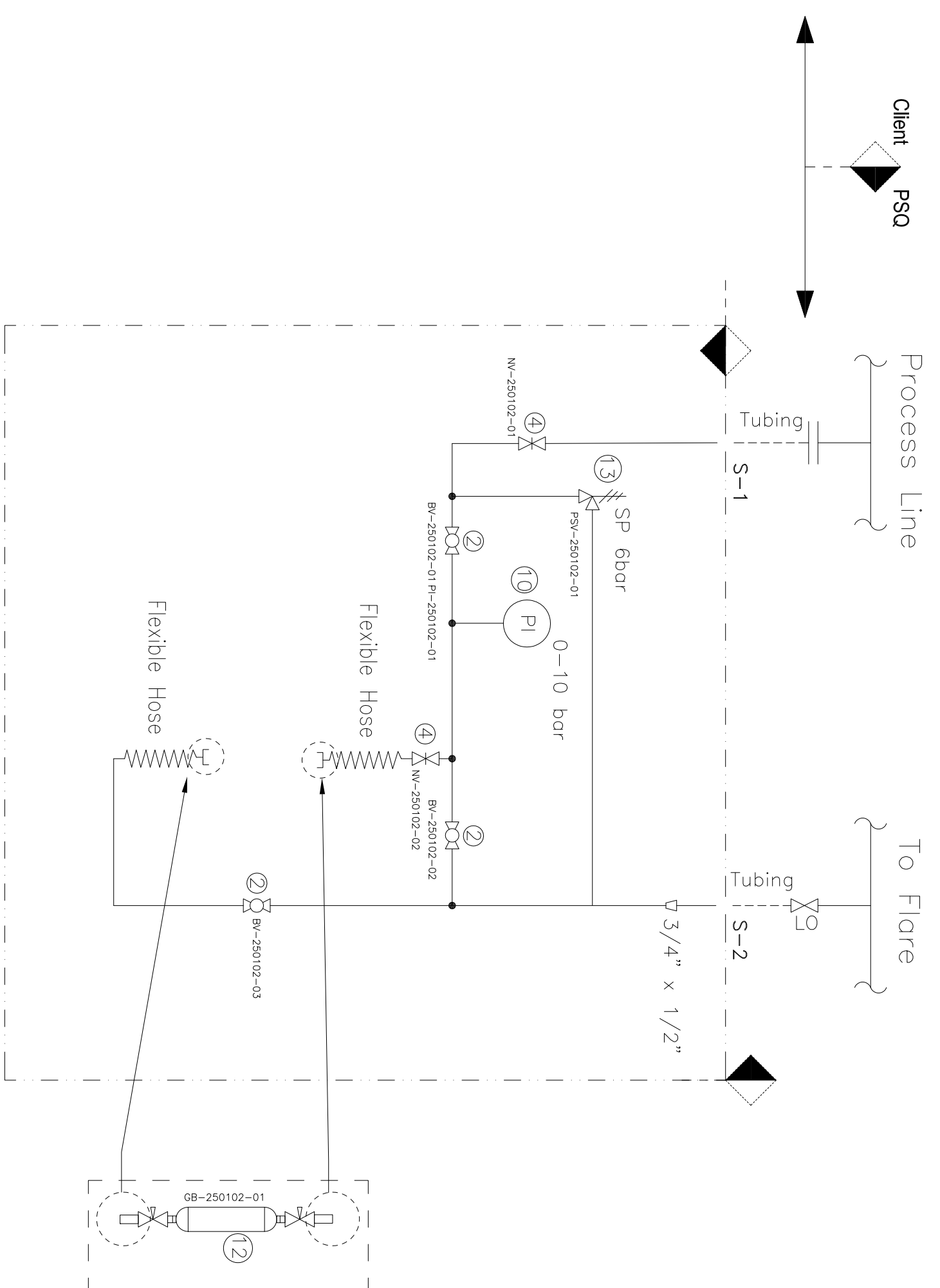
OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 PROJECT: **ARIAN METHANOL PLANT**

E/S CONTRACTOR: **PIRAMOON SYSTEMS**  
**PIRAMOON PIRAMOON SYSTEM QESHM & ENGINEERING COMPANY (PIDEC)**

VENDOR: **PIRAMOON SYSTEMS**

Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: 1/XXX	OWNER PROJ. NO.: 21	PIDEC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: 33 OF 50	PIDEC PROJ. NO.: 1217	VENDOR DWG. NO.: VD-1217-603-PID-009	SIZE: A3



Process Data

Tag No.	Process Line	Flare	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-250102	3/4" - OFG - 2501001 - AA1	3/4" - FLG - 2501002 - AA3	-	80	5	PSV-251702 PI-251702	25AP102

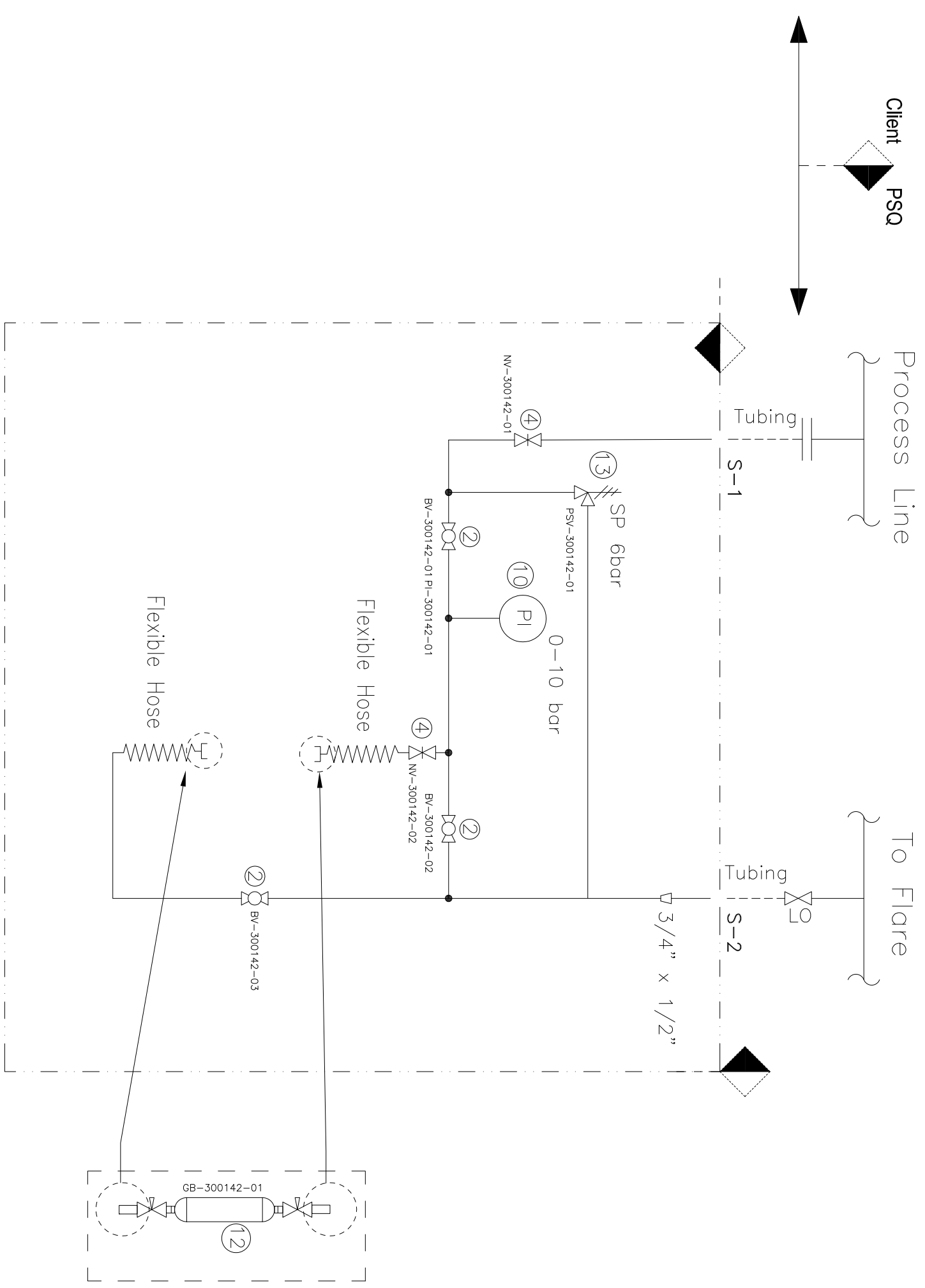
GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Sample to Flare	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	-
2	Ball Valve, 1/2"	3
3	Needle Valve, 1/2"	2
4	Needle Valve, 1/4"	2
5	Check Valve, 1/2"	-
6	Gate Valve, 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	-



TYPE "4E"

Process Data

Tag No.	Process Line	Flare	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-300142	3/4"-EXG-3001001-AA1	3/4"-FLG-3001001-AA3	-	38	4.5	PSV-301701 PI-301701	30AP142

- NO COMMENT.
  - COMMENTS AS MARKED: Manufacturing May Proceed.
  - Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
  - REJECTED : New Document With The Same Revision Shall Be Issued.
  - FOR INFORMATION.
- Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_
- PI/EC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 PROJECT: **ARIAN METHANOL PLANT**

ENGINEER: **PIRAMOON SYSTEMS**  
 PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: **PIRAMOON SYSTEMS QESHM**

**Schematic Tubing and Instrumentation Diagram (P&ID)**

SCALE: OWNER PROJ. NO.: 21  
 SHEET: 1/XXX  
 PIDEC PROJ. NO.: 1217  
 PIDEC DWG. NO.: VD-1217-603-PID-009  
 VENDOR DWG. NO.: VD-1217-603-PID-009

REV. 04  
 SIZE: A3

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GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Sample to Flare	Male NPT Connector, 1/2"

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve - 1/2"	-
2	Ball Valve - 1/2"	3
3	Needle Valve - 1/2"	2
4	Needle Valve - 1/4"	2
5	Check Valve - 1/2"	-
6	Gate Valve - 1/2"	-
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	-
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	-

NO COMMENT.

COMMENTS AS MARKED: Manufacturing May Proceed.

Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.

REJECTED : New Document With The Same Revision Shall Be Issued.

FOR INFORMATION.

Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

PIPEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
04	14.03.2021	ISSUED FOR APPROVAL	HRR	NK	RR	MA
03	06.10.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
02	11.08.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA
01	24.06.2020	ISSUED FOR APPROVAL	HRR	NK	RR	MA

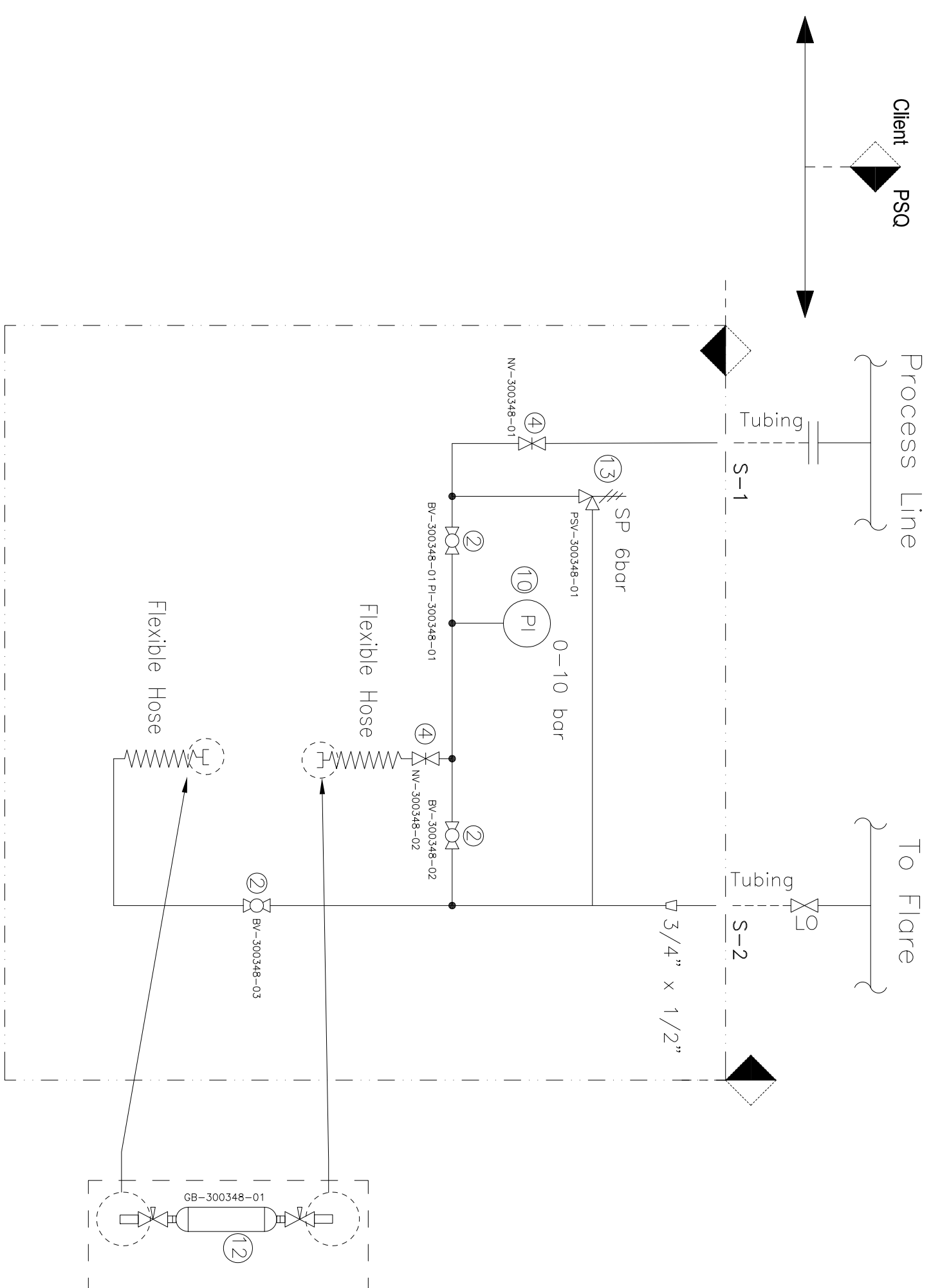
OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 PROJECT: **ARIAN METHANOL PLANT**

