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			CAPACITY	0.90 m³/h	CAPACITY	0.54 m³/h
DIMENSIONS	Ø: 1M H: 2M	POWER	9 kW	HEAD	139 m	HEAD	57.1m
MOC	316 SS	MOC	INC 800	POWER	1.1 kW	POWER	0.37 kW
				MOC	316 SS	MOC	316 SS

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

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

FROM 200-PC-001
UF FILTRATE
PID005

FROM UF TRAIN A
UF REJECT
PID002

FROM UF TRAIN B
UF REJECT
PID003

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

HOT CONDENSATE SUPPLY HEADER

LIGNIOX SOLUTION FROM SUPPLY

CLIENT
CHIMERICAL TECHNOLOGY

100-BD-001

ES

ELECTRIC HEATER
100-HEI-001
144E1001

UF FEED TANK
100-TK-001
144T1001

TO BUILDING DRAIN

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

100-BD-001
144T1011

TO 102-PPIC-001
PID002

TO 102-FFIC-001
PID002

TO 100-UF-001
UF TRAIN A
PID002

TO 103-FFIC-001
PID003

TO 100-UF-001
UF TRAIN B
PID003

TO 103-PPIC-001
PID003

TROUGH

100-PC-001
144P1001
UF FEED A PUMP

100-PC-002
144P1002
UF FEED B PUMP

DRAIN

CHIMERICAL TECHNOLOGY
CLIENT

EF-SS316-DN50-PN16-118

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	S

A. ADDED 144E1001 TAG.
B. CHANGED IMEG.
C. ADDED 144T1001 TAG.
D. ADDED 144T1011 TAG.
E. ADDED ARROW & 1019 TAG.
F. ADDED 144P1001 TAG.
G. ADDED ARROW & 1019 TAG.
H. ADDED 144P1002 TAG.
I. ADDED INSTRUMENT AIR TO TABLE.
J. ADDED FLEXIBLE LINE TO LEGEND.
K. ADDED ARROW & 1019 TAG.
L. WAS PN10 NOW PN16.
M. WAS PN10 NOW PN16.
N. WAS PN10 NOW PN16.
O. WAS PN10 NOW PN16.
P. WAS PN10 NOW PN16.
Q. WAS PN10 NOW PN16.
R. WAS PN10 NOW PN16.
S. WAS PN10 NOW PN16.
T. WAS PN10 NOW PN16.
U. WAS PN10 NOW PN16.
V. WAS PN20 NOW PN40.
W. WAS PN10 NOW PN16.
X. WAS PN10 NOW PN16.
Y. WAS PN10 NOW PN16.
Z. ADDED LINE NUMBER FD-SS316-DN15-PN16-194.
AA. ADDED LINE NUMBER FD-SS316-DN15-PN40-111.
AB. ADDED LINE NUMBER FD-SS316-DN15-PN40-195.
AC. ADDED LINE NUMBER FD-SS316-DN15-PN40-191.
AD. ADDED LINE NUMBER FD-SS316-DN15-PN40-193.
AE. WAS PN20 NOW PN40.
AF. ADDED LINE NUMBER FD-PFA-DN6-PN1.5-196.
AG. WAS PN20 NOW PN40.
AH. WAS PN20 NOW PN40.
AI. WAS PN10 NOW PN16.

Client

ANDRITZ Ligni

REV	DESCRIPTION	DRAWN	CHECKED	APPRVD	DATE
3A	ISSUED FOR INFORMATION	RB	-	-	04/04/2025
2	ISSUED FOR CONSTRUCTION	AH	MB	RW	01/02/2025
1Q	ISSUED FOR APPROVAL	AH	MB	RW	29/01/2025
0	ISSUED FOR INFORMATION	RB	SCV	DS	17/05/2024

CM2402
ANDRITZ OY
LIGNIOX MEMBRANE DEMO PLANT
PIPING & INSTRUMENTATION DIAGRAM
AREA 100 - FEED

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.

CHIMERICAL TECHNOLOGY

DRAWING NO.:	PID NO.:	REV.
CM2402-AND001-4A-PID001	PID001	3A

100-UF-001A	
UF TRAIN A	
NO OF PV'S	1
PRESSURE RATING	PN 60
MEMBRANES PER PV	2
TYPE	SPIRAL
MOC	316 SS

100-UF-002A	
UF TRAIN A	
NO OF PV'S	1
PRESSURE RATING	PN 60
MEMBRANES PER PV	2
TYPE	SPIRAL
MOC	316 SS

100-UF-003A	
UF TRAIN A	
NO OF PV'S	1
PRESSURE RATING	PN 60
MEMBRANES PER PV	2
TYPE	SPIRAL
MOC	316 SS

100-PC-003	
UF A RECIRCULATION PUMP	
CAPACITY	17.0 m³/h
HEAD	22 m
POWER	2.2 kW
MOC	316 SS

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

ULTRAFILTRATION UF TRAIN A
SPIRAL-WOUND MEMBRANE

FROM ACID CIP PID007
FROM ALKALINE CIP PID008
FROM 100-PC-001 UF FEED A PUMP PID001
SIGNAL FROM 101-PT-001 PID001
SIGNAL FROM 101-FIT-002 PID001

TO 100-TK-002 FILTRATE TANK PID004
TO 300-TK-002 TO ALKALINE CIP TANK PID008
ACID CIP RETURN TO 300-TK-001 TO ACID CIP TANK PID007
TO 100-TK-001 UF FEED TANK PID001
TO 100-TK-003 UF CONCENTRATE TANK PID004
PRESSURE RATIO CONTROLLER SIGNAL TO UF A FEED PUMP MOTOR SPEED CONTROL 100-PC-001

100-UF-001A 144K1001
100-UF-002A 144K1002
100-UF-003A 144K1003
100-PC-003 144P1003 UF TRAIN A RECIRCULATION PUMP
TROUGH
REDUCING TEE
DRAIN

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	S

A. ADDED 144K1001 TAG.
B. ADDED 144K1002 TAG.
C. ADDED 144K1003 TAG.
D. ADDED 144P1003 TAG.
E. ADDED INSTRUMENT AIR TO TABLE.
F. ADDED FLEXIBLE LINE TO LEGEND.
G. WAS PN10 NOW PN16.
H. WAS PN10 NOW PN16.
I. WAS PN20 NOW PN40.
J. WAS PN20 NOW PN40.
K. WAS PN10 NOW PN16.
L. WAS PN20 NOW PN40.
M. WAS PN10 NOW PN16.
N. WAS PN20 NOW PN40.
O. WAS PN10 NOW PN16.
P. WAS PN10 NOW PN16.
Q. WAS PN10 NOW PN16.
R. WAS PN20 NOW PN40.
S. ADDED LINE NUMBER UR-SS316-DN15-PN40-197.
T. WAS PN20 NOW PN40.
U. ADDED LINE NUMBER UR-SS316-DN15-PN40-198.
V. ADDED LINE NUMBER UR-SS316-DN50-PN40-123.
W. WAS PN20 NOW PN40.
X. WAS PN10 NOW PN16.
Y. WAS PN10 NOW PN16.
Z. WAS PN10 NOW PN16.
AA. WAS PN10 NOW PN16.
AB. WAS PN20 NOW PN40.
AC. ADDED LINE NUMBER CP-SS316-DN40-PN40-1100.
AD. WAS PN10 NOW PN16.
AE. WAS PN10 NOW PN16.
AF. ADDED LINE NUMBER UR-PFA-DN6-PN1.5-1101.

