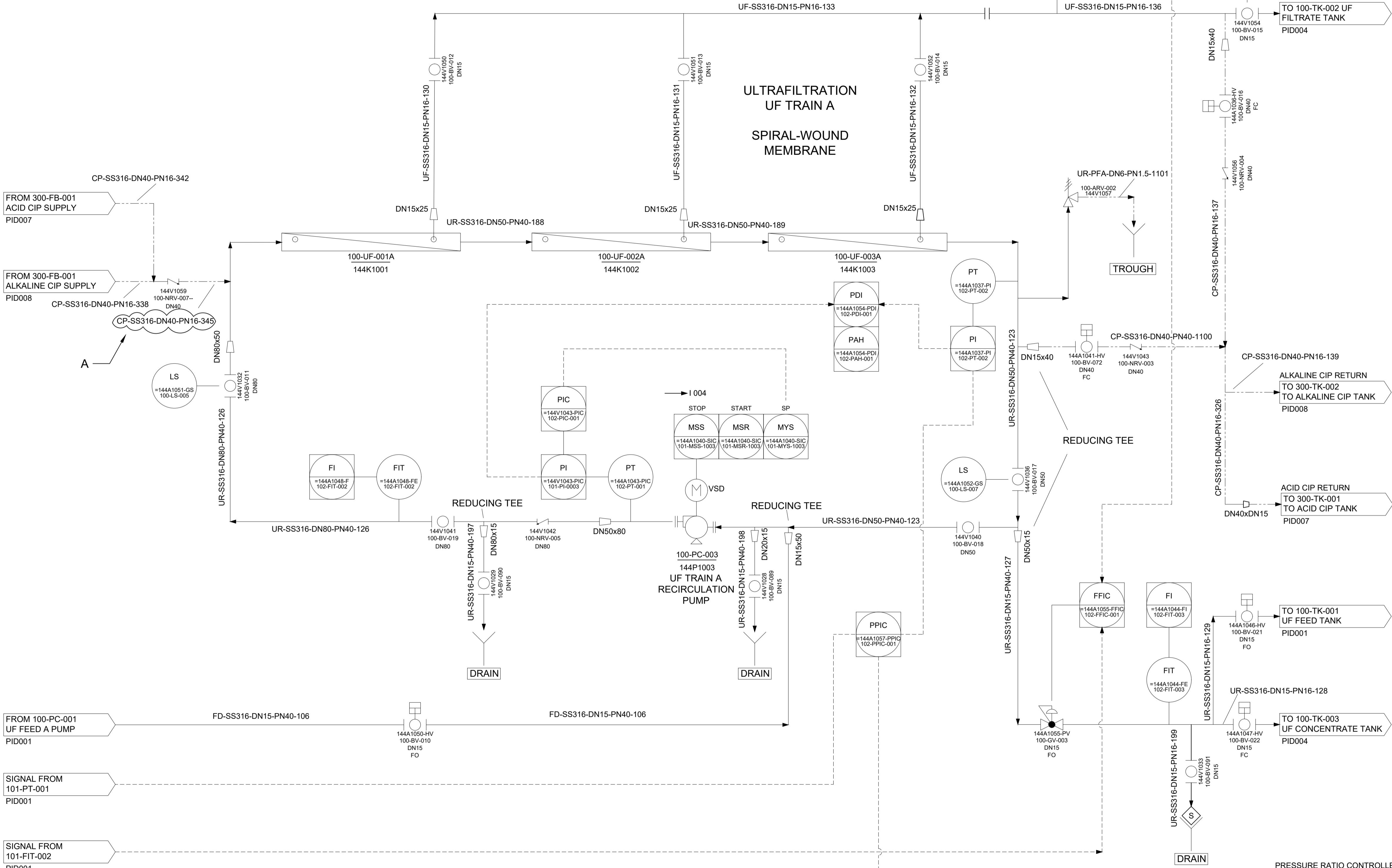


100-UF-001A	100-UF-002A	100-UF-003A	100-PC-003
UF TRAIN A	UF TRAIN A	UF TRAIN A	UF A RECIRCULATION PUMP
NO OF PV'S	1	NO OF PV'S	1
PRESSURE RATING	PN 60	PRESSURE RATING	PN 60
MEMBRANES PER PV	2	MEMBRANES PER PV	2
TYPE	SPIRAL	TYPE	SPIRAL
MOC	316 SS	MOC	316 SS
		MOC	316 SS
			CAPACITY 17.0 m³/h
			HEAD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