ENGINEER: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS**  
 PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: **PIRAMOON SYSTEMS**  
**PIRAMOON SYSTEMS**

Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: 1/XXX	OWNER PROJ. NO.: 21	PIDEC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: 1/13	PIDEC PROJ. NO.: 1217	VENDOR DWG. NO.: VD-1217-603-PID-009	SIZE: A3



TYPE "4E"

Process Data

Tag No.	Process Line	Flare	Drainage	Temp. (°C)	Press. (bar)	Instruments	Code
AP-300348	3/4"-OFG-3003001-AA1	3/4"-FLG-3003018-AA3	-	40	0.9	PSV-301702 PI-301702	30AP348

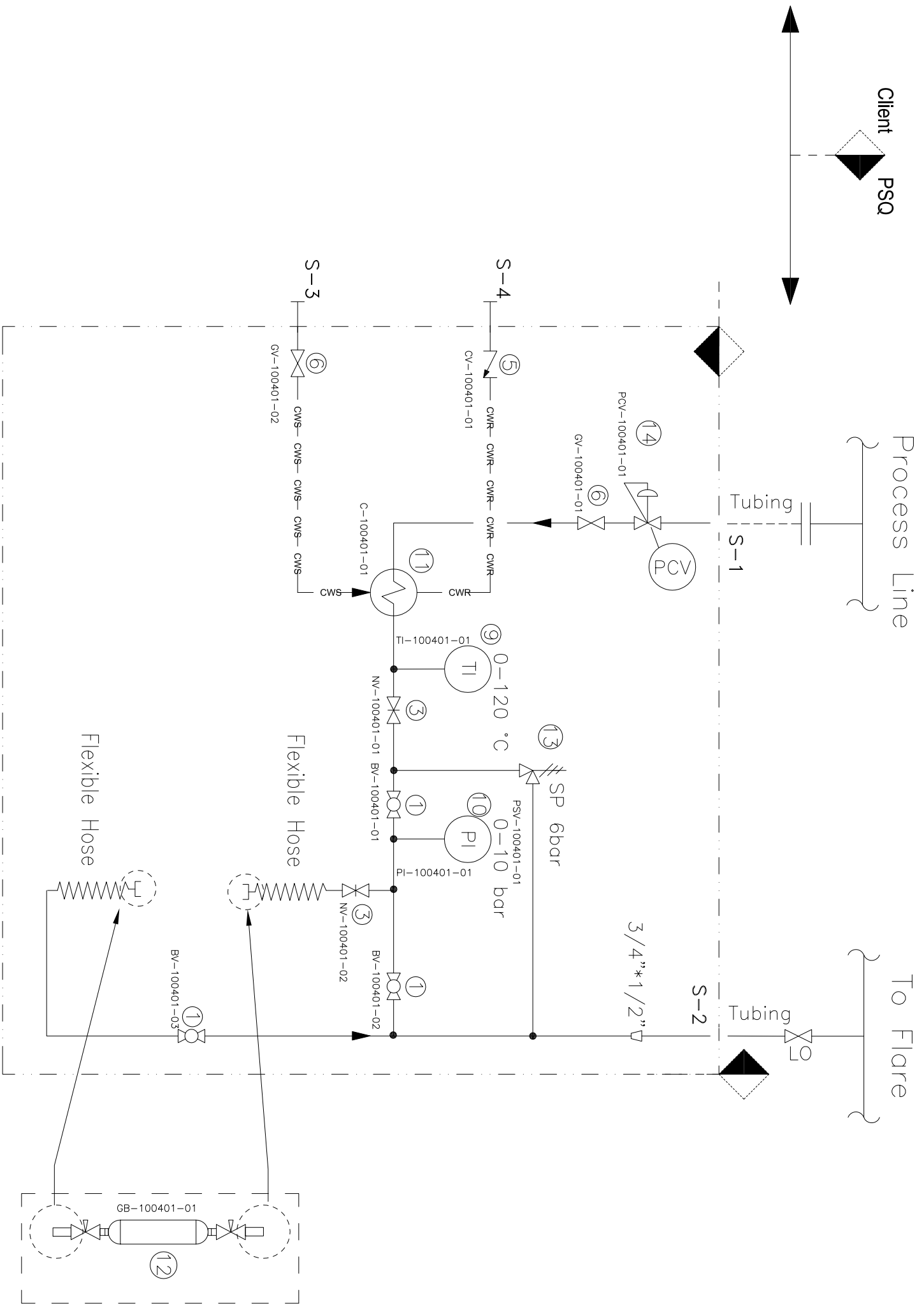
GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Sample to Flare	Male NPT Connector, 1/2"
S3	Cooling Water Supply	Flange 3/4" 150# RF, 316L
S4	Cooling Water Return	Flange 3/4" 150# RF, 316L

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	3
2	Ball Valve, 1/2"	3
3	Needle Valve, 1/2"	2
4	Needle Valve, 1/4"	1
5	Check Valve, 1/2"	1
6	Gate Valve, 1/2"	2
7	Gate Valve with Indicator	-
8	Globe Valve	-
9	Temperature Indicator	1
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	1



TYPE "SF"

Process Data

Tag No.	Process Line	CWS/CWR	Flare	Temp. (°C)	Press. (bar)	Instruments	Code
AP-100401	3/4"-NG-1004011-ND2	3/4"-CWS/R-1004013-AA2	3/4"-FLG-1004032-AA3	270	54	PSV-101708 TI-101708 PCV-101708 PI-101708	10AP401

- NO COMMENT.
  - COMMENTS AS MARKED: Manufacturing May Proceed.
  - Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
  - REJECTED : New Document With The Same Revision Shall Be Issued.
  - FOR INFORMATION.
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DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 PROJECT: **ARIAN METHANOL PLANT**

E/S CONTRACTOR: **PIRAMOON SYSTEMS**  
**PIRAMOON PIRAMOON SYSTEM QESHM & ENGINEERING COMPANY (PIDEC)**

VENDOR: **PIRAMOON PIRAMOON SYSTEM QESHM**

TITLE: **Schematic Tubing and Instrumentation Diagram (P&ID)**

SCALE: OWNER PROJ. NO.: 21  
 SHEET: 1/XXX  
 PIDEC PROJ. NO.: 1217  
 PIDEC DWG. NO.: VD-1217-603-PID-009  
 VENDOR DWG. NO.: XD-1217-603-PID-009

REV. 04  
 SIZE: A3

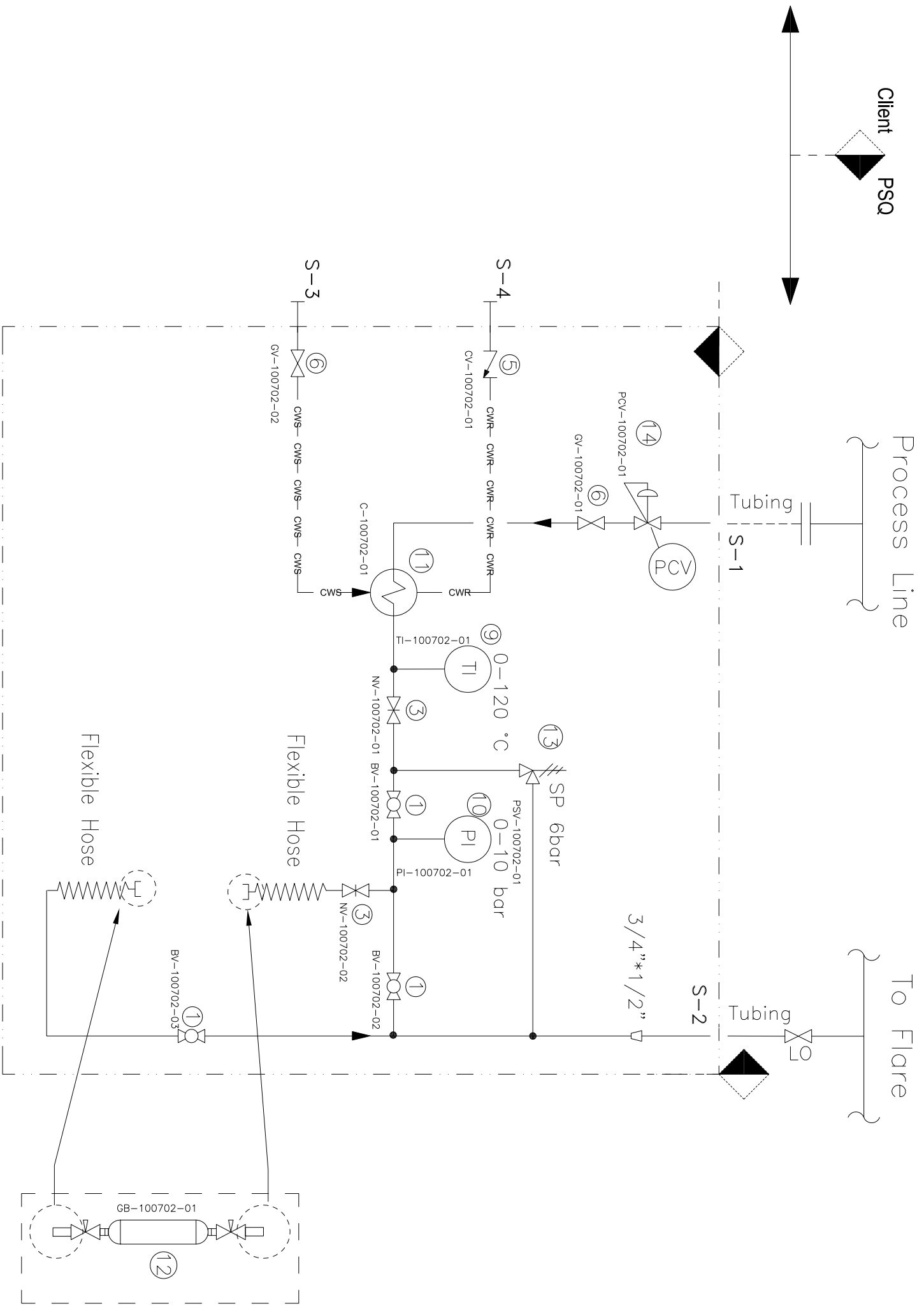
GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Sample to Flare	Male NPT Connector, 1/2"
S3	Cooling Water Supply	Flange 3/4" 150# RF, 316L
S4	Cooling Water Return	Flange 3/4" 150# RF, 316L

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	3
2	Ball Valve, 1/2"	3
3	Needle Valve, 1/2"	2
4	Needle Valve, 1/4"	2
5	Check Valve, 1/2"	1
6	Gate Valve, 1/2"	2
7	Gate Valve with Indicator	2
8	Globe Valve	1
9	Temperature Indicator	1
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	1



TYPE "SF"

Process Data

Tag No.	Process Line	CWS/CWR	Flare	Temp. (°C)	Press. (bar)	Instruments	Code
AP-100702	3/4"-PRG-1007001-DE1	3/4"-CWS/R-1007002-AA2	3/4"-FLG-1007022-AA3	433	41.3	PSV-101704 TI-101704 PCV-101704 PI-101704	10AP702

- NO COMMENT.
- COMMENTS AS MARKED: Manufacturing May Proceed.
- Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
- REJECTED : New Document With The Same Revision Shall Be Issued.
- FOR INFORMATION.

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DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

OWNER: DI POLYMER ARIAN COMPANY (DPAC)

PROJECT: ARIAN METHANOL PLANT

E/S CONTRACTOR: PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: PIRAMOON SYSTEMS QESHM

Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: 1/XXX	OWNER PROJ. NO.: 21	PIDEC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: 37 OF 50	PIDEC PROJ. NO.: 1217	VENDOR DWG. NO.: XD-1217-603-PID-009	SIZE: A3

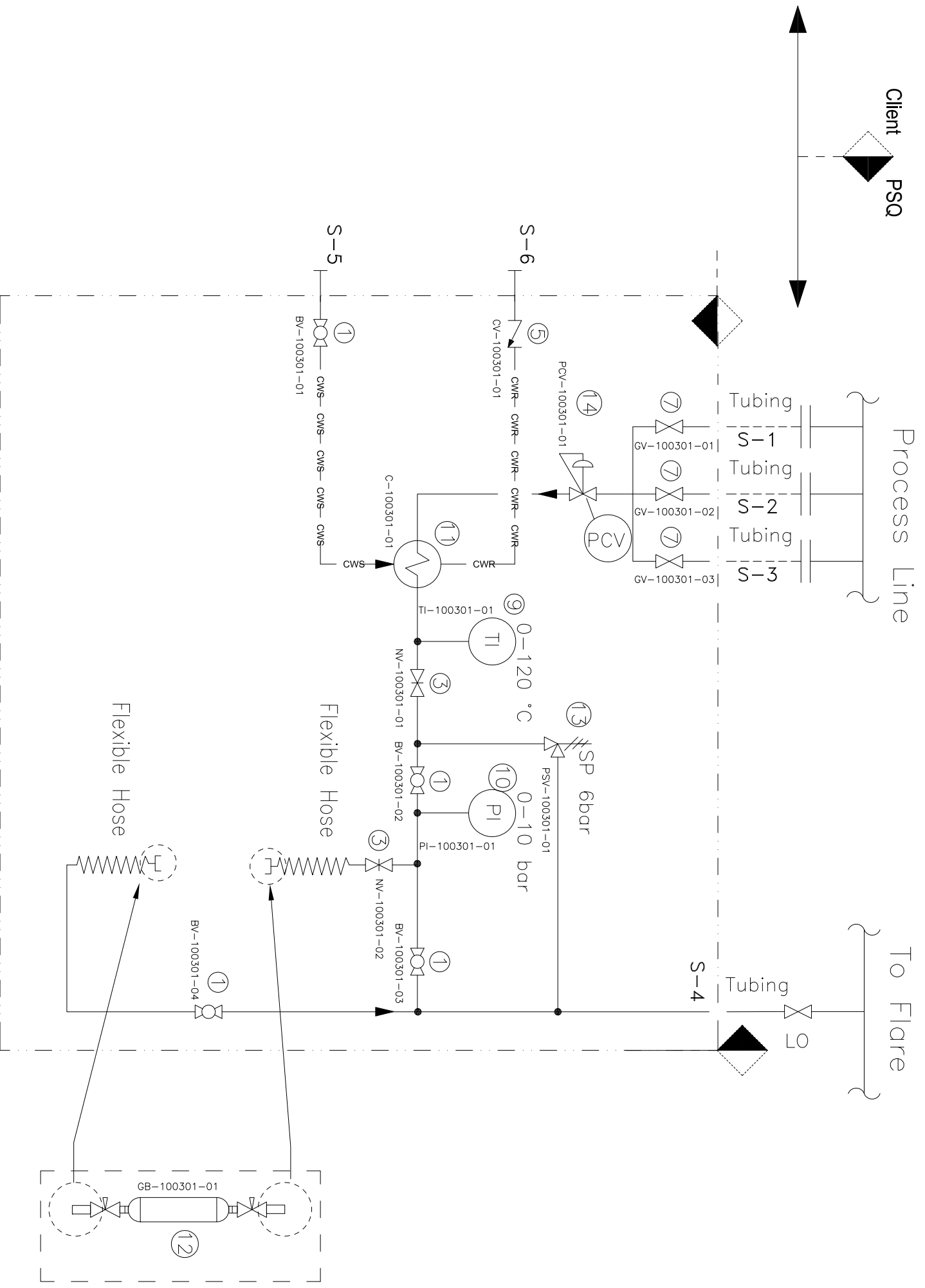
GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Sample Inlet	Male NPT Connector, 1/2"
S3	Sample Inlet	Male NPT Connector, 1/2"
S4	Sample to Flare	Male NPT Connector, 1/2"
S5	Cooling Water Supply	Flange 3/4" 150# RF- 316L
S6	Cooling Water Return	Flange 3/4" 150# RF- 316L