Client

ANDRITZ LigniOx

REVISION						
3A	ISSUED FOR INFORMATION	RB	-	-	04/04/2025	
2	ISSUED FOR CONSTRUCTION	AH	MB	RW	01/02/2025	
1Q	ISSUED FOR APPROVAL	AH	MB	RW	29/01/2025	
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)

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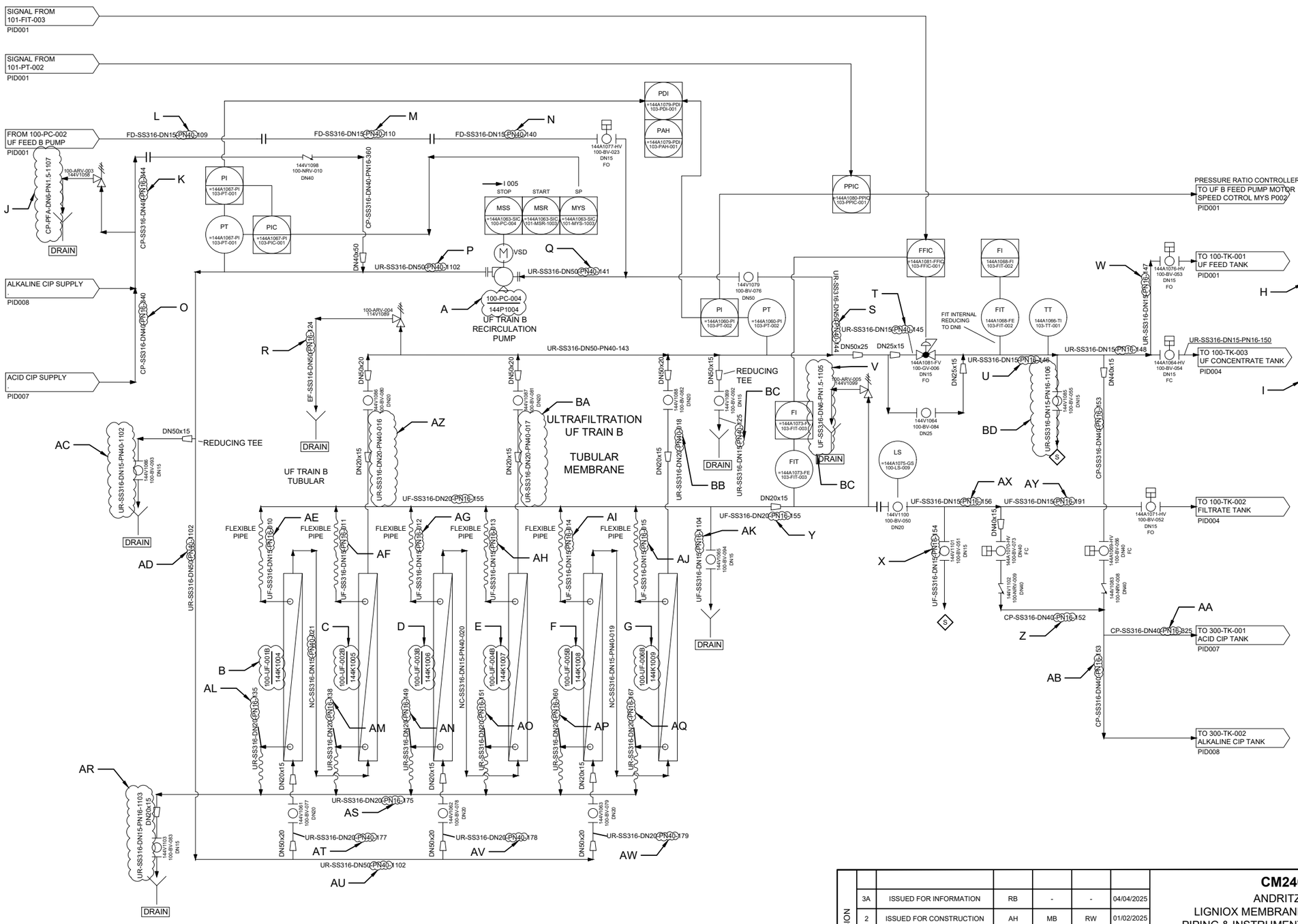
CHIMERICAL TECHNOLOGY

DRAWING NO.:	PID NO.:	REV.
CM2402-AND001-4A-PID002	PID002	3A

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 PV'S	1	NO OF PV'S	1	NO OF PV'S	1	NO OF PV'S	1	NO OF PV'S	1	NO OF PV'S	1		
PRESSURE RATING	64 Bar	PRESSURE RATING	64 Bar	PRESSURE RATING	64 Bar	PRESSURE RATING	64 Bar	PRESSURE RATING	64 Bar	PRESSURE RATING	64 Bar	CAPACITY	12.3 m³/h
MEMBRANES PER PV	1	MEMBRANES PER PV	1	MEMBRANES PER PV	1	MEMBRANES PER PV	1	MEMBRANES PER PV	1	MEMBRANES PER PV	1	HEAD	18.98 Bar
TYPE	TUBULAR	TYPE	TUBULAR	TYPE	TUBULAR	TYPE	TUBULAR	TYPE	TUBULAR	TYPE	TUBULAR	POWER	11 kW
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	S

A. ADDED 144P1004 TAG.
B. ADDED 144K1004 TAG.
C. ADDED 144K1005 TAG.
D. ADDED 144K1006 TAG.
E. ADDED 144K1007 TAG.
F. ADDED 144K1008 TAG.
G. ADDED 144K1009 TAG.
H. ADDED INSTRUMENT AIR TO TABLE.
I. ADDED FLEXIBLE LINE TO LEGEND.
J. ADDED LINE NUMBER CP-PFA-DN6-PN1.5-1107.
K. WAS PN10 NOW PN16.
L. WAS PN20 NOW PN40.
M. WAS PN20 NOW PN40.
N. WAS PN50 NOW PN40.
O. WAS PN10 NOW PN16.
P. WAS PN20 NOW PN40.
Q. WAS PN20 NOW PN40.
R. WAS PN10 NOW PN16.
S. WAS PN20 NOW PN40.
T. WAS PN20 NOW PN40.
U. WAS PN10 NOW PN16.
V. ADDED LINE NUMBER UF-PFA-DN6-PN1.5-1105.
W. WAS PN10 NOW PN16.
X. WAS PN10 NOW PN16.
Y. WAS PN10 NOW PN16.
Z. WAS PN10 NOW PN16.
AA. WAS PN10 NOW PN16.
AB. WAS PN10 NOW PN16.
AC. ADDED LINE NUMBER UR-SS316-DN15-PN40-1102.
AD. WAS PN20 NOW PN40.
AE. WAS PN10 NOW PN40.
AF. WAS PN10 NOW PN40.
AG. WAS PN10 NOW PN40.
AH. WAS PN10 NOW PN40.
AI. WAS PN10 NOW PN40.
AJ. WAS PN10 NOW PN40.
AK. WAS PN10 NOW PN40.
AL. WAS PN10 NOW PN40.
AM. WAS PN10 NOW PN16.
AN. WAS PN10 NOW PN16.
AO. WAS PN10 NOW PN16.
AP. WAS PN10 NOW PN16.
AQ. WAS PN10 NOW PN16.
AR. ADDED LINE NUMBER UR-SS316-DN15-PN16-1103.
AS. WAS PN10 NOW PN16.
AT. WAS PN20 NOW PN40.
AU. WAS PN20 NOW PN40.
AV. WAS PN20 NOW PN40.
AW. WAS PN10 NOW PN16.
AX. WAS PN10 NOW PN16.
AY. WAS PN10 NOW PN16.
BA. LINE NUMBER WAS 014.
BB. WAS PN20 NOW PN40.
BC. ADDED LINE NUMBER UR-SS316-DN6-PN1.5-1105.
BD. ADDED LINE NUMBERS UR-SS316-DN16-1106.

Client

ANDRITZ LigniOx

REVISION							
3A	ISSUED FOR INFORMATION	RB	-	-	04/04/2025	**CM2402** ANDRITZ OY LIGNIOX MEMBRANE DEMO PLANT PIPING & INSTRUMENTATION DIAGRAM AREA 100 - UF TRAIN B (TUBULAR)	CHIMERICAL TECHNOLOGY
2	ISSUED FOR CONSTRUCTION	AH	MB	RW	01/02/2025		
1Q	ISSUED FOR APPROVAL	AH	MB	RW	29/01/2025		
0	ISSUED FOR INFORMATION	RB	SCV	DS	17/05/2024		
REV	DESCRIPTION	DRAWN	CHECKED	APPRVD	DATE		

