

100-TK-001		100-HEI-001		100-PC-001		100-PC-002	
UF FEED TANK A		ELECTRIC FLANGED HEATER		UF FEED PUMP A		UF FEED PUMP B	
CAPACITY	1.96 m³	POWER		CAPACITY	0.90 m³/h	CAPACITY	0.54 m³/h
DIMENSIONS	Ø: 1M H: 2M	MOC		HEAD	139 m	HEAD	57.1m
MOC	316 SS	INC 800		POWER	1.1 kW	POWER	0.37 kW
				MOC	316 SS	MOC	316 SS

MOTOR SPEED SIGNAL  
FROM PRESSURE RATIO  
CONTROLLER 102-PPIC-001  
PID002

FROM 200-PC-001  
UF FILTRATE  
PID005

UF-SS316-DN15-PN16-235

FROM UF TRAIN A  
UF REJECT  
PID002

UR-SS316-DN15-PN16-129

FROM UF TRAIN B  
UF REJECT  
PID003

UR-SS316-DN15-PN16-147

SIGNAL FROM HOT CONDENSATE  
FLOW INDICATOR  
307-FIT-001  
PID009

HOT CONDENSATE  
SUPPLY HEADER  
PID009

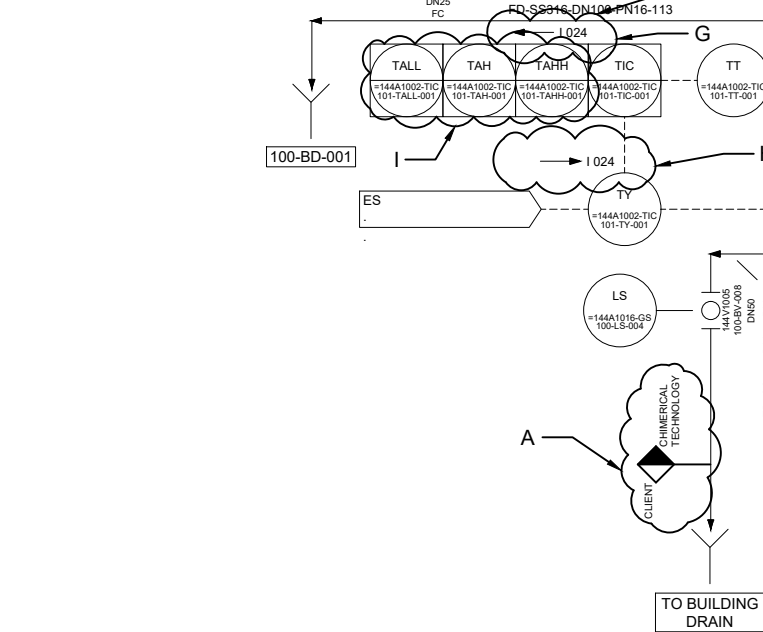
WH-SS316-DN25-PN16-116

SIGNAL FROM HOT CONDENSATE  
FROM GLOBE VALVE  
100-GV-002  
PID009

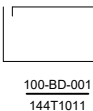
B

CLIENT  
CHIMERICAL  
TECHNOLOGY

LIGNIOX SOLUTION  
FROM SUPPLY



MOTOR SPEED SIGNAL  
FROM PRESSURE RATIO  
CONTROLLER 103-PPIC-001  
PID003



EF-SS316-DN50-PN16-118

NOTE : 1  
ARV AT HIGHEST POINT  
DUAL FUNCTION ARV'S  
(AIR RELIEF + VACUUM)

## MATERIAL CODE

FLUID	CODE
LigniOx Solution	LS
UF Feed	FD
UF Filtrate	UF
UF Reject	UR
Combined Concentrate	CC
NF Feed (High Pressure)	FN
NF Concentrate	NC
NF Permeate	NP
CIP Supply	CS
CIP Return	CP
Sulfuric Acid	AS
Caustic Soda (Liquid)	AC
Water Hot (Hot Condensate)	WH
Water Cold (Demineralized)	WC
Water Potable	WP
Effluent	EF
Offgas Vapour	EV
40% SMBS	SM
INSTRUMENT AIR	IA

## LEGEND

Process Stream	
Signal	
Intermittent	
Flexible line	

Fail Open	FO
Fail Closed	FC
Sample Valve	

- A. ADDED BATTERY LIMIT  
B. OFF PAGE CONNECTOR UNDATED + LINE NUMBER CHANGED  
C. LINE TYPE CHANGED  
D. OFF-PAGE-CONNECTORS ADDED ( SIGNAL TO )  
E. VALVE MOVED TO PID-009  
F. TAG CHANGED  
G. INTERLOCKS REMOVED  
H. ELEMENTS ADDED  
I. CONTROL LOGIC ADDED

Client



REVISION	5	AS-BUILT	MM	LK		23/01/2026
	4	ISSUED FOR INFORMATION	AH	LK	LC	23/10/2025
	3A	ISSUED FOR INFORMATION	RB	-	-	04/04/2025
	2	ISSUED FOR CONSTRUCTION	AH	MB	RW	01/02/2025
	0	ISSUED FOR INFORMATION	RB	SCV	DS	17/05/2024
	REV	DESCRIPTION	DRAWN	CHECKED	APPRVD	DATE