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	4
2	Ball Valve, 1/2"	2
3	Needle Valve, 1/2"	2
4	Needle Valve, 1/2"	1
5	Check Valve, 1/2"	1
6	Gate Valve, 1/2"	1
7	Gate Valve with Indicator	3
8	Globe Valve	1
9	Temperature Indicator	1
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	1
15		
16		
17		
18		
19		
20		



TYPE "SPECIAL 5F"

Process Data

Tag No.	Process Line	CWS/CWR	Flare	Temp. (°C)	Press. (bar)	Instruments	Code
AP-100301/2/5	3/4"-FEG-1003003-BD1 3/4"-FEG-1003005-BD1 3/4"-FEG-1003006-BD1	3/4"-CWS/R-1003001-AA2	3/4"-FLG-1003017-AA3	380	46.4	PI-101703 TI-101703 PCV-101703 PSV-101703	10AP301

- NO COMMENT.
- COMMENTS AS MARKED: Manufacturing May Proceed.
- Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
- REJECTED : New Document With The Same Revision Shall Be Issued.
- FOR INFORMATION.

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DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 PROJECT: **ARIAN METHANOL PLANT**



VENDOR: **PIRAMOON SYSTEM QESHM**

TITLE: **Schematic Tubing and Instrumentation Diagram (P&ID)**  
 SCALE: OWNER PROJ. NO.: 1/XXX  
 SHEET: PIDE PROJ. NO.: 1217  
 PIDEC DWG. NO.: VD-1217-603-PID-009  
 VENDOR DWG. NO.: VD-1217-603-PID-009  
 REV. 04  
 SIZE: A3

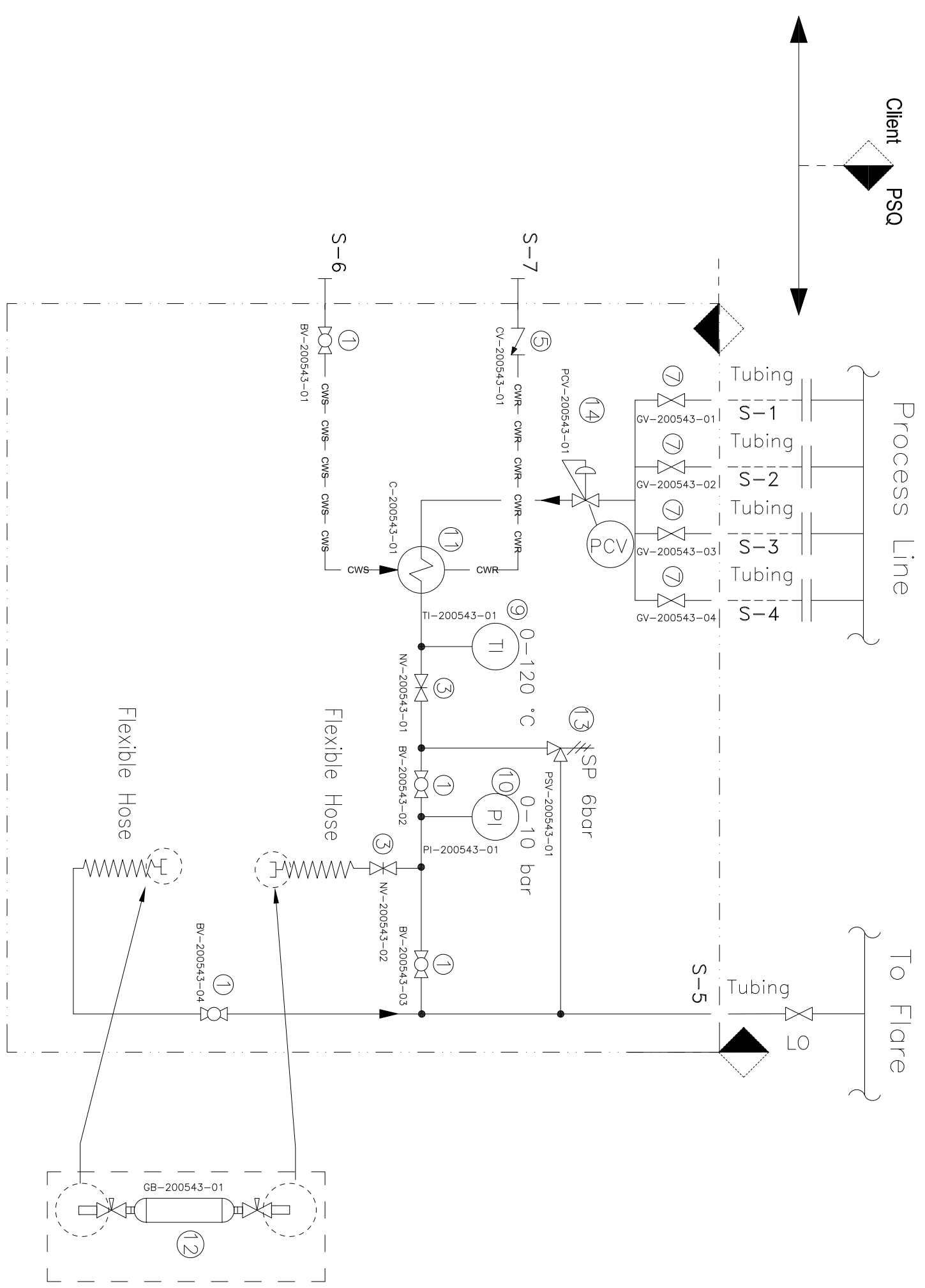
GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Inlet	Male NPT Connector, 1/2"
S2	Sample Inlet	Male NPT Connector, 1/2"
S3	Sample Inlet	Male NPT Connector, 1/2"
S4	Sample Inlet	Male NPT Connector, 1/2"
S5	Sample to Flare	Male NPT Connector, 1/2"
S6	Cooling Water Supply	Flange 3/4" 150# RF- 316L
S7	Cooling Water Return	Flange 3/4" 150# RF- 316L

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Ball Valve, 1/2"	4
2	Ball Valve, 1/2"	2
3	Needle Valve, 1/2"	2
4	Needle Valve, 1/2"	1
5	Check Valve, 1/2"	1
6	Gate Valve, 1/2"	1
7	Gate Valve with Indicator	4
8	Globe Valve	1
9	Temperature Indicator	1
10	Pressure Indicator	1
11	Sample Cooler	1
12	Gas Bomb	1
13	Pressure Safety Valve	1
14	Pressure Control Valve	1
15		
16		
17		
18		
19		
20		



Process Data

Tag No.	Process Line	CWS/CWR	Flare	Temp. (°C)	Press. (bar)	Instruments	Code
AP-200543 A/B/C/D	3/4"-SGO-2005011-ZE1 (Tubing)	3/4"-CWS-2004006-AA2 3/4"-CWR-2004006-AA2	3/4"-FLG-2005007-AA3	380	88	PI-201705 TI-201705 PCV-201705 PSV-201705	20AP543

- NO COMMENT.
  - COMMENTS AS MARKED: Manufacturing May Proceed.
  - Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
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DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**  
 of Poly. Meth. Arian Company  
 PROJECT: **ARIAN METHANOL PLANT**

ENGINEER: **PIRAMOON SYSTEMS QESHM**  
 & ENGINEERING COMPANY (PIDEC)  
 PETROCHEMICAL INDUSTRIES DESIGN

TITLE: **Schematic Tubing and Instrumentation Diagram (P&ID)**

SCALE: OWNER PROJ. NO.: 21  
 SHEET: 1/XXX  
 PIDEC PROJ. NO.: VD-1217-603-PID-009  
 PIDEC DWG. NO.: VD-1217-603-PID-009  
 VENDOR DWG. NO.: VD-1217-603-PID-009

REV. **04**  
 SIZE: **A3**

FIELD

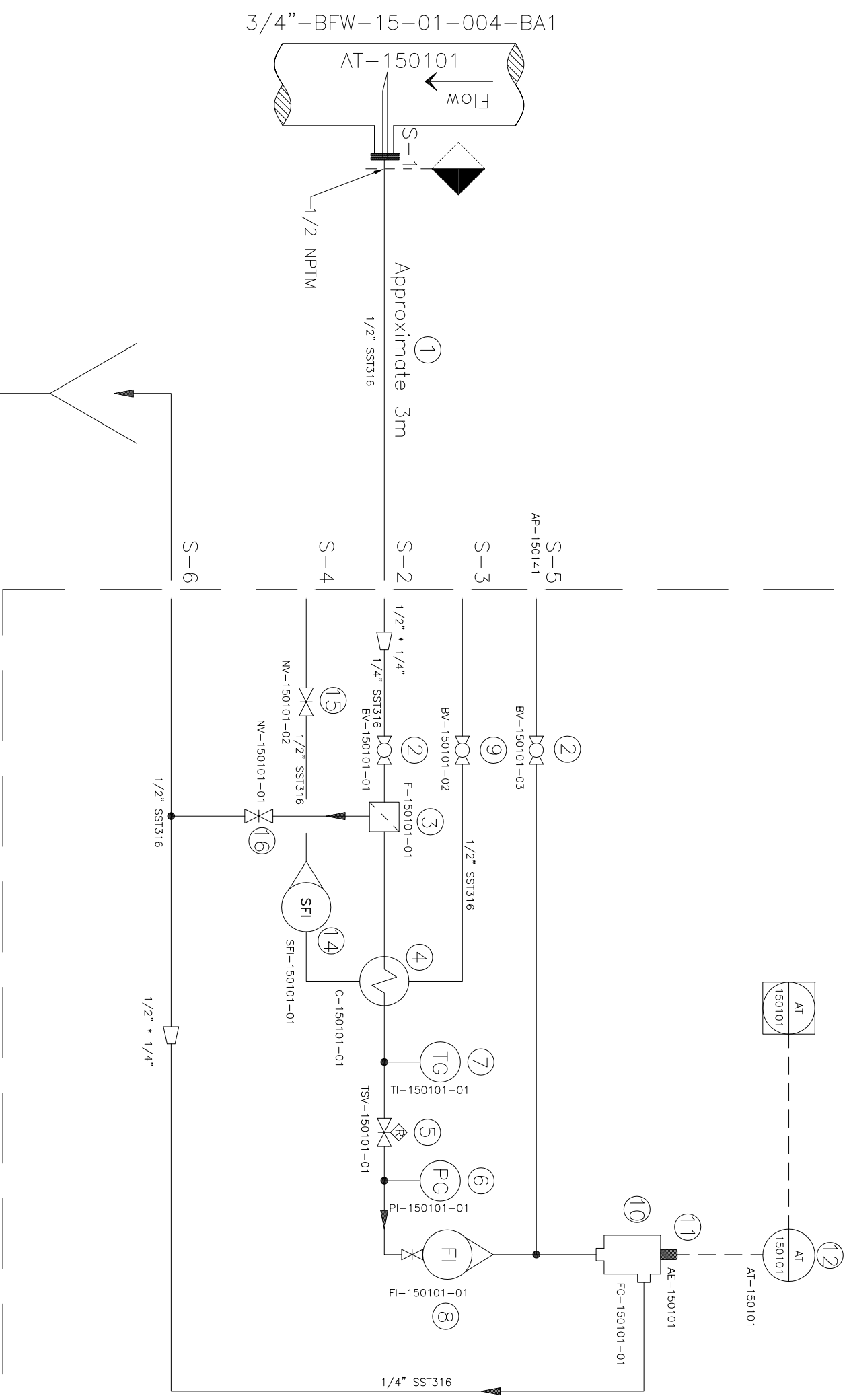
SST BOX

GENERAL NOTES

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Take-off point	1/2" NPTM
S2	Sample Inlet	Bulkhead Union 1/2"
S3	Cooling Water Supply	Flange 3/4" ANSI 150#
S4	Cooling Water Return	Flange 3/4" ANSI 150#
S5	Lab Connection	1/2" NPTF
S6	Drain	1/2" OD

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Transfer Line, Tube 1/2" OD, SST 316	3m
2	Ball Valve 1/4" OD, SST316	2
3	Particle Filter, 1/4" SST316	1
4	Sample Cooler, SST316	1
5	Thermal Shut-off Valve, 1/4", SST316	1
6	Pressure Indicator, 1/2", SST316	1
7	Temperature Indicator, 1/2", SST316	1
8	Flow Meter with Needle Valve, 1/4"	1
9	Ball Valve 1/2" OD, SST316	1
10	Flow Chamber, SST316	1
11	Conductivity Sensor	1
12	Conductivity Transmitter	1
13	Signal JB, 1/2" SST316	1
14	Sight Flow Indicator, 1/2", SST316	1
15	Needle Valve, 1/4", SST316	1
16	Needle Valve, 1/4", SST316	1



Process Data	
Tag No.	AT-150101
Service	BFW DRUM WITH DEAERATOR
Fluid State	Liquid
Measuring Component/Range	Conductivity/0 - 20 µs/cm
Temp °C (Norm./Max.)	112/150
Pressure barg (Norm./Design)	0.5/3.5
Return Point Pressure barg	0.5 to 3.5
Ambient Temp °C (min/max)	5 to 48
Area Class	Zone 1, IIC, T2

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**OWNER:**  
DI POLYMER ARIAN COMPANY (DPAC)

**PROJECT:**  
ARIAN METHANOL PLANT

**EPC CONTRACTOR:**  
PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDECC)

**VENDOR:**  
PIRAMOON PIRAMOON SYSTEM QESHM

**SCALE:** OWNER PROJ. NO.: 21 PIDECC DWG. NO.: VD-1217-603-PID-009  
1/XXX SHEET: PIDECC PROJ. NO.: 1217 VENDOR DWG. NO.: VD-1217-603-PID-009

**REV.:** 04  
**SIZE:** A3

**Rev. History:**

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
01	24.06.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A
04	14.03.2021	ISSUED FOR APPROVAL	H/R/R	N/K	R/R	M/A

**DE:** EXT IFA

**Eng. Phase:** Purpose of Distribution (POD) Purpose of Issue (POI)

**Comments:**  
 NO COMMENT.  
 COMMENTS AS MARKED: Manufacturing May Proceed.  
 Major Comment As Marked: Manufacturing Shall Be Held For Next Revision.  
 REJECTED: New Document With The Same Revision Shall Be Issued.  
 FOR INFORMATION.