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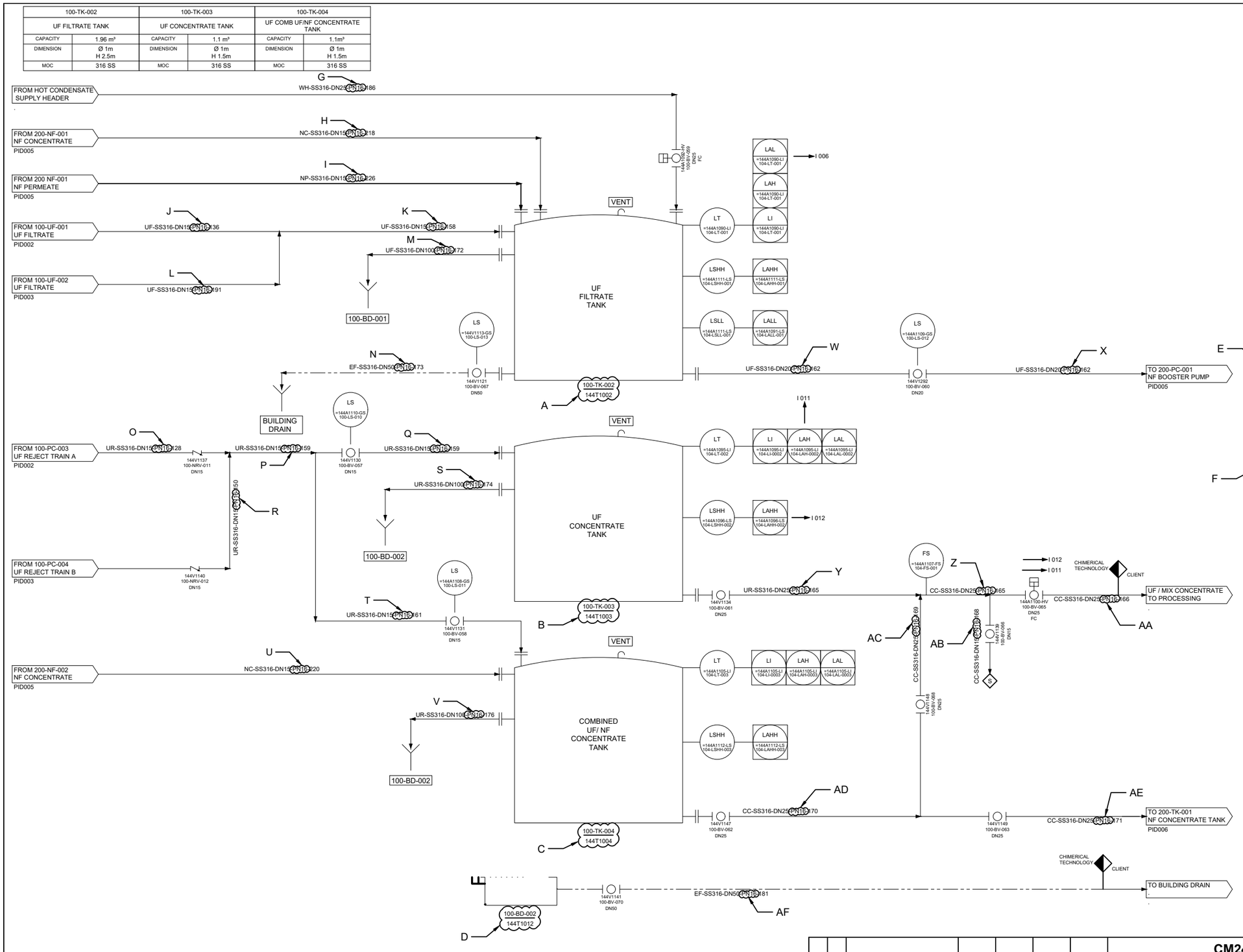
DRAWING NO.:	PID NO.:	REV.
CM2402-AND001-4A-PID003	PID003	3A

100-TK-002		100-TK-003		100-TK-004	
UF FILTRATE TANK		UF CONCENTRATE TANK		UF COMB UF/NF CONCENTRATE TANK	
CAPACITY	1.96 m³	CAPACITY	1.1 m³	CAPACITY	1.1m³
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	S

A. ADDED 144T1002 TAG.
B. ADDED 144T1003 TAG.
C. ADDED 144T1004 TAG.
D. ADDED 144T1012 TAG.
E. ADDED INSTRUMENT AIR TO TABLE.
F. ADDED FLEXIBLE LINE TO LEGEND.
G. WAS PN10 NOW PN16.
H. WAS PN10 NOW PN16.
I. WAS PN10 NOW PN16.
J. WAS PN10 NOW PN16.
K. WAS PN10 NOW PN16.
L. WAS PN10 NOW PN16.
M. WAS PN10 NOW PN16.
N. WAS PN10 NOW PN16.
O. WAS PN10 NOW PN16.
P. WAS PN10 NOW PN16.
Q. WAS PN10 NOW PN16.
R. WAS PN10 NOW PN16.
S. WAS PN10 NOW PN16.
T. WAS PN10 NOW PN16.
U. WAS PN10 NOW PN16.
V. WAS PN10 NOW PN16.
W. WAS PN10 NOW PN16.
X. WAS PN10 NOW PN16.
Y. WAS PN10 NOW PN16.
Z. WAS PN10 NOW PN16.
AA. WAS PN10 NOW PN16.
AB. WAS PN10 NOW PN16.
AC. WAS PN10 NOW PN16.
AD. WAS PN10 NOW PN16.
AE. WAS PN10 NOW PN16.
AF. WAS PN10 NOW PN16.

Client

ANDRITZ LigniOx

REVISION						
3A	ISSUED FOR INFORMATION	RB	-	-	04/04/2025
2	ISSUED FOR CONSTRUCTION	AH	MB	RW	01/02/2025
1Q	ISSUED FOR APPROVAL	AH	MB	RW	29/01/2025
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

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CHIMERICAL TECHNOLOGY

DRAWING NO.:	PID NO.:	REV.
CM2402-AND001-4A-PID004	PID004	3A

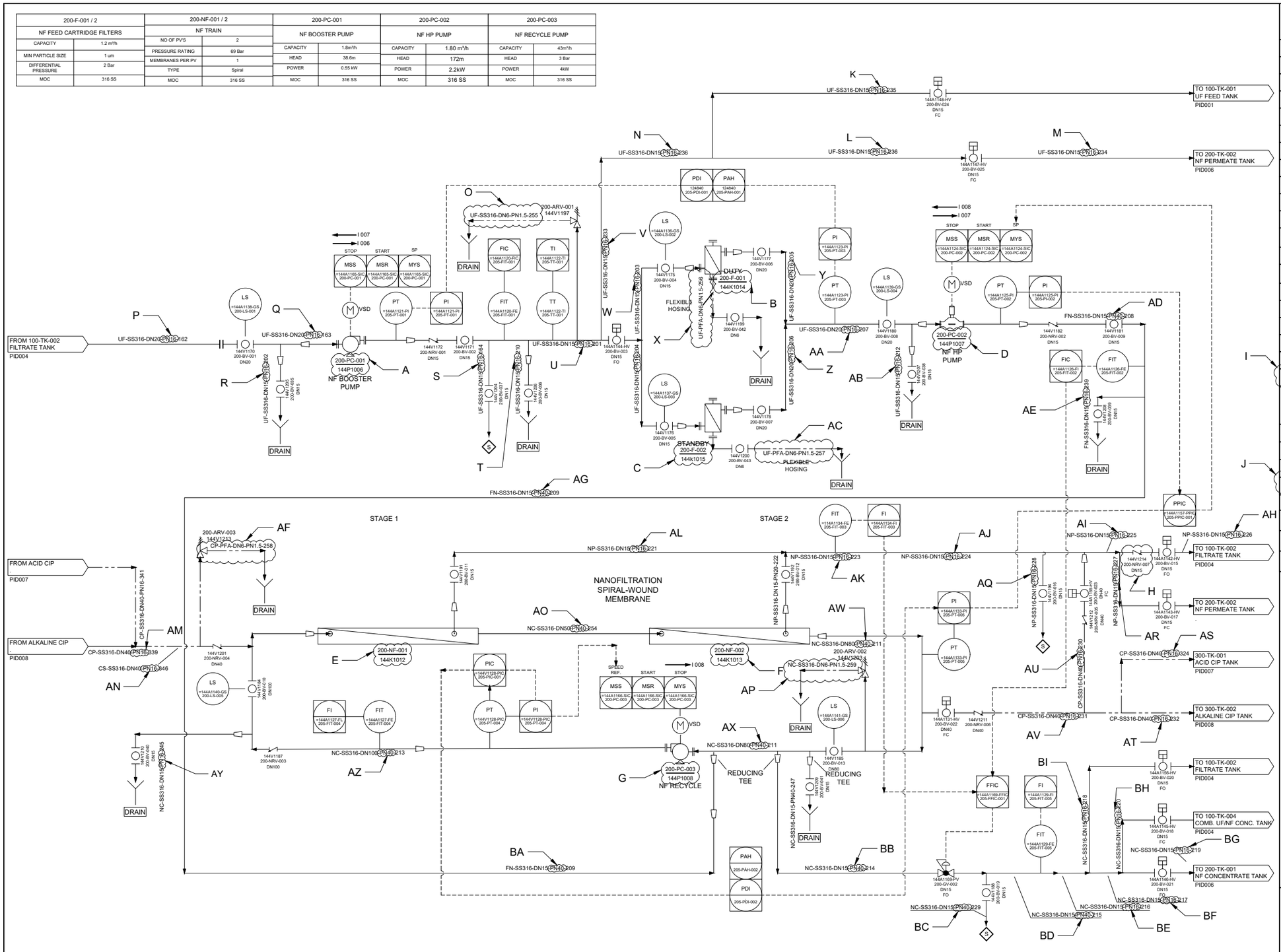
200-F-001 / 2	
NF FEED CARTRIDGE FILTERS	
CAPACITY	1.2 m³/h
MIN PARTICLE SIZE	1 um
DIFFERENTIAL PRESSURE	2 Bar
MOC	316 SS