CM2402

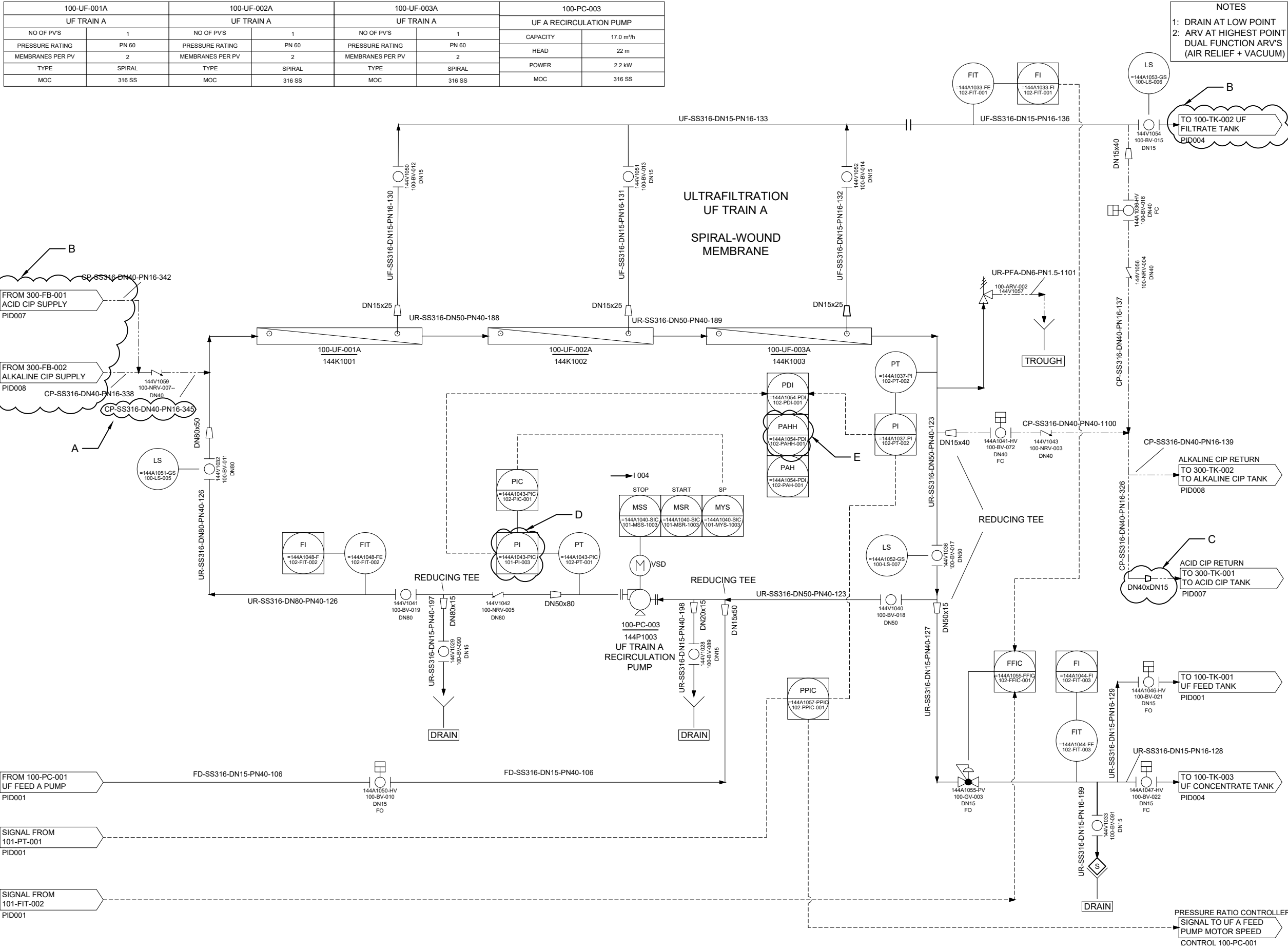
ANDRITZ OY

LIGNIOX MEMBRANE DEMO PLANT  
PIPING & INSTRUMENTATION DIAGRAM  
AREA 100 - FEED - AS-BUILT

This drawing is subject to return on demand and must not be copied or passed on to any third party; or used directly or indirectly for any other purpose than the design and construction to the order of CHIMERICAL TECHNOLOGY (PTY) LTD.

DRAWING NO.:	PID NO.:	REV.
CM2402-AND001-4A-PID001	PID001	5

100-UF-001A		100-UF-002A		100-UF-003A		100-PC-003	
UF TRAIN A		UF TRAIN A		UF TRAIN A		UF A RECIRCULATION PUMP	
NO OF PVS	1	NO OF PVS	1	NO OF PVS	1	CAPACITY	17.0 m³/h
PRESSURE RATING	PN 60	PRESSURE RATING	PN 60	PRESSURE RATING	PN 60	HEAD	22 m
MEMBRANES PER PV	2	MEMBRANES PER PV	2	MEMBRANES PER PV	2	POWER	2.2 kW
TYPE	SPIRAL	TYPE	SPIRAL	TYPE	SPIRAL	MOC	316 SS
MOC	316 SS	MOC	316 SS	MOC	316 SS		



NOTES  
1: DRAIN AT LOW POINT  
2: ARV AT HIGHEST POINT  
DUAL FUNCTION ARV'S  
(AIR RELIEF + VACUUM)

MATERIAL CODE	
FLUID	CODE
LigniOx Solution	LS
UF Feed	FD
UF Filtrate	UF
UF Reject	UR
Combined Concentrate	CC
NF Feed (High Pressure)	FN
NF Concentrate	NC
NF Permeate	NP
CIP Supply	CS
CIP Return	CP
Sulfuric Acid	AS
Caustic Soda (Liquid)	AC
Water Hot (Hot Condensate)	WH
Water Cold (Demineralized)	WC
Water Potable	WP
Effluent	EF
Offgas Vapour	EV
40% SMBS	SM
INSTRUMENT AIR	IA

LEGEND	
Process Stream	—————
Signal	-----
Intermittent	- - - - -
Flexible line	~~~~~
Fail Open	FO
Fail Closed	FC
Sample Valve	◇

- A. RE-ADDED "CP-345"
- B. OFF PAGE CONNECTOR EDITED
- C. REDUCER ADDED
- D. TAG UPDATED
- E. PAHH ADDED

Client

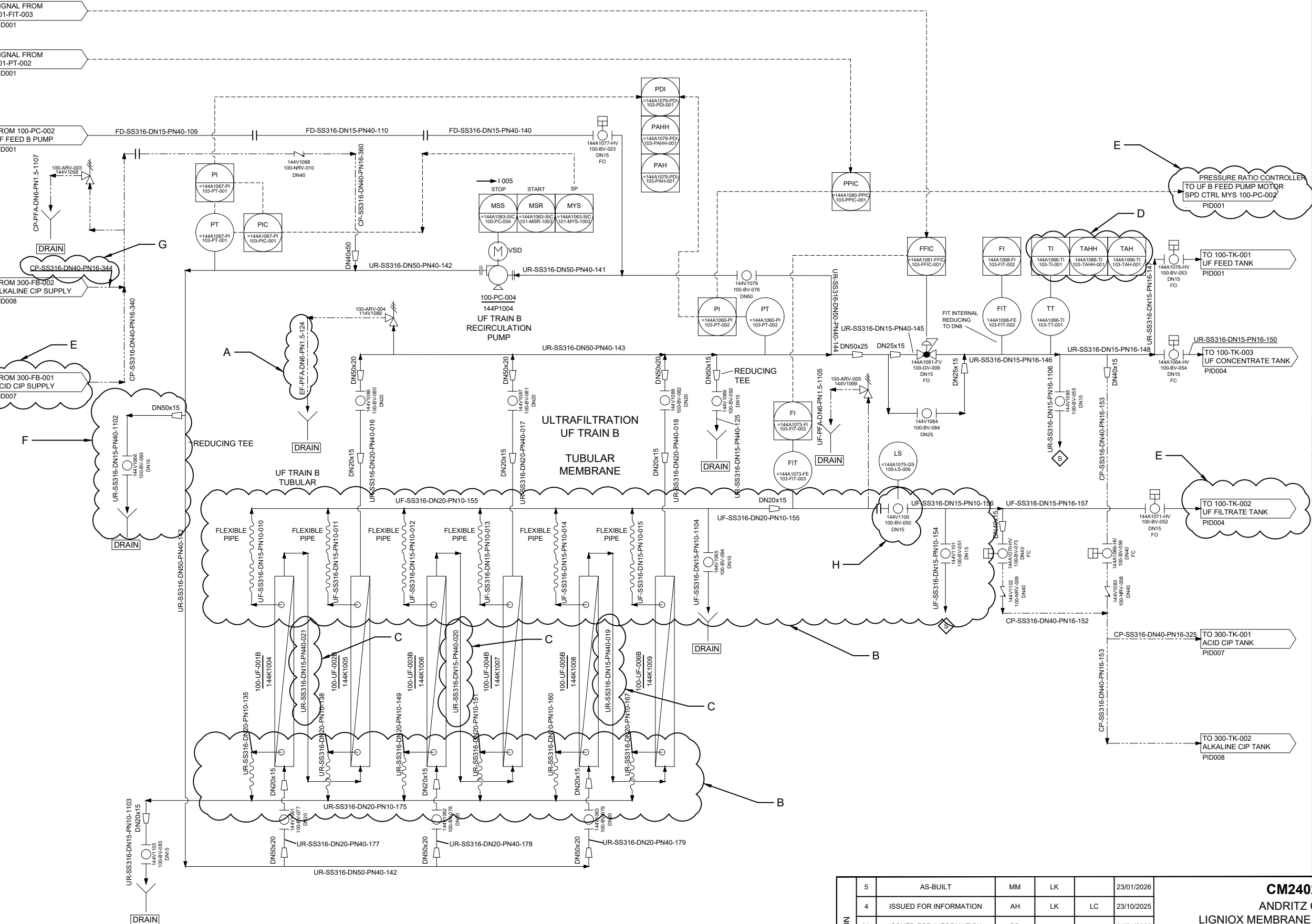
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CM2402-AND001-4A-PID002	PID002	5