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 (Deminerlized)	WC
Water Potable	WP
Effluent	EF
Offgas Vapour	EV
40% SMBS	SM
INSTRUMENT AIR	IA

LEGEND

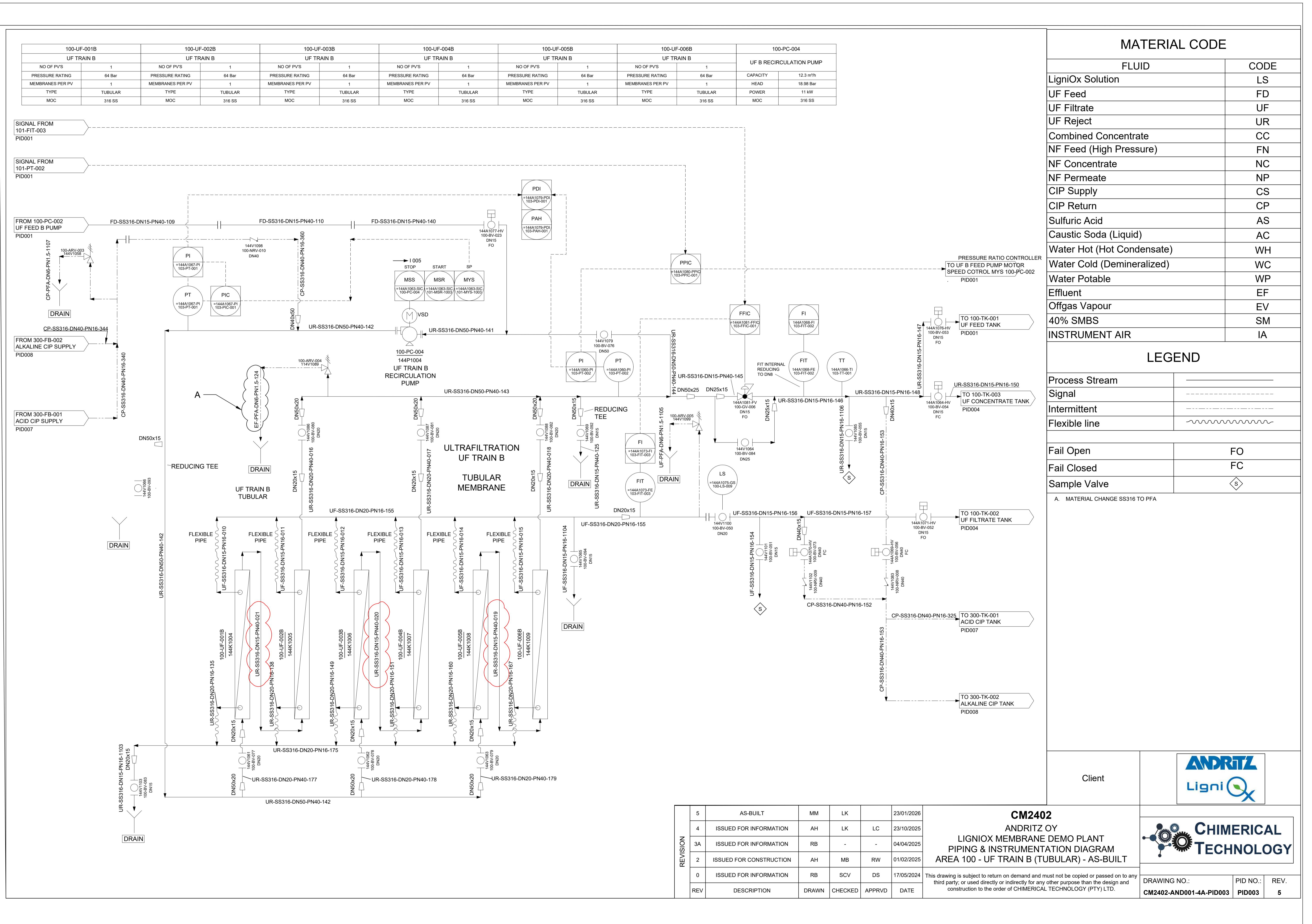
Process Stream	—
Signal	- - -
Intermittent	- - - -
Flexible line	~~~~~
Fail Open	FO
Fail Closed	FC
Sample Valve	◊