**Name:** \_\_\_\_\_ **Req. No.:** \_\_\_\_\_ **Seq. No.:** \_\_\_\_\_  
**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

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Schematic Tubing and Instrumentation Diagram (P&ID)

Client PSQ



FIELD

SST BOX

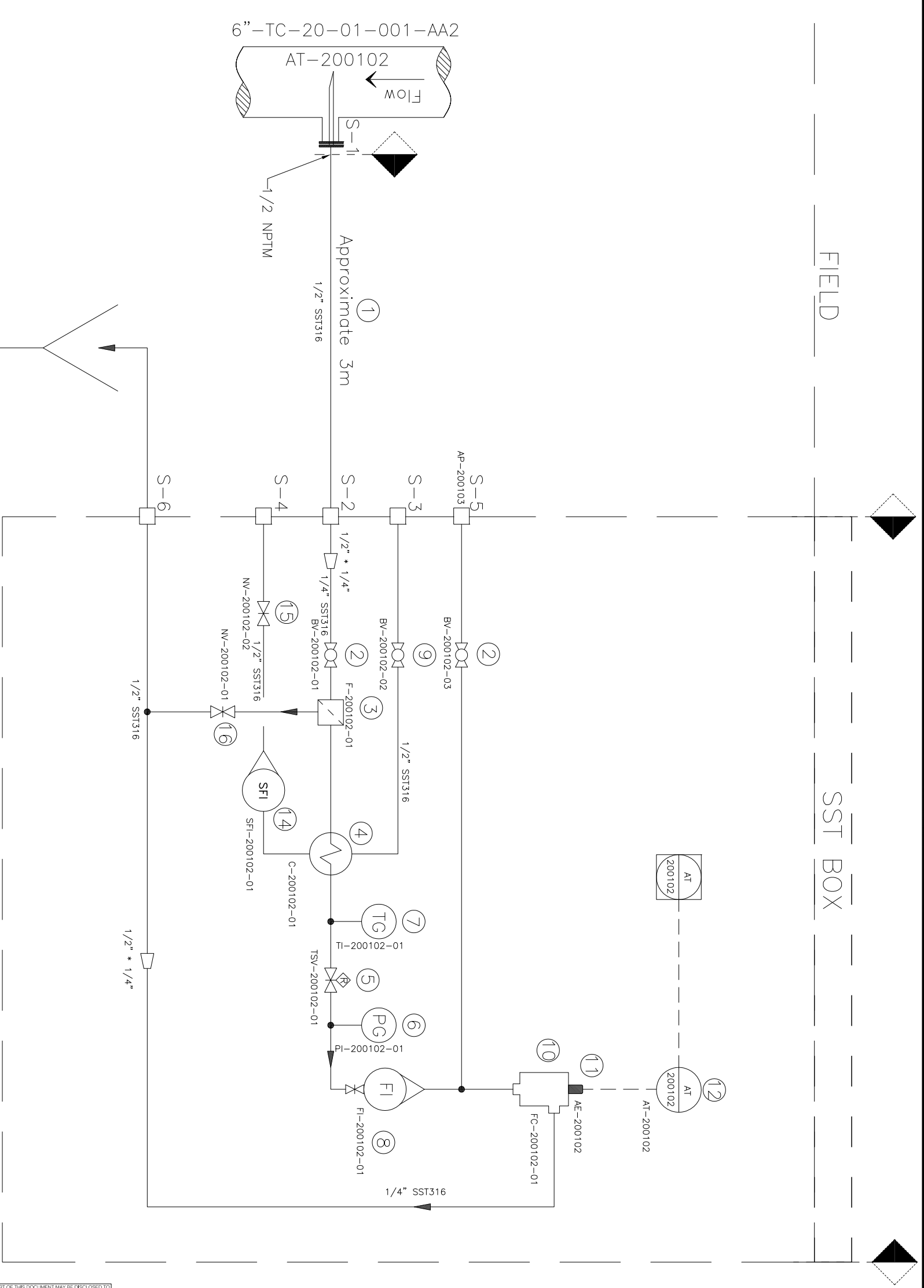
GENERAL NOTES

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Take-off point	1/2" NPTM
S2	Sample Inlet	Bulkhead Union 1/2"
S3	Cooling Water Supply	Flange 3/4" ANSI 150#
S4	Cooling Water Return	Flange 3/4" ANSI 150#
S5	Lab Connection	1/2" NPTF
S6	Drain	1/2" OD

TIE-IN CONNECTIONS

ITEM	DESCRIPTION	QTY
1	Transfer Line, Tube 1/2" OD, SST 316	3m
2	Ball Valve 1/4" OD, SST316	2
3	Particle Filter, 1/4" SST316	1
4	Sample Cooler, SST316	1
5	Thermal Shut-off Valve, 1/4" SST316	1
6	Pressure Indicator, 1/2" SST316	1
7	Temperature Indicator, 1/2" SST316	1
8	Flow Meter with Needle Valve, 1/4"	1
9	Ball Valve 1/2" OD, SST316	1
10	Flow Chamber, SST316	1
11	Conductivity Sensor	1
12	Conductivity Transmitter	1
13	Signal JB, 1/2" SST316	1
14	Sight Flow Indicator, 1/2" SST316	1
15	Needle Valve, 1/2" SST316	1
16	Needle Valve, 1/4" SST316	1

BILL OF MATERIAL



Process Data	
Tag No.	AT-200102
Service	TURBINE CONDENSATE TO HEADER
Fluid State	Liquid
Measuring Component/Range	Conductivity/0 - 20 µs/cm
Temp °C (Norm./Max.)	54/100
Pressure ,barg (Norm./Design)	4/10
Return Point Pressure barg	4 to 10
Ambeint Temp °C (min/max)	5 to 48
Area Class	Zone 1, IIC, T2

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**OWNER:** DI POLYMER ARIAN COMPANY (DPAC)

**PROJECT:** ARIAN METHANOL PLANT

**ENGINEER:** PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDECC)

**VENDOR:** PIRAMOON SYSTEMS QESHM

**SCALE:** OWNER PROJ. NO.: 21 PIDECC DWG. NO.: VD-1217-603-PID-009

**SHEET:** PIDECC PROJ. NO.: 1217 VENDOR DWG. NO.: VD-1217-603-PID-009

**REV.:** 04

**SIZE:** A3

REV.	DATE	ISSUE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
01	24.06.2020	ISSUED FOR APPROVAL		H/R/R	N/K	R/R	M/A
02	11.08.2020	ISSUED FOR APPROVAL		H/R/R	N/K	R/R	M/A
03	06.10.2020	ISSUED FOR APPROVAL		H/R/R	N/K	R/R	M/A
04	14.03.2021	ISSUED FOR APPROVAL		H/R/R	N/K	R/R	M/A

DE	EXT	IFA
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

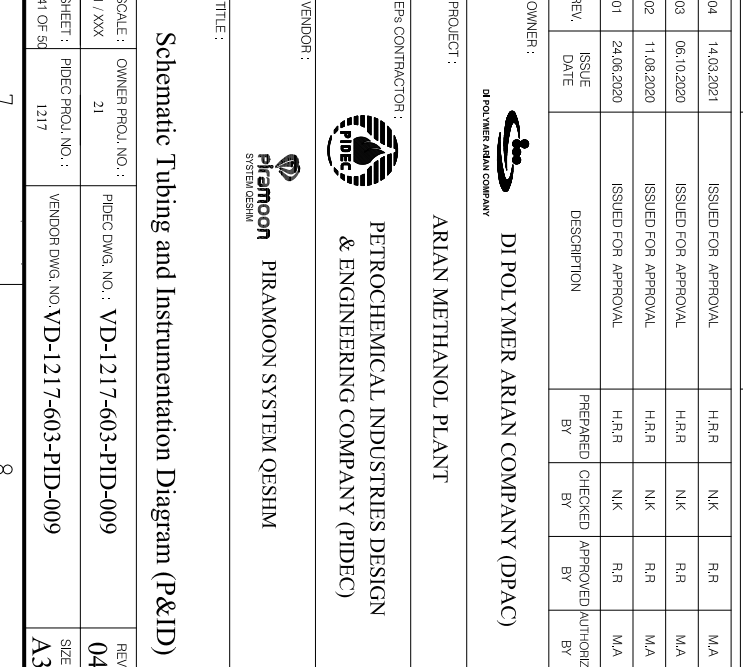
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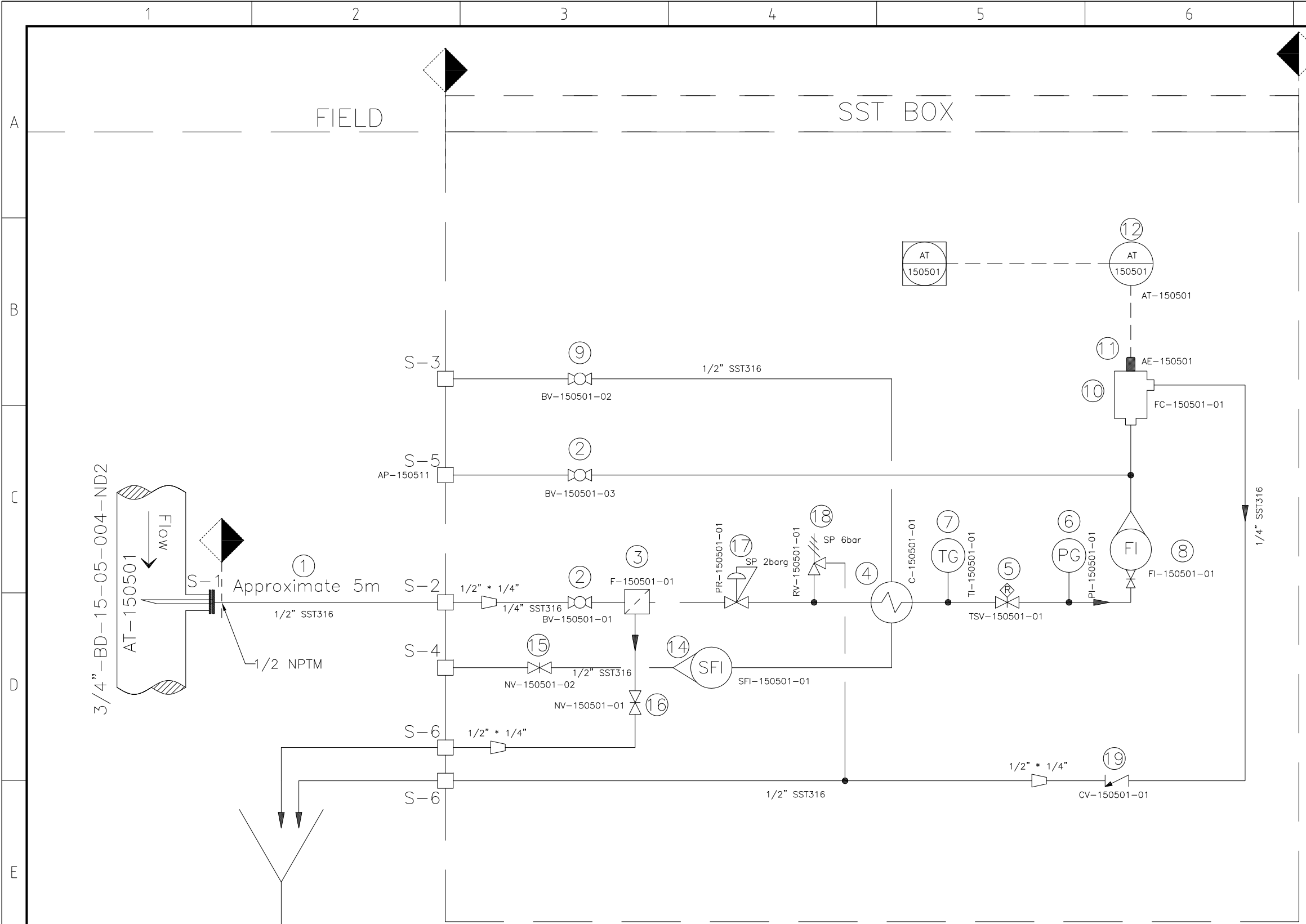
**SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

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- NO COMMENT.
- COMMENTS AS MARKED: Manufacturing May Proceed.
- Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
- REJECTED : New Document With The Same Revision Shall Be Issued.
- FOR INFORMATION.





GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Take-off point	1/2" NPTM
S2	Sample Inlet	Bulkhead Union 1/2"
S3	Cooling Water Supply	Flange 3/4" ANSI 150#
S4	Cooling Water Return	Flange 3/4" ANSI 150#
S5	Lab Connection	1/2" NPTF
S6	Drain	1/2" OD

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Transfer Line, Tube 1/2" OD, SST 316	5m
2	Ball Valve 1/4" OD, SST316	2
3	Particle Filter, 1/4", SST316	1
4	Sample Cooler, SST316	1
5	Thermal Shut-off Valve, 1/4", SST316	1
6	Pressure Indicator, 1/4", SST316	1
7	Temperature Indicator, 1/2", SST316	1
8	Flow Meter with Needle Valve, 1/4", SST316	1
9	Ball Valve 1/2" OD, SST316	1
10	Flow Chamber, SST316	1
11	pH Sensor	1
12	pH Transmitter	1
13	Signal JB	1
14	Sight Flow Indicator, 1/2", SST316	1
15	Needle Valve, 1/2", SST316	1
16	Needle Valve, 1/4", SST316	1
17	Pressure Regulator, 1/4", SST316	1
18	Relief Valve, 1/4", SST316	1
19	Check Valve, 1/4", SST316	1

NO COMMENT.  
 COMMENTS AS MARKED: Manufacturing May Proceed.  
 Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.  
 REJECTED : New Document With The Same Revision Shall Be Issued.  
 FOR INFORMATION.

Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_

PIDEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA				
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	H,R,R	N,K	R,R	M,A
03	06.10.2020	ISSUED FOR APPROVAL	H,R,R	N,K	R,R	M,A
02	11.08.2020	ISSUED FOR APPROVAL	H,R,R	N,K	R,R	M,A
01	24.06.2020	ISSUED FOR APPROVAL	H,R,R	N,K	R,R	M,A
REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY

OWNER: DI POLYMER ARIAN COMPANY (DPAC)

PROJECT: ARIAN METHANOL PLANT

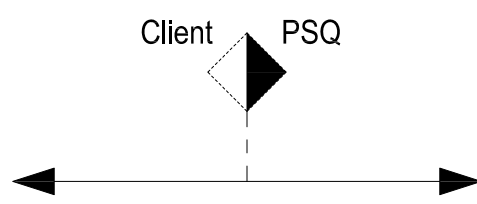
EPs CONTRACTOR: PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: PIRAMOOS SYSTEM QESHM

TITLE: Schematic Tubing and Instrumentation Diagram (P&ID)

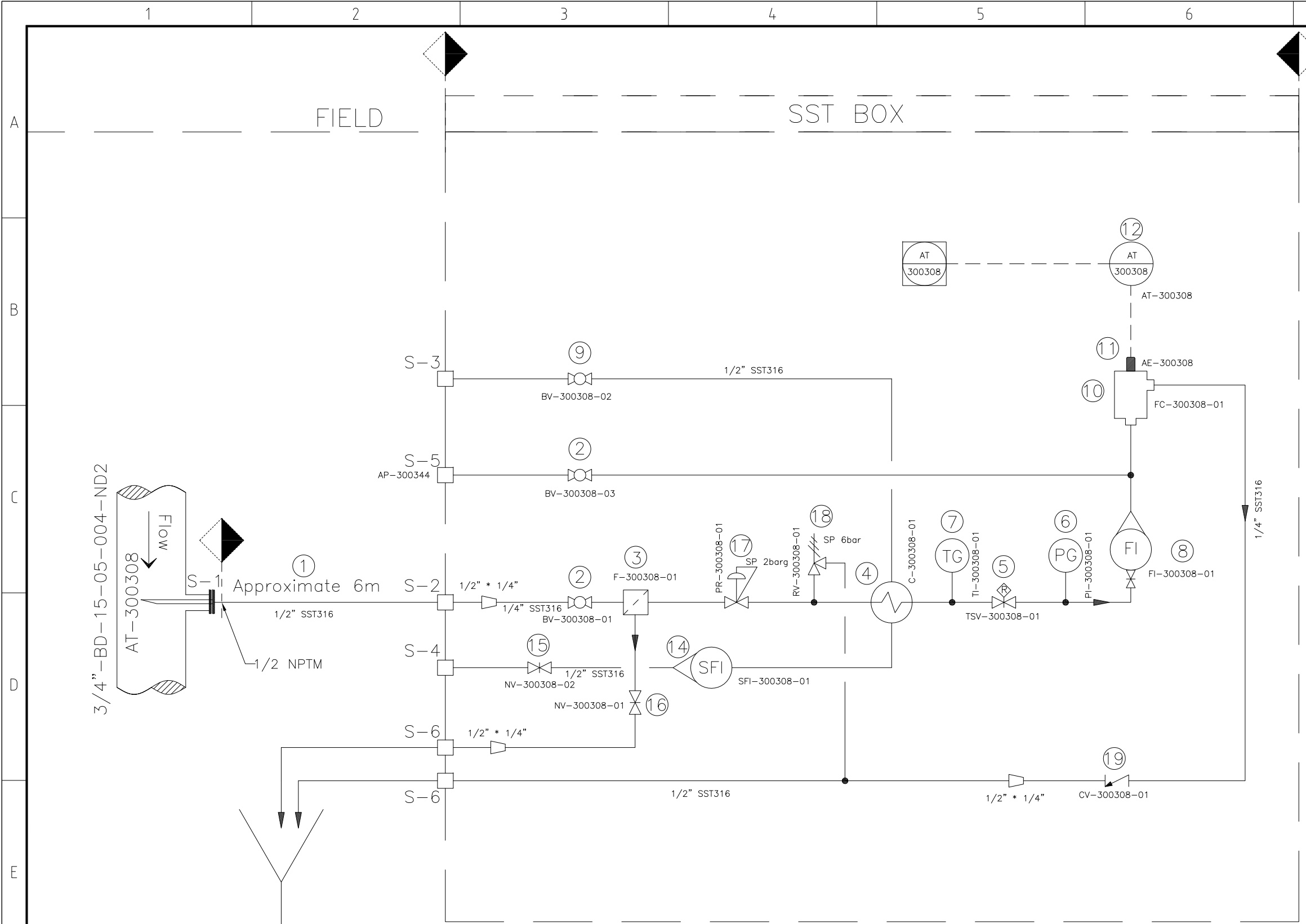
Process Data

Tag No.	AT-150501
Service	BLOW DOWN FROM E-1503
Fluid State	Liquid
Measuring Component/Range	pH/3 - 12
Temp °C (Norm./Max.)	50/100
Pressure .barg (Norm./Design)	44/55
Return Point Pressure barg	2 to 4
Ambeint Temp °C (min/max)	5 to 48
Area Class	Zone 1, IIC, T2



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SCALE: 1/XXX	OWNER PROJ. NO.: 21	PIDEC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: 42 OF 50	PIDEC PROJ. NO.: 1217	VENDOR DWG. NO. VD-1217-603-PID-009	SIZE: A3



GENERAL NOTES

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Take-off point	1/2" NPTM
S2	Sample Inlet	Bulkhead Union 1/2"
S3	Cooling Water Supply	Flange 3/4" ANSI 150#
S4	Cooling Water Return	Flange 3/4" ANSI 150#
S5	Lab Connection	1/2" NPTF
S6	Drain	1/2" OD

BILL OF MATERIAL

ITEM	DESCRIPTION	QTY
1	Transfer Line, Tube 1/2" OD, SST 316	6m
2	Ball Valve 1/4" OD, SST316	2
3	Particle Filter, 1/4", SST316	1
4	Sample Cooler, SST316	1
5	Thermal Shut-off Valve, 1/4", SST316	1
6	Pressure Indicator, 1/4", SST316	1
7	Temperature Indicator, 1/2", SST316	1
8	Flow Meter with Needle Valve, 1/4", SST316	1
9	Ball Valve 1/2" OD, SST316	1
10	Flow Chamber, SST316	1
11	pH Sensor	1
12	pH Transmitter	1
13	Signal JB	1
14	Sight Flow Indicator, 1/2", SST316	1
15	Needle Valve, 1/2", SST316	1
16	Needle Valve, 1/4", SST316	1
17	Pressure Regulator, 1/4", SST316	1
18	Relief Valve, 1/4", SST316	1
19	Check Valve, 1/4", SST316	1

NO COMMENT.

COMMENTS AS MARKED: Manufacturing May Proceed.

Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.

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Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_

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DE	EXT	IFA				
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	H,R,R	N,K	R,R	M,A
03	06.10.2020	ISSUED FOR APPROVAL	H,R,R	N,K	R,R	M,A
02	11.08.2020	ISSUED FOR APPROVAL	H,R,R	N,K	R,R	M,A
01	24.06.2020	ISSUED FOR APPROVAL	H,R,R	N,K	R,R	M,A
REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY

OWNER: DI POLYMER ARIAN COMPANY (DPAC)

PROJECT: ARIAN METHANOL PLANT

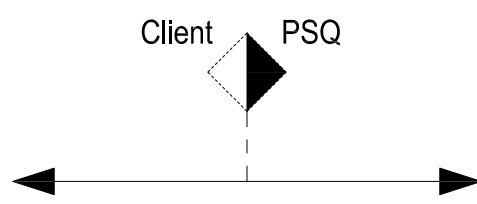
EPs CONTRACTOR: PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: PIRAMOONE SYSTEM QESHM

TITLE: Schematic Tubing and Instrumentation Diagram (P&ID)

Process Data

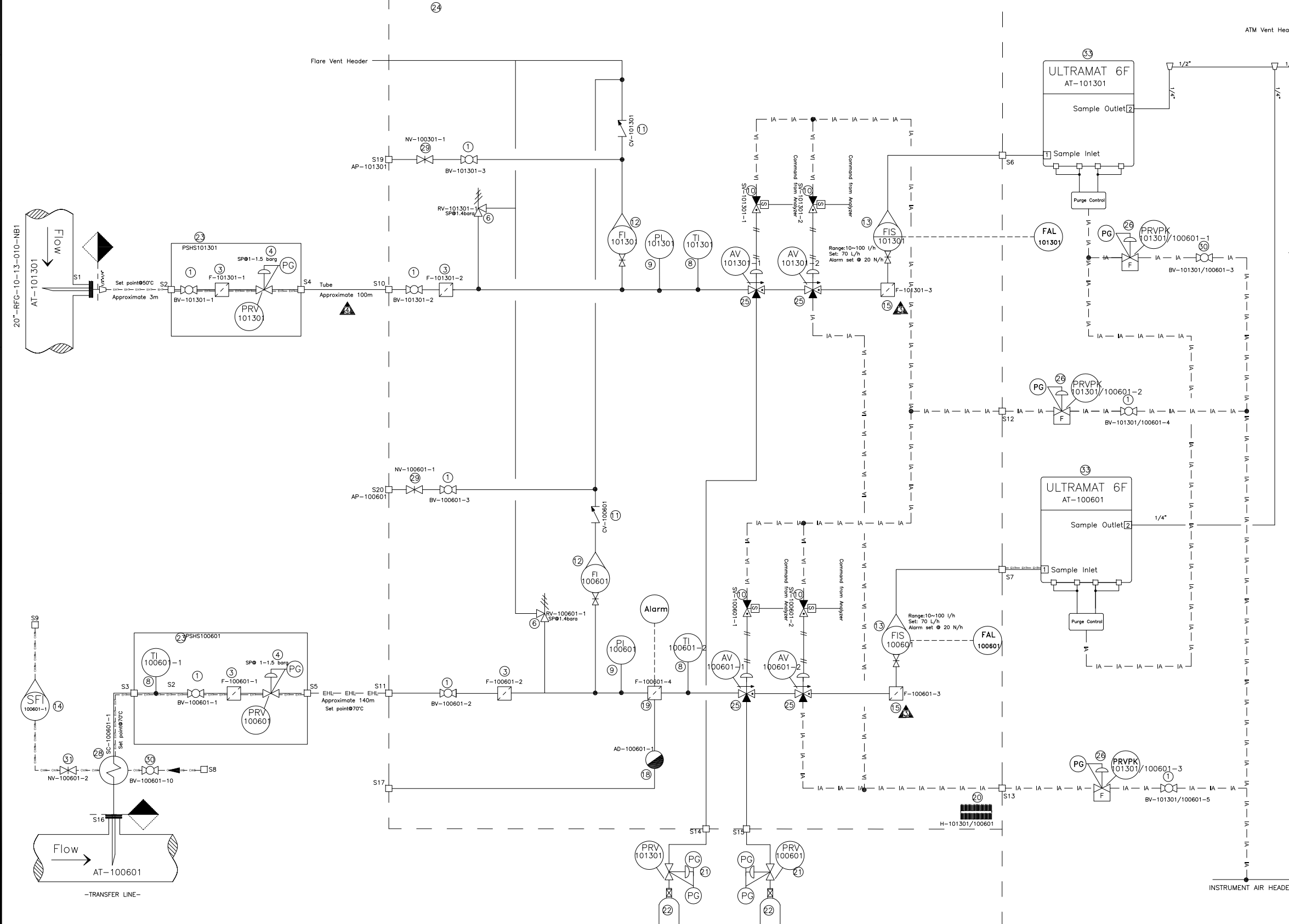
Tag No.	AT-300308
Service	STABILIZED METHANOL OUT P-3001
Fluid State	Liquid
Measuring Component/Range	pH/5 - 14
Temp °C (Norm./Max.)	92/150
Pressure .barg (Norm./Design)	10.3/14
Return Point Pressure barg	2 to 4
Ambeint Temp °C (min/max)	5 to 48
Area Class	Zone 1, IIC, T2



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FIELD PROCESS LINE      ANALYZER HOUSE 2      TIE-IN CONNECTIONS

OUTSIDE WALL      INSIDE WALL



TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Take-Off Point (AE101301)	1/2" NPTM
S2	Sample Inlet to Primary Box (AE101301)	Gland M63
S3	Sample Inlet to Primary Box (AE100601)	Bulkhead Union, 1/4"
S4	Sample (AE101301) Outlet from Primary Box	Bulkhead Union, 1/4"
S5	Sample (AE100601) Outlet from Primary Box	Bulkhead Union, 1/4"
S6	Sample (AE101301) Outlet From Secondary Box to Analyzer	Bulkhead Union, 1/4"
S7	Sample (AE100601) Outlet From Secondary Box to Analyzer	Bulkhead Union, 1/4"
S8	Cooling Water Supply	Flange 3/4" ANSI 150# RF
S9	Cooling Water Return	Flange 3/4" ANSI 150# RF
S10	Sample (AE101301) Inlet to Secondary Box	Bulkhead Union, 1/4"
S11	Sample (AE100601) Inlet to Secondary Box	Gland M63
S12	Instrument air Gas inlet to Secondary box	Bulkhead Union, 1/4"
S13	Zero Gas inlet to Secondary box	Bulkhead Union, 1/4"
S14	Calibration (AE101301) Gas inlet to Secondary box	Bulkhead Union, 1/4"
S15	Calibration (AE100601) Gas inlet to Secondary box	Bulkhead Union, 1/4"
S16	Sample Take-Off Point (AE100601)	1/2" NPTM
S17	Sample Drain	Bulkhead Union, 1/2"
S18	Deleted	Deleted
S19	Laboratory Connection (AP-101301)	FNPT, 1/4"
S20	Laboratory Connection (AP-100601)	FNPT, 1/4"