REVISION	5	AS-BUILT	MM	LK		23/01/2026
	4	ISSUED FOR INFORMATION	AH	LK	LC	23/10/2025
	3A	ISSUED FOR INFORMATION	RB	-	-	04/04/2025
	2	ISSUED FOR CONSTRUCTION	AH	MB	RW	01/02/2025
	0	ISSUED FOR INFORMATION	RB	SCV	DS	17/05/2024
	REV	DESCRIPTION	DRAWN	CHECKED	APPRVD	DATE

**CM2402**  
ANDRITZ OY  
LIGNIOX MEMBRANE DEMO PLANT  
PIPING & INSTRUMENTATION DIAGRAM  
AREA 100 - UF TRAIN A (SPIRAL) - AS-BUILT

This drawing is subject to return on demand and must not be copied or passed on to any third party; or used directly or indirectly for any other purpose than the design and construction to the order of CHIMERICAL TECHNOLOGY (PTY) LTD.

100-UF-001B		100-UF-002B		100-UF-003B		100-UF-004B		100-UF-005B		100-UF-006B		100-PC-004	
UF TRAIN B		UF TRAIN B		UF TRAIN B		UF TRAIN B		UF TRAIN B		UF TRAIN B		UF B RECIRCULATION PUMP	
NO OF PVS	1	NO OF PVS	1	NO OF PVS	1	NO OF PVS	1	NO OF PVS	1	NO OF PVS	1	CAPACITY	12.3 m <sup>3</sup> /h
PRESSURE RATING	64 Bar	PRESSURE RATING	64 Bar	PRESSURE RATING	64 Bar	PRESSURE RATING	64 Bar	PRESSURE RATING	64 Bar	PRESSURE RATING	64 Bar	HEAD	18.98 Bar
MEMBRANES PER PV	1	MEMBRANES PER PV	1	MEMBRANES PER PV	1	MEMBRANES PER PV	1	MEMBRANES PER PV	1	MEMBRANES PER PV	1	POWER	11 kW
TYPE	TUBULAR	TYPE	TUBULAR	TYPE	TUBULAR	TYPE	TUBULAR	TYPE	TUBULAR	TYPE	TUBULAR	MOC	316 SS
MOC	316 SS	MOC	316 SS	MOC	316 SS	MOC	316 SS	MOC	316 SS	MOC	316 SS	MOC	316 SS




MATERIAL CODE	
FLUID	CODE
LigniOx Solution	LS
UF Feed	FD
UF Filtrate	UF
UF Reject	UR
Combined Concentrate	CC
NF Feed (High Pressure)	FN
NF Concentrate	NC
NF Permeate	NP
CIP Supply	CS
CIP Return	CP
Sulfuric Acid	AS
Caustic Soda (Liquid)	AC
Water Hot (Hot Condensate)	WH
Water Cold (Demineralized)	WC
Water Potable	WP
Effluent	EF
Offgas Vapour	EV
40% SMBS	SM
INSTRUMENT AIR	IA

LEGEND	
Process Stream	_____
Signal	-----
Intermittent	-----
Flexible line	~~~~~
Fail Open	FO
Fail Closed	FC
Sample Valve	◇

- A. MATERIAL CHANGE SS316 TO PFA
- B. PRESSURE RATING CHANGED FROM PN16 TO PN10
- C. LINE DESCRIPTION CHANGED
- D. INSTRUMENTS ADDED
- E. OFF-PAGE CONNECTOR UPDATED
- F. MISSING LINE ADDED
- G. LINE NUMBER PLACEMENT FIXED
- H. VALVE DN FIXED

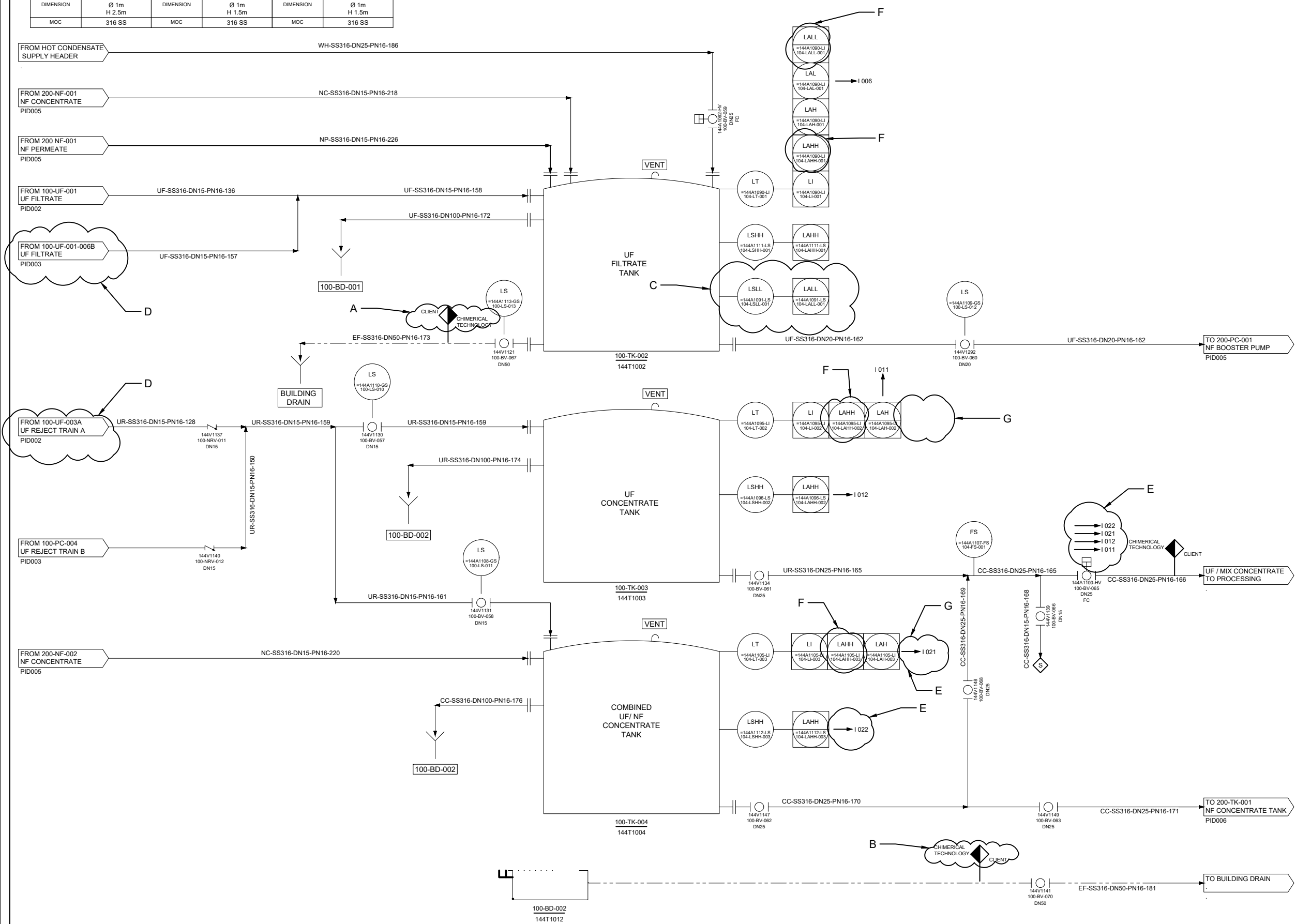
Client	ANDRITZ LigniOx
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REVISION	5	AS-BUILT	MM	LK		23/01/2026
	4	ISSUED FOR INFORMATION	AH	LK	LC	23/10/2025
	3A	ISSUED FOR INFORMATION	RB	-	-	04/04/2025
	2	ISSUED FOR CONSTRUCTION	AH	MB	RW	01/02/2025
	0	ISSUED FOR INFORMATION	RB	SCV	DS	17/05/2024
	REV	DESCRIPTION	DRAWN	CHECKED	APPRVD	DATE