200-NF-001 / 2	
NF TRAIN	
NO OF PV'S	2
PRESSURE RATING	69 Bar
MEMBRANES PER PV	1
TYPE	Spiral
MOC	316 SS

200-PC-001	
NF BOOSTER PUMP	
CAPACITY	1.8m³/h
HEAD	38.6m
POWER	0.55 kW
MOC	316 SS

200-PC-002	
NF HP PUMP	
CAPACITY	1.80 m³/h
HEAD	172m
POWER	2.2kW
MOC	316 SS

200-PC-003	
NF RECYCLE PUMP	
CAPACITY	43m³/h
HEAD	3 Bar
POWER	4kW
MOC	316 SS


FROM 100-TK-002 FILTRATE TANK
PID004
FROM ACID CIP
PID007
FROM ALKALINE CIP
PID008
TO 100-TK-001 UF FEED TANK
PID001
TO 200-TK-002 NF PERMEATE TANK
PID006
TO 100-TK-002 FILTRATE TANK
PID004
TO 200-TK-002 NF PERMEATE TANK
TO 300-TK-001 ACID CIP TANK
PID007
TO 300-TK-002 ALKALINE CIP TANK
PID008
TO 100-TK-002 FILTRATE TANK
PID004
TO 100-TK-004 COMB. UF/NF CONC. TANK
PID004
TO 200-TK-001 NF CONCENTRATE TANK
PID006
200-PC-001 144P1006 NF BOOSTER PUMP
200-PC-002 144P1007 NF HP PUMP
200-PC-003 144P1008 NF RECYCLE
200-NF-001 144K1012
200-NF-002 144K1013
200-F-001 144K1014
200-F-002 144k1015
STAGE 1
STAGE 2
NANOFILTRATION SPIRAL-WOUND MEMBRANE
REDUCING TEE
REDUCING TEE
FLEXIBLE HOSING
UF-PFA-DN6-PN1.5-256
UF-PFA-DN6-PN1.5-257 FLEXIBLE HOSING
CP-PFA-DN6-PN1.5-258
UF-SS316-DN6-PN1.5-255
NC-SS316-DN6-PN1.5-259
STANDBY
DRAIN
VSD
PDI 124840 205-PDI-001
PAH 124840 205-PAH-001
PAH 205-PAH-002
PDI 205-PDI-002
PPIC =144A1157-PPIC 205-PPIC-001
FIC =144A1120-FIC 205-FIT-001
TI =144A1122-TI 205-TT-001
PI =144A1121-PI 205-PT-001
FIT =144A1120-FE 205-FIT-001
TT =144A1122-TT 205-TT-001
LS =144A1136-GS 200-LS-001
PT =144A1121-PI 205-PT-001
MSS =144A1165-S/C 200-PC-001
MSR =144A1165-S/C 200-PC-001
MYS =144A1165-S/C 200-PC-001
LS =144A1140-GS 200-LS-007
PIC =144V1128-PIC 205-PIC-001
PT =144V1128-PIC 205-PT-004
PI =144V1128-PIC 205-PT-004
FI =144A1127-FI 205-FIT-004
FIT =144A1127-FE 205-FIT-004
MSS =144A1166-S/C 200-PC-003
MSR =144A1166-S/C 200-PC-003
MYS =144A1166-S/C 200-PC-003
LS =144A1137-GS 200-LS-003
LS =144A1141-GS 200-LS-006
PI =144A1123-PI 205-PT-003
PT =144A1123-PI 205-PT-003
LS =144A1139-GS 200-LS-004
MSS =144A1124-S/C 200-PC-005
MSR =144A1124-S/C 200-PC-002
MYS =144A1124-S/C 200-PC-007
PT =144A1125-PI 205-PT-002
PI =144A1125-PI 205-PI-003
FIC =144A1126-FI 205-FIT-002
FIT =144A1126-FE 205-FIT-002
FIT =144A1134-FE 205-FIT-003
FI =144A1134-FI 205-FIT-003
PI =144A1133-PI 205-PT-005
PT =144A1133-PI 205-PT-005
FFIC =144A1169-FFIC 205-FFIC-001
FI =144A1129-FI 205-FIT-005
FIT =144A1129-FE 205-FIT-005
144A1169-PV 200-GV-002 DN15 FO
144A1156-HV 200-BV-020 DN15 FO
144A1145-HV 200-BV-018 DN15 FC
144A1146-HV 200-BV-021 DN15 FO
144A1142-HV 200-BV-015 DN15 FO
144A1143-HV 200-BV-017 DN15 FC
144A1147-HV 200-BV-025 DN15 FC
144A1148-HV 200-BV-026 DN15 FC
144A1144-HV 200-BV-003 DN15 FO
144A1141-HV 200-BV-024 DN15 FC
144A1151-HV 200-BV-022 DN40 FC
144A1152-HV 200-BV-023 DN40 FC
200-ARV-001 144V1197
200-ARV-002 144V1203
200-ARV-003 144V1213
144V1177 200-BV-006 DN20
144V1199 200-BV-042 DN6
144V1178 200-BV-007 DN20
144V1200 200-BV-043 DN6
144V1170 200-BV-001 DN20
144V1172 200-NRV-001 DN15
144V1171 200-BV-002 DN15
144V1175 200-BV-004 DN15
144V1176 200-BV-005 DN15
144V1180 200-BV-008 DN20
144V1182 200-NRV-002 DN15
144V1181 200-BV-009 DN15
144V1214 200-NRV-007 DN15
144V1201 200-NRV-004 DN40
144V1187 200-NRV-003 DN100
144V1185 200-BV-013 DN80
144V1211 200-NRV-006 DN40
144V1210 200-BV-030 DN15
144V1209 200-BV-029 DN15
144V1208 200-BV-028 DN15
144V1207 200-BV-027 DN15
144V1206 200-BV-026 DN15
144V1205 200-BV-025 DN15
144V1204 200-BV-024 DN15
144V1203 200-BV-023 DN15
144V1202 200-BV-012 DN15
144V1198 200-BV-019 DN15
144V1199 200-BV-033 DN15
144V1197 200-BV-032 DN15
144V1196 200-BV-031 DN15
144V1195 200-BV-030 DN15
144V1194 200-BV-029 DN15
144V1193 200-BV-028 DN15
144V1192 200-BV-027 DN15
144V1191 200-BV-026 DN15
144V1190 200-BV-035 DN15
144V1189 200-BV-034 DN15
144V1188 200-BV-033 DN15
144V1187 200-BV-032 DN15
144V1186 200-BV-031 DN15
144V1185 200-BV-030 DN15
144V1184 200-BV-029 DN15
144V1183 200-BV-028 DN15
144V1182 200-BV-027 DN15
144V1181 200-BV-026 DN15
144V1180 200-BV-025 DN15
144V1179 200-BV-024 DN15
144V1178 200-BV-023 DN15
144V1177 200-BV-022 DN15
144V1176 200-BV-021 DN15
144V1175 200-BV-020 DN15
144V1174 200-BV-019 DN15
144V1173 200-BV-018 DN15
144V1172 200-BV-017 DN15
144V1171 200-BV-016 DN15
144V1170 200-BV-015 DN15
144V1169 200-BV-014 DN15
144V1168 200-BV-013 DN15
144V1167 200-BV-012 DN15
144V1166 200-BV-011 DN15