ITEM	DESCRIPTION	QTY
1	2-way Ball Valve, 1/4"	8
2	4-way Ball Valve, 1/4"	-
3	Particle Filter, 1/4"	4
4	Pressure Regulator with outlet Gauge, 1/4"	2
5	Electrically Heated Pressure Regulator with outlet Gauge, 1/4"	-
6	Relief Valve, 1/4"	-
7	Temperature Switch, 1/4"	3
8	Temperature gauge, 1/2"	2
9	Pressure gauge, 1/4"	2
10	Solenoid Valve, 1/8"	4
11	Check Valve, 1/2"	2
12	Flow Meter With Needle Valve, 1/4"	2
13	Flow Meter With Needle Valve & Flow Low Switch, 1/4"	2
14	Flow Sight Glass	1
15	Tee Filter, 1/4"	2
16	CO2 absorber	-
17	Electrical cooler with Peristaltic Pump	-
18	Auto Drain	1
19	Water removal Filter with alarm, 1/4"	1
20	Heater	1
21	Cylinder Cylinder Pressure Regulator With Inlet And Outlet Gauge, 1/4"	2
22	Span gas Cylinder	2
23	Primary Sample Handling System Box	2
24	Secondary Sample Handling System Box	1
25	3-way Pneumatic Actuator valve, 1/4"	4
26	Air Filter Pressure Regulator	3
27	2-way Pneumatic Actuator valve, 1/4"	-
28	Sample Cooler	1
29	Needle Valve, 1/4"	2
30	2-way Ball Valve, 1/2"	2
31	Needle Valve, 1/2"	1
32	Drain Pot	-
33	Ultramat 6F	2

NO COMMENT.

COMMENTS AS MARKED: Manufacturing May Proceed.

Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.

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 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_

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DE	EXT	IFA				
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	H.R.R	N.K	R.R	M.A
03	08.10.2020	ISSUED FOR APPROVAL	H.R.R	N.K	R.R	M.A
02	11.08.2020	ISSUED FOR APPROVAL	M.K	N.K	R.R	M.A
01	24.06.2020	ISSUED FOR APPROVAL	M.K	N.K	R.R	M.A
REV.	DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY

OWNER: DI POLYMER ARIAN COMPANY (DPAC)

PROJECT: ARIAN METHANOL PLANT

EPs CONTRACTOR: PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

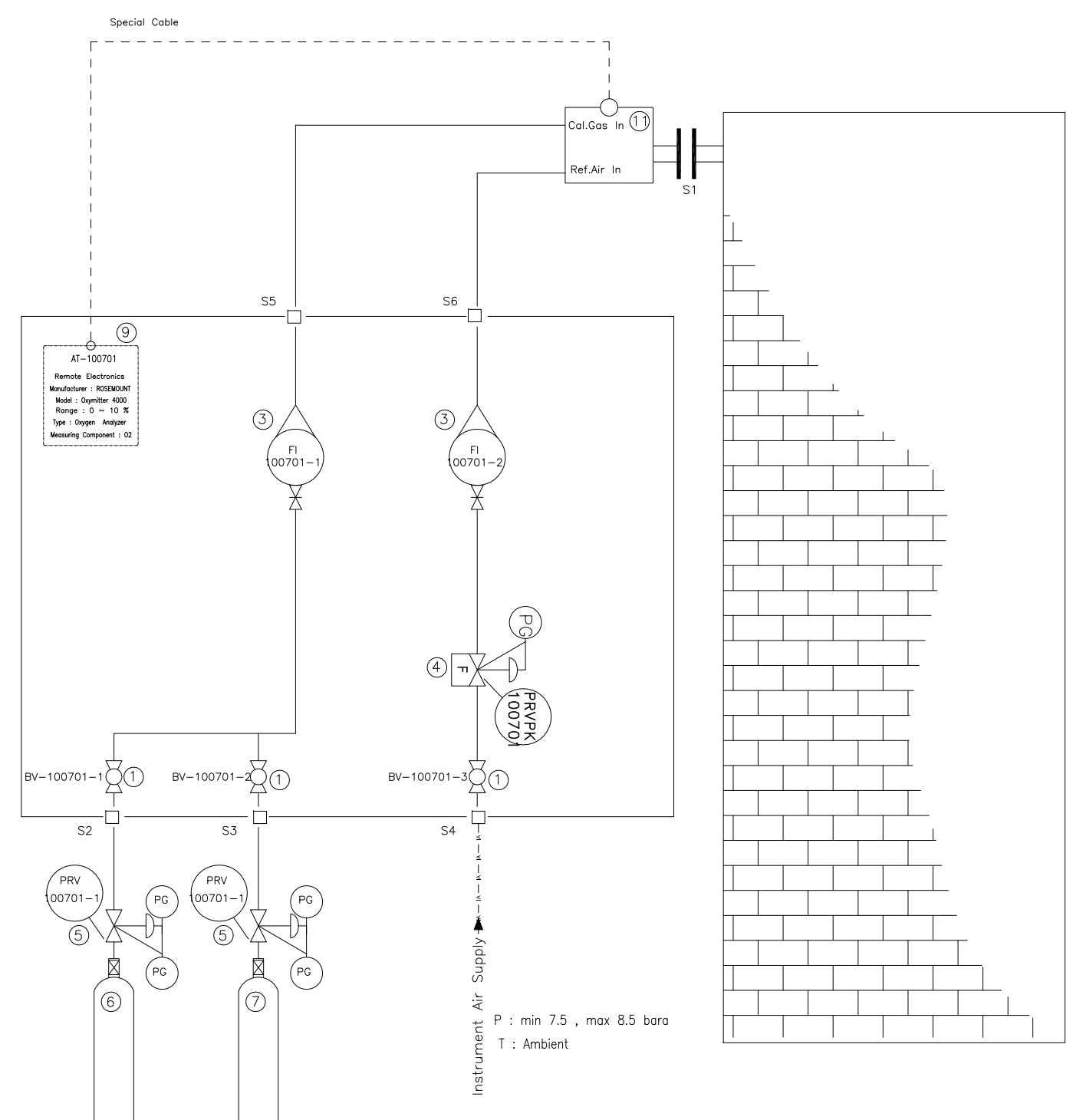
VENDOR: PIRAMOON SYSTEM QESHM

TITLE: Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: OWNER PROJ. NO.: 1/XXX	PIDEC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: 44 OF 50	VENDOR DWG. NO VD-1217-603-PID-009	SIZE: A3

Process Data		
Tag No.	AT-100601	AT-101301
Service	Reformed Gas from H-1001	Reformed Gas from D-1004
Fluid State	Gas	Gas
Measuring Component/Range	CH4: 0-40 Mol%	CH4: 0-5 Mol%
Temp °C (Norm./Design)	710/770	40/100
Pressure .bara (Norm./Design)	35/41	31/39
Return Point Pressure bara	-	-
Ambient Temp °C (min/max)	5 to 48	5 to 48
Area Class	Zone 1, Gas Group IIC, T2	Zone 1, Gas Group IIC, T2

Analyzer Stand With Sun Shade



TIE-IN CONNECTIONS		
TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Probe connection	Flange 3" ANSI 150# RF
S2	Calibration gas Inlet	1/4" OD
S3	Zero gas Inlet	1/4" OD
S4	Instrument air Inlet	1/4" FNPT
S5	Calibration and Zero gas Outlet	1/4" OD
S6	Instrument air Outlet	1/4" OD

BILL OF MATERIAL		
ITEM	DESCRIPTION	QTY
1	Ball valve, 1/4"	3
2	Needle valve	-
3	Flow Meter With Needle Valve, 1/4"	2
4	Air Filter Pressure Regulator	1
5	Cylinder Cylinder Pressure Regulator With Inlet And Outlet Gauge, 1/4"	2
6	Span gas Cylinder	1
7	Zero gas Cylinder	1
8	Plate with sunshade	1
9	Remote Electronics	1
10	Pressure gauge, 1/4"	-
11	Oxymitter 4000	1

NO COMMENT.

COMMENTS AS MARKED: Manufacturing May Proceed.

Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.

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REV.	DATE	DESCRIPTION	PREPARED BY		CHECKED BY		APPROVED BY		AUTHORIZED BY	
			BY	BY	BY	BY	BY	BY		
04	14.03.2021	ISSUED FOR APPROVAL	M.K	N.K	R.R	M.A				
03	06.10.2020	ISSUED FOR APPROVAL	M.K	N.K	R.R	M.A				
02	11.08.2020	ISSUED FOR APPROVAL	M.K	N.K	R.R	M.A				
01	24.06.2020	ISSUED FOR APPROVAL	M.K	N.K	R.R	M.A				

OWNER: DI POLYMER ARIAN COMPANY (DPAC)

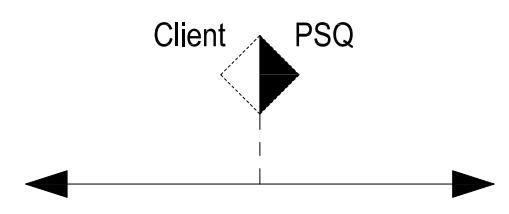
PROJECT: ARIAN METHANOL PLANT

EPs CONTRACTOR: PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: PIRAMOON SYSTEM QESHM

TITLE: Schematic Tubing and Instrumentation Diagram (P&ID)

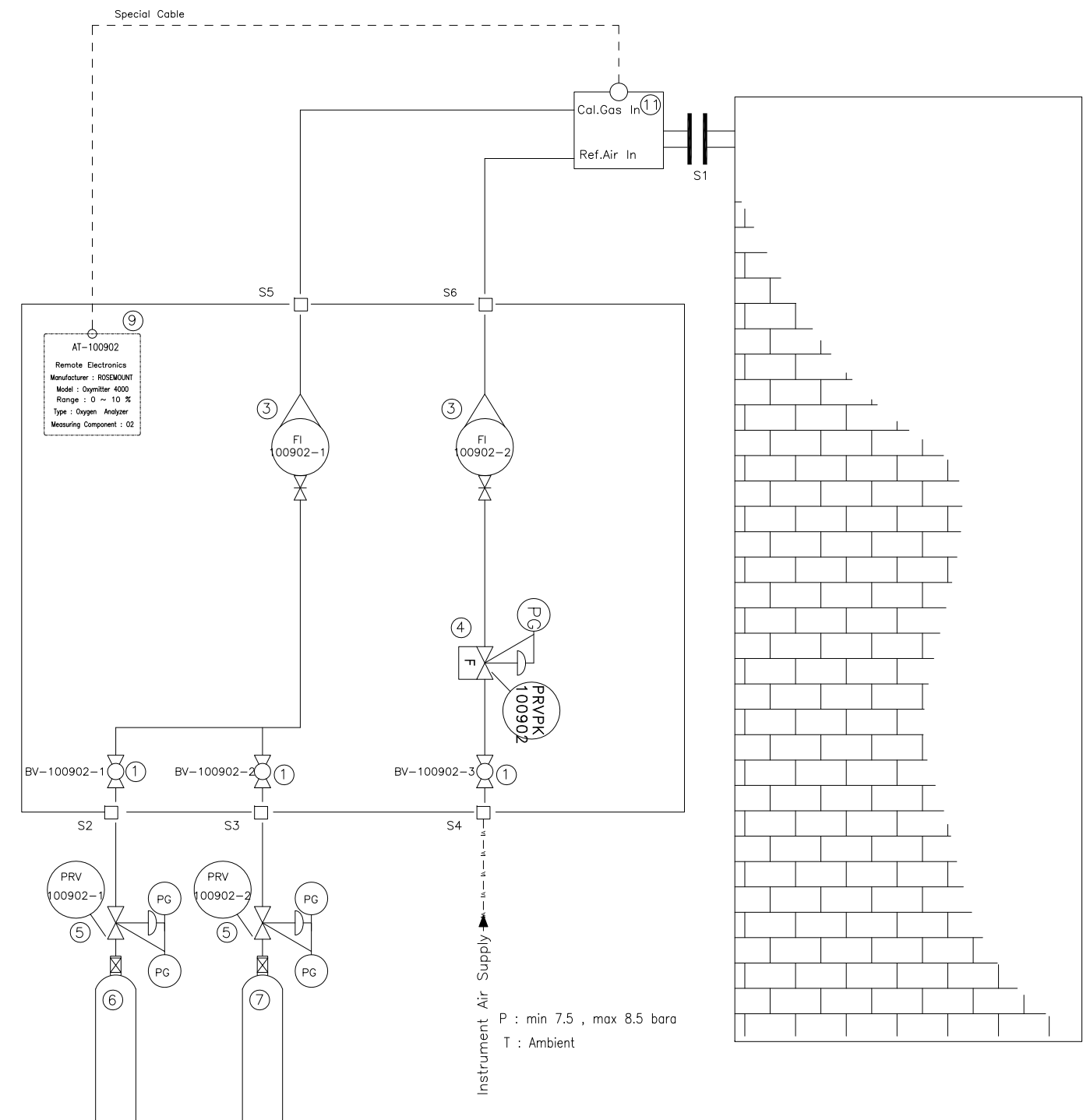
Process Data	
Tag No.	AT100701
Service	O2 Flue Gas from H-1001
Fluid State	Gas
Measuring Component/Range	O2:0-10%
Temp °C (Norm./Design)	629/700
Pressure .barg (Norm./Design)	-0.001/±0.15
Return Point Pressure bara	-
Ambeint Temp °C (min/max)	5 to 48
Area Class	Zone 1, Gas Group IIC, T2



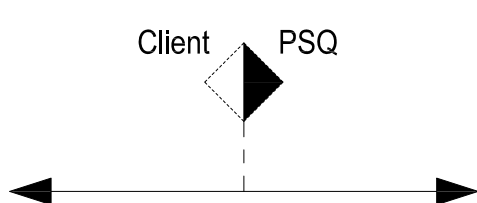
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SCALE: 1/XXX	OWNER PROJ. NO.: 21	PIDEC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: 45 OF 50	PIDEC PROJ. NO.: 1217	VENDOR DWG. NO. VD-1217-603-PID-009	SIZE: A3

Analyzer Stand With Sun Shade



Process Data	
Tag No.	AT100902
Service	O2 Flue Gas to Stack
Fluid State	Gas
Measuring Component/Range	O2:0-10%
Temp °C (Norm./Design)	403/500
Pressure .barg (Norm./Design)	-0.03/±0.15
Return Point Pressure bara	-
Ambeint Temp °C (min/max)	5 to 48
Area Class	Zone 1, Gas Group IIC, T2



TIE-IN CONNECTIONS		
TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Probe connection	Flange 3" ANSI 150# RF
S2	Calibration gas Inlet	1/4" OD
S3	Zero gas Inlet	1/4" OD
S4	Instrument air Inlet	1/4" FNPT
S5	Calibration and Zero gas Outlet	1/4" OD
S6	Instrument air Outlet	1/4" OD

BILL OF MATERIAL		
ITEM	DESCRIPTION	QTY
1	Ball valve, 1/4"	3
2	Needle valve	-
3	Flow Meter With Needle Valve, 1/4"	2
4	Air Filter Pressure Regulator	1
5	Cylinder Cylinder Pressure Regulator With Inlet And Outlet Gauge, 1/4"	2
6	Span gas Cylinder	1
7	Zero gas Cylinder	1
8	Plate with sunshade	1
9	Remote Electronics	1
10	Pressure gauge, 1/4"	-
11	Oxymitter 4000	1

NO COMMENT.