<div>CM2402</div> <div>ANDRITZ OY</div> <div>LIGNIOX MEMBRANE DEMO PLANT</div> <div>PIPING &amp; INSTRUMENTATION DIAGRAM</div> <div>AREA 100 - UF TRAIN B (TUBULAR) - AS-BUILT</div>		<div>CHIMERICAL TECHNOLOGY</div>		
<div>This drawing is subject to return on demand and must not be copied or passed on to any third party; or used directly or indirectly for any other purpose than the design and construction to the order of CHIMERICAL TECHNOLOGY (PTY) LTD.</div>				
<div>DRAWING NO.:</div> <div>CM2402-AND001-4A-PID003</div>		<div>PID NO.:</div> <div>PID003</div>	<div>REV.</div> <div>5</div>	



100-TK-002		100-TK-003		100-TK-004	
UF FILTRATE TANK		UF CONCENTRATE TANK		UF COMB UF/NF CONCENTRATE TANK	
CAPACITY	1.96 m <sup>3</sup>	CAPACITY	1.1 m <sup>3</sup>	CAPACITY	1 m <sup>3</sup>
DIMENSION	Ø 1m H 2.5m	DIMENSION	Ø 1m H 1.5m	DIMENSION	Ø 1m H 1.5m
MOC	316 SS	MOC	316 SS	MOC	316 SS



MATERIAL CODE	
FLUID	CODE
LigniOx Solution	LS
UF Feed	FD
UF Filtrate	UF
UF Reject	UR
Combined Concentrate	CC
NF Feed (High Pressure)	FN
NF Concentrate	NC
NF Permeate	NP
CIP Supply	CS
CIP Return	CP
Sulfuric Acid	AS
Caustic Soda (Liquid)	AC
Water Hot (Hot Condensate)	WH
Water Cold (Demineralized)	WC
Water Potable	WP
Effluent	EF
Offgas Vapour	EV
40% SMBS	SM
INSTRUMENT AIR	IA

LEGEND	
Process Stream	
Signal	
Intermittent	
Flexible line	
Fail Open	FO
Fail Closed	FC
Sample Valve	

A.	ADDED BATTERY LIMIT
B.	ADDED BATTERY LIMIT
C.	ANDRITZ TAG CHANGED
D.	OFF PAGE CONNECTOR DESCRIPTION CHANGED
E.	INTERLOCKS ADDED
F.	INSTRUMENT ADDED
G.	INSTRUMENT REMOVED

Client	
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REVISION	5	AS-BUILT	MM	LK		23/01/2026
	4	ISSUED FOR INFORMATION	AH	LK	LC	23/10/2025
	3A	ISSUED FOR INFORMATION	RB	-	-	04/04/2025
	2	ISSUED FOR CONSTRUCTION	AH	MB	RW	01/02/2025
	0	ISSUED FOR INFORMATION	RB	SCV	DS	17/05/2024
	REV	DESCRIPTION	DRAWN	CHECKED	APPRVD	DATE

**CM2402**  
ANDRITZ OY  
LIGNIOX MEMBRANE DEMO PLANT  
PIPING & INSTRUMENTATION DIAGRAM  
AREA 100 - UF TANKS - AS-BUILT

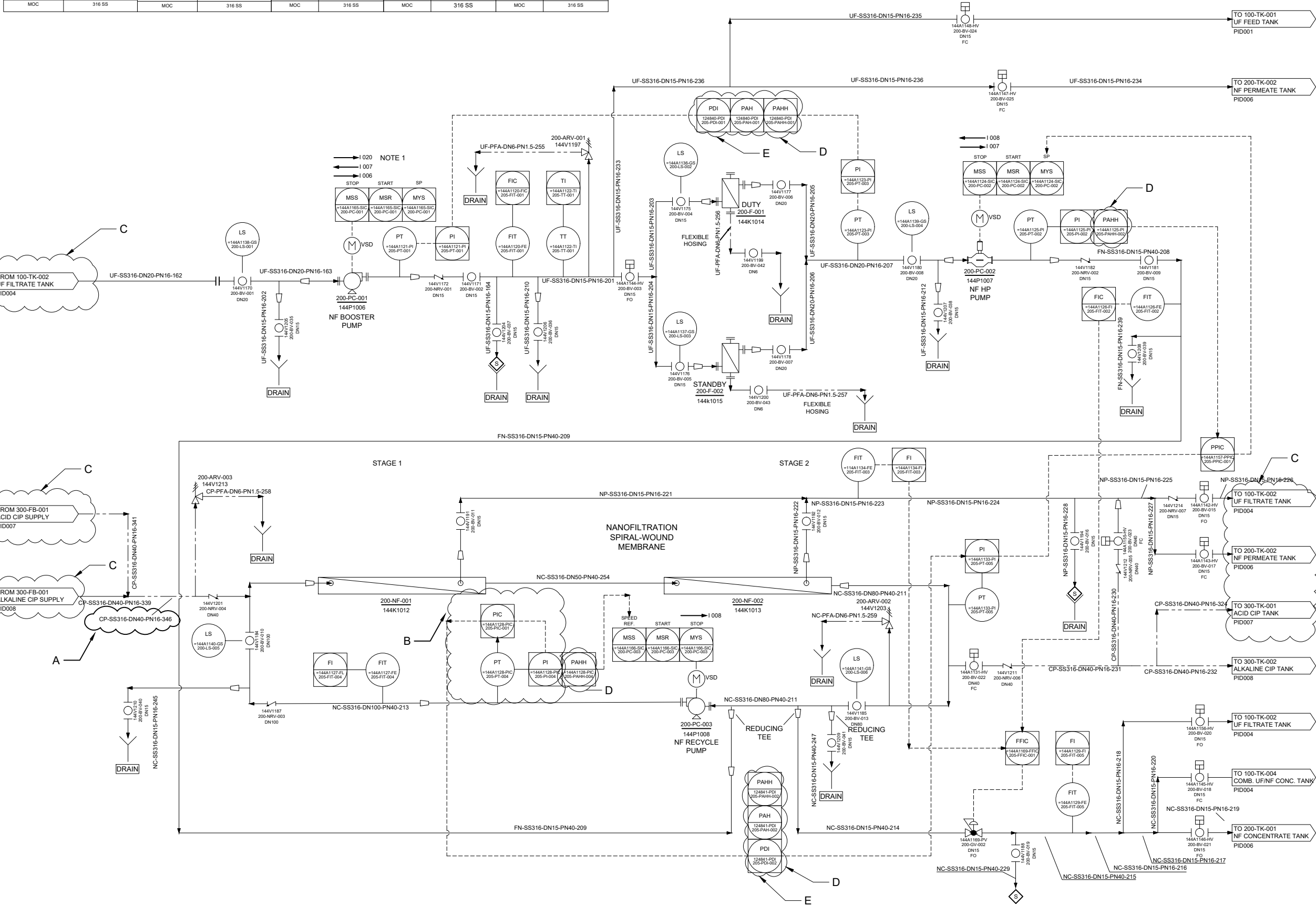
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DRAWING NO.:	PID NO.:	REV.
CM2402-AND001-4A-PID004	PID004	5