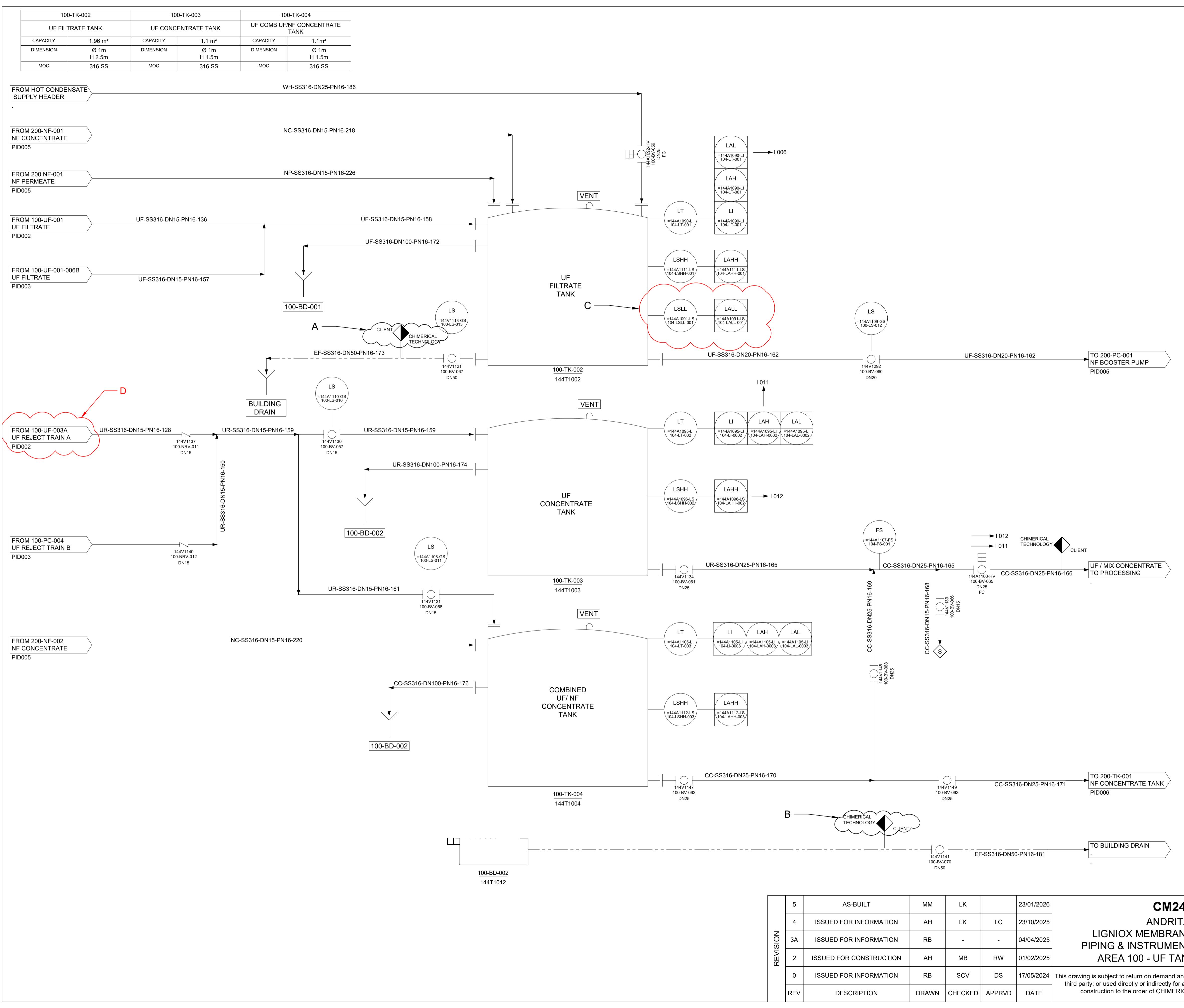
A RE-ADDED "CP-345"

Client



CM2402	ANDRITZ OY
LIGNIOX MEMBRANE DEMO PLANT	
PIPEING & 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.	
DRAWING NO.: CM2402-AND001-4A-PID002	PID NO.: PID002
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	wavy
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

REVISION	5	AS-BUILT	MM	LK		23/01/2026	CM2402 ANDRITZ OY LIGNIOX MEMBRANE DEMO PLANT PIPING & INSTRUMENTATION DIAGRAM AREA 100 - UF TANKS - AS-BUILT
	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	

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.