COMMENTS AS MARKED: Manufacturing May Proceed.

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REV.	DATE	DESCRIPTION	DE		EXT		IFA	
			Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)	M.K	N.K	R.R
04	14.03.2021	ISSUED FOR APPROVAL			M.K	N.K	R.R	M.A
03	06.10.2020	ISSUED FOR APPROVAL			M.K	N.K	R.R	M.A
02	11.08.2020	ISSUED FOR APPROVAL			M.K	N.K	R.R	M.A
01	24.06.2020	ISSUED FOR APPROVAL			M.K	N.K	R.R	M.A

OWNER: DI POLYMER ARIAN COMPANY (DPAC)

PROJECT: ARIAN METHANOL PLANT

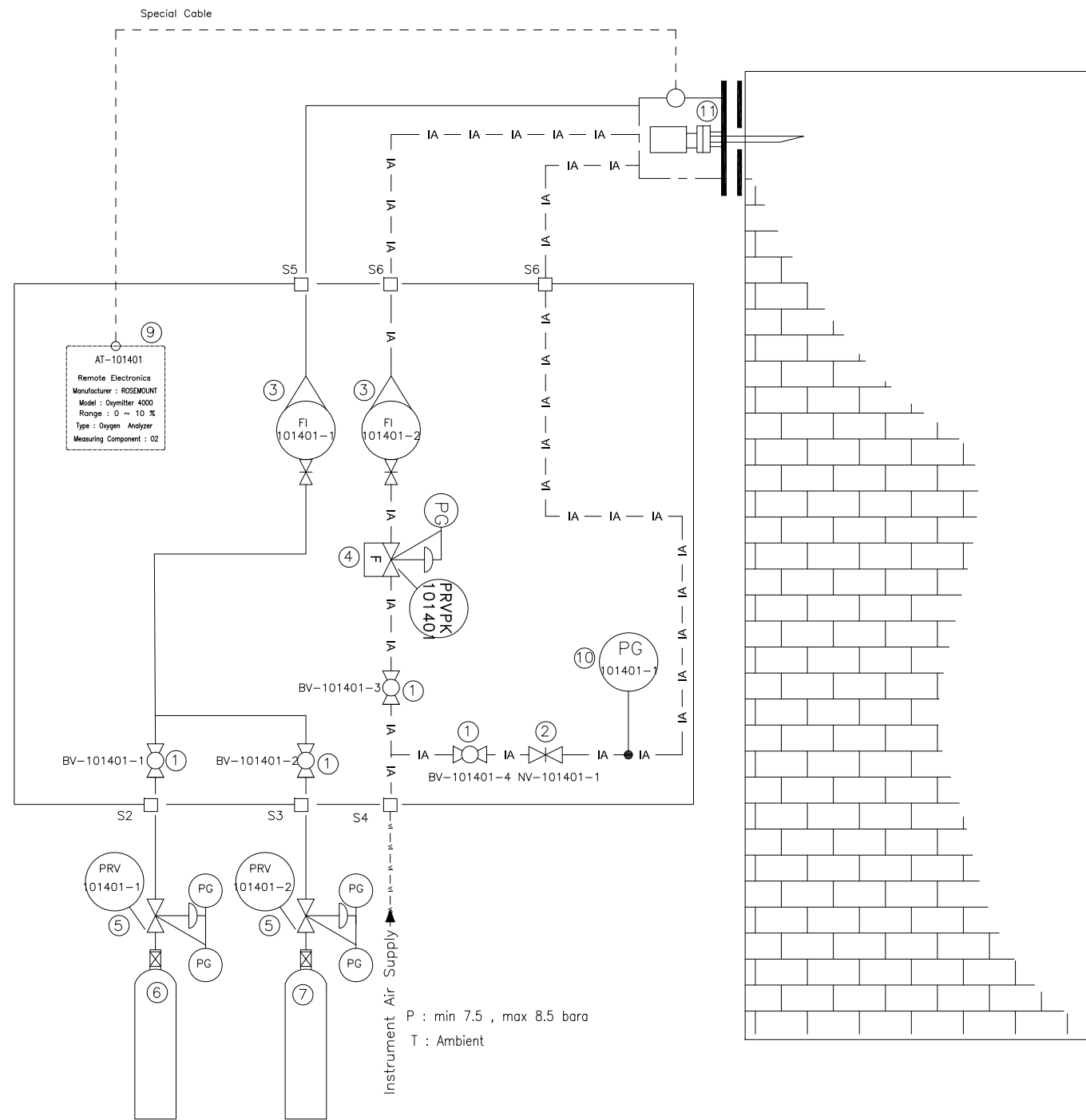
EPs CONTRACTOR: PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)

VENDOR: PIRAMOON SYSTEM QESHM

TITLE: Schematic Tubing and Instrumentation Diagram (P&ID)			
SCALE: 1/XXX	OWNER PROJ. NO.: 21	PIDEC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: 46 OF 50	PIDEC PROJ. NO.: 1217	VENDOR DWG. NO. VD-1217-603-PID-009	SIZE: A3

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Analyzer Stand With Sun Shade



Process Data	
Tag No.	AT101401
Service	O2 Flue Gas from FH-1001
Fluid State	Gas
Measuring Component/Range	O2:0-20%
Temp °C (Norm./Design)	728/750
Pressure .barg (Norm./Design)	0.035/0.1
Return Point Pressure bara	-
Ambeint Temp °C (min/max)	5 to 48
Area Class	Zone 1, Gas Group IIC, T2

TIE-IN CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Probe connection	Flange 3" ANSI 150# RF
S2	Calibration gas Inlet	1/4" OD
S3	Zero gas Inlet	1/4" OD
S4	Instrument air Inlet	1/2" FNPT
S5	Calibration and Zero gas Outlet	1/4" OD
S6	Instrument air Outlet	1/4" OD

BILL OF MATERIAL

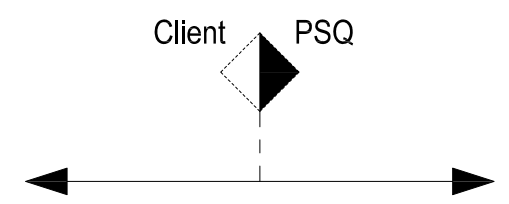
ITEM	DESCRIPTION	QTY
1	Ball valve, 1/4"	4
2	Needle valve	1
3	Flow Meter With Needle Valve, 1/4"	2
4	Air Filter Pressure Regulator	1
5	Cylinder Cylinder Pressure Regulator With Inlet And Outlet Gauge, 1/4"	2
6	Span gas Cylinder	1
7	Zero gas Cylinder	1
8	Plate with sunshade	1
9	Remote Electronics	1
10	Pressure gauge, 1/4"	1
11	Oxymitter 4000 with jacket	1

<input type="checkbox"/> NO COMMENT.
<input type="checkbox"/> COMMENTS AS MARKED: Manufacturing May Proceed.
<input type="checkbox"/> Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.
<input type="checkbox"/> REJECTED : New Document With The Same Revision Shall Be Issued.
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Signature: _____
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DE	EXT	IFA				
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	M.K	N.K	R.R	M.A
03	06.10.2020	ISSUED FOR APPROVAL	M.K	N.K	R.R	M.A
02	11.08.2020	ISSUED FOR APPROVAL	M.K	N.K	R.R	M.A
01	24.06.2020	ISSUED FOR APPROVAL	M.K	N.K	R.R	M.A
REV.	DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY

OWNER :	DI POLYMER ARIAN COMPANY (DPAC)
PROJECT :	ARIAN METHANOL PLANT
EPs CONTRACTOR :	PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)
VENDOR :	PIRAMOON SYSTEM QESHM
TITLE :	Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE :	OWNER PROJ. NO. :	PIDEC DWG. NO. :	REV. :
1 / XXX	21	VD-1217-603-PID-009	04
SHEET :	PIDEC PROJ. NO. :	VENDOR DWG. NO. :	SIZE :
47 OF 50	1217	VD-1217-603-PID-009	A3

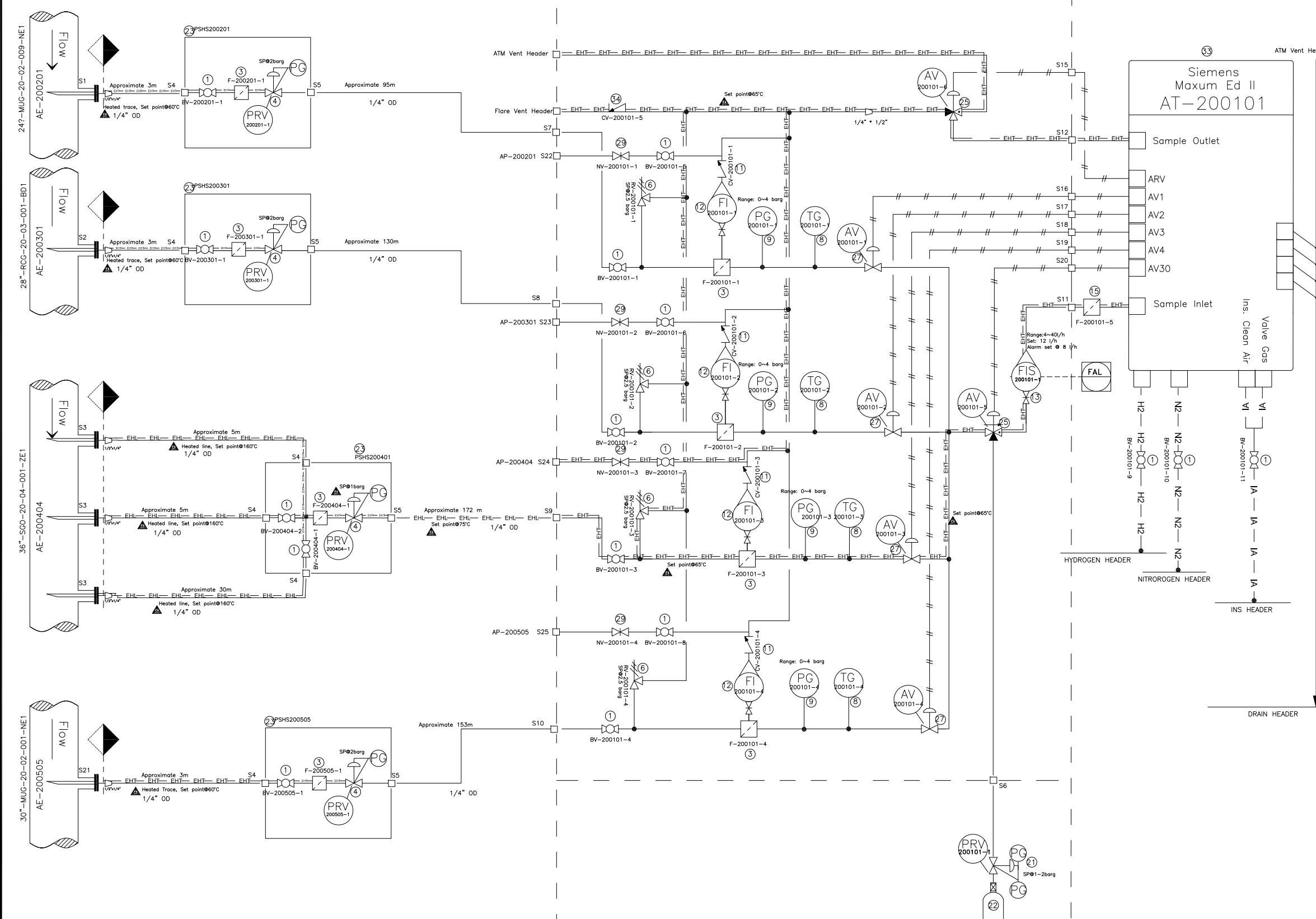


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FIELD PROCESS LINE      ANALYZER HOUSE 1      OUTSIDE WALL      INSIDE WALL