200-F-001 / 2		200-NF-001 / 2		200-PC-001		200-PC-002		200-PC-003	
NF FEED CARTRIDGE FILTERS		NF TRAIN		NF BOOSTER PUMP		NF HP PUMP		NF RECYCLE PUMP	
CAPACITY	1.2 m³/h	NO OF PVS	2	CAPACITY	1.8m³/h	CAPACITY	1.80 m³/h	CAPACITY	43m³/h
MIN PARTICLE SIZE	1 µm	PRESSURE RATING	69 Bar	HEAD	38.6m	HEAD	172m	HEAD	3 Bar
DIFFERENTIAL PRESSURE	2 Bar	MEMBRANES PER PV	1	POWER	0.55 kW	POWER	2.2kW	POWER	4kW
MOC	316 SS	TYPE	Spiral						
		MOC	316 SS	MOC	316 SS	MOC	316 SS	MOC	316 SS



MATERIAL CODE	
FLUID	CODE
LigniOx Solution	LS
UF Feed	FD
UF Filtrate	UF
UF Reject	UR
Combined Concentrate	CC
NF Feed (High Pressure)	FN
NF Concentrate	NC
NF Permeate	NP
CIP Supply	CS
CIP Return	CP
Sulfuric Acid	AS
Caustic Soda (Liquid)	AC
Water Hot (Hot Condensate)	WH
Water Cold (Demineralized)	WC
Water Potable	WP
Effluent	EF
Offgas Vapour	EV
40% SMBS	SM
INSTRUMENT AIR	IA

LEGEND	
Process Stream	—————
Signal	-----
Intermittent	-----
Flexible line	~~~~~

Fail Open	FO
Fail Closed	FC
Sample Valve	◇

NOTES:  
1. ON THE CONDITION VALVE 144A1148-HV IS OPEN

Client






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4	ISSUED FOR INFORMATION	AH	LK	LC	23/10/2025
3A	ISSUED FOR INFORMATION	RB	-	-	04/04/2025
2	ISSUED FOR CONSTRUCTION	AH	MB	RW	01/02/2025
0	ISSUED FOR INFORMATION	RB	SCV	DS	17/05/2024
REV	DESCRIPTION	DRAWN	CHECKED	APPRVD	DATE



**CM2402**  
ANDRITZ OY  
LIGNIOX MEMBRANE DEMO PLANT  
PIPING & INSTRUMENTATION DIAGRAM  
AREA 200 - NF - AS-BUILT

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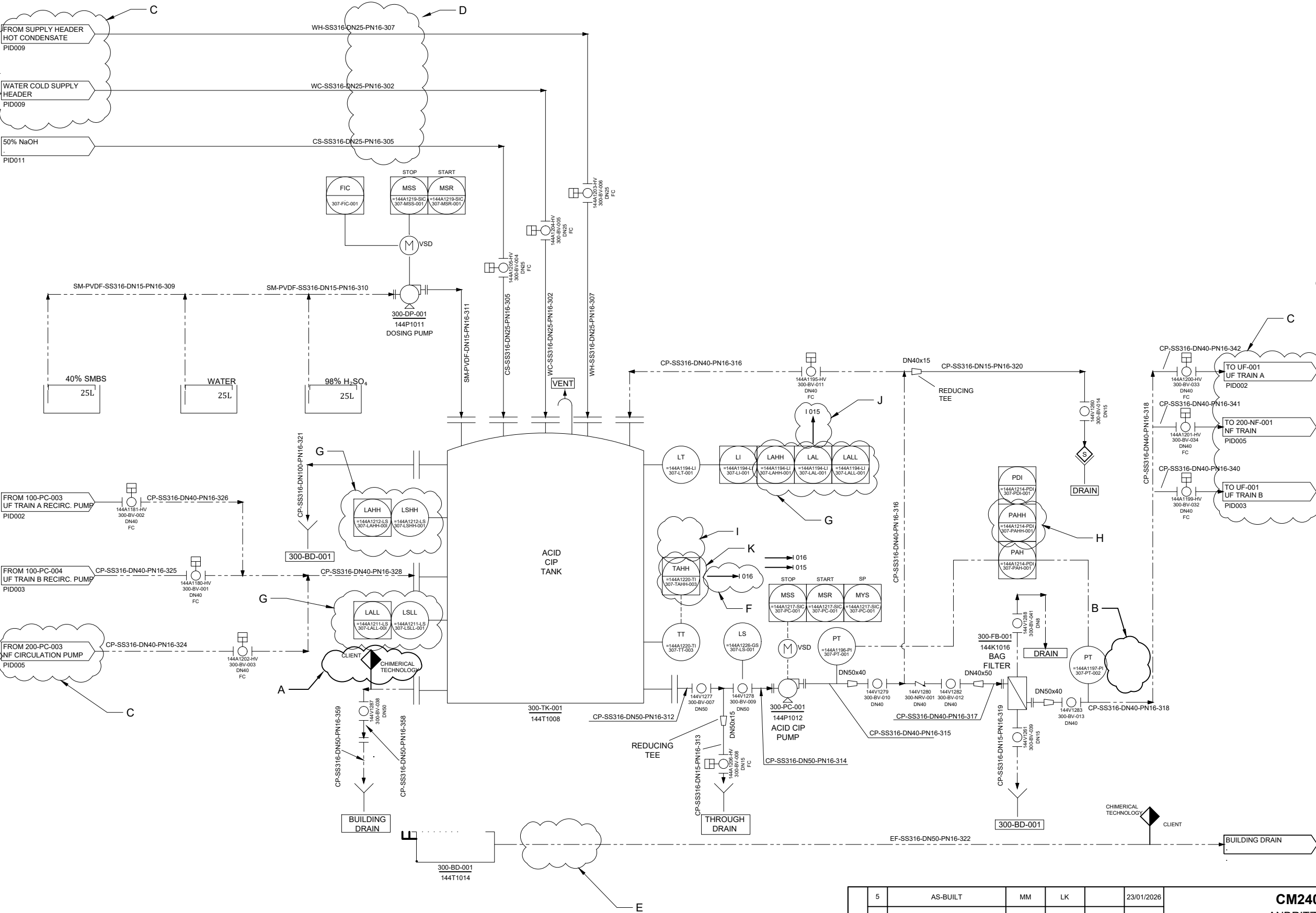
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PID NO.: PID005  
REV.: 5

[illegible]






LEGEND	
Process Stream	
Signal	
Intermittent	
Flexible line	
Fail Open	FO
Fail Closed	FC
Sample Valve	

Client			
<b>2</b> OY DEMO PLANT ATION DIAGRAM KS - AS-BUILT			
must not be copied or passed on to any other purpose than the design and TECHNOLOGY (PTY) LTD.	DRAWING NO.: <b>CM2402-AND001-4A-PID006</b>	PID NO.: <b>PID006</b>	REV.: <b>5</b>

300-FB-001		300-DP-001		300-PC-001		300-TK-001	
BAG FILTER		DOSING PUMP		ACID CIP PUMP		ACID CIP TANK	
CAPACITY	17m³/h	CAPACITY	0.07m³/h	CAPACITY	17m³/h	CAPACITY	1.01m³
MIN PARTICLE SIZE	1 µm	HEAD	10 m	HEAD	30m	DIMS Ø 0.89m H 1.16m	
DIFFERENTIAL PRESSURE	2 bar	POWER	0.062 kW	POWER	3 kW		
MOC	316 SS	MOC	316 SS	MOC	316 SS	MOC	316 SS