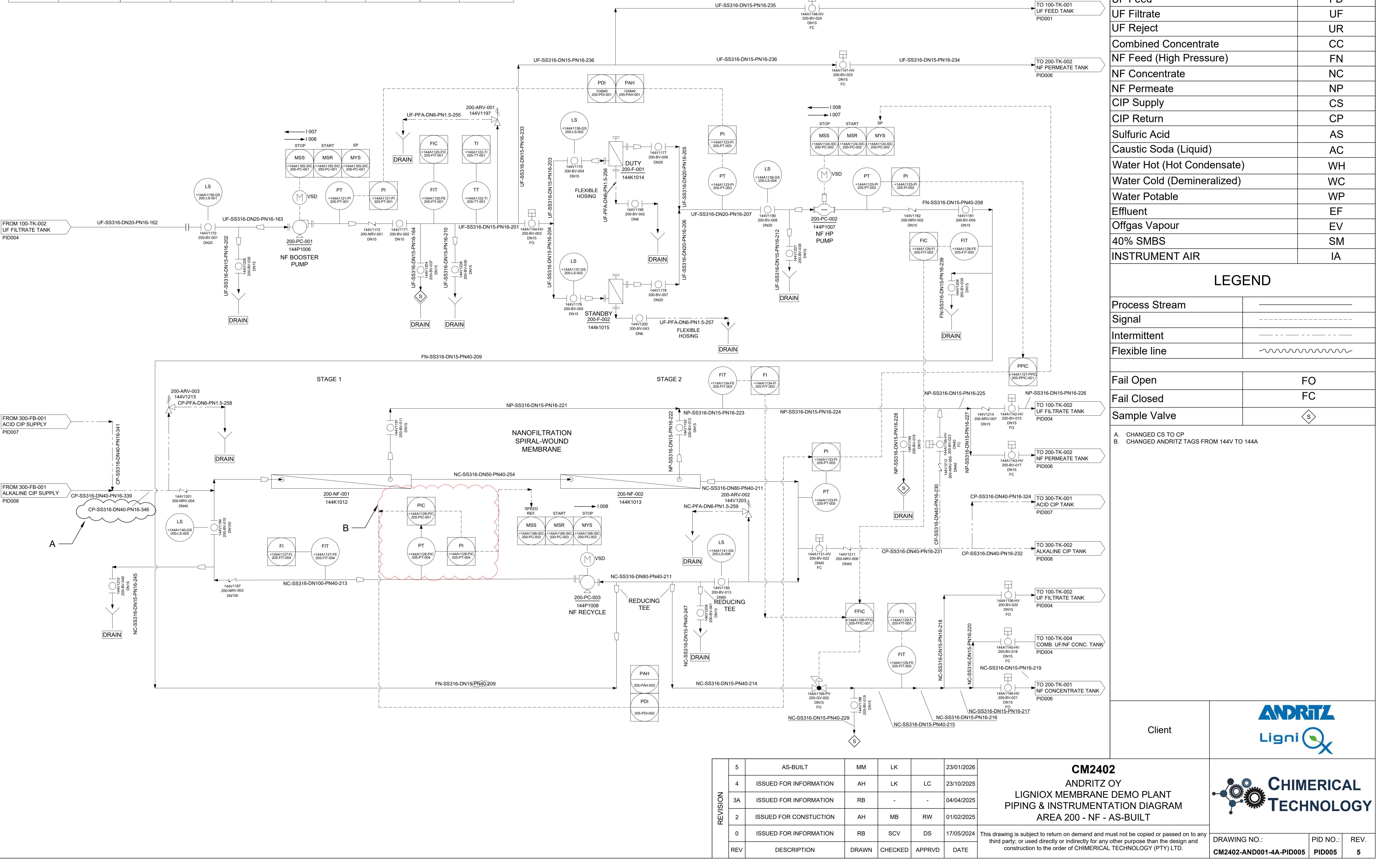
Client

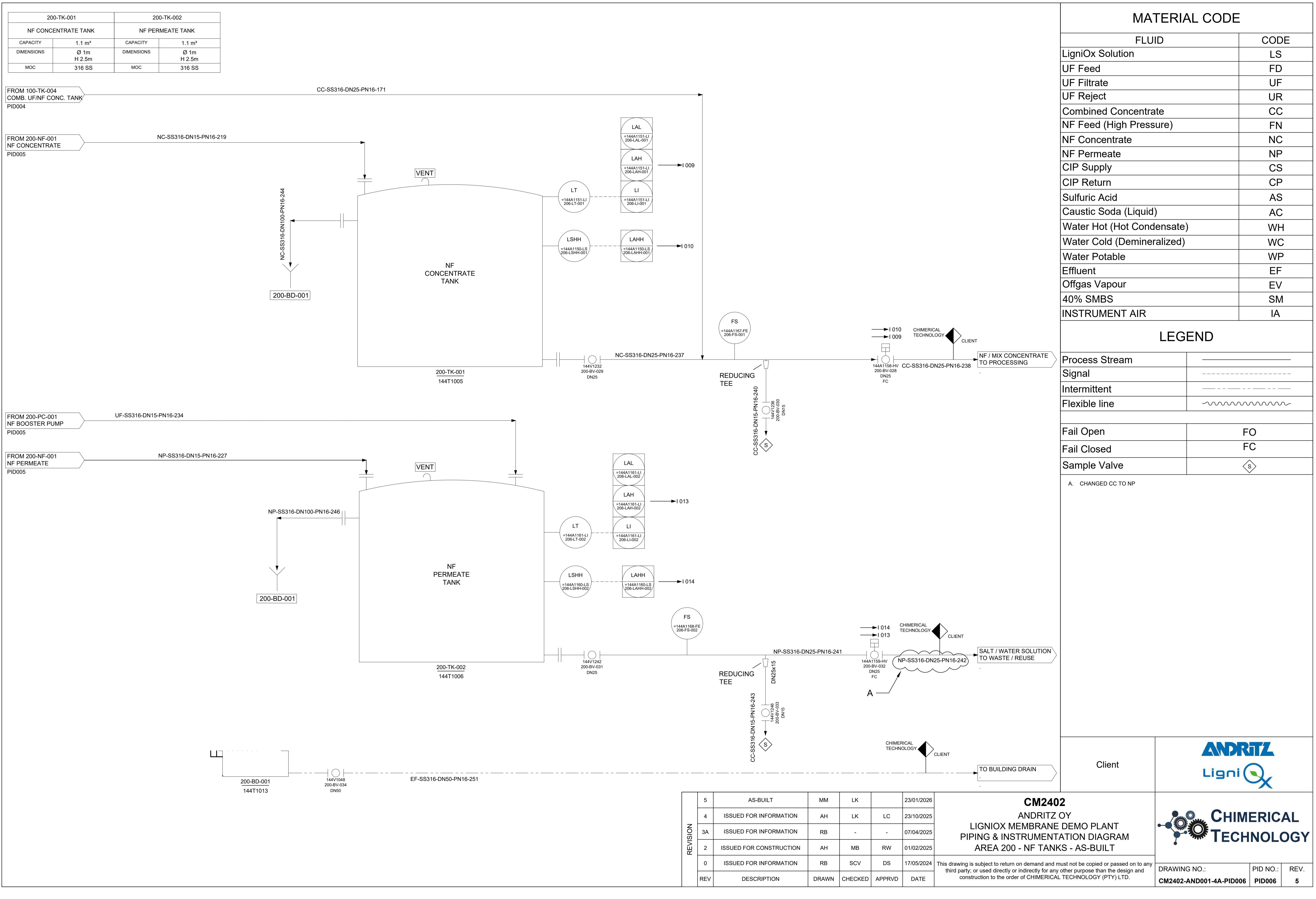


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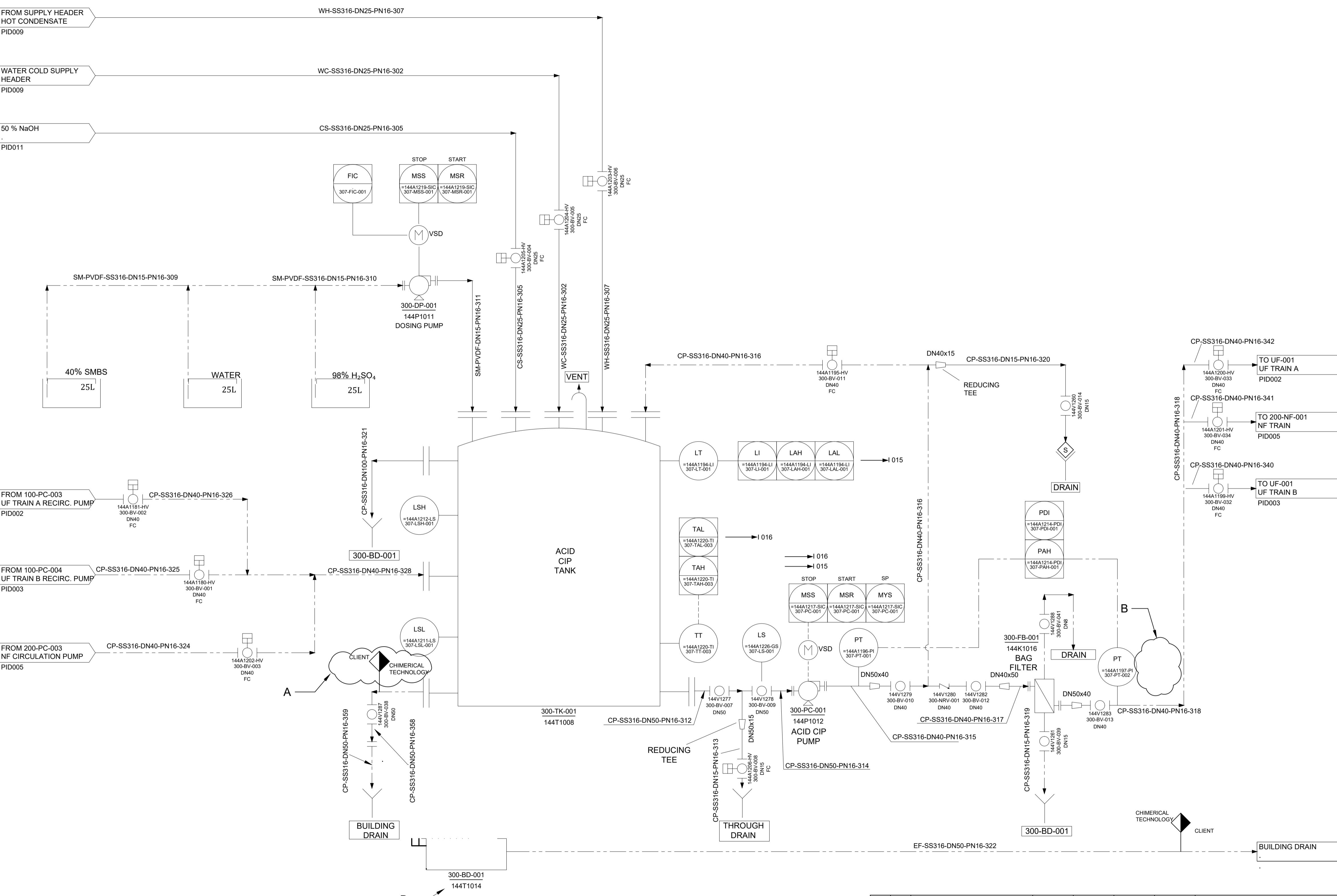
DRAWING NO.: CM2402-AND001-4A-PID004
PID NO.: PID004
REV. 5

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 MIN PARTICLE SIZE DIN PRESSURE	1.2 m³/h 1 µm 2 Bar	NO OF PV'S PRESSURE RATING MEMBRANES PER PV	1.8m³/h 69 Bar 1	CAPACITY HEAD POWER	1.80 m³/h 38.6m 0.55 kW	CAPACITY HEAD POWER	43m³/h 172m 2.2kW	CAPACITY HEAD POWER	43m³/h 3 Bar 4kW
MOC	316 SS	MOC	316 SS	MOC	316 SS	MOC	316 SS	MOC	316 SS





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	17m³/h	CAPACITY
MIN PARTICLE SIZE	1 um	HEAD	10 m	1.01m³
DIFFERENTIAL PRESSURE	2 bar	POWER	0.062 kW	DIMS
MOC	316 SS	MOC	316 SS	Ø 0.89m H 1.16m
		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

REVISION	5	AS-BUILT	MM	LK	23/01/2026	CM2402 ANDRITZ OY LIGNIOX MEMBRANE DEMO PLANT PIPING & INSTRUMENTATION DIAGRAM AREA 300 - CIP ACID - AS-BUILT
	4	ISSUED FOR INFORMATION	AH	LK	LC	
	3A	ISSUED FOR INFORMATION	RB	-	-	
	2	ISSUED FOR CONSTRUCTION	AH	MB	RW	
	0	ISSUED FOR INFORMATION	RB	SCV	DS	17/05/2024
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.



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