144V1165 200-BV-010 DN15
144V1164 200-BV-009 DN15
144V1163 200-BV-008 DN15
144V1162 200-BV-007 DN15
144V1161 200-BV-006 DN15
144V1160 200-BV-005 DN15
144V1159 200-BV-004 DN15
144V1158 200-BV-003 DN15
144V1157 200-BV-002 DN15
144V1156 200-BV-001 DN15
144A1144-HV 200-BV-003 DN15 FO
144A1135-HV 200-BV-010 DN15 FO
144A1136-HV 200-BV-009 DN15 FO
144A1137-HV 200-BV-008 DN15 FO
144A1138-HV 200-BV-007 DN15 FO
144A1139-HV 200-BV-006 DN15 FO
144A1140-HV 200-BV-005 DN15 FO
144A1141-HV 200-BV-004 DN15 FO
144A1142-HV 200-BV-015 DN15 FO
144A1143-HV 200-BV-017 DN15 FC
144A1144-HV 200-BV-003 DN15 FO
144A1145-HV 200-BV-018 DN15 FC
144A1146-HV 200-BV-021 DN15 FO
144A1147-HV 200-BV-025 DN15 FC
144A1148-HV 200-BV-026 DN15 FC
144A1149-HV 200-BV-027 DN15 FC
144A1150-HV 200-BV-028 DN15 FC
144A1151-HV 200-BV-022 DN40 FC
144A1152-HV 200-BV-023 DN40 FC
144A1153-HV 200-BV-024 DN40 FC
144A1154-HV 200-BV-029 DN40 FC
144A1155-HV 200-BV-030 DN40 FC
144A1156-HV 200-BV-031 DN40 FC
144A1157-HV 200-BV-032 DN40 FC
144A1158-HV 200-BV-033 DN40 FC
144A1159-HV 200-BV-034 DN40 FC
144A1160-HV 200-BV-035 DN40 FC
144A1161-HV 200-BV-036 DN40 FC
144A1162-HV 200-BV-037 DN40 FC
144A1163-HV 200-BV-038 DN40 FC
144A1164-HV 200-BV-039 DN40 FC
144A1165-HV 200-BV-040 DN40 FC
144A1166-HV 200-BV-041 DN40 FC
144A1167-HV 200-BV-042 DN40 FC
144A1168-HV 200-BV-043 DN40 FC
UF-SS316-DN15-PN16-235
UF-SS316-DN15-PN16-236
UF-SS316-DN15-PN16-234
UF-SS316-DN20-PN16-162
UF-SS316-DN20-PN16-163
UF-SS316-DN15-PN16-164
UF-SS316-DN15-PN16-201
UF-SS316-DN15-PN16-202
UF-SS316-DN15-PN16-203
UF-SS316-DN15-PN16-204
UF-SS316-DN20-PN16-205
UF-SS316-DN20-PN16-206
UF-SS316-DN20-PN16-207
UF-SS316-DN15-PN16-208
UF-SS316-DN15-PN16-210
UF-SS316-DN15-PN16-212
FN-SS316-DN15-PN40-208
FN-SS316-DN15-PN40-209
FN-SS316-DN15-PN16-239
CP-SS316-DN40-PN16-339
CP-SS316-DN40-PN16-341
CP-SS316-DN40-PN16-346
CS-SS316-DN40-PN16-346
NP-SS316-DN15-PN20-322
NP-SS316-DN15-PN16-223
NP-SS316-DN15-PN16-224
NP-SS316-DN15-PN16-225
NP-SS316-DN15-PN16-226
NP-SS316-DN15-PN16-227
NP-SS316-DN15-PN16-228
NP-SS316-DN15-PN16-230
NC-SS316-DN15-PN16-201
NC-SS316-DN15-PN16-202
NC-SS316-DN15-PN16-203
NC-SS316-DN15-PN16-204
NC-SS316-DN15-PN16-205
NC-SS316-DN15-PN16-206
NC-SS316-DN15-PN16-207
NC-SS316-DN15-PN16-208
NC-SS316-DN15-PN16-209
NC-SS316-DN15-PN16-210
NC-SS316-DN15-PN16-211
NC-SS316-DN15-PN16-212
NC-SS316-DN15-PN16-213
NC-SS316-DN15-PN16-214
NC-SS316-DN15-PN16-215
NC-SS316-DN15-PN16-216
NC-SS316-DN15-PN16-217
NC-SS316-DN15-PN16-218
NC-SS316-DN15-PN16-219
NC-SS316-DN15-PN16-220
NC-SS316-DN15-PN40-229
NC-SS316-DN15-PN40-230
NC-SS316-DN15-PN40-231
NC-SS316-DN15-PN40-232
NC-SS316-DN15-PN40-247
NP-SS316-DN15-PN16-236
NP-SS316-DN15-PN16-237
NP-SS316-DN15-PN16-238
NP-SS316-DN15-PN16-239
NP-SS316-DN50-PN40-254
NP-SS316-DN15-PN40-221
NP-SS316-DN80-PN40-211
CP-SS316-DN40-PN16-324
CP-SS316-DN40-PN16-325
CP-SS316-DN40-PN16-326
CS-SS316-DN40-PN16-345
CS-SS316-DN40-PN16-346
CS-SS316-DN40-PN16-347
CS-SS316-DN40-PN16-348
CS-SS316-DN40-PN16-349
CS-SS316-DN40-PN16-350
CS-SS316-DN40-PN16-351
CS-SS316-DN40-PN16-352
CS-SS316-DN40-PN16-353
CS-SS316-DN40-PN16-354
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CS-SS316-DN40-PN16-356
CS-SS316-DN40-PN16-357
CS-SS316-DN40-PN16-358
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CS-SS316-DN40-PN16-368
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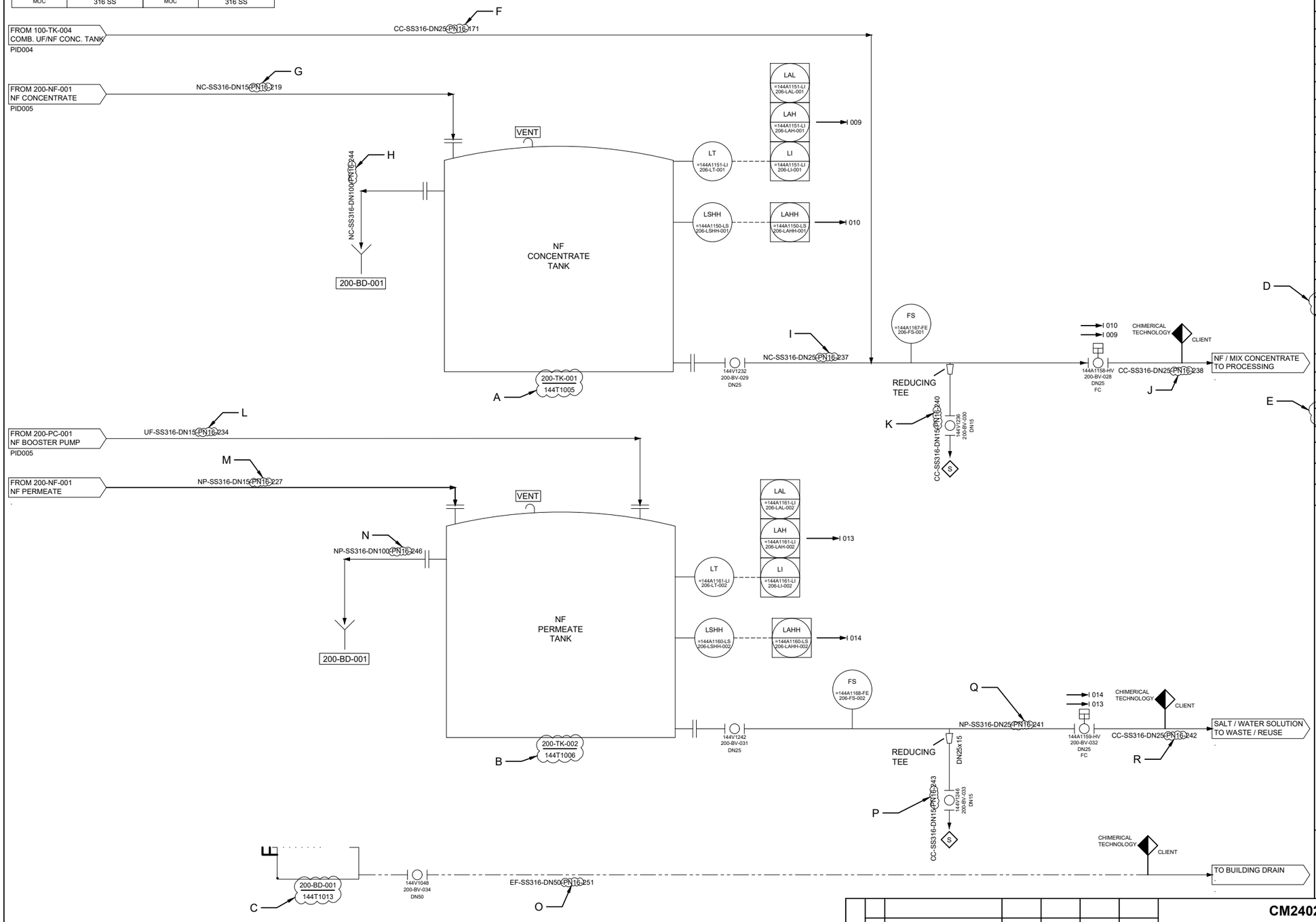
CS-SS316-DN40-PN16-372
CS-SS316-DN40-PN16-373
CS-SS316-DN40-PN16-374
CS-SS316-DN40-PN16-375
CS-SS316-DN40-PN16-376
CS-SS316-DN40-PN16-377
CS-SS316-DN40-PN16-378
CS-SS316-DN40-PN16-379
CS-SS316-DN40-PN16-380
CS-SS316-DN40-PN16-381
CS-SS316-DN40-PN16-382
CS-SS316-DN40-PN16-383
CS-SS316-DN40-PN16-384

200-TK-001		200-TK-002	
NF CONCENTRATE TANK		NF PERMEATE TANK	
CAPACITY	1.1 m³	CAPACITY	1.1 m³
DIMENSIONS	Ø 1m H 2.5m	DIMENSIONS	Ø 1m H 2.5m
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	S

A. ADDED 144T1005 TAG.
B. ADDED 144T1005 TAG.
C. ADDED 144T1013 TAG.
D. ADDED INSTRUMENT AIR TO TABLE.
E. ADDED FLEXIBLE LINE TO LEGEND.
F. WAS NP10 NOW PN16.
G. WAS NP10 NOW PN16.
H. WAS NP10 NOW PN16.
I. WAS NP10 NOW PN16.
J. WAS NP10 NOW PN16.
K. WAS NP10 NOW PN16.
L. WAS NP10 NOW PN16.
M. WAS NP10 NOW PN16.
N. WAS NP10 NOW PN16.
O. WAS NP10 NOW PN16.
P. WAS NP10 NOW PN16.
Q. WAS NP10 NOW PN16.
R. WAS NP10 NOW PN16.