MATERIAL CODE	
FLUID	CODE
LigniOx Solution	LS
UF Feed	FD
UF Filtrate	UF
UF Reject	UR
Combined Concentrate	CC
NF Feed (High Pressure)	FN
NF Concentrate	NC
NF Permeate	NP
CIP Supply	CS
CIP Return	CP
Sulfuric Acid	AS
Caustic Soda (Liquid)	AC
Water Hot (Hot Condensate)	WH
Water Cold (Demineralized)	WC
Water Potable	WP
Effluent	EF
Offgas Vapour	EV
40% SMBS	SM
INSTRUMENT AIR	IA

LEGEND	
Process Stream	
Signal	
Intermittent	
Flexible line	
Fail Open	FO
Fail Closed	FC
Sample Valve	

- A. ADDED BATTERY LIMIT
- B. TT REMOVED
- C. OFF-PAGE CONNECTOR UPDATED
- D. LINE COUNTER UPDATED
- E. VALVE REMOVED
- F. INTERLOCK MOVED
- G. CONTROL ADDED AND RENAMED
- H. CONTROL ADDED
- I. CONTROL REMOVED
- J. INTERLOCK ADDED
- K. CONTROL RENAMED

Client	
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**CHIMERICAL  
TECHNOLOGY**

DRAWING NO.:	PID NO.:	REV.
CM2402-AND001-4A-PID007	PID007	5

REVISION	5	AS-BUILT	MM	LK		23/01/2026
	4	ISSUED FOR INFORMATION	AH	LK	LC	23/10/2025
	3A	ISSUED FOR INFORMATION	RB	-	-	7/04/2025
	2	ISSUED FOR CONSTRUCTION	AH	MB	RW	01/02/2025
	0	ISSUED FOR INFORMATION	RB	SCV	DS	17/05/2024
	REV	DESCRIPTION	DRAWN	CHECKED	APPRVD	DATE

**CM2402**  
ANDRITZ OY  
LIGNIOX MEMBRANE DEMO PLANT  
PIPING & INSTRUMENTATION DIAGRAM  
AREA 300 - CIP ACID - AS-BUILT

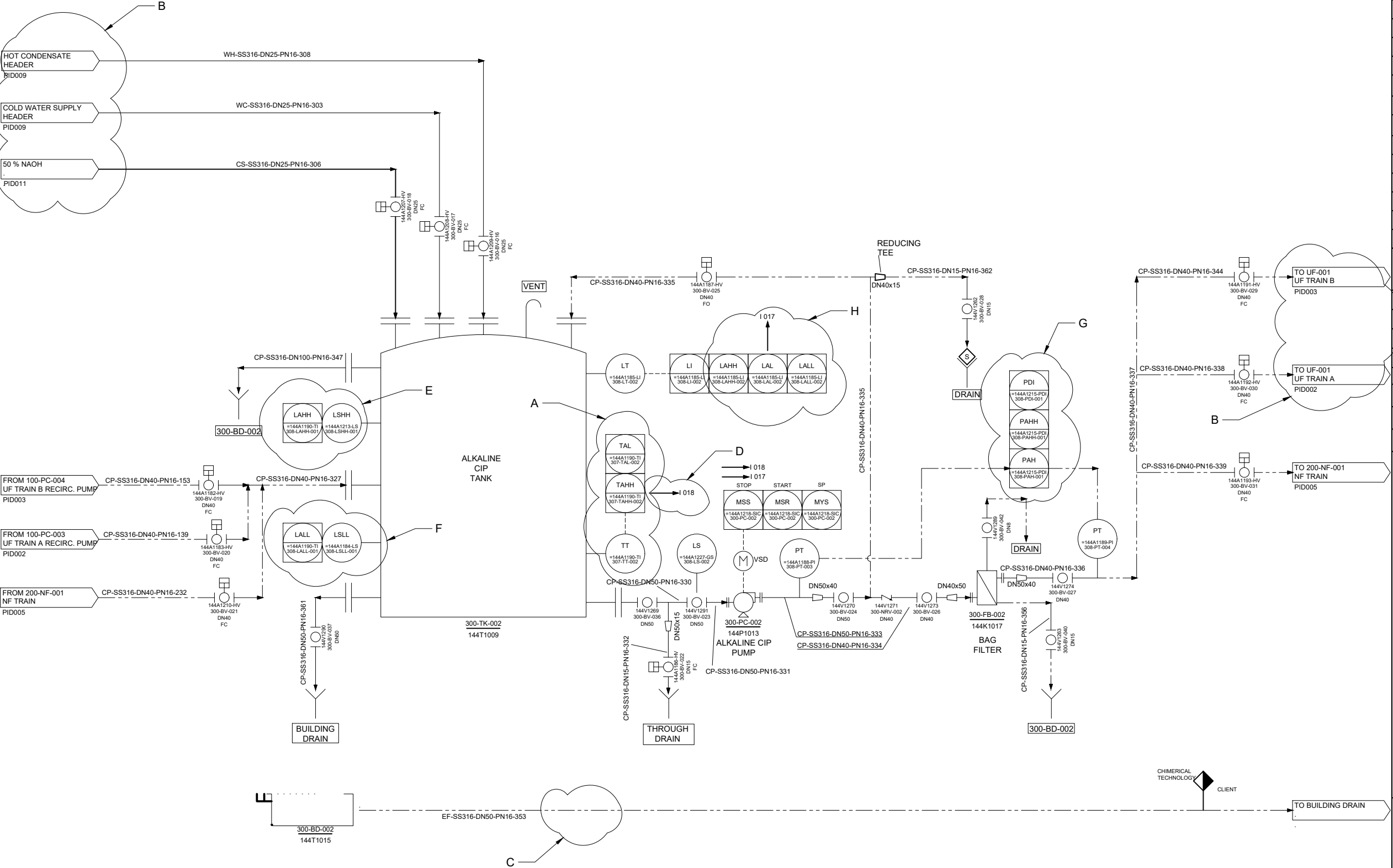
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300-FB-002		300-PC-001		300-TK-002	
BAG FILTER		ALKALINE CIP PUMP		ALKALINE CIP TANK	
CAPACITY	17 m³/h	CAPACITY	17 m³/h	CAPACITY	1.01 m³
MIN PARTICLE SIZE	1 µm	HEAD	30m	DIMS	Ø 0.89 m H 1.610 m
DIFFERENTIAL PRESSURE	2 bar	POWER	3 kW		
MOC	316 SS	MOC	316 SS	MOC	316 SS

MATERIAL CODE	
FLUID	CODE
LigniOx Solution	LS
UF Feed	FD
UF Filtrate	UF
UF Reject	UR
Combined Concentrate	CC
NF Feed (High Pressure)	FN
NF Concentrate	NC
NF Permeate	NP
CIP Supply	CS
CIP Return	CP
Sulfuric Acid	AS
Caustic Soda (Liquid)	AC
Water Hot (Hot Condensate)	WH
Water Cold (Demineralized)	WC
Water Potable	WP
Effluent	EF
Offgas Vapour	EV
40% SMBS	SM
INSTRUMENT AIR	IA

LEGEND	
Process Stream	
Signal	
Intermittent	
Flexible line	
Fail Open	FO
Fail Closed	FC
Sample Valve	