TIE-IN CONNECTIONS		
TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Take-Off Point (AE-200201)	1/2" NPTM
S2	Sample Take-Off Point (AE-200301)	1/2" NPTM
S3	Sample Take-Off Point (AE-200404)	1/2" NPTM
S4	Sample Inlet to Primary Box	Gland M63
S5	Sample Outlet from Primary Box	Gland M63
S6	Calibration Gas inlet to Secondary box	Bulkhead Union, 1/4"
S7	Sample (AE200201) Inlet to Secondary Box	Bulkhead Union, 1/4"
S8	Sample (AE200301) Inlet to Secondary Box	Bulkhead Union, 1/4"
S9	Sample (AE200404) Inlet to Secondary Box	Gland M63
S10	Sample (AE200505) Inlet to Secondary Box	Bulkhead Union, 1/4"
S11	Sample Outlet From Secondary Box to GC	Bulkhead Union, 1/4"
S12	Sample Outlet From GC To Secondary Box	Bulkhead Union, 1/4"
S13	-	-
S14	-	-
S15	ARV air into SHS	Bulkhead Union, 1/8"
S16	AV1 air into SHS	Bulkhead Union, 1/8"
S17	AV2 air into SHS	Bulkhead Union, 1/8"
S18	AV3 air into SHS	Bulkhead Union, 1/8"
S19	AV4 air into SHS	Bulkhead Union, 1/8"
S20	AV30 air into SHS	Bulkhead Union, 1/8"
S21	Sample Take-Off Point (AE-200505)	1/2" NPTM
S22	Laboratory Connections (AP-200201)	1/4" NPTF
S23	Laboratory Connections (AP-200301)	1/4" NPTF
S24	Laboratory Connections (AP-200404)	1/4" NPTF
S25	Laboratory Connections (AP-200505)	1/4" NPTF

BILL OF MATERIAL		
ITEM	DESCRIPTION	QTY
1	2-way Ball Valve, 1/4"	16
2	4-way Ball Valve, 1/4"	1
3	Particle Filter, 1/4"	8
4	Pressure Regulator with outlet Gauge, 1/4"	4
5	Electrically Heated Pressure Regulator with outlet Gauge, 1/4"	-
6	Relief Valve, 1/4"	4
7	Temperature Switch, 1/4"	-
8	Temperature gauge, 1/2"	4
9	Pressure gauge, 1/4"	4
10	Solenoid Valve, 1/4"	-
11	Check Valve, 1/4"	4
12	Flow Meter With Needle Valve, 1/4"	4
13	Flow Meter With Needle Valve & Flow Low Switch, 1/4"	1
14	Flow Sight Glass	-
15	Inline Filter, 1/8"	1
16	GC Collector	1
17	Electrical cooler with Peristaltic Pump	-
18	Auto Drain	-
19	Water removal Filter with alarm, 1/4"	-
20	Heater	-
21	Cylinder Cylinder Pressure Regulator With Inlet And Outlet Gauge, 1/4"	1
22	Calibration gas Cylinder	1
23	Primary Sample Handling System Box	4
24	Secondary Sample Handling System Box	1
25	3-way Pneumatic Actuator valve, 1/4"	2
26	Air Filter Pressure Regulator	-
27	2-way Pneumatic Actuator valve, 1/4"	4
28	Sample Cooler	-
29	Needle Valve, 1/4"	4
30	2-way Ball Valve, 1/2"	-
31	Needle Valve, 1/2"	-
32	Check Valve, 1/2"	-
33	GC, Maxum II	2
34	Check Valve, 1/2"	1

NO COMMENT.  
 COMMENTS AS MARKED: Manufacturing May Proceed.  
 Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.  
 REJECTED : New Document With The Same Revision Shall Be Issued.  
 FOR INFORMATION.

Name: \_\_\_\_\_ Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_

PIDECC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	IFA				
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)				
04	14.03.2021	ISSUED FOR APPROVAL	H.R.R	N.K	R.R	M.A
03	06.10.2020	ISSUED FOR APPROVAL	H.R.R	N.K	R.R	M.A
02	11.08.2020	ISSUED FOR APPROVAL	M.K	N.K	R.R	M.A
01	24.06.2020	ISSUED FOR APPROVAL	M.K	N.K	R.R	M.A

OWNER: DI POLYMER ARIAN COMPANY (DPAC)

PROJECT: ARIAN METHANOL PLANT

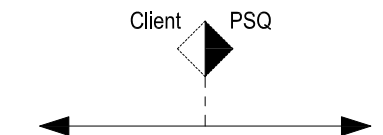
EPs CONTRACTOR: PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDECC)

VENDOR: PIRAMOOS SYSTEM QESHM

TITLE: Schematic Tubing and Instrumentation Diagram (P&ID)

SCALE: 1/XXX	OWNER PROJ. NO.: 21	PIDECC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: 49 OF 50	PIDECC PROJ. NO.: 1217	VENDOR DWG. NO. VD-1217-603-PID-009	SIZE: A3

Tag No.	Process Data			
	AT-200201SC	AT-200301SC	AT-200404SC	AT-200505SC
Service	Synthesis Gas to C-2001	Recycle Gas to C-2002	Outlet Gas R-2001A/B to R-2002	Feed Gas to R-2002
Fluid State	Gas	Gas	Gas	Gas
Measuring Component/Range	CO2: 0-20 Mol% CO: 0-30 Mol% H2: 0-80.0-5 Mol% N2: 0-5 Mol% CH4: 0-10 Mol%	CO2: 0-20 Mol% CO: 0-15 Mol% H2: 0-80.0-5 Mol% N2: 0-20 Mol% CH4: 0-30 Mol%	CO2: 0-20 Mol% CO: 0-15 Mol% H2: 0-80.0-5 Mol% N2: 0-20 Mol% CH4: 0-30 Mol%	CO2: 0-20 Mol% CO: 0-20 Mol% H2: 0-80.0-5 Mol% N2: 0-20 Mol% CH4: 0-30 Mol%
Temp °C (Norm./Design)	40/200	40/100	264/300	128/200
Pressure .barg (Norm./Design)	32/88	67.9/88	72/88	79/88
Return Point Pressure bara	-	-	-	-
Ambient Temp °C (min/max)	5 to 48	5 to 48	5 to 48	5 to 48
Area Class	?	?		



FIELD  
PROCESS LINE

ANALYZER HOUSE 1  
OUTSIDE WALL

INSIDE WALL

TIE-IN CONNECTIONS		
TAG	DESCRIPTION	CONNECTION SIZE
S1	Sample Take-Off Point (AE-300601)	1/2" NPTM
S2	Sample (AE-300601) Inlet to Sampling Box	Bulkhead Union, 3/8"
S3	Sample (AE-300801) Inlet to Sampling Box	Bulkhead Union, 3/8"
S4	Calibration Gas Inlet To Sampling Box	Bulkhead Union, 1/4"
S5	Sample Outlet From Sampling Box To GC	Bulkhead Union, 1/4"
S6	Sample Outlet From GC To Sampling Box	Bulkhead Union, 1/4"
S7	Sample Back to Process	1/2" NPTM
S8	AV1 air into SHS	Bulkhead Union, 1/8"
S9	AV2 air into SHS	Bulkhead Union, 1/8"
S10	AV30 air into SHS	Bulkhead Union, 1/8"
S11	Laboratory Connection (AP-300602)	1/4" NPTF
S12	Laboratory Connection (AP-300802)	1/4" NPTF
S13	Sample Take-Off Point (AE-300801)	1/2" NPTM

BILL OF MATERIAL		
ITEM	DESCRIPTION	QTY
1	2-way Ball Valve, 1/4"	6
2	4-way Ball Valve, 1/4"	-
3	Particle Filter, 1/4"	4
4	Pressure Regulator with outlet Gauge, 1/4"	1
5	Electrically Heated Pressure Regulator with outlet Gauge, 1/4"	-
6	Relief Valve, 1/4"	2
7	Temperature Switch, 1/4"	-
8	Temperature gauge, 1/2"	1
9	Pressure gauge, 1/4"	1
10	Solenoid Valve, 1/4"	-
11	Check Valve, 1/4"	2
12	Flow Meter With Needle Valve, 1/4"	2
13	Flow Meter With Needle Valve & Flow Low Switch, 1/4"	-
14	Flow Sight Glass	1
15	Inline Filter, 1/8"	1
16	GC Collector	1
17	Electrical cooler with Peristaltic Pump	-
18	Auto Drain	-
19	Water removal Filter with alarm, 1/4"	-
20	Heater	-
21	Cylinder Pressure Regulator With Inlet And Outlet Gauge, 1/4"	-
22	Calibration gas Cylinder	1
23	Primary Sample Handling System Box	-
24	Secondary Sample Handling System Box	1
25	3-way Pneumatic Actuator valve, 1/4"	1
26	Air Filter Pressure Regulator	-
27	2-way Pneumatic Actuator valve, 1/4"	2
28	Sample Cooler	-
29	Needle Valve, 1/4"	2
30	Air Treater	1
31	GC, Maxum II	1

NO COMMENT.  
 COMMENTS AS MARKED: Manufacturing May Proceed.  
 Major Comment As Marked : Manufacturing Shall Be Hold For Next Revision.  
 REJECTED : New Document With The Same Revision Shall Be Issued.  
 FOR INFORMATION.

Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Req. No.: \_\_\_\_\_ Seq. No.: \_\_\_\_\_

PIDEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

REV.	ISSUE DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	AUTHORIZED BY
04	14.03.2021	ISSUED FOR APPROVAL	H.R.R	N.K	RR	M.A
03	06.10.2020	ISSUED FOR APPROVAL	H.R.R	N.K	RR	M.A
02	11.08.2020	ISSUED FOR APPROVAL	M.K	N.K	RR	M.A
01	24.06.2020	ISSUED FOR APPROVAL	M.K	N.K	RR	M.A

OWNER: **DI POLYMER ARIAN COMPANY (DPAC)**

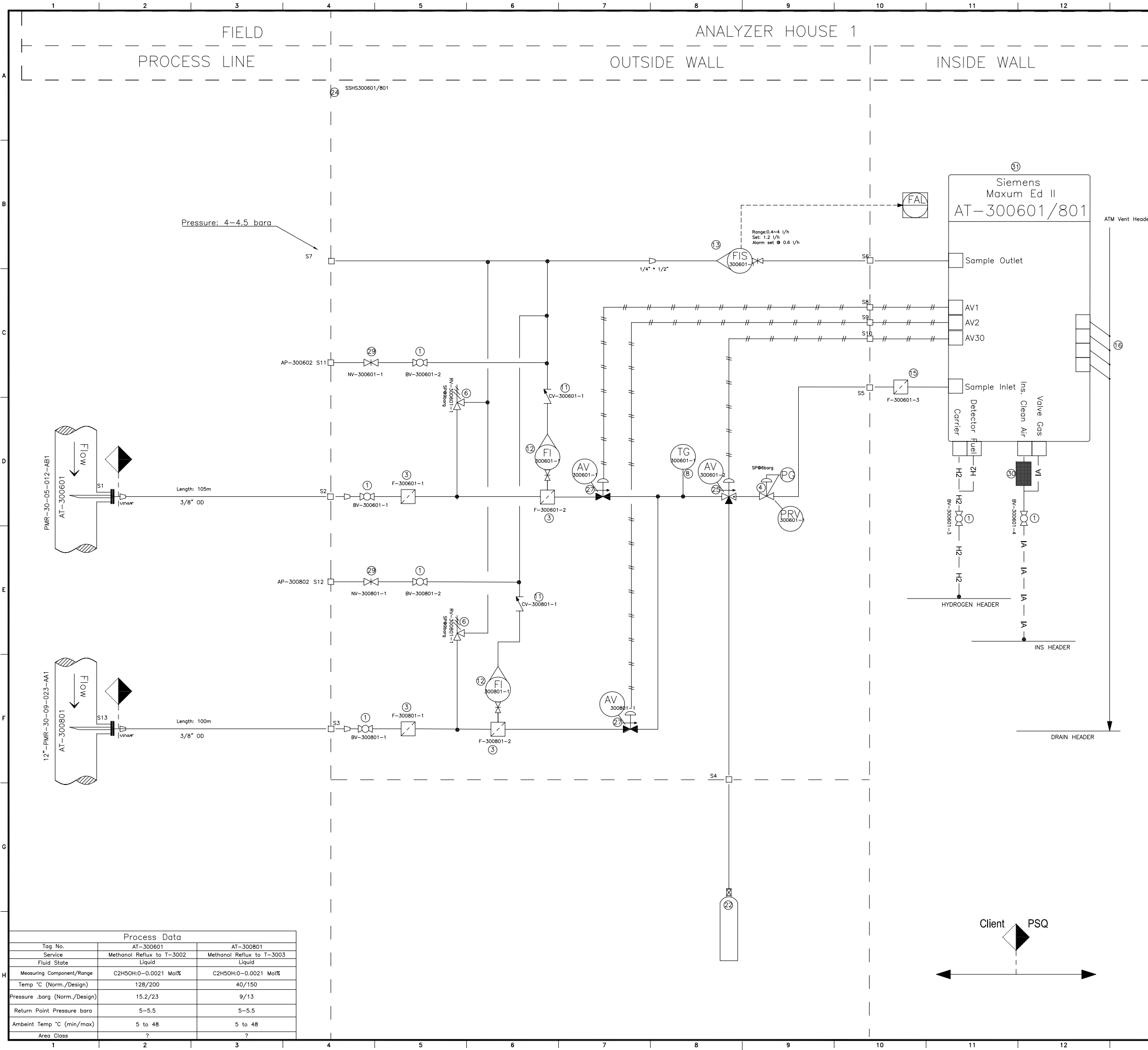
PROJECT: **ARIAN METHANOL PLANT**

EPs CONTRACTOR: **PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (PIDEC)**

VENDOR: **PIRAMOON SYSTEM QESHM**

TITLE: **Schematic Tubing and Instrumentation Diagram (P&ID)**

SCALE: 1/XXX	OWNER PROJ. NO.: 21	PIDEC DWG. NO.: VD-1217-603-PID-009	REV. 04
SHEET: 50 OF 50	PIDEC PROJ. NO.: 1217	VENDOR DWG. NO. VD-1217-603-PID-009	SIZE: A3



Process Data		
Tag No.	AT-300601	AT-300801
Service	Methanol Reflux to T-3002	Methanol Reflux to T-3003
Fluid State	Liquid	Liquid
Measuring Component/Range	C2H5OH:0-0.0021 Mol%	C2H5OH:0-0.0021 Mol%
Temp °C (Norm./Design)	128/200	40/150
Pressure .barg (Norm./Design)	15.2/23	9/13
Return Point Pressure bara	5-5.5	5-5.5
Ambient Temp °C (min/max)	5 to 48	5 to 48
Area Class	?	?