Client

ANDRITZ Ligni

REVISION						
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	
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 TANKS

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.

CHIMERICAL TECHNOLOGY

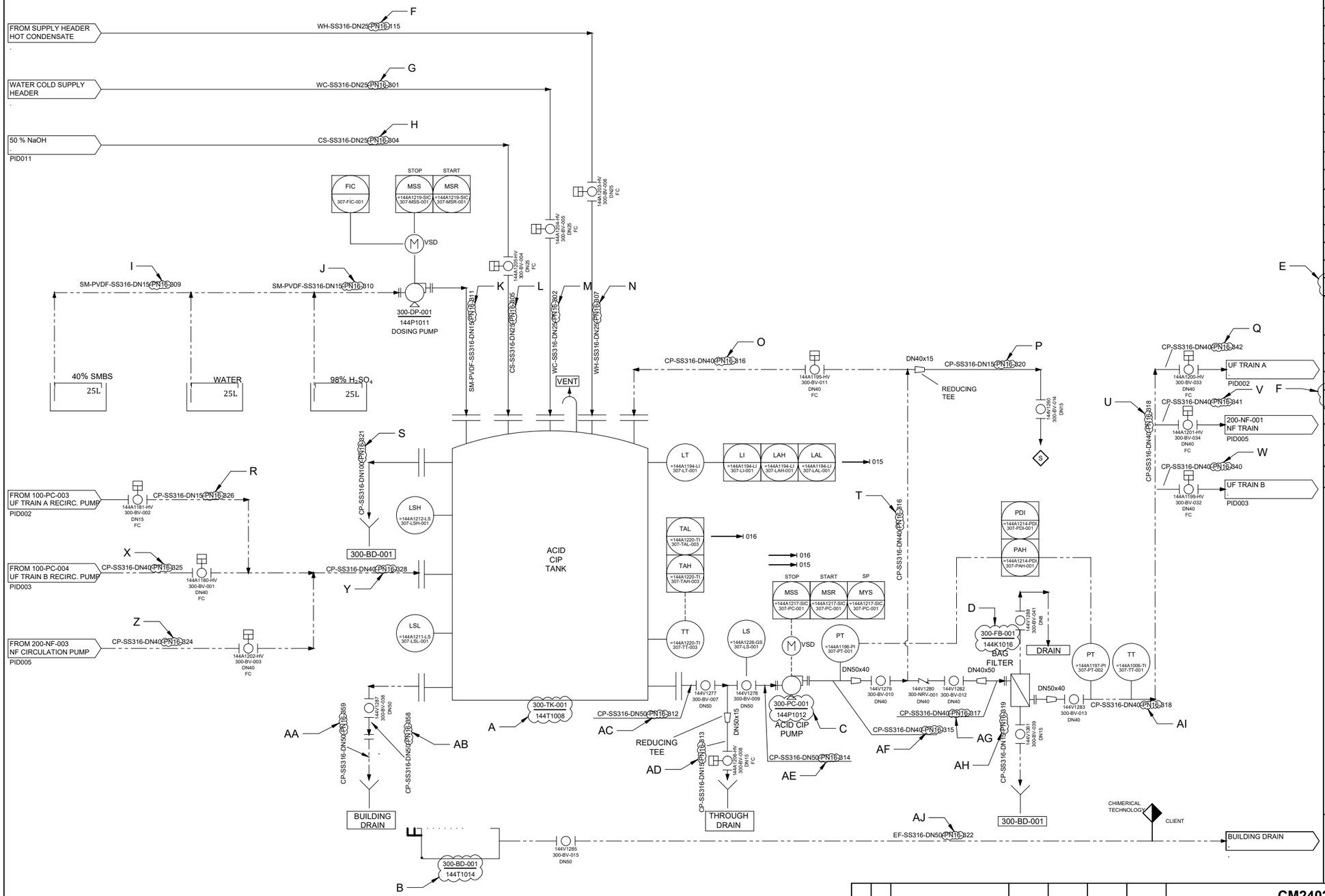
DRAWING NO.:	PID NO.:	REV.
CM2402-AND001-4A-PID006	PID006	3A

300-FB-001	
BAG FILTER	
CAPACITY	17m³/h
MIN PARTICLE SIZE	1 um
DIFFERENTIAL PRESSURE	2 bar
MOC	316 SS

300-DP-001	
DOSING PUMP	
CAPACITY	0.07m³/h
HEAD	10 m
POWER	0.062 kW
MOC	316 SS

300-PC-001	
ACID CIP PUMP	
CAPACITY	17m³/h
HEAD	30m
POWER	3 kW
MOC	316 SS

300-TK-001	
ACID CIP TANK	
CAPACITY	1.01m³
DIMS	Ø 0.89m H 1.16m
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	S

A. ADDED 144T1008 TAG.
B. ADDED 144T1014 TAG.
C. ADDED 144P1012 TAG.
D. ADDED 144K1016 TAG.
E. ADDED INSTRUMENT AIR TO TABLE.
F. ADDED FLEXIBLE LINE TO
G. WAS NP10 NOW PN16.
H. WAS NP10 NOW PN16.
I. WAS NP10 NOW PN16.
J. WAS NP10 NOW PN16.
K. WAS NP10 NOW PN16.
L. WAS NP10 NOW PN16.
M. WAS NP10 NOW PN16.
N. WAS NP10 NOW PN16.
O. WAS NP10 NOW PN16.
P. WAS NP10 NOW PN16.
Q. WAS NP10 NOW PN16.
R. WAS NP10 NOW PN16.
S. WAS NP10 NOW PN16.
T. WAS NP10 NOW PN16.
U. WAS NP10 NOW PN16.
V. WAS NP10 NOW PN16.
W. WAS NP10 NOW PN16.
X. WAS NP10 NOW PN16.
Y. WAS NP10 NOW PN16.
Z. WAS NP10 NOW PN16.
AA. WAS NP10 NOW PN16.
AB. WAS NP10 NOW PN16.
AC. WAS NP10 NOW PN16.
AD. WAS NP10 NOW PN16.
AE. WAS NP10 NOW PN16.
AF. WAS NP10 NOW PN16.
AG. WAS NP10 NOW PN16.
AH. WAS NP10 NOW PN16.
AI. WAS NP10 NOW PN16.
AJ. WAS NP10 NOW PN16.