- A. TAG NUMBERS CHANGED, TAH CHANGED TO TAHH  
B. OFF-PAGE CONNECTOR UPDATED  
C. DRAIN VALVE REMOVED  
D. INTERLOCK MOVED  
E. LAHH ADDED, LSH CHANGED TO LSHH  
F. LALL ADDED, LSL CHANGED TO LSLL  
G. PAHH ADDED, ANDRITZ TAGS ADDED  
H. INTERLOCK AND LALL ADDED, LAH CHANGED TO LAHH



REVISION	5	AS-BUILT	MM	LK		23/01/2026
	4	ISSUED FOR INFORMATION	AH	LK	LC	23/10/2025
	3A	ISSUED FOR INFORMATION	RB	-	-	07/04/2025
	2	ISSUED FOR CONSTRUCTION	AH	MB	RW	01/02/2025
	1Q	ISSUED FOR APPROVAL	AH	MB	RW	29/01/2025
	REV	DESCRIPTION	DRAWN	CHECKED	APPRVD	DATE

**CM2402**  
ANDRITZ OY  
LIGNIOX MEMBRANE DEMO PLANT  
PIPING & INSTRUMENTATION DIAGRAM  
AREA 300 - CIP ALKALINE - AS-BUILT

This drawing is subject to return on demand and must not be copied or passed on to any third party; or used directly or indirectly for any other purpose than the design and construction to the order of CHIMERICAL TECHNOLOGY (PTY) LTD.

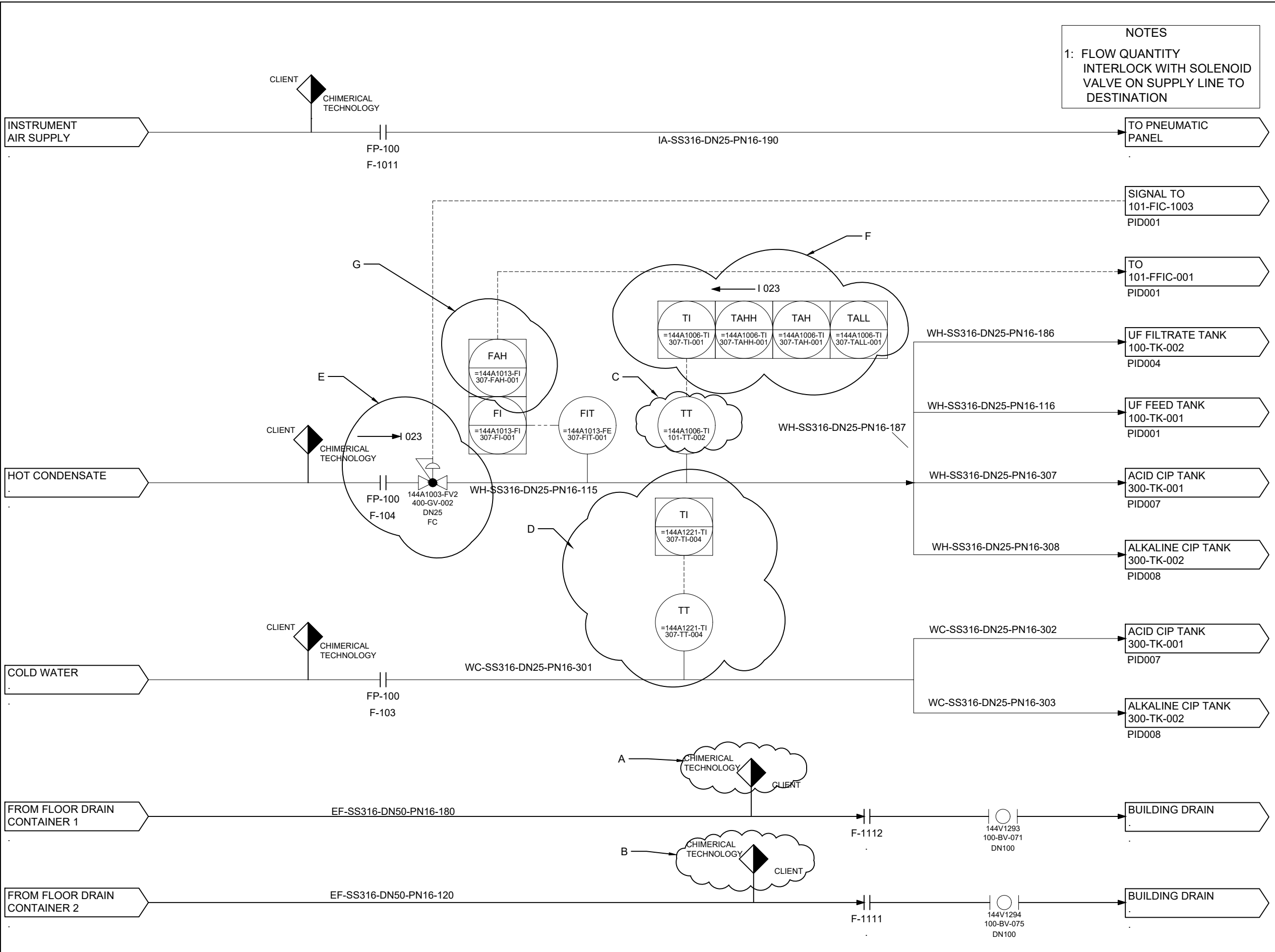
Client

DRAWING NO.:  
CM2402-AND001-4A-PID008

PID NO.:  
PID008

REV.  
5





NOTES  
1: FLOW QUANTITY  
INTERLOCK WITH SOLENOID  
VALVE ON SUPPLY LINE TO  
DESTINATION

MATERIAL CODE	
FLUID	CODE
LigniOx Solution	LS
UF Feed	FD
UF Filtrate	UF
UF Reject	UR
Combined Concentrate	CC
NF Feed (High Pressure)	FN
NF Concentrate	NC
NF Permeate	NP
CIP Supply	CS
CIP Return	CP
Sulfuric Acid	AS
Caustic Soda (Liquid)	AC
Water Hot (Hot Condensate)	WH
Water Cold (Demineralized)	WC
Water Potable	WP
Effluent	EF
Offgas Vapour	EV
40% SMBS	SM
INSTRUMENT AIR	IA


LEGEND	
Process Stream	—————
Signal	-----
Intermittent	-----
Flexible line	~~~~~

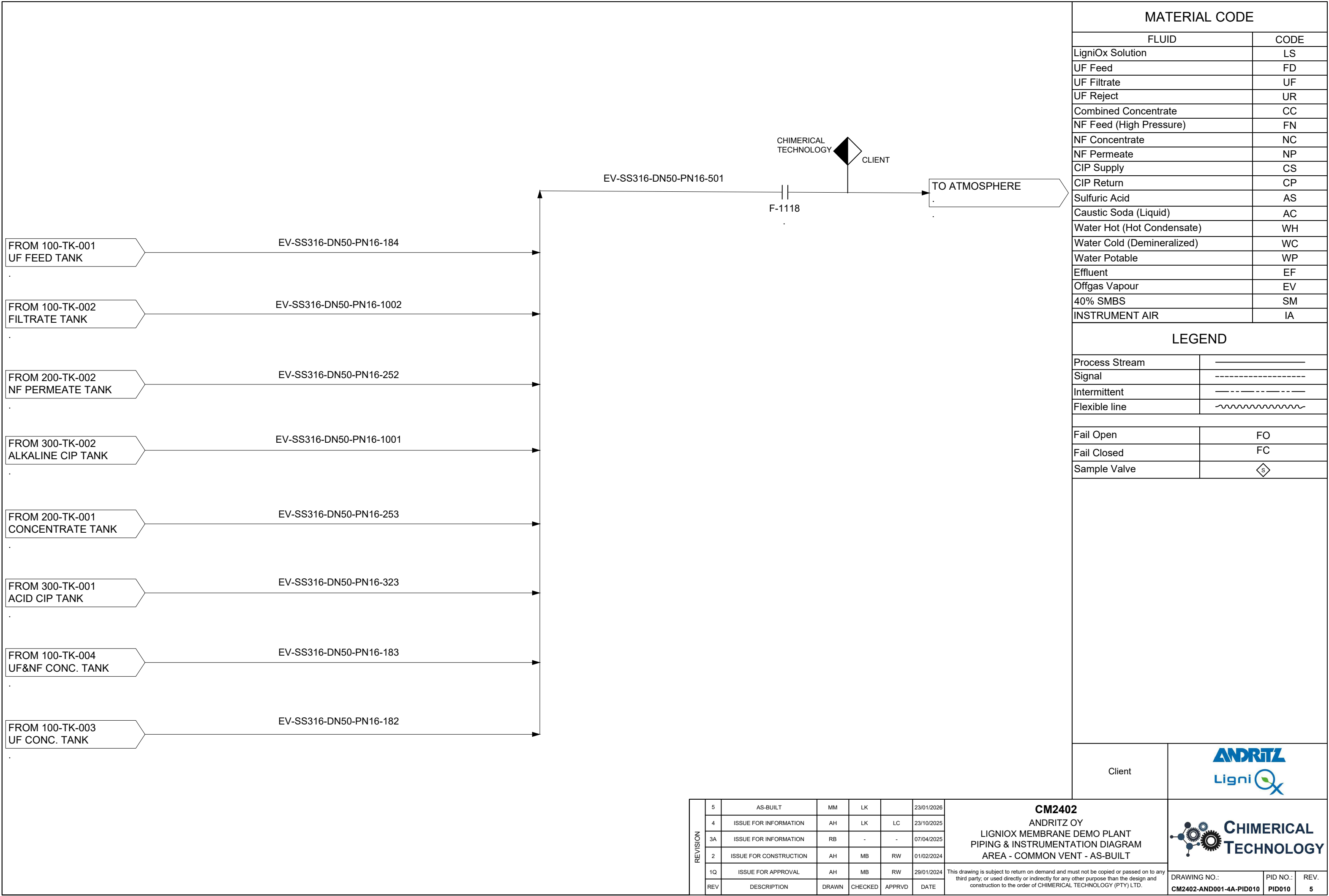
Fail Open	FO
Fail Closed	FC
Sample Valve	◇

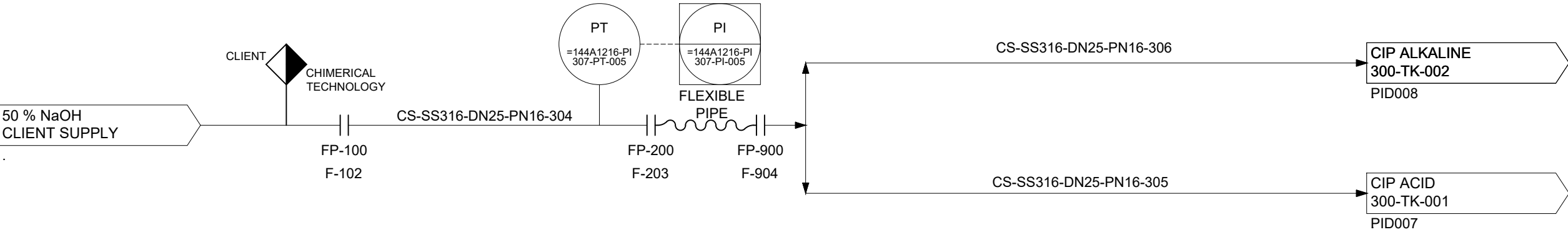
FLANGE PLATES			
F102	DN25	PN10	SS316
F104	DN25	PN10	SS316
F103	DN25	PN10	SS316


A. ADDED BATTERY LIMIT  
B. ADDED BATTERY LIMIT  
C. CHANGED TAG  
D. CHANGED TAG NUMBER  
E. VALVE MOVED FROM PID-001 & INTERLOCK ADDED  
F. INTERLOCK, TI, TAHH, TAH, TALL WERE ALL ADDED  
G. FAH ADDED


Client

REVISION	5	AS-BUILT	MM	LK		23/01/2026	<div>CM2402</div> <div>ANDRITZ OY</div> <div>LIGNIOX MEMBRANE DEMO PLANT</div> <div>PIPING &amp; INSTRUMENTATION DIAGRAM</div> <div>AREA - UTILITIES - AS-BUILT</div>	<div>CHIMERICAL TECHNOLOGY</div>	
	4	ISSUE FOR INFORMATION	AH	LK	LC	23/10/2025			
	3A	ISSUE FOR INFORMATION	RB	-	-	07/04/2025			
	2	ISSUE FOR CONSTRUCTION	AH	MB	RW	01/02/2025			
	1Q	ISSUE FOR APPROVAL	AH	MB	RW	29/01/2025			
	REV	DESCRIPTION	DRAWN	CHECKED	APPRVD	DATE	This drawing is subject to return on demand and must not be copied or passed on to any third party; or used directly or indirectly for any other purpose than the design and construction to the order of CHIMERICAL TECHNOLOGY (PTY) LTD.		
							DRAWING NO.: CM2402-AND001-4A-PID009	PID NO.: PID009	REV. 5





MATERIAL CODE			
FLUID		CODE	
LigniOx Solution		LS	
UF Feed		FD	
UF Filtrate		UF	
UF Reject		UR	
Combined Concentrate		CC	
NF Feed (High Pressure)		FN	
NF Concentrate		NC	
NF Permeate		NP	
CIP Supply		CS	
CIP Return		CP	
Sulfuric Acid		AS	
Caustic Soda (Liquid)		AC	
Water Hot (Hot Condensate)		WH	
Water Cold (Demineralized)		WC	
Water Potable		WP	
Effluent		EF	
Offgas Vapour		EV	
40% SMBS		SM	
INSTRUMENT AIR		IA	
LEGEND			
Process Stream	_____		
Signal	_____		
Intermittent	_____		
Flexible line	~~~~~		
Fail Open	FO		
Fail Closed	FC		
Sample Valve			
FLANGE PLATES			
F102	DN25	PN10	SS316

REVISION	5	AS-BUILT	MM	LK		23/01/2026	<div>CM2402</div> <div>ANDRITZ OY</div> <div>LIGNIOX MEMBRANE DEMO PLANT</div> <div>PIPING &amp; INSTRUMENTATION DIAGRAM</div> <div>AREA - REAGENT - AS-BUILT</div>	<div><div>CHIMERICAL TECHNOLOGY</div></div>	
	4	ISSUED FOR APPROVAL	AH	LK	LC	23/10/2025			
	3A	ISSUED FOR APPROVAL	RB	-	-	07/04/2025			
	2	ISSUED FOR CONSTRUCTION	AH	MB	RW	01/02/2025			
	1Q	ISSUED FOR APPROVAL	AH	MB	RW	29/01/2025			
	REV	DESCRIPTION	DRAWN	CHECKED	APPRVD	DATE	This drawing is subject to return on demand and must not be copied or passed on to any third party; or used directly or indirectly for any other purpose than the design and construction to the order of CHIMERICAL TECHNOLOGY (PTY) LTD.		
							DRAWING NO.: CM2402-AND001-4A-PID011	PID NO.: PID011	REV.: 5