Client

ANDRITZ LigniOx

REV	DESCRIPTION	DRAWN	CHECKED	APPRVD	DATE
3A	ISSUED FOR INFORMATION	RB	-	-	7/04/2025
2	ISSUED FOR CONSTRUCTION	AH	MB	RW	01/02/2025
1Q	ISSUED FOR APPROVAL	AH	MB	RW	29/01/2025
0	ISSUED FOR INFORMATION	RB	SCV	DS	17/05/2024

REVISION

CM2402

ANDRITZ OY
LIGNIOX MEMBRANE DEMO PLANT
PIPING & INSTRUMENTATION DIAGRAM
AREA 300 - CIP ACID

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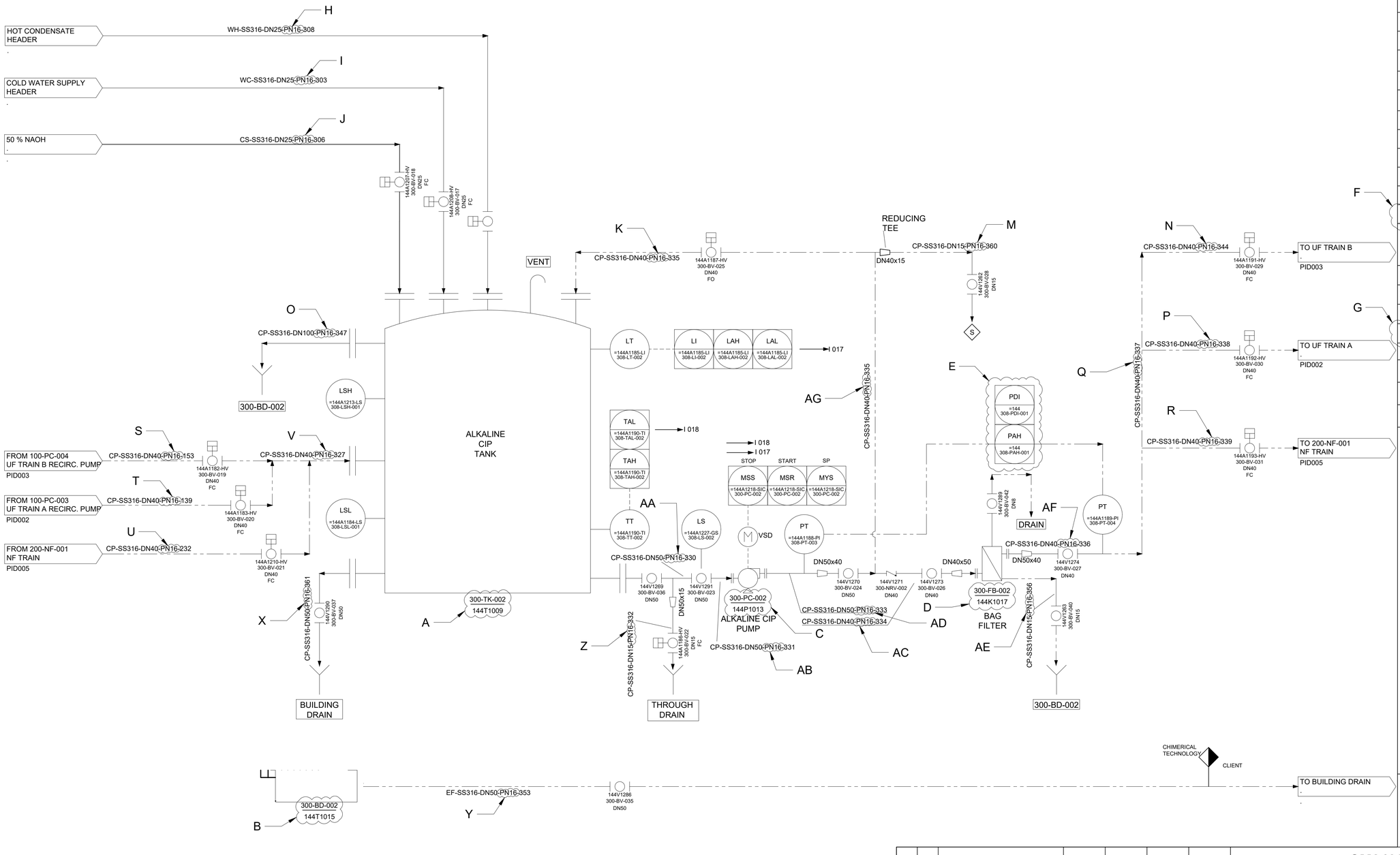
CHIMERICAL TECHNOLOGY

DRAWING NO.:	PID NO.:	REV.
CM2402-AND001-4A-PID007	PID007	3A

300-FB-002	
BAG FILTER	
CAPACITY	17 m³/h
MIN PARTICLE SIZE	1 um
DIFFERENTIAL PRESSURE	2 bar
MOC	316 SS

300-PC-001	
ALKALINE CIP PUMP	
CAPACITY	17 m³/h
HEAD	30m
POWER	3 kW
MOC	316 SS

300-TK-002	
ALKALINE CIP TANK	
CAPACITY	1.01 m³
DIMS	Ø 0.89 m H 1.610 m
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	S

A. ADDED 144T1009 TAG.
B. ADDED 144T1015 TAG.
C. ADDED 144P1013 TAG.
D. ADDED 144K1017 TAG.
E. ADDED SIGNAL LOOP.
F. ADDED INSTRUMENT AIR TO TABLE.
G. ADDED FLEXIBLE LINE TO LEGEND.
H. WAS NP10 NOW PN16.
I. WAS NP10 NOW PN16.
J. WAS NP10 NOW PN16.
K. WAS NP10 NOW PN16.
L. WAS NP10 NOW PN16.
M. WAS NP10 NOW PN16.
N. WAS NP10 NOW PN16.
O. WAS NP10 NOW PN16.
P. WAS NP10 NOW PN16.
Q. WAS NP10 NOW PN16.
R. WAS NP10 NOW PN16.
S. WAS NP10 NOW PN16.
T. WAS NP10 NOW PN16.
U. WAS NP10 NOW PN16.
V. WAS NP10 NOW PN16.
W. WAS NP10 NOW PN16.
X. WAS NP10 NOW PN16.
Y. WAS NP10 NOW PN16.
Z. WAS NP10 NOW PN16.
AA. WAS NP10 NOW PN16.
AB. WAS NP10 NOW PN16.
AC. WAS NP10 NOW PN16.
AD. WAS NP10 NOW PN16.
AE. WAS NP10 NOW PN16..
AF. WAS NP10 NOW PN16.
AG. WAS NP10 NOW PN16.

Client

ANDRITZ Ligni

REVISION						
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	
1A	ISSUED FOR INFORMATION	RB	-	-	13/06/2024	
REV	DESCRIPTION	DRAWN	CHECKED	APPRVD	DATE	

CM2402

ANDRITZ OY
LIGNIOX MEMBRANE DEMO PLANT
PIPING & INSTRUMENTATION DIAGRAM
AREA 300 - CIP ALKALINE

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CHIMERICAL TECHNOLOGY

DRAWING NO.:	PID NO.:	REV.
CM2402-AND001-4A-PID008	PID008	3A

NOTES

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

INSTRUMENT AIR SUPPLY

CLIENT / CHIMERICAL TECHNOLOGY

FP-100 F-1011

A

I

IA-SS316-DN25-PN16-I90

TO PNEUMATIC PANEL

TO 101-FFIC-001 PID001

HOT CONDENSATE

CLIENT / CHIMERICAL TECHNOLOGY

FP-100 F-104

B

WH-SS316-DN25-PN16-I15

J

FI =144A1013-FI 307-FIT-001

FIT =144A1013-FE 307-FIT-001

TI =144A1006-TI 307-TI-001

TT =144A1006-TI 307-TT-001

TI =144A1221-TI 307-TI-002

TT =144A1221-TI 307-TT-002

K

WH-SS316-DN25-PN16-I87

L

WH-SS316-DN25-PN16-I86

UF FILTRATE TANK 100-TK-002 PID004

M

WH-SS316-DN25-PN16-I16

UF FEED TANK 100-TK-001 PID001

N

WH-SS316-DN25-PN16-I07

ACID CIP TANK 300-TK-001 PID007

O

WH-SS316-DN25-PN16-I08

ALKALINE CIP TANK 300-TK-002 PID008

COLD WATER

CLIENT / CHIMERICAL TECHNOLOGY

FP-100 F-103

C

R

WC-SS316-DN25-PN16-I01

P

WC-SS316-DN25-PN16-I02

ACID CIP TANK 300-TK-001 PID007

Q

WC-SS316-DN25-PN16-I03

ALKALINE CIP TANK 300-TK-002 PID008

FROM FLOOR DRAIN CONTAINER 1

S

T

EF-SS316-DN50-PN16-I80

D

F-1112

144V1293 100-BV-071 DN100

CHIMERICAL TECHNOLOGY / CLIENT

BUILDING DRAIN

FROM FLOOR DRAIN CONTAINER 2

U

V

EF-SS316-DN50-PN16-I20

E

F-1111

144V1294 100-BV-075 DN100

CHIMERICAL TECHNOLOGY / CLIENT

BUILDING DRAIN

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
F INSTRUMENT AIR	IA

LEGEND

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

FLANGE PLATES

H F102	DN25	PN10	SS316
F104	DN25	PN10	SS316
F103	DN25	PN10	SS316

A. ADDED FP-100 & F-1011 TAG.
B. ADDED PF-100 & F-104 TAG.
C. ADDED PF-100 & F-103 TAG.
D. ADDED F-1112 TAG.
E. ADDED F-1111 TAG.
F. ADDED INSTRUMENT AIR TO TABLE.
G. ADDED FLEXIBLE LINE TO LEGEND..
H. ADDED FLANGE PLATES TABLE.
I. WAS PN10 NOW PN16.
J. WAS PN10 NOW PN16.
K. WAS PN10 NOW PN16.
L. WAS PN10 NOW PN16.
M. WAS PN10 NOW PN16.
N. WAS PN10 NOW PN16.
O. WAS PN10 NOW PN16.
P. WAS PN10 NOW PN16.
Q. WAS PN10 NOW PN16.
R. WAS PN10 NOW PN16.
S. WAS EC NOW EF.
T. WAS PN10 NOW PN16.
U. WAS EC NOW EF.
V. WAS PN10 NOW PN16.

Client

ANDRITZ LigniOx

REVISION						
3A	ISSUE FOR INFOMATION	RB	-	-	07/04/2025	
2	ISSUE FOR CONSTUCTION	AH	MB	RW	01/02/2025	
1Q	ISSUE FOR APPROVAL	AH	MB	RW	29/01/2025	
1G	ISSUE FOR INFOMATION	WvD	D.S	-	11/07/2024	
REV	DESCRIPTION	DRAWN	CHECKED	APPRVD	DATE	

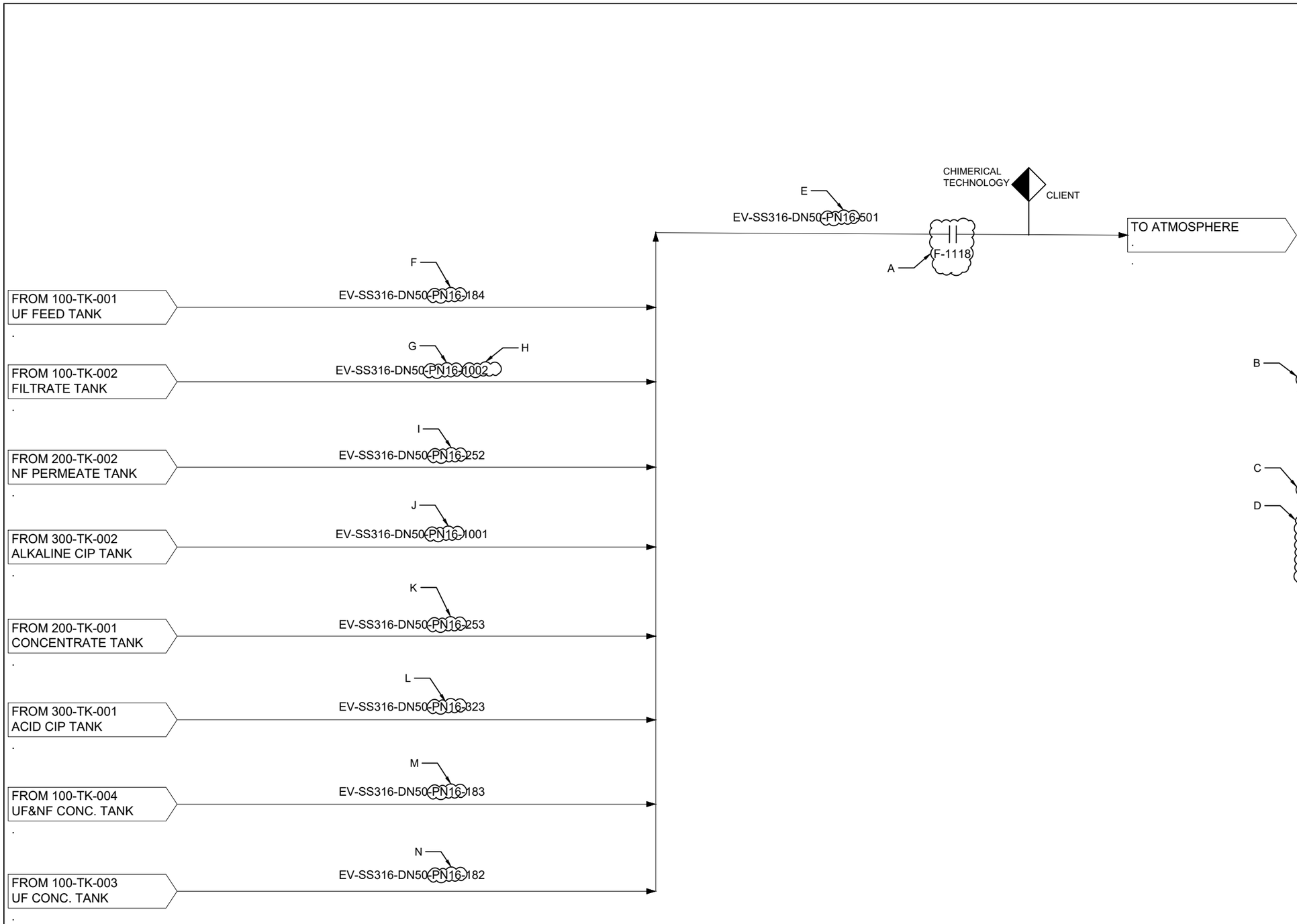
CM2402

ANDRITZ OY
LIGNIOX MEMBRANE DEMO PLANT
PIPING & INSTRUMENTATION DIAGRAM
AREA - UTILITIES

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.

CHIMERICAL TECHNOLOGY

DRAWING NO.:	PID NO.:	REV.
CM2402-AND001-4A-PID009	PID009	3A



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

B

LEGEND

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

C

D

A. ADDED F-1118 TAG.
B. ADDED INSTRUMENT AIR TO TABLE.
C. ADDED FLEXIBLE LINE TO LEGEND..
D. ADDED FLANGE PLATES TABLE.
E. WAS NP10 NOW PN16.
F. WAS NP10 NOW PN16.
G. WAS NP10 NOW PN16.
H. WAS 181 NOW 1002.
I. WAS NP10 NOW PN16.
J. WAS NP10 NOW PN16.
K. WAS NP10 NOW PN16.
L. WAS NP10 NOW PN16.
M. WAS NP10 NOW PN16.
N. WAS NP10 NOW PN16.

Client

ANDRITZ Ligni

REVISION						
3A	ISSUE FOR INFORMATION	RB	-	-	07/04/2025
2	ISSUE FOR CONSTRUCTION	AH	MB	RW	01/02/2024
1Q	ISSUE FOR APPROVAL	AH	MB	RW	29/01/2024
1G	ISSUE FOR INFORMATION	WvD	D.S	-	11/07/2024
REV	DESCRIPTION	DRAWN	CHECKED	APPRVD	DATE

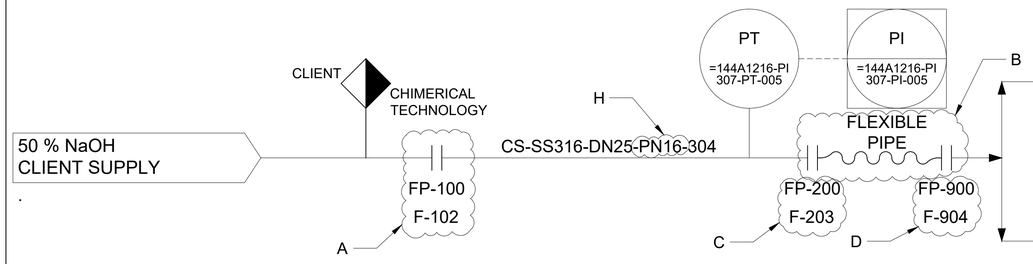
CM2402

ANDRITZ OY
LIGNIOX MEMBRANE DEMO PLANT
PIPING & INSTRUMENTATION DIAGRAM
AREA - COMMON VENT

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.

CHIMERICAL TECHNOLOGY

DRAWING NO.:	PID NO.:	REV.
CM2402-AND001-4A-PID010	PID010	3A



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

E

LEGEND

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

F

G

FLANGE PLATES

F102	DN25	PN10	SS316

A. ADDED FP-100 & F-102 TAG.
B. ADDED FLEXIBLE LINE.
C. ADDED PF-200 & F-203 TAG.
D. ADDED PF-900 & F-904 TAG.
E. ADDED INSTRUMENT AIR TO TABLE.
F. ADDED FLEXIBLE LINE TO LEGEND..
G. ADDED FLANGE PLATES TABLE.
H. WAS PN10 NOW PN16.
I. WAS PN10 NOW PN16.
J. WAS PN10 NOW PN16.

Client

ANDRITZ
LigniOx

REVISION						
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	

CM2402
ANDRITZ OY
LIGNIOX MEMBRANE DEMO PLANT
PIPING & INSTRUMENTATION DIAGRAM
AREA - REAGENT

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CHIMERICAL TECHNOLOGY

DRAWING NO.:	PID NO.:	REV.
CM2402-AND001-4A-PID011	**PID011**	**3A